

KIC 004249749

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})
004249749-01	OBS	No	446.117305	256.422906	1857.0	4.770	15.7	7.7	0.69	4399	3.13	0.16
004249749-02	OBS	No	402.698956	390.275257	2413.1	11.416	14.9	8.4	0.69	4399	3.24	0.18
004249749-03	OBS	No	482.664452	211.554519	1405.4	3.344	13.3	6.2	0.69	4399	2.63	0.14
004249749-04	OBS	No	394.695695	418.747079	1921.3	4.252	16.1	8.5	0.69	4399	3.28	0.19
004249749-05	OBS	No	564.387457	300.441440	1535.8	2.879	11.8	7.6	0.69	4399	2.78	0.12
004249749-06	OBS	No	468.440517	577.888541	519.8	0.625	11.8	1.9	0.69	4399	1.66	0.15
004249749-07	OBS	No	346.748892	226.742683	1217.2	2.759	12.2	5.9	0.69	4399	2.33	0.22
004249749-08	OBS	No	501.969206	511.912106	1462.4	4.949	13.2	7.3	0.69	4399	2.75	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004249749-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
004249749-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

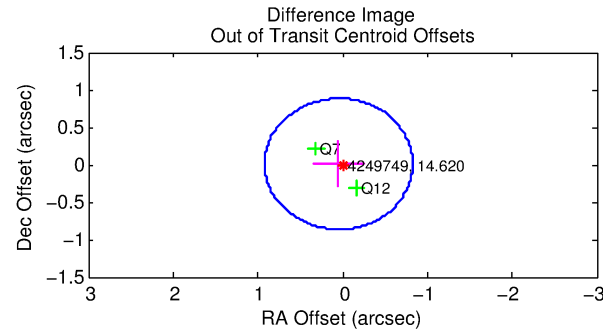
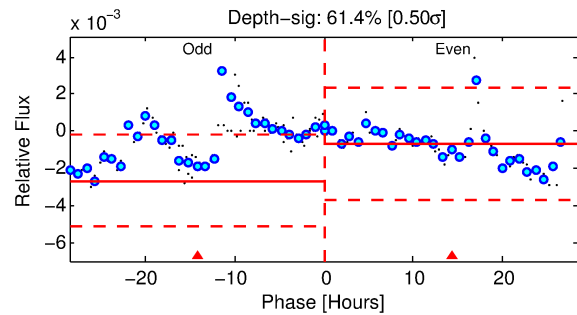
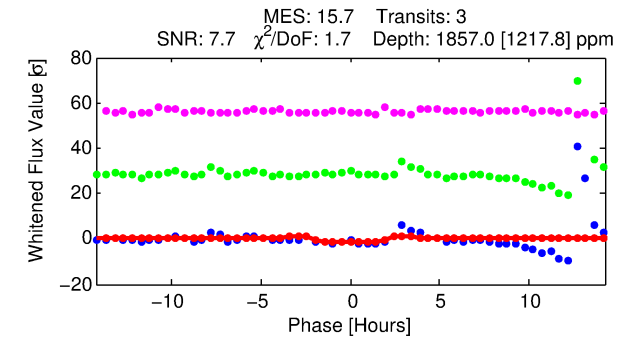
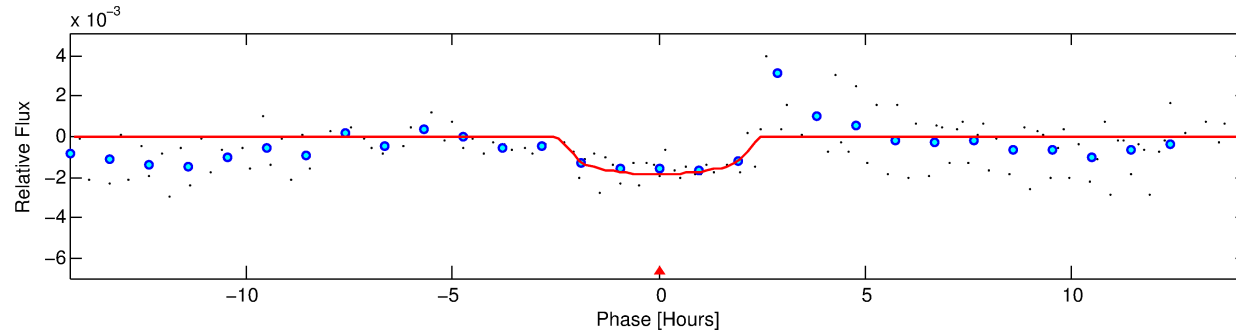
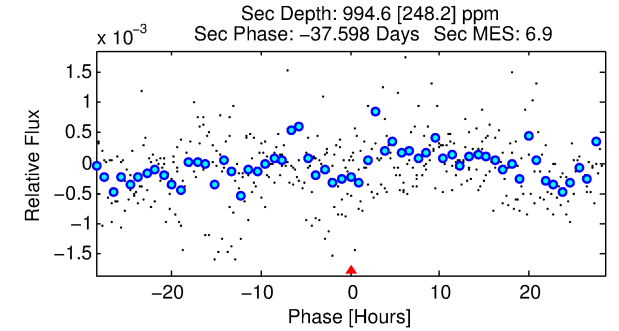
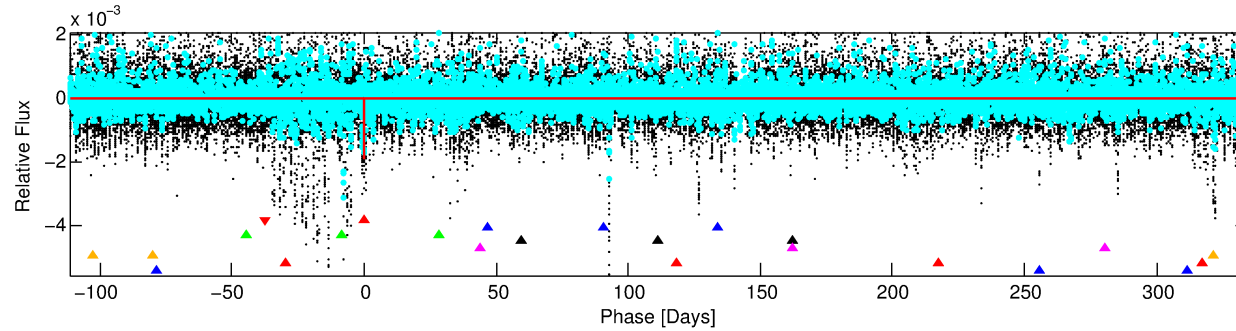
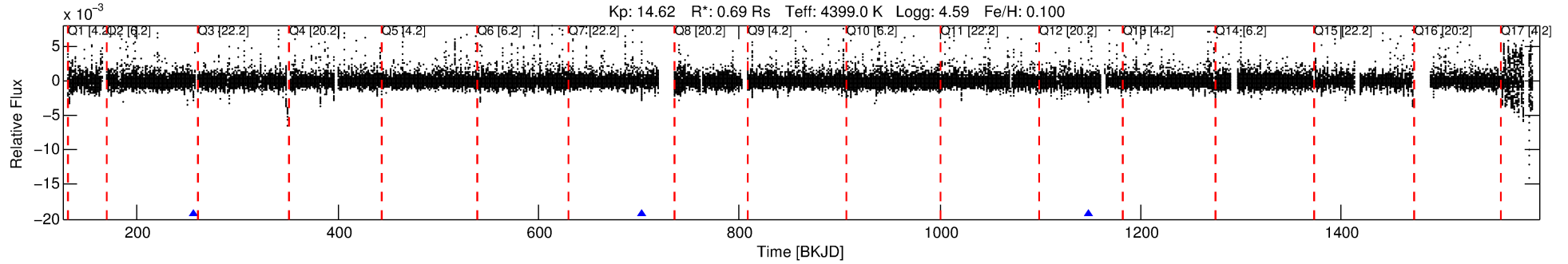
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004249749-01

No Significant Match Found

DV One-Page Summary

KIC: 4249749 Candidate: 1 of 8 Period: 446.117 d



DV Fit Results:

Period = 446.11730 [0.02584] d
Epoch = 256.4229 [0.0389] BKJD
Rp/R* = 0.0415 [0.1219]
a/R* = 575.81 [5100.44]
b = 0.66 [7.76]
Seff = 0.16 [0.02]
Teq = 161 [6] K
Rp = 3.13 [9.21] Re
a = 1.0063 [0.0703] AU
Ag = 56514.71 [332511.69] [0.17 σ]
Teffp = 3836 [5643] K [0.65 σ]

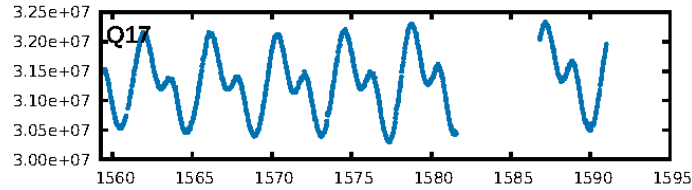
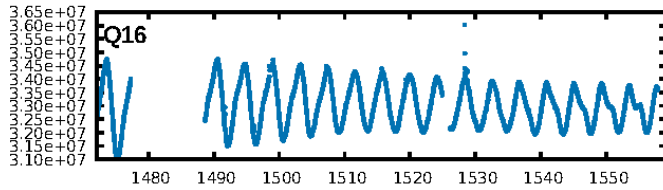
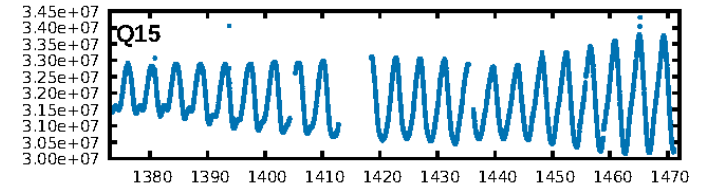
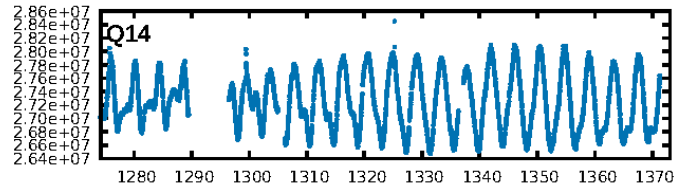
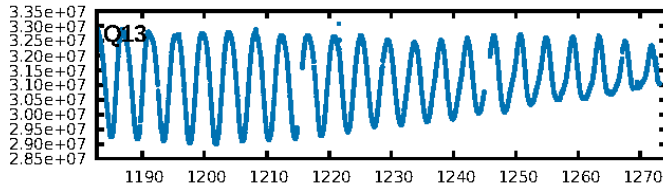
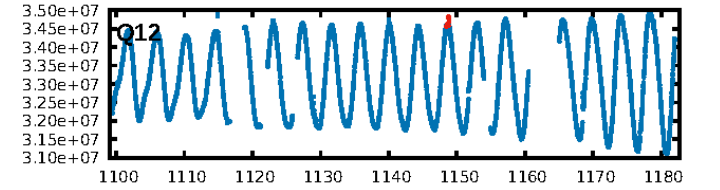
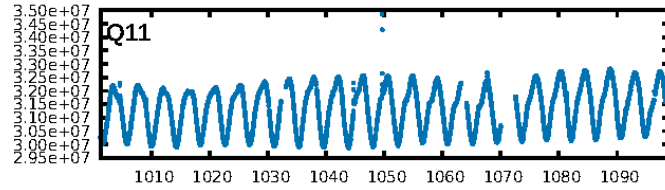
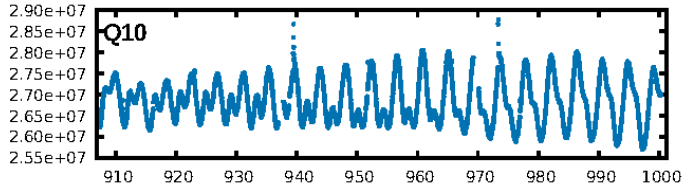
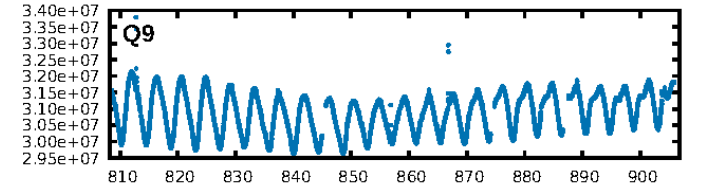
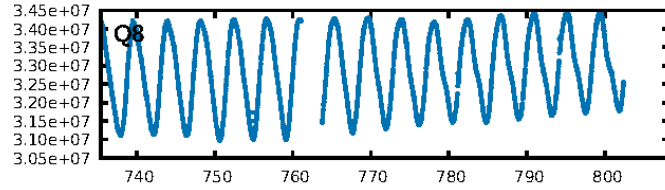
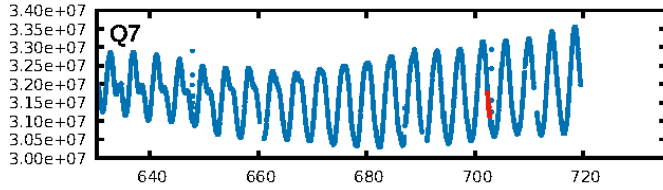
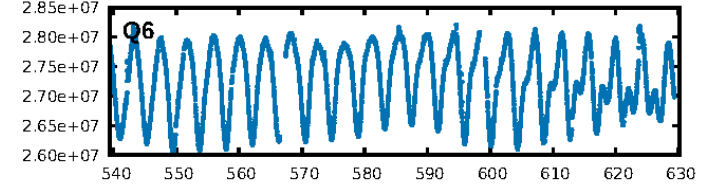
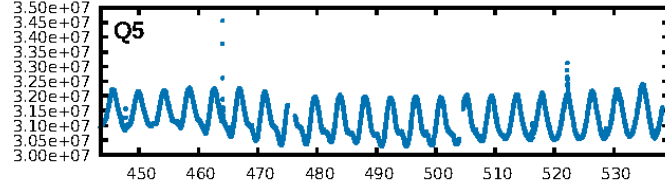
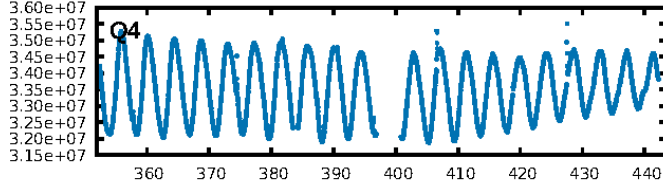
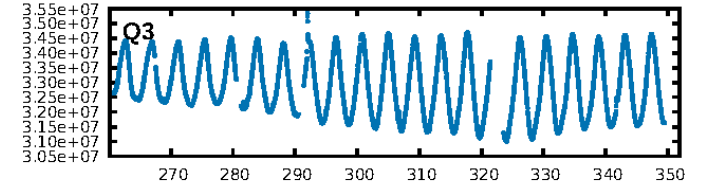
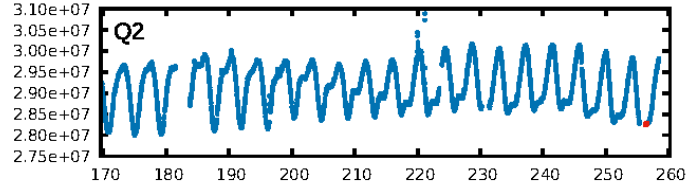
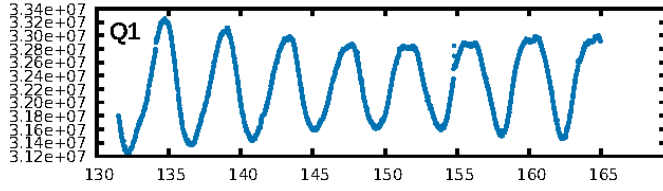
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [84.22 σ]
LongPeriod-sig: 100.0% [111.36 σ]
ModelChiSquare2-sig: 1.3%
ModelChiSquareGof-sig: 61.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 2.942
Centroid-sig: 85.6%
Centroid-so: 0.114 arcsec [0.17 σ]
OotOffset-rm: 0.049 arcsec [0.17 σ]
OotOffset-st: 0/1/1/0 [2]
KicOffset-rm: 0.048 arcsec [0.17 σ]
KicOffset-st: 0/1/1/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

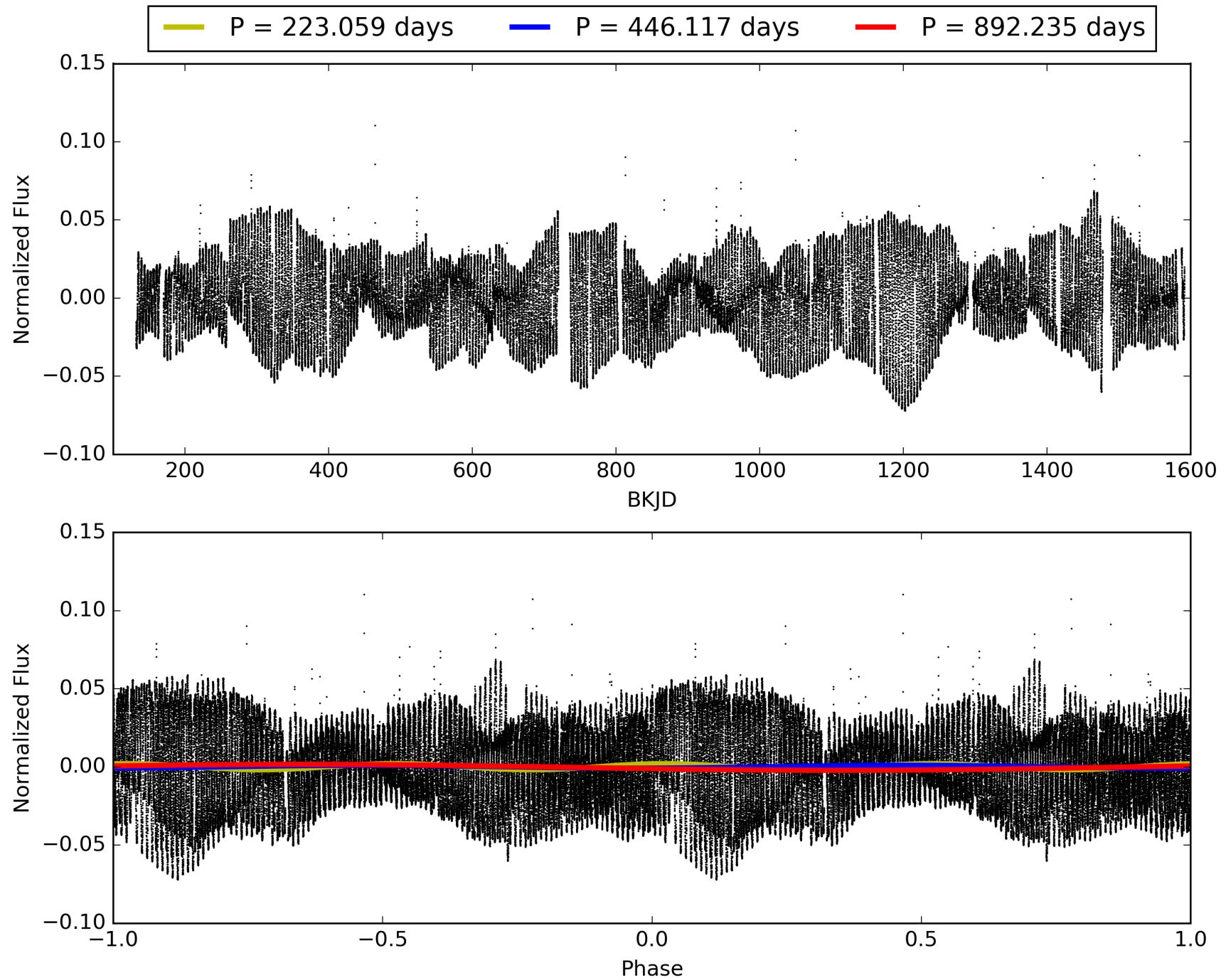
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:23:54 Z

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

TCE 004249749-01, PDC Light Curves

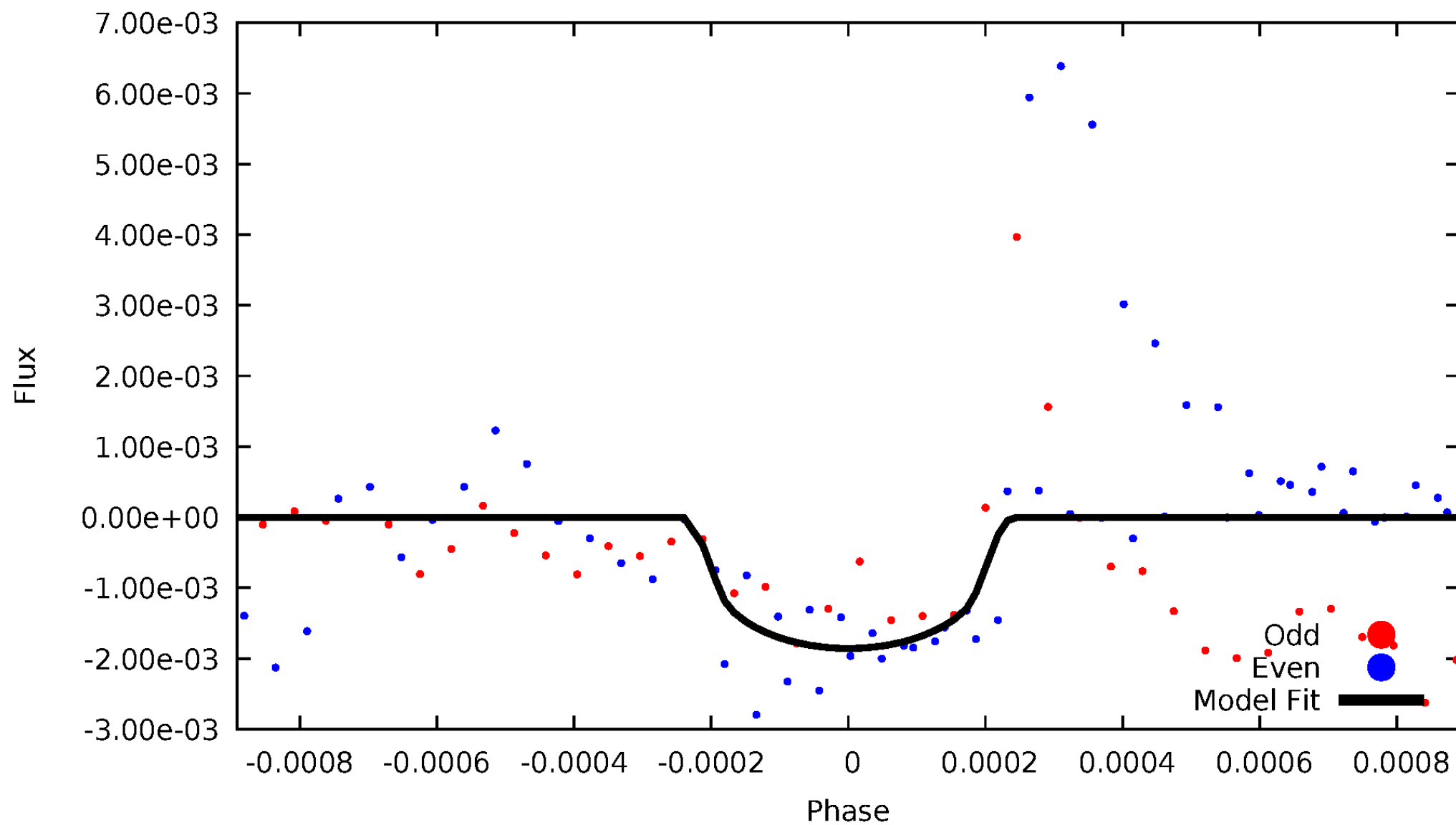


TCE 004249749-01



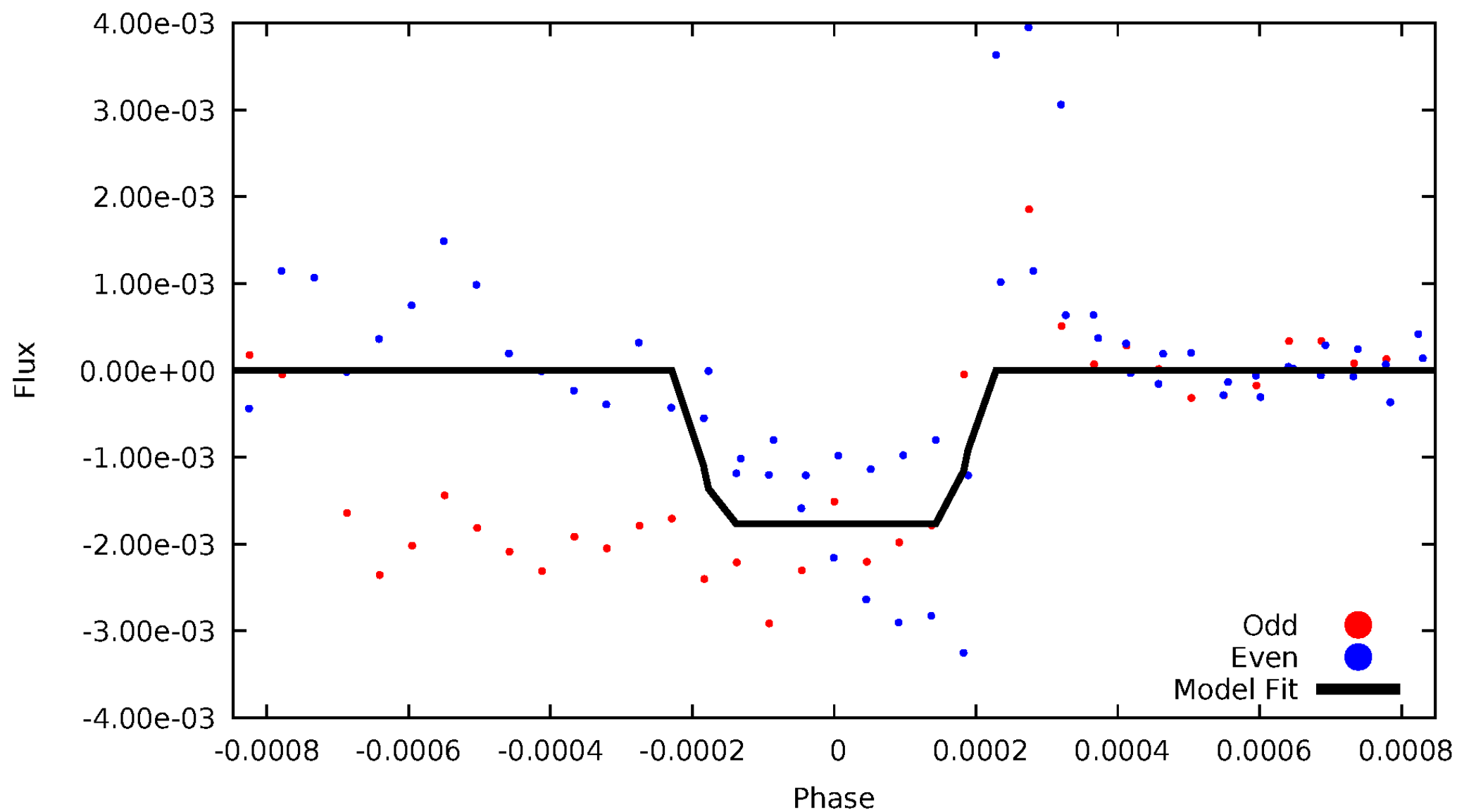
DV Odd/Even

TCE 004249749-01



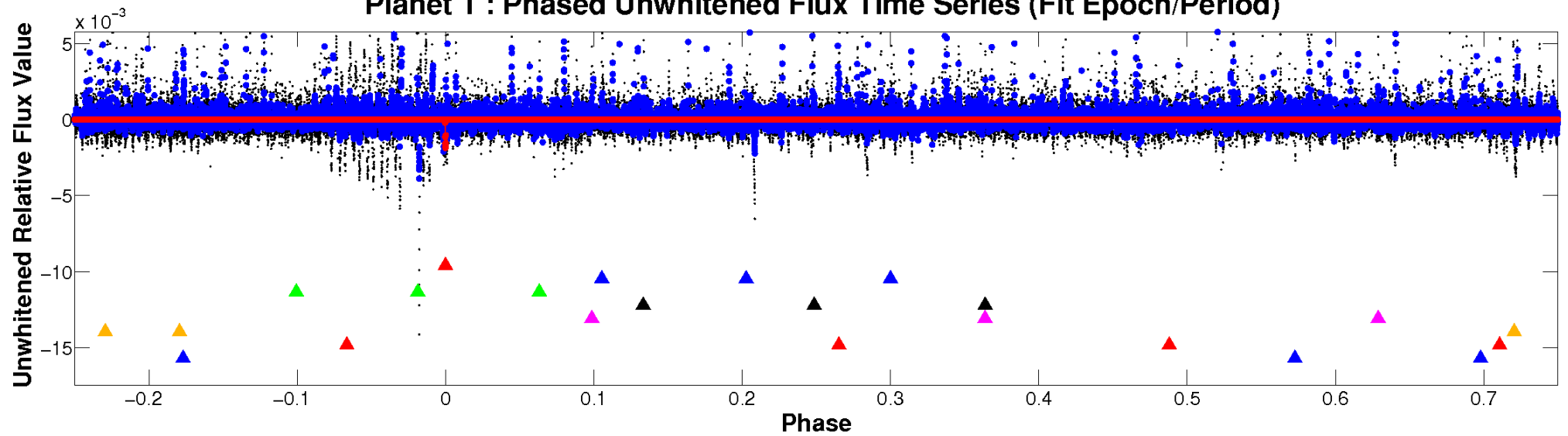
ALT Odd/Even

TCE 004249749-01

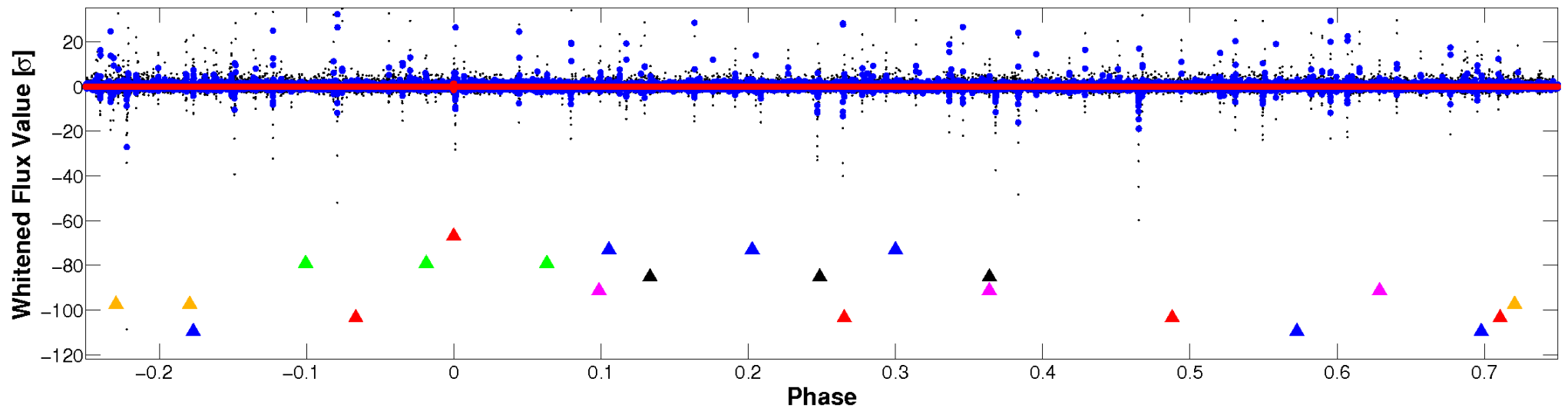


Non-Whitened Vs. Whitened Light Curve

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

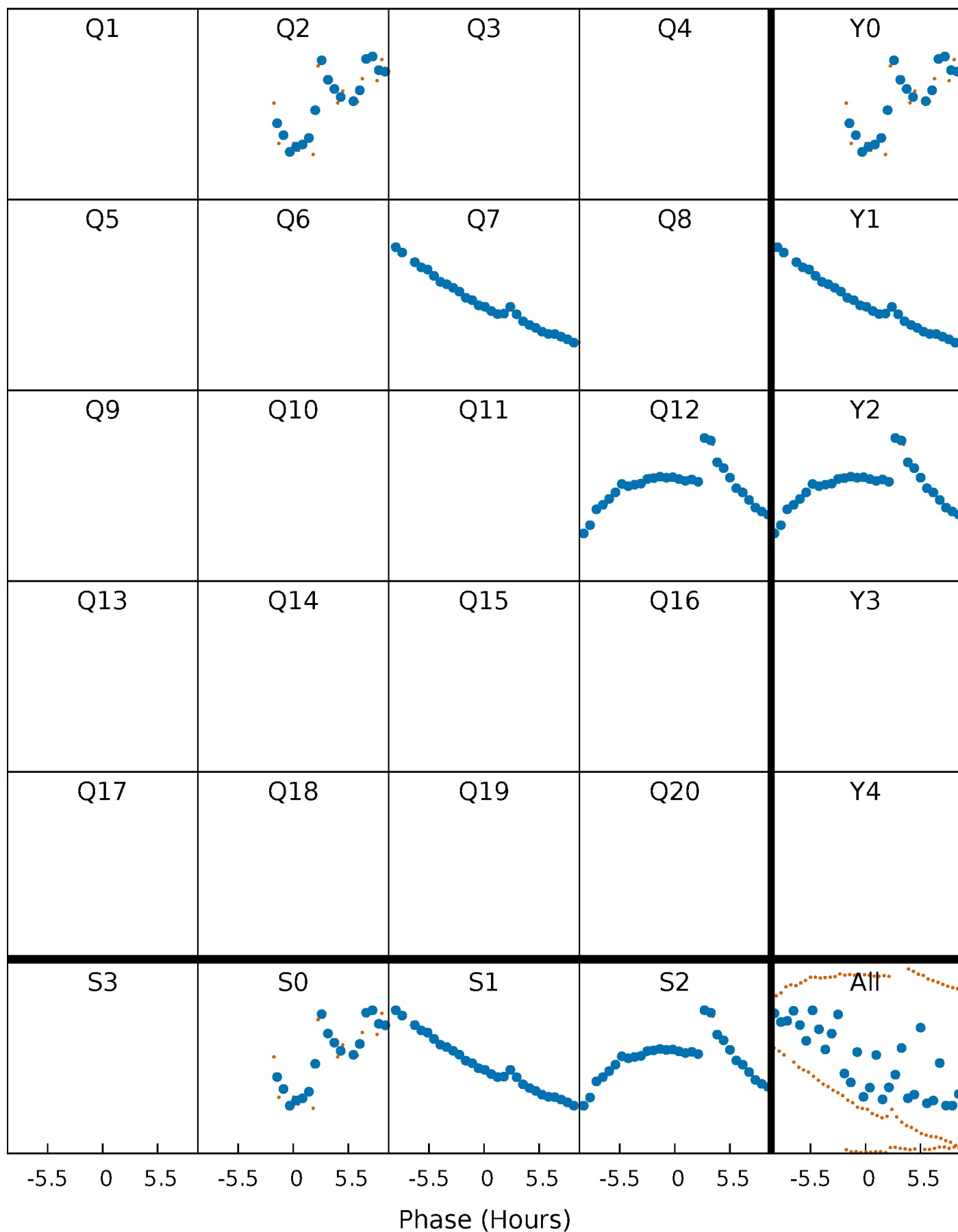


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



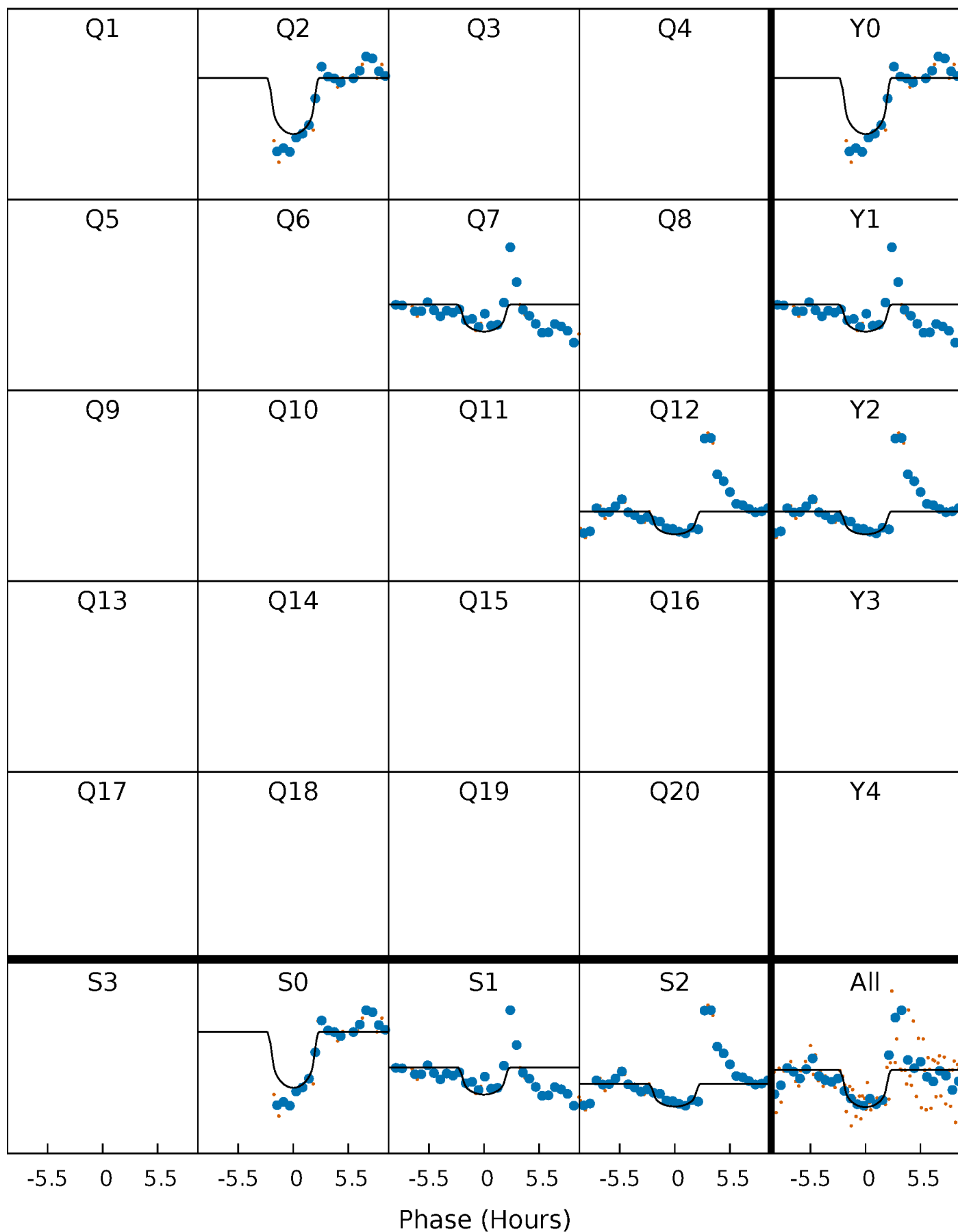
PDC Quarter-Phased Transit Curves

TCE 004249749-01 P=446.117304 Days $T_0=256.422906$ (BKJD)



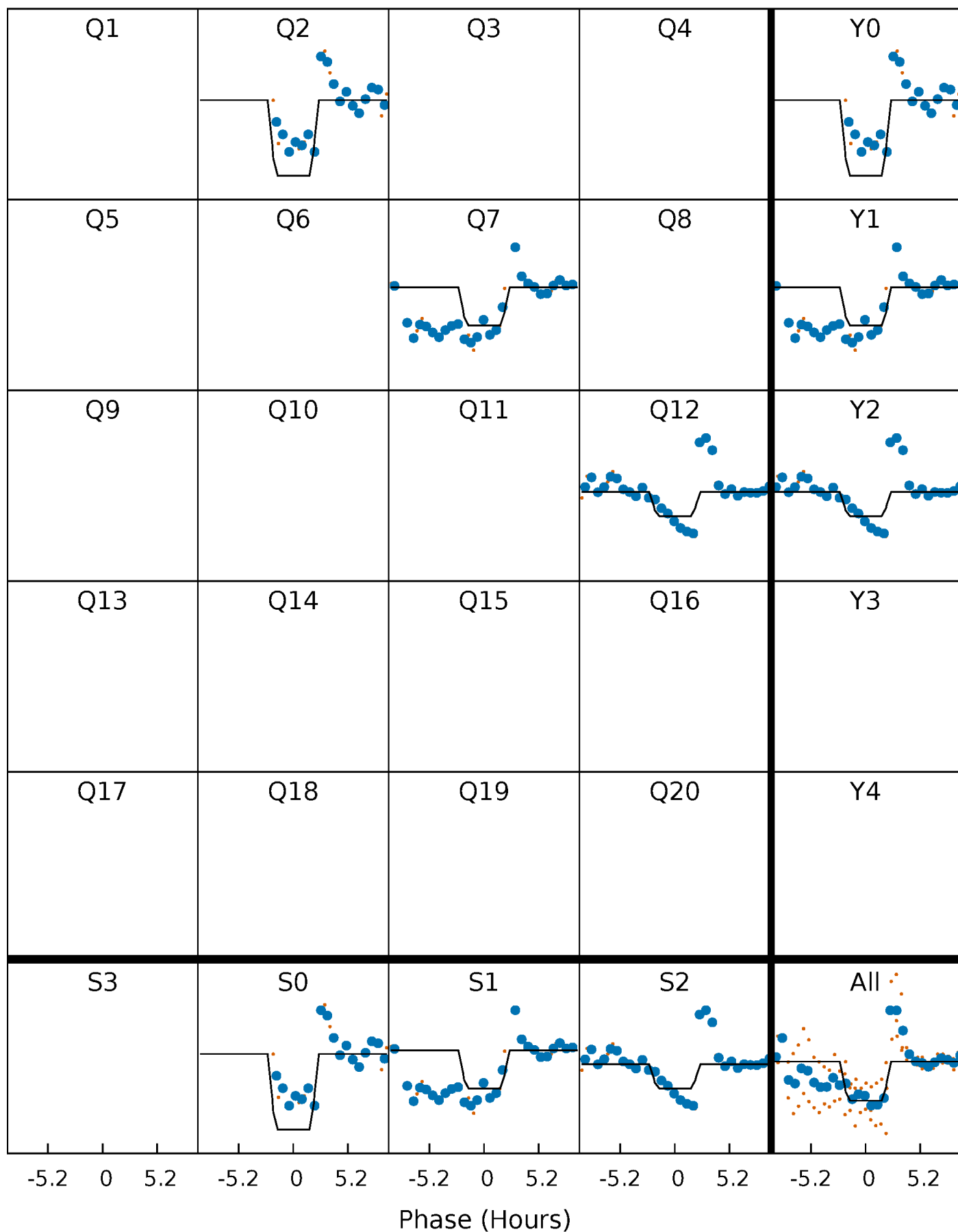
DV Quarter-Phased Transit Curves

TCE 004249749-01 P=446.117304 Days $T_0=256.422906$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

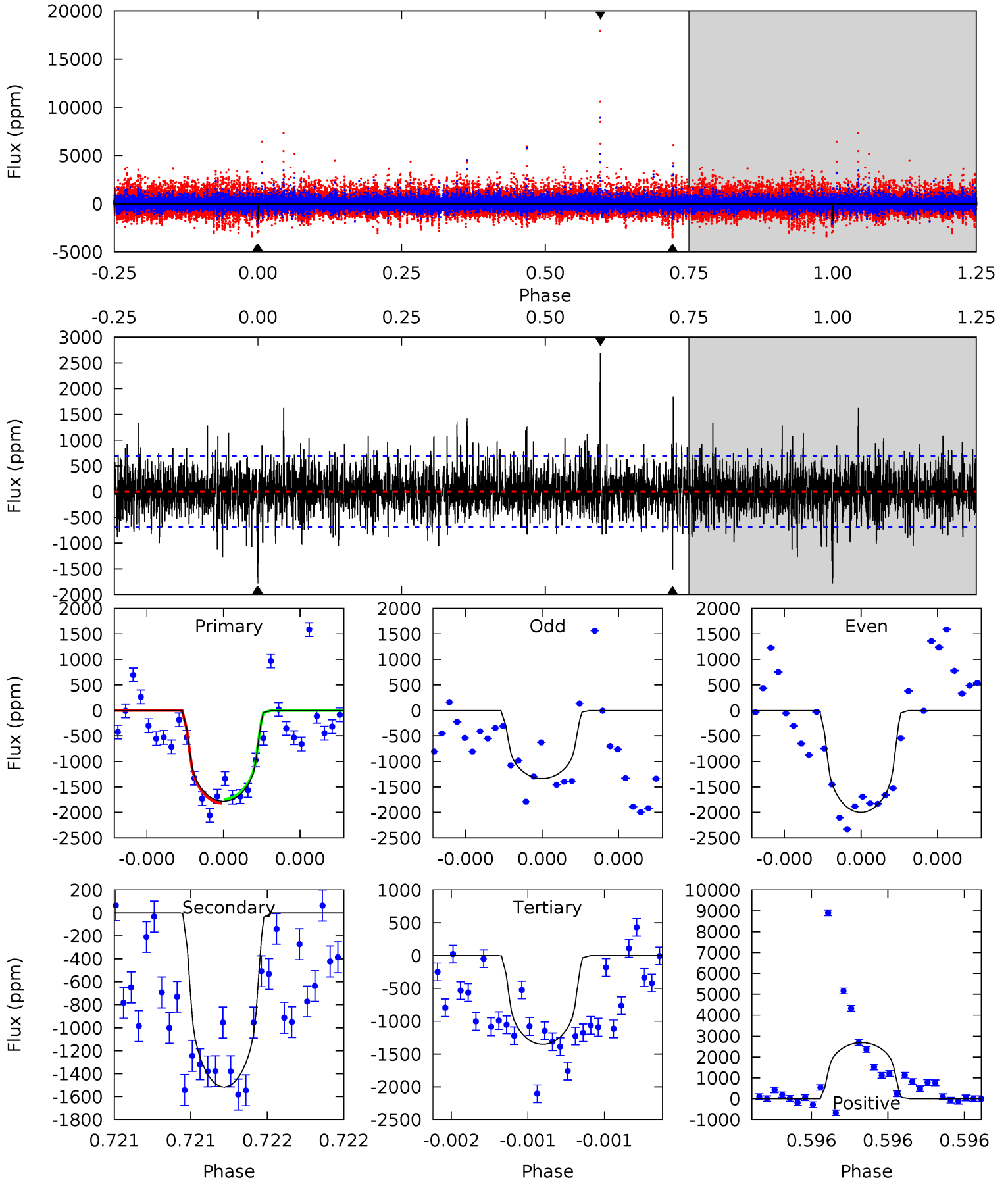
TCE 004249749-01 P=446.125916 Days $T_0=256.421635$ (BKJD)



DV Model-Shift Uniqueness Test

004249749-01, P = 446.117304 Days, E = 256.422906 Days

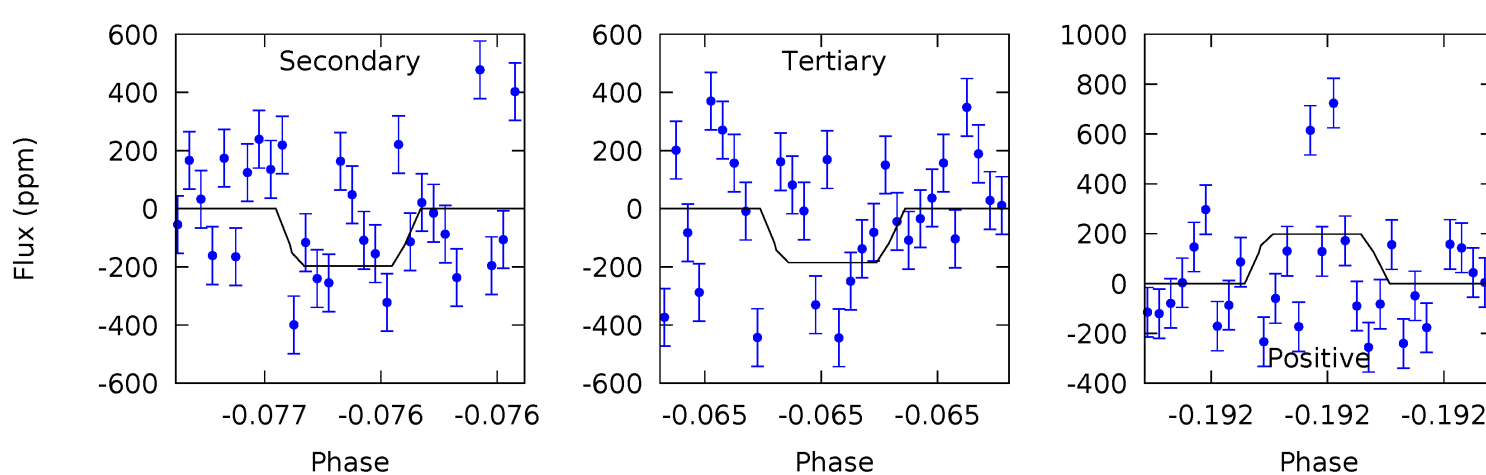
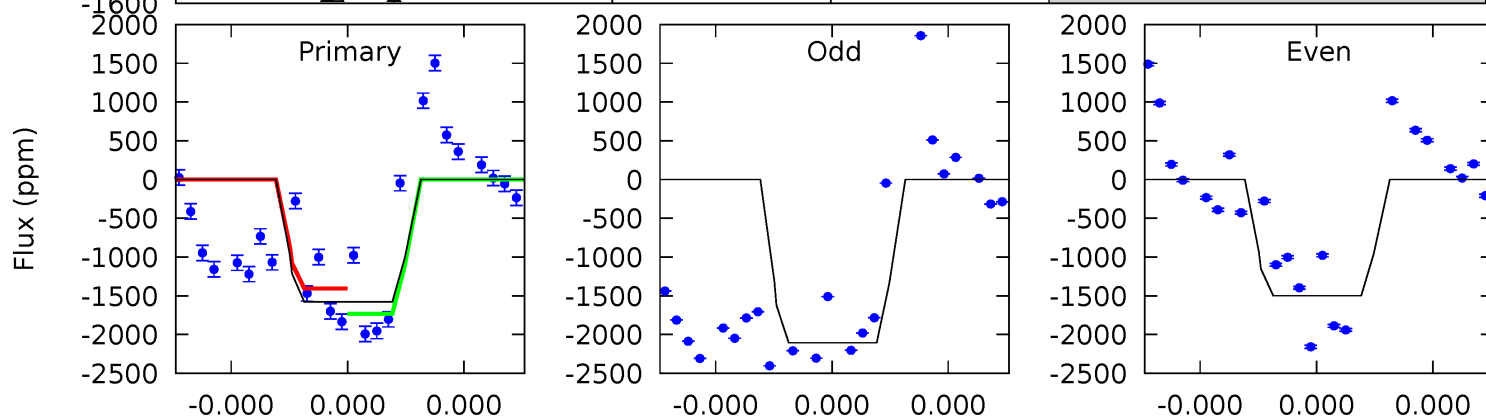
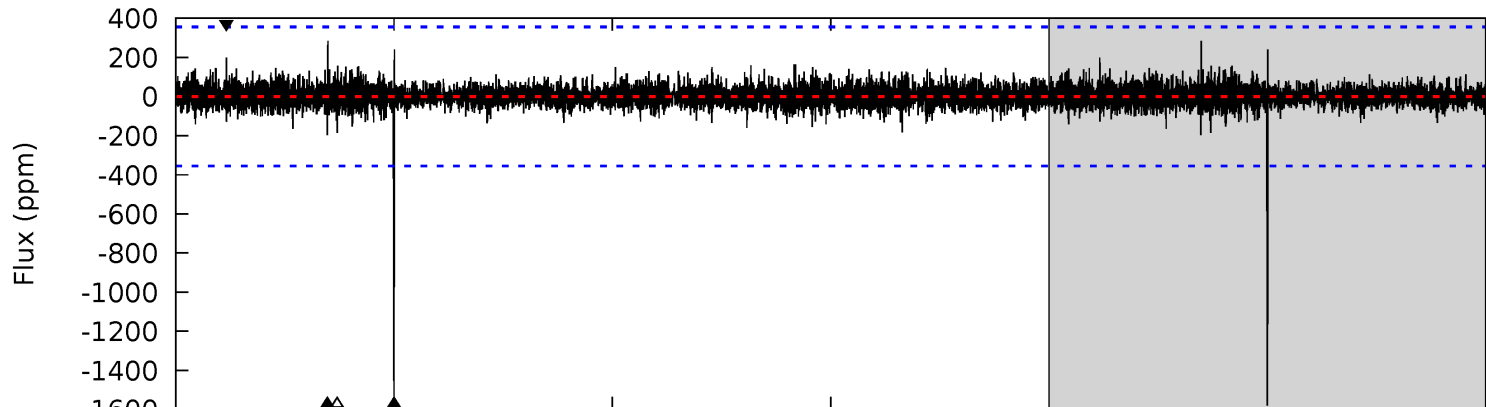
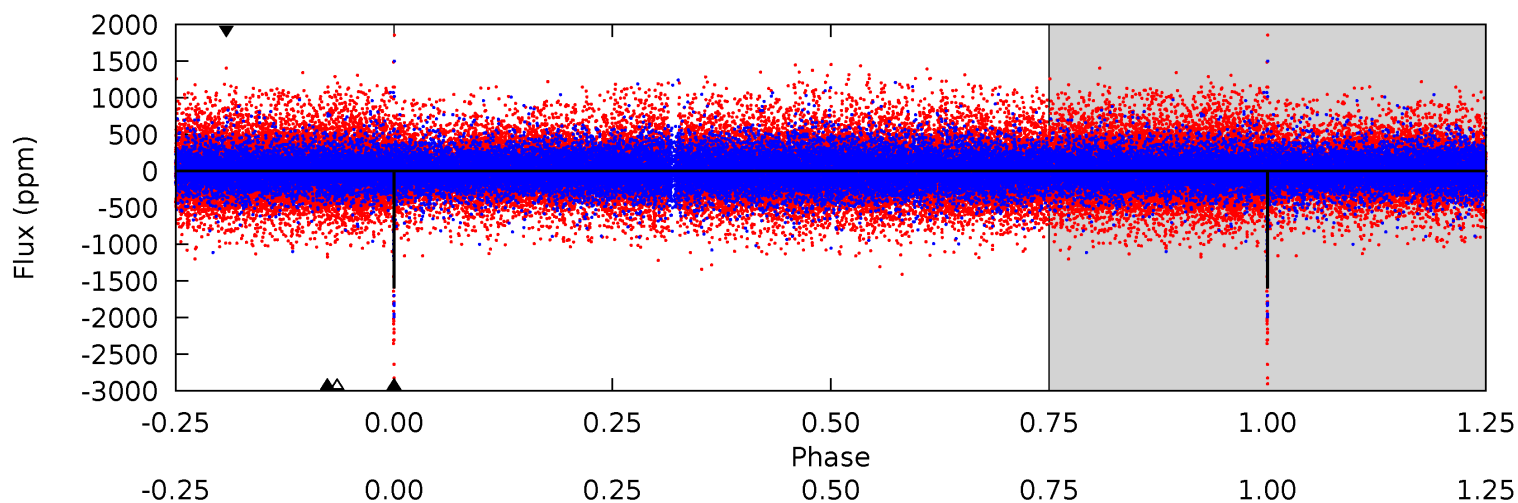
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	12.3	10.9	21.7	5.59	3.51	2.57	3.44	-7.34	1.31	-9.47	1.65	1.10	0.60	0.34



Alt Model-Shift Uniqueness Test

004249749-01, P = 446.125916 Days, E = 256.421635 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
25.0	3.11	2.94	3.13	5.62	3.56	0.61	22.1	21.9	0.18	-0.02	4.34	0.83	0.15	2.60



Stellar Parameters For KIC 004249749

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4399^{+132}_{-132}	$4.592^{+0.053}_{-0.018}$	$0.100^{+0.250}_{-0.300}$	$0.692^{+0.033}_{-0.059}$	$0.683^{+0.055}_{-0.050}$	$2.902^{+0.625}_{-0.250}$
	+3%/-3%	+1%/-0%	+250%/-300%	+5%/-9%	+8%/-7%	+22%/-9%
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 004249749-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1516 ± 124	$7.78^{+7.44}_{-5.65}$	223^{+7}_{-7}	3184^{+1738}_{-542}	$14413^{+159535}_{-10618}$
Alt.	-197 ± 63	$8.48^{+6.38}_{-5.84}$	223^{+6}_{-8}	2386^{+839}_{-321}	1631^{+12915}_{-1182}

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

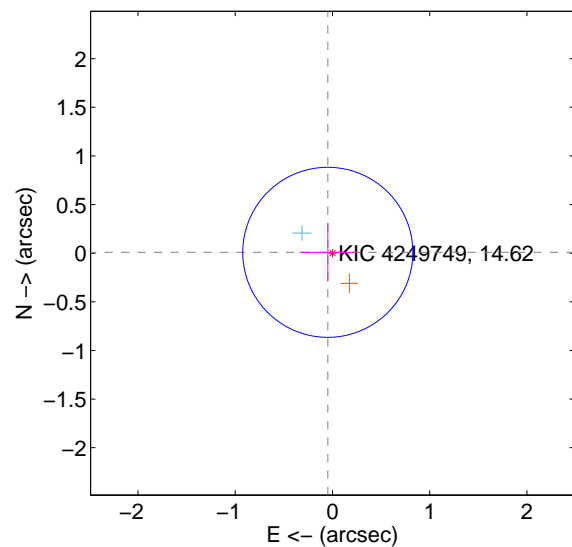
Supplemental centroid analysis for 004249749-01. Kepler magnitude: 14.62. Transit SNR 7.66

There are 1 quarters with good PRF difference image offsets

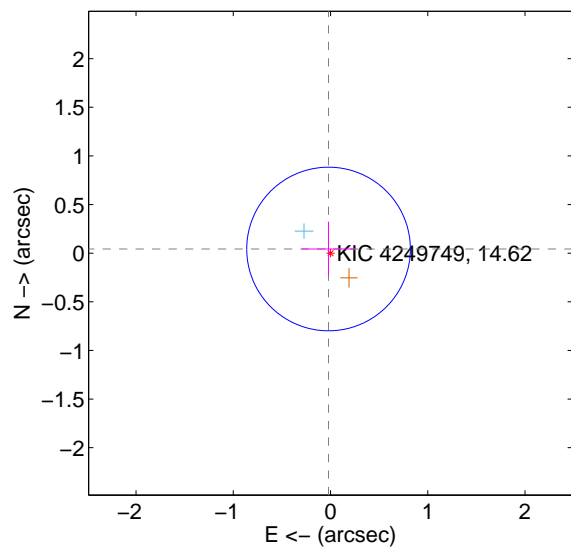
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.049 ± 0.291	0.17	0.048 ± 0.291	0.009 ± 0.301
PRF-fit source offset from KIC position	0.048 ± 0.280	0.17	0.020 ± 0.277	0.043 ± 0.281
photometric centroid source offset	0.11 ± 0.65	0.17	-0.11 ± 0.63	0.04 ± 0.83

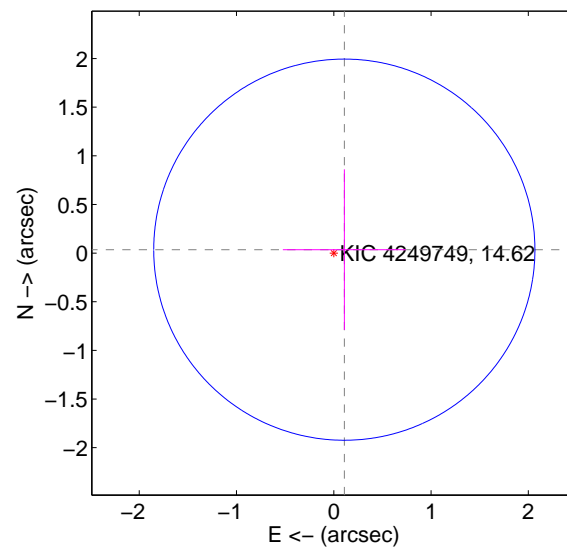
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

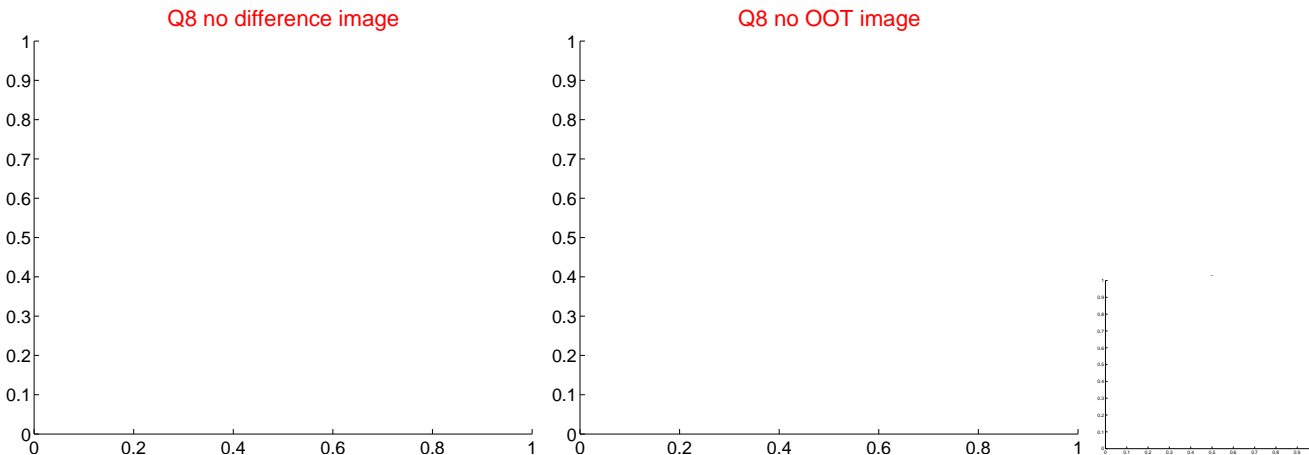
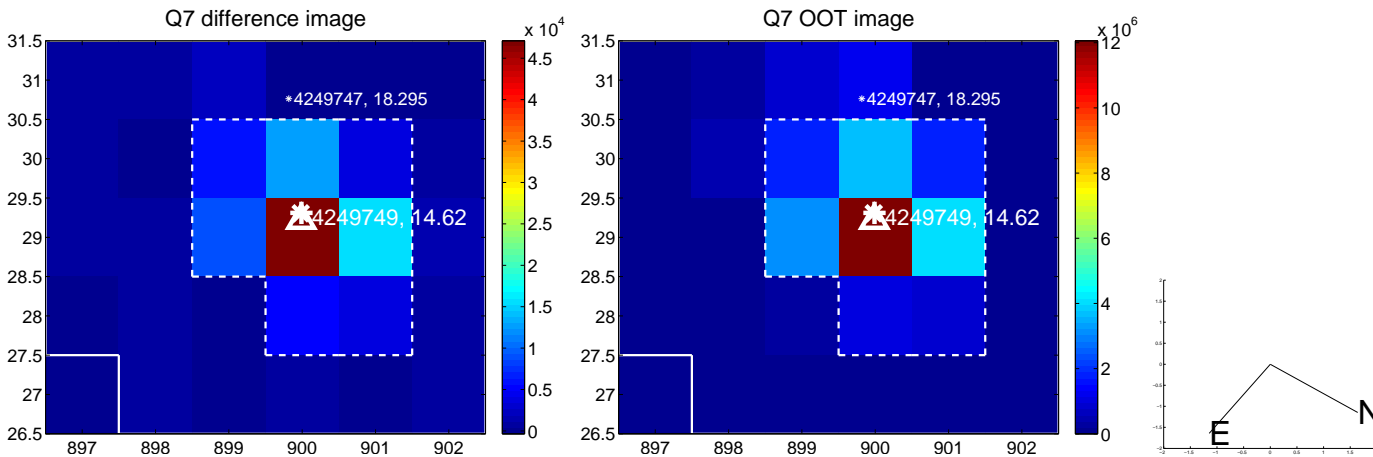
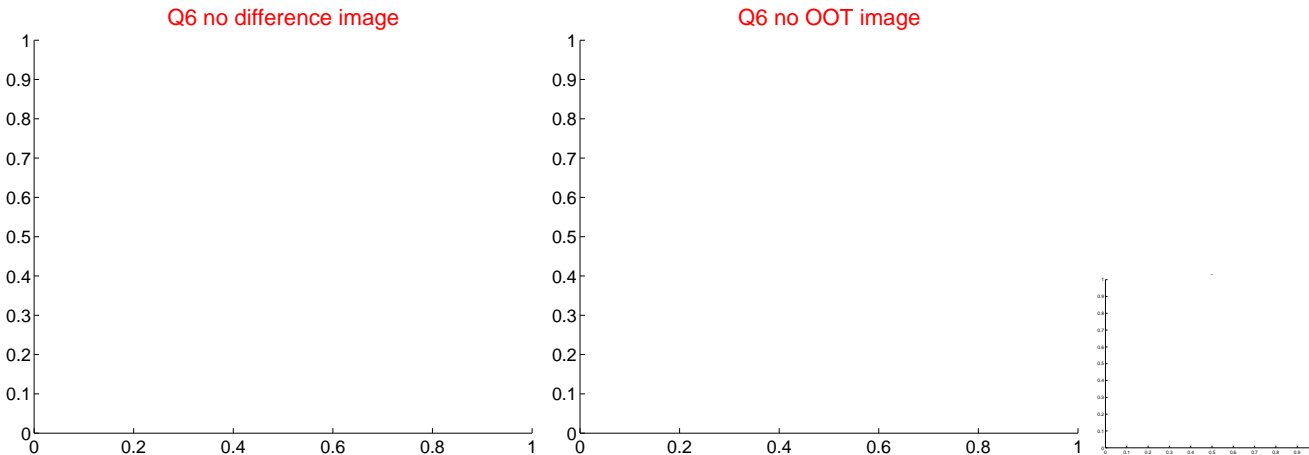
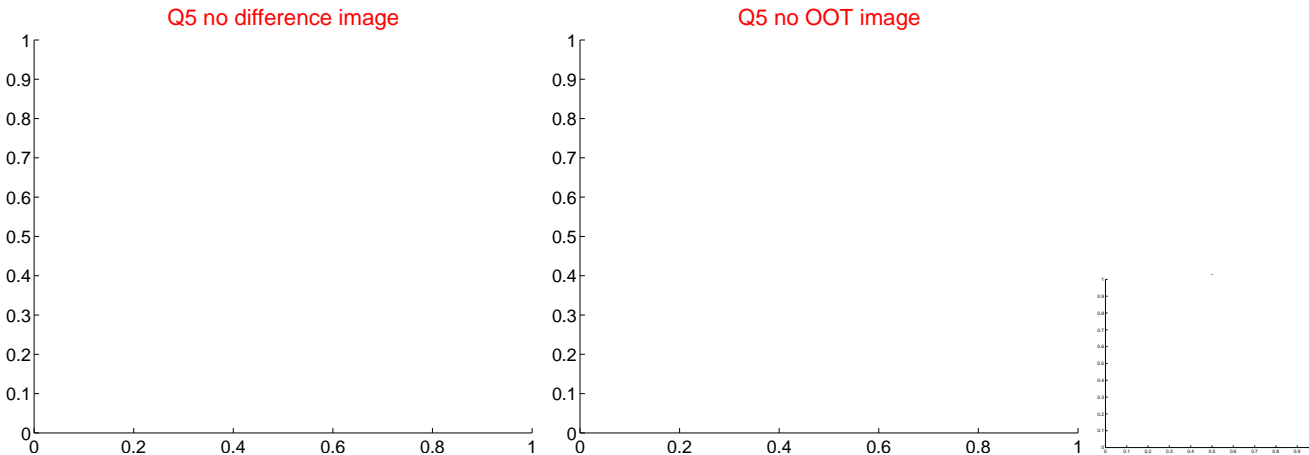


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

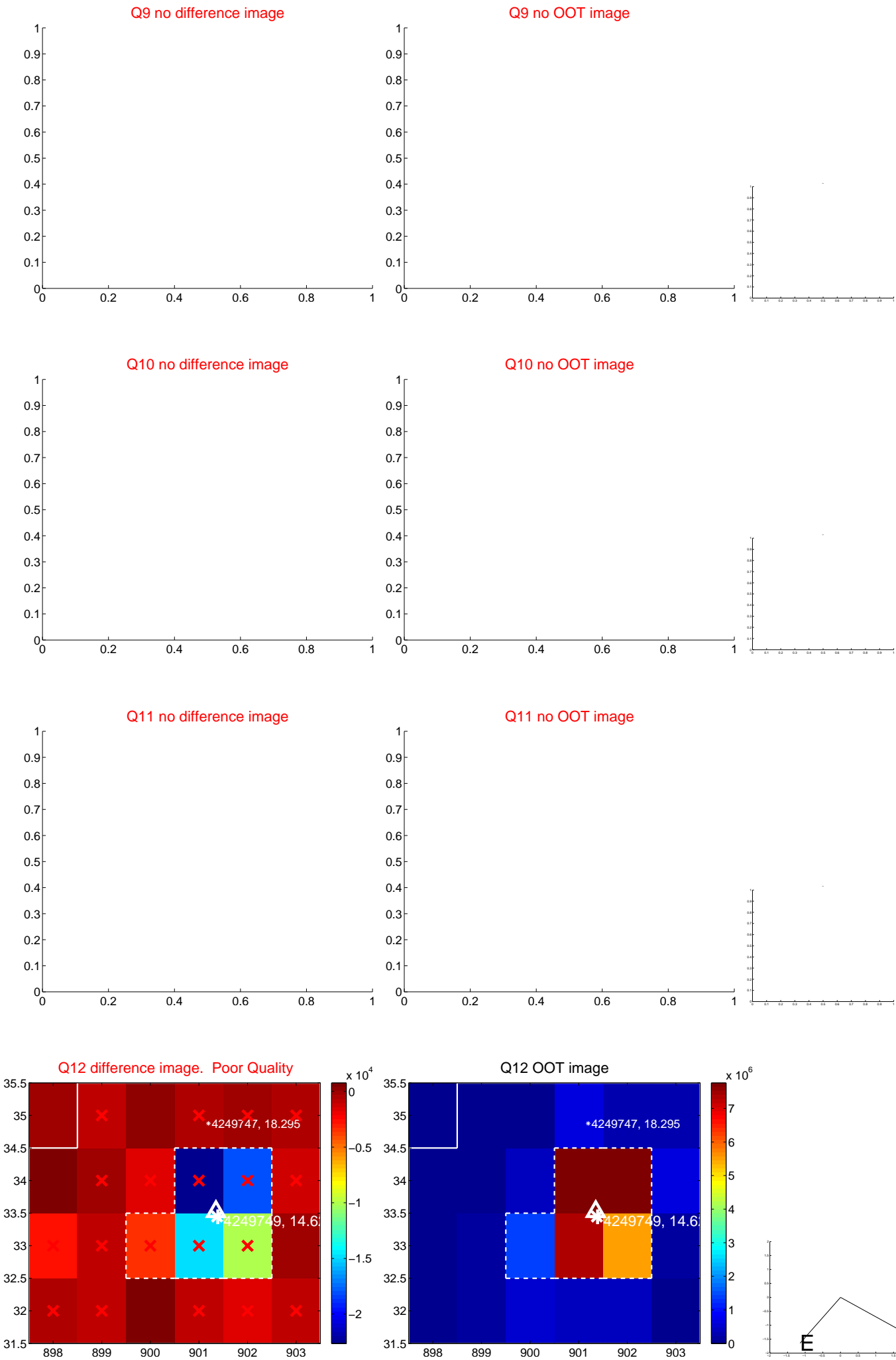
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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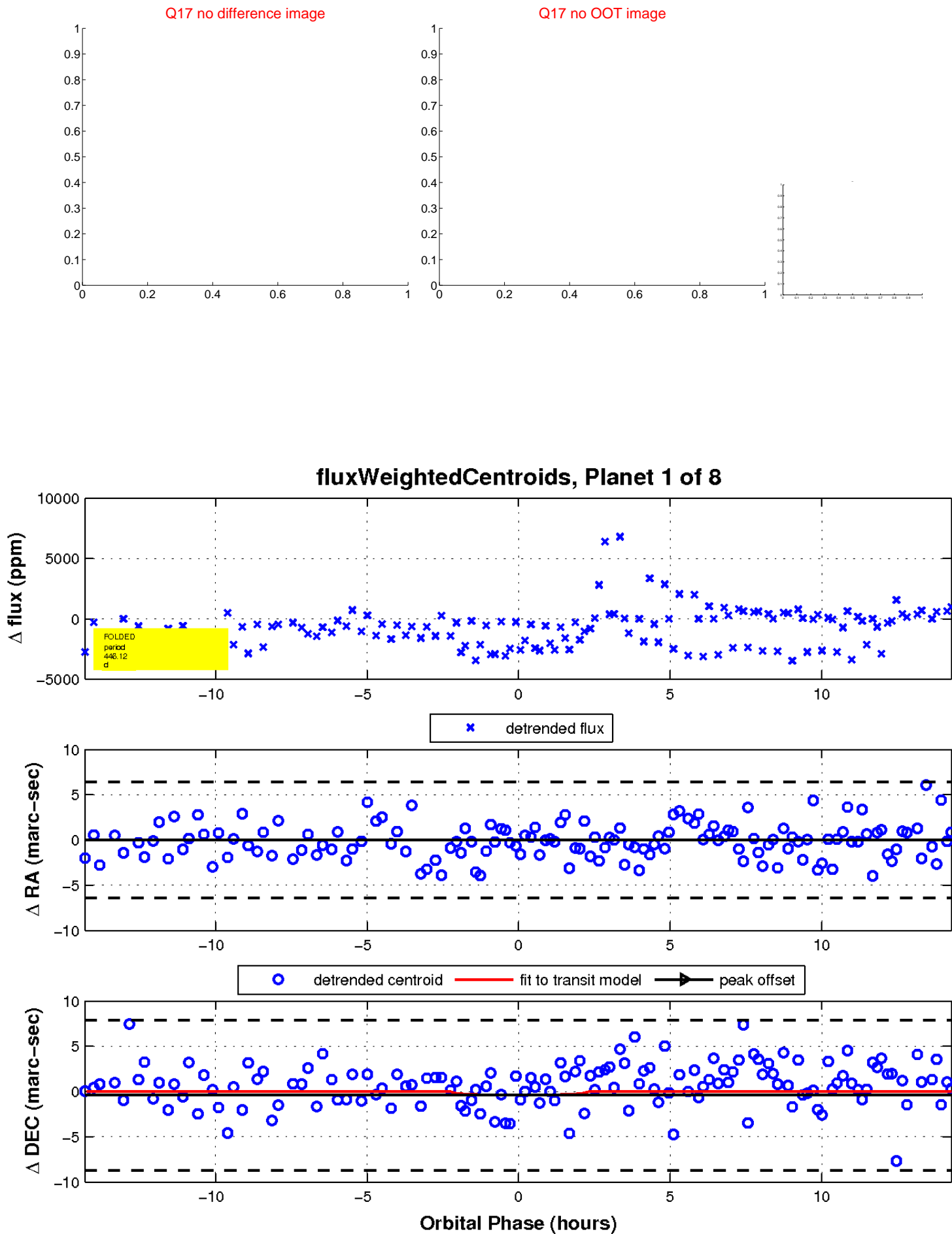
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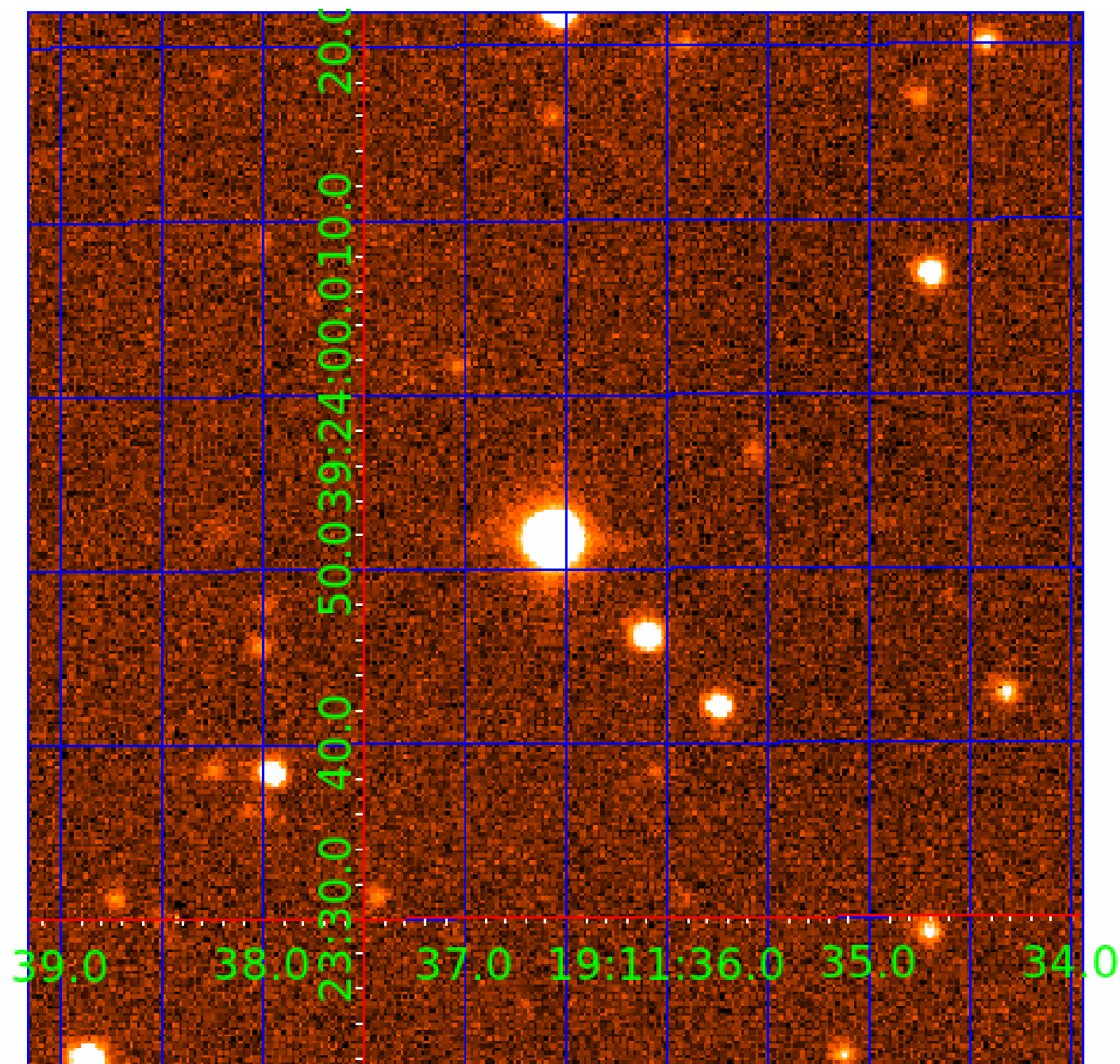


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UKIRT Image

Declination



KIC 004249749

Q1-17 DR25 TCE Parameters

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004249749-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
004249749-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

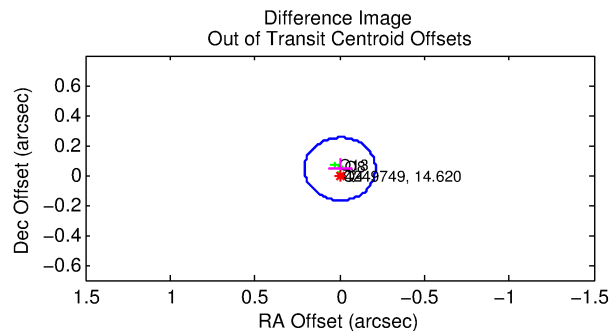
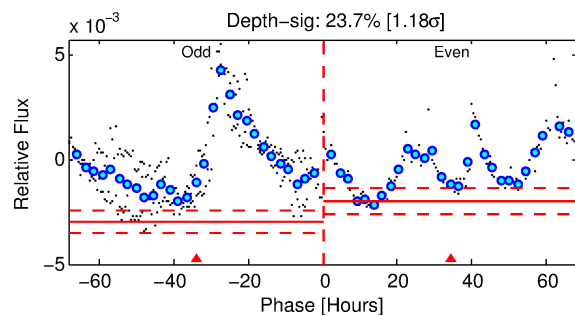
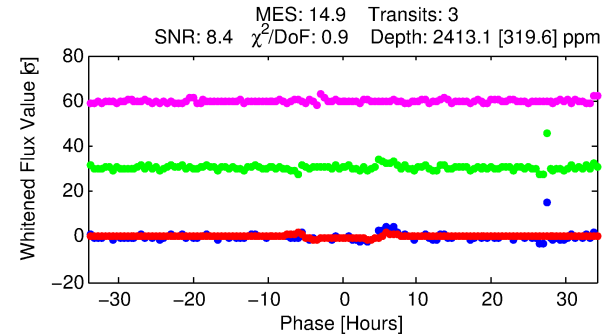
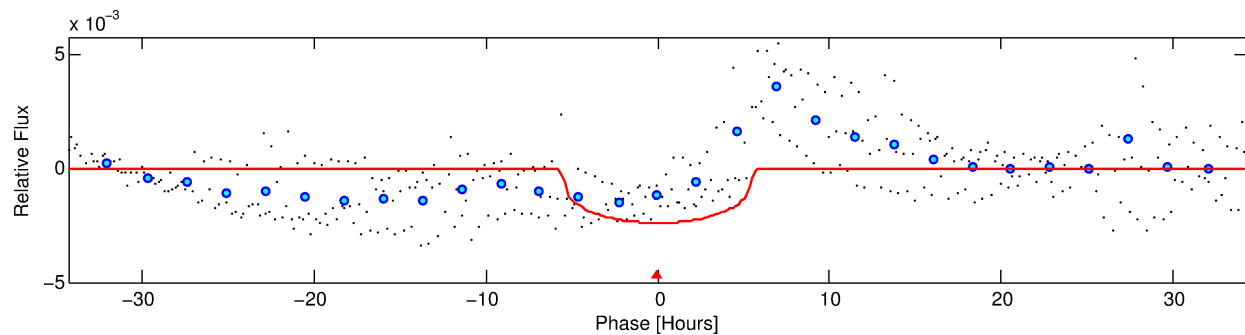
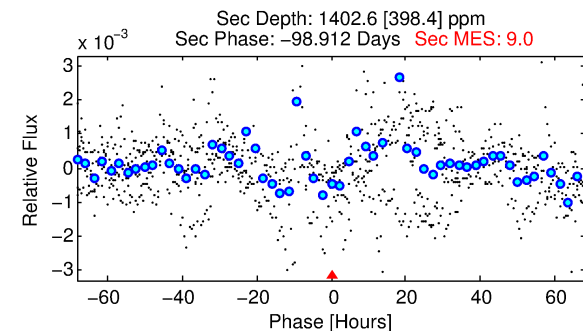
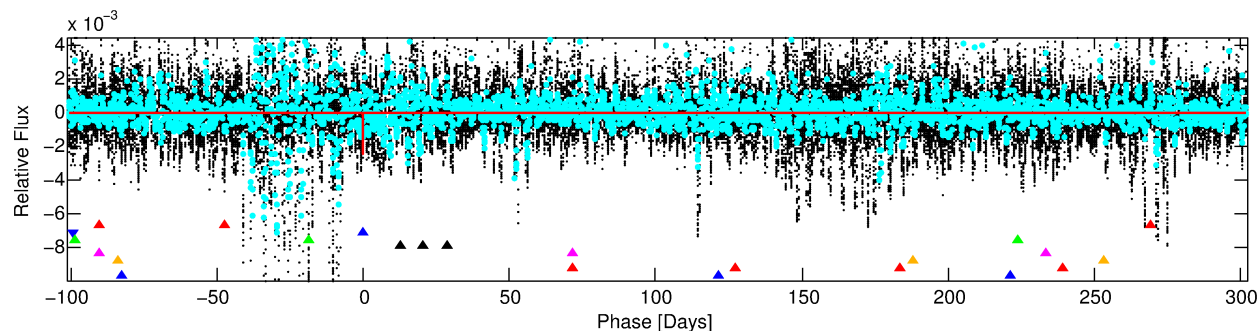
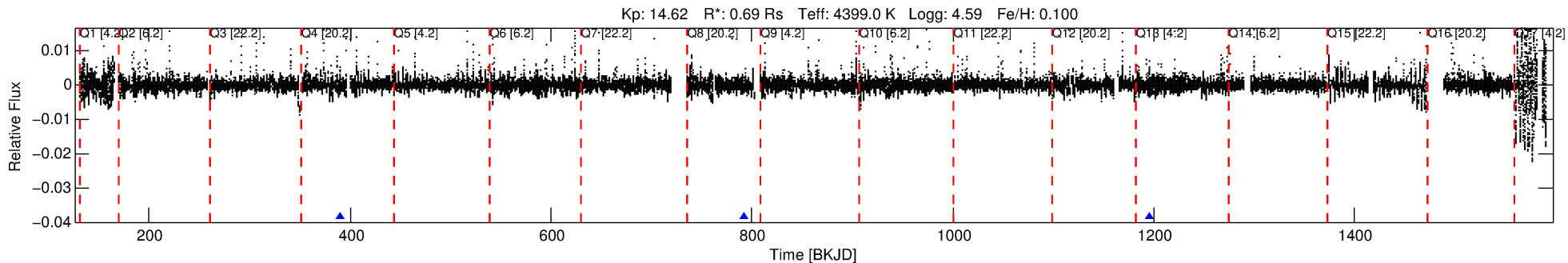
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004249749-02

No Significant Match Found

DV One-Page Summary

KIC: 4249749 Candidate: 2 of 8 Period: 402.699 d



DV Fit Results:

Period = 402.69896 [0.00475] d
Epoch = 390.2753 [0.0064] BKJD
Rp/R* = 0.0429 [0.0135]
a/R* = 281.05 [252.58]
b = 0.00 [3362.14]
Seff = 0.18 [0.03]
Teq = 167 [6] K
Rp = 3.24 [1.06] Re
a = 0.9399 [0.0657] AU
Ag = 64939.66 [45305.82] [1.43σ]
Teffp = 4110 [720] K [5.48σ]

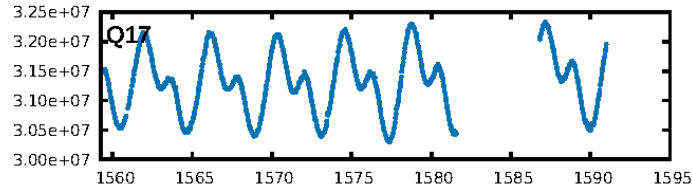
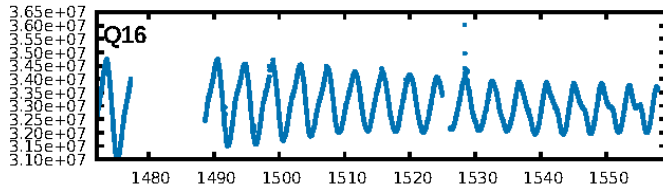
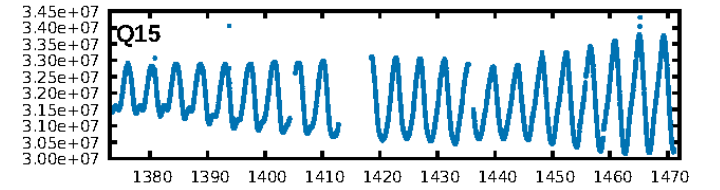
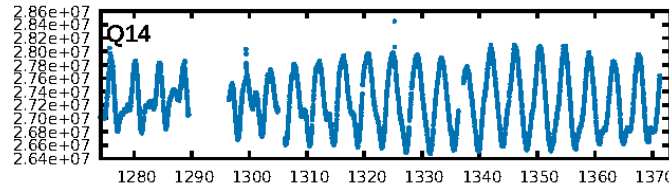
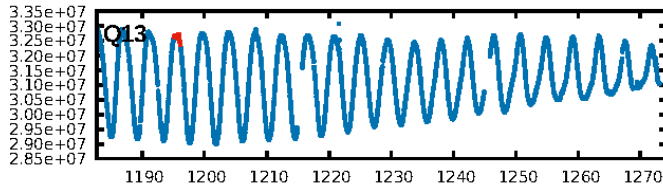
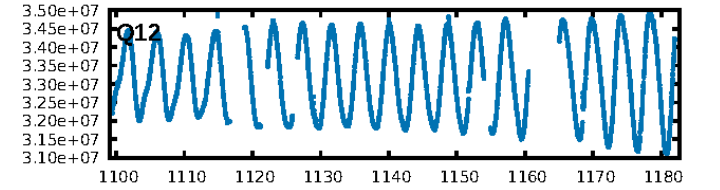
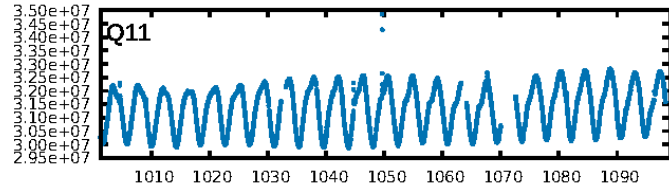
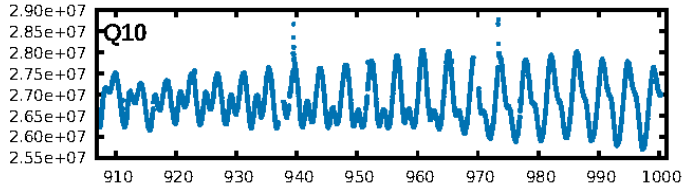
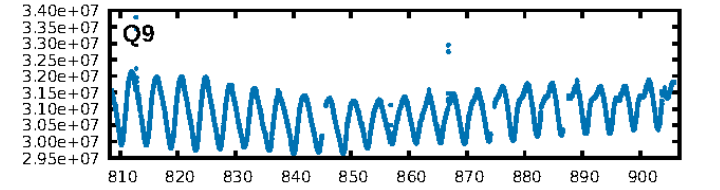
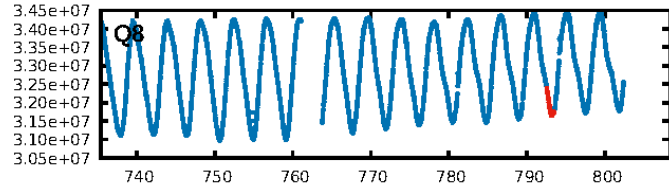
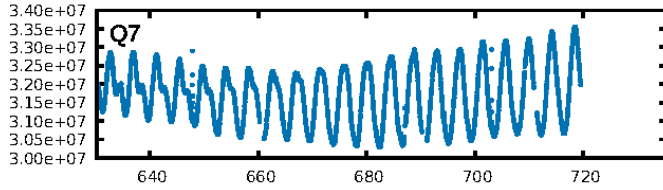
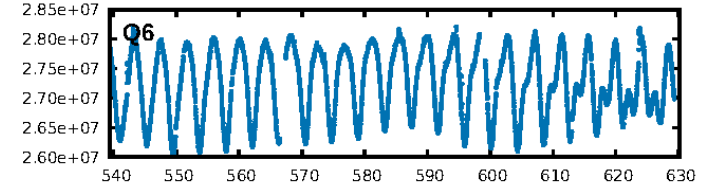
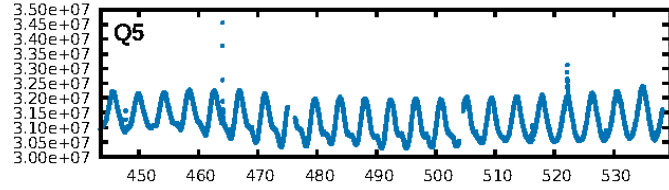
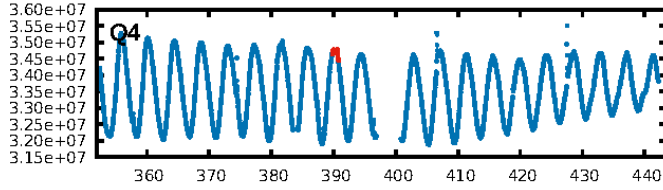
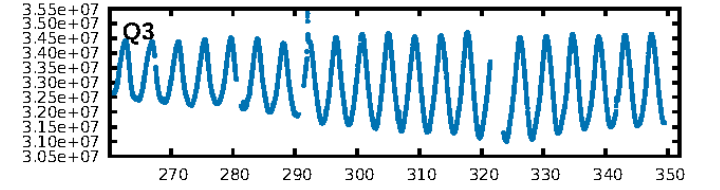
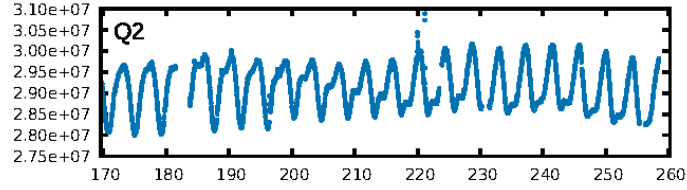
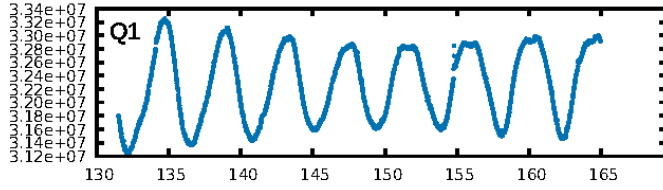
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [15.77σ]
LongPeriod-sig: 100.0% [84.22σ]
ModelChiSquare2-sig: 72.5%
ModelChiSquareGof-sig: 99.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.172
Centroid-sig: 16.8%
Centroid-so: 0.413 arcsec [0.90σ]
OotOffset-rm: 0.041 arcsec [0.59σ]
OotOffset-st: 0/0/2/1 [3]
KicOffset-rm: 0.090 arcsec [1.18σ]
KicOffset-st: 0/0/2/1 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

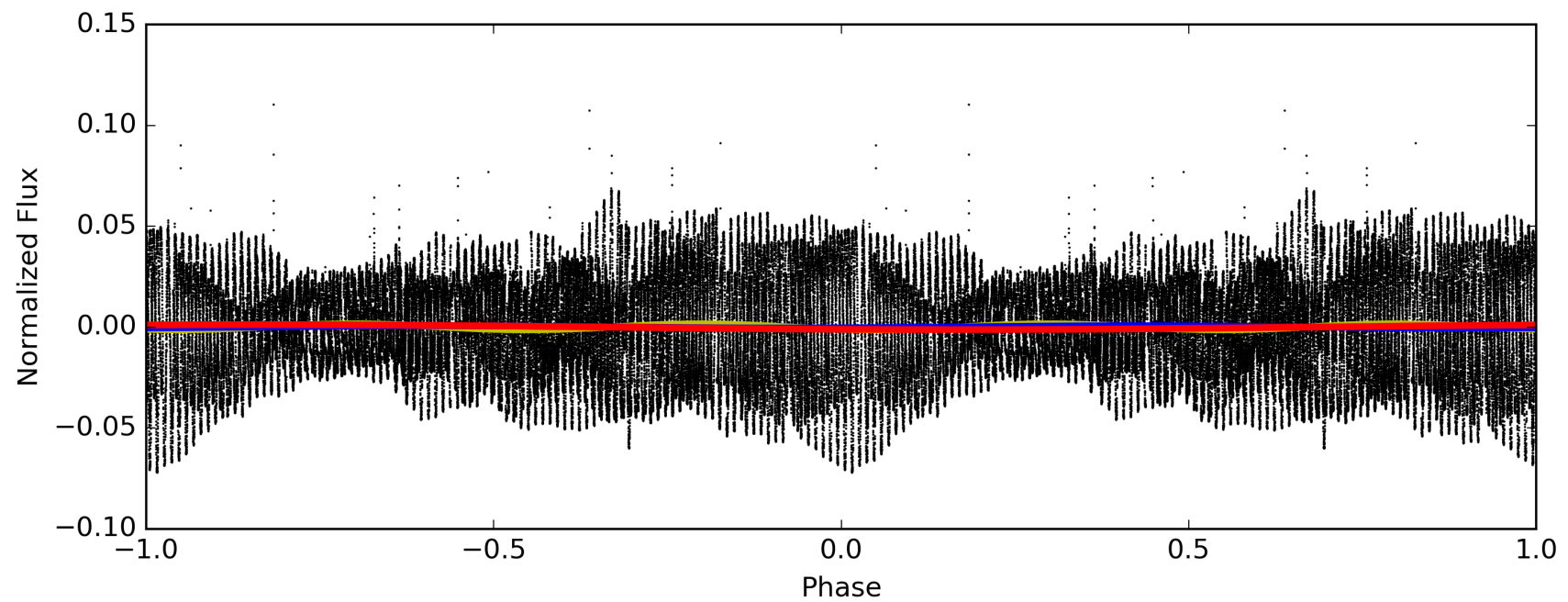
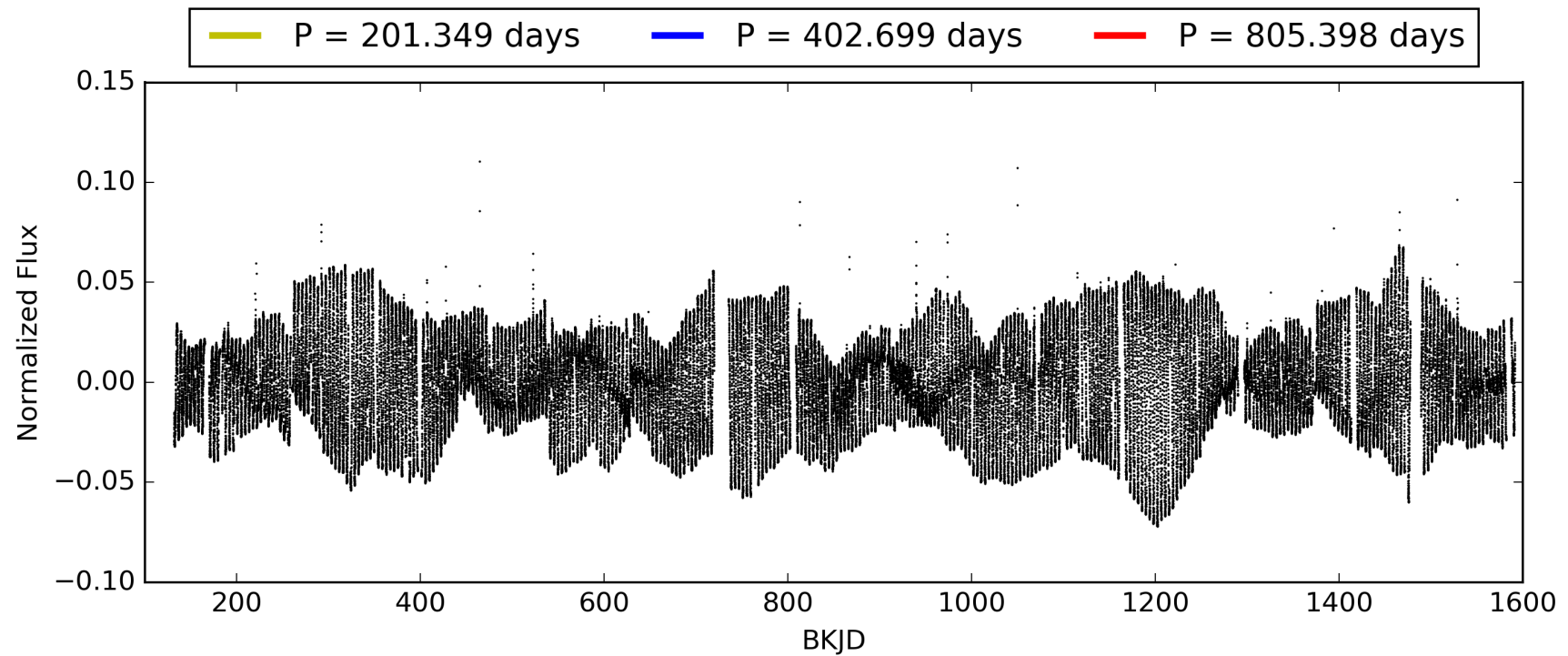
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:24:03 Z

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

TCE 004249749-02, PDC Light Curves

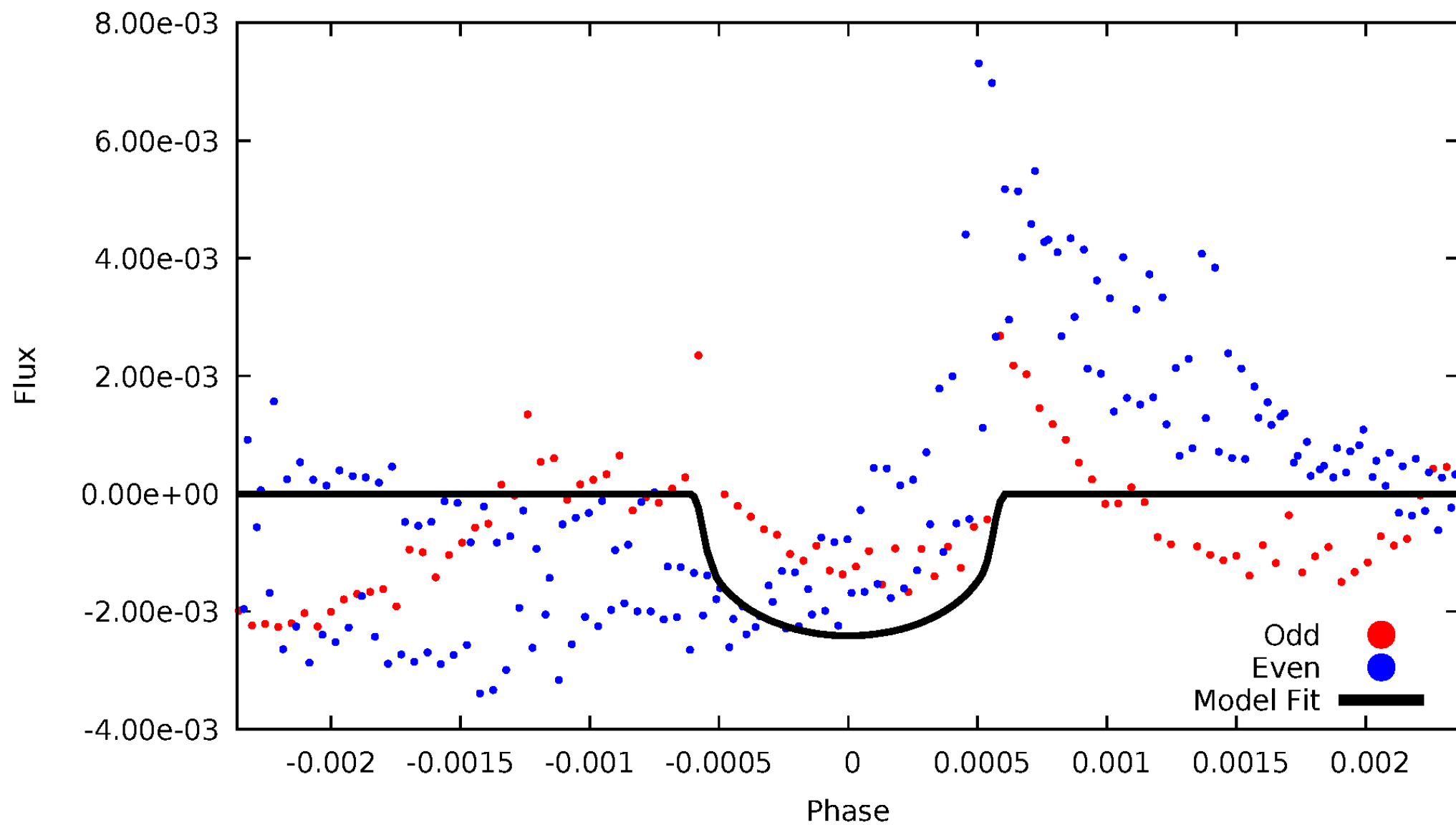


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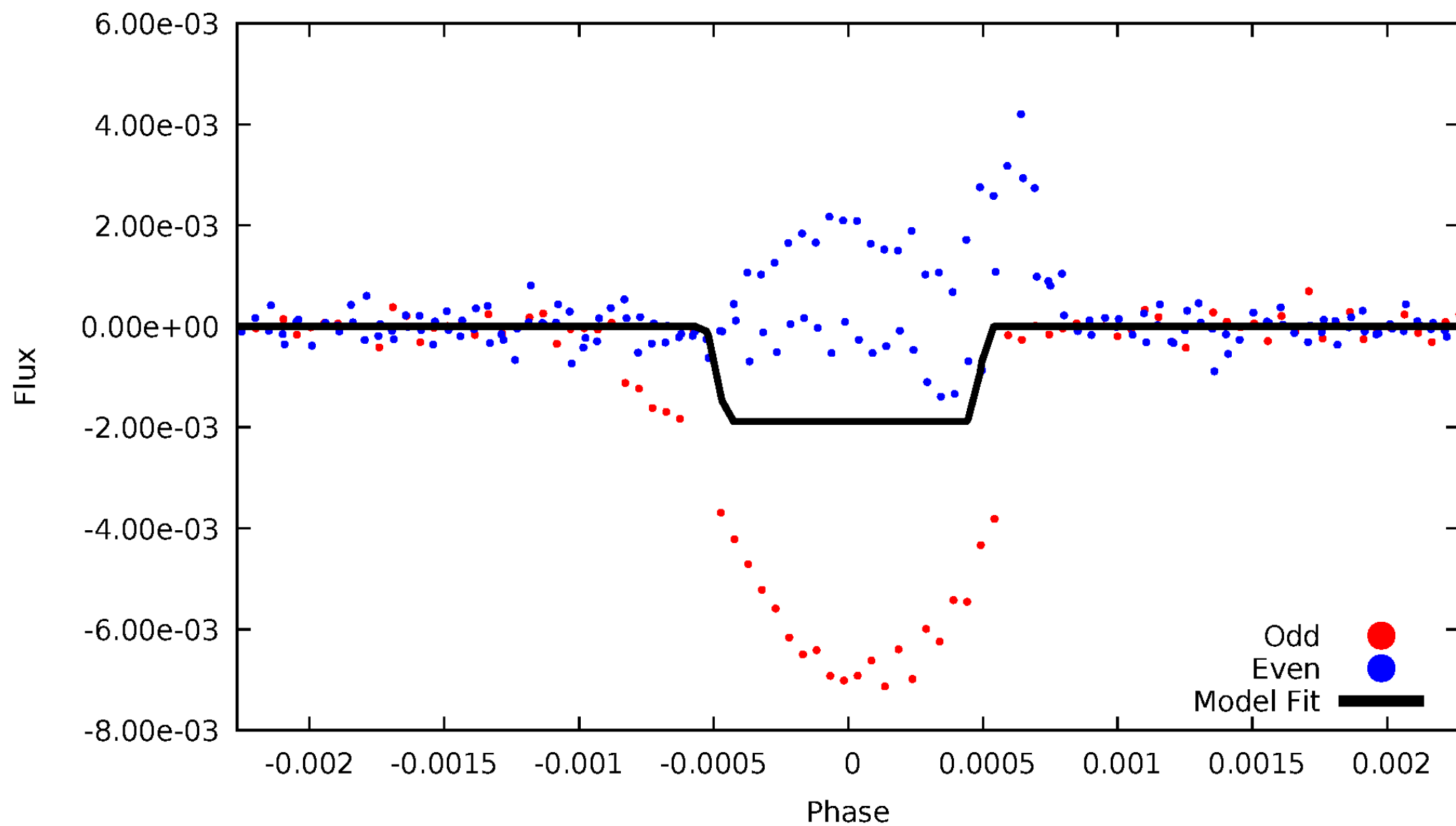
DV Odd/Even

TCE 004249749-02



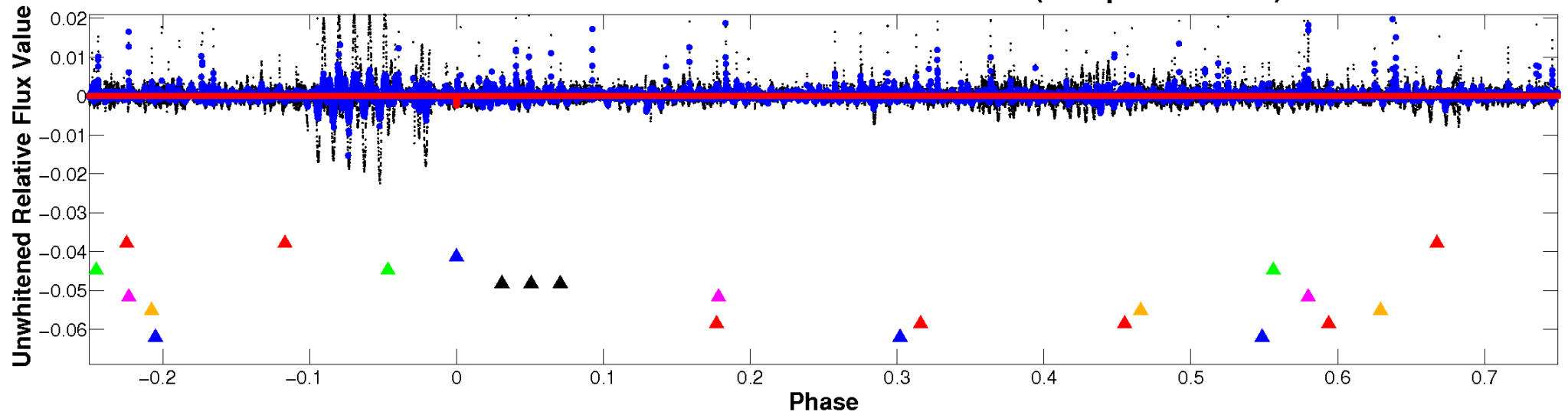
ALT Odd/Even

TCE 004249749-02

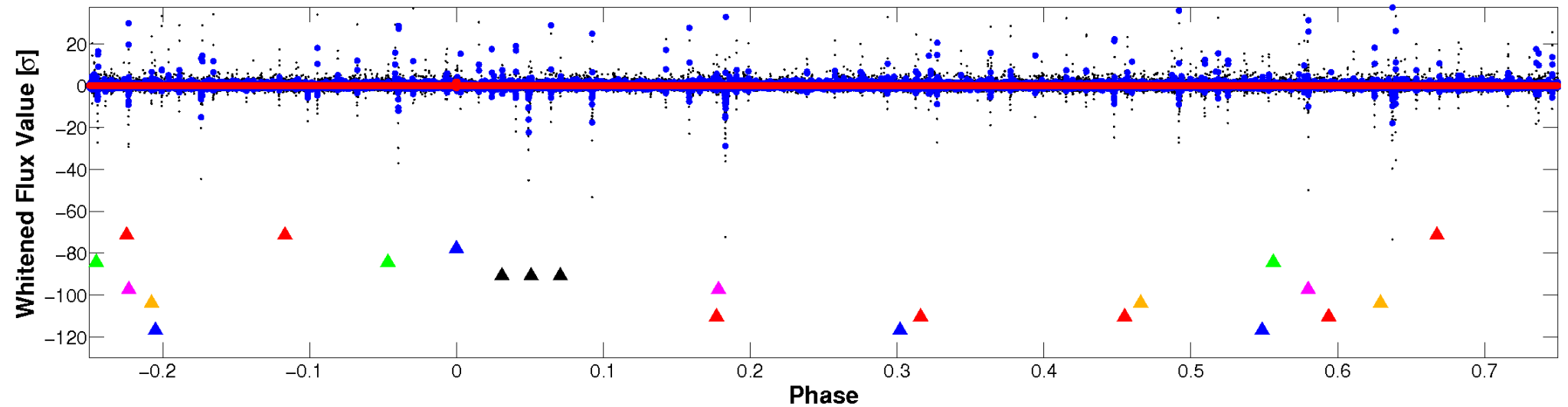


Non-Whitened Vs. Whitened Light Curve

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

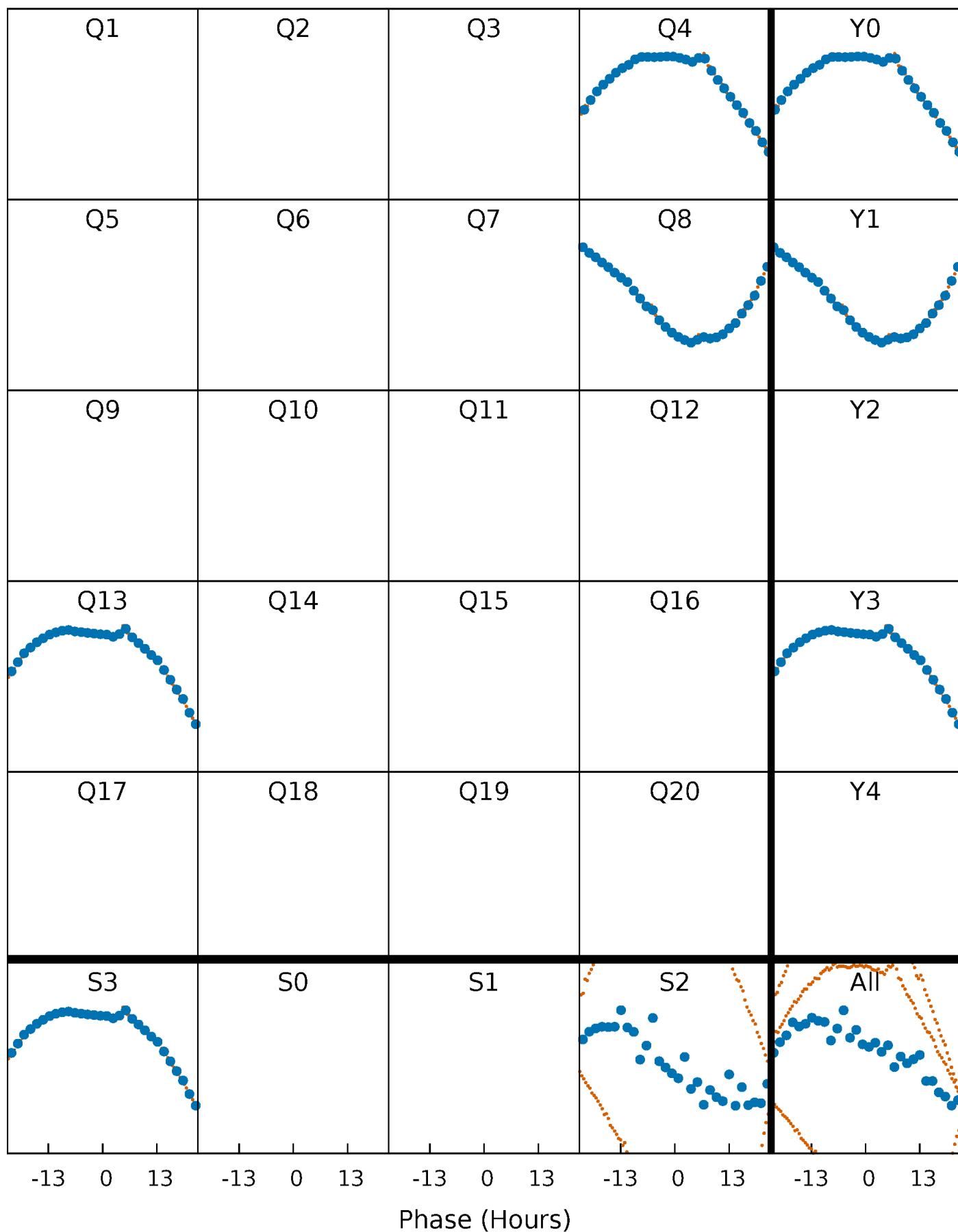


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



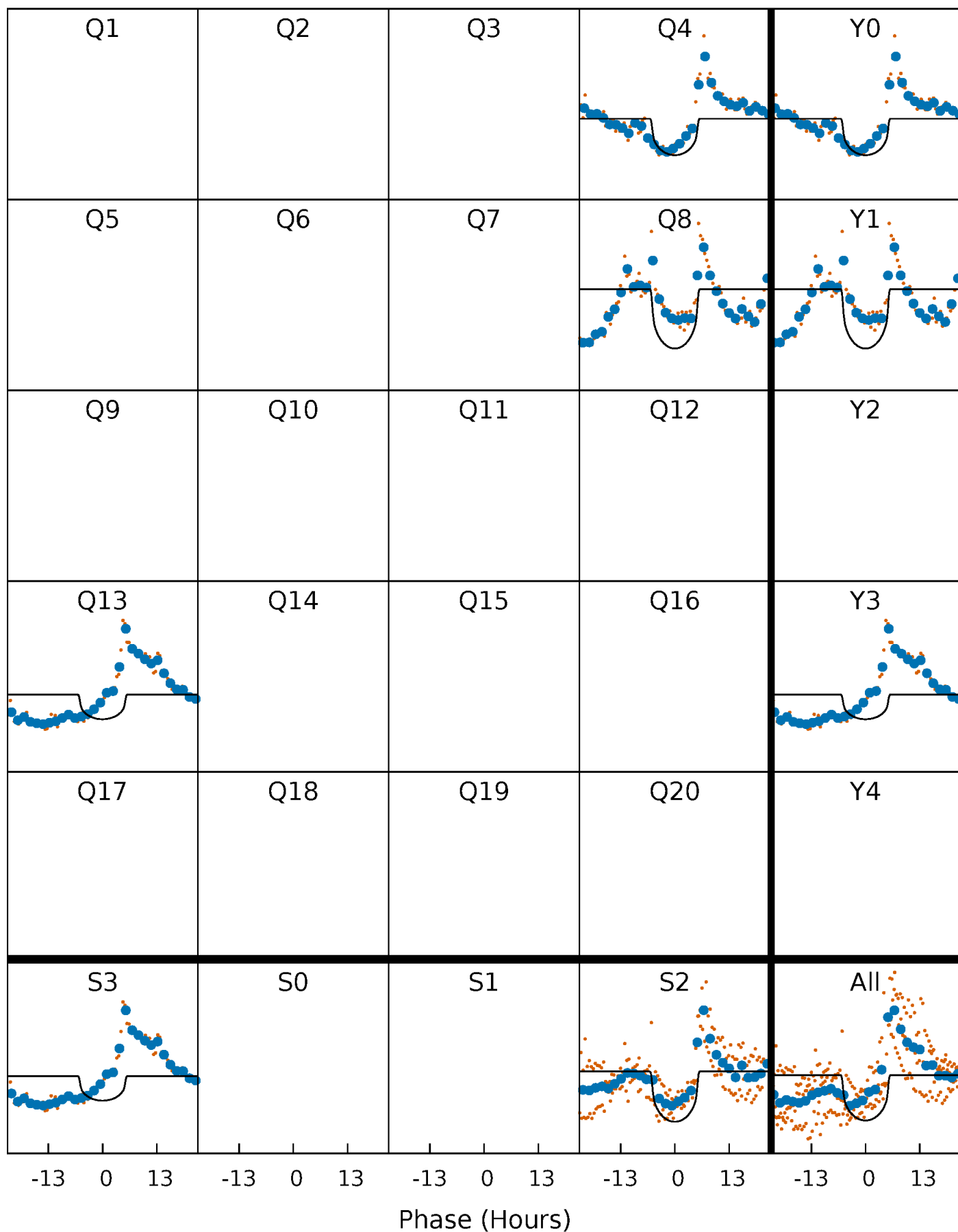
PDC Quarter-Phased Transit Curves

TCE 004249749-02 P=402.698956 Days $T_0=390.275257$ (BKJD)



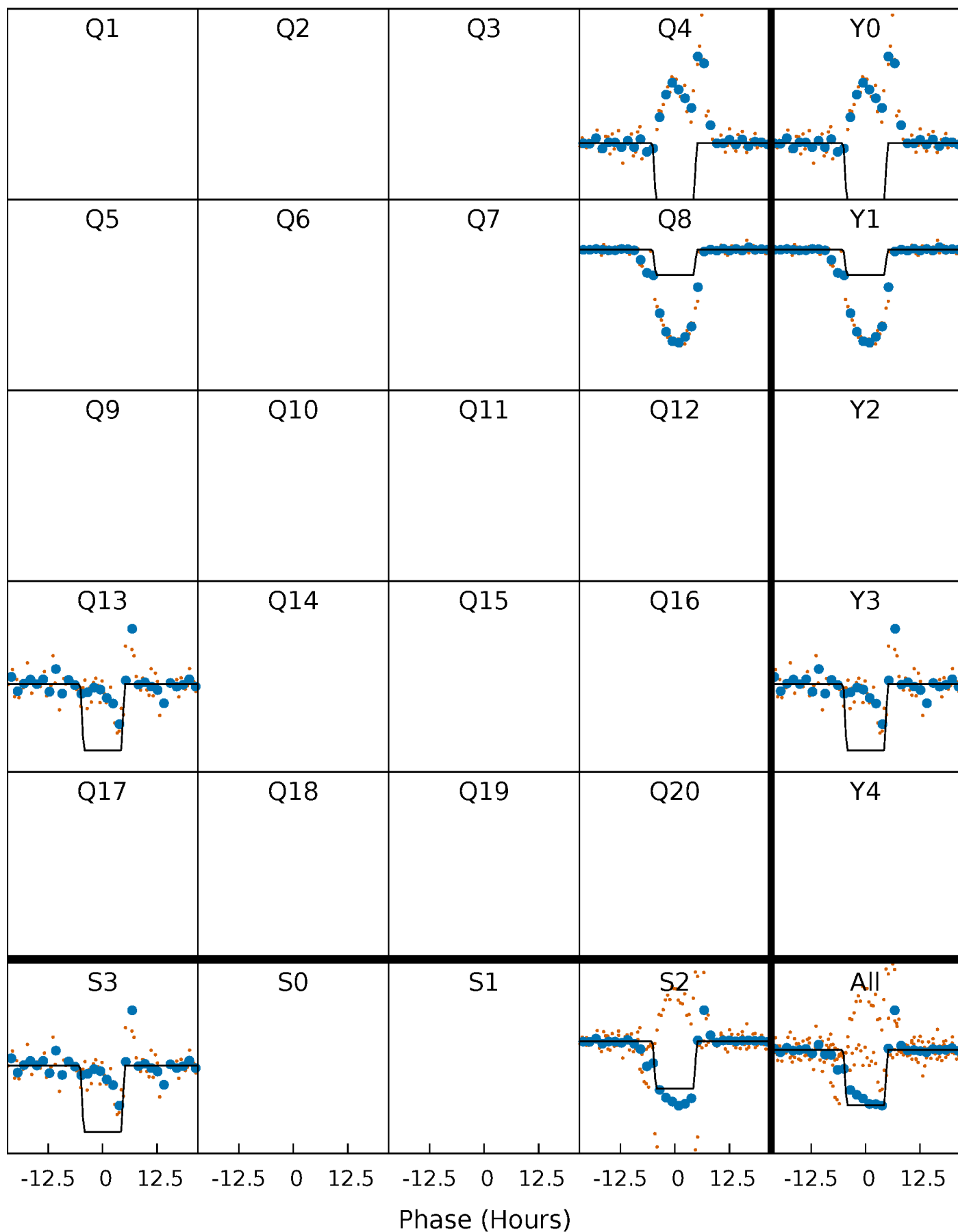
DV Quarter-Phased Transit Curves

TCE 004249749-02 $P=402.698956$ Days $T_0=390.275257$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

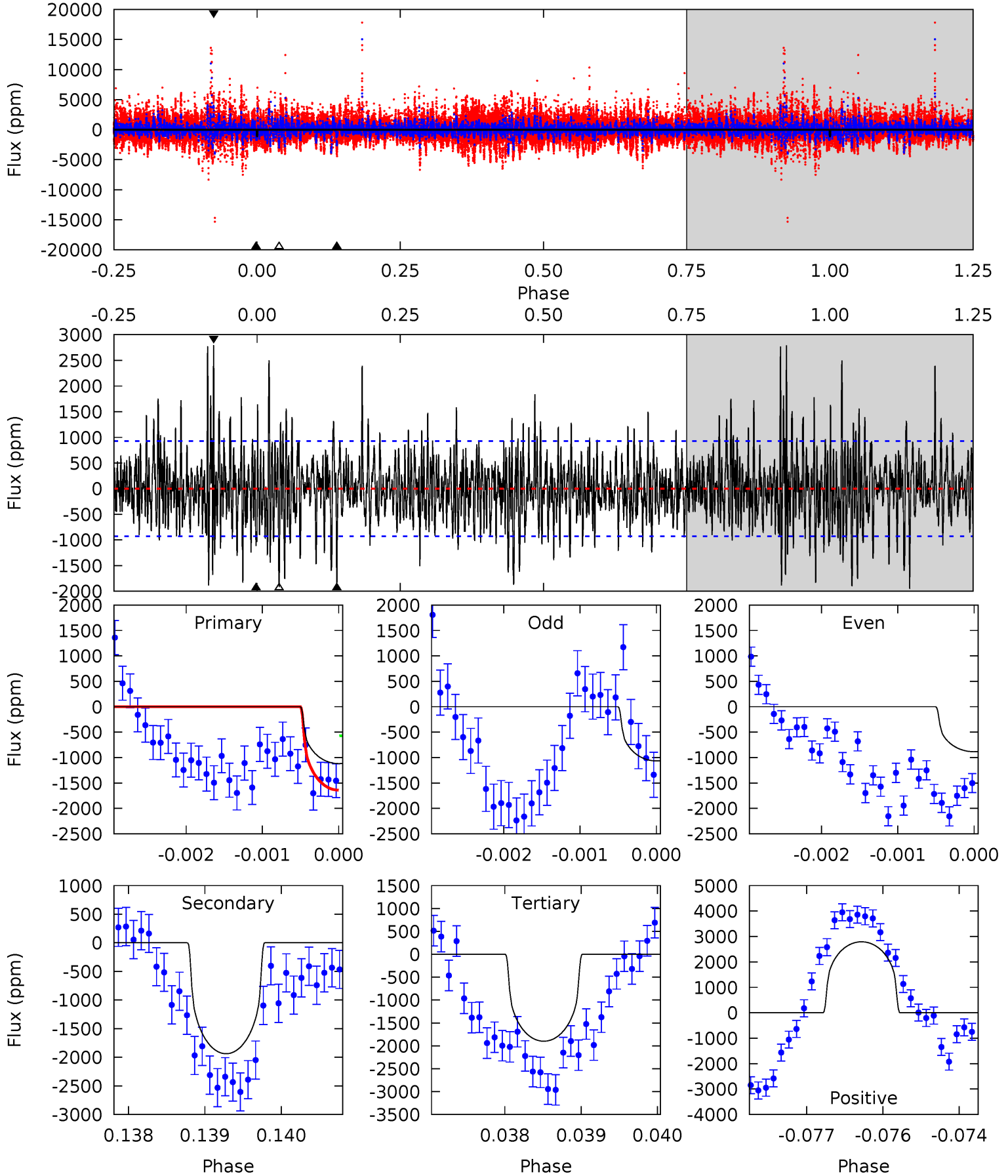
TCE 004249749-02 P=402.663733 Days $T_0=390.308178$ (BKJD)



DV Model-Shift Uniqueness Test

004249749-02, P = 402.698956 Days, E = 390.275257 Days

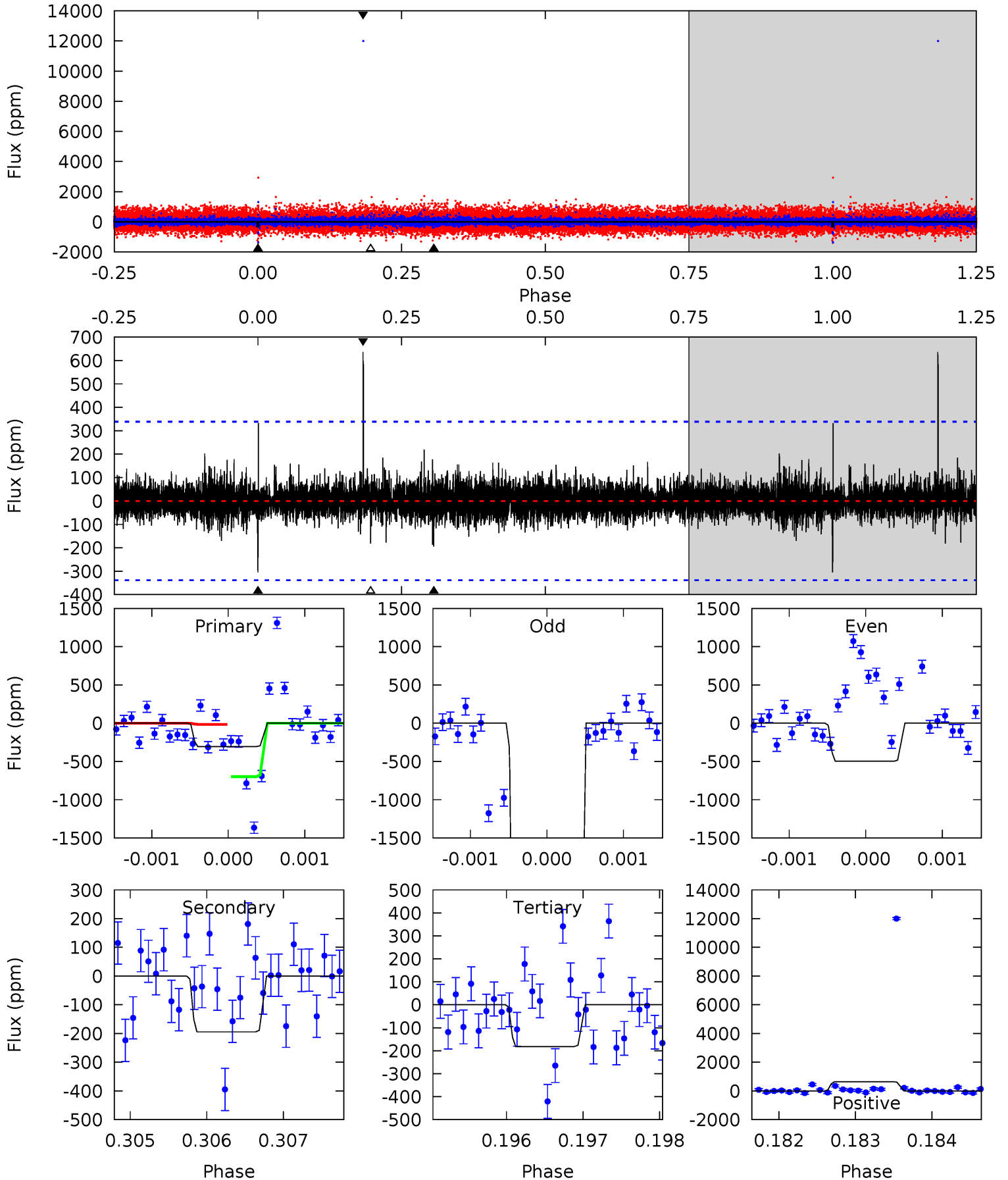
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.54	11.3	11.1	16.3	5.42	3.23	3.18	-4.56	-9.77	0.23	-4.99	0.29	0.89	0.59	3.15



Alt Model-Shift Uniqueness Test

004249749-02, P = 402.663733 Days, E = 390.308178 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.90	3.13	2.92	10.2	5.44	3.27	0.65	1.98	-5.31	0.20	-7.09	65.3	3.87	0.68	5.28



Stellar Parameters For KIC 004249749

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4399^{+132}_{-132}	$4.592^{+0.053}_{-0.018}$	$0.100^{+0.250}_{-0.300}$	$0.692^{+0.033}_{-0.059}$	$0.683^{+0.055}_{-0.050}$	$2.902^{+0.625}_{-0.250}$
	+3%/-3%	+1%/-0%	+250%/-300%	+5%/-9%	+8%/-7%	+22%/-9%
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 004249749-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1938 ± 171	$3.19^{+1.09}_{-1.02}$	231^{+7}_{-8}	4476^{+797}_{-499}	$94729^{+109969}_{-43151}$
Alt.	-195 ± 62	$3.21^{+1.09}_{-0.99}$	230^{+9}_{-8}	3024^{+414}_{-278}	9039^{+11679}_{-4621}

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

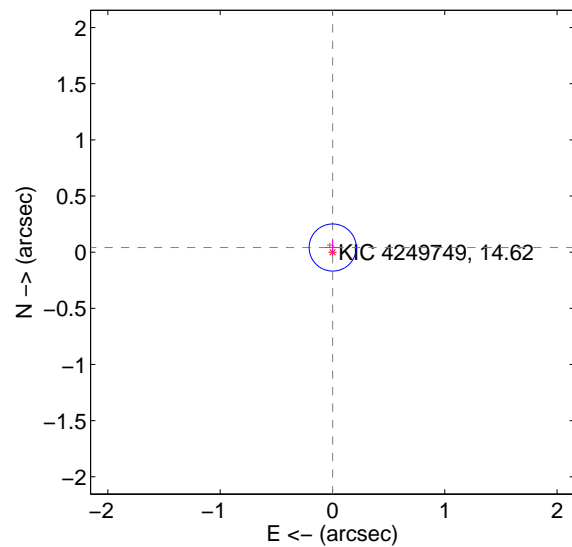
Supplemental centroid analysis for 004249749-02. Kepler magnitude: 14.62. Transit SNR 8.43

There are 1 quarters with good PRF difference image offsets

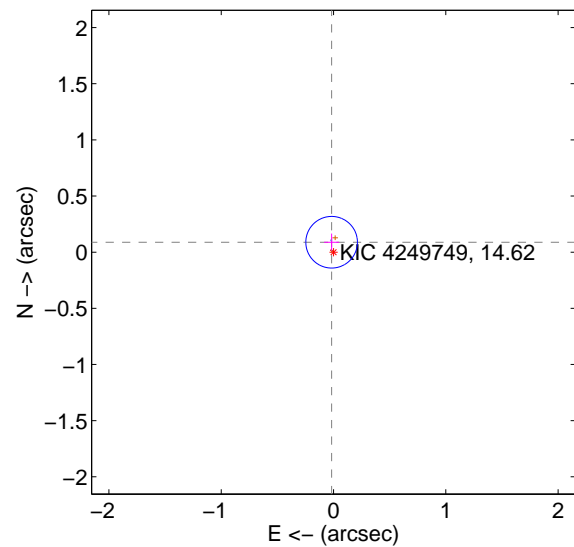
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.041 ± 0.070	0.59	-0.002 ± 0.067	0.041 ± 0.070
PRF-fit source offset from KIC position	0.090 ± 0.077	1.18	0.017 ± 0.067	0.088 ± 0.077
photometric centroid source offset	0.41 ± 0.46	0.90	0.41 ± 0.45	0.08 ± 0.60

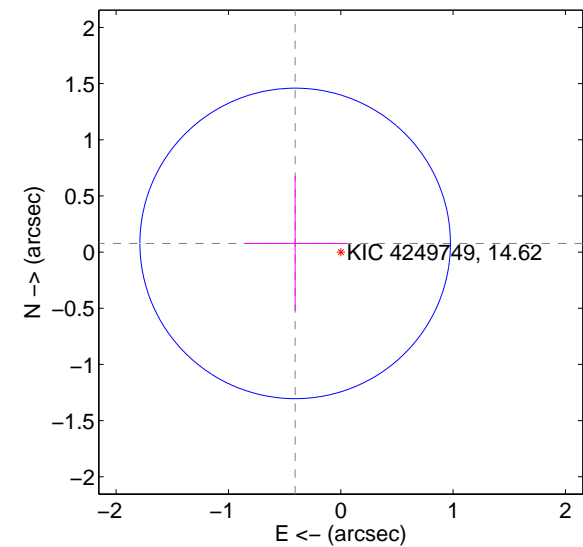
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

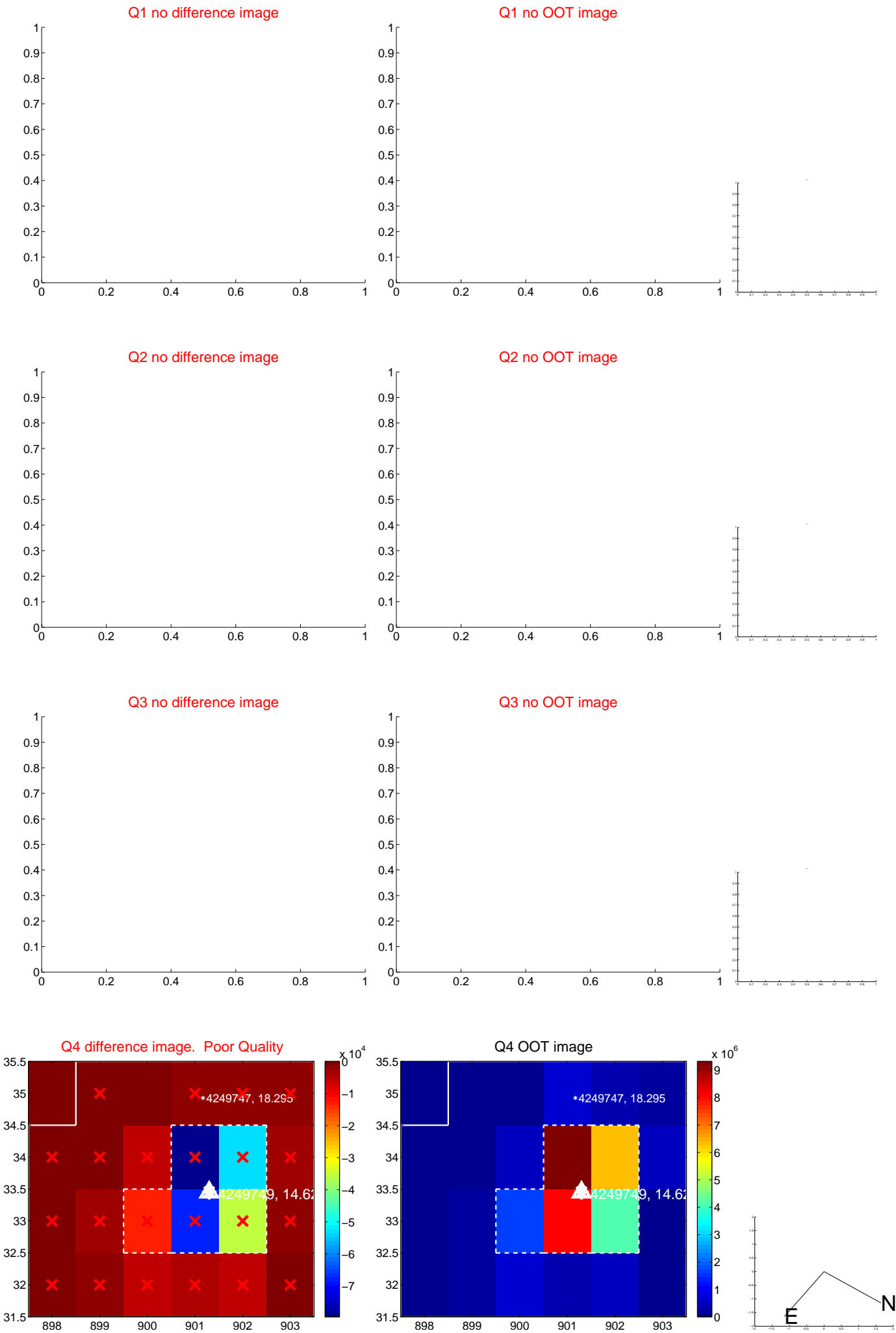


offset from photometric centroids

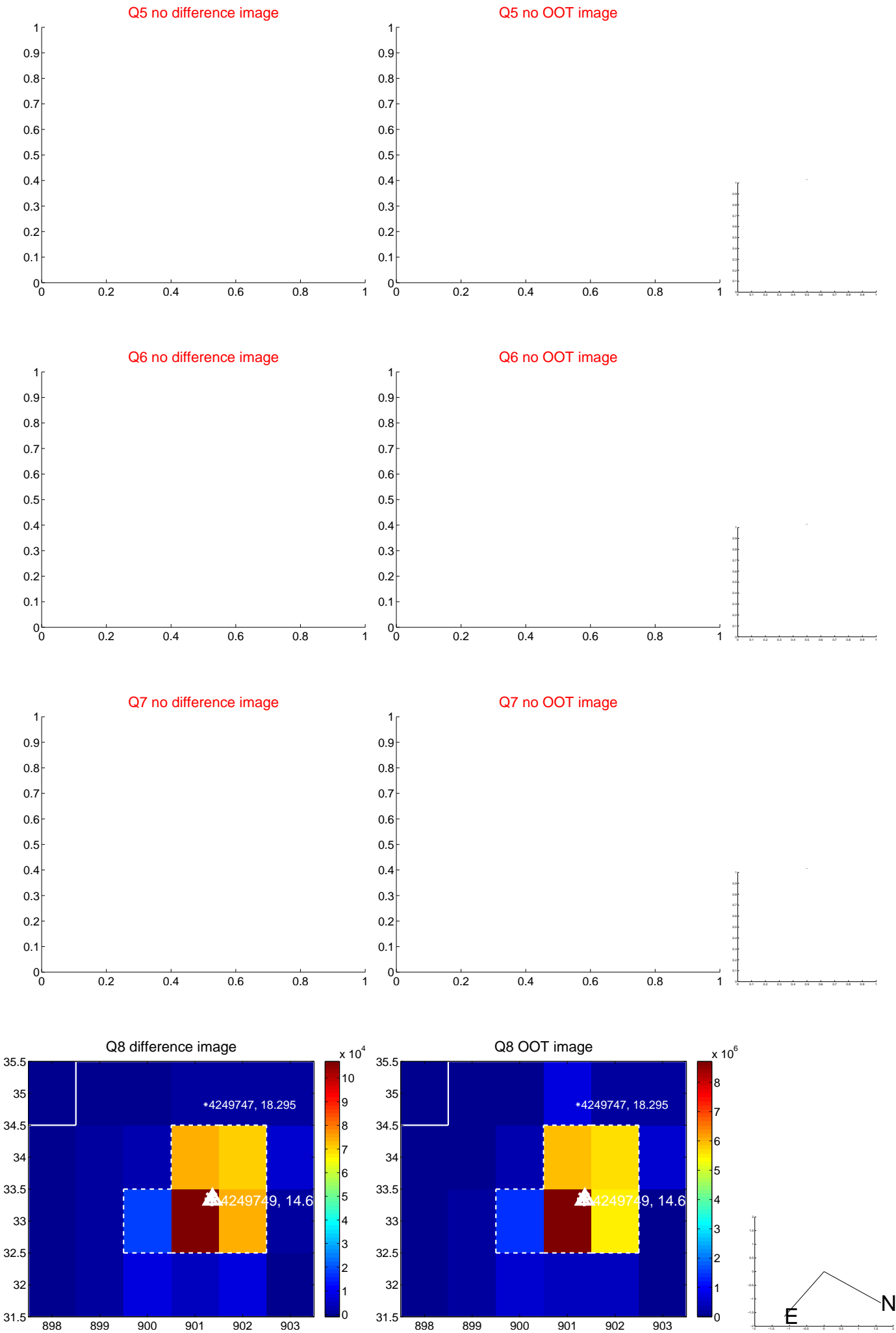


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



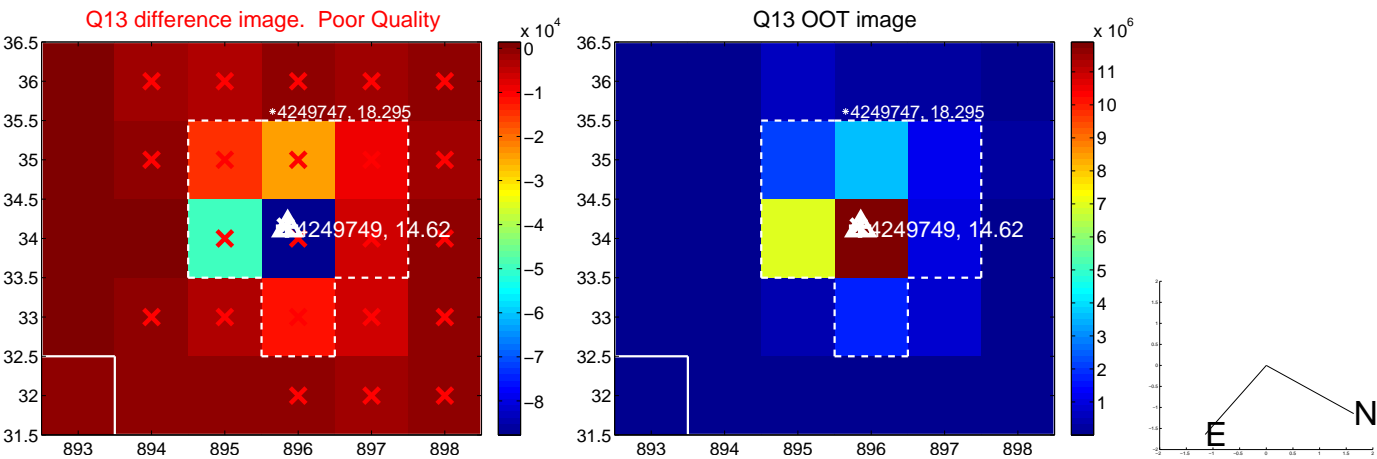
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



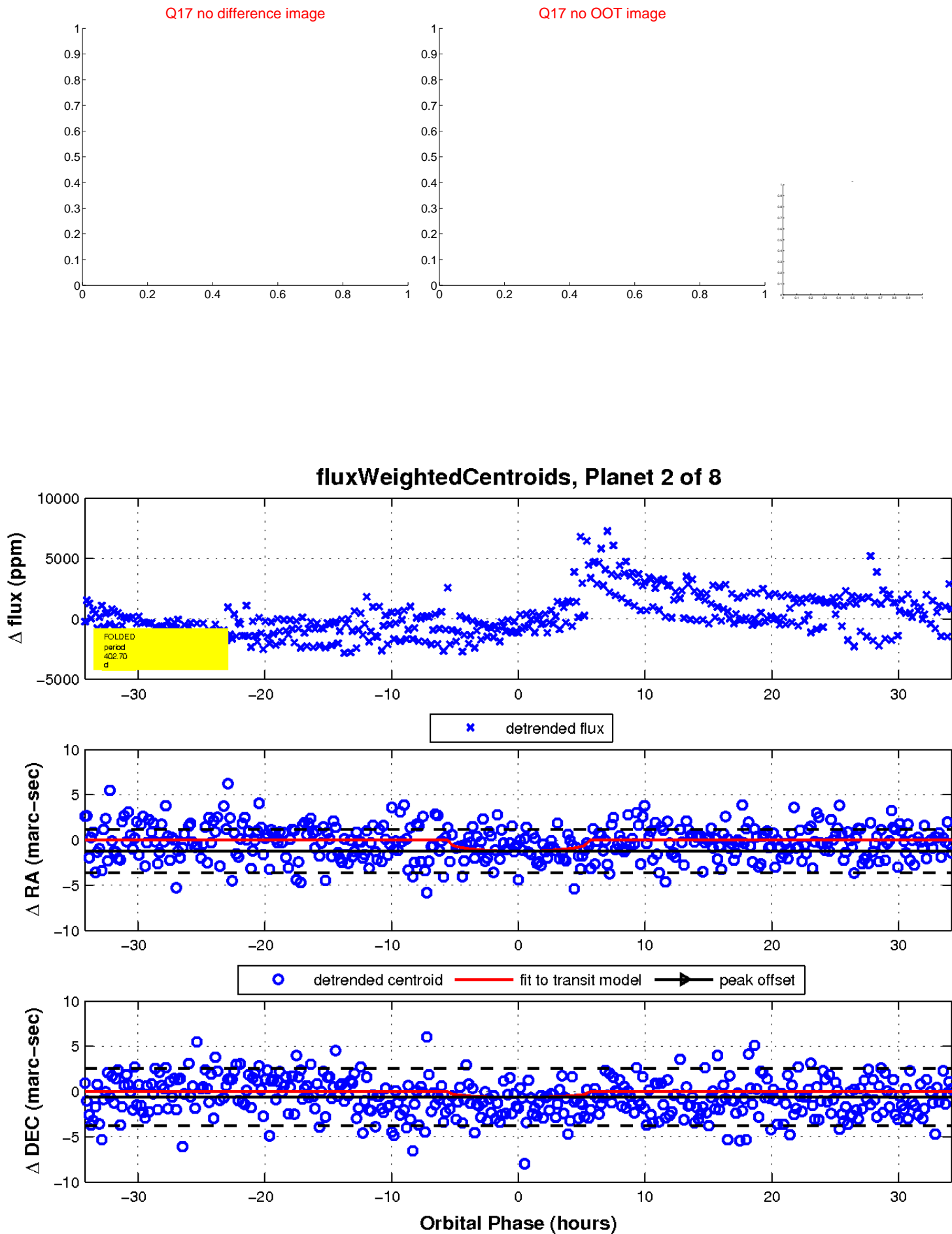
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

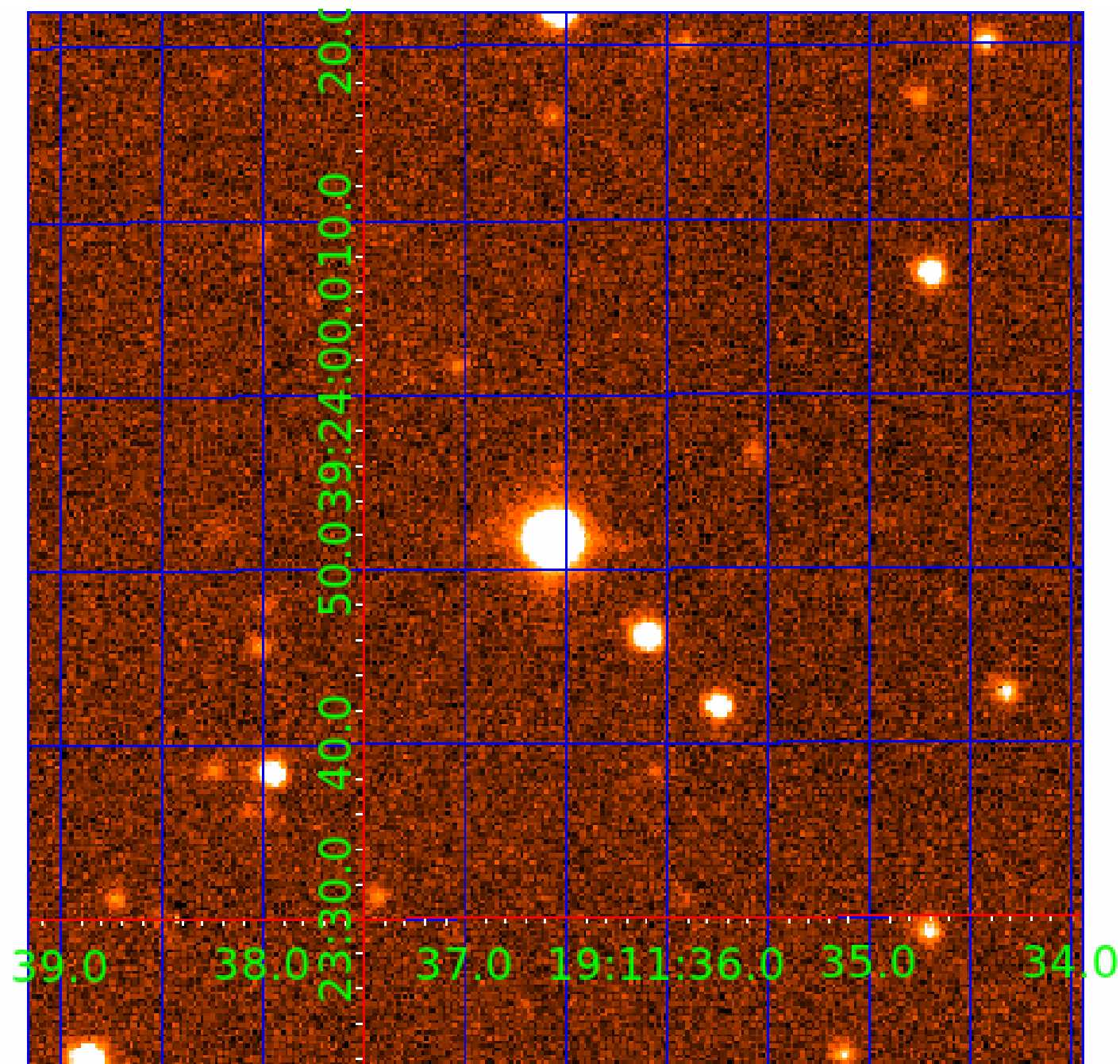


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004249749

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})
004249749-01	OBS	No	446.117305	256.422906	1857.0	4.770	15.7	7.7	0.69	4399	3.13	0.16
004249749-02	OBS	No	402.698956	390.275257	2413.1	11.416	14.9	8.4	0.69	4399	3.24	0.18
004249749-03	OBS	No	482.664452	211.554519	1405.4	3.344	13.3	6.2	0.69	4399	2.63	0.14
004249749-04	OBS	No	394.695695	418.747079	1921.3	4.252	16.1	8.5	0.69	4399	3.28	0.19
004249749-05	OBS	No	564.387457	300.441440	1535.8	2.879	11.8	7.6	0.69	4399	2.78	0.12
004249749-06	OBS	No	468.440517	577.888541	519.8	0.625	11.8	1.9	0.69	4399	1.66	0.15
004249749-07	OBS	No	346.748892	226.742683	1217.2	2.759	12.2	5.9	0.69	4399	2.33	0.22
004249749-08	OBS	No	501.969206	511.912106	1462.4	4.949	13.2	7.3	0.69	4399	2.75	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004249749-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
004249749-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

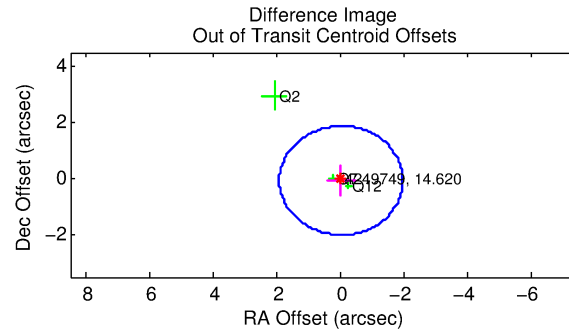
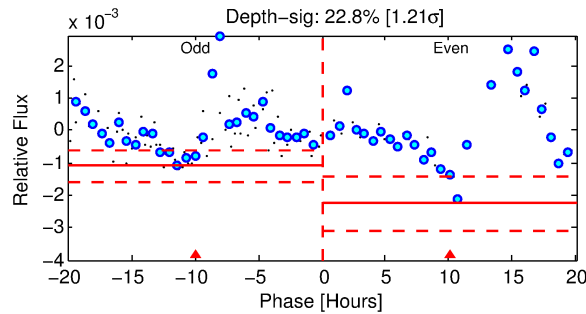
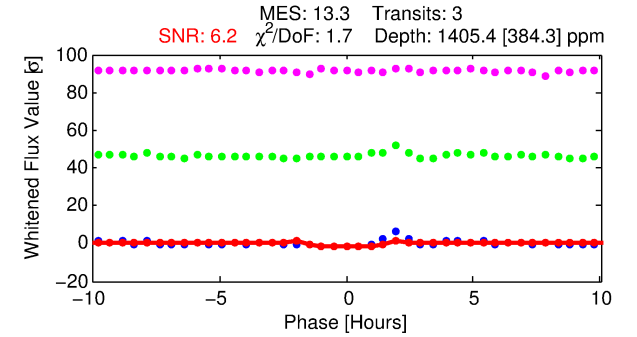
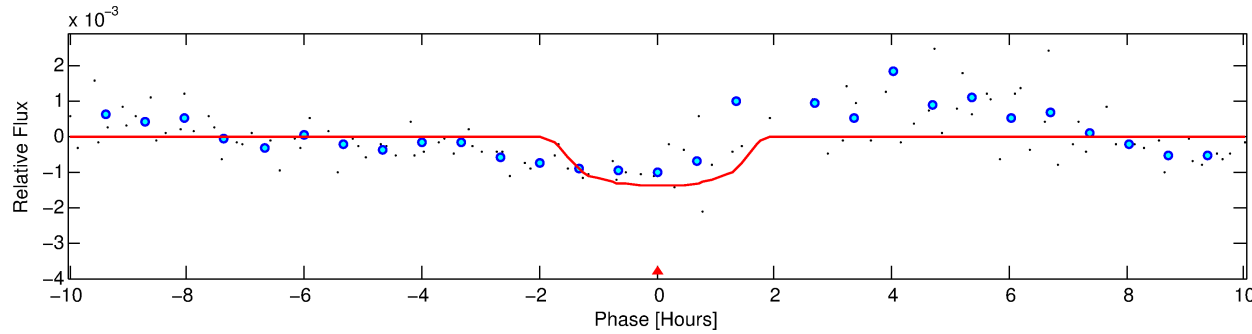
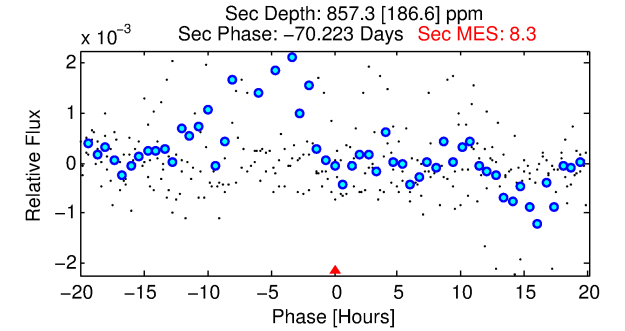
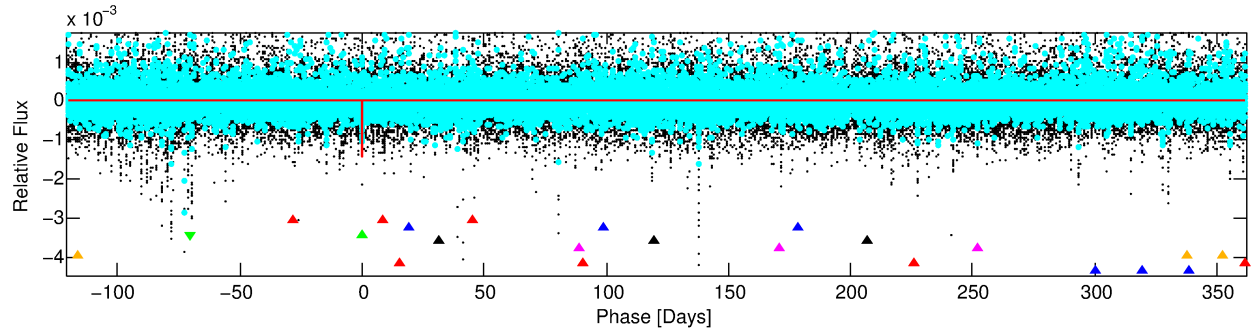
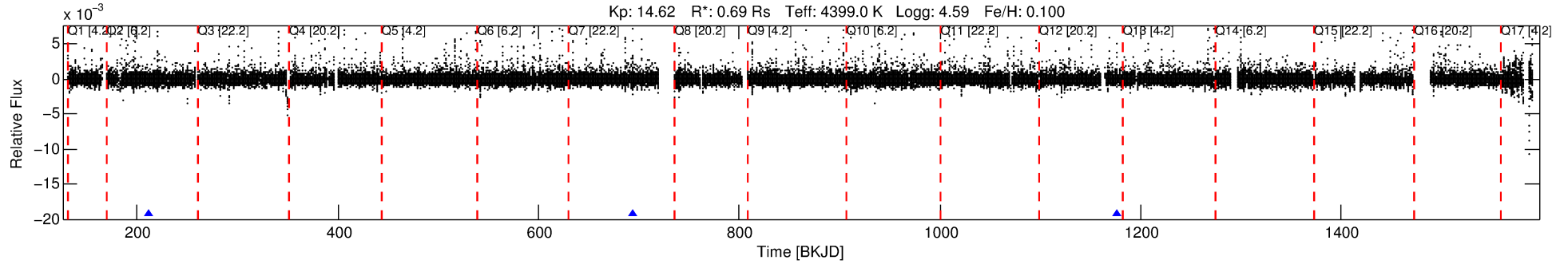
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004249749-03

No Significant Match Found

DV One-Page Summary

KIC: 4249749 Candidate: 3 of 8 Period: 482.664 d



DV Fit Results:

Period = 482.66445 [0.00756] d
Epoch = 211.5545 [0.0101] BKJD
Rp/R* = 0.0348 [0.0618]
a/R* = 969.85 [5168.84]
b = 0.55 [7.07]
Seff = 0.14 [0.02]
Teq = 157 [6] K
Rp = 2.63 [4.67] Re
a = 1.0606 [0.0741] AU
Ag = 76743.84 [272927.82] [0.28 σ]
Teffp = 4034 [3587] K [1.08 σ]

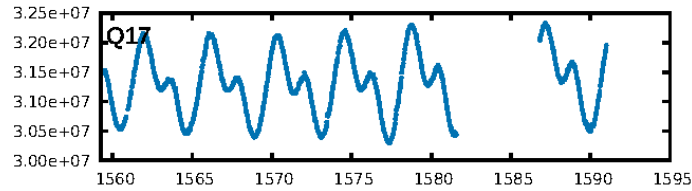
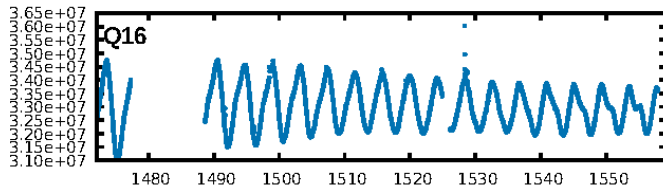
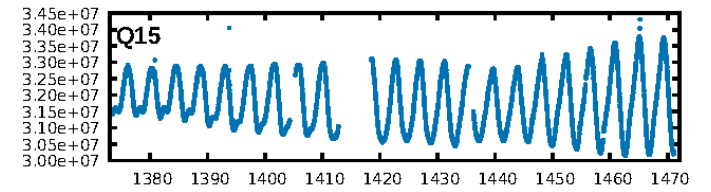
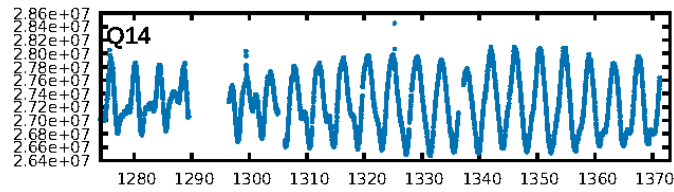
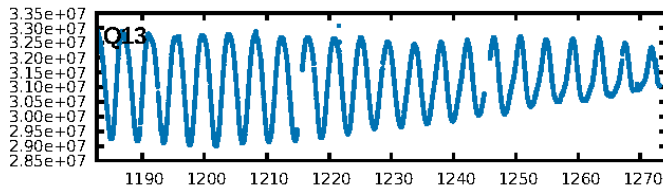
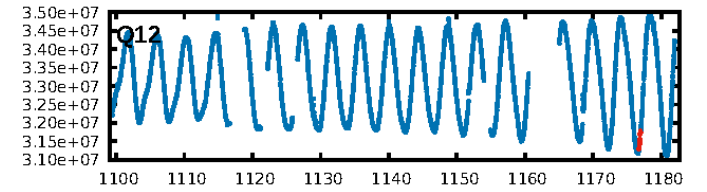
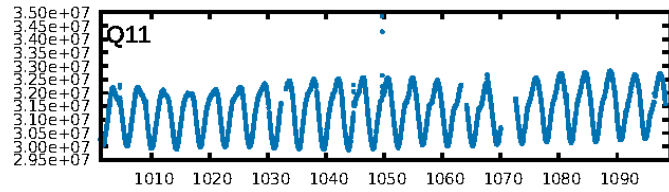
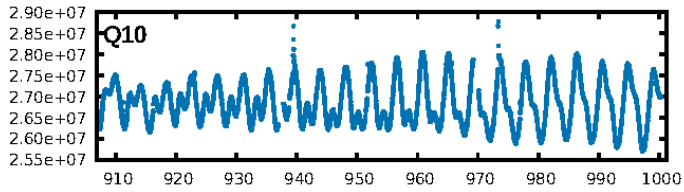
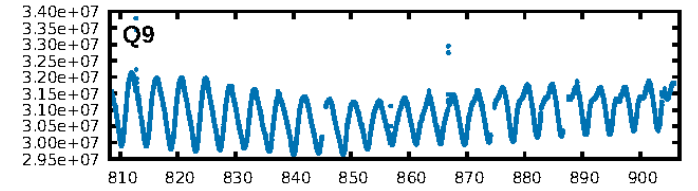
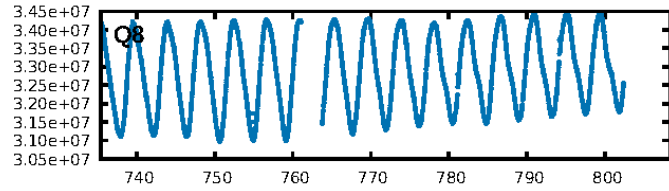
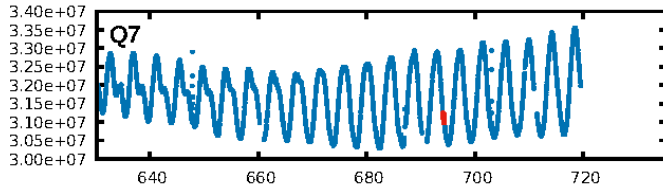
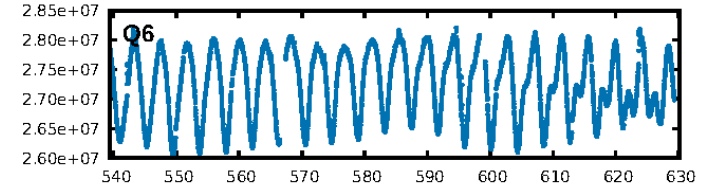
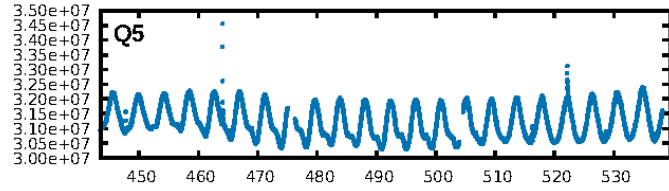
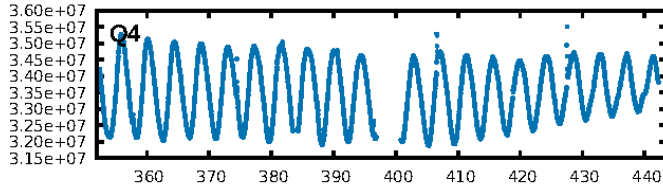
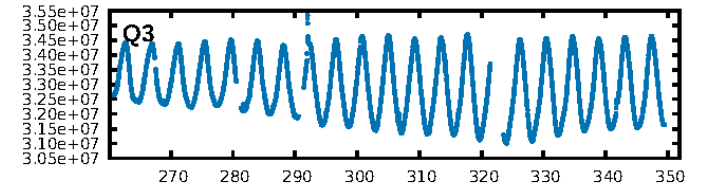
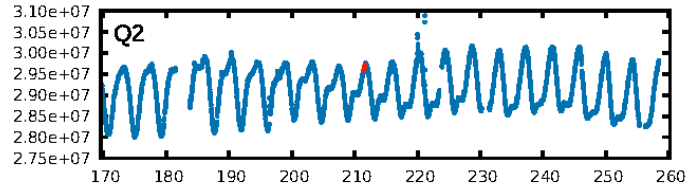
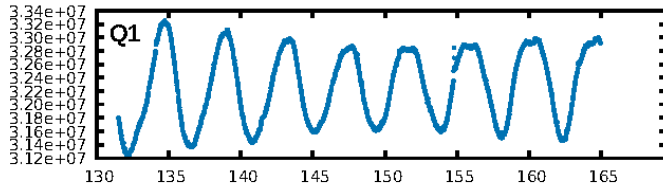
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [100.34 σ]
LongPeriod-sig: 100.0% [77.57 σ]
ModelChiSquare2-sig: 3.9%
ModelChiSquareGof-sig: 91.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.133
Centroid-sig: 38.1%
Centroid-so: 0.947 arcsec [0.92 σ]
OotOffset-rm: 0.069 arcsec [0.11 σ]
OotOffset-st: 1/1/1/0 [3]
KicOffset-rm: 0.030 arcsec [0.03 σ]
KicOffset-st: 1/1/1/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

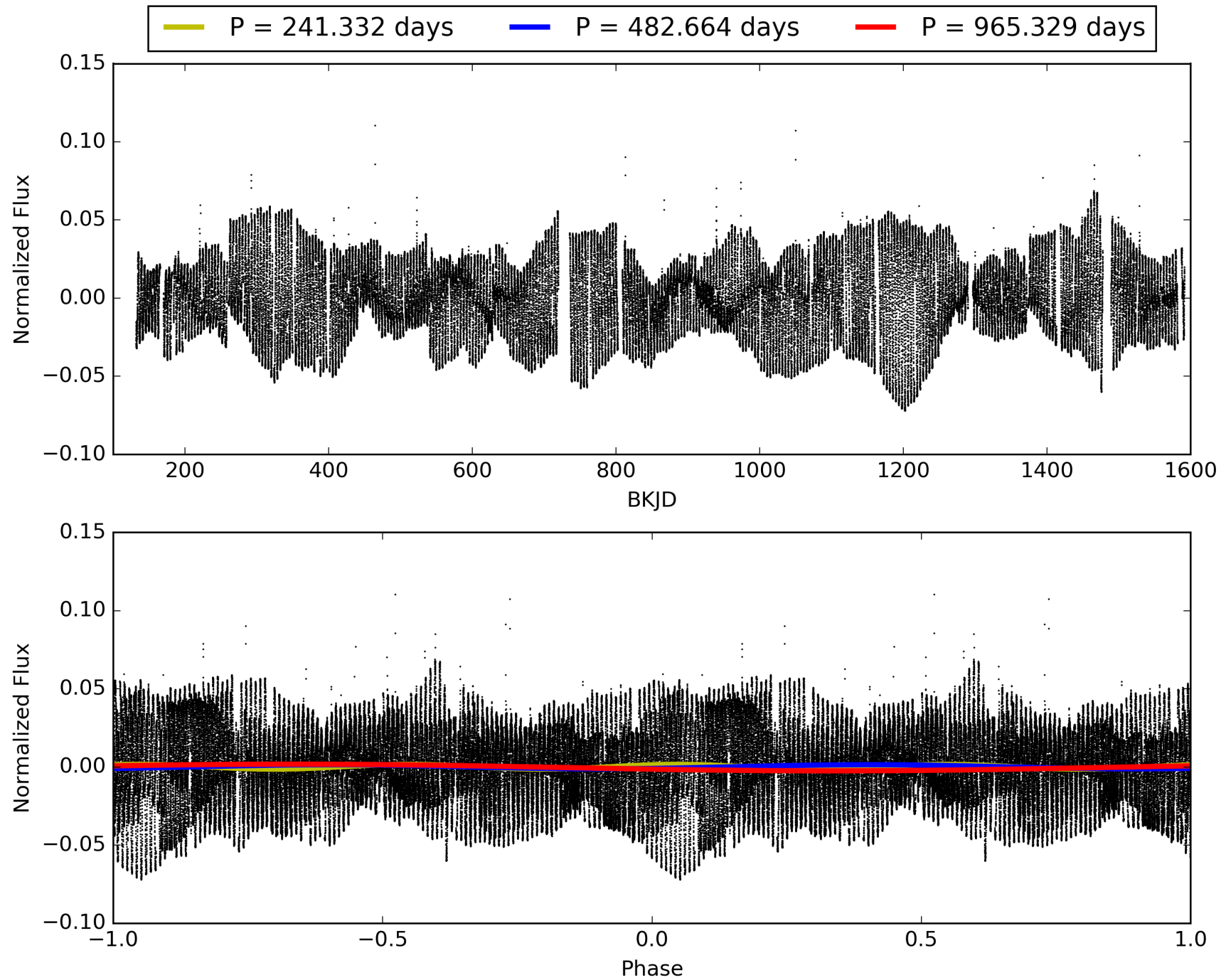
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:24:23 Z

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

TCE 004249749-03, PDC Light Curves

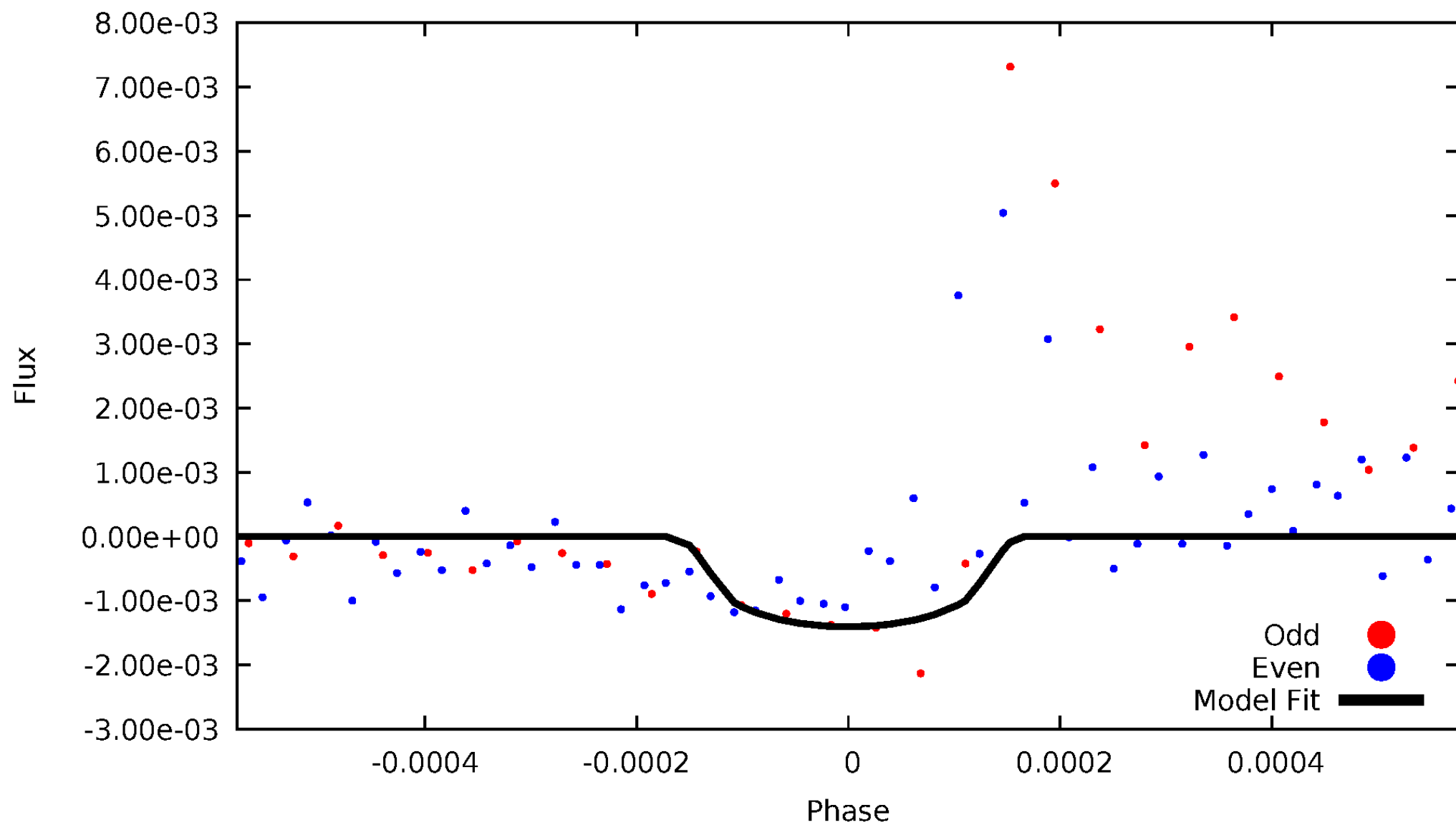


TCE 004249749-03



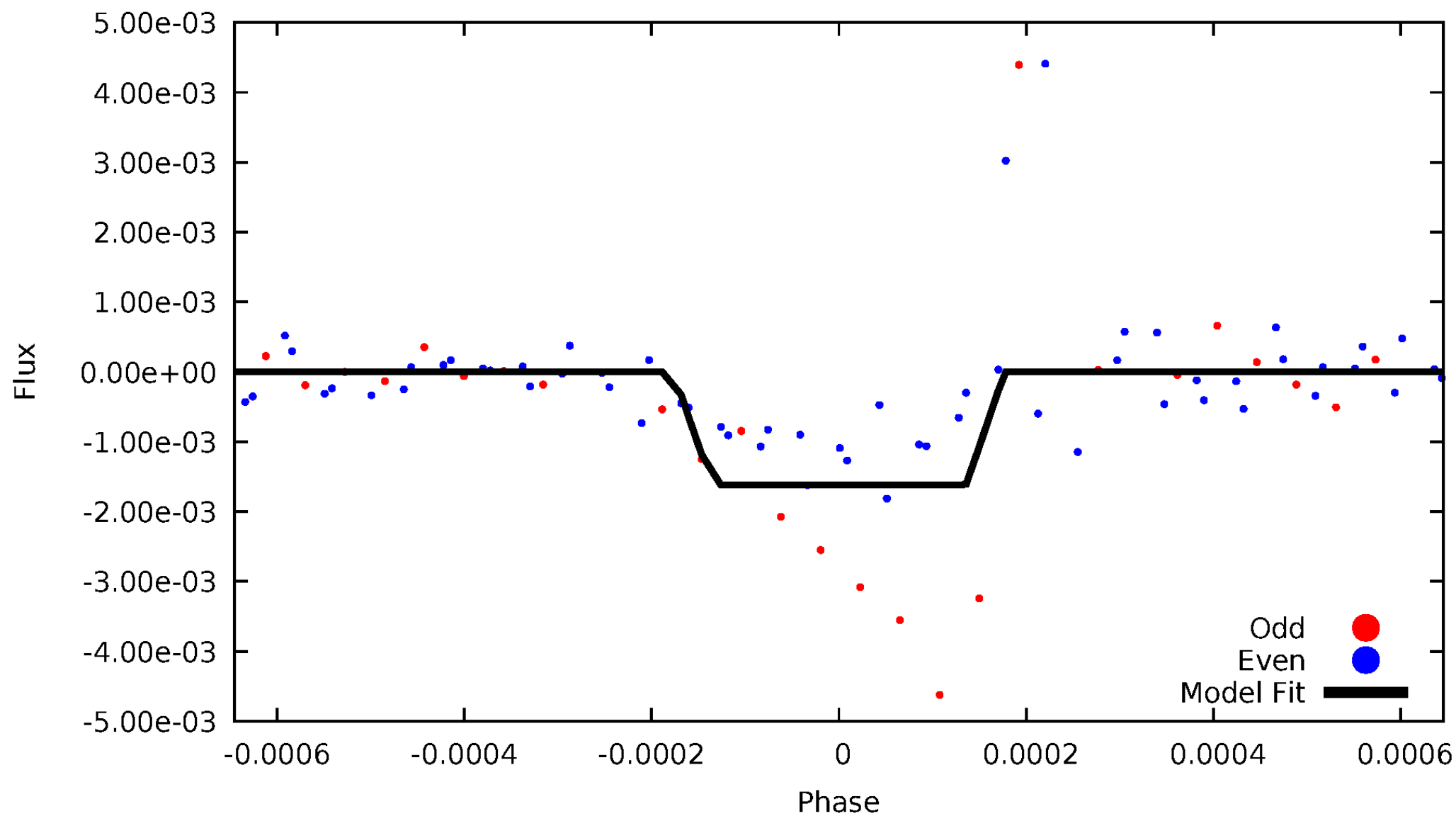
DV Odd/Even

TCE 004249749-03



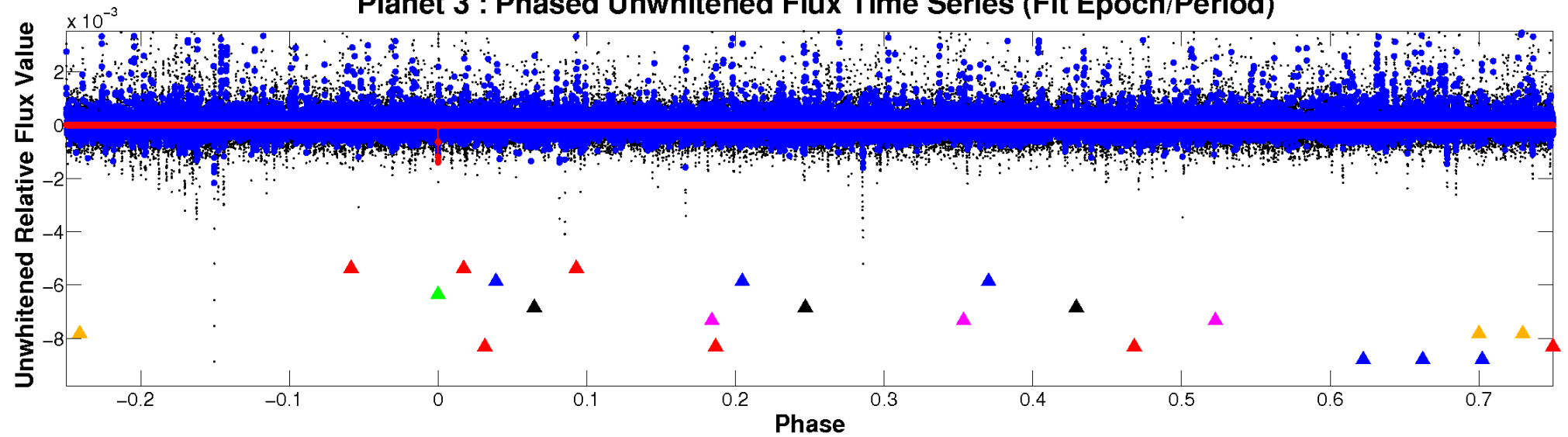
ALT Odd/Even

TCE 004249749-03

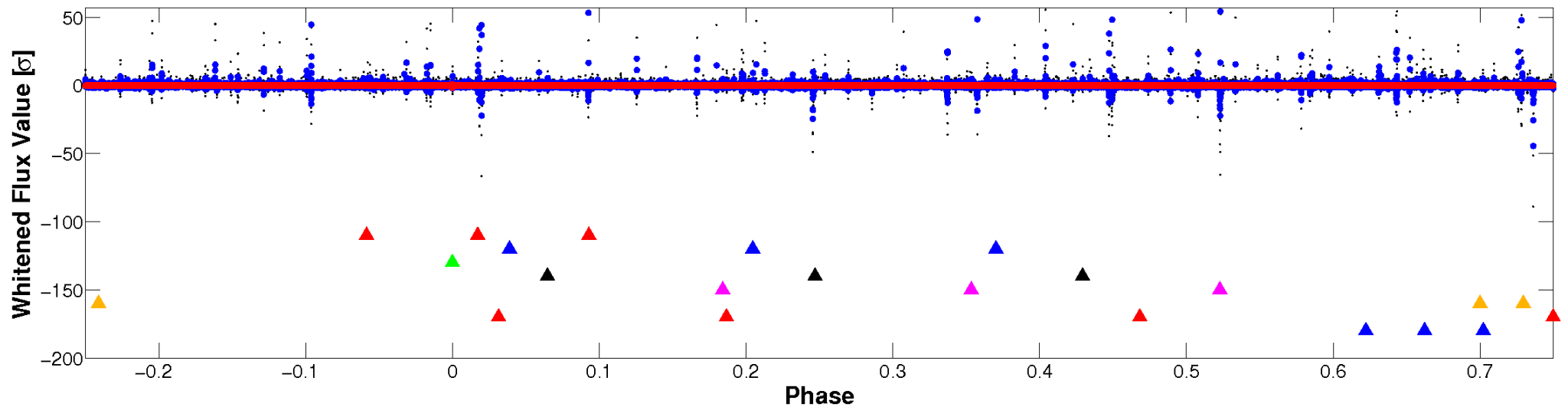


Non-Whitened Vs. Whitened Light Curve

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

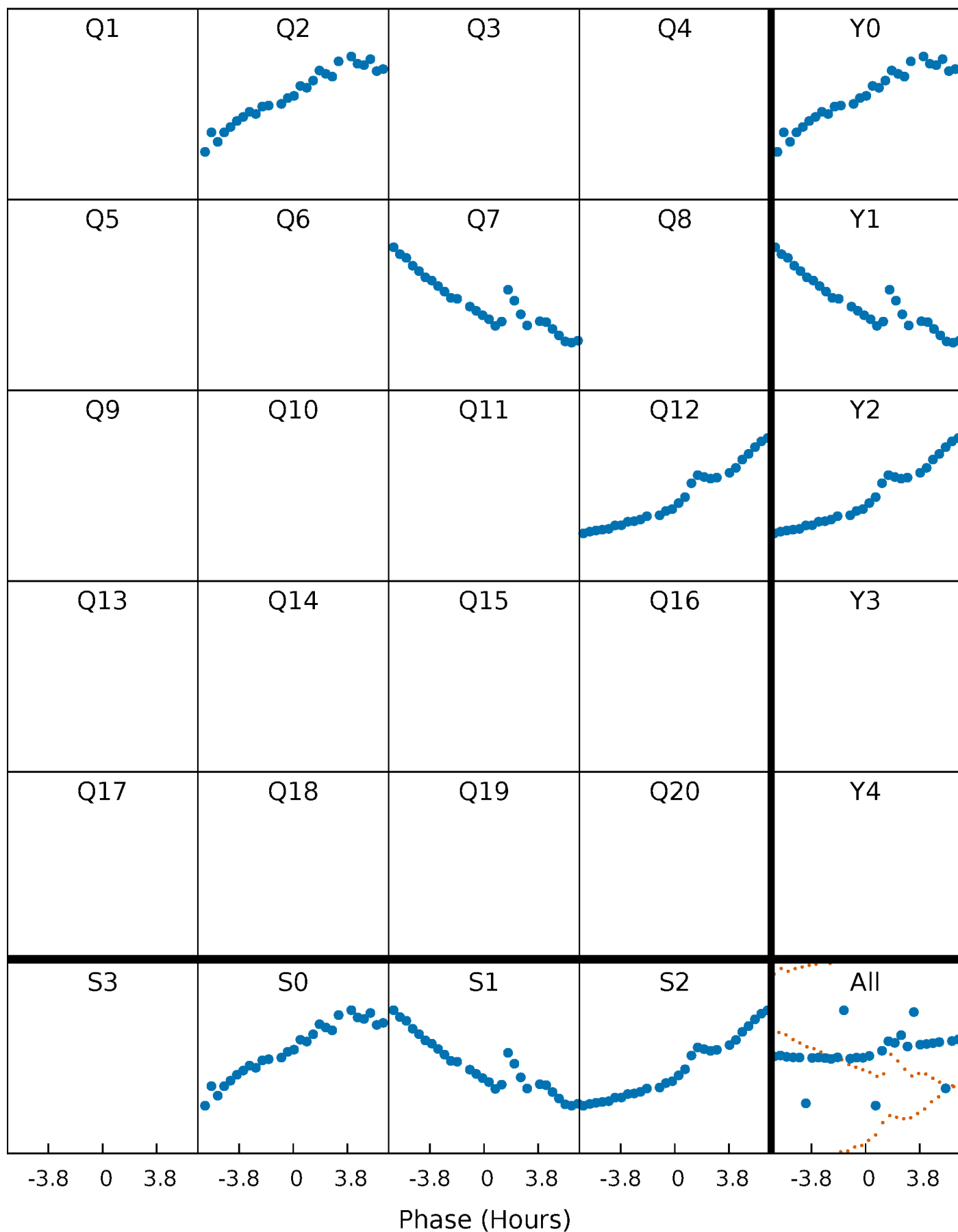


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



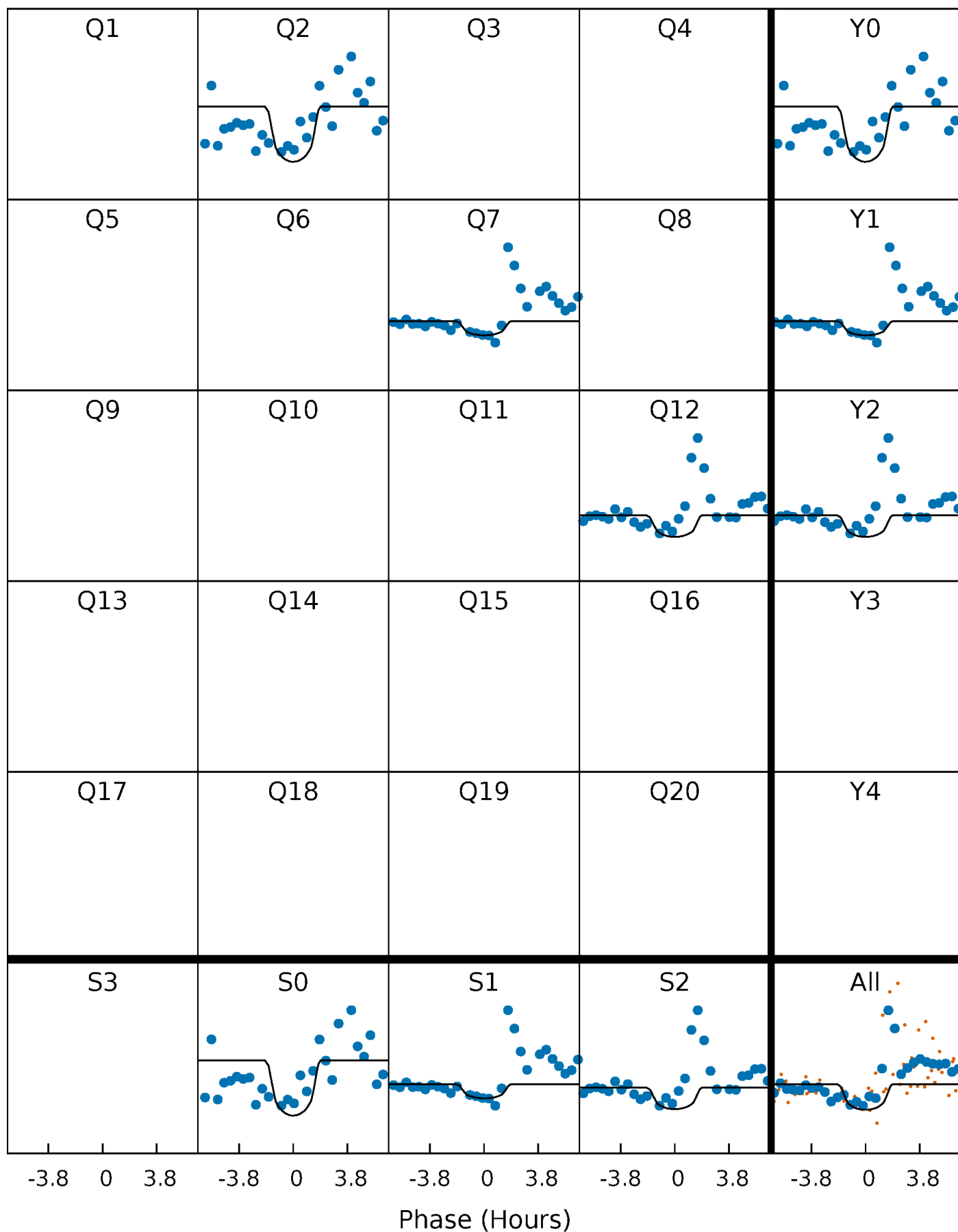
PDC Quarter-Phased Transit Curves

TCE 004249749-03 P=482.664452 Days $T_0=211.554519$ (BKJD)



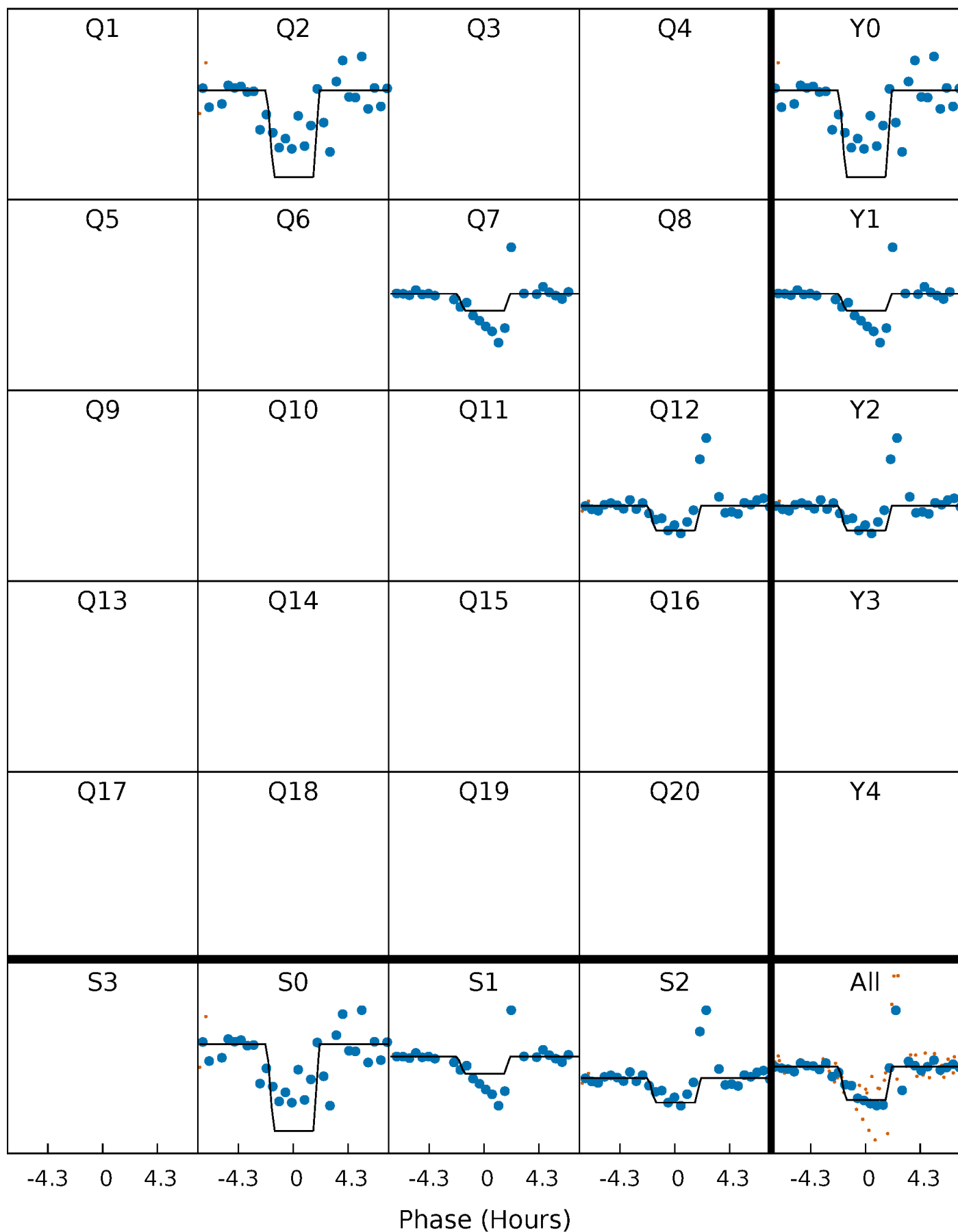
DV Quarter-Phased Transit Curves

TCE 004249749-03 $P=482.664452$ Days $T_0=211.554519$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

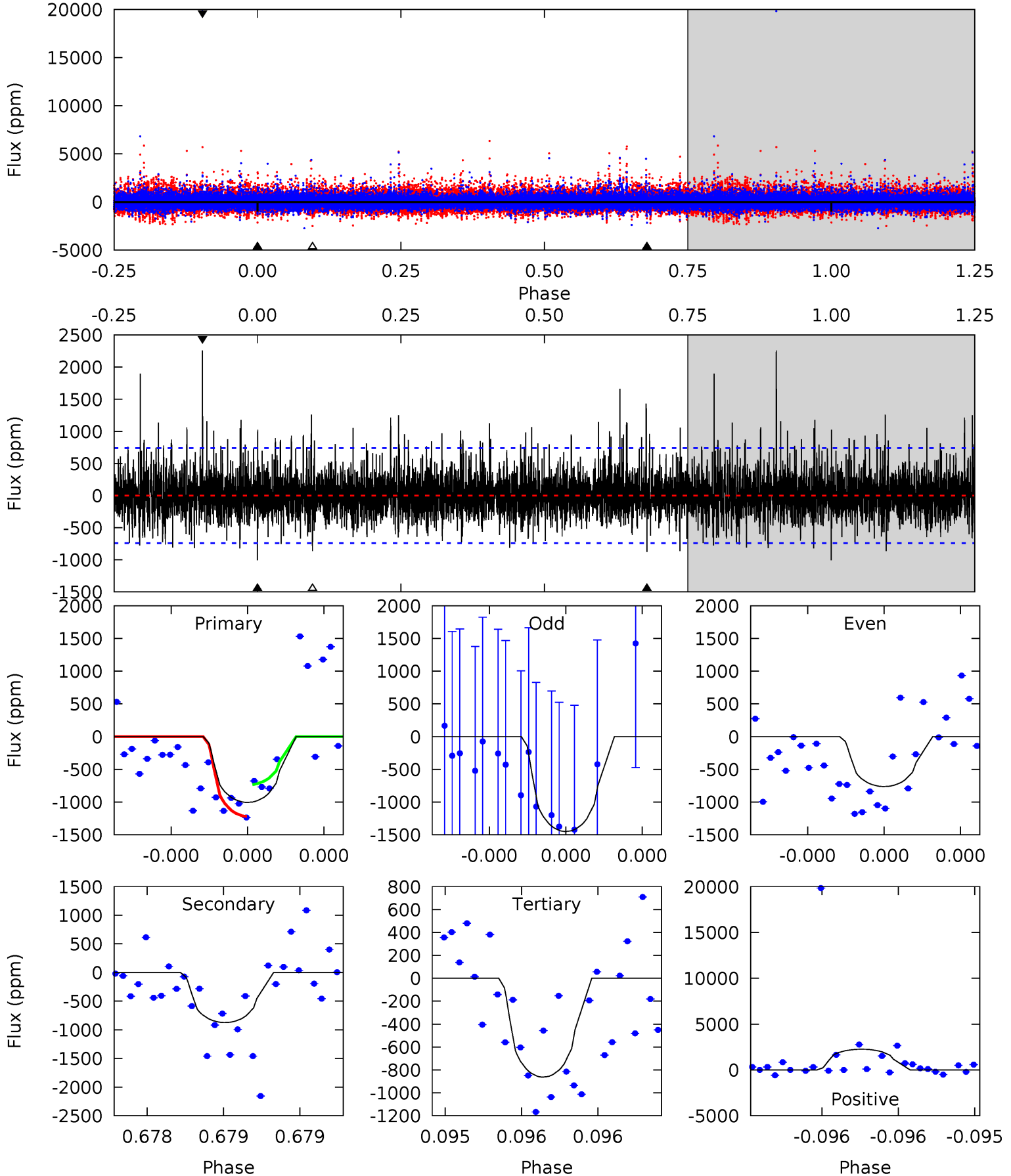
TCE 004249749-03 P=482.647498 Days $T_0=211.552513$ (BKJD)



DV Model-Shift Uniqueness Test

004249749-03, P = 482.664452 Days, E = 211.554519 Days

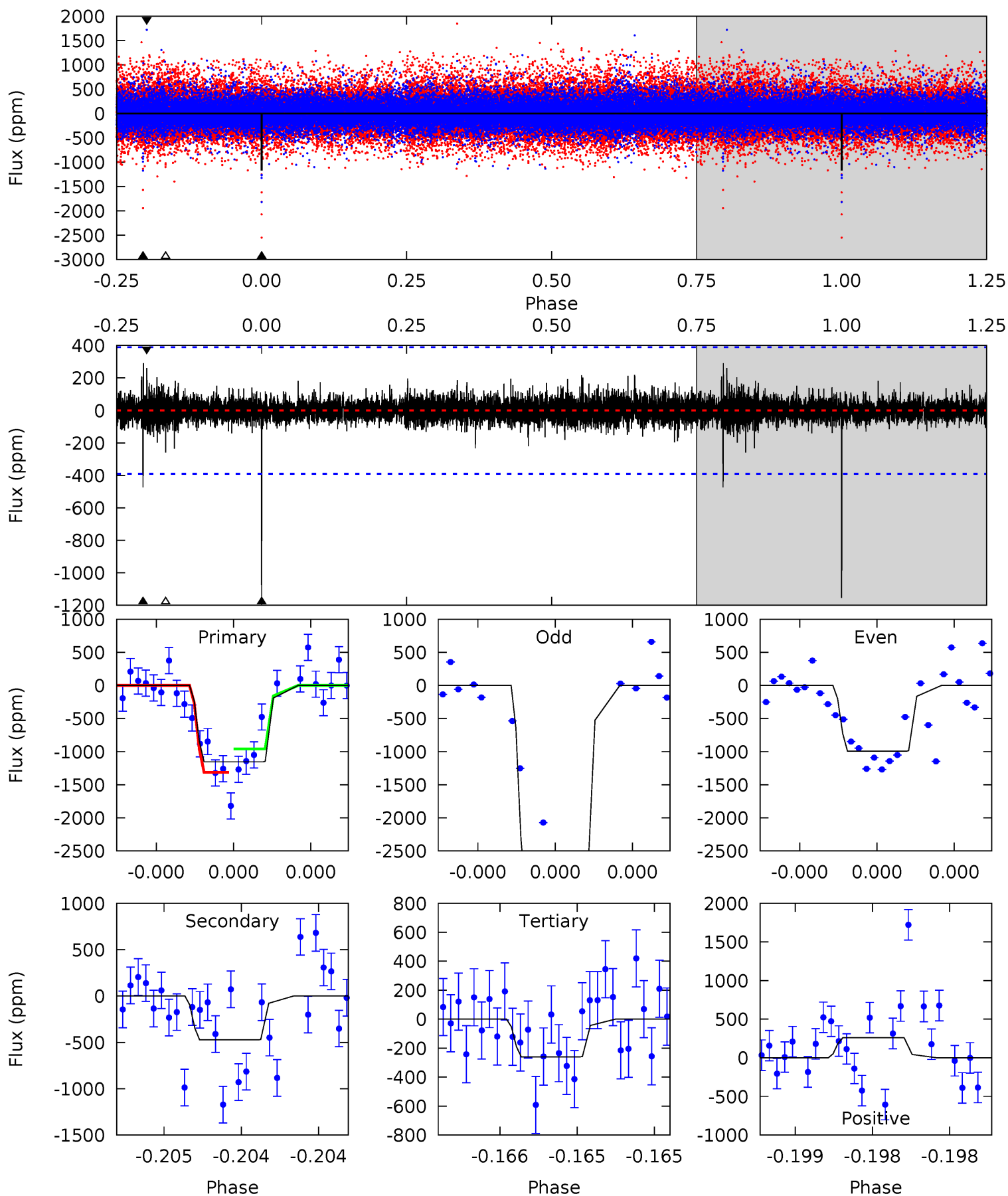
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.70	6.69	6.61	17.3	5.66	3.62	1.93	1.09	-9.59	0.08	-10.6	1.38	0.71	0.69	1.88



Alt Model-Shift Uniqueness Test

004249749-03, P = 482.647498 Days, E = 211.552513 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.7	6.84	3.76	3.79	5.64	3.59	0.61	13.0	12.9	3.08	3.05	14.2	1.43	0.20	2.57



Stellar Parameters For KIC 004249749

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4399^{+132}_{-132}	$4.592^{+0.053}_{-0.018}$	$0.100^{+0.250}_{-0.300}$	$0.692^{+0.033}_{-0.059}$	$0.683^{+0.055}_{-0.050}$	$2.902^{+0.625}_{-0.250}$
	+3%/-3%	+1%/-0%	+250%/-300%	+5%/-9%	+8%/-7%	+22%/-9%
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 004249749-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-874 ± 131	$4.29^{+4.11}_{-2.90}$	218^{+7}_{-7}	3453^{+1861}_{-581}	$28340^{+274170}_{-20410}$
Alt.	-472 ± 69	$4.65^{+3.86}_{-3.18}$	218^{+7}_{-8}	3127^{+1431}_{-480}	$13843^{+116964}_{-9633}$

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 $A_{obs} \gg 1.0$

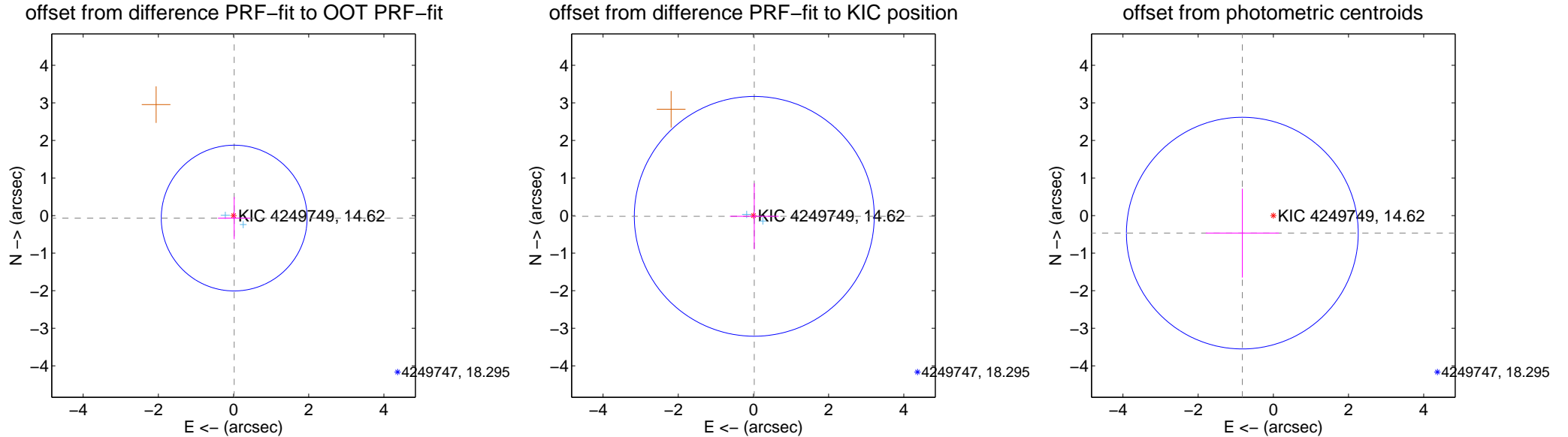
DV Centroid Data

Supplemental centroid analysis for 004249749-03. Kepler magnitude: 14.62. Transit SNR 6.23

There are 2 quarters with good PRF difference image offsets

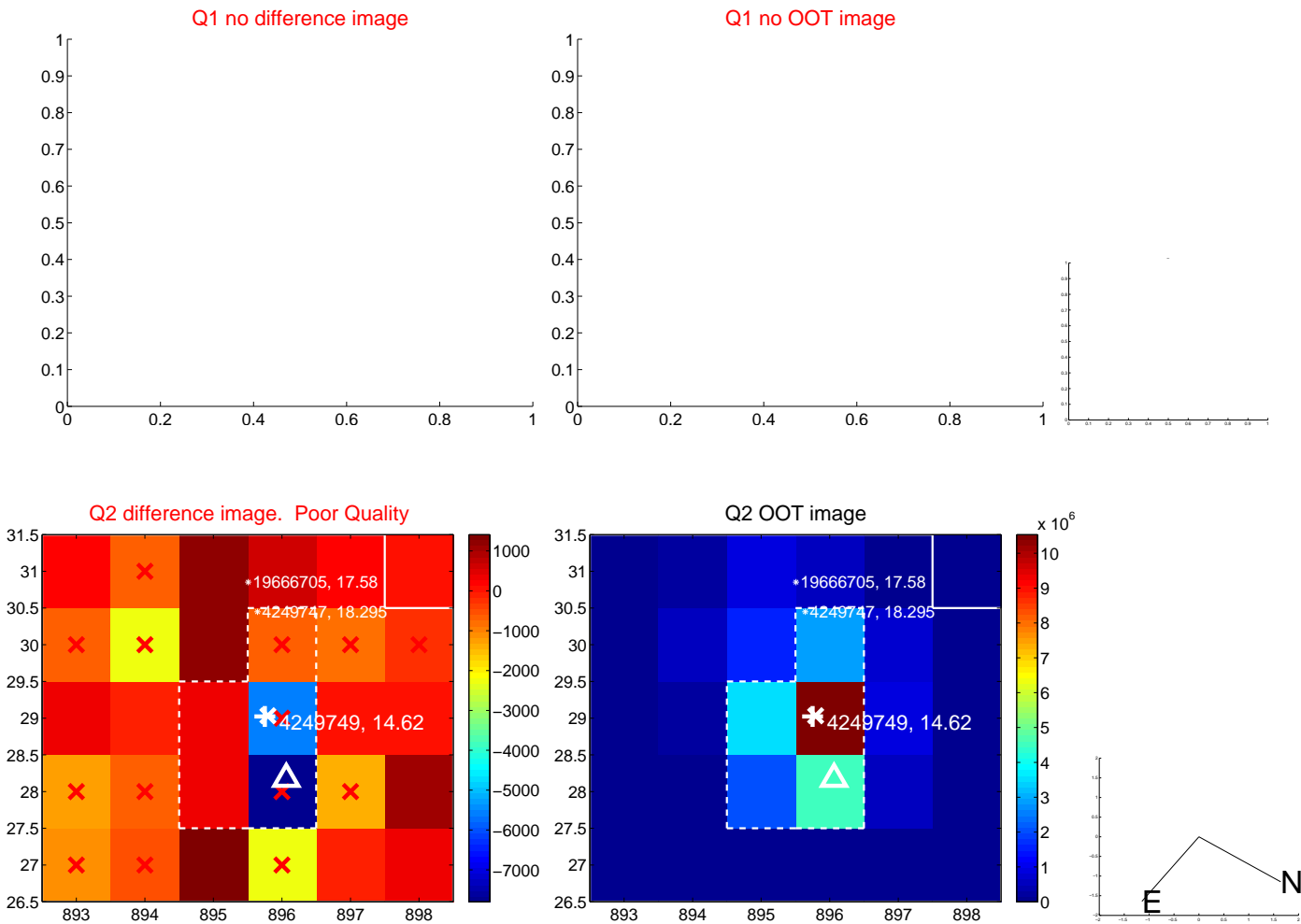
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.069 ± 0.647	0.11	-0.017 ± 0.430	-0.066 ± 0.563
PRF-fit source offset from KIC position	0.030 ± 1.064	0.03	-0.023 ± 0.648	-0.020 ± 0.877
photometric centroid source offset	0.95 ± 1.03	0.92	0.82 ± 0.97	-0.47 ± 1.18



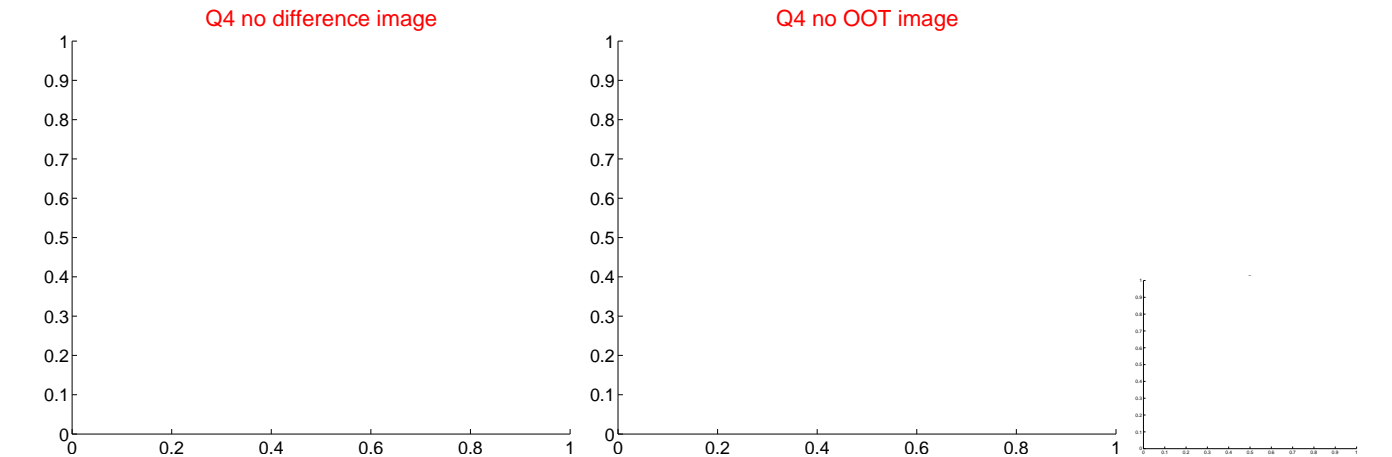
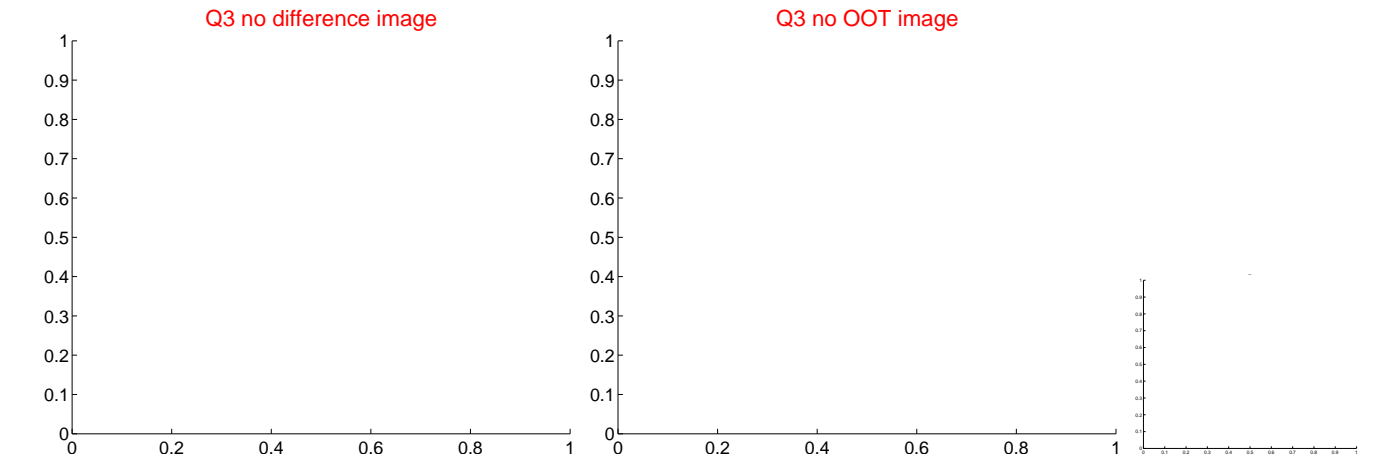
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



Q2 difference image. Poor Quality

Q2 OOT image



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

Q5 no difference image



Q5 no OOT image



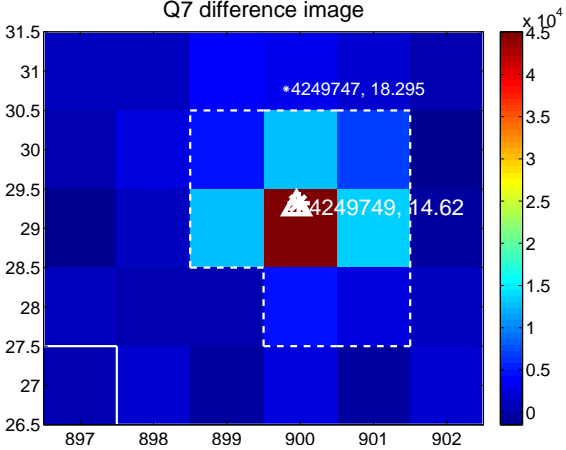
Q6 no difference image



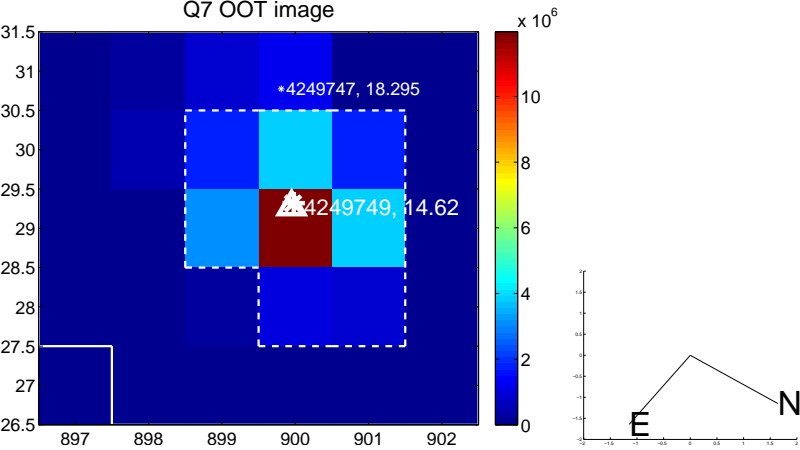
Q6 no OOT image



Q7 difference image



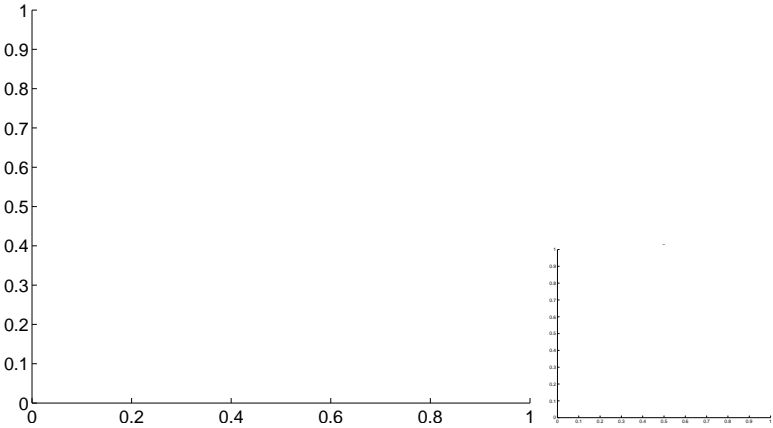
Q7 OOT image



Q8 no difference image



Q8 no OOT image



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

Q9 no difference image



Q9 no OOT image



Q10 no difference image



Q10 no OOT image



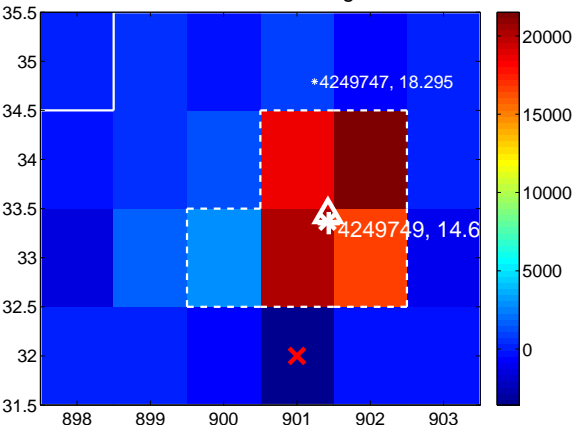
Q11 no difference image



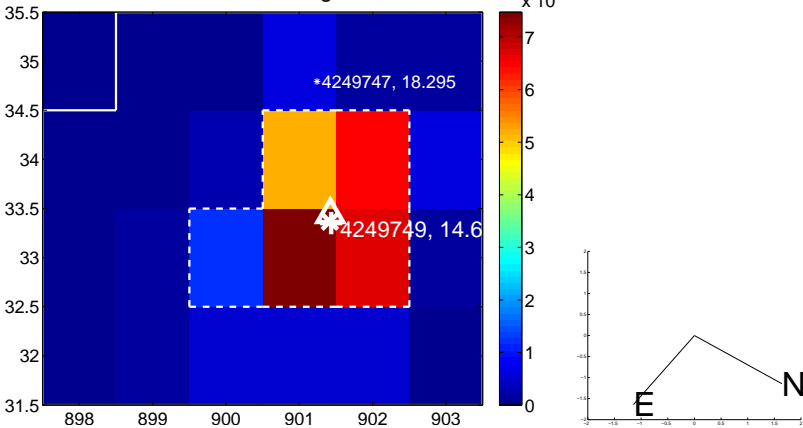
Q11 no OOT image



Q12 difference image



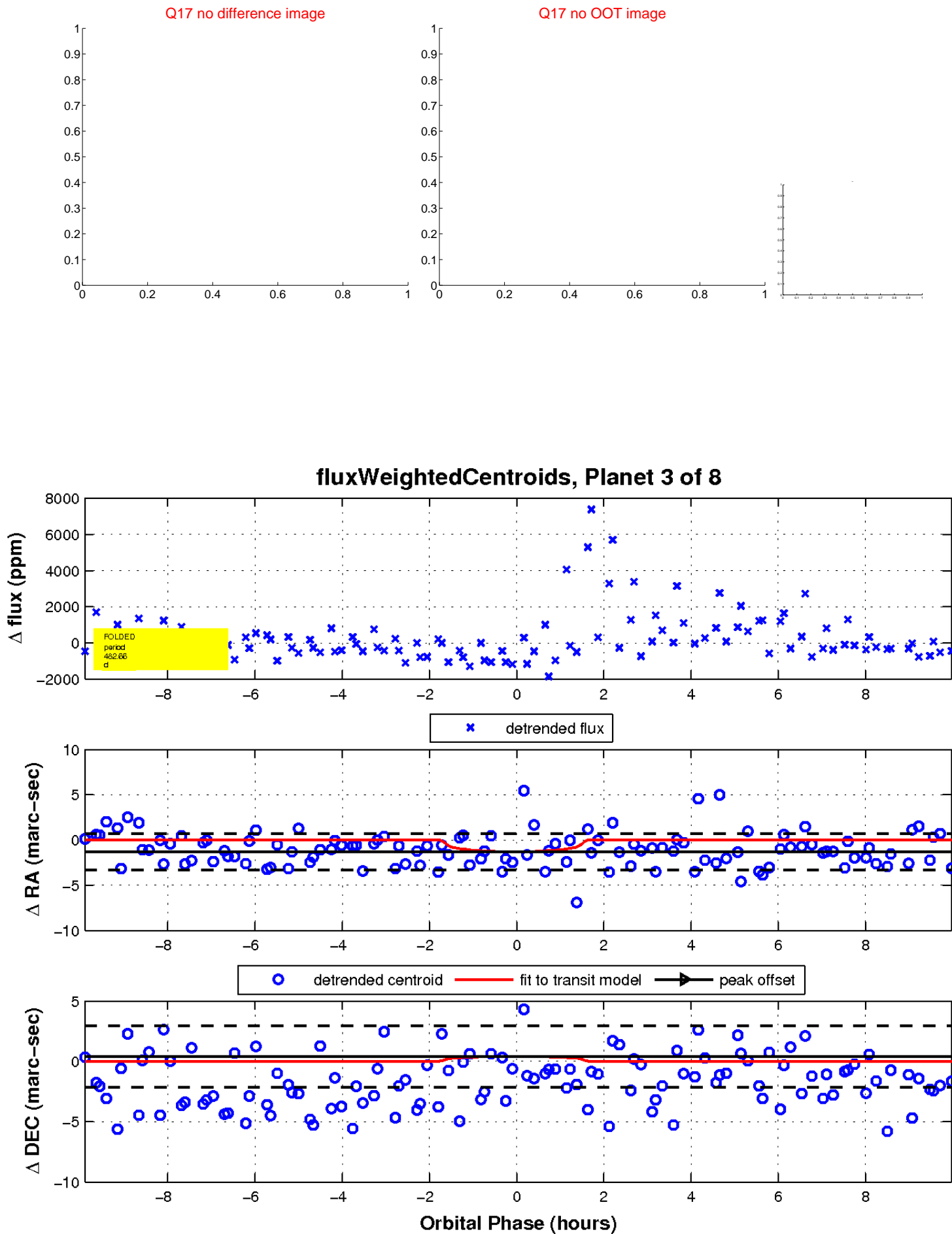
Q12 OOT image



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

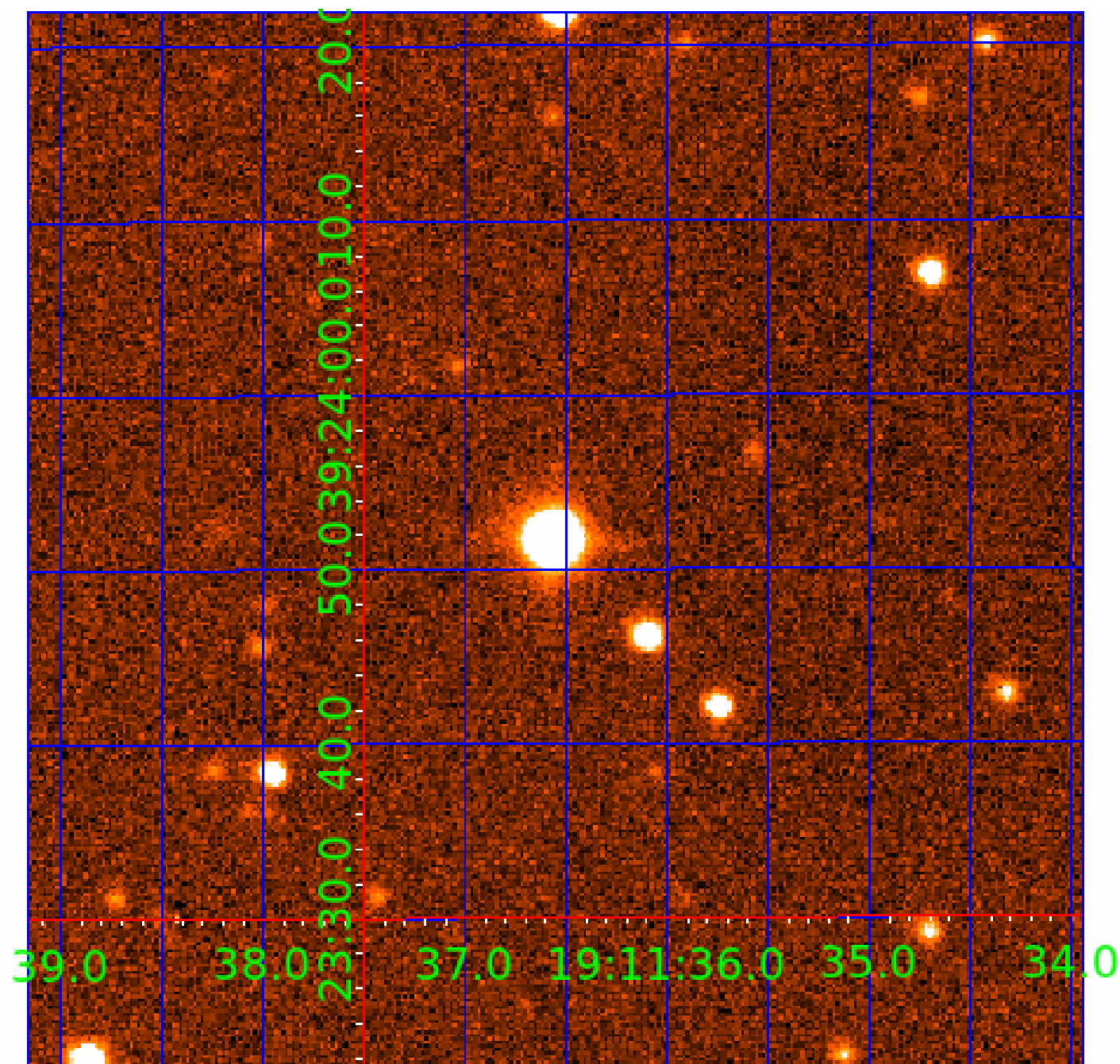


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004249749

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})
004249749-01	OBS	No	446.117305	256.422906	1857.0	4.770	15.7	7.7	0.69	4399	3.13	0.16
004249749-02	OBS	No	402.698956	390.275257	2413.1	11.416	14.9	8.4	0.69	4399	3.24	0.18
004249749-03	OBS	No	482.664452	211.554519	1405.4	3.344	13.3	6.2	0.69	4399	2.63	0.14
004249749-04	OBS	No	394.695695	418.747079	1921.3	4.252	16.1	8.5	0.69	4399	3.28	0.19
004249749-05	OBS	No	564.387457	300.441440	1535.8	2.879	11.8	7.6	0.69	4399	2.78	0.12
004249749-06	OBS	No	468.440517	577.888541	519.8	0.625	11.8	1.9	0.69	4399	1.66	0.15
004249749-07	OBS	No	346.748892	226.742683	1217.2	2.759	12.2	5.9	0.69	4399	2.33	0.22
004249749-08	OBS	No	501.969206	511.912106	1462.4	4.949	13.2	7.3	0.69	4399	2.75	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004249749-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
004249749-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

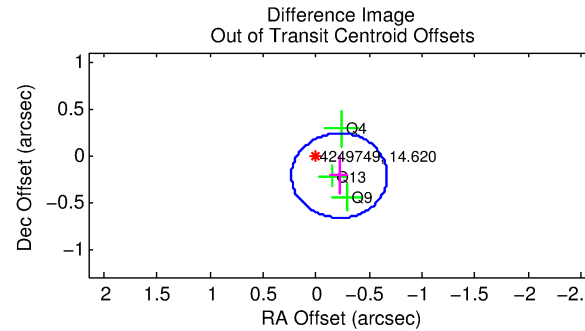
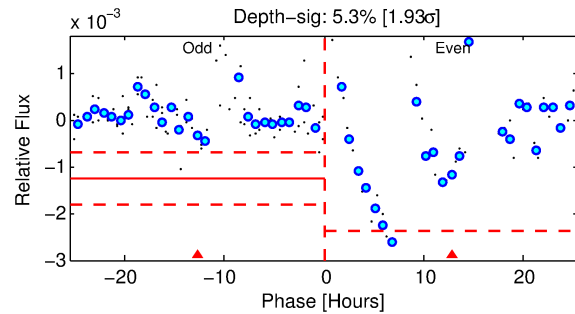
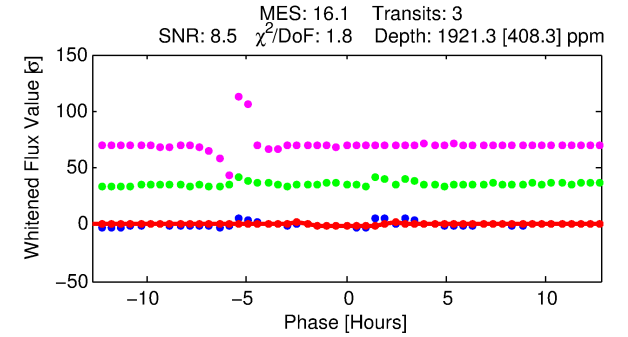
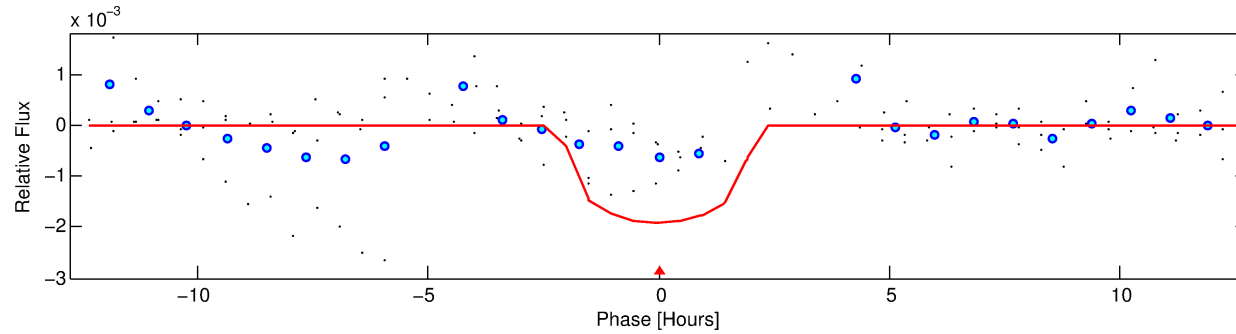
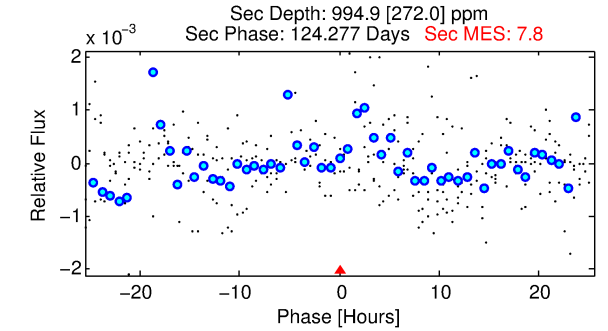
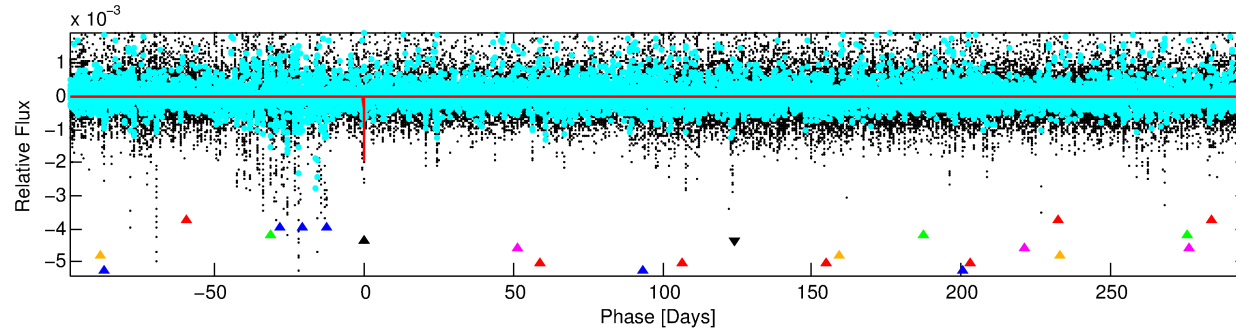
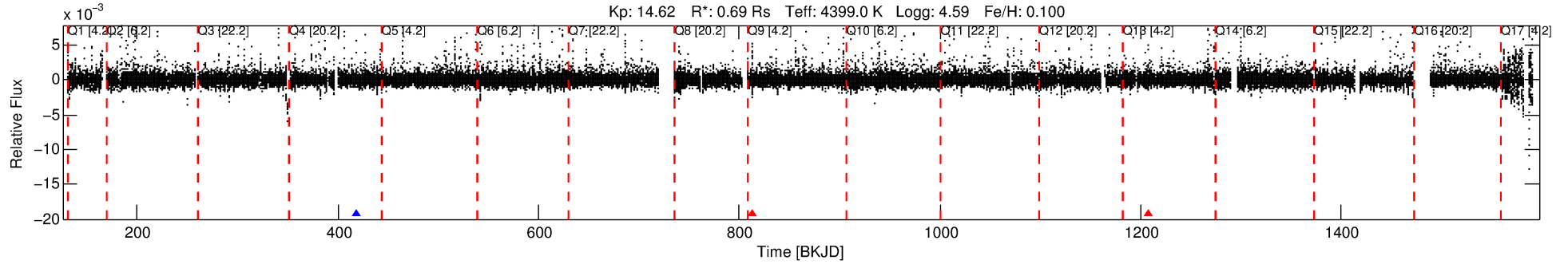
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004249749-04

No Significant Match Found

DV One-Page Summary

KIC: 4249749 Candidate: 4 of 8 Period: 394.696 d



DV Fit Results:

Period = 394.69569 [0.00565] d
Epoch = 418.7471 [0.0080] BKJD
Rp/R* = 0.0434 [0.0614]
a/R* = 531.21 [2367.75]
b = 0.73 [2.99]
Seff = 0.19 [0.03]
Teq = 168 [7] K
Rp = 3.28 [4.64] Re
a = 0.9274 [0.0648] AU
Ag = 43784.97 [124425.21] [0.35 σ]
Teffp = 3749 [2664] K [1.34 σ]

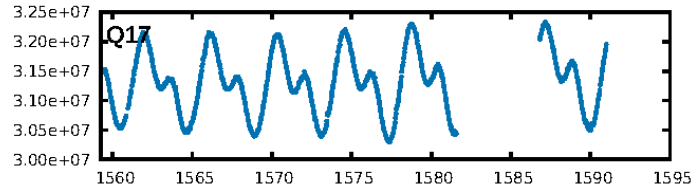
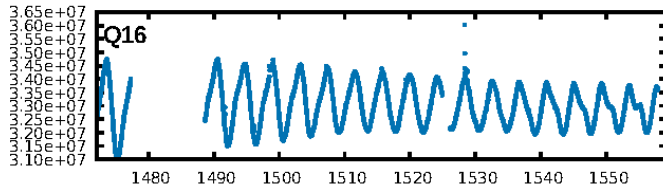
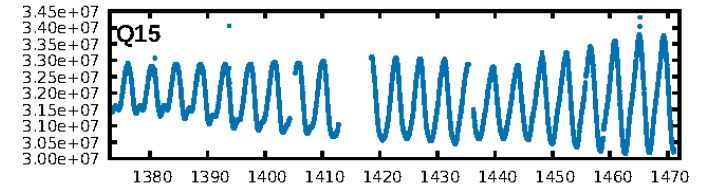
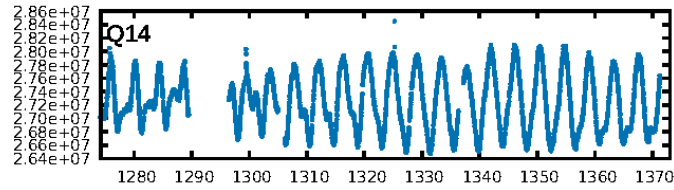
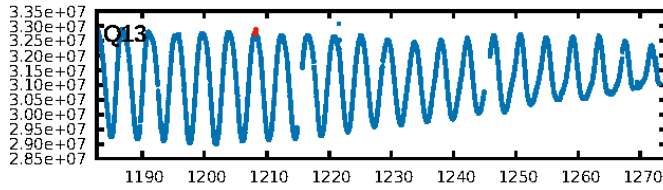
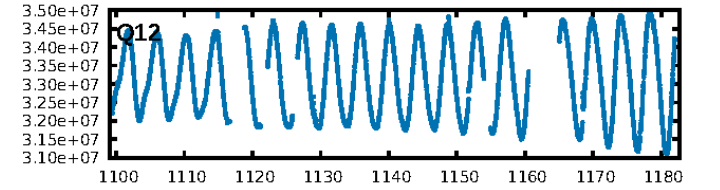
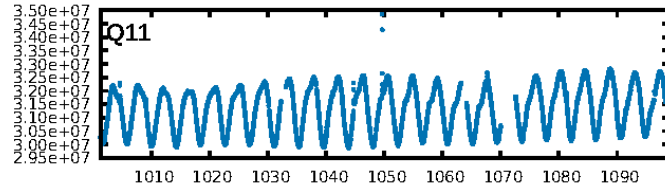
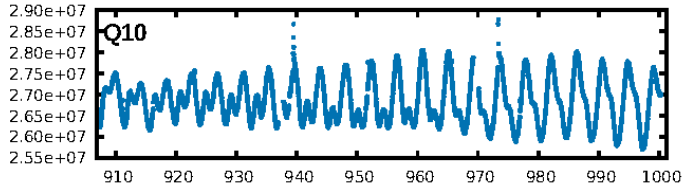
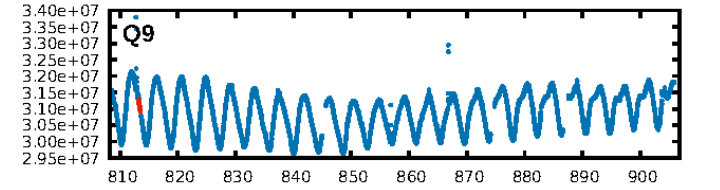
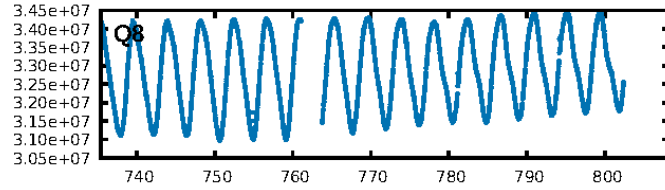
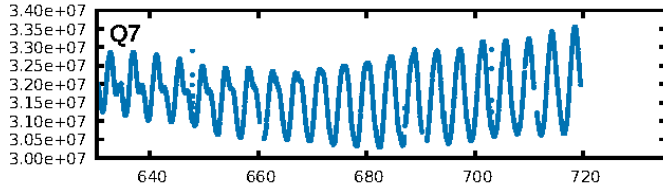
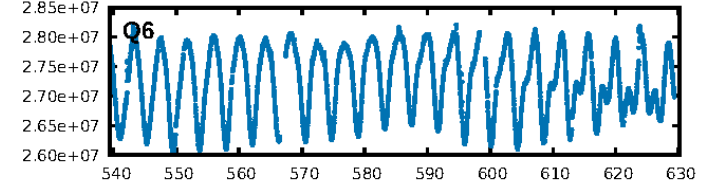
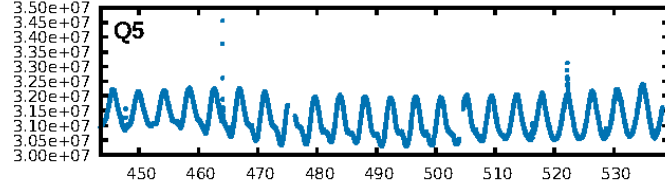
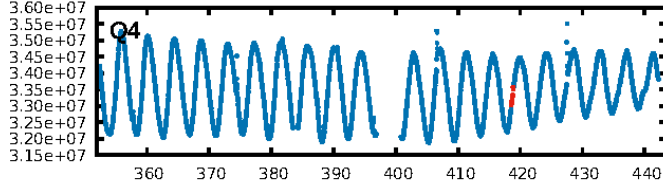
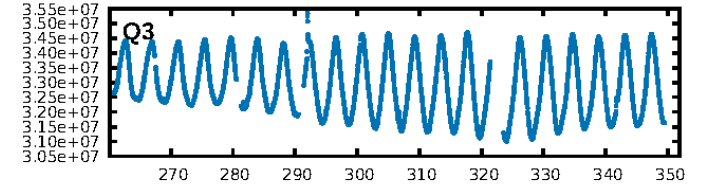
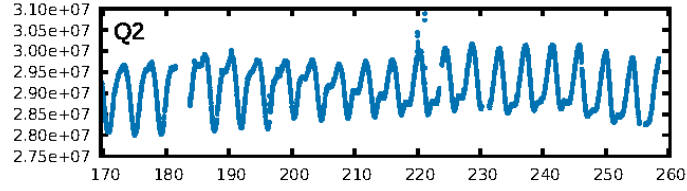
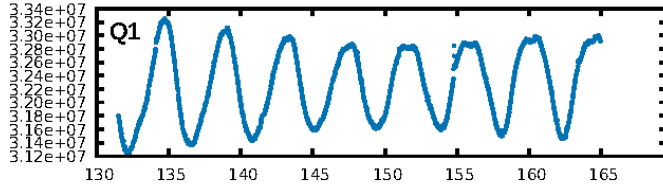
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [227.04 σ]
LongPeriod-sig: 100.0% [15.77 σ]
ModelChiSquare2-sig: 9.0%
ModelChiSquareGof-sig: 82.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.33 [1/3]
GhostDiagnostic-chr: 0.5203
Centroid-sig: 7.1%
Centroid-so: 0.869 arcsec [1.00 σ]
OotOffset-rm: 0.307 arcsec [2.04 σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-rm: 0.290 arcsec [2.02 σ]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

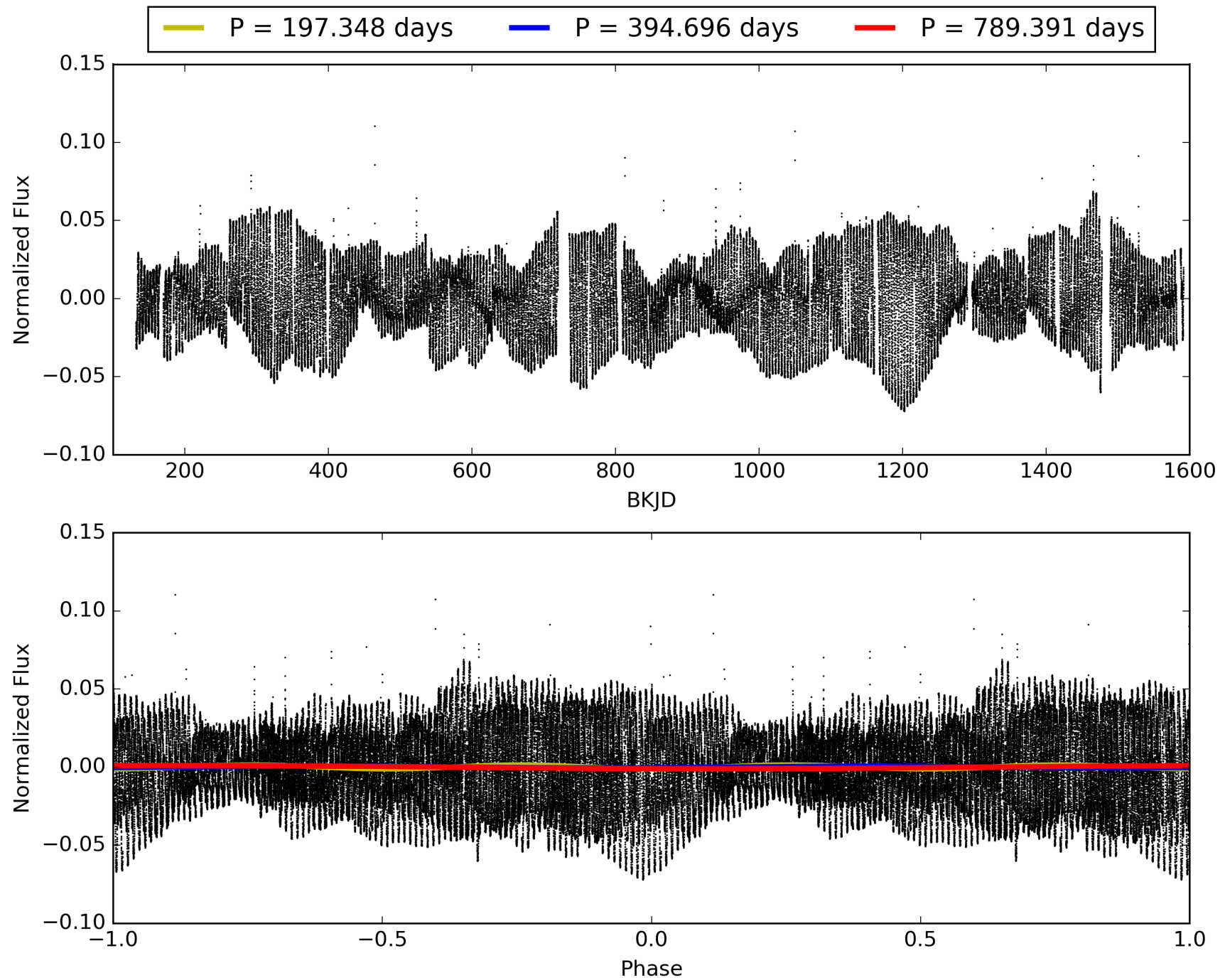
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:24:39 Z

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

TCE 004249749-04, PDC Light Curves

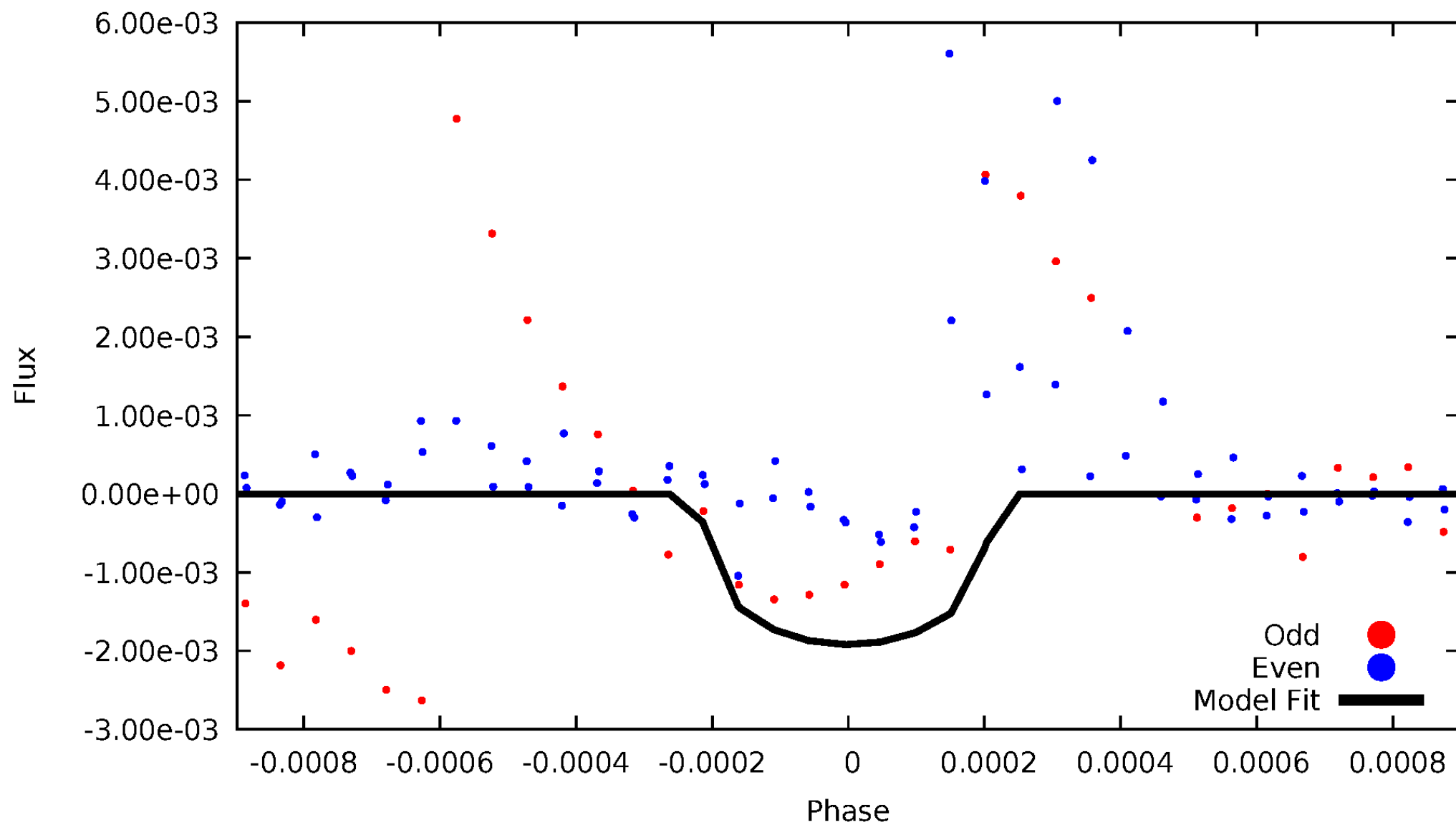


TCE 004249749-04



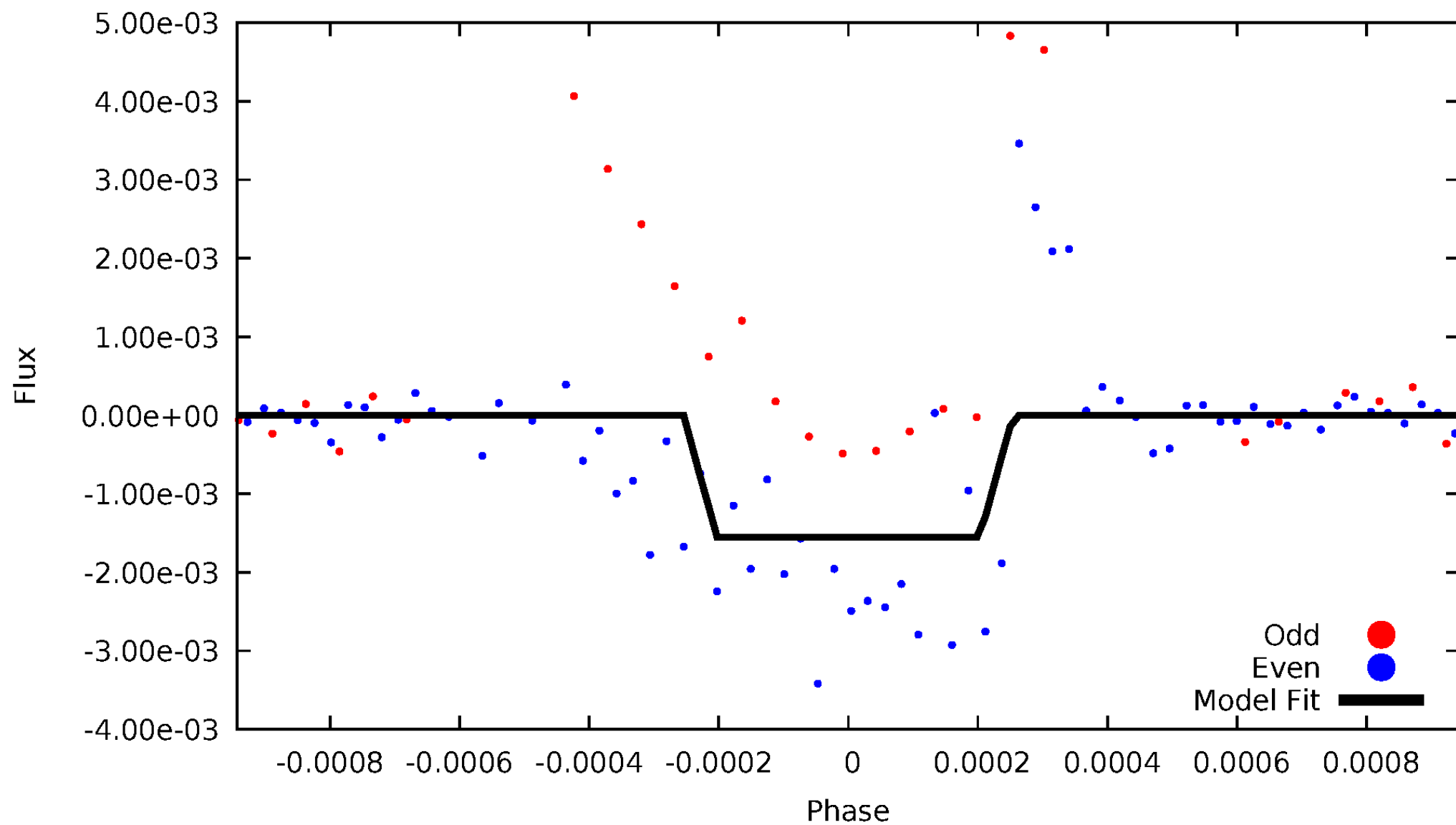
DV Odd/Even

TCE 004249749-04



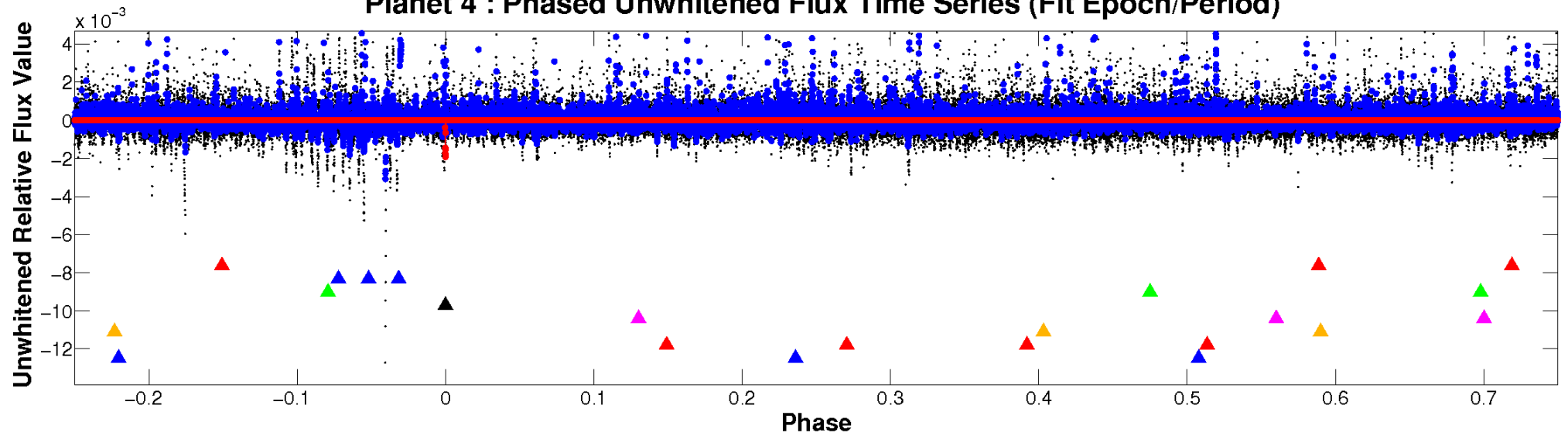
ALT Odd/Even

TCE 004249749-04

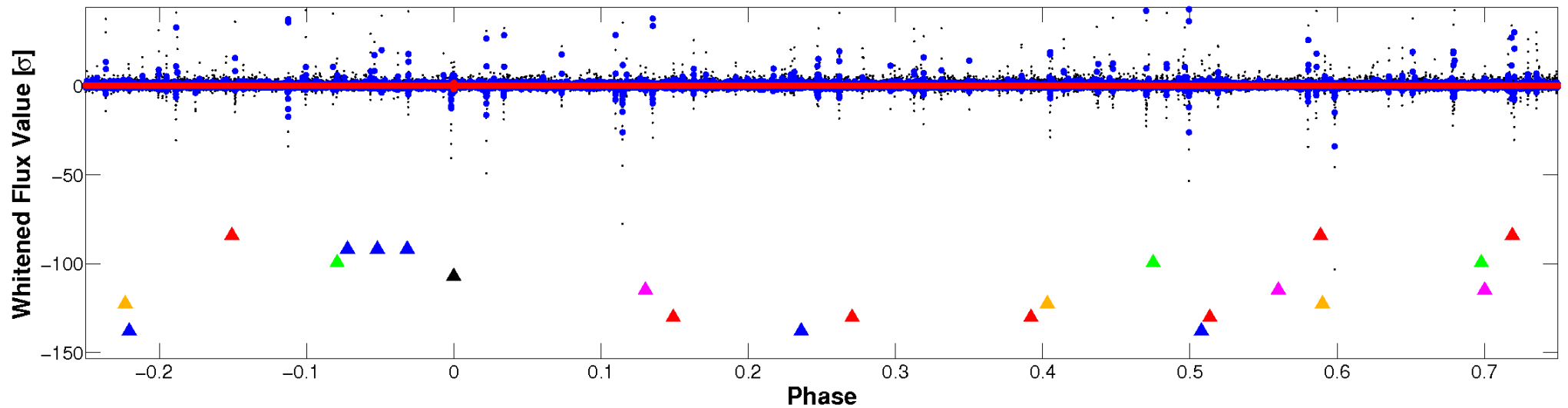


Non-Whitened Vs. Whitened Light Curve

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

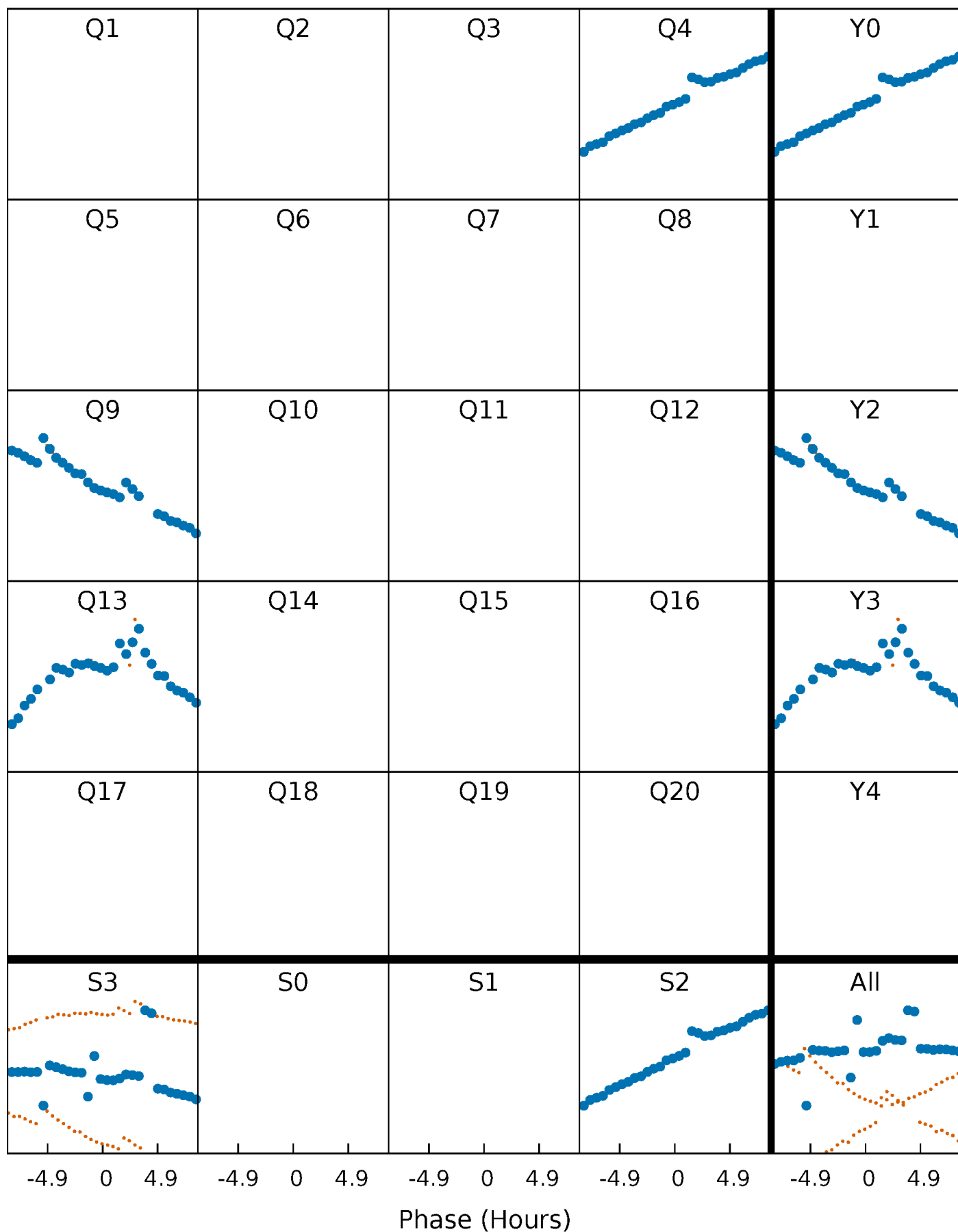


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



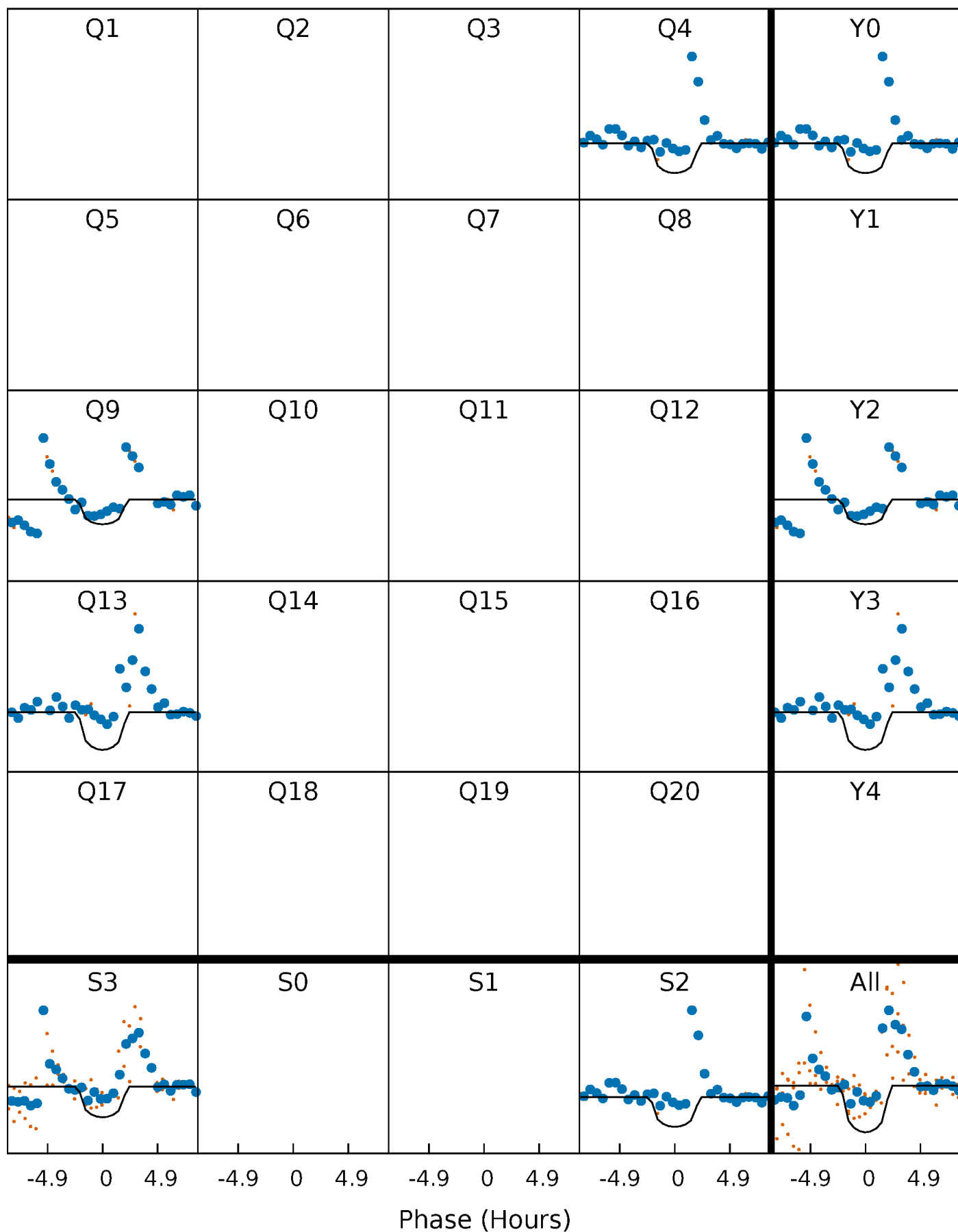
PDC Quarter-Phased Transit Curves

TCE 004249749-04 $P=394.695695$ Days $T_0=418.747079$ (BKJD)



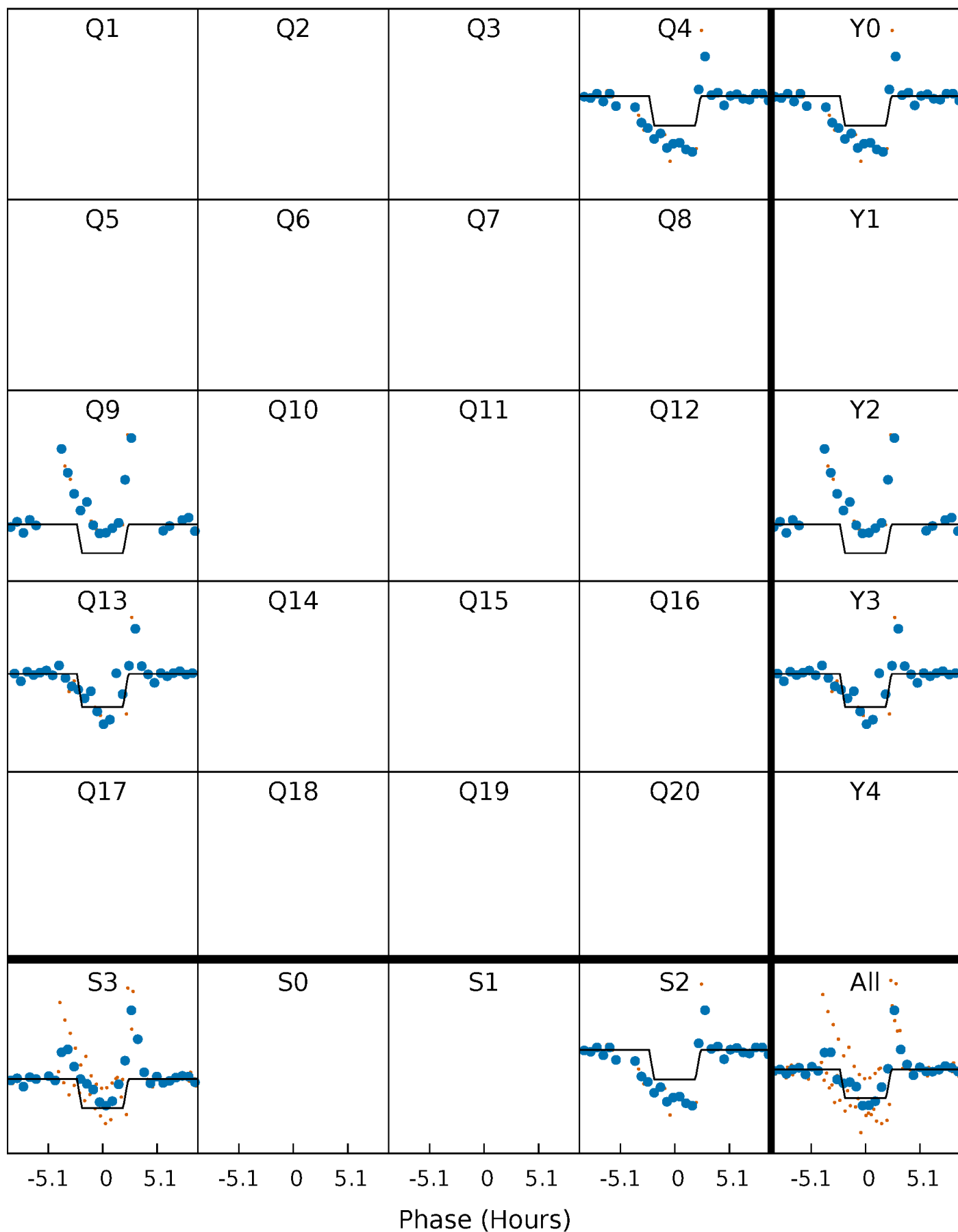
DV Quarter-Phased Transit Curves

TCE 004249749-04 $P=394.695695$ Days $T_0=418.747079$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

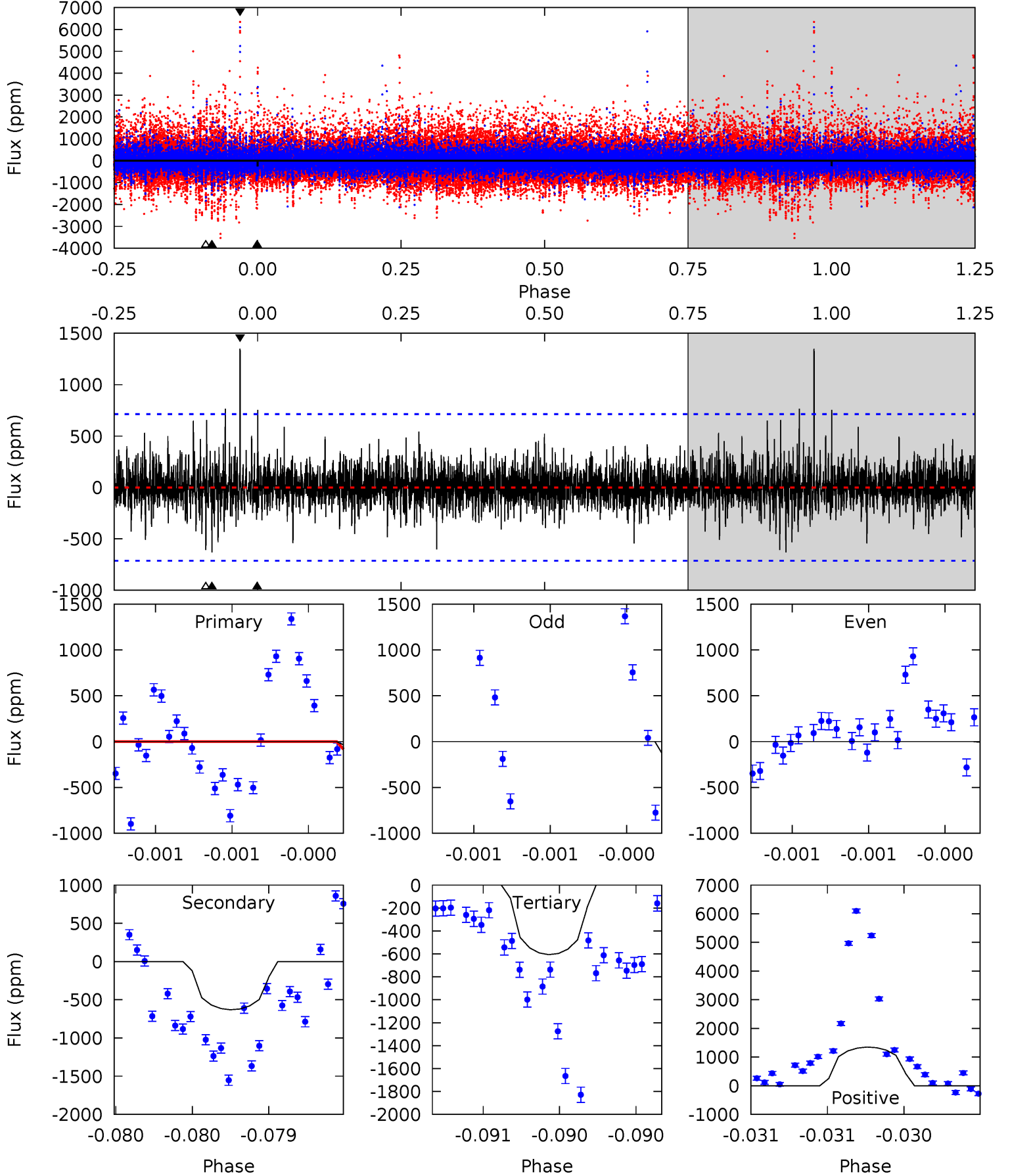
TCE 004249749-04 P=394.721890 Days $T_0=418.701748$ (BKJD)



DV Model-Shift Uniqueness Test

004249749-04, $P = 394.695695$ Days, $E = 24.051384$ Days

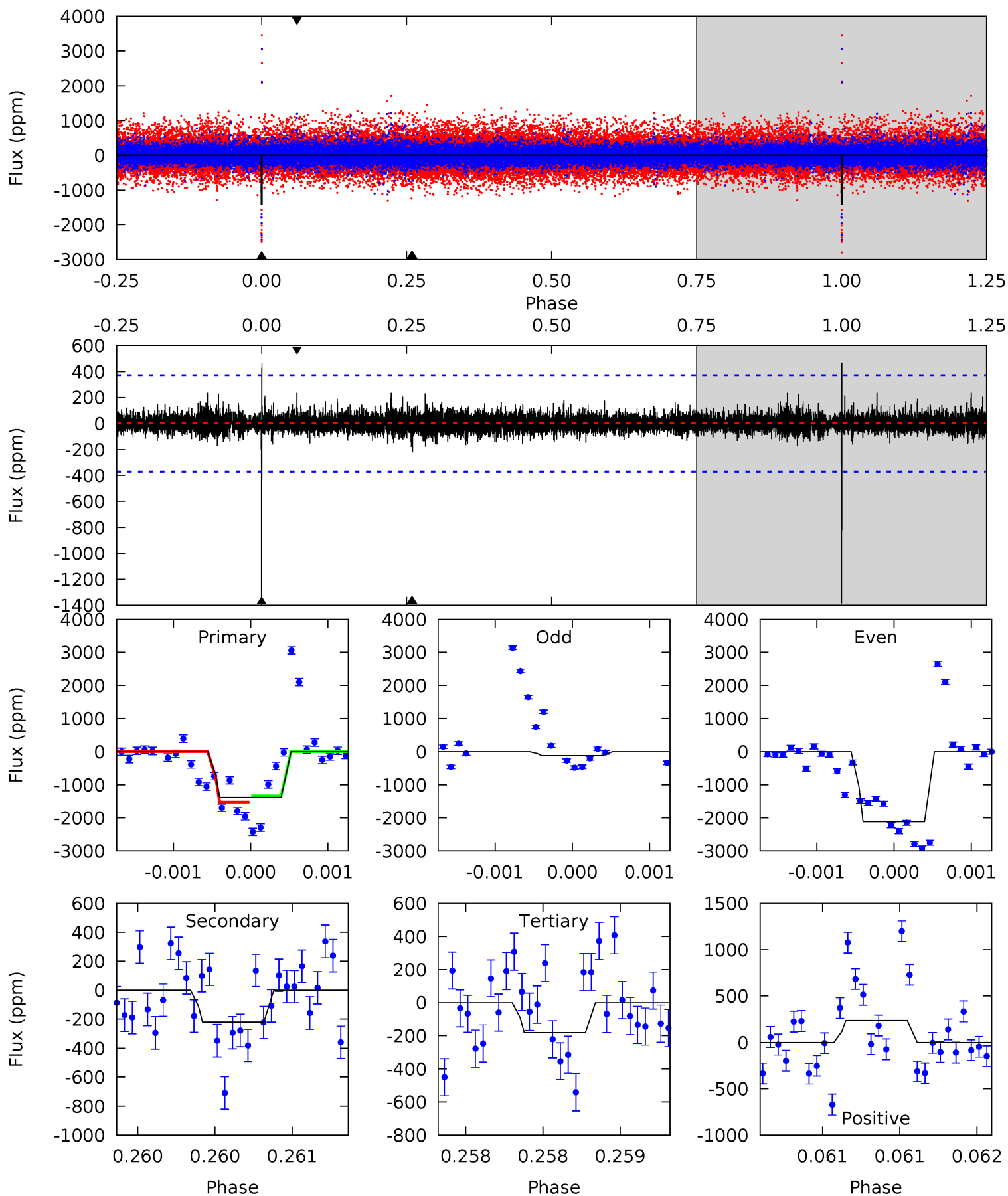
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.93	4.95	4.76	10.6	5.61	3.53	1.07	-2.84	-8.67	0.19	-5.64	2.07	-0.04	0.68	1.50



Alt Model-Shift Uniqueness Test

004249749-04, P = 394.721890 Days, E = 23.979858 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.7	3.30	2.70	3.53	5.57	3.48	0.62	18.0	17.2	0.60	-0.23	15.6	0.91	0.25	1.44



Stellar Parameters For KIC 004249749

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4399^{+132}_{-132}	$4.592^{+0.053}_{-0.018}$	$0.100^{+0.250}_{-0.300}$	$0.692^{+0.033}_{-0.059}$	$0.683^{+0.055}_{-0.050}$	$2.902^{+0.625}_{-0.250}$
	+3%/-3%	+1%/-0%	+250%/-300%	+5%/-9%	+8%/-7%	+22%/-9%
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 004249749-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-630 ± 127	$4.65^{+3.75}_{-2.91}$	233^{+8}_{-8}	3279^{+1348}_{-533}	14971^{+94490}_{-10720}
Alt.	-220 ± 67	$4.49^{+3.70}_{-2.92}$	233^{+8}_{-8}	2799^{+1020}_{-402}	4929^{+35014}_{-3445}

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

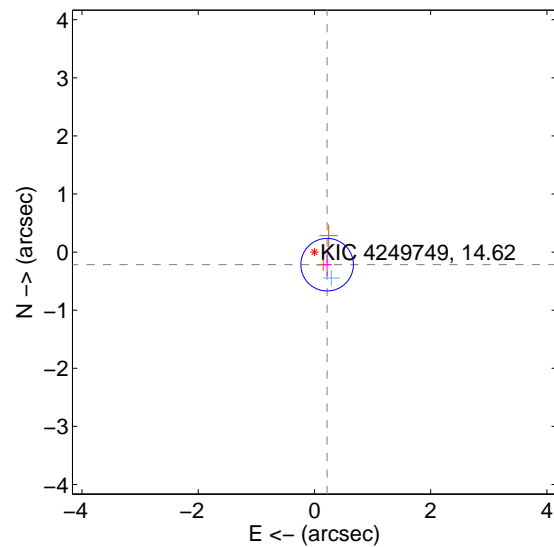
Supplemental centroid analysis for 004249749-04. Kepler magnitude: 14.62. Transit SNR 8.52

There are 1 quarters with good PRF difference image offsets

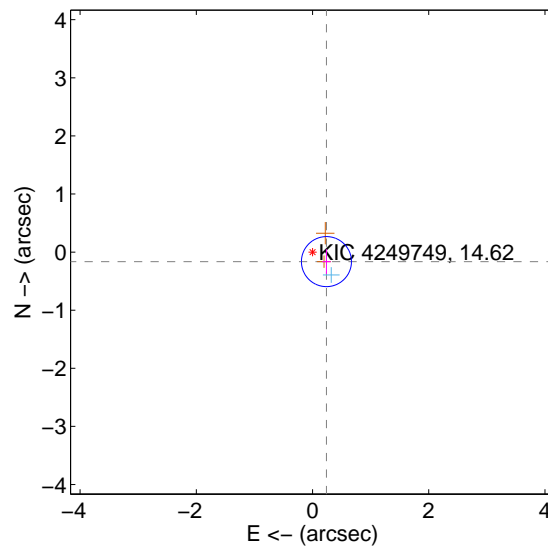
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.307 ± 0.151	2.04	-0.218 ± 0.082	-0.217 ± 0.197
PRF-fit source offset from KIC position	0.290 ± 0.144	2.02	-0.240 ± 0.072	-0.164 ± 0.212
photometric centroid source offset	0.87 ± 0.87	1.00	0.10 ± 0.74	0.86 ± 0.87

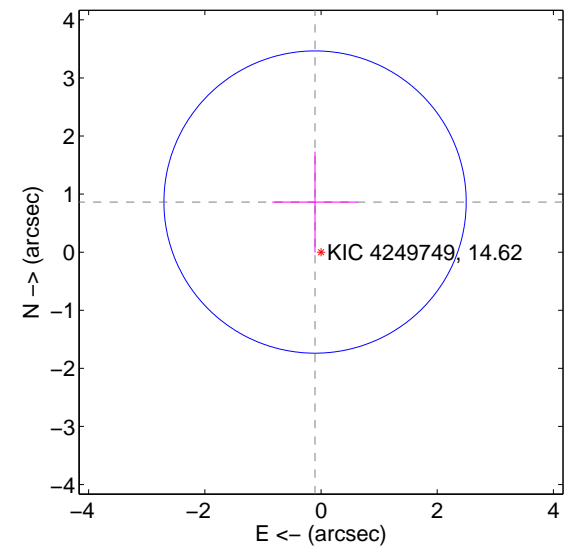
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

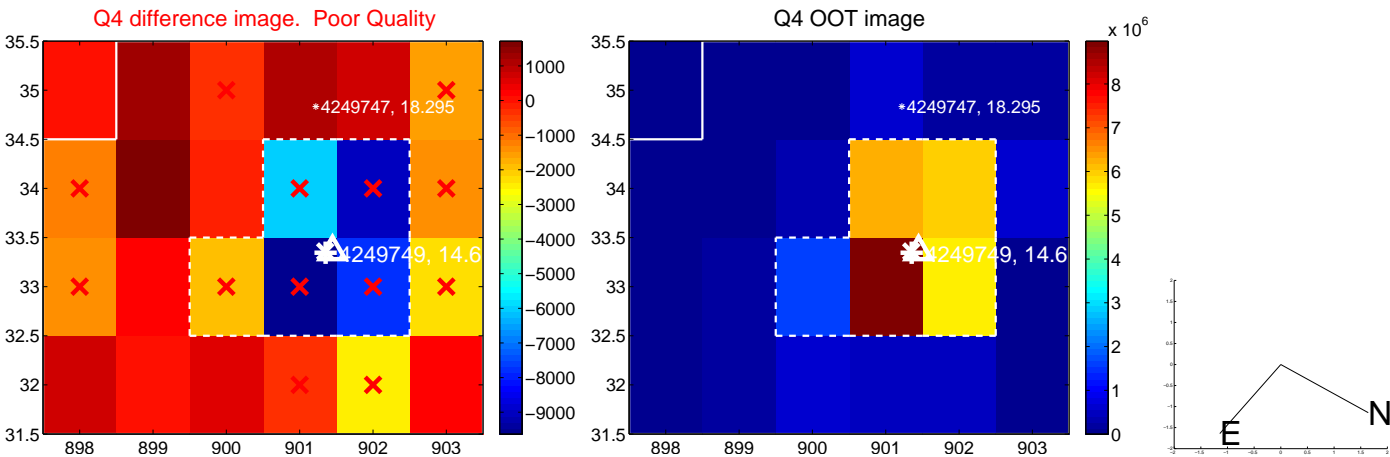


offset from photometric centroids



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.

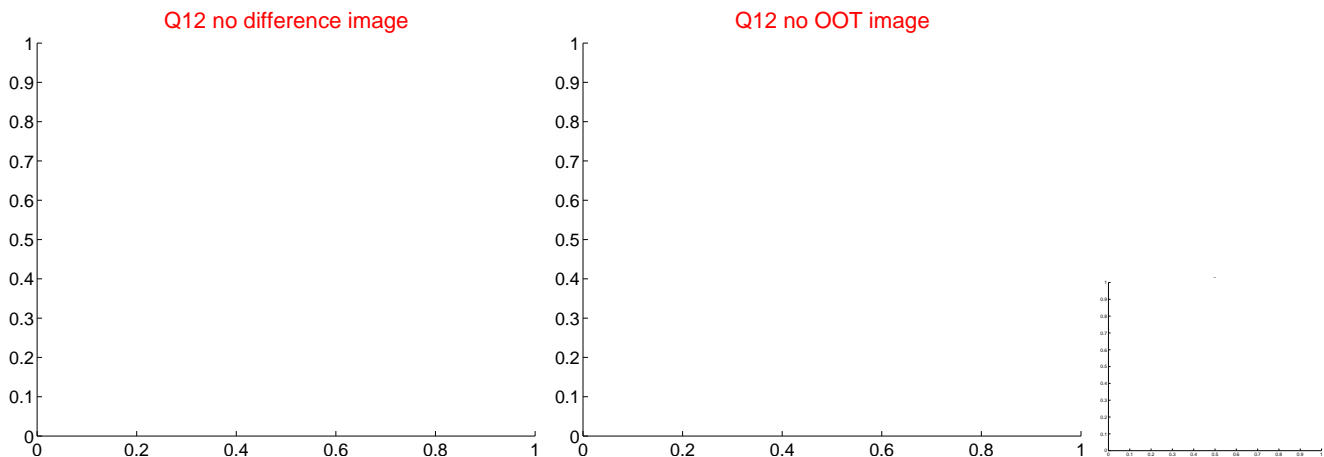
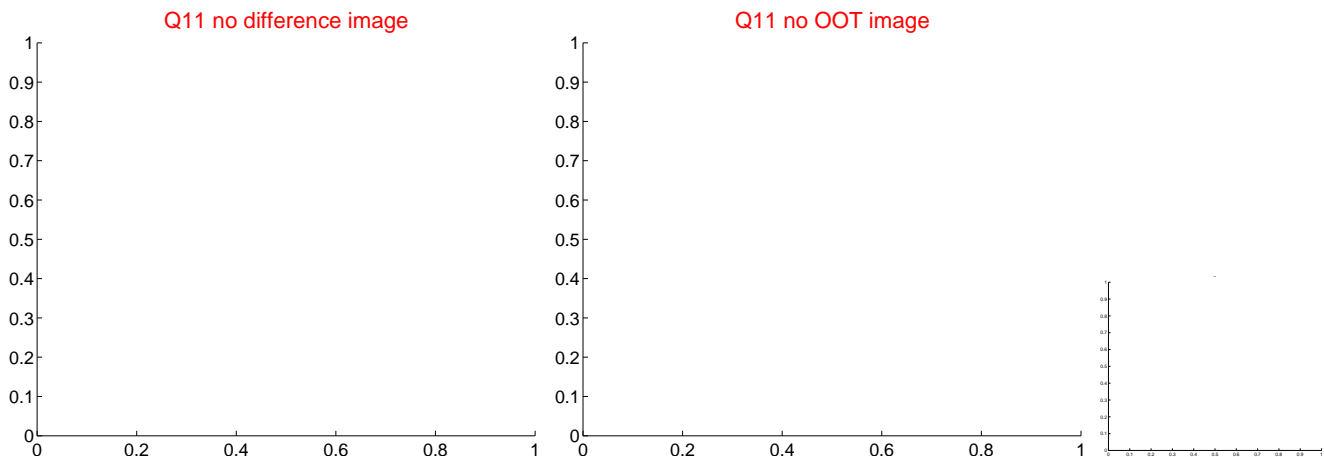
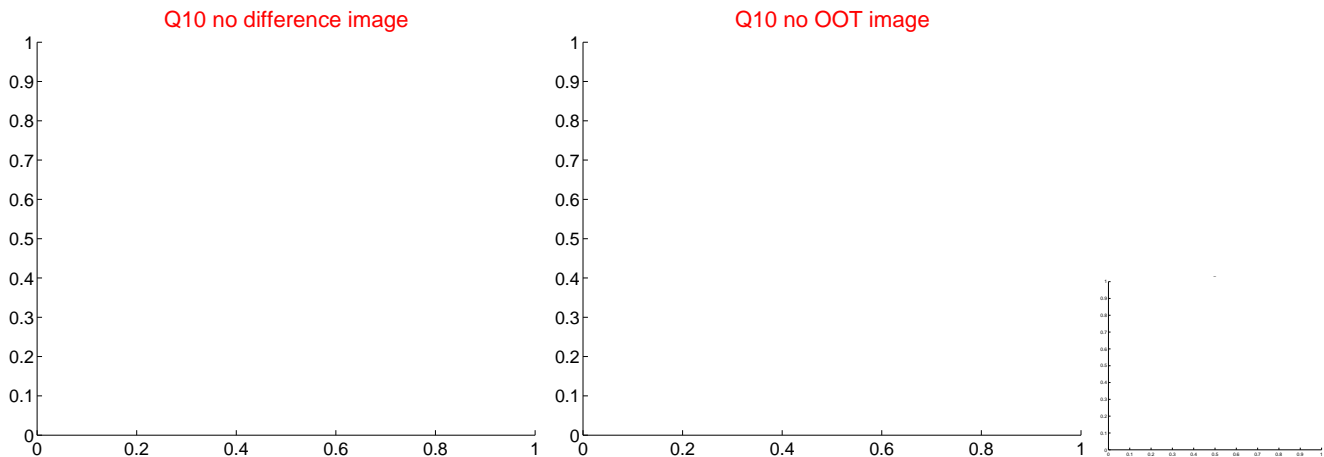
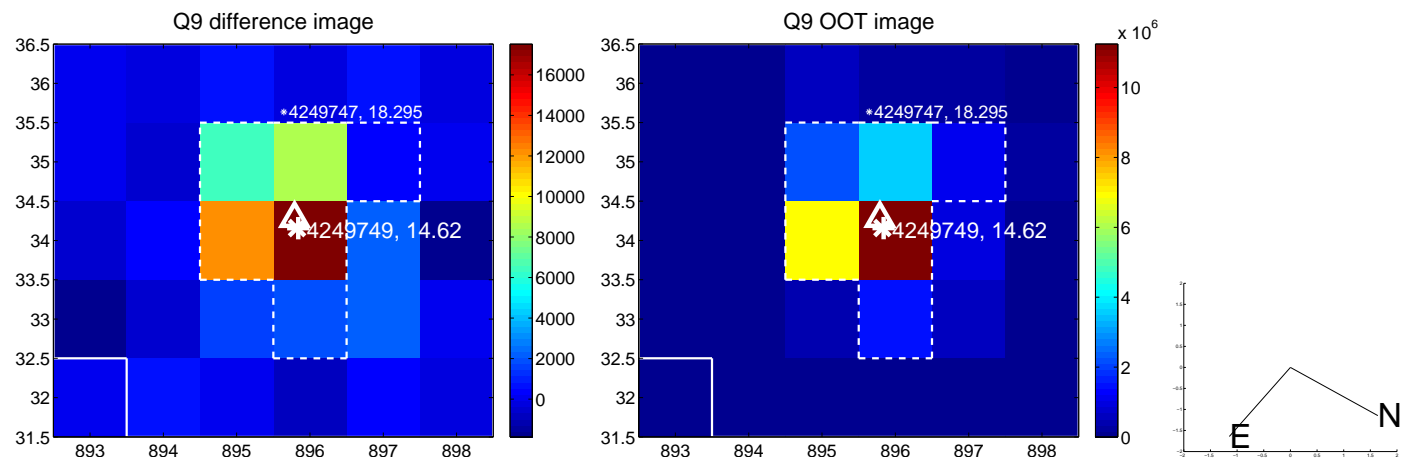
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



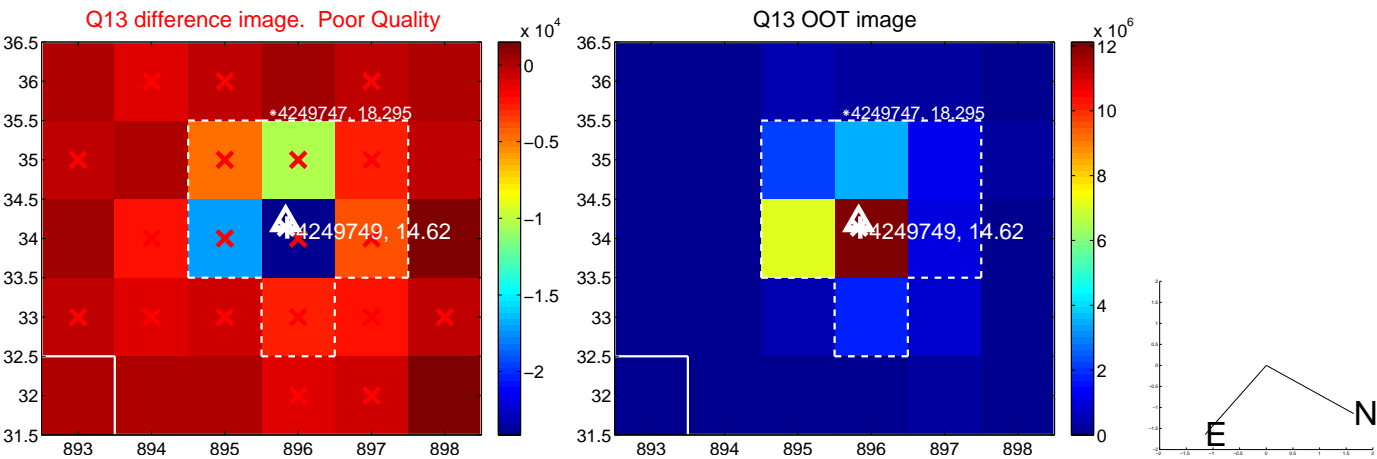
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



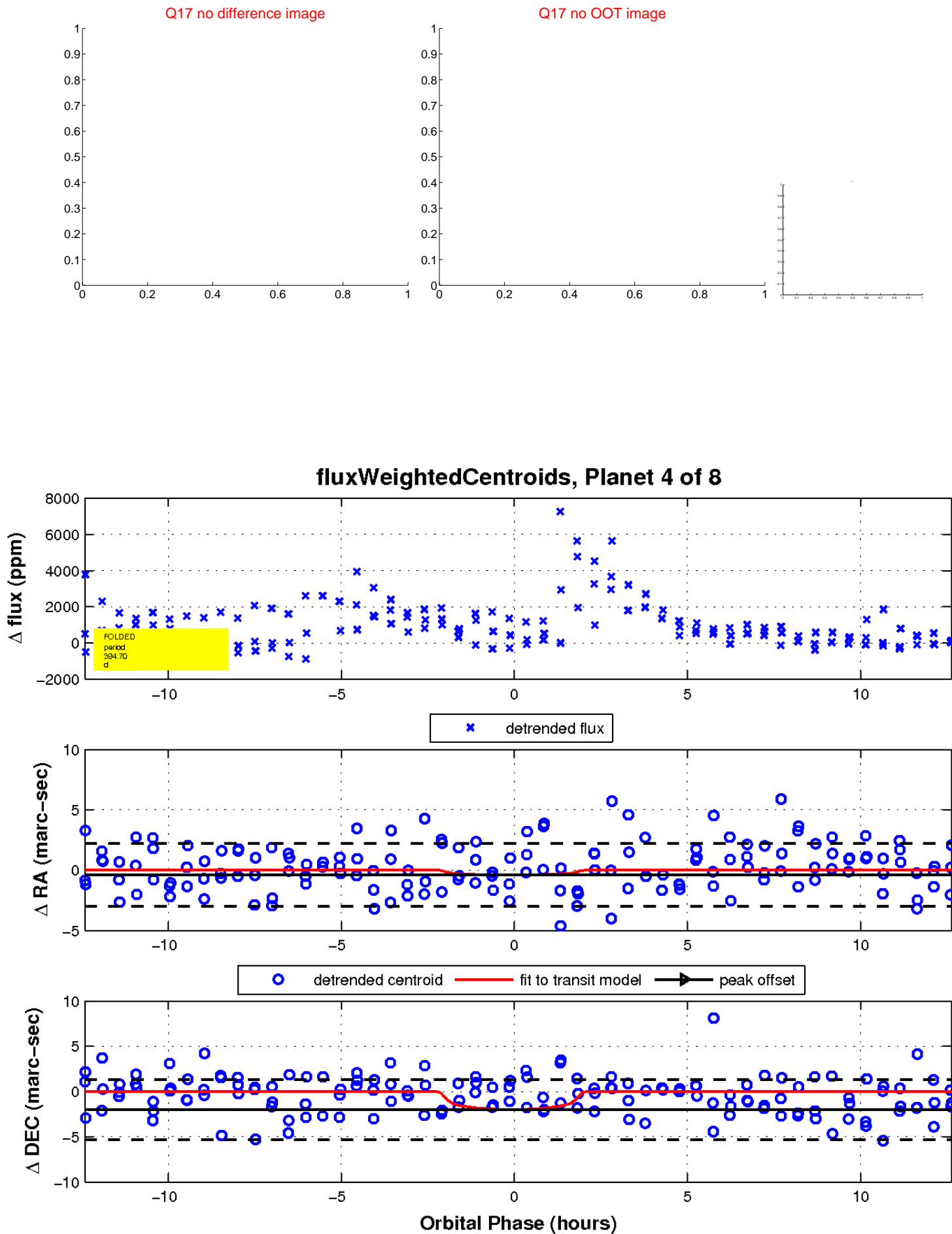
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

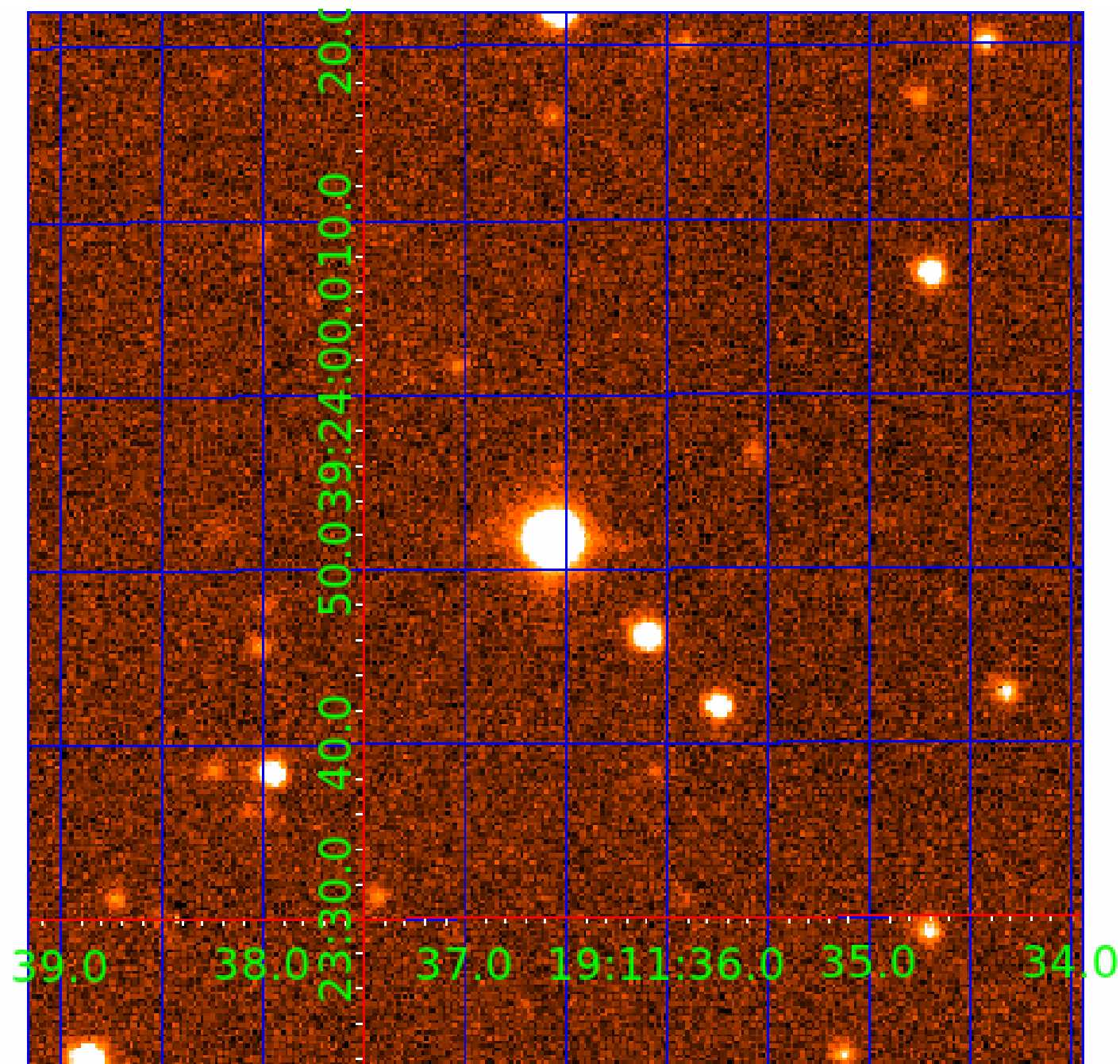


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004249749

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})
004249749-01	OBS	No	446.117305	256.422906	1857.0	4.770	15.7	7.7	0.69	4399	3.13	0.16
004249749-02	OBS	No	402.698956	390.275257	2413.1	11.416	14.9	8.4	0.69	4399	3.24	0.18
004249749-03	OBS	No	482.664452	211.554519	1405.4	3.344	13.3	6.2	0.69	4399	2.63	0.14
004249749-04	OBS	No	394.695695	418.747079	1921.3	4.252	16.1	8.5	0.69	4399	3.28	0.19
004249749-05	OBS	No	564.387457	300.441440	1535.8	2.879	11.8	7.6	0.69	4399	2.78	0.12
004249749-06	OBS	No	468.440517	577.888541	519.8	0.625	11.8	1.9	0.69	4399	1.66	0.15
004249749-07	OBS	No	346.748892	226.742683	1217.2	2.759	12.2	5.9	0.69	4399	2.33	0.22
004249749-08	OBS	No	501.969206	511.912106	1462.4	4.949	13.2	7.3	0.69	4399	2.75	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004249749-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
004249749-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

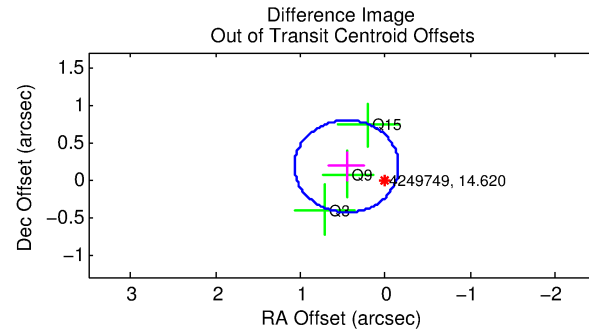
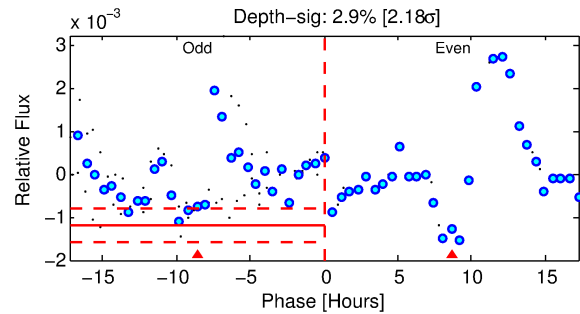
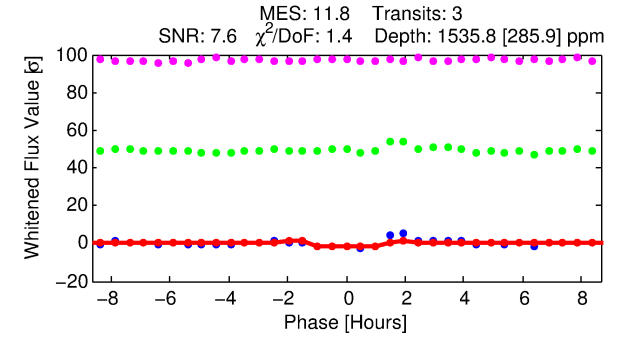
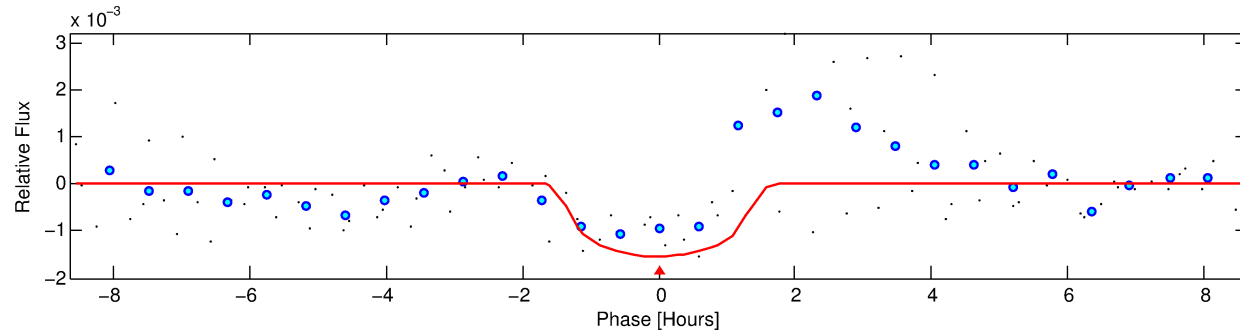
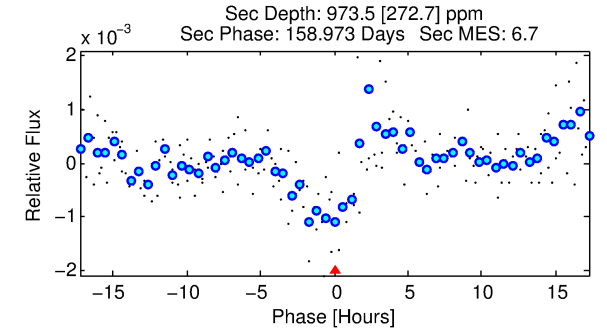
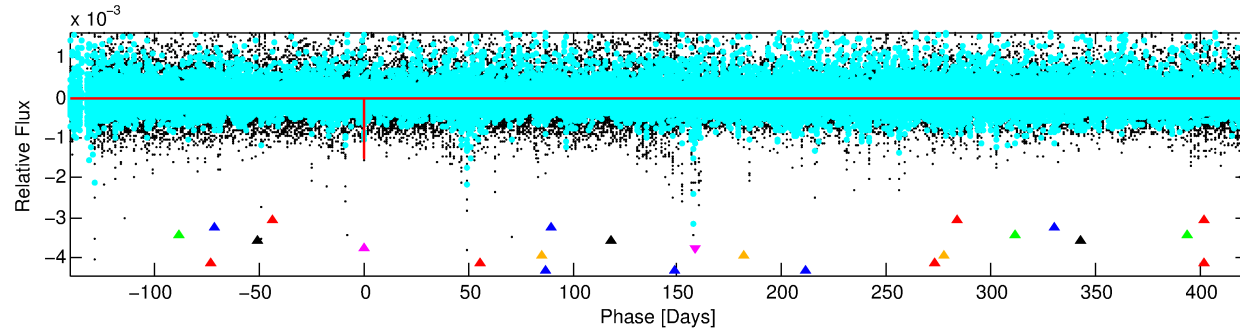
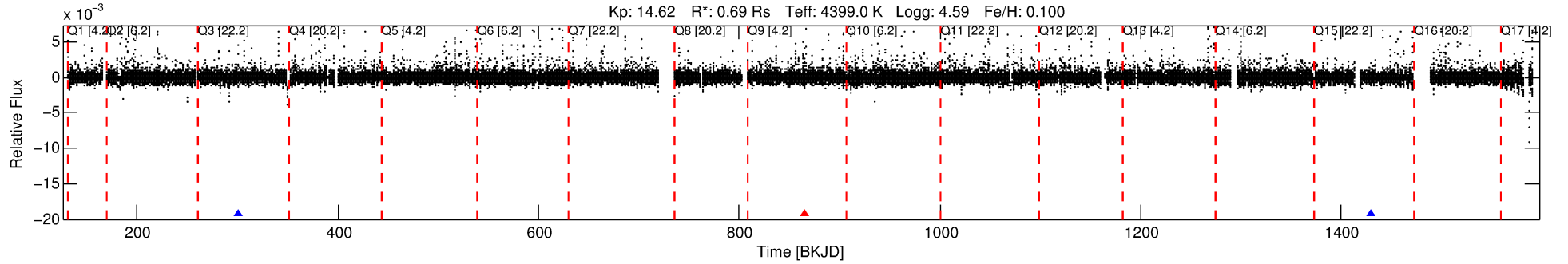
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004249749-05

No Significant Match Found

DV One-Page Summary

KIC: 4249749 Candidate: 5 of 8 Period: 564.387 d



DV Fit Results:

Period = 564.38746 [0.00501] d
Epoch = 300.4414 [0.0067] BKJD
Rp/R* = 0.0368 [0.0785]
a/R* = 1285.02 [8087.34]
b = 0.58 [7.39]
Seff = 0.12 [0.02]
Teq = 149 [6] K
Rp = 2.78 [5.93] Re
a = 1.1771 [0.0823] AU
Ag = 95983.34 [410162.29] [0.23 σ]
Teffp = 4049 [4327] K [0.90 σ]

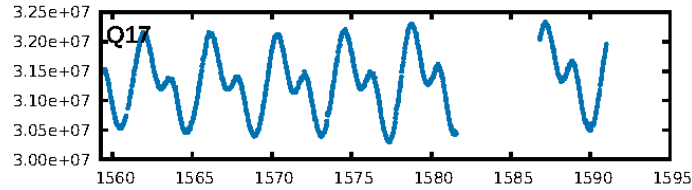
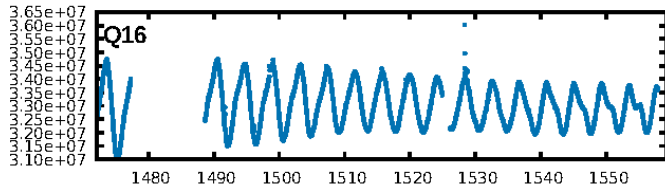
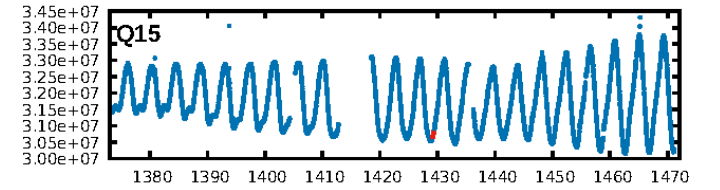
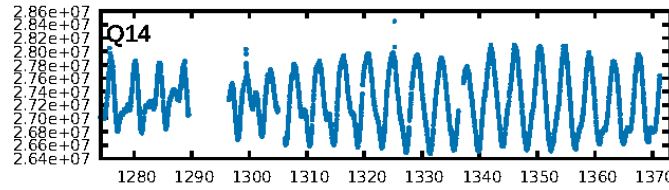
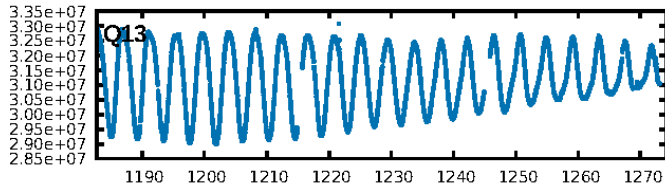
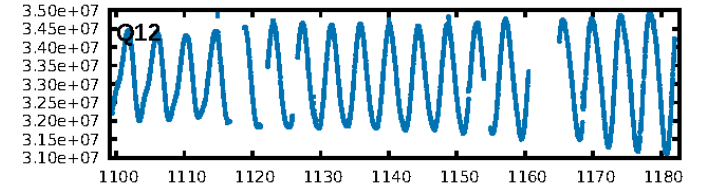
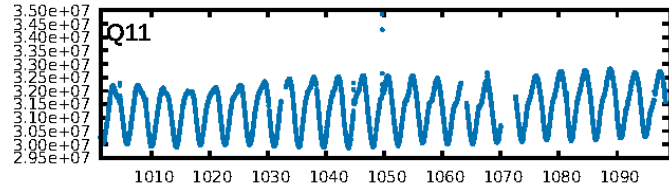
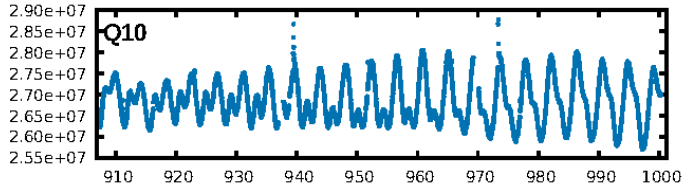
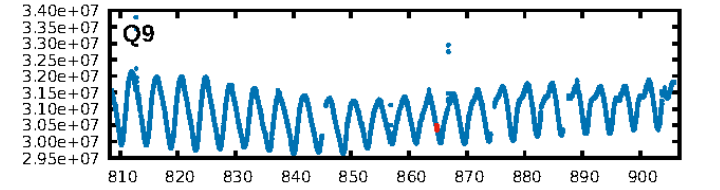
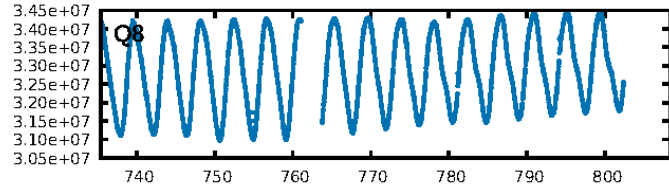
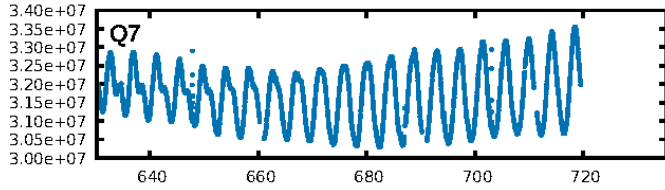
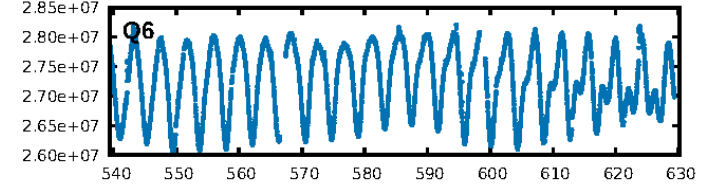
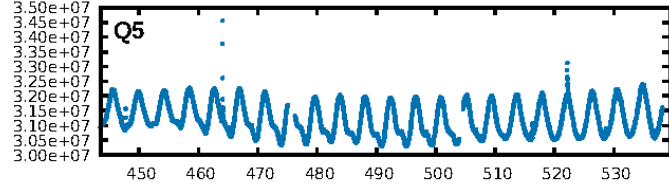
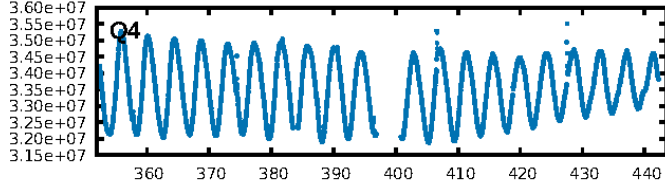
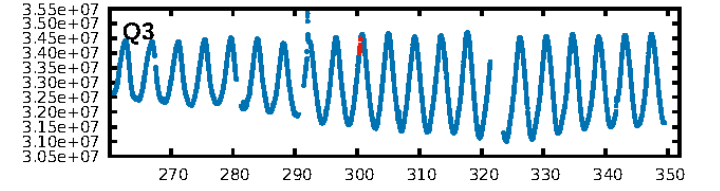
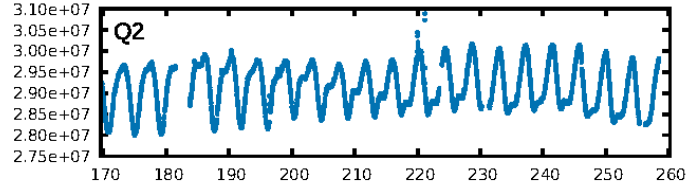
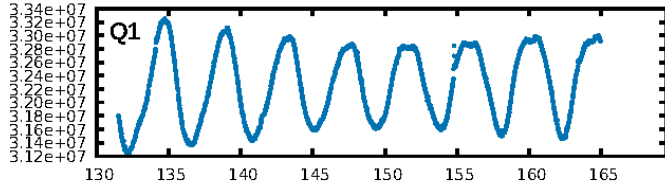
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [261.66 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.0%
ModelChiSquareGof-sig: 50.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.67 [2/3]
GhostDiagnostic-chr: 0.816
Centroid-sig: 24.8%
Centroid-so: 1.203 arcsec [1.22 σ]
OotOffset-rm: 0.488 arcsec [2.38 σ]
KicOffset-rm: 0.414 arcsec [1.95 σ]
OotOffset-st: 0/2/0/1 [3]
KicOffset-st: 0/2/0/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

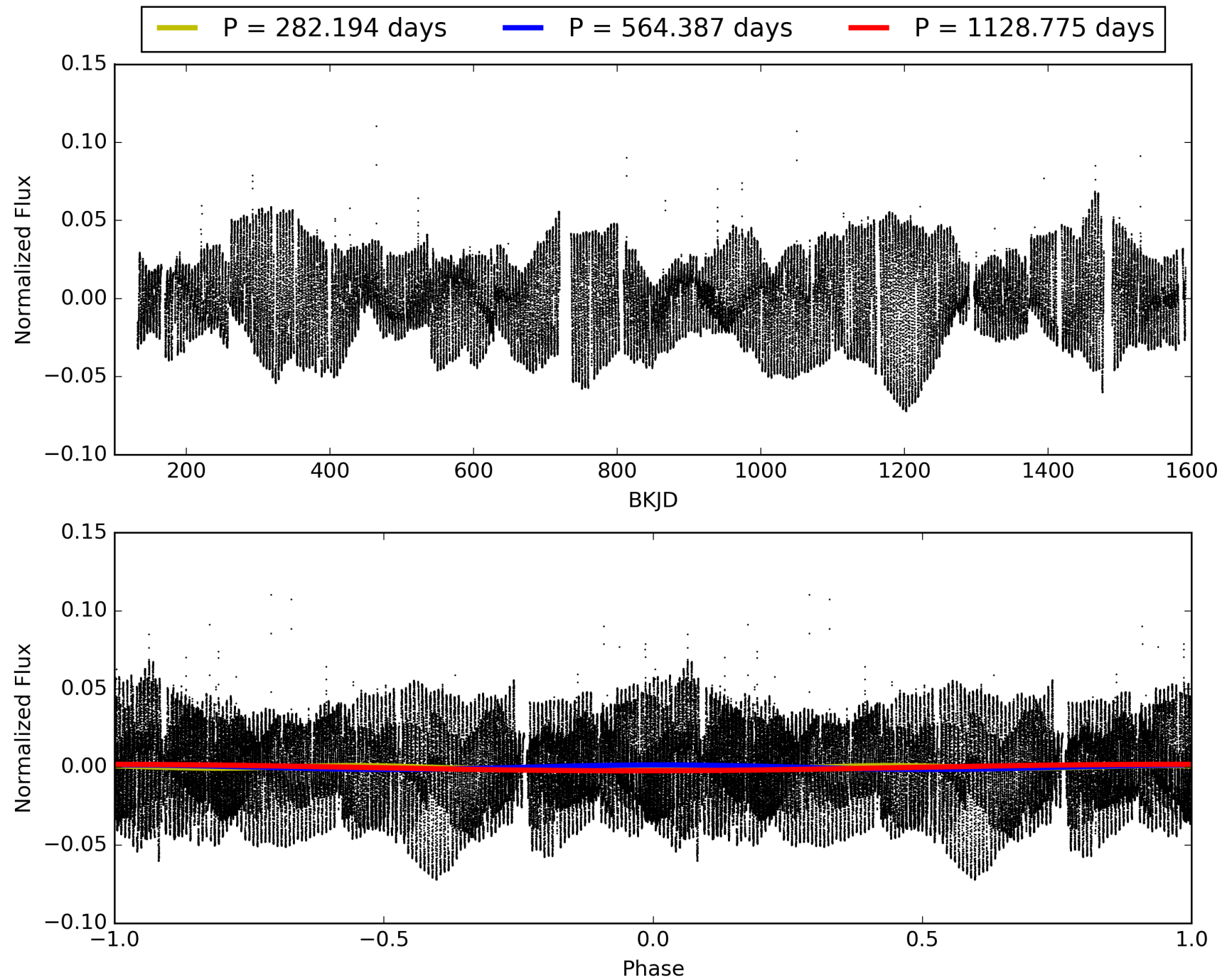
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:25:04 Z

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

TCE 004249749-05, PDC Light Curves

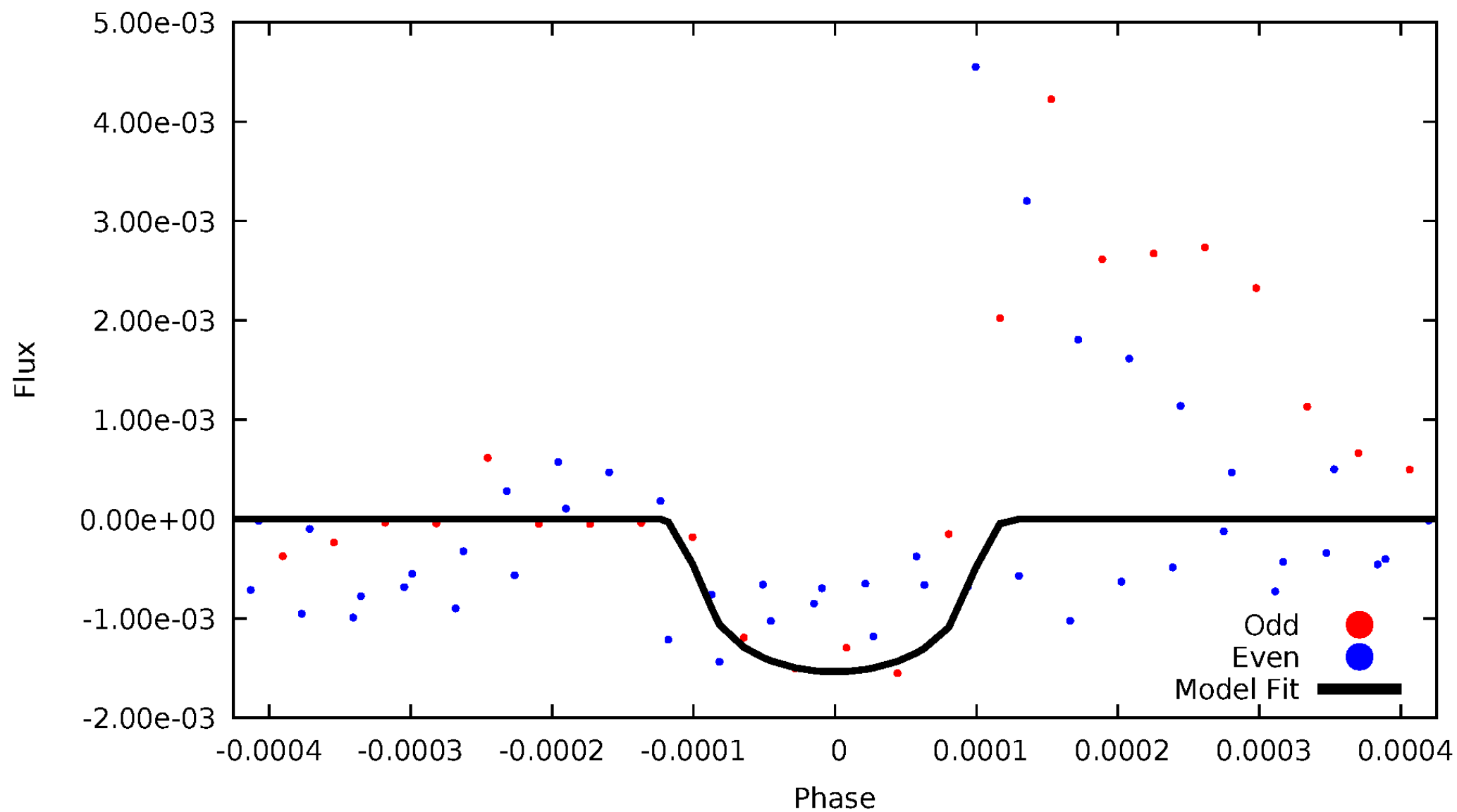


TCE 004249749-05



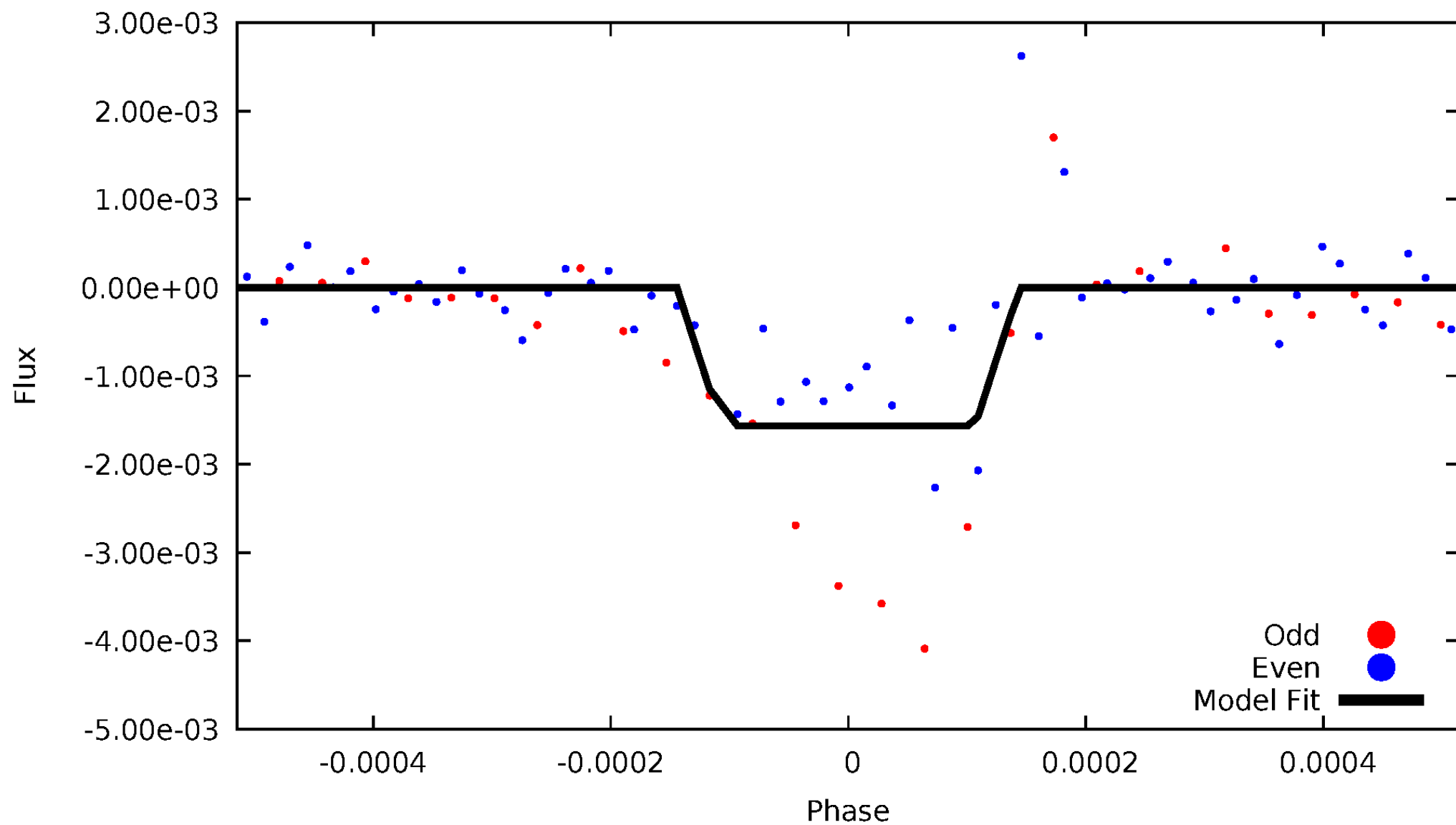
DV Odd/Even

TCE 004249749-05



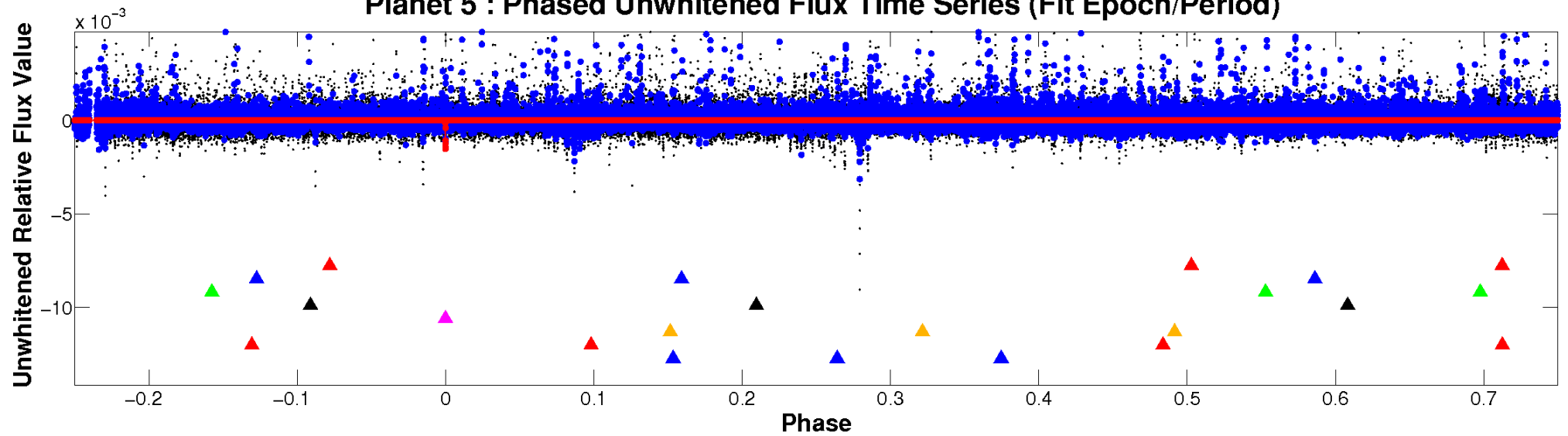
ALT Odd/Even

TCE 004249749-05

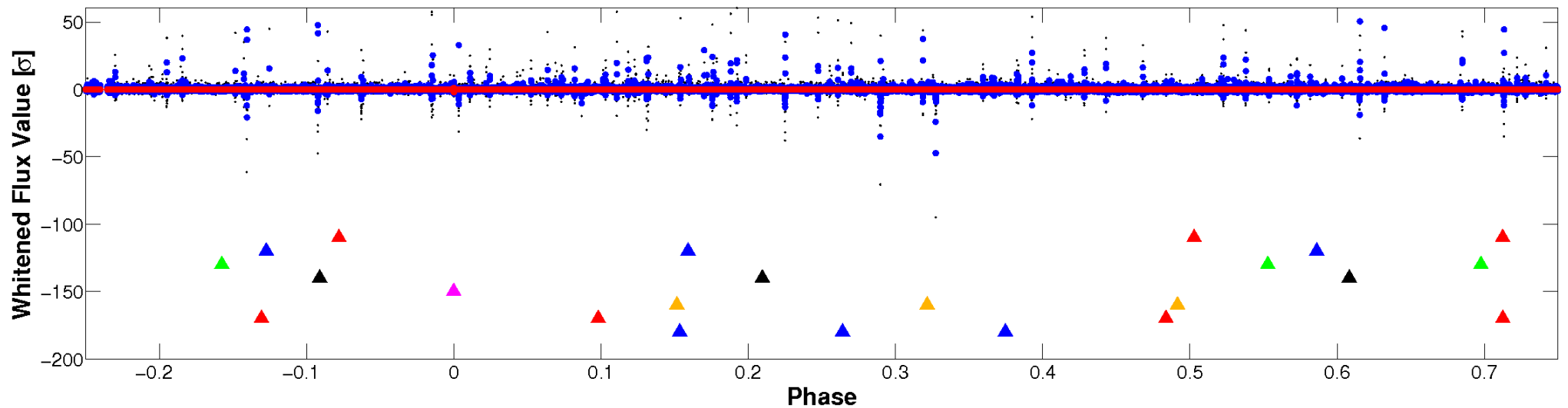


Non-Whitened Vs. Whitened Light Curve

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

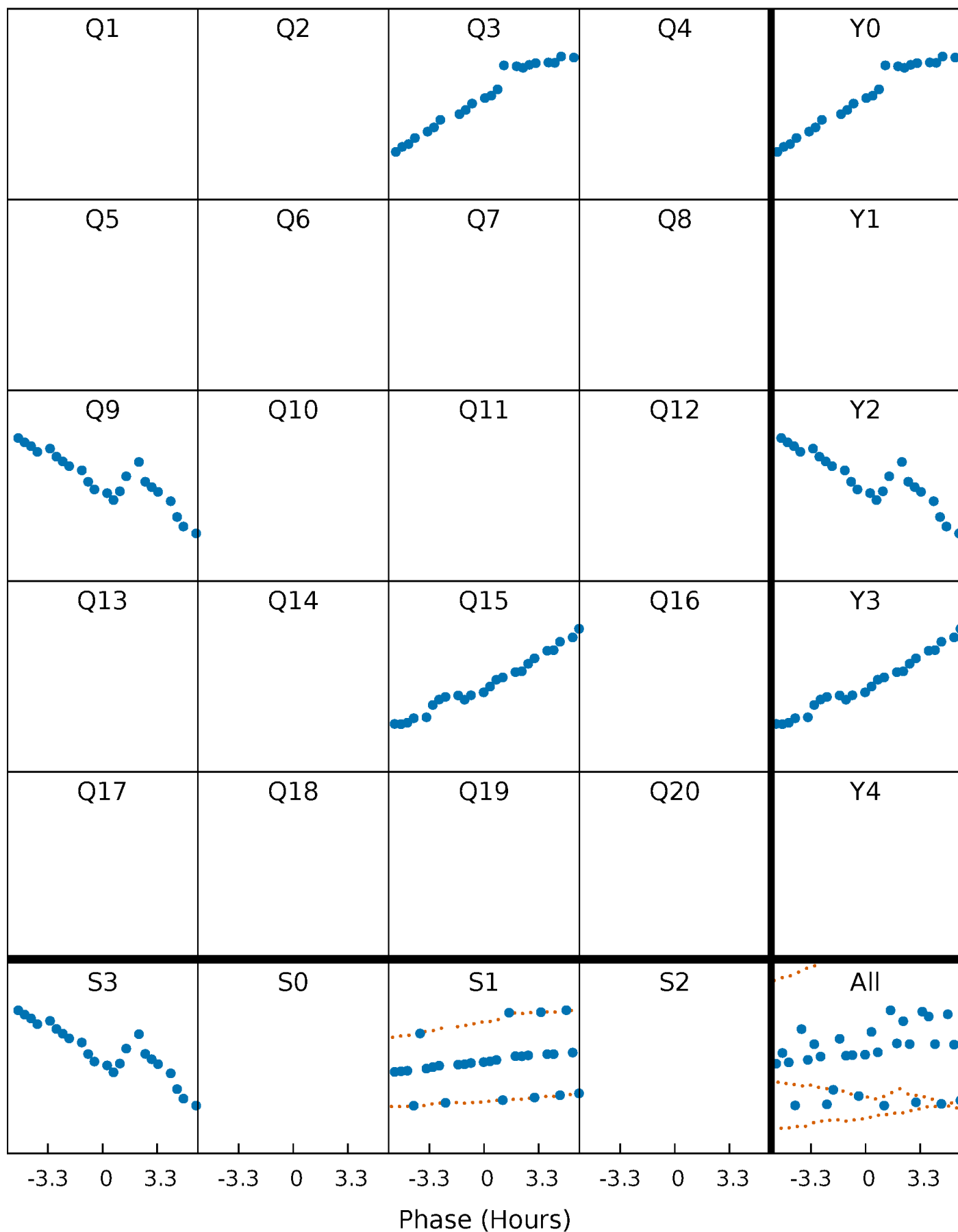


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



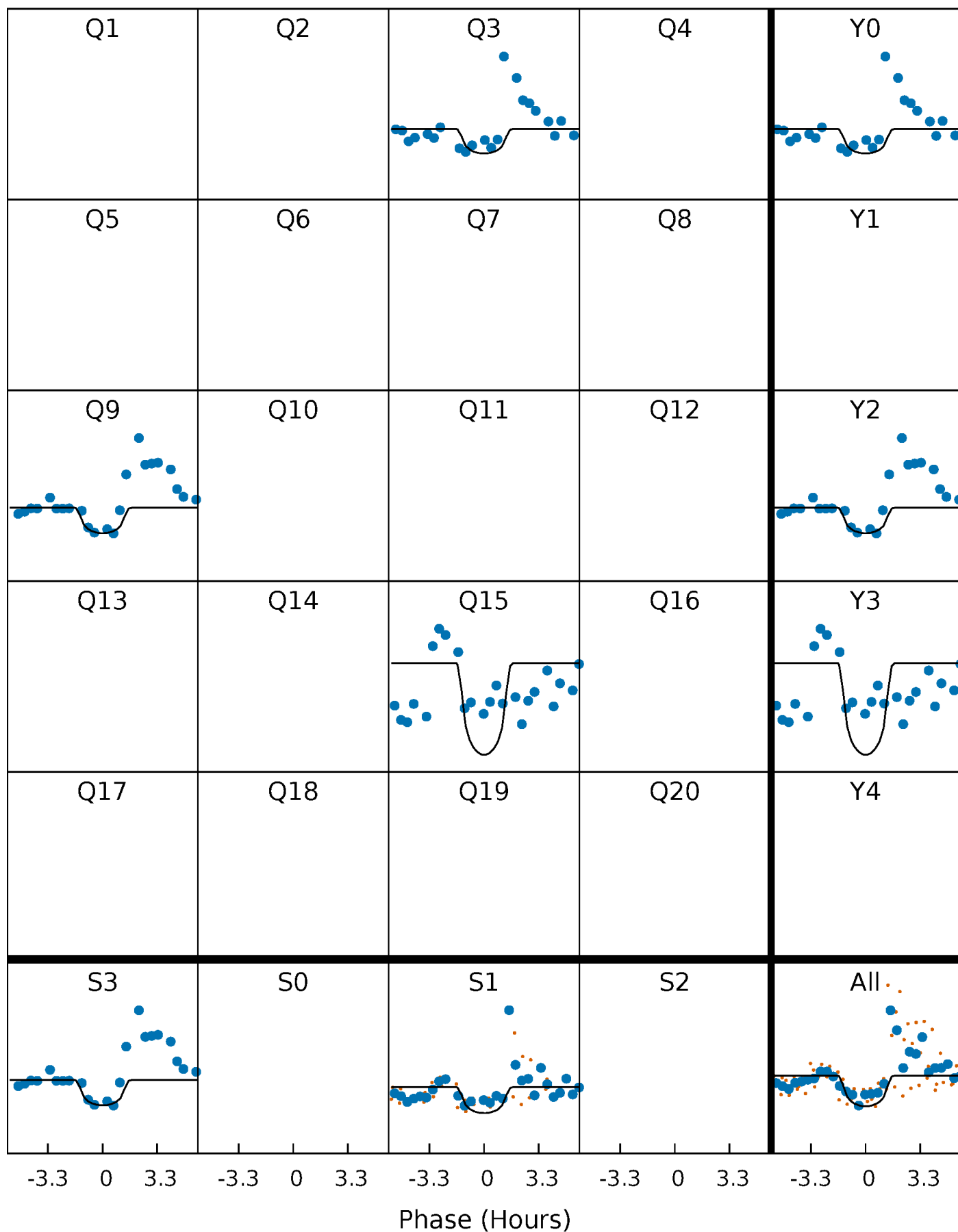
PDC Quarter-Phased Transit Curves

TCE 004249749-05 $P=564.387457$ Days $T_0=300.441440$ (BKJD)



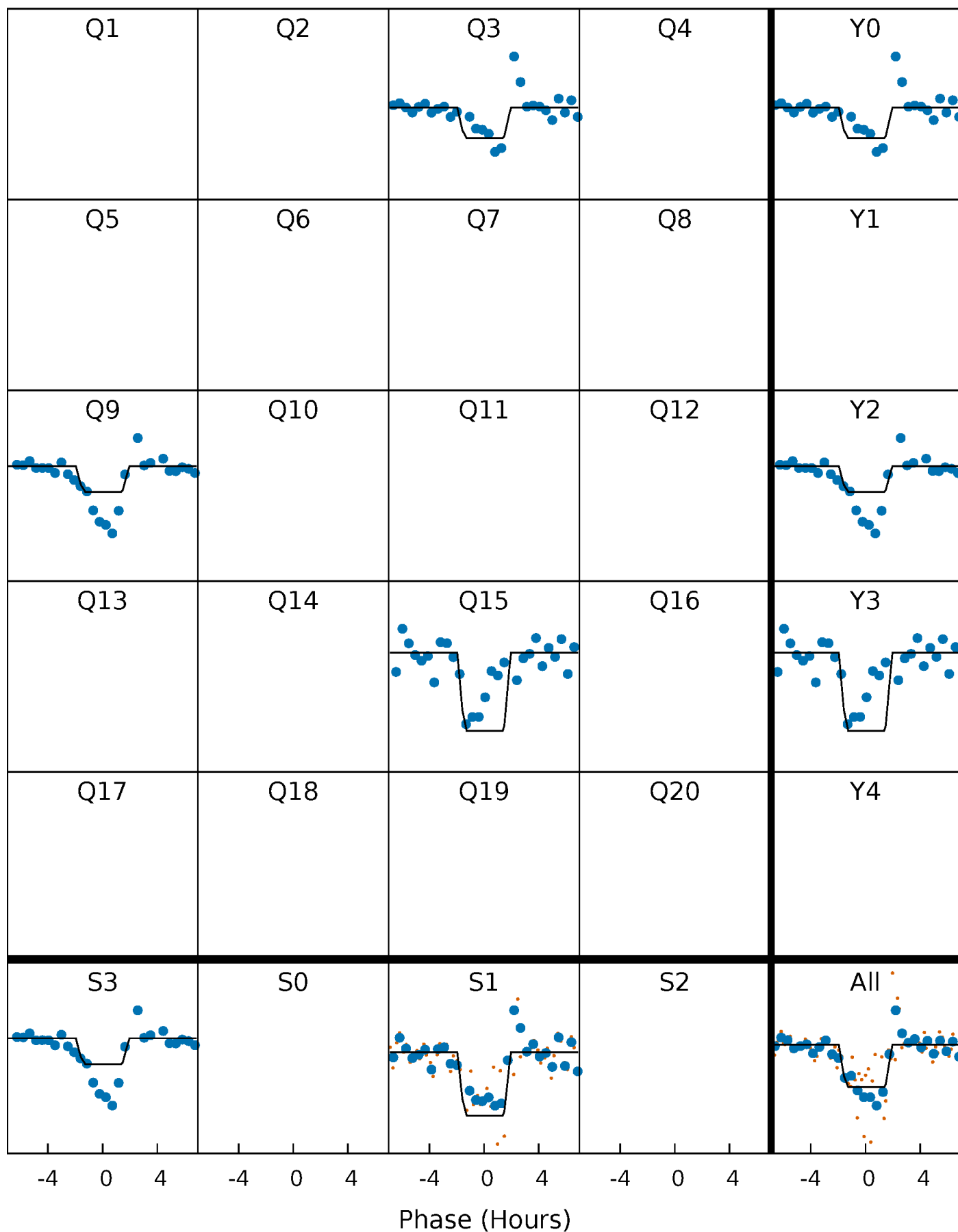
DV Quarter-Phased Transit Curves

TCE 004249749-05 $P=564.387457$ Days $T_0=300.441440$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

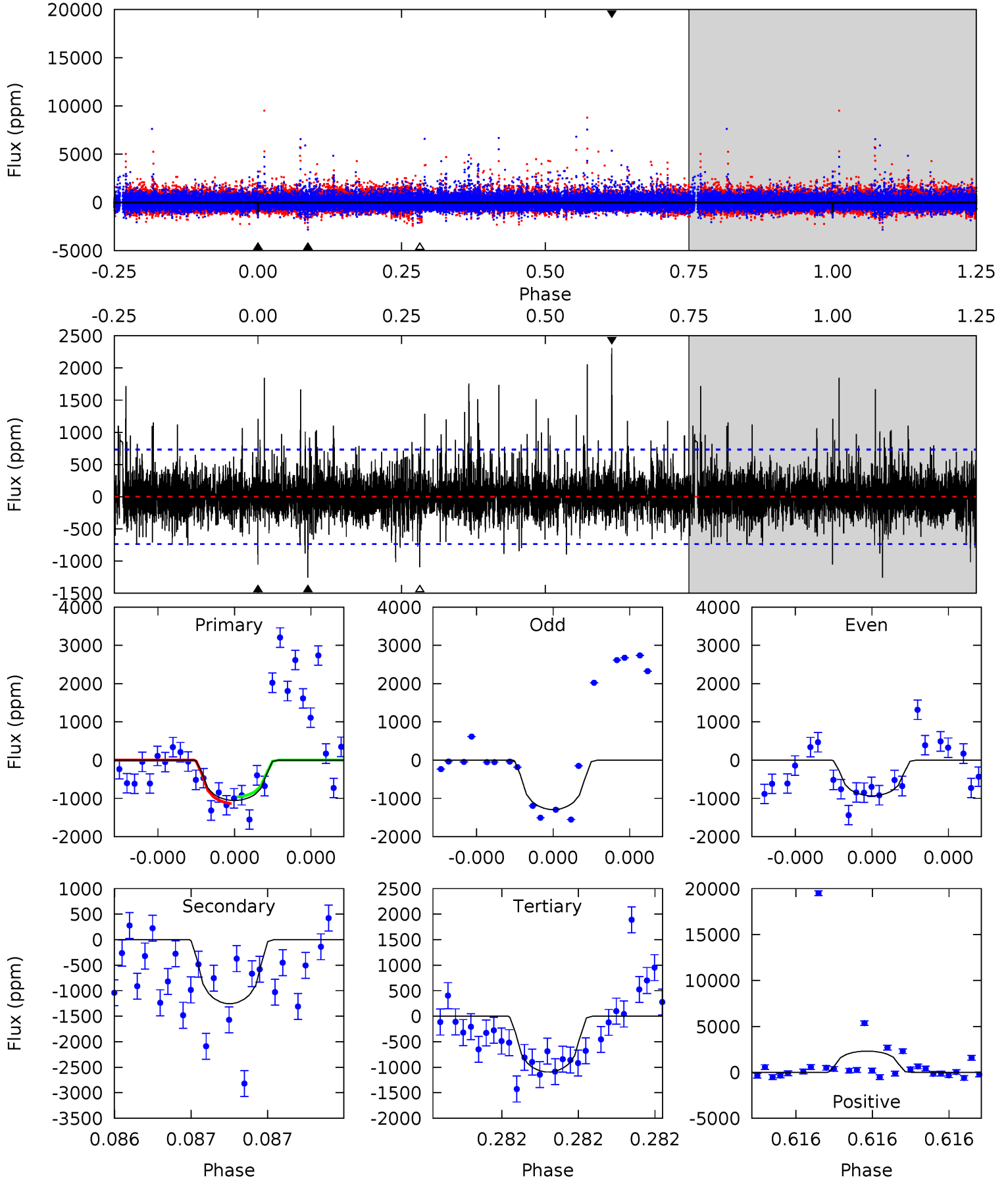
TCE 004249749-05 $P=564.402172$ Days $T_0=300.415454$ (BKJD)



DV Model-Shift Uniqueness Test

004249749-05, P = 564.387457 Days, E = 300.441440 Days

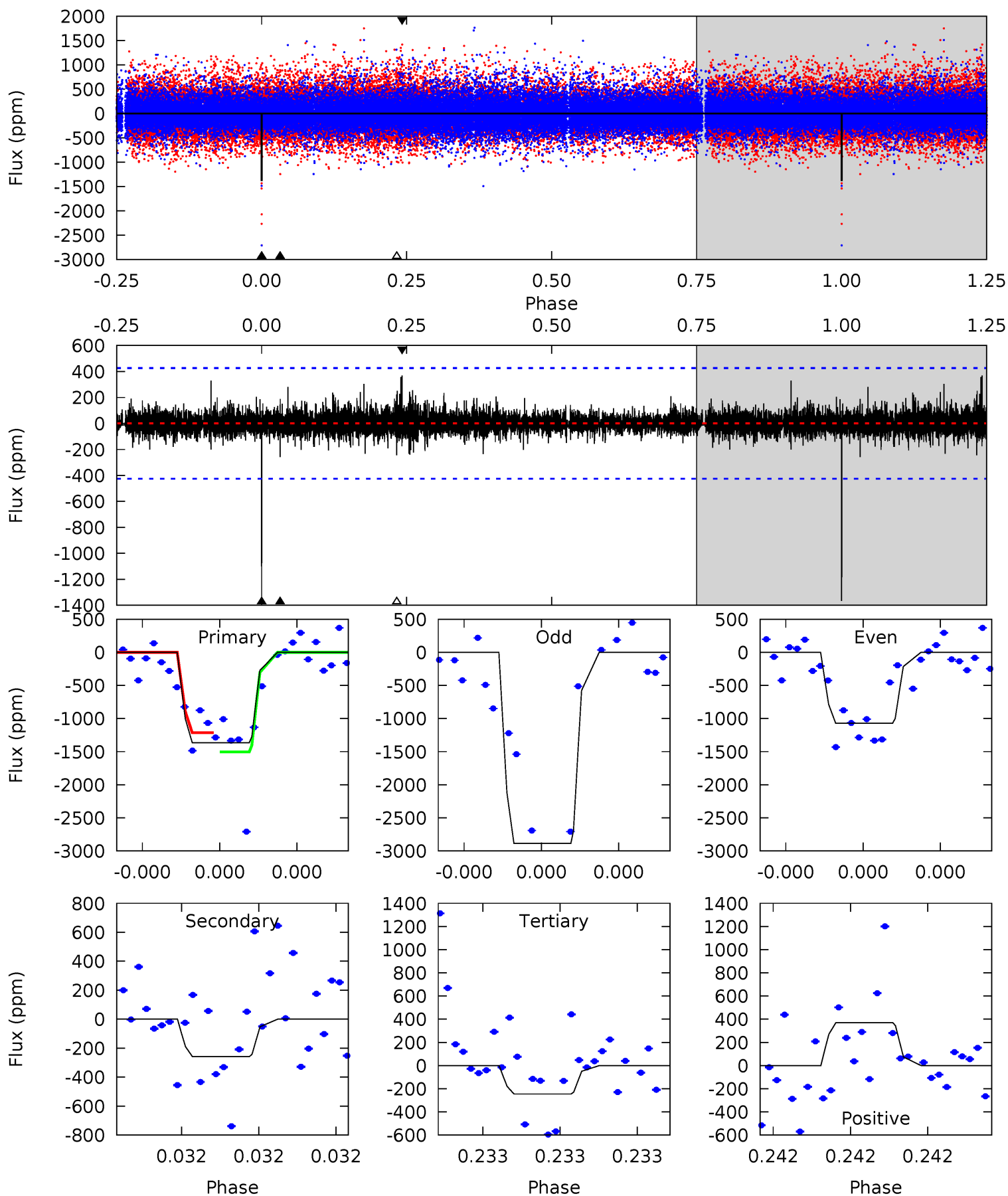
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.17	9.73	8.48	17.9	5.70	3.68	1.86	-0.31	-9.76	1.25	-8.20	0.62	1.20	0.65	0.66



Alt Model-Shift Uniqueness Test

004249749-05, P = 564.402172 Days, E = 300.415454 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.2	3.45	3.28	4.93	5.68	3.65	0.66	15.0	13.3	0.17	-1.48	11.8	1.25	0.21	0



Stellar Parameters For KIC 004249749

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4399^{+132}_{-132}	$4.592^{+0.053}_{-0.018}$	$0.100^{+0.250}_{-0.300}$	$0.692^{+0.033}_{-0.059}$	$0.683^{+0.055}_{-0.050}$	$2.902^{+0.625}_{-0.250}$
	+3%/-3%	+1%/-0%	+250%/-300%	+5%/-9%	+8%/-7%	+22%/-9%
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 004249749-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1253 ± 129	$5.06^{+4.38}_{-3.47}$	207^{+7}_{-7}	3516^{+1921}_{-599}	$38188^{+351240}_{-27289}$
Alt.	-258 ± 75	$5.43^{+5.07}_{-3.71}$	206^{+7}_{-7}	2727^{+1010}_{-415}	6380^{+55848}_{-4724}

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

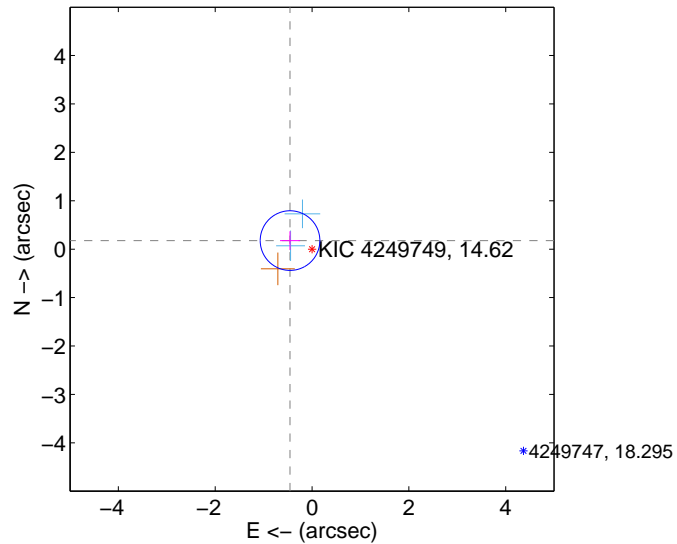
Supplemental centroid analysis for 004249749-05. Kepler magnitude: 14.62. Transit SNR 7.59

There are 2 quarters with good PRF difference image offsets

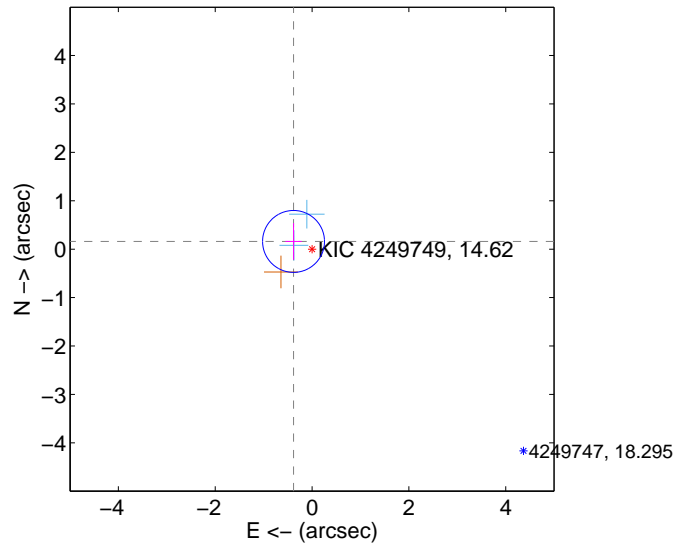
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.488 ± 0.205	2.38	0.454 ± 0.207	0.177 ± 0.194
PRF-fit source offset from KIC position	0.414 ± 0.213	1.95	0.382 ± 0.168	0.160 ± 0.379
photometric centroid source offset	1.20 ± 0.99	1.22	-1.20 ± 0.99	-0.06 ± 1.28

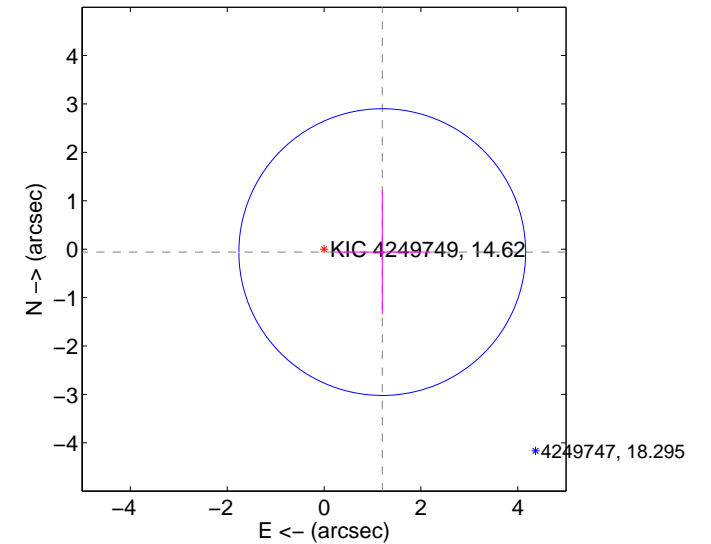
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

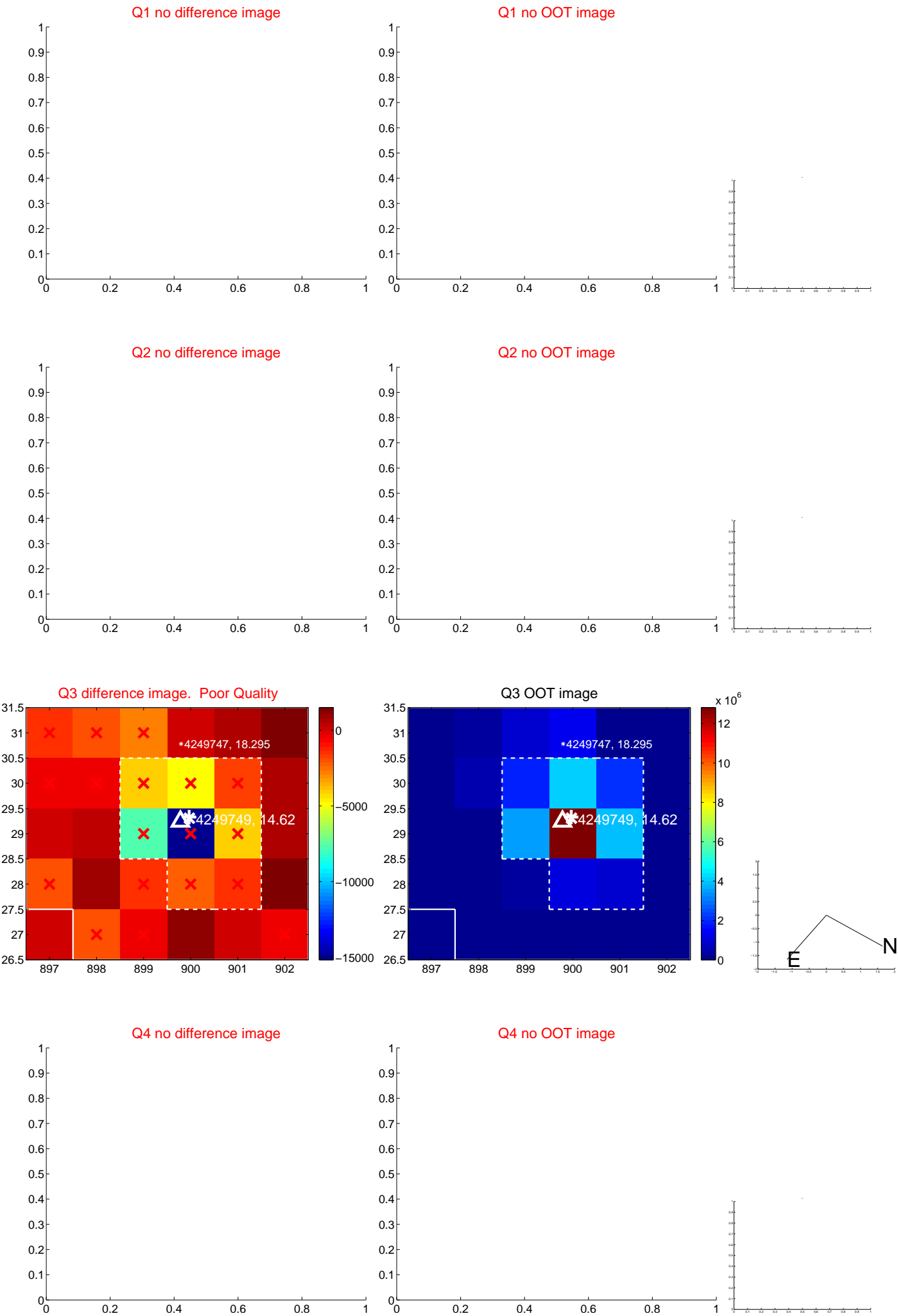


offset from photometric centroids



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.

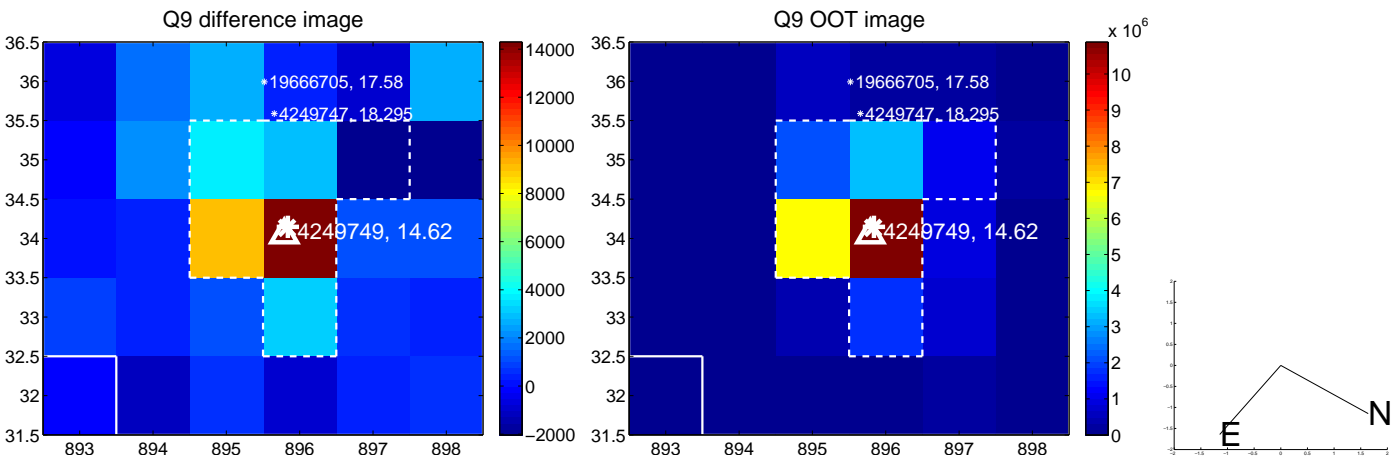
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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.



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

Q13 no difference image



Q13 no OOT image



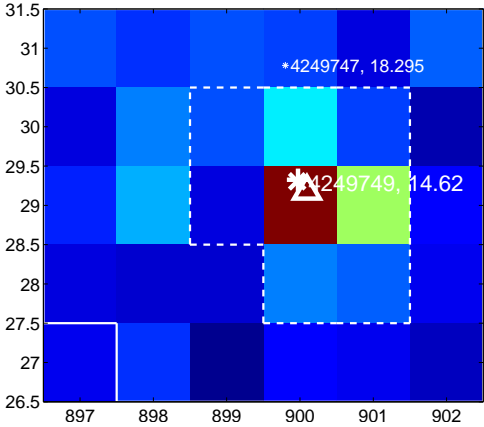
Q14 no difference image



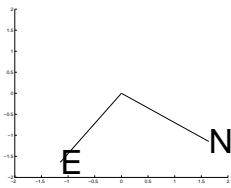
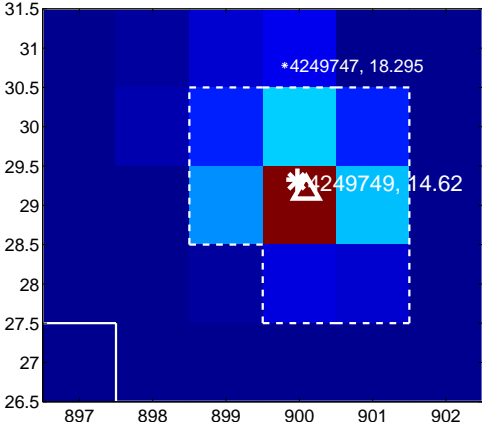
Q14 no OOT image



Q15 difference image



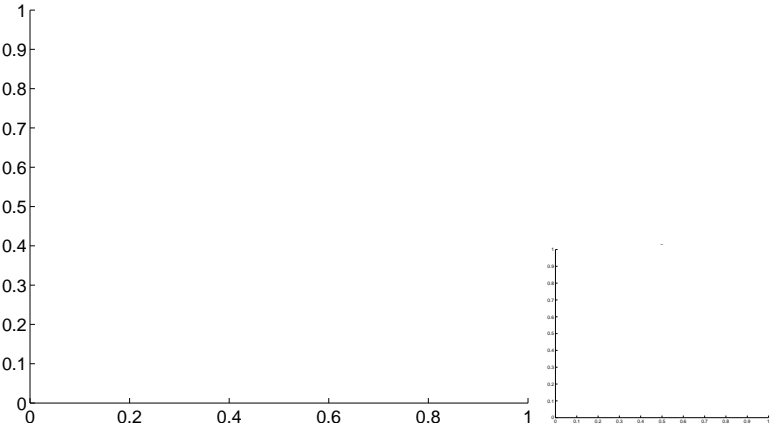
Q15 OOT image



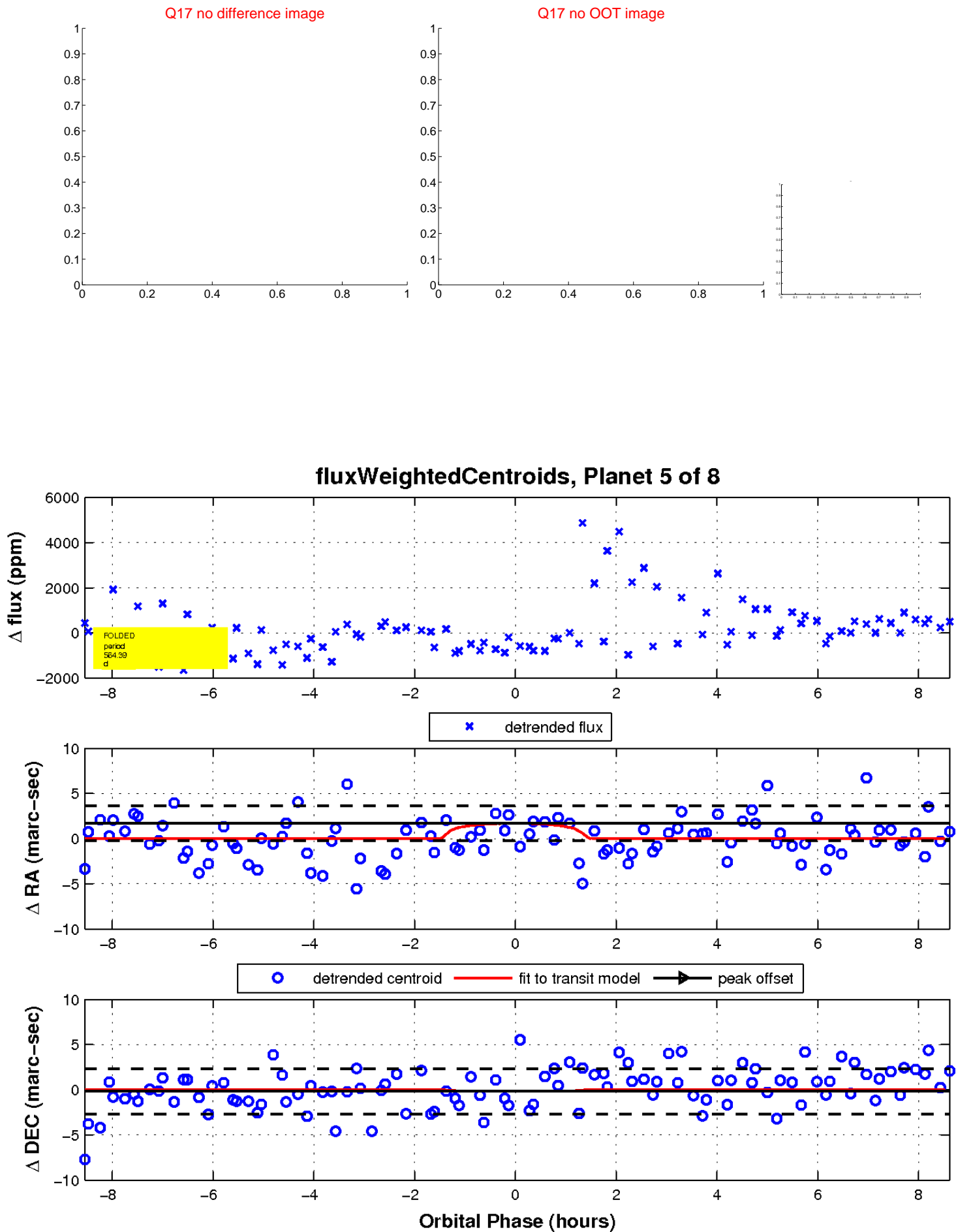
Q16 no difference image



Q16 no OOT image

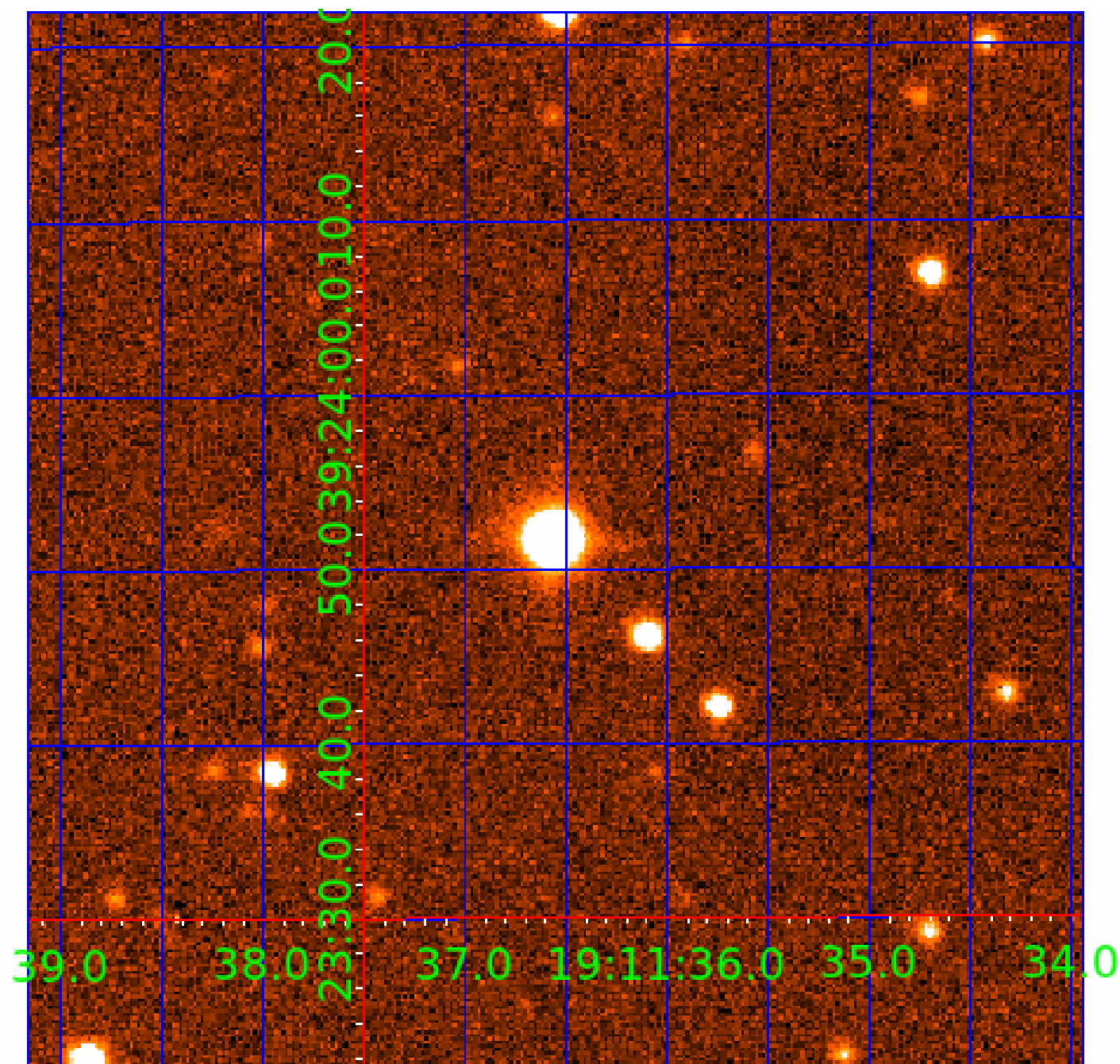


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004249749

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})
004249749-01	OBS	No	446.117305	256.422906	1857.0	4.770	15.7	7.7	0.69	4399	3.13	0.16
004249749-02	OBS	No	402.698956	390.275257	2413.1	11.416	14.9	8.4	0.69	4399	3.24	0.18
004249749-03	OBS	No	482.664452	211.554519	1405.4	3.344	13.3	6.2	0.69	4399	2.63	0.14
004249749-04	OBS	No	394.695695	418.747079	1921.3	4.252	16.1	8.5	0.69	4399	3.28	0.19
004249749-05	OBS	No	564.387457	300.441440	1535.8	2.879	11.8	7.6	0.69	4399	2.78	0.12
004249749-06	OBS	No	468.440517	577.888541	519.8	0.625	11.8	1.9	0.69	4399	1.66	0.15
004249749-07	OBS	No	346.748892	226.742683	1217.2	2.759	12.2	5.9	0.69	4399	2.33	0.22
004249749-08	OBS	No	501.969206	511.912106	1462.4	4.949	13.2	7.3	0.69	4399	2.75	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004249749-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
004249749-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

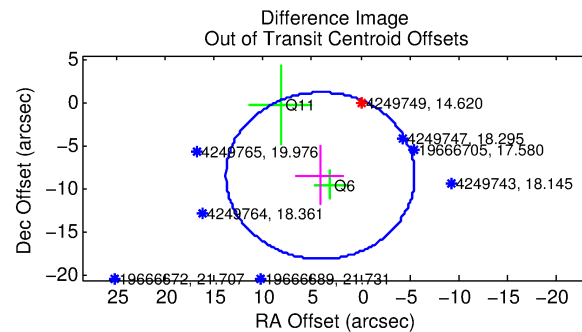
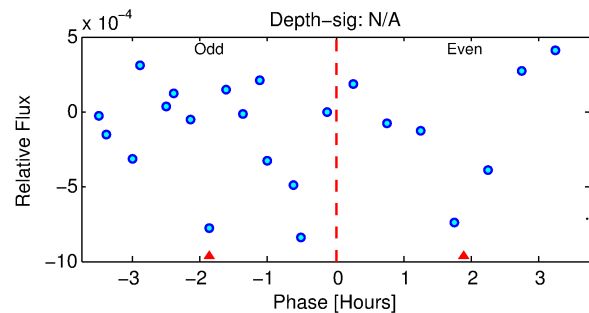
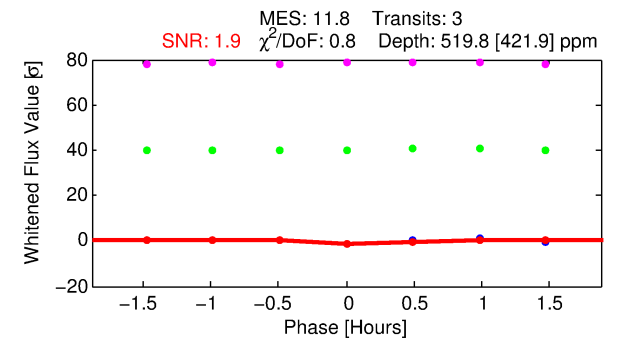
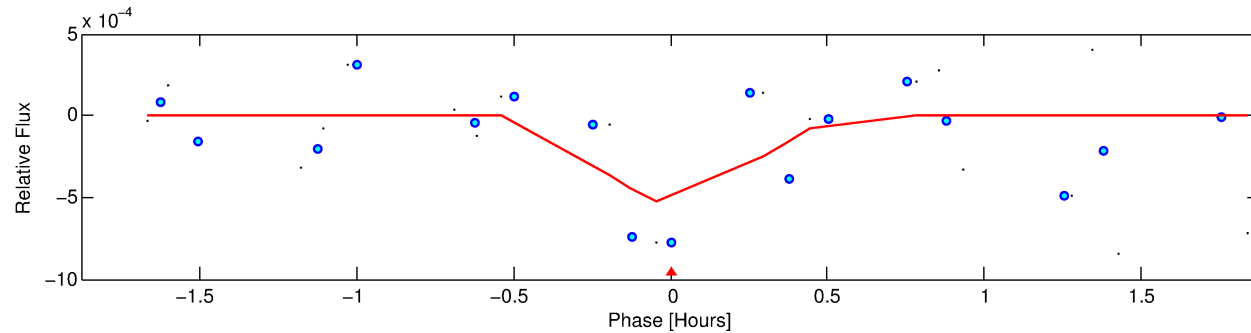
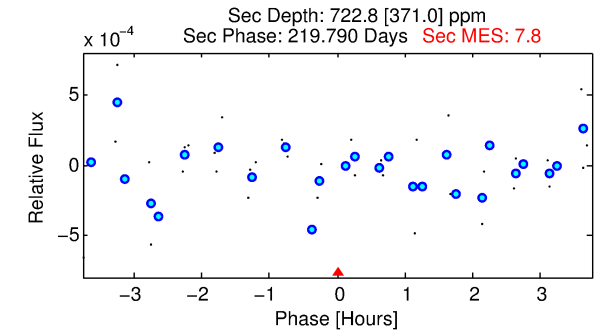
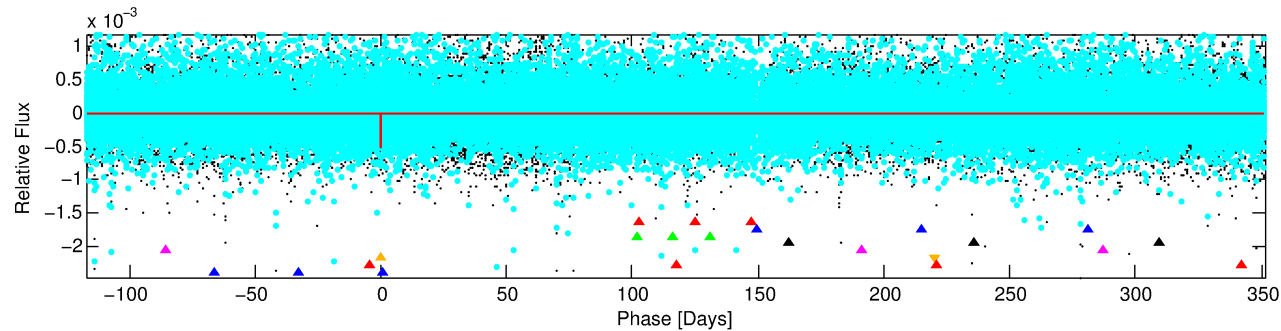
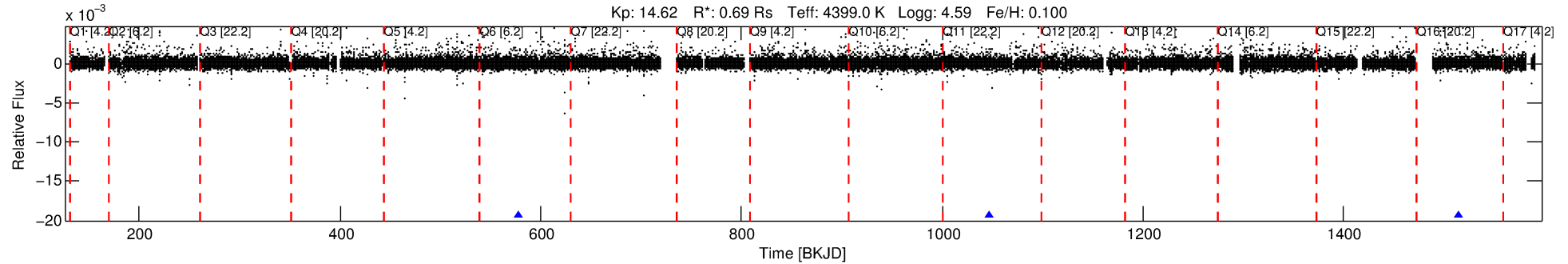
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004249749-06

No Significant Match Found

DV One-Page Summary

KIC: 4249749 Candidate: 6 of 8 Period: 468.441 d



DV Fit Results:

Period = 468.44052 [0.02150] d
Epoch = 577.8885 [0.0240] BKJD
Rp/R* = 0.0219 [0.2303]
a/R* = 5159.83 [172854.92]
b = 0.48 [52.86]
Seff = 0.15 [0.02]
Teq = 158 [6] K
Rp = 1.65 [17.39] Re
a = 1.0396 [0.0727] AU
Ag = 156950.58 [3299550.02] [0.05σ]
Teffp = 4872 [25609] K [0.18σ]

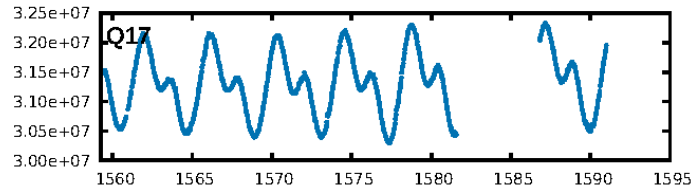
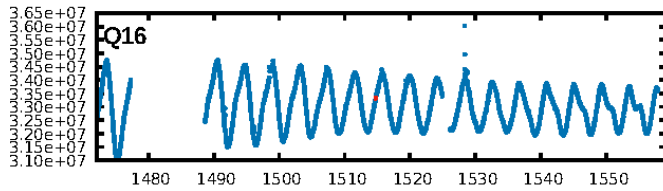
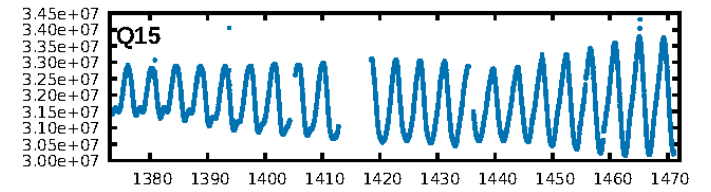
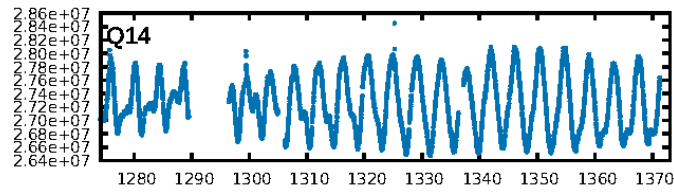
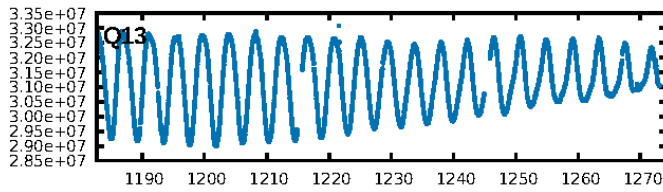
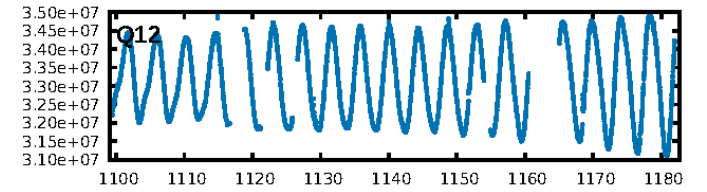
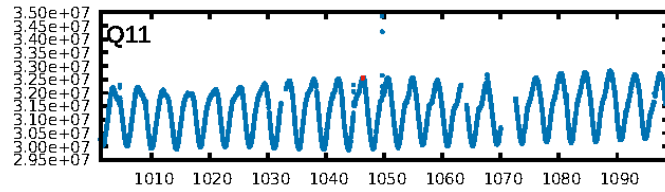
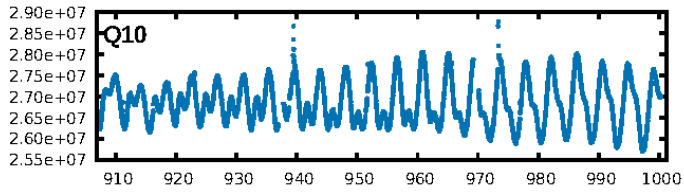
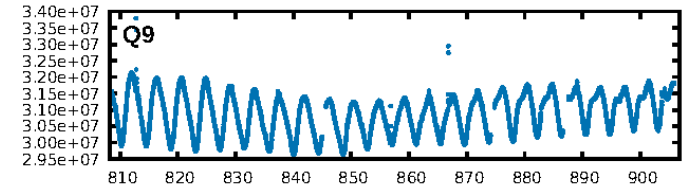
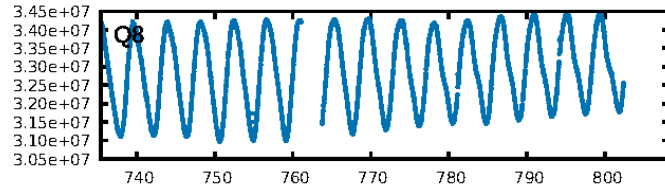
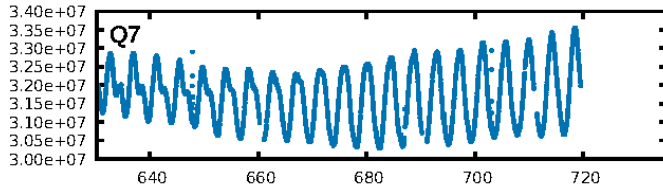
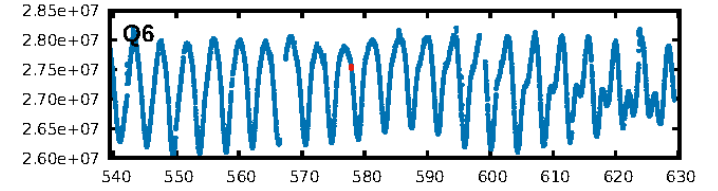
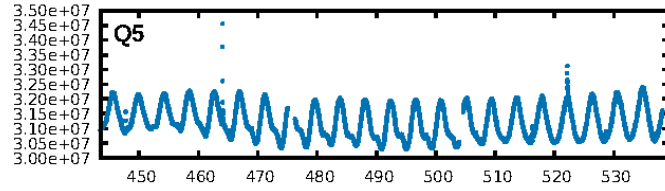
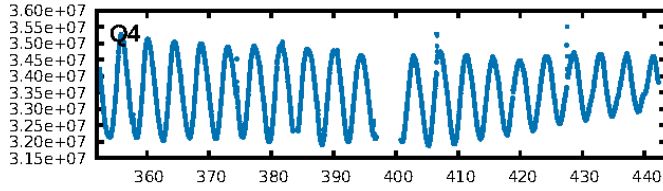
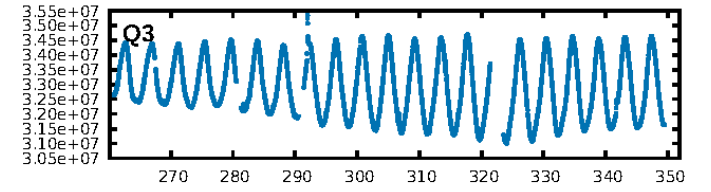
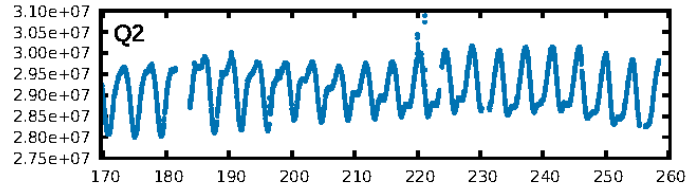
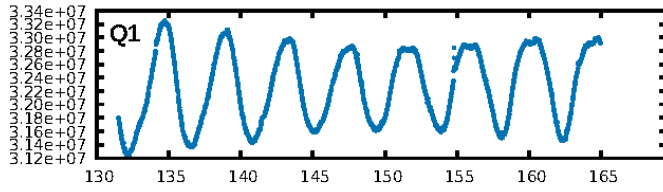
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [111.36σ]
LongPeriod-sig: 100.0% [100.34σ]
ModelChiSquare2-sig: 39.8%
ModelChiSquareGof-sig: 84.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.199
Centroid-sig: 54.6%
Centroid-so: 3.034 arcsec [0.52σ]
OotOffset-rm: 9.398 arcsec [2.92σ]
KicOffset-rm: 9.570 arcsec [2.96σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

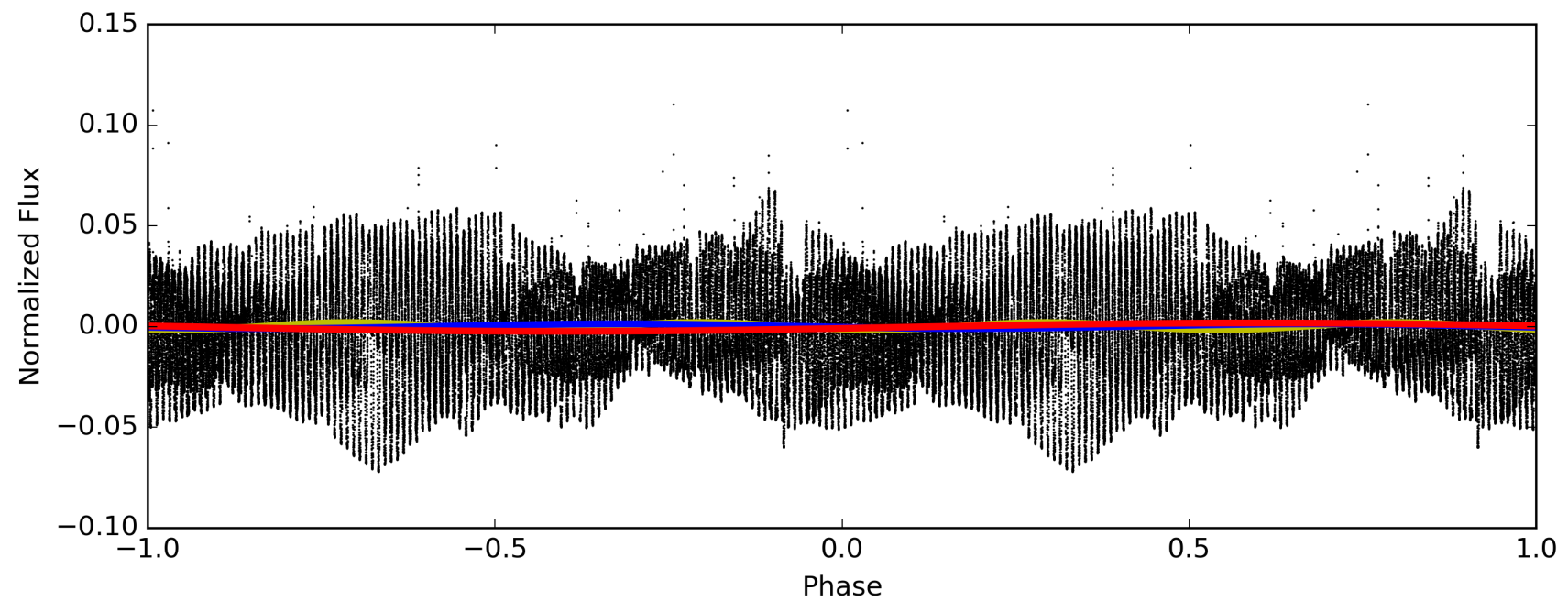
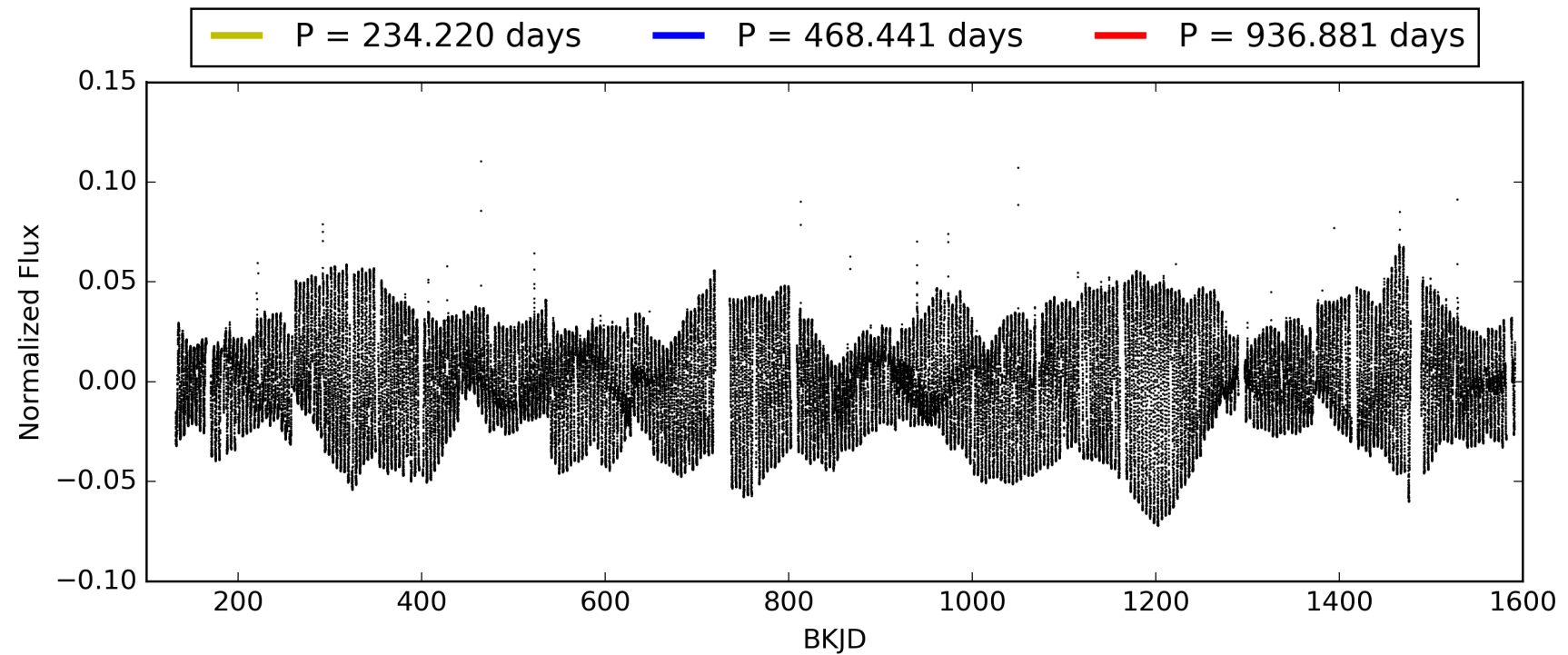
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:26:23 Z

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

TCE 004249749-06, PDC Light Curves

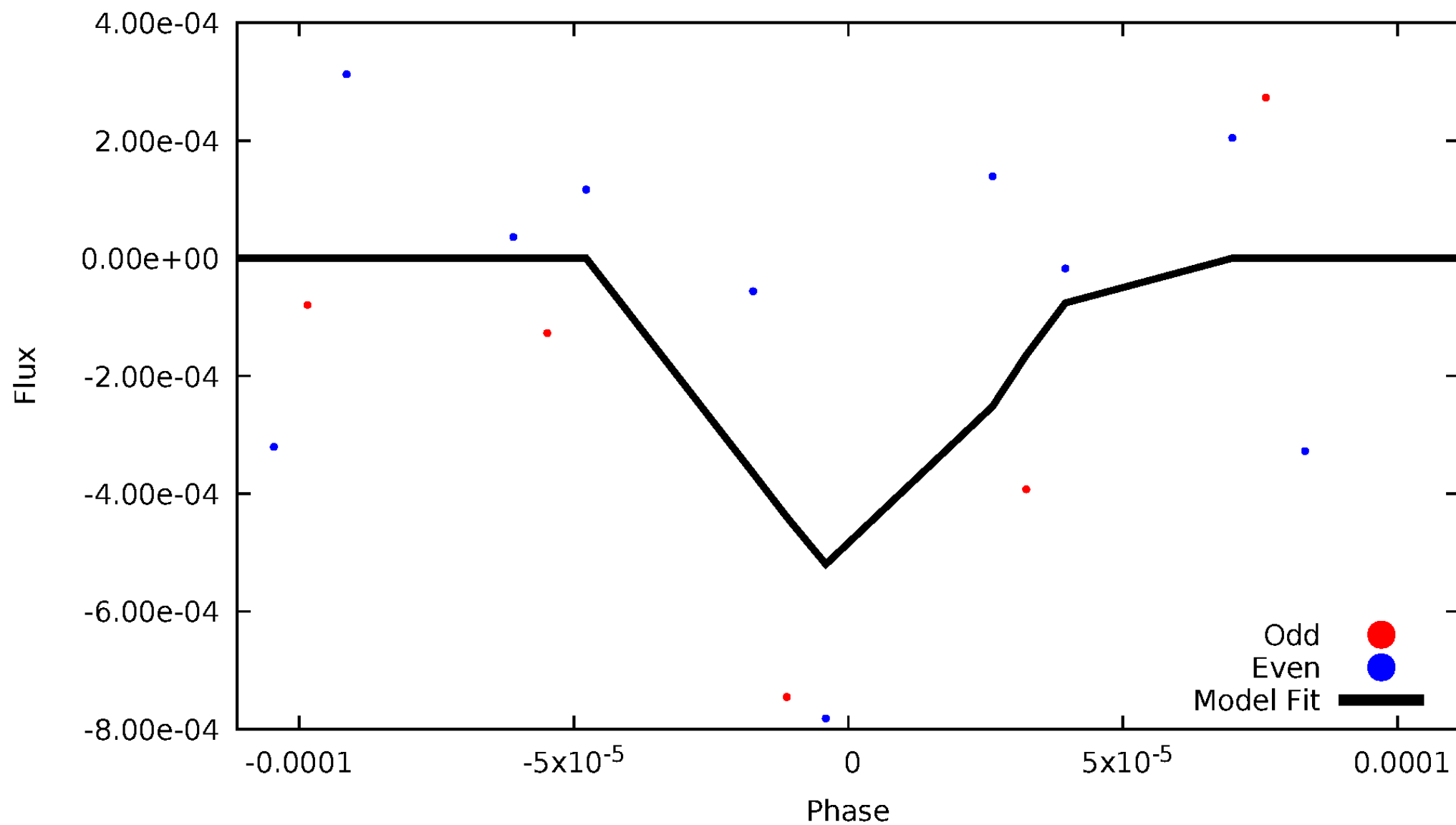


TCE 004249749-06



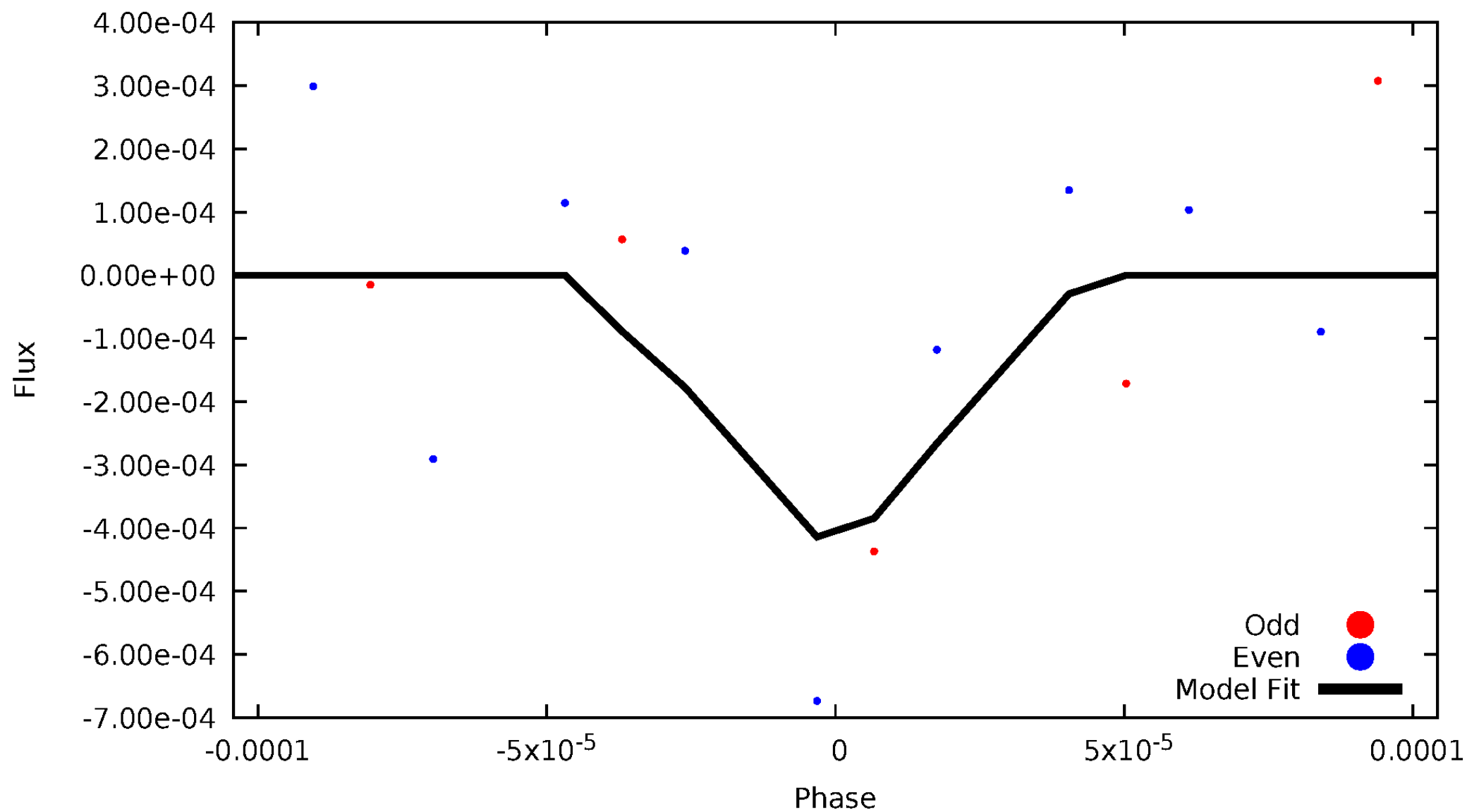
DV Odd/Even

TCE 004249749-06



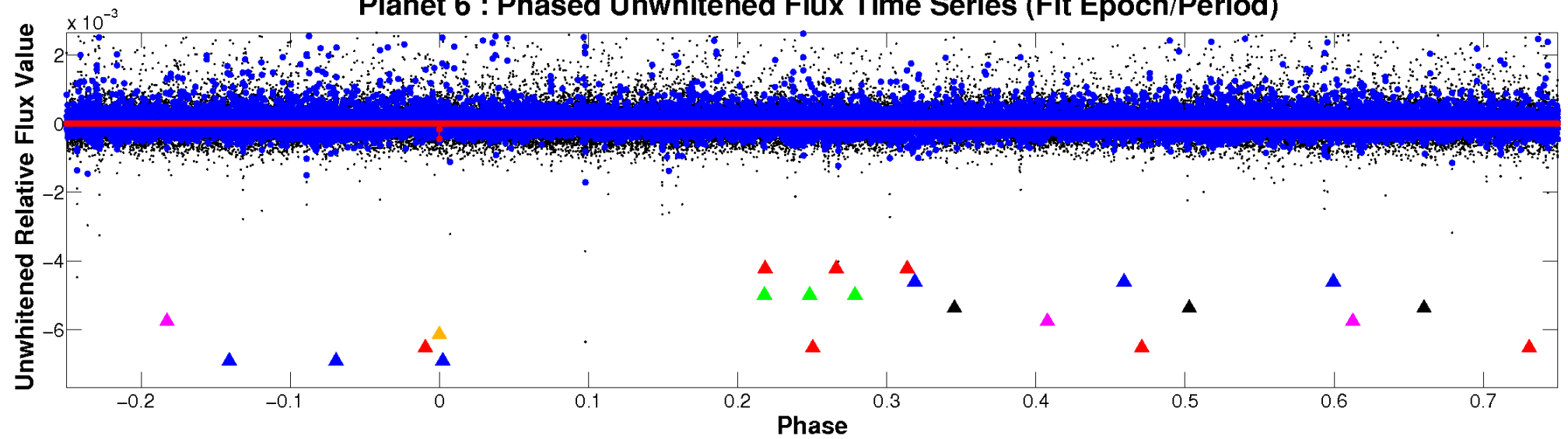
ALT Odd/Even

TCE 004249749-06

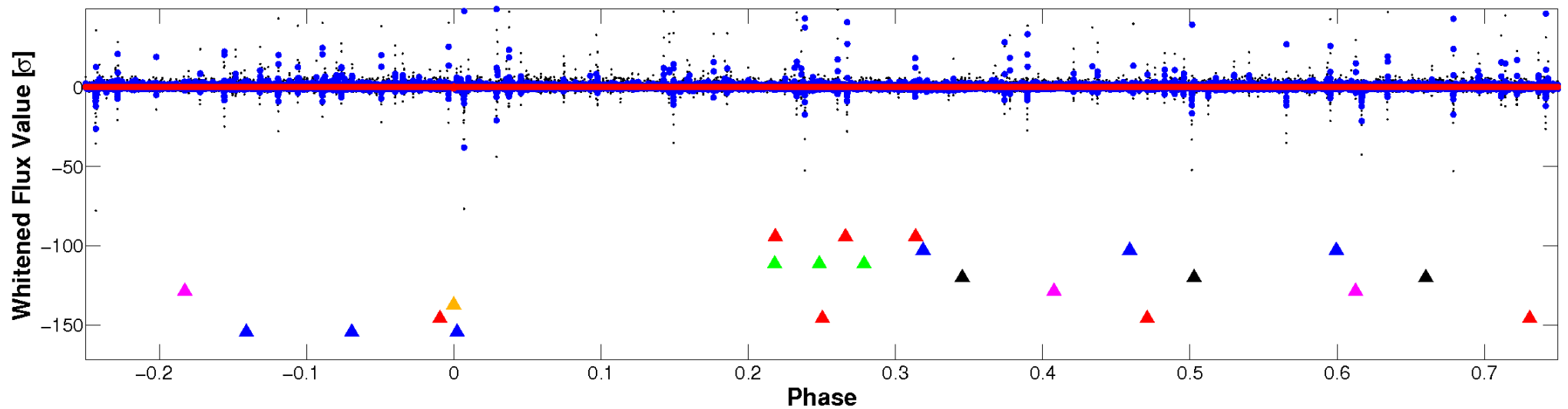


Non-Whitened Vs. Whitened Light Curve

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

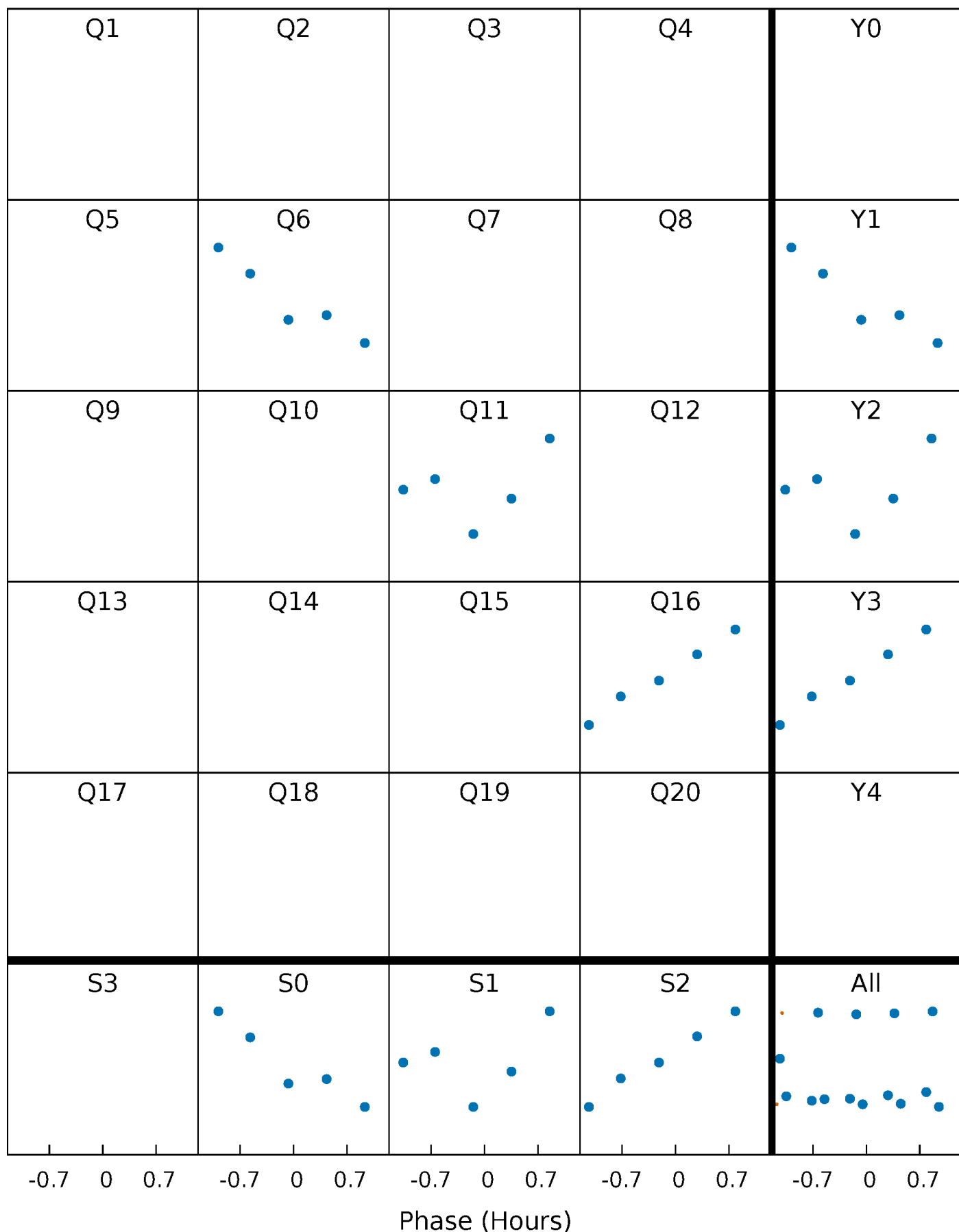


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



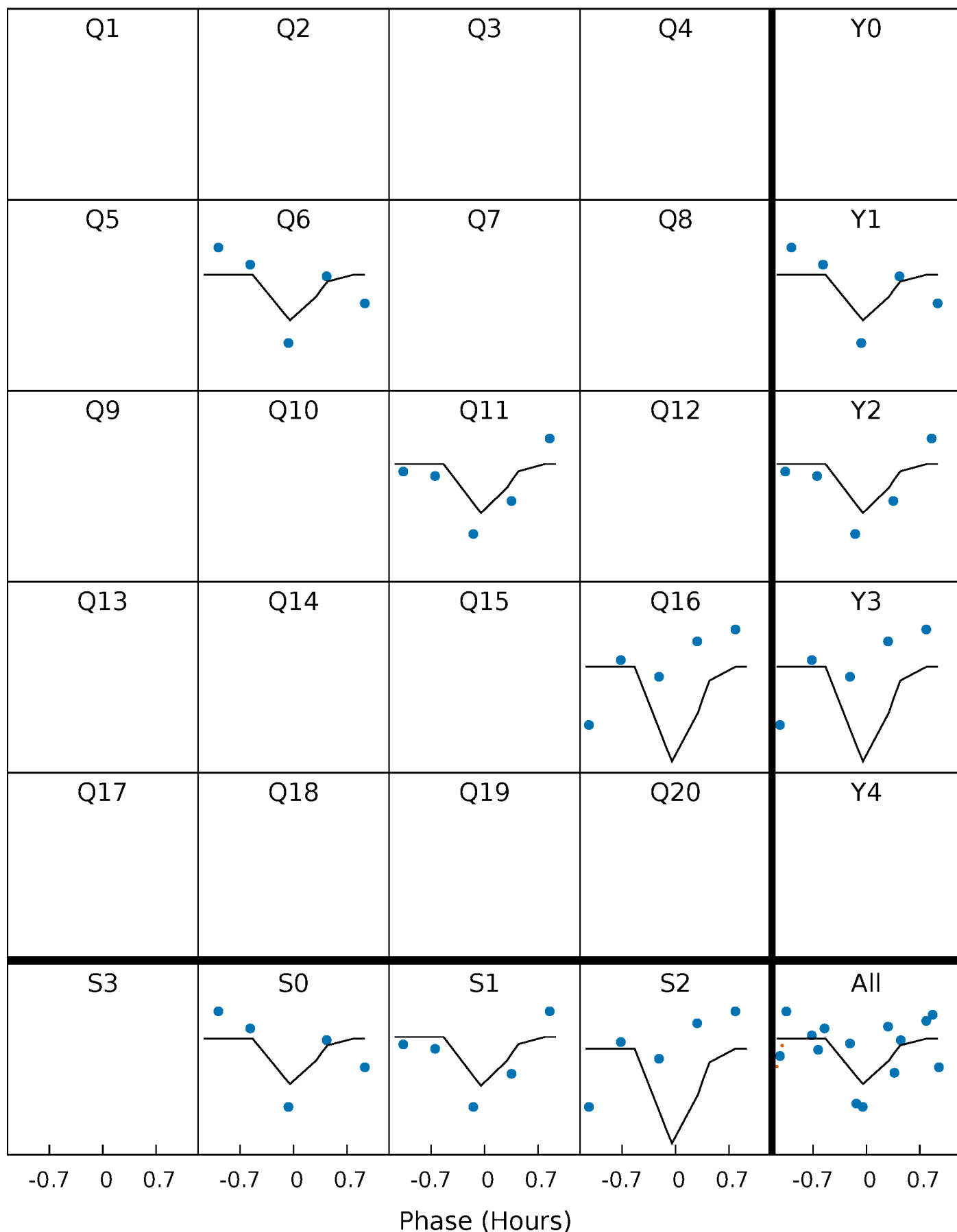
PDC Quarter-Phased Transit Curves

TCE 004249749-06 P=468.440517 Days $T_0=577.888541$ (BKJD)



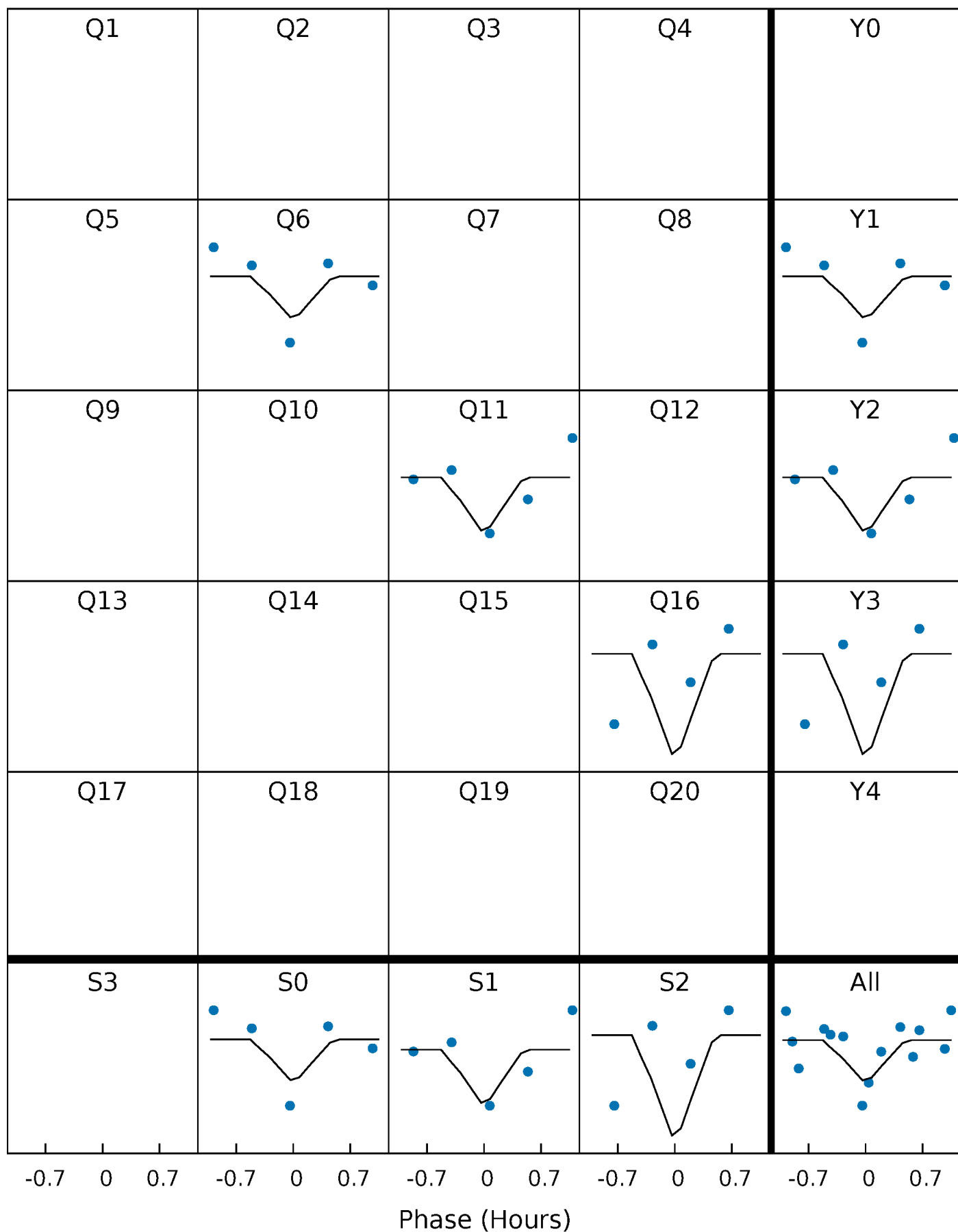
DV Quarter-Phased Transit Curves

TCE 004249749-06 P=468.440517 Days $T_0=577.888541$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

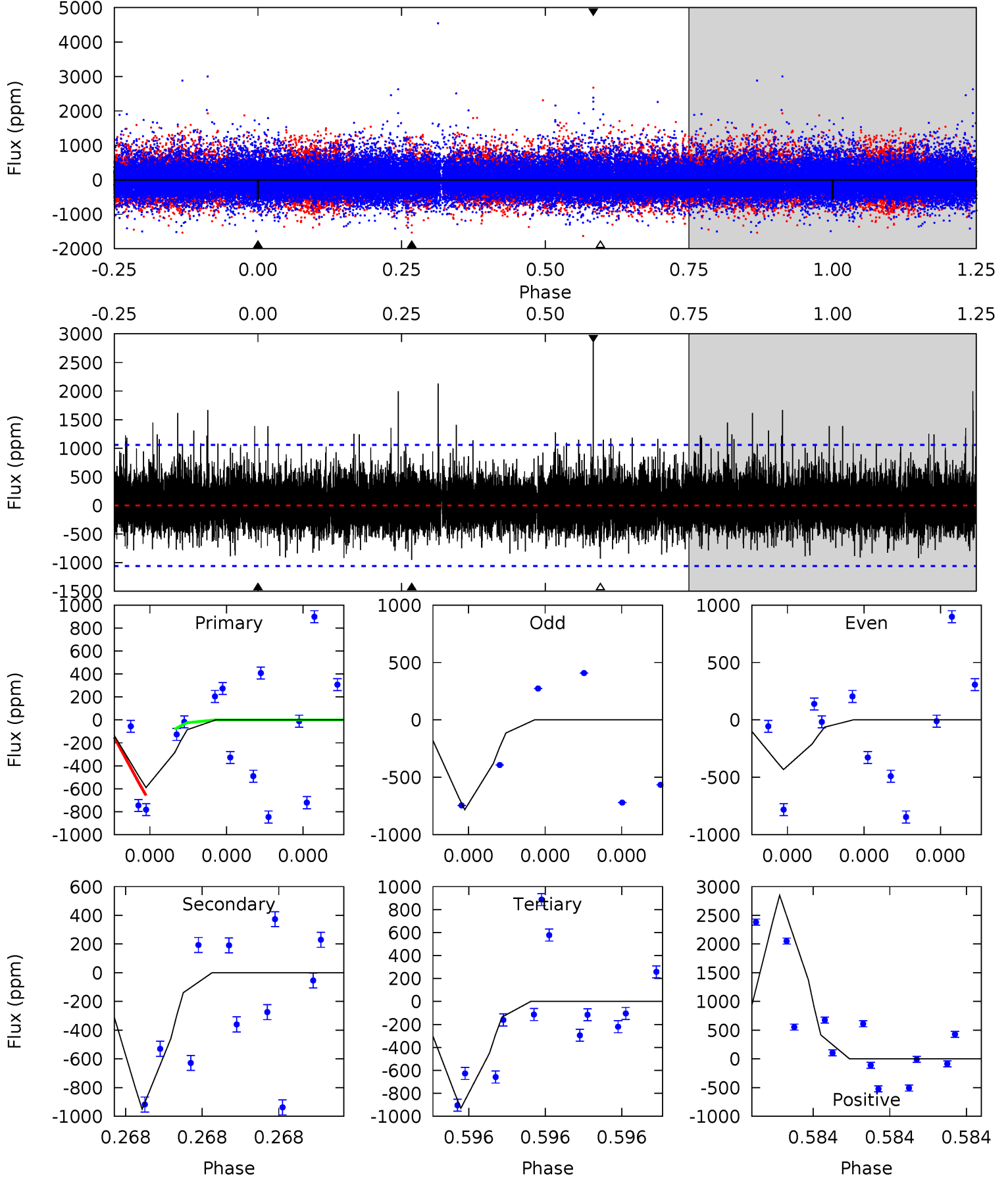
TCE 004249749-06 P=468.432552 Days $T_0=577.888112$ (BKJD)



DV Model-Shift Uniqueness Test

004249749-06, P = 468.440517 Days, E = 109.448024 Days

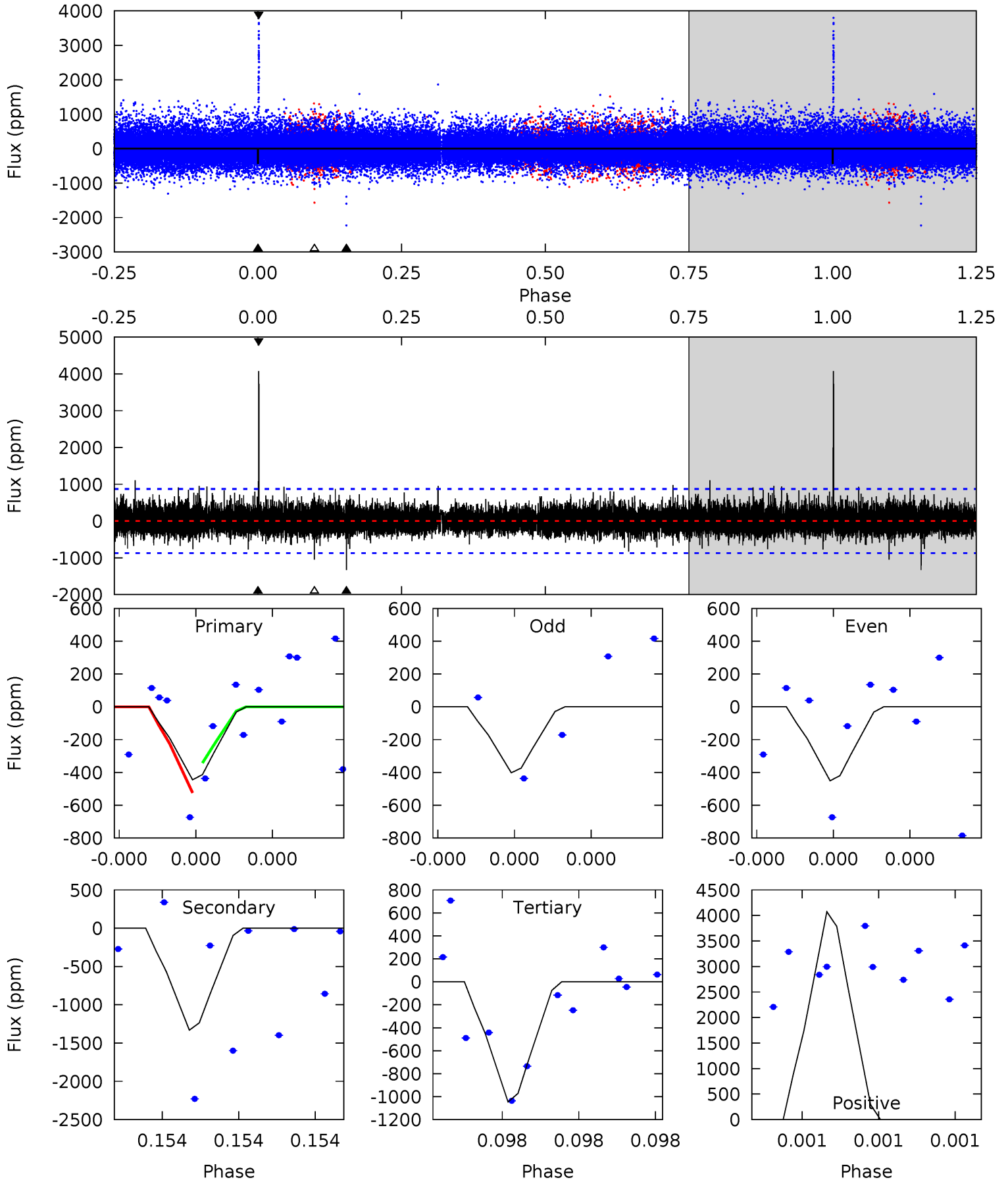
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.27	5.28	5.16	15.8	5.88	3.94	1.31	-1.89	-12.5	0.11	-10.5	0.43	0.72	0.75	1.38



Alt Model-Shift Uniqueness Test

004249749-06, P = 468.432552 Days, E = 109.455560 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.00	8.98	7.06	27.5	5.89	3.96	1.30	-4.06	-24.5	1.92	-18.5	0.14	0.92	0.75	0.53



Stellar Parameters For KIC 004249749

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4399^{+132}_{-132}	$4.592^{+0.053}_{-0.018}$	$0.100^{+0.250}_{-0.300}$	$0.692^{+0.033}_{-0.059}$	$0.683^{+0.055}_{-0.050}$	$2.902^{+0.625}_{-0.250}$
	+3%/-3%	+1%/-0%	+250%/-300%	+5%/-9%	+8%/-7%	+22%/-9%
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 004249749-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-950 ± 180	$12.09^{+13.08}_{-8.66}$	219^{+7}_{-7}	2624^{+1136}_{-419}	3780^{+43970}_{-2906}
Alt.	-1332 ± 148	$11.42^{+12.42}_{-7.81}$	219^{+7}_{-7}	2802^{+1116}_{-486}	6184^{+51642}_{-4793}

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 $A_{obs} \gg 1.0$

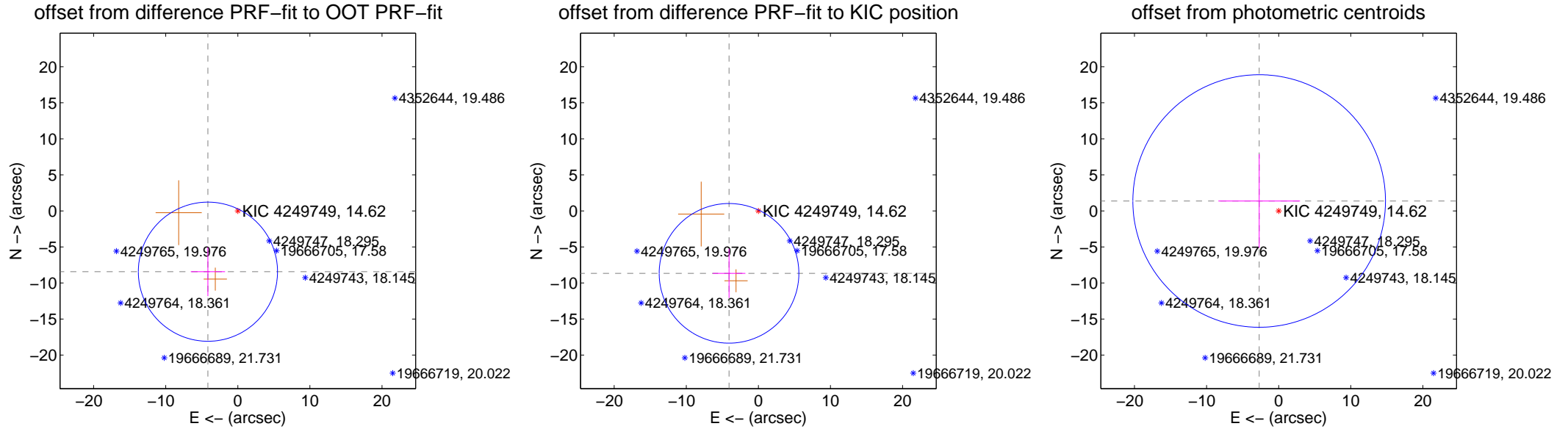
DV Centroid Data

Supplemental centroid analysis for 004249749-06. Kepler magnitude: 14.62. Transit SNR 1.90

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.33 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	9.398 ± 3.217	2.92	4.145 ± 2.378	-8.435 ± 3.389
PRF-fit source offset from KIC position	9.570 ± 3.229	2.96	4.071 ± 2.264	-8.660 ± 3.405
photometric centroid source offset	3.03 ± 5.84	0.52	2.70 ± 5.66	1.37 ± 6.49



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.

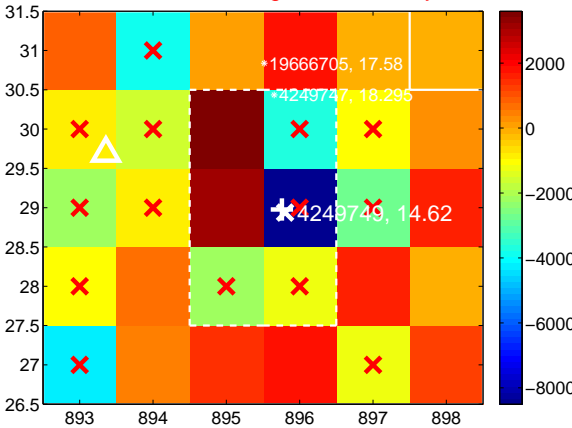
Q5 no difference image



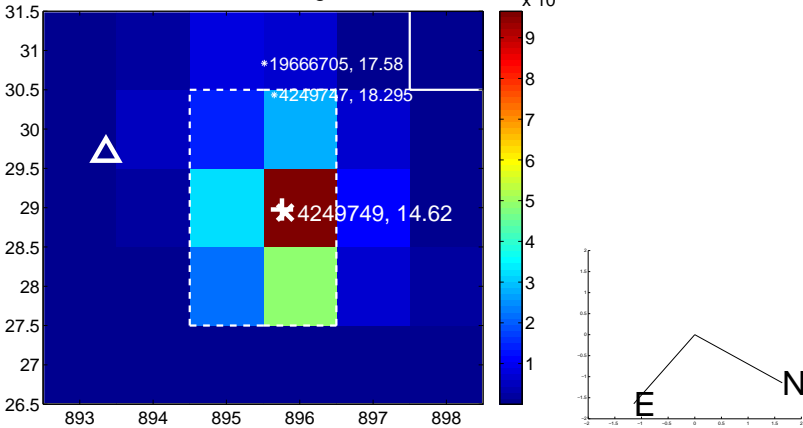
Q5 no OOT image



Q6 difference image. Poor Quality



Q6 OOT image



Q7 no difference image



Q7 no OOT image



Q8 no difference image



Q8 no OOT image



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

Q9 no difference image



Q9 no OOT image



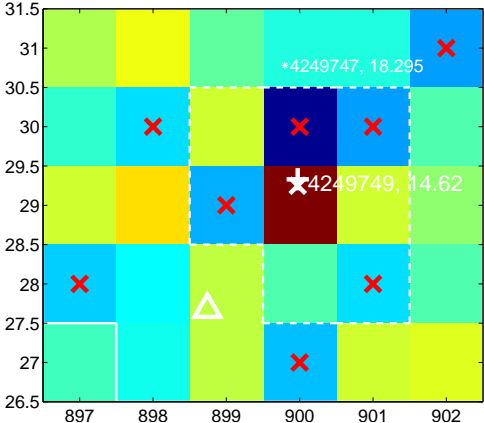
Q10 no difference image



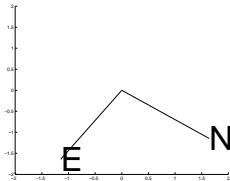
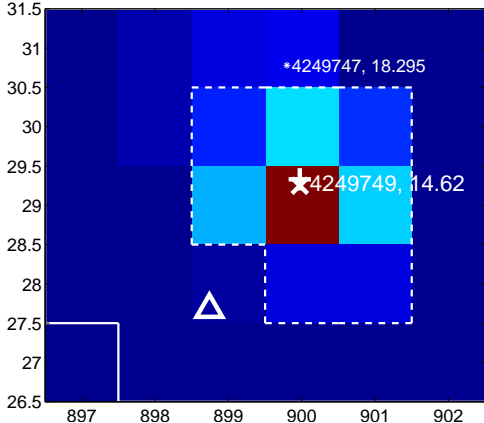
Q10 no OOT image



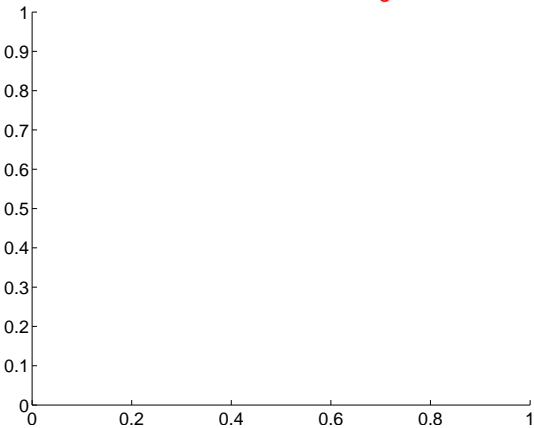
Q11 difference image. Poor Quality



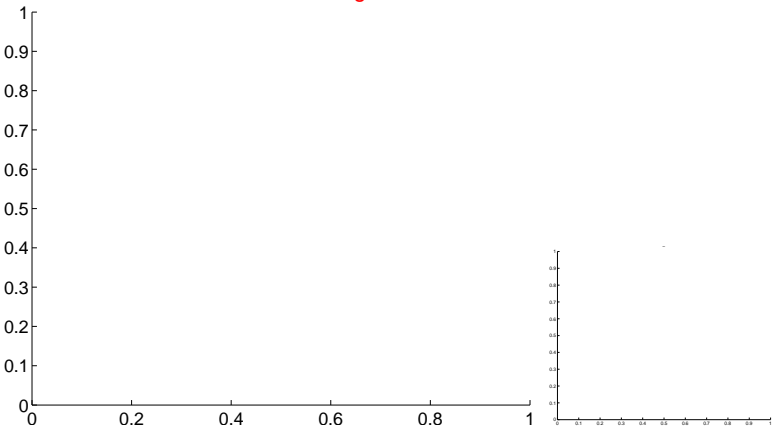
Q11 OOT image



Q12 no difference image



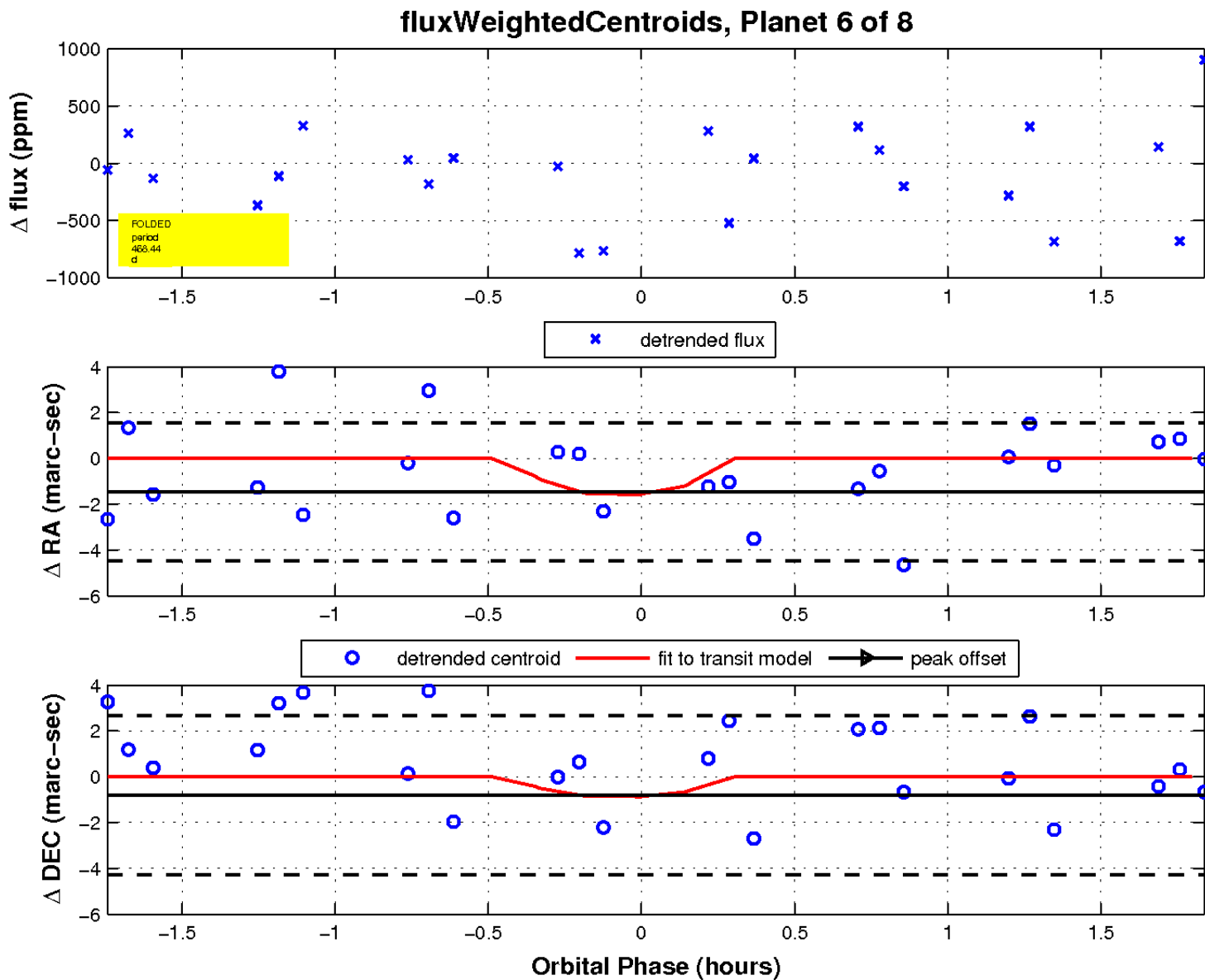
Q12 no OOT image



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

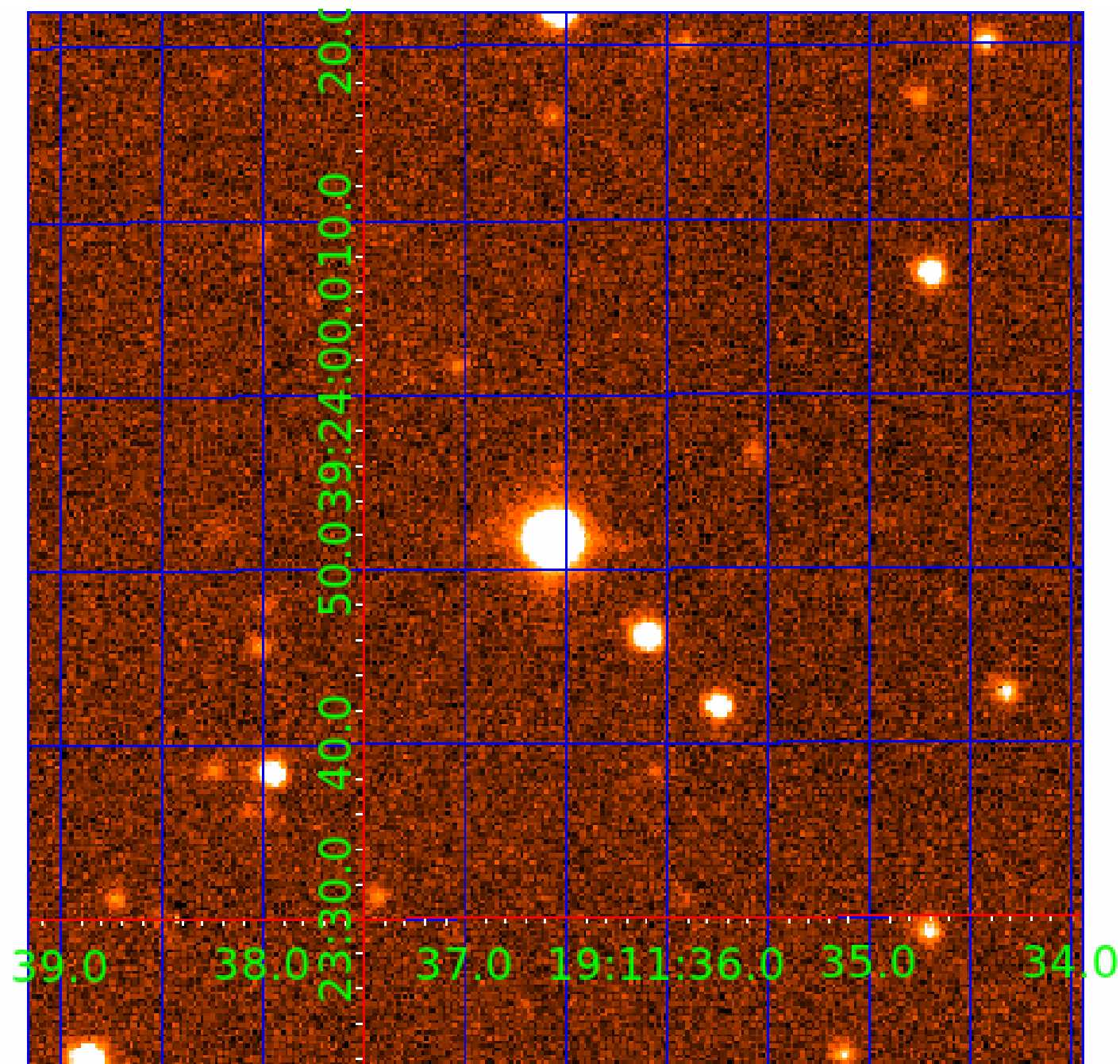


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004249749

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})
004249749-01	OBS	No	446.117305	256.422906	1857.0	4.770	15.7	7.7	0.69	4399	3.13	0.16
004249749-02	OBS	No	402.698956	390.275257	2413.1	11.416	14.9	8.4	0.69	4399	3.24	0.18
004249749-03	OBS	No	482.664452	211.554519	1405.4	3.344	13.3	6.2	0.69	4399	2.63	0.14
004249749-04	OBS	No	394.695695	418.747079	1921.3	4.252	16.1	8.5	0.69	4399	3.28	0.19
004249749-05	OBS	No	564.387457	300.441440	1535.8	2.879	11.8	7.6	0.69	4399	2.78	0.12
004249749-06	OBS	No	468.440517	577.888541	519.8	0.625	11.8	1.9	0.69	4399	1.66	0.15
004249749-07	OBS	No	346.748892	226.742683	1217.2	2.759	12.2	5.9	0.69	4399	2.33	0.22
004249749-08	OBS	No	501.969206	511.912106	1462.4	4.949	13.2	7.3	0.69	4399	2.75	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004249749-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
004249749-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

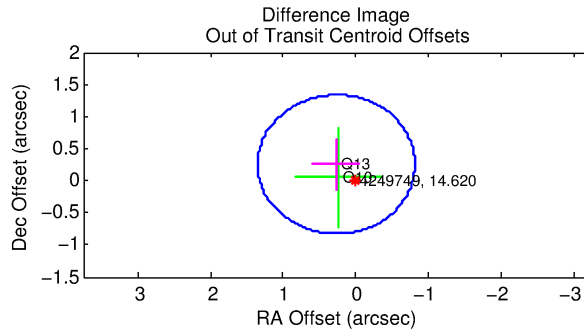
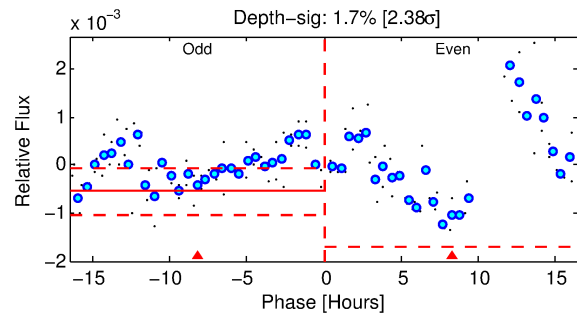
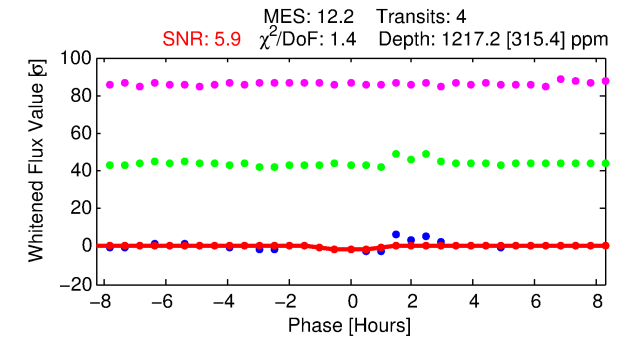
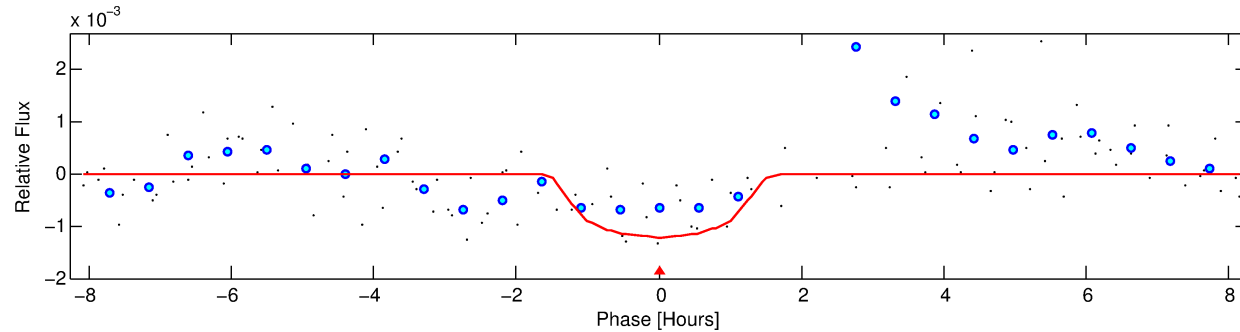
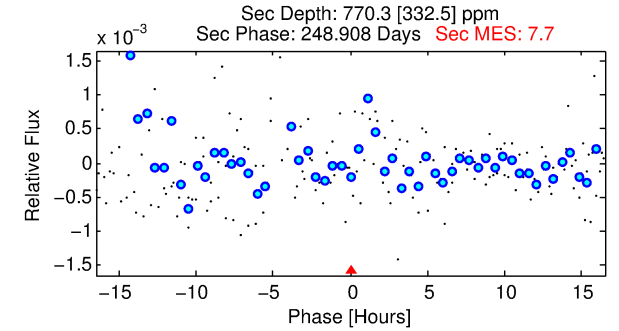
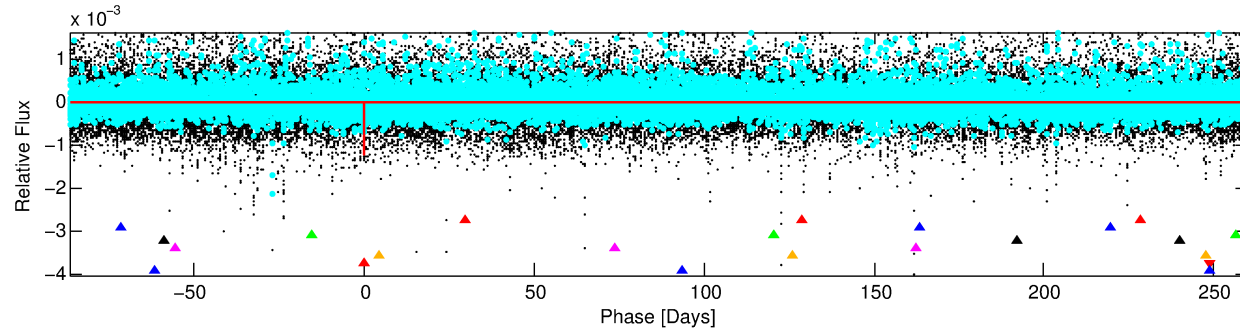
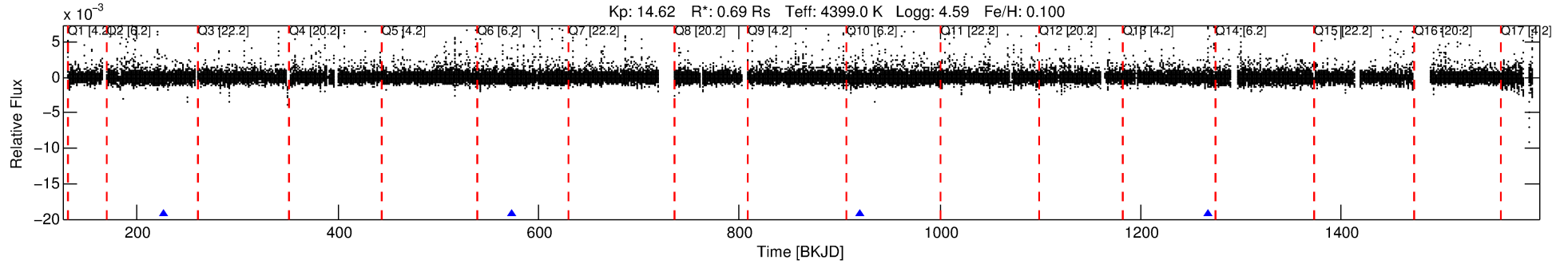
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004249749-07

No Significant Match Found

DV One-Page Summary

KIC: 4249749 Candidate: 7 of 8 Period: 346.749 d



DV Fit Results:

Period = 346.74889 [0.00480] d
Epoch = 226.7427 [0.0085] BKJD
Rp/R* = 0.0308 [0.0816]
a/R* = 964.32 [7343.65]
b = 0.23 [31.90]
Seff = 0.22 [0.03]
Teq = 175 [7] K
Rp = 2.33 [6.16] Re
a = 0.8507 [0.0595] AU
Ag = 56616.23 [300666.30] [0.19 σ]
Teffp = 4174 [5543] K [0.72 σ]

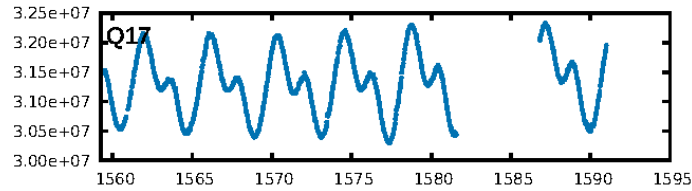
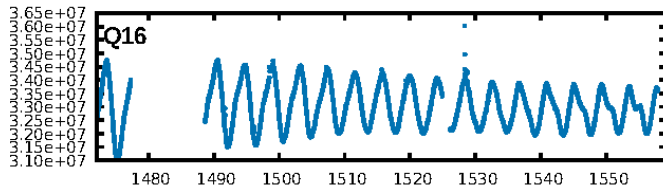
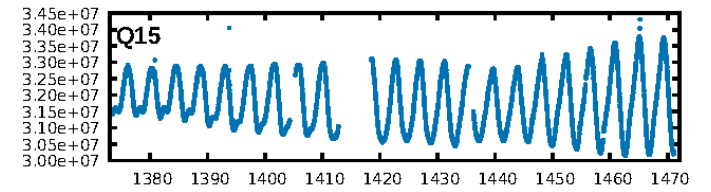
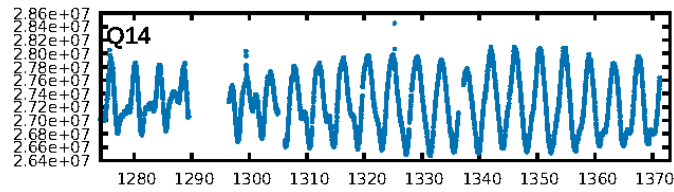
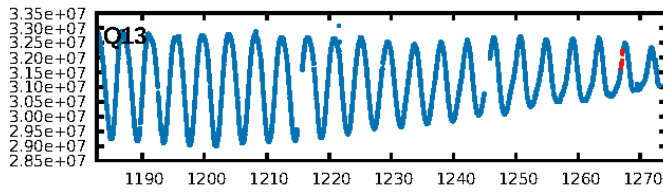
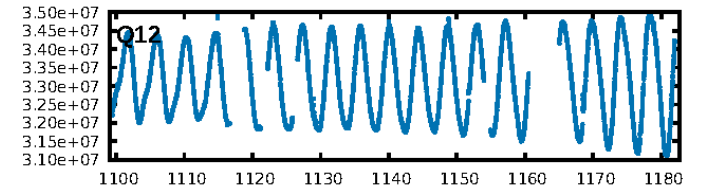
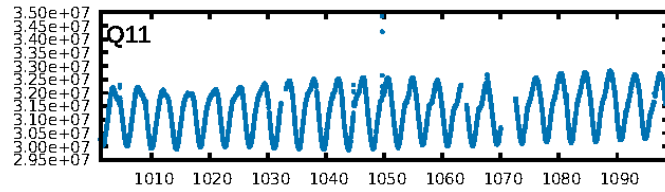
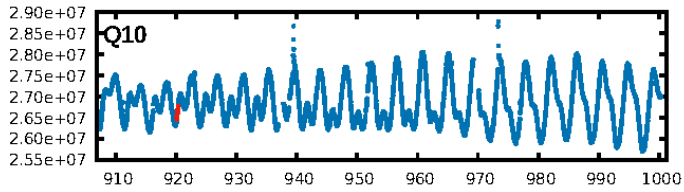
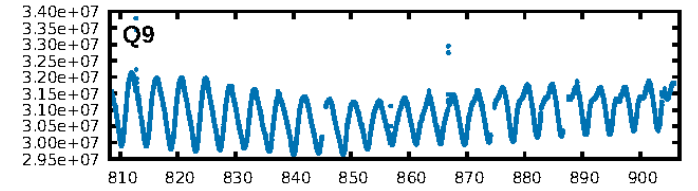
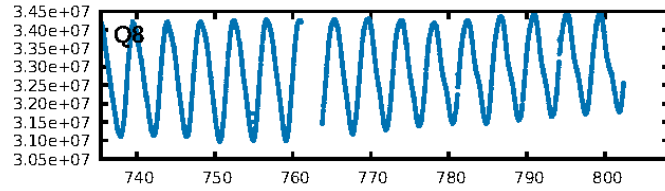
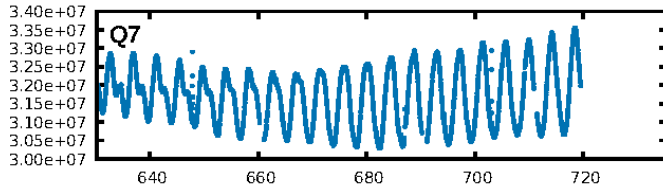
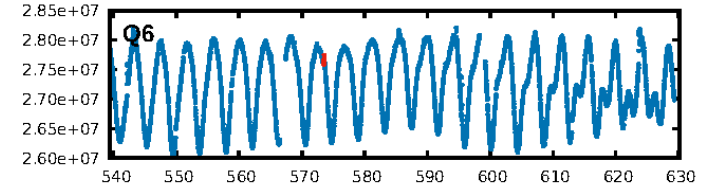
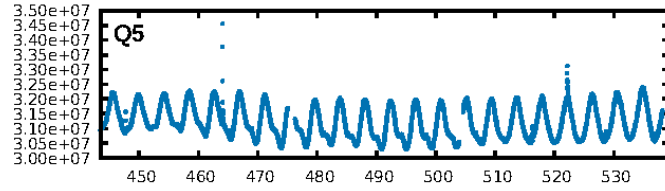
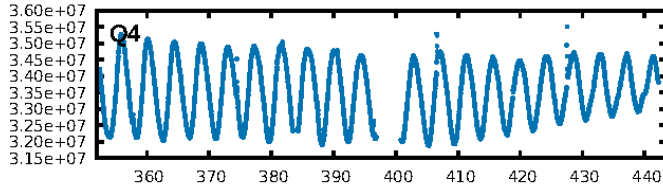
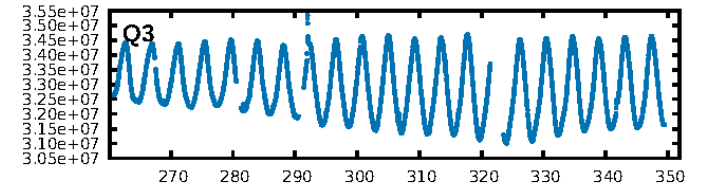
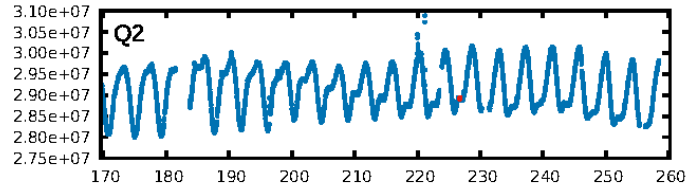
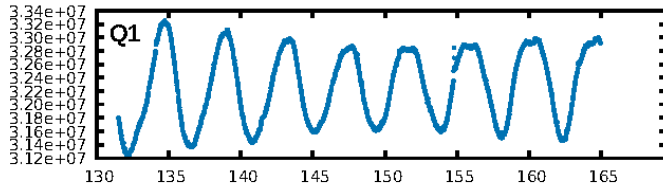
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [227.04 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 34.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.6699
Centroid-sig: 77.7%
Centroid-so: 0.324 arcsec [0.27 σ]
OotOffset-rm: 0.370 arcsec [1.03 σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-rm: 0.262 arcsec [0.71 σ]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [4/4]

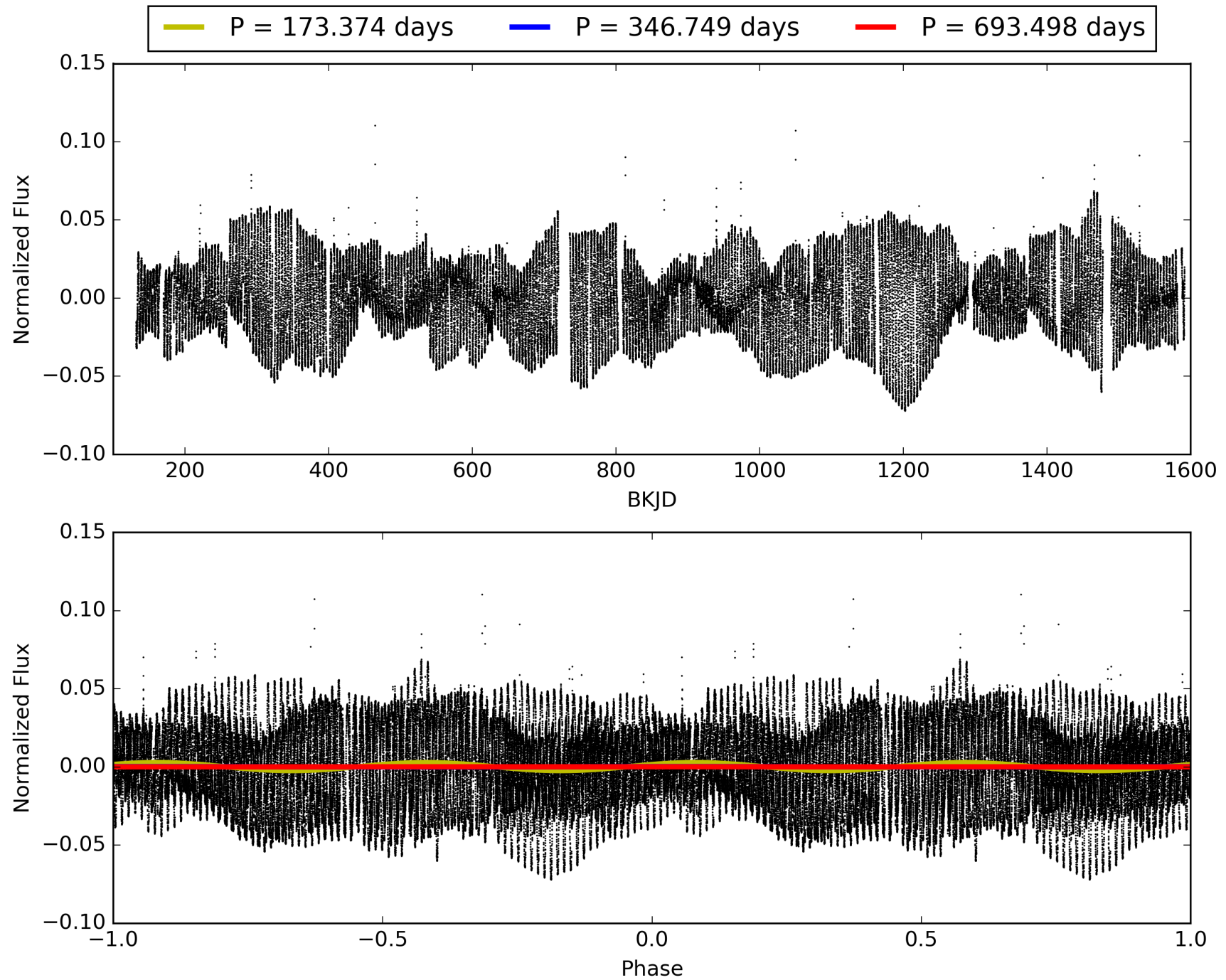
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 00:26:43 Z

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

TCE 004249749-07, PDC Light Curves

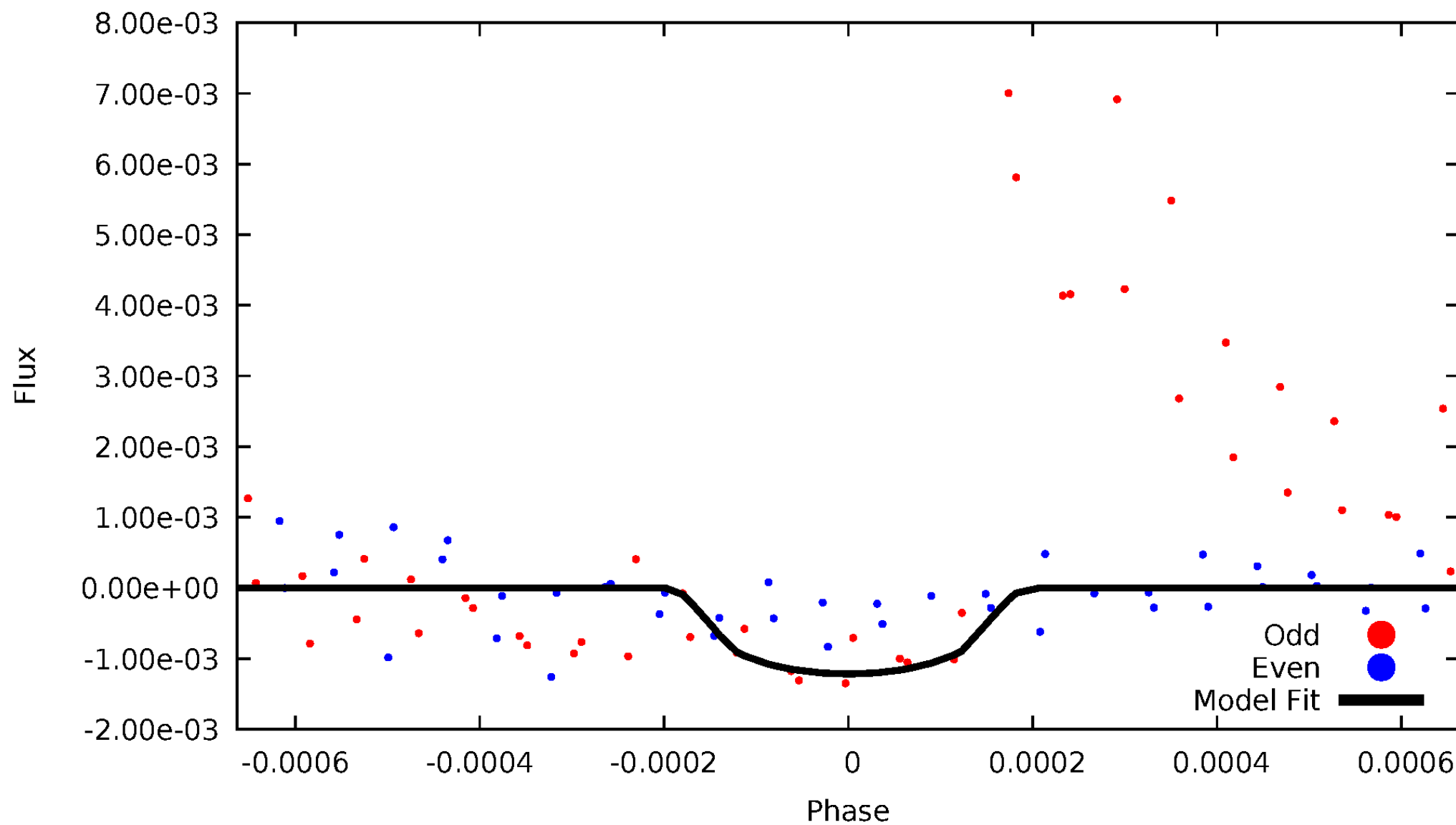


TCE 004249749-07



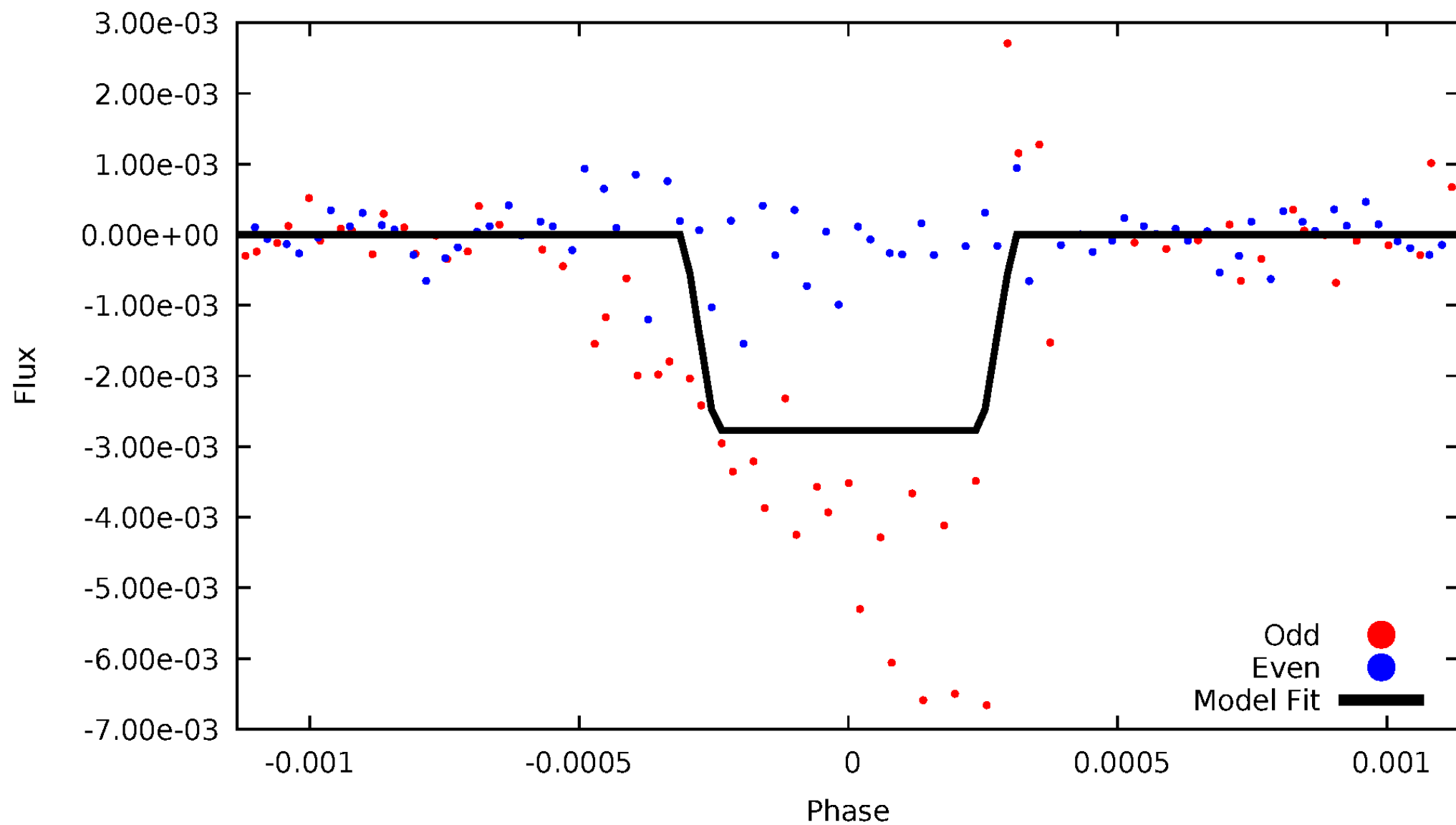
DV Odd/Even

TCE 004249749-07



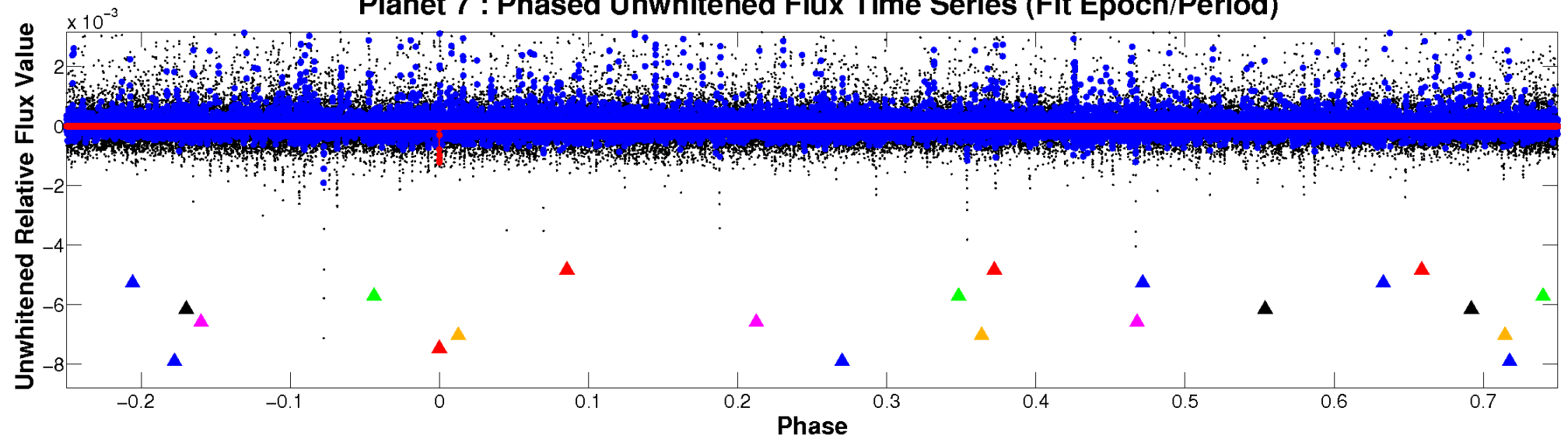
ALT Odd/Even

TCE 004249749-07

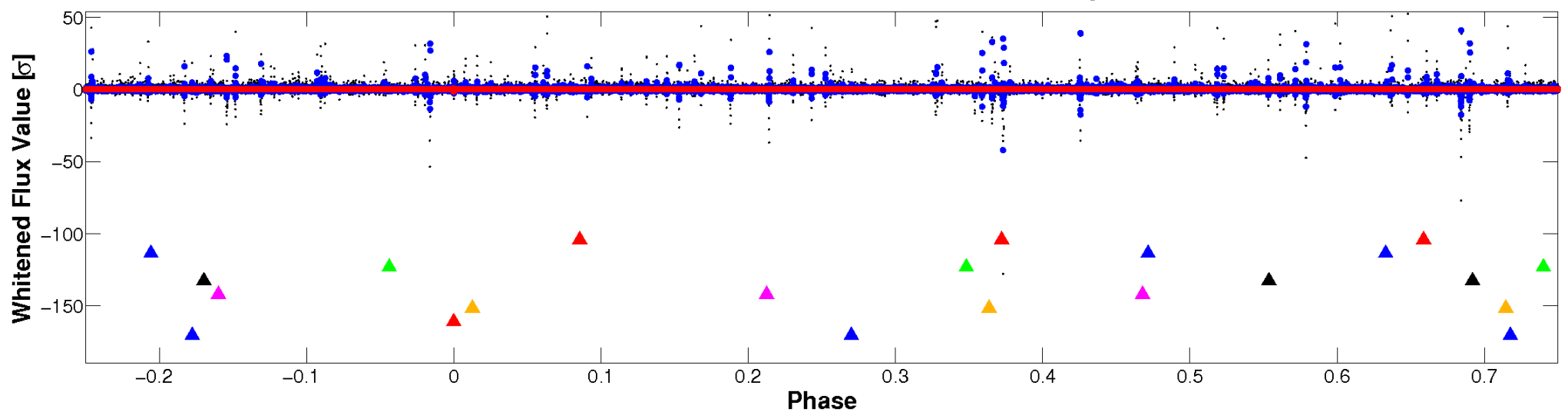


Non-Whitened Vs. Whitened Light Curve

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

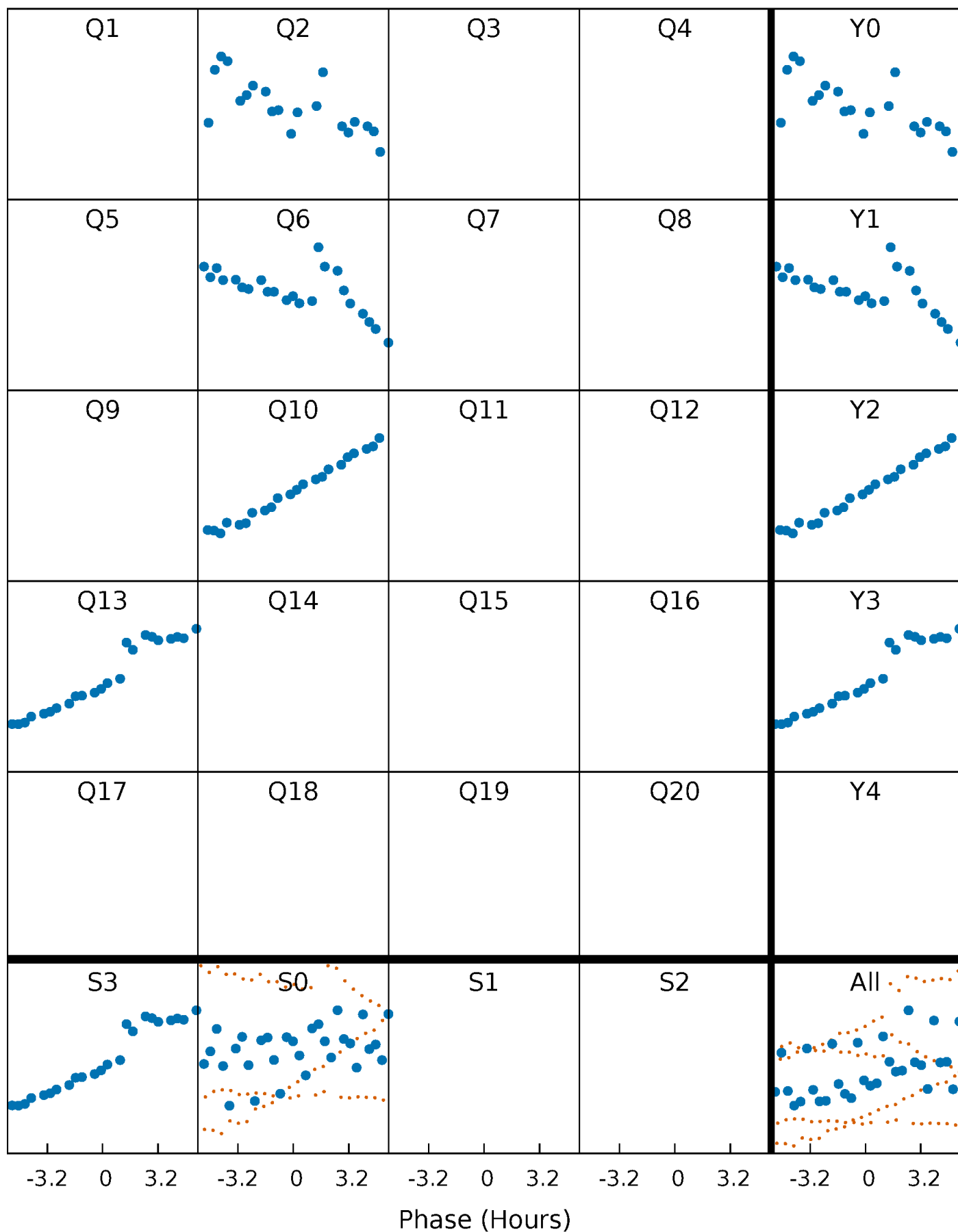


Planet 7 : Phased Whitened Flux Time Series (Fit Epoch/Period)



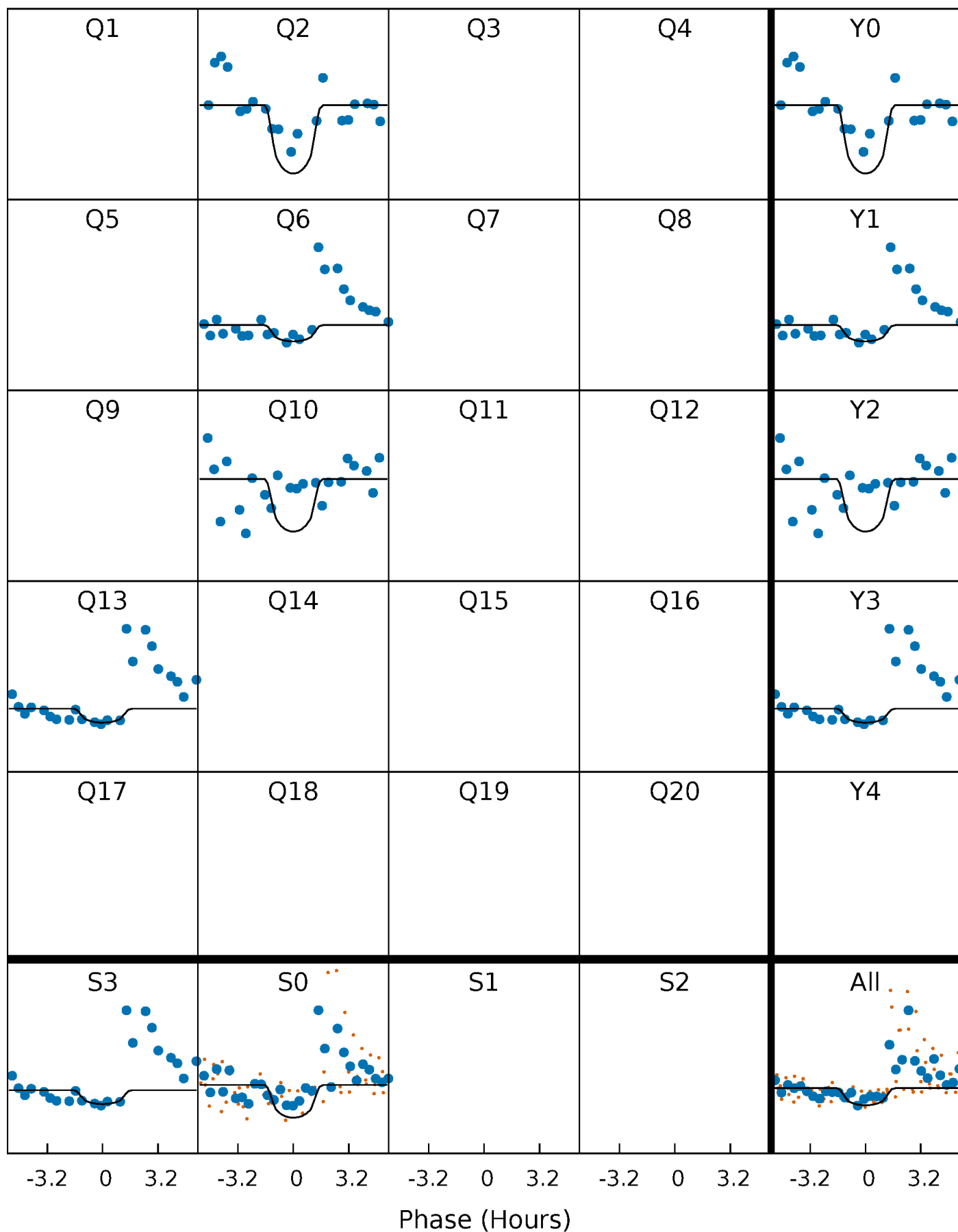
PDC Quarter-Phased Transit Curves

TCE 004249749-07 $P=346.748892$ Days $T_0=226.742683$ (BKJD)



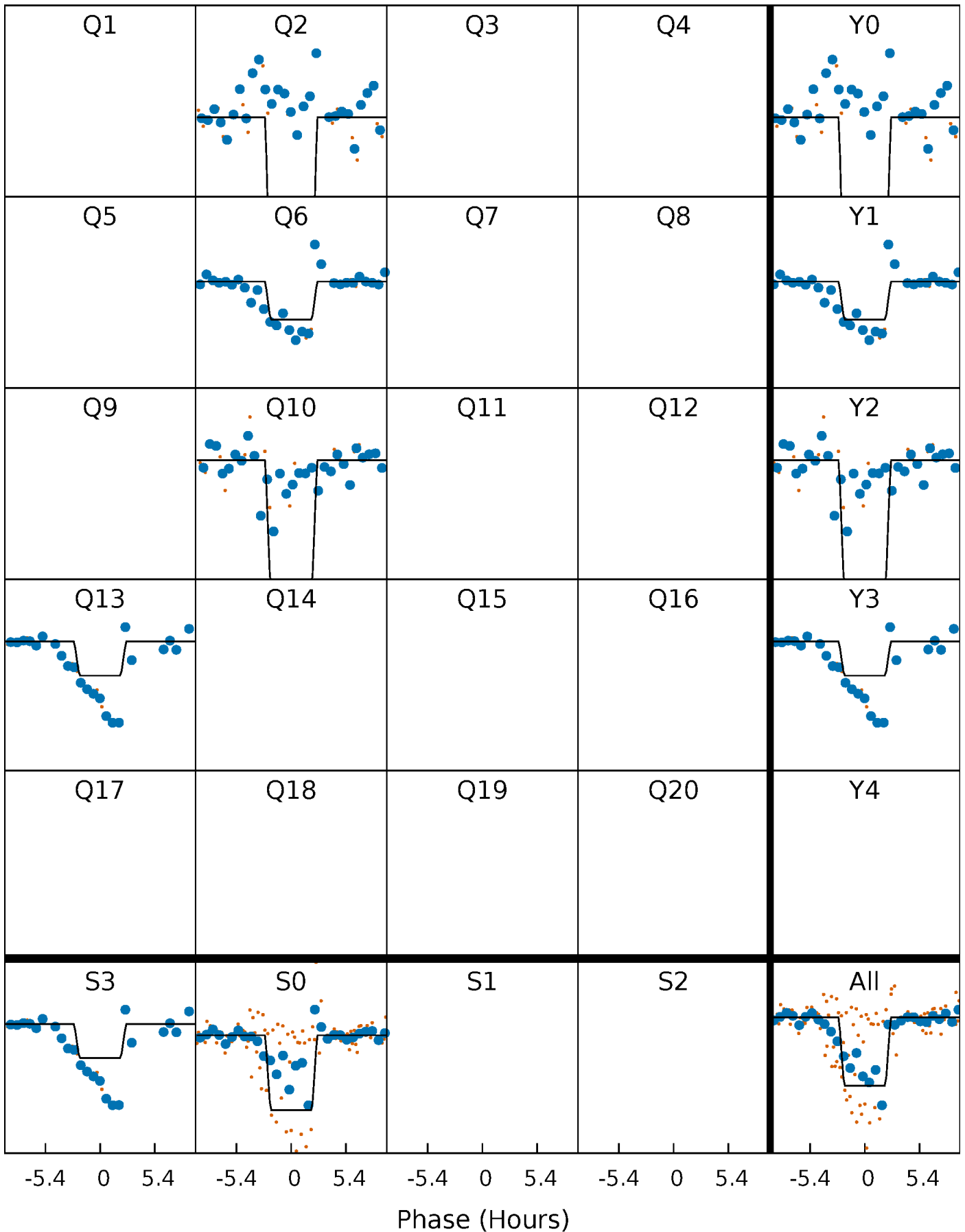
DV Quarter-Phased Transit Curves

TCE 004249749-07 P=346.748892 Days $T_0=226.742683$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

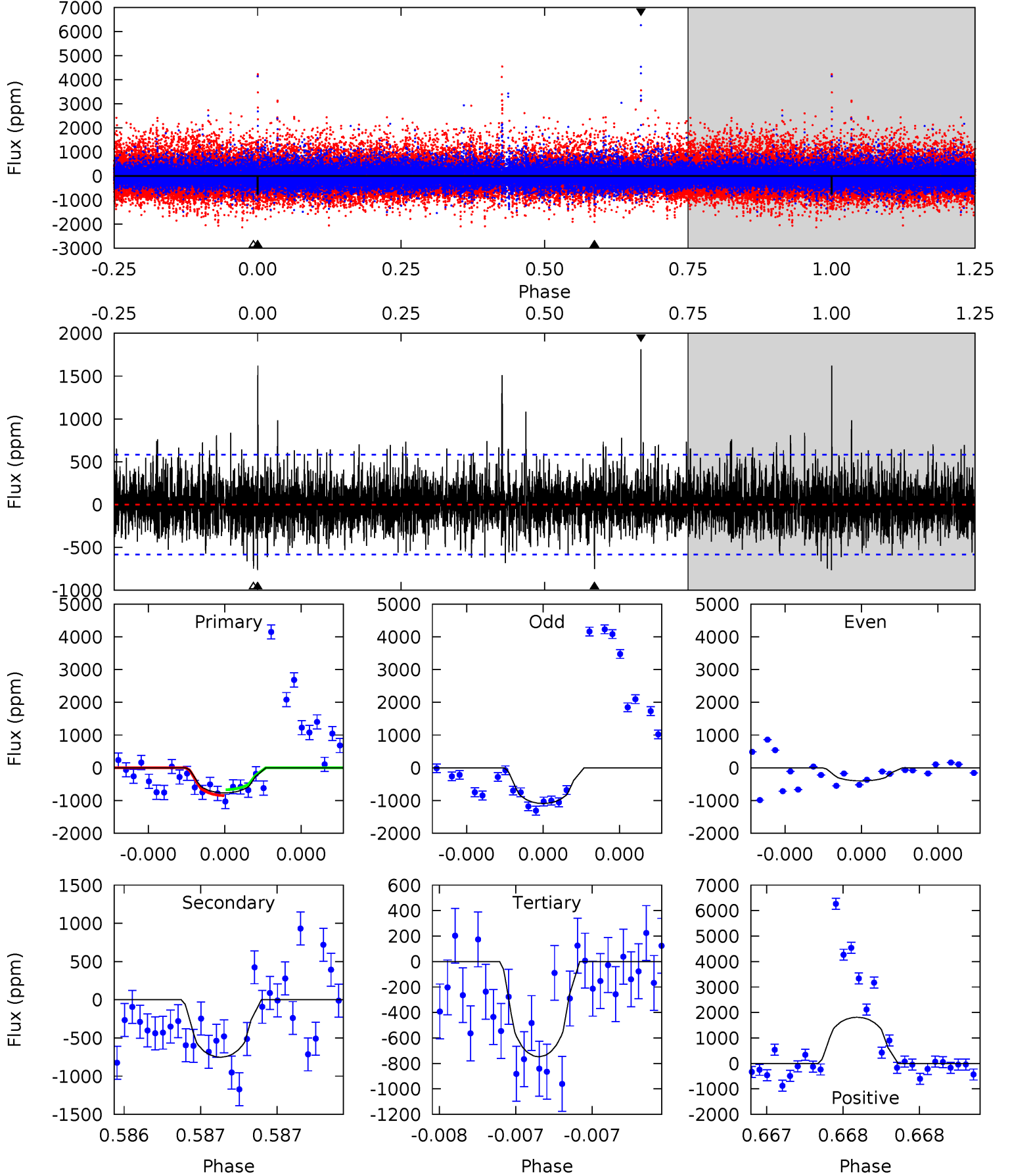
TCE 004249749-07 $P=346.743891$ Days $T_0=226.708382$ (BKJD)



DV Model-Shift Uniqueness Test

004249749-07, P = 346.748892 Days, E = 226.742683 Days

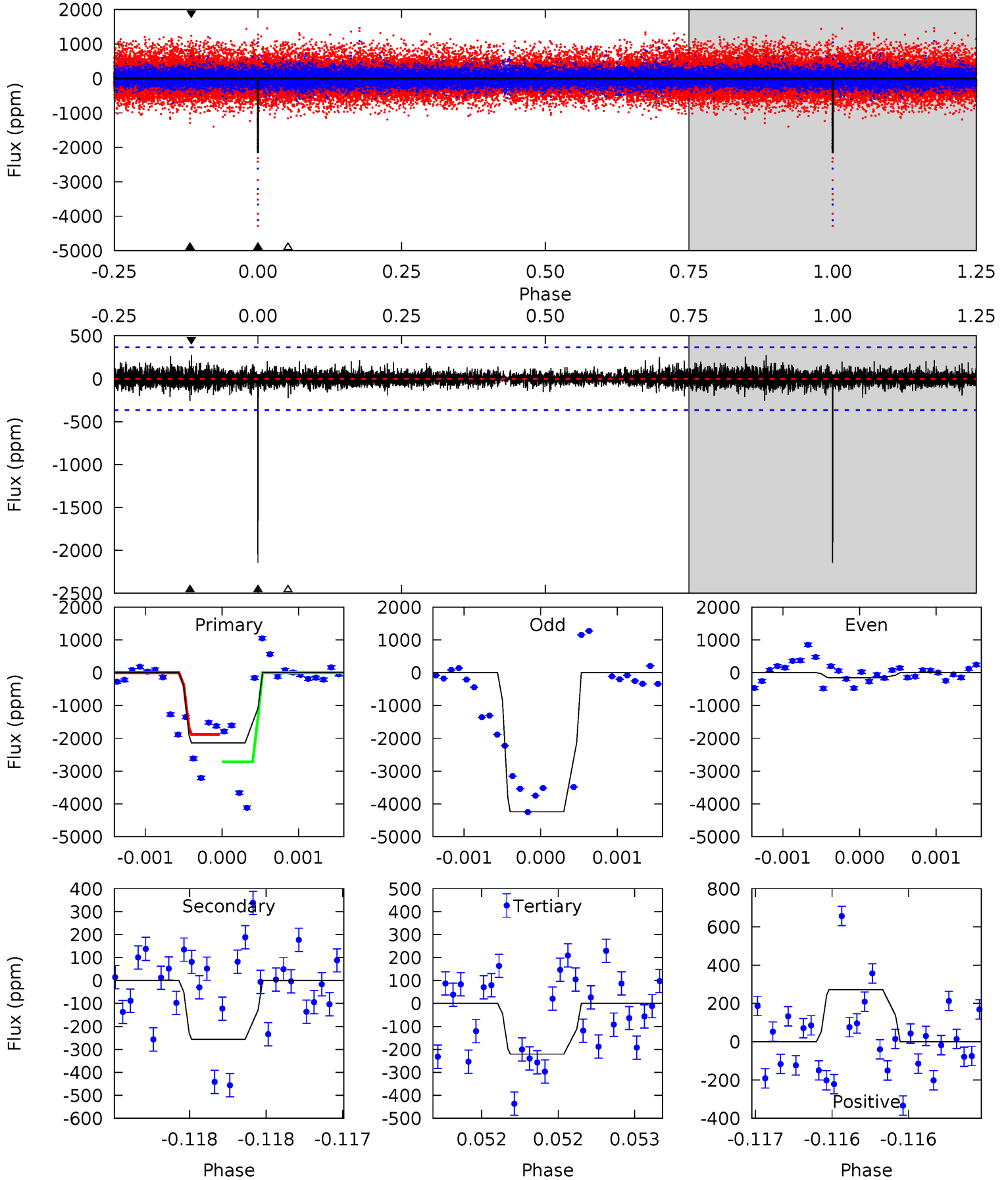
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.39	7.24	7.21	17.5	5.62	3.55	1.89	0.18	-10.1	0.04	-10.2	2.75	0.90	0.70	0.86



Alt Model-Shift Uniqueness Test

004249749-07, P = 346.743891 Days, E = 226.708382 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.5	3.88	3.34	4.13	5.54	3.44	0.71	29.2	28.4	0.54	-0.25	40.9	1.13	0.11	6.15



Stellar Parameters For KIC 004249749

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4399^{+132}_{-132}	$4.592^{+0.053}_{-0.018}$	$0.100^{+0.250}_{-0.300}$	$0.692^{+0.033}_{-0.059}$	$0.683^{+0.055}_{-0.050}$	$2.902^{+0.625}_{-0.250}$
	+3%/-3%	+1%/-0%	+250%/-300%	+5%/-9%	+8%/-7%	+22%/-9%
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 004249749-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-751 ± 104	$4.98^{+4.83}_{-3.12}$	243^{+8}_{-8}	3247^{+1266}_{-542}	11802^{+70951}_{-8584}
Alt.	-256 ± 66	$5.92^{+5.15}_{-4.03}$	242^{+8}_{-7}	2681^{+1045}_{-399}	3010^{+23487}_{-2236}

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

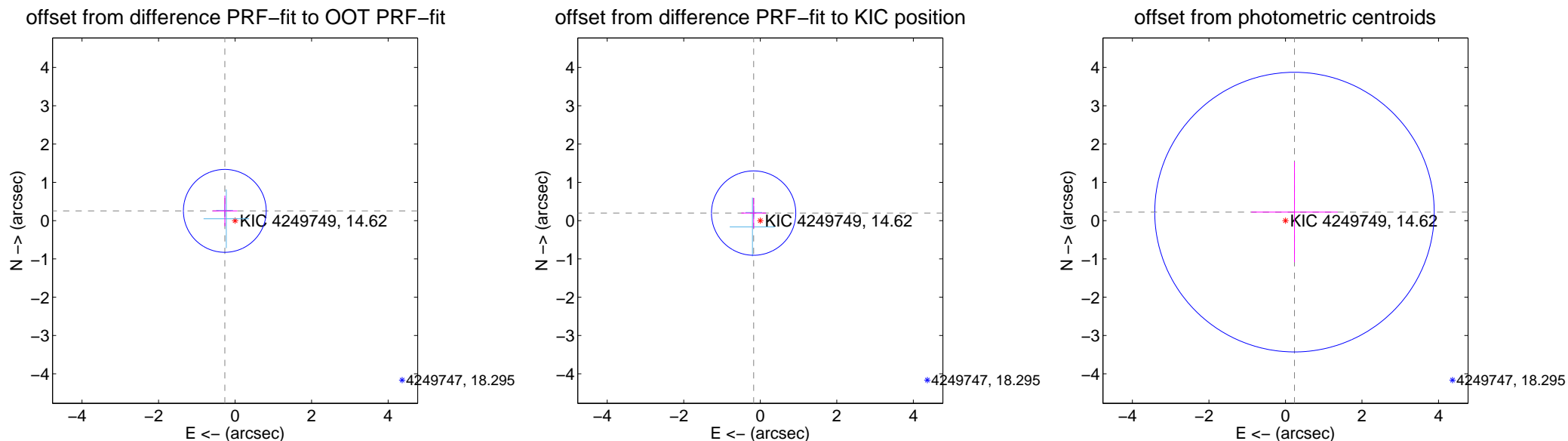
DV Centroid Data

Supplemental centroid analysis for 004249749-07. Kepler magnitude: 14.62. Transit SNR 5.87

There are 2 quarters with good PRF difference image offsets

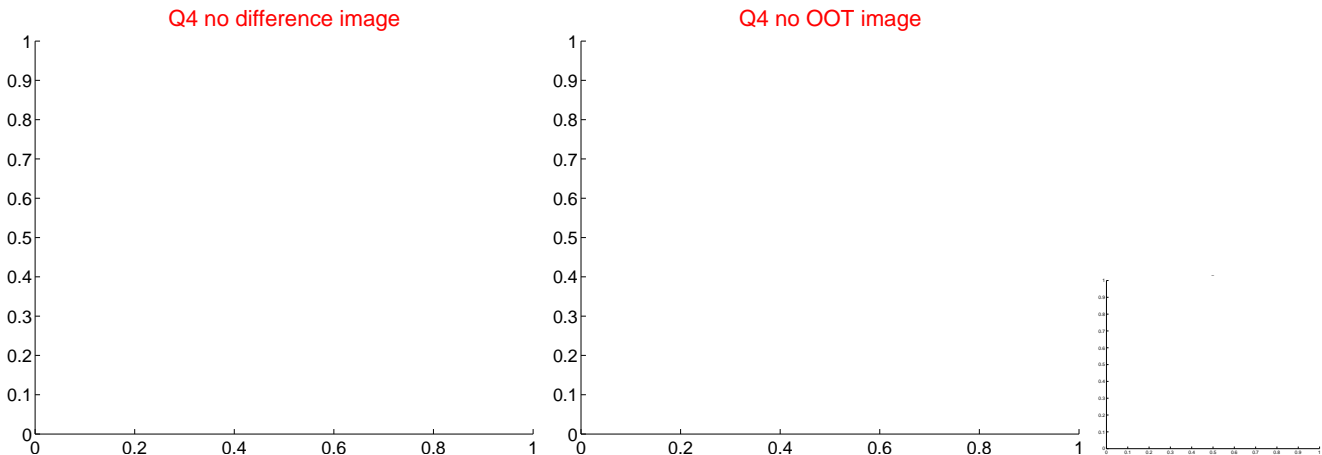
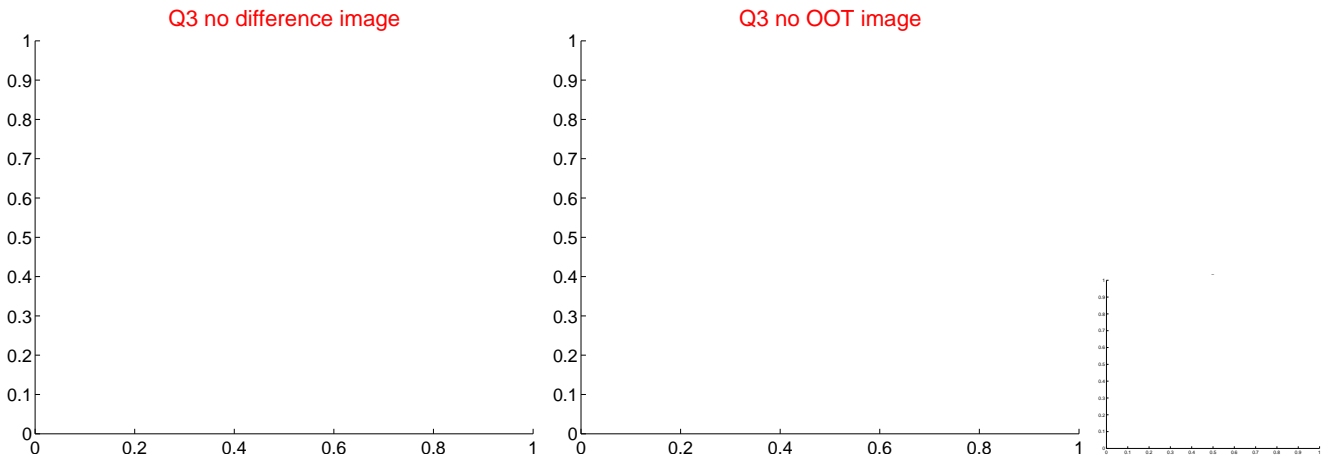
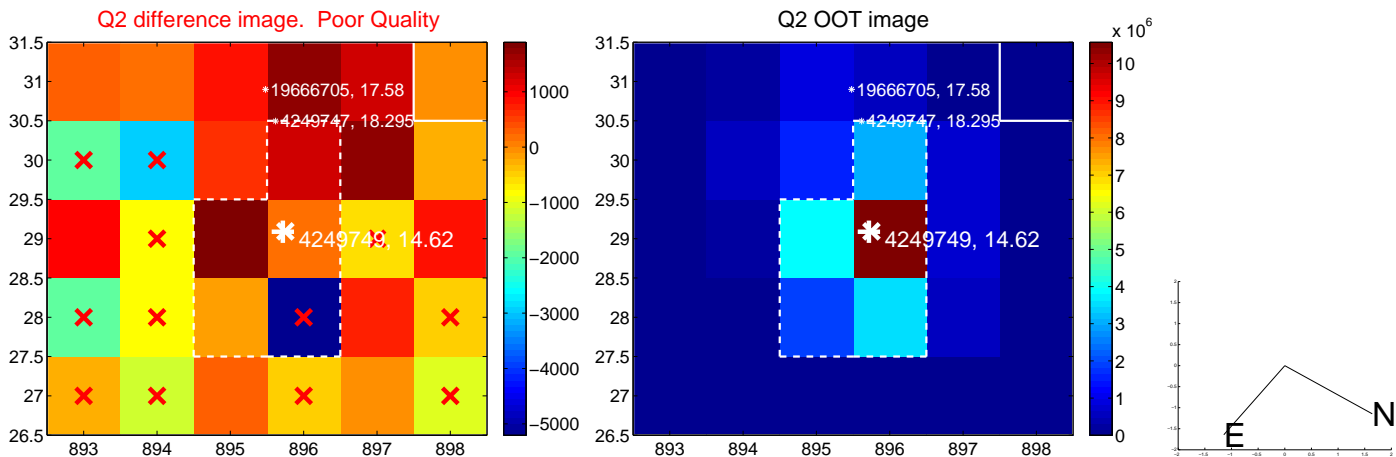
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.370 ± 0.361	1.03	0.268 ± 0.323	0.255 ± 0.398
PRF-fit source offset from KIC position	0.262 ± 0.367	0.71	0.174 ± 0.323	0.197 ± 0.398
photometric centroid source offset	0.32 ± 1.22	0.27	-0.24 ± 1.13	0.22 ± 1.31

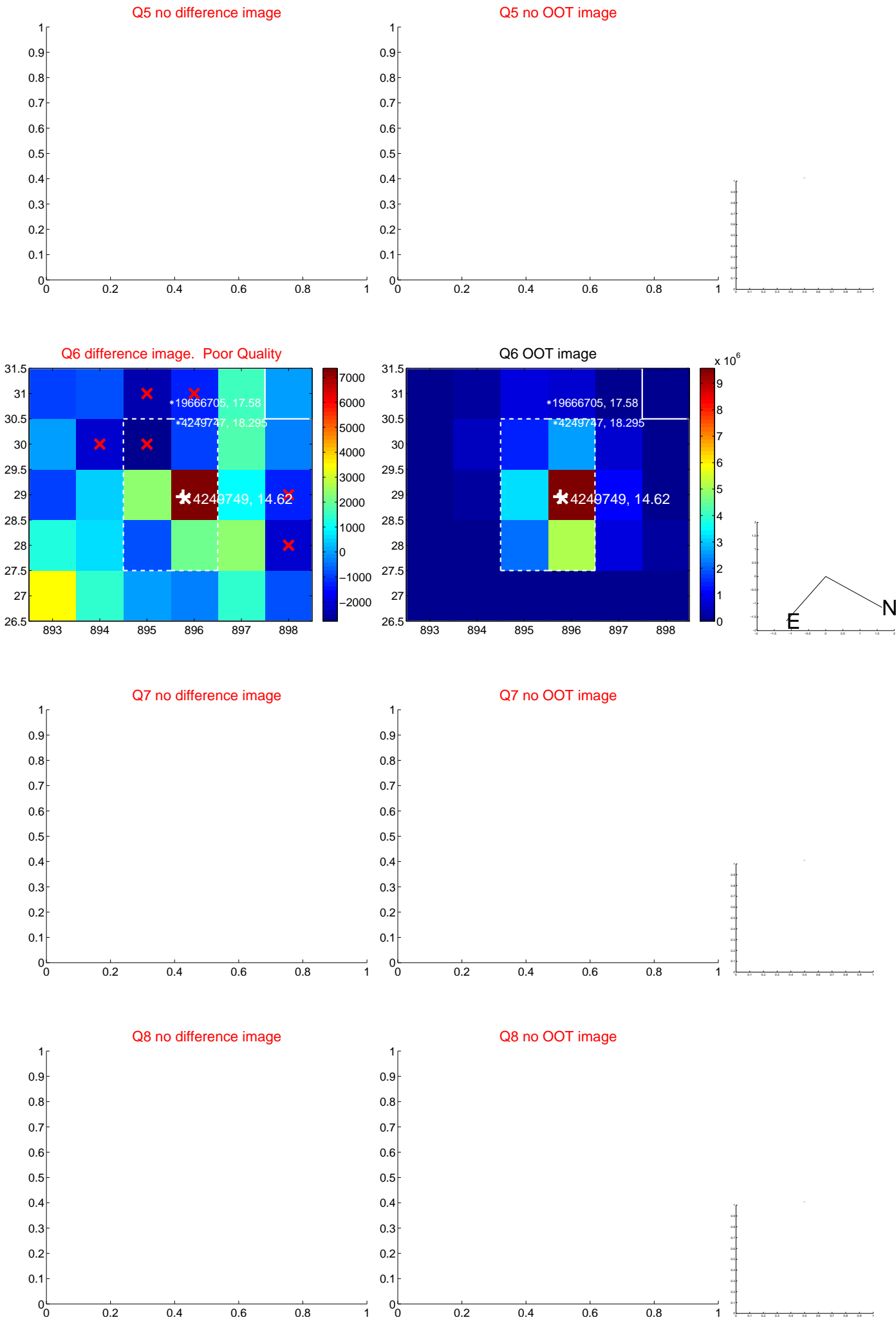


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

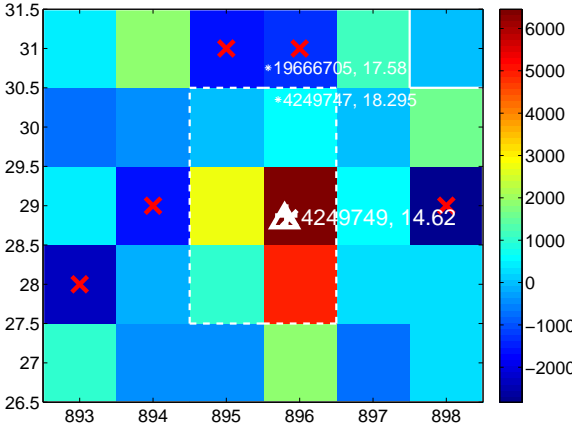
Q9 no difference image



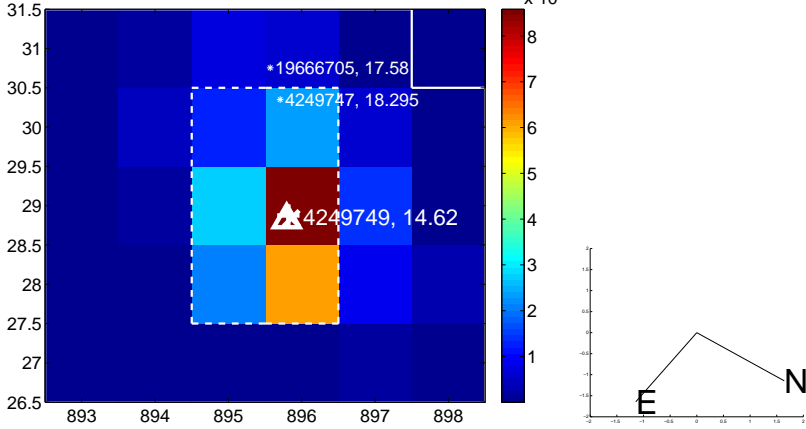
Q9 no OOT image



Q10 difference image



Q10 OOT image



Q11 no difference image



Q11 no OOT image



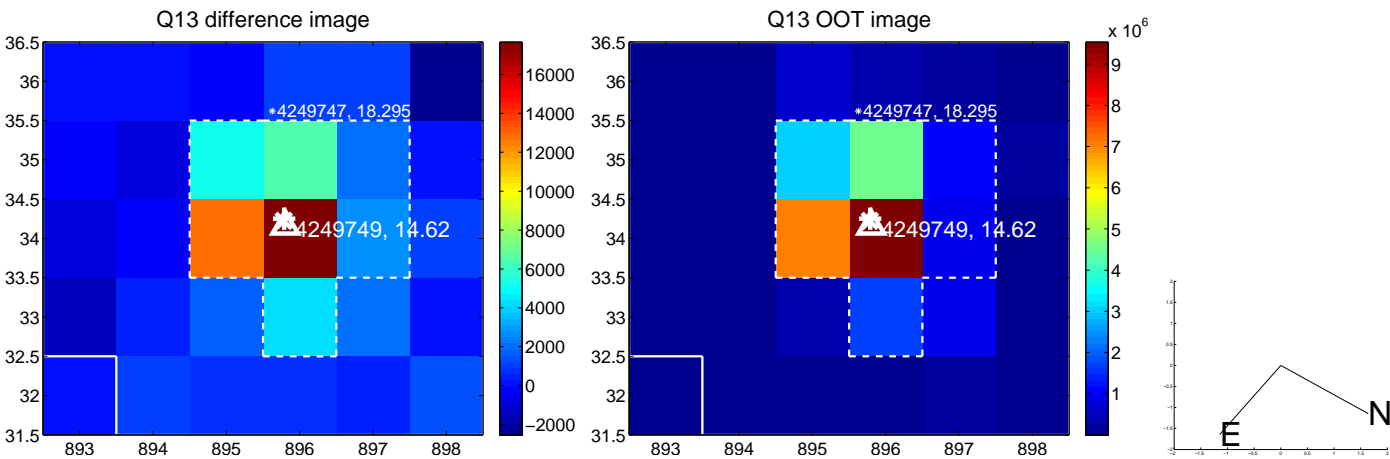
Q12 no difference image



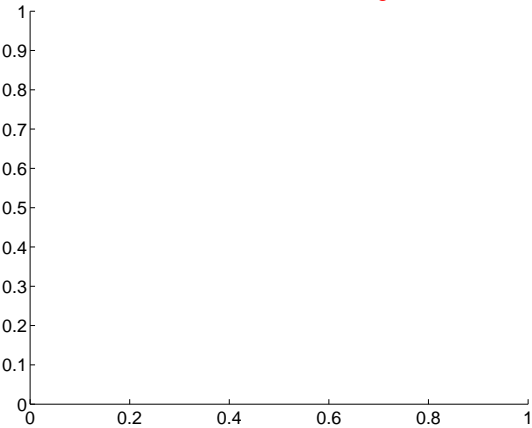
Q12 no OOT image



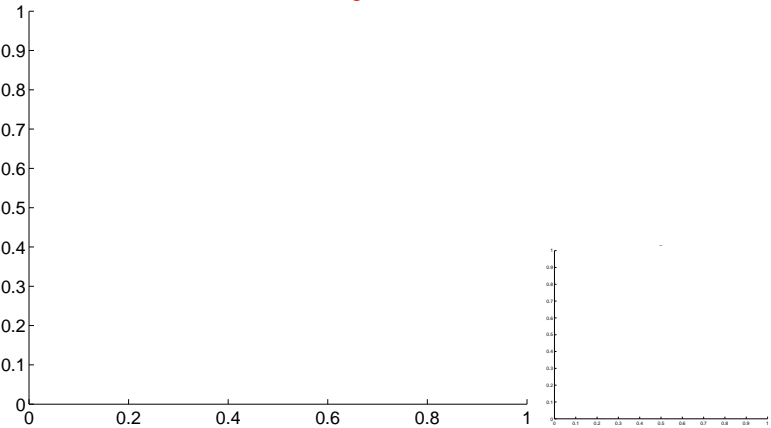
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



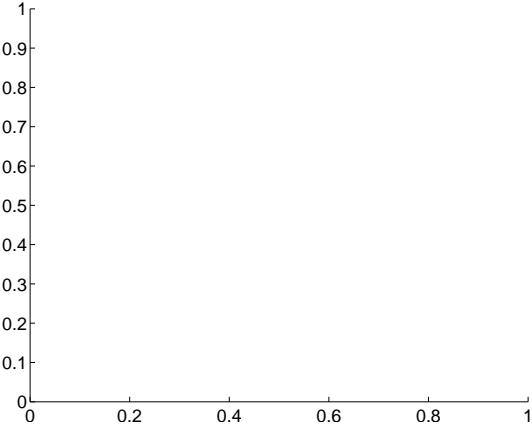
Q14 no difference image



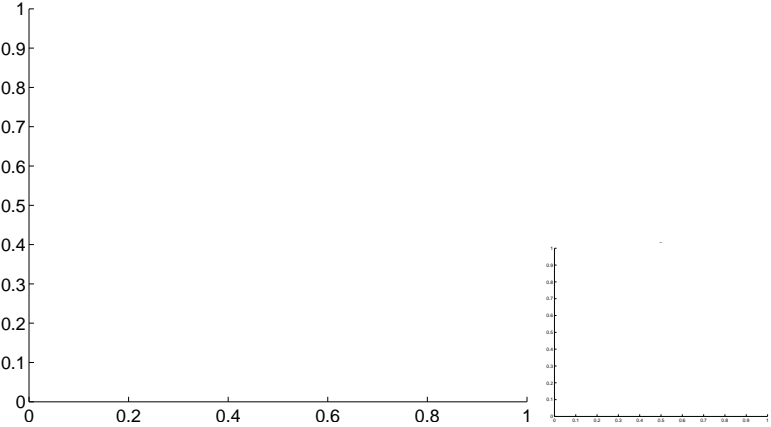
Q14 no OOT image



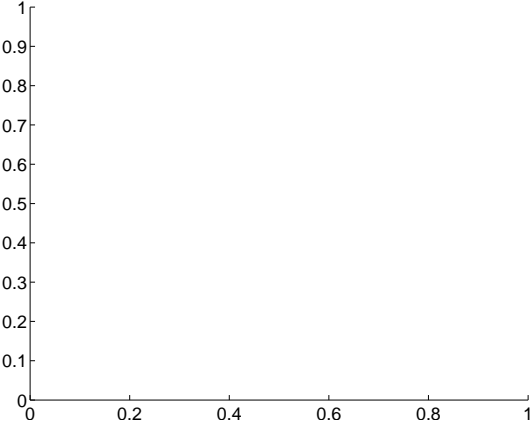
Q15 no difference image



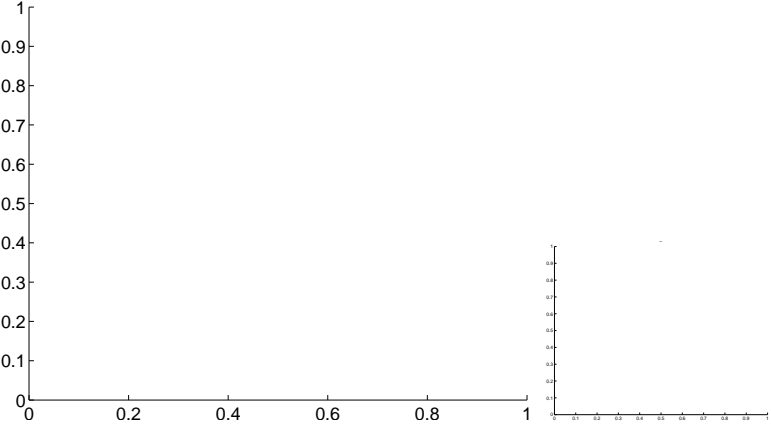
Q15 no OOT image



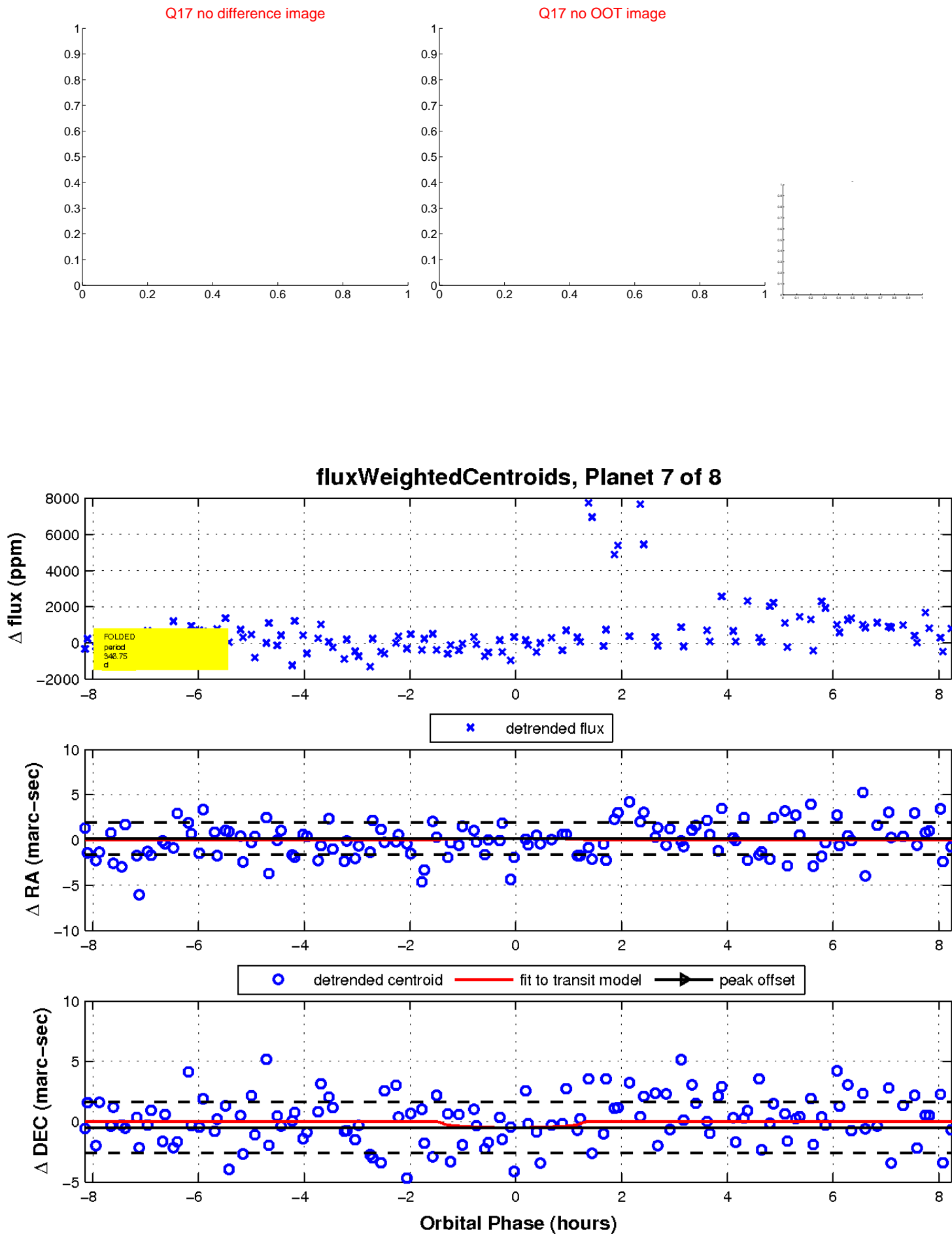
Q16 no difference image



Q16 no OOT image

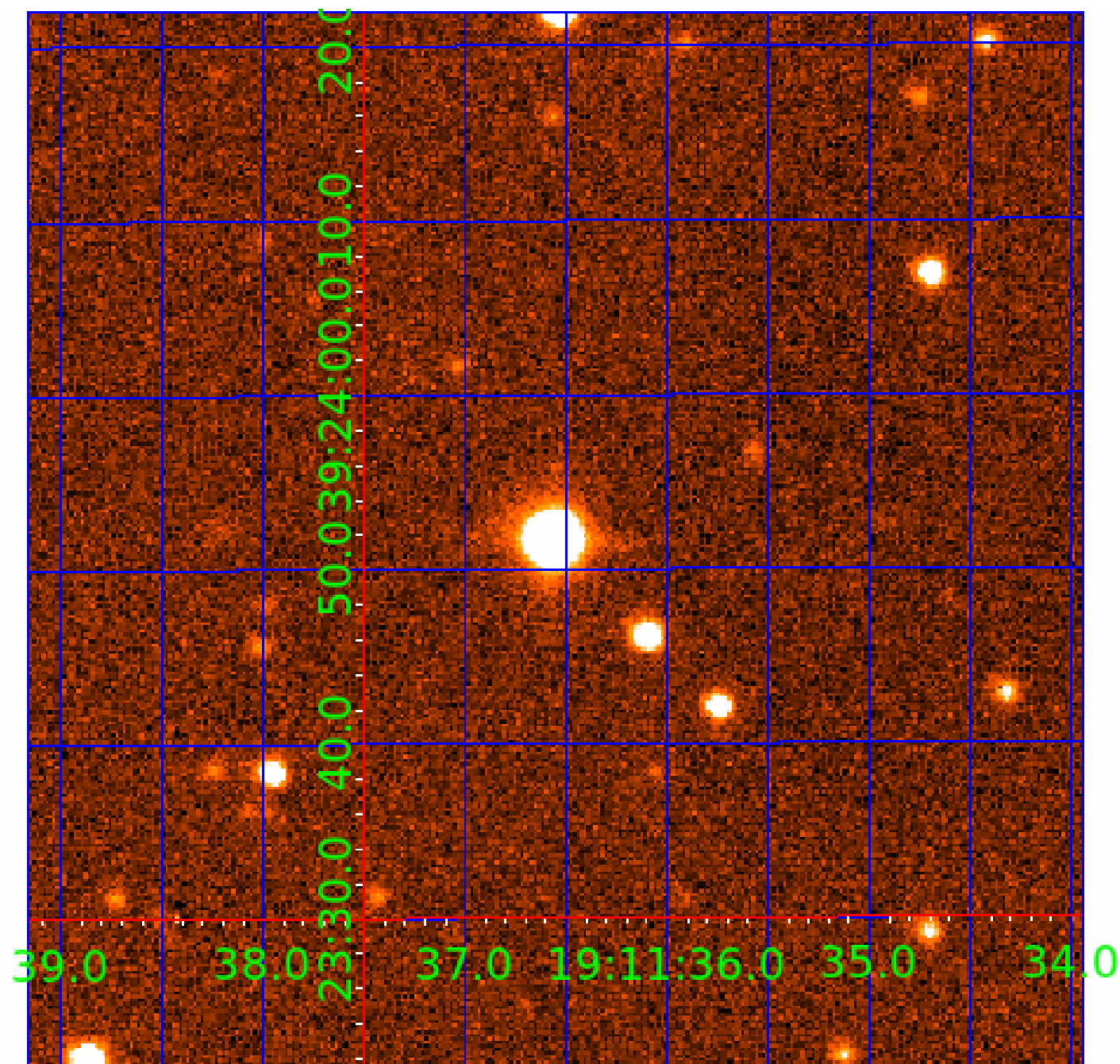


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 004249749

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})
004249749-01	OBS	No	446.117305	256.422906	1857.0	4.770	15.7	7.7	0.69	4399	3.13	0.16
004249749-02	OBS	No	402.698956	390.275257	2413.1	11.416	14.9	8.4	0.69	4399	3.24	0.18
004249749-03	OBS	No	482.664452	211.554519	1405.4	3.344	13.3	6.2	0.69	4399	2.63	0.14
004249749-04	OBS	No	394.695695	418.747079	1921.3	4.252	16.1	8.5	0.69	4399	3.28	0.19
004249749-05	OBS	No	564.387457	300.441440	1535.8	2.879	11.8	7.6	0.69	4399	2.78	0.12
004249749-06	OBS	No	468.440517	577.888541	519.8	0.625	11.8	1.9	0.69	4399	1.66	0.15
004249749-07	OBS	No	346.748892	226.742683	1217.2	2.759	12.2	5.9	0.69	4399	2.33	0.22
004249749-08	OBS	No	501.969206	511.912106	1462.4	4.949	13.2	7.3	0.69	4399	2.75	0.14

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004249749-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—ALL_TRANS_CHASES—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
004249749-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
004249749-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_MEAS
004249749-08	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—CENT_FEW_DIFFS

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

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

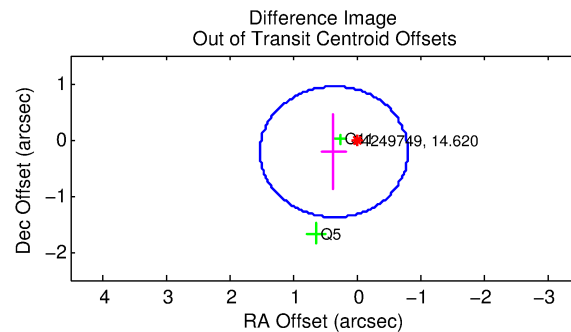
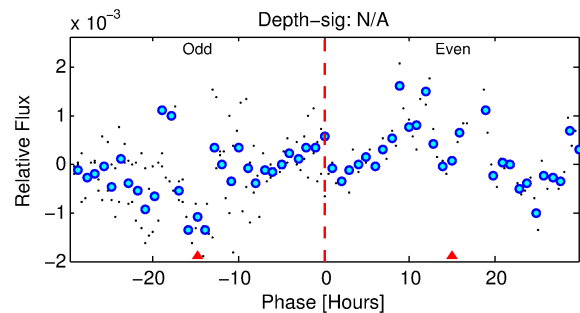
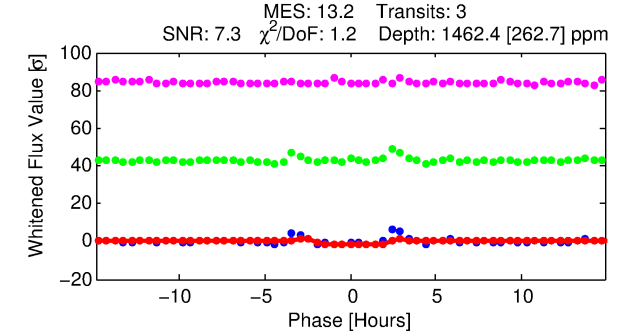
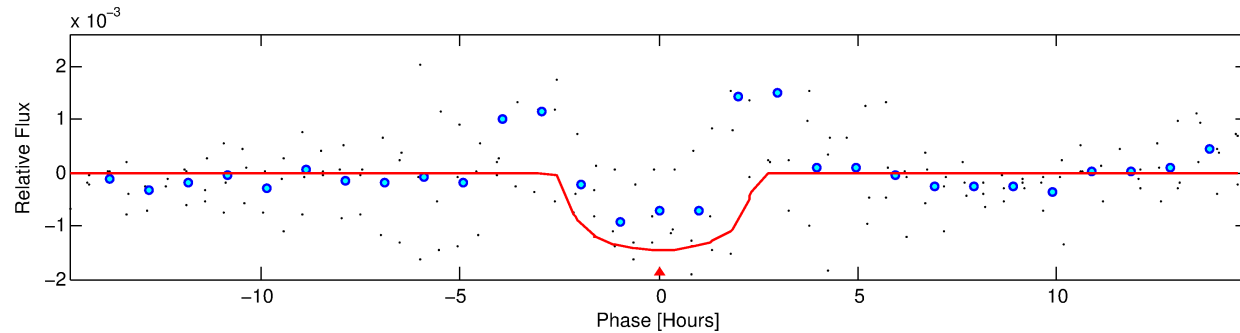
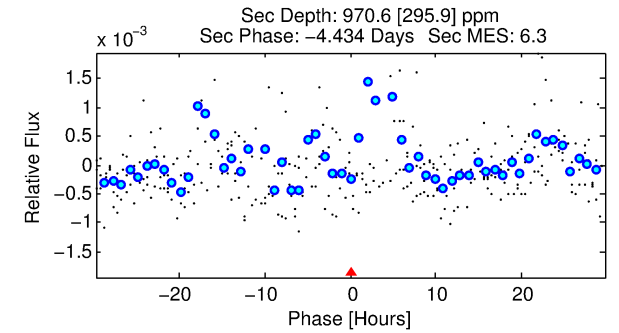
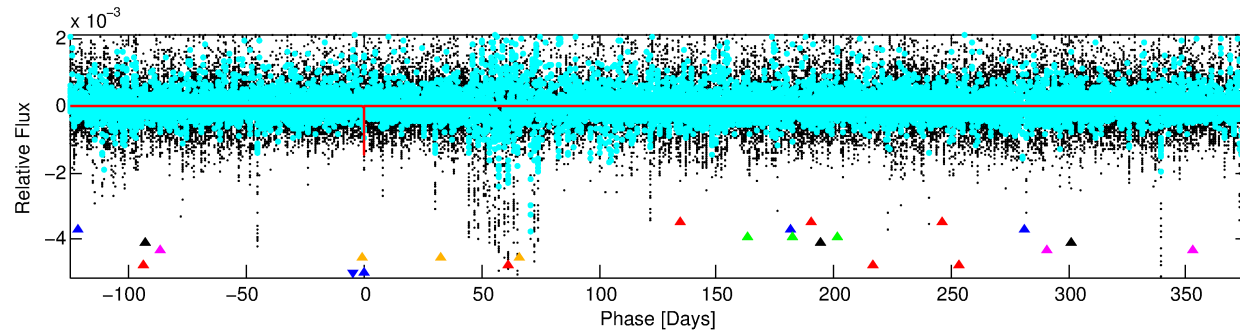
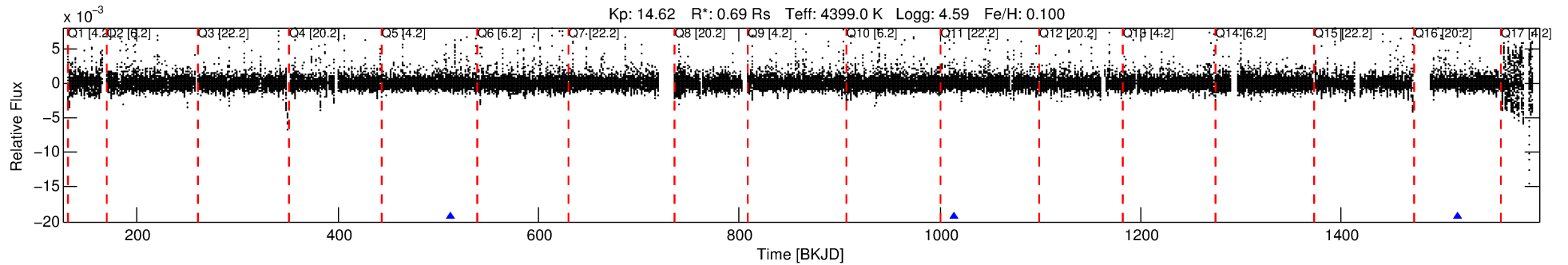
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004249749-08

No Significant Match Found

DV One-Page Summary

KIC: 4249749 Candidate: 8 of 8 Period: 501.969 d



DV Fit Results:

Period = 501.96921 [0.00626] d
Epoch = 511.9121 [0.0082] BKJD
Rp/R* = 0.0364 [0.0285]
a/R* = 637.22 [1505.32]
b = 0.63 [2.30]
Seff = 0.14 [0.02]
Teq = 155 [6] K
Rp = 2.75 [2.17] Re
a = 1.0886 [0.0761] AU
Ag = 83645.30 [133804.10] [0.63] σ
Teffp = 4068 [1628] K [2.40] σ

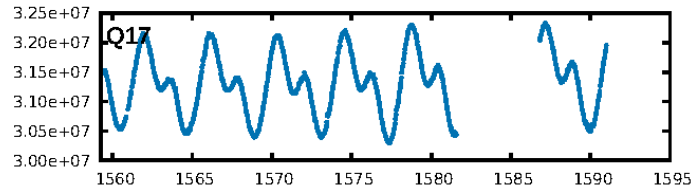
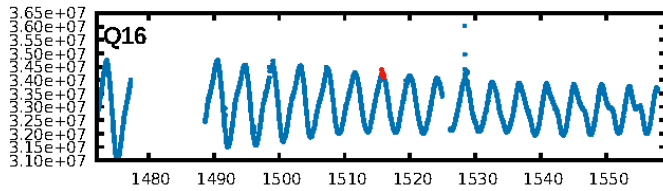
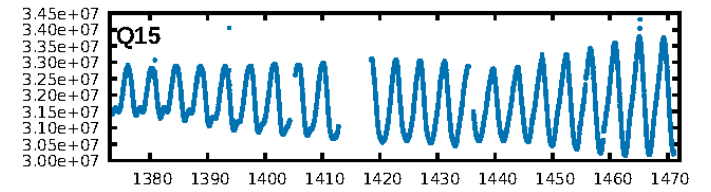
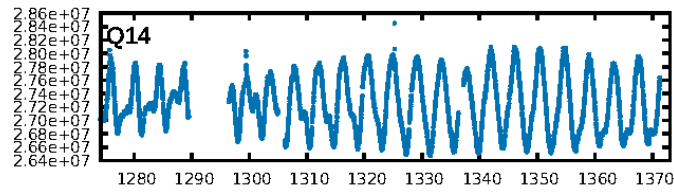
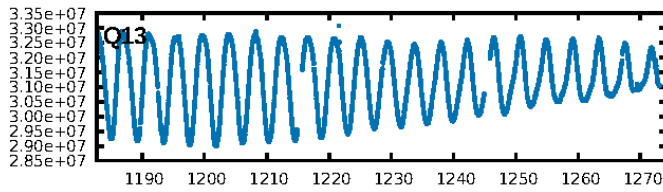
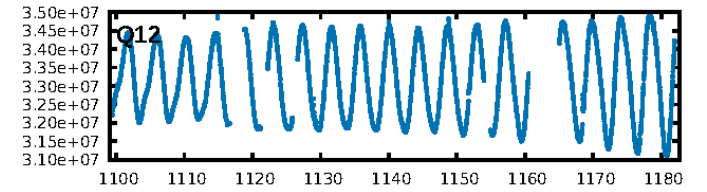
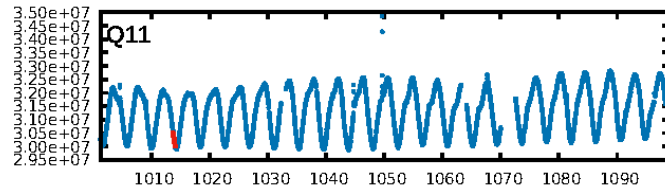
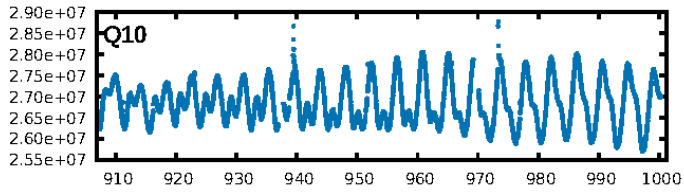
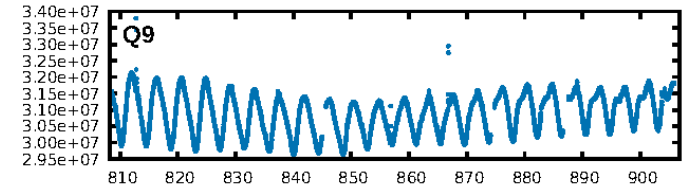
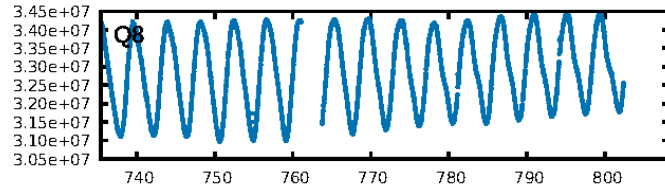
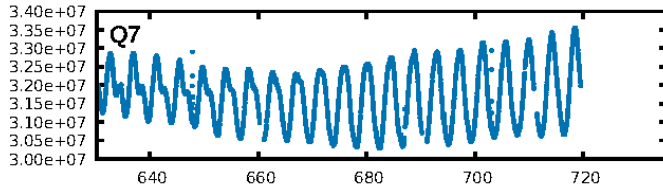
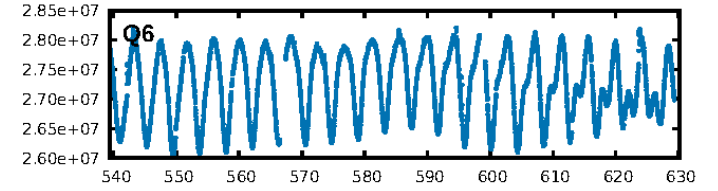
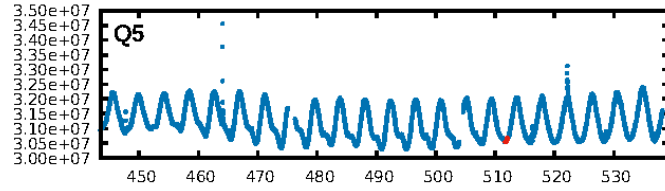
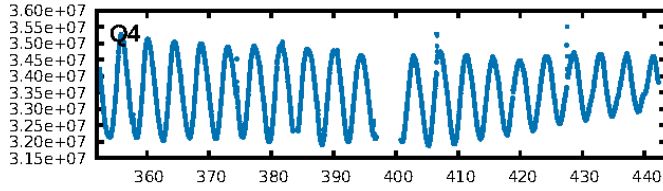
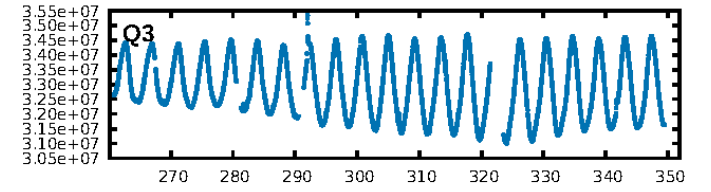
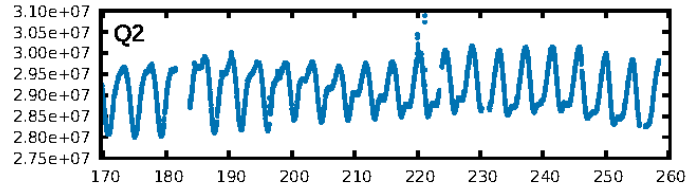
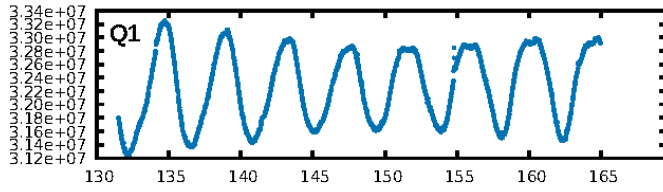
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [77.57] σ
LongPeriod-sig: 100.0% [261.66] σ
ModelChiSquare2-sig: 4.8%
ModelChiSquareGof-sig: 96.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.88
Centroid-sig: 45.8%
Centroid-so: 0.567 arcsec [0.56] σ
OotOffset-rm: 0.416 arcsec [1.07] σ
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 0.408 arcsec [0.58] σ
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

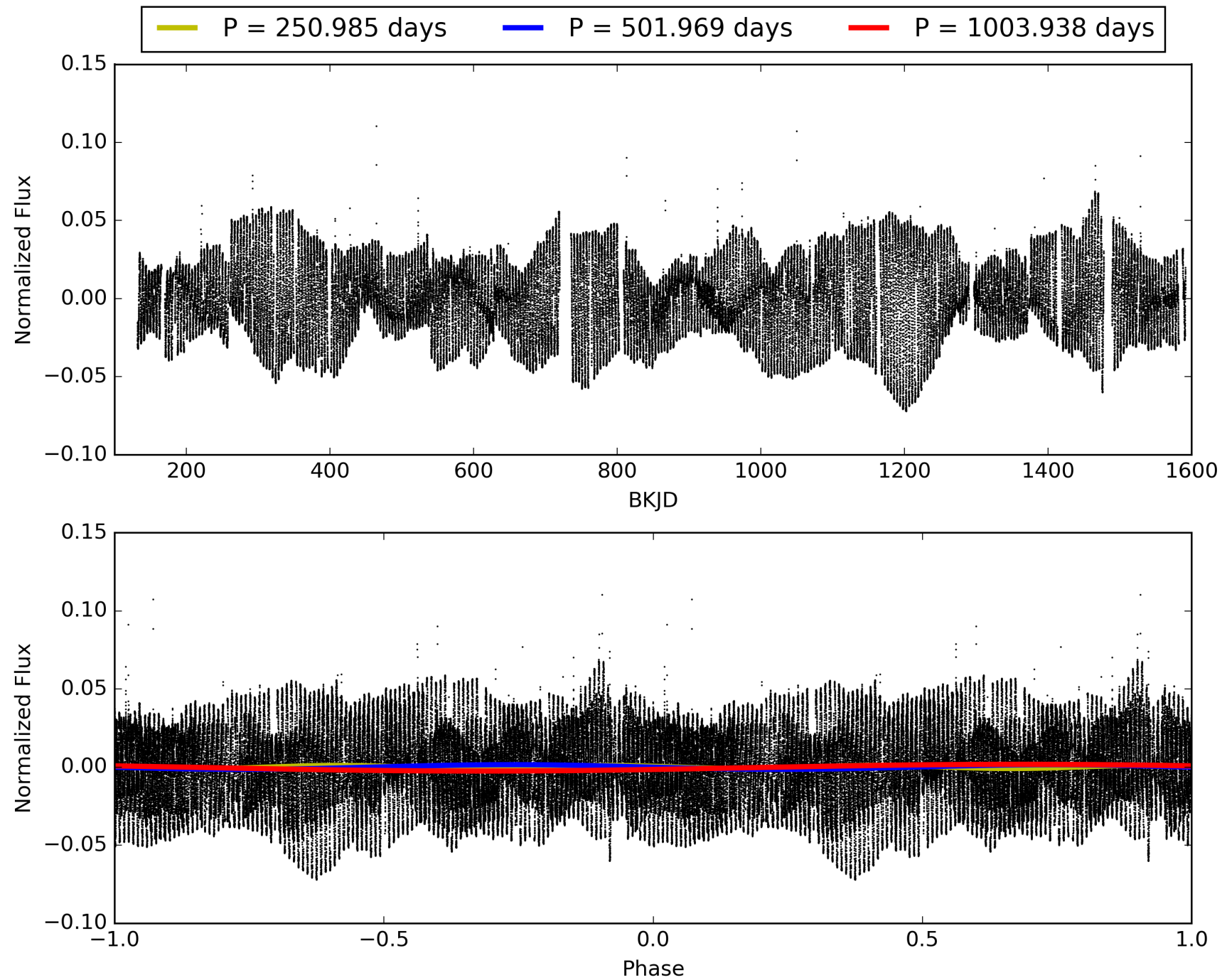
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 004249749-08, PDC Light Curves

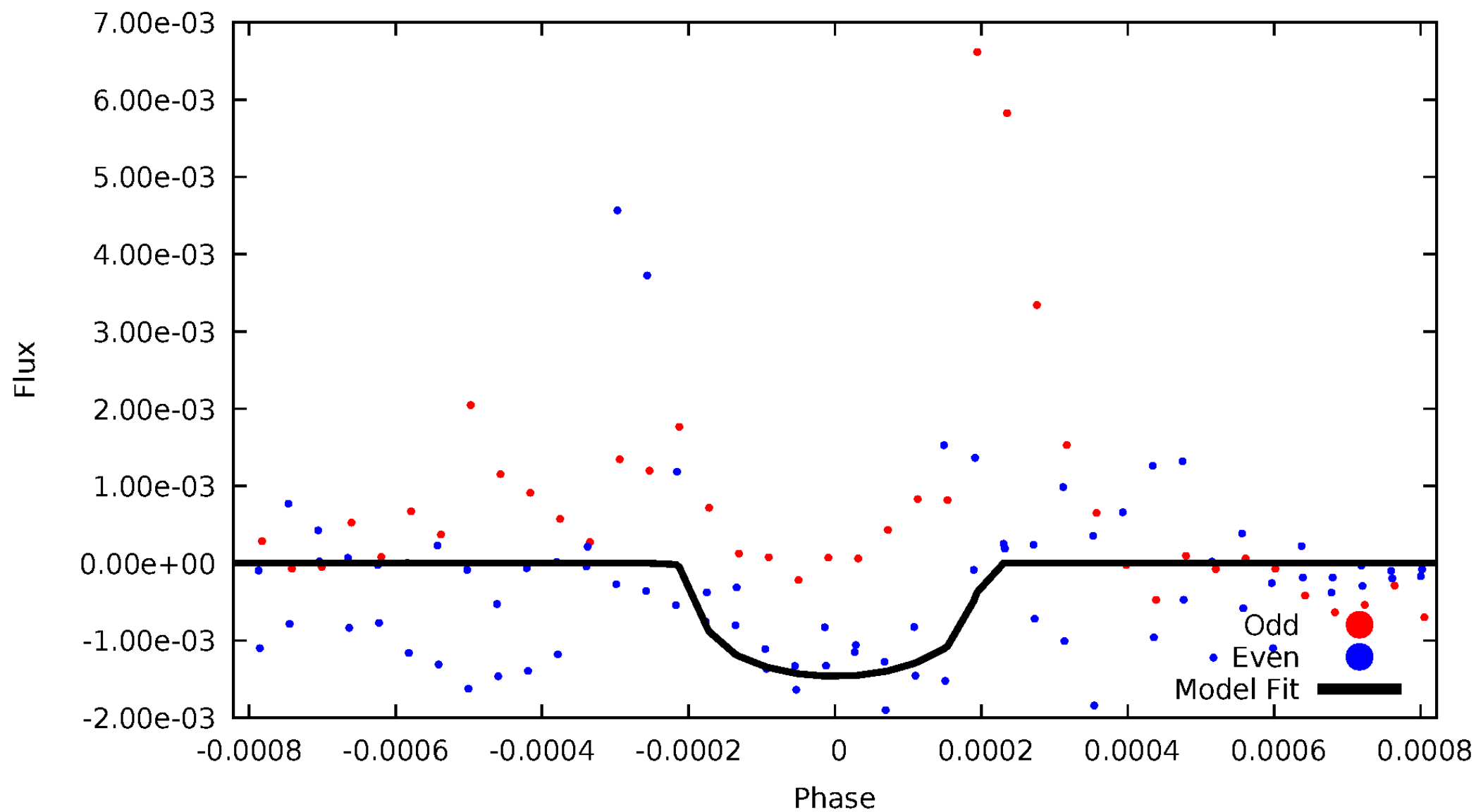


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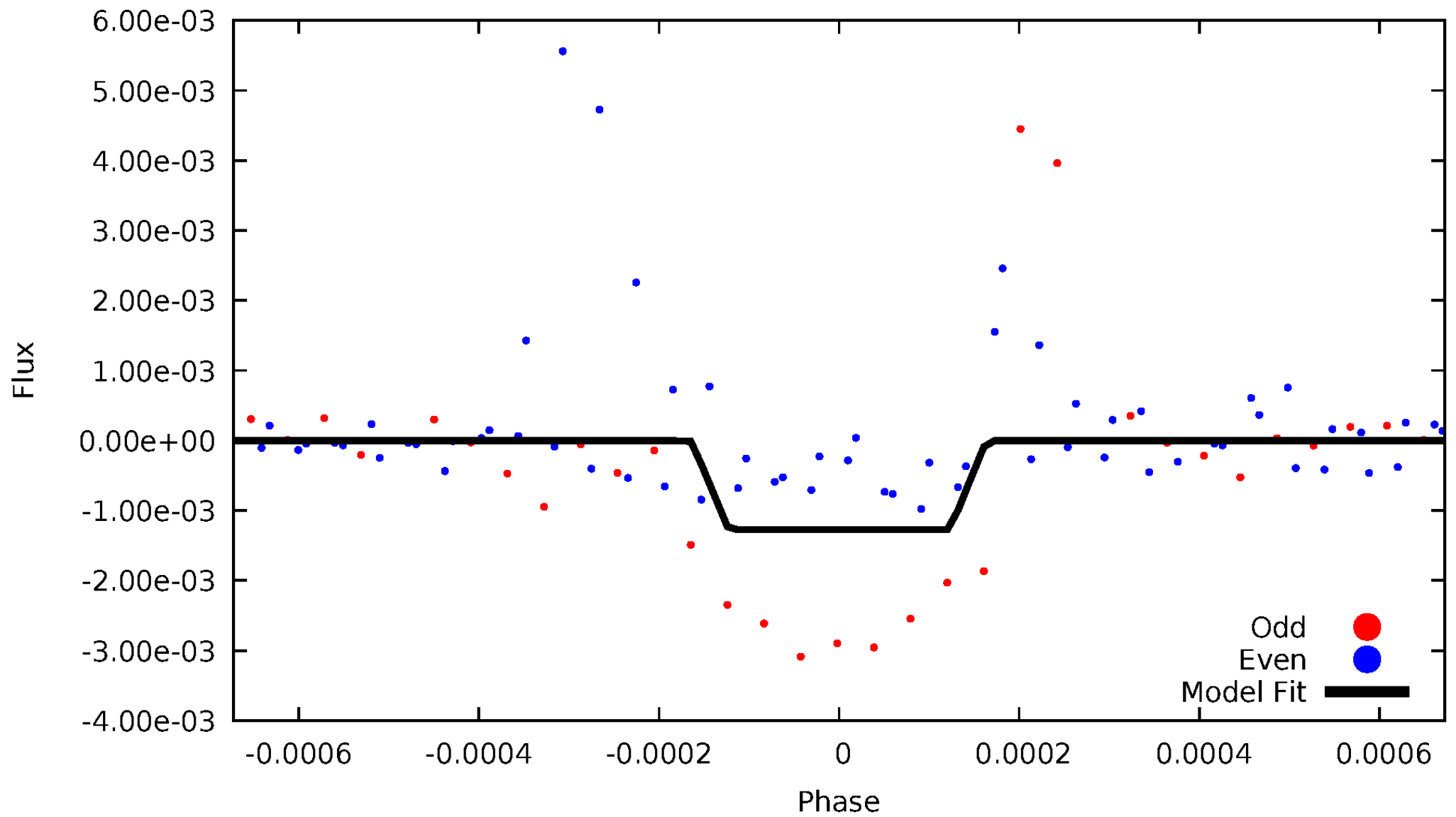
DV Odd/Even

TCE 004249749-08



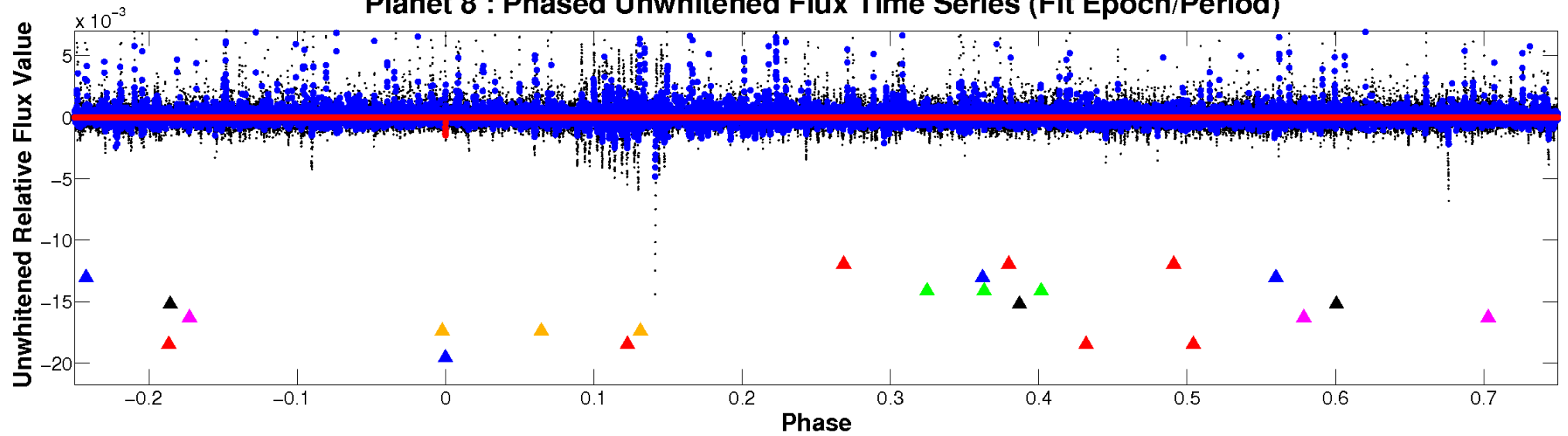
ALT Odd/Even

TCE 004249749-08

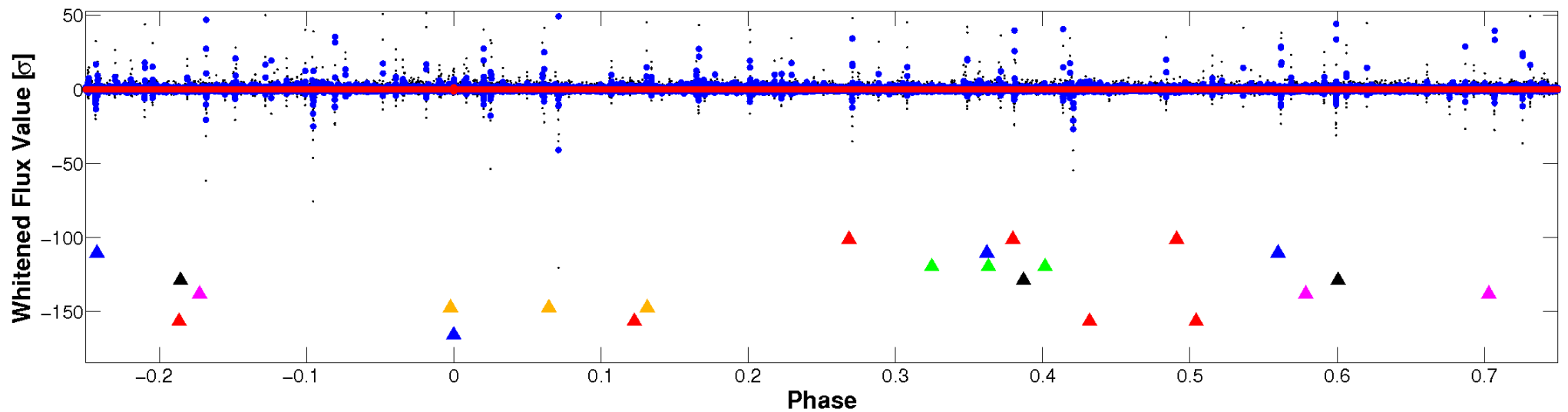


Non-Whitened Vs. Whitened Light Curve

Planet 8 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

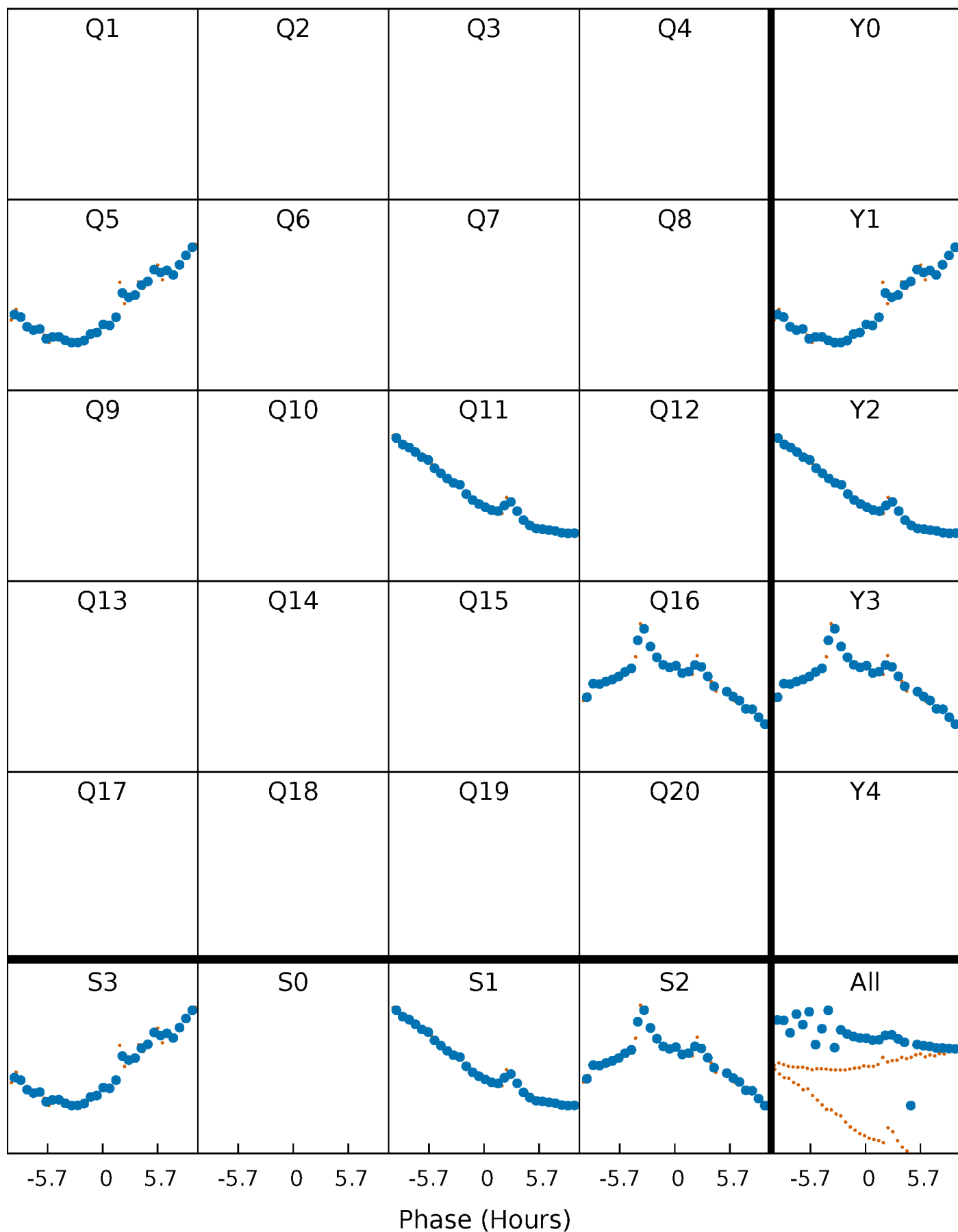


Planet 8 : Phased Whitened Flux Time Series (Fit Epoch/Period)



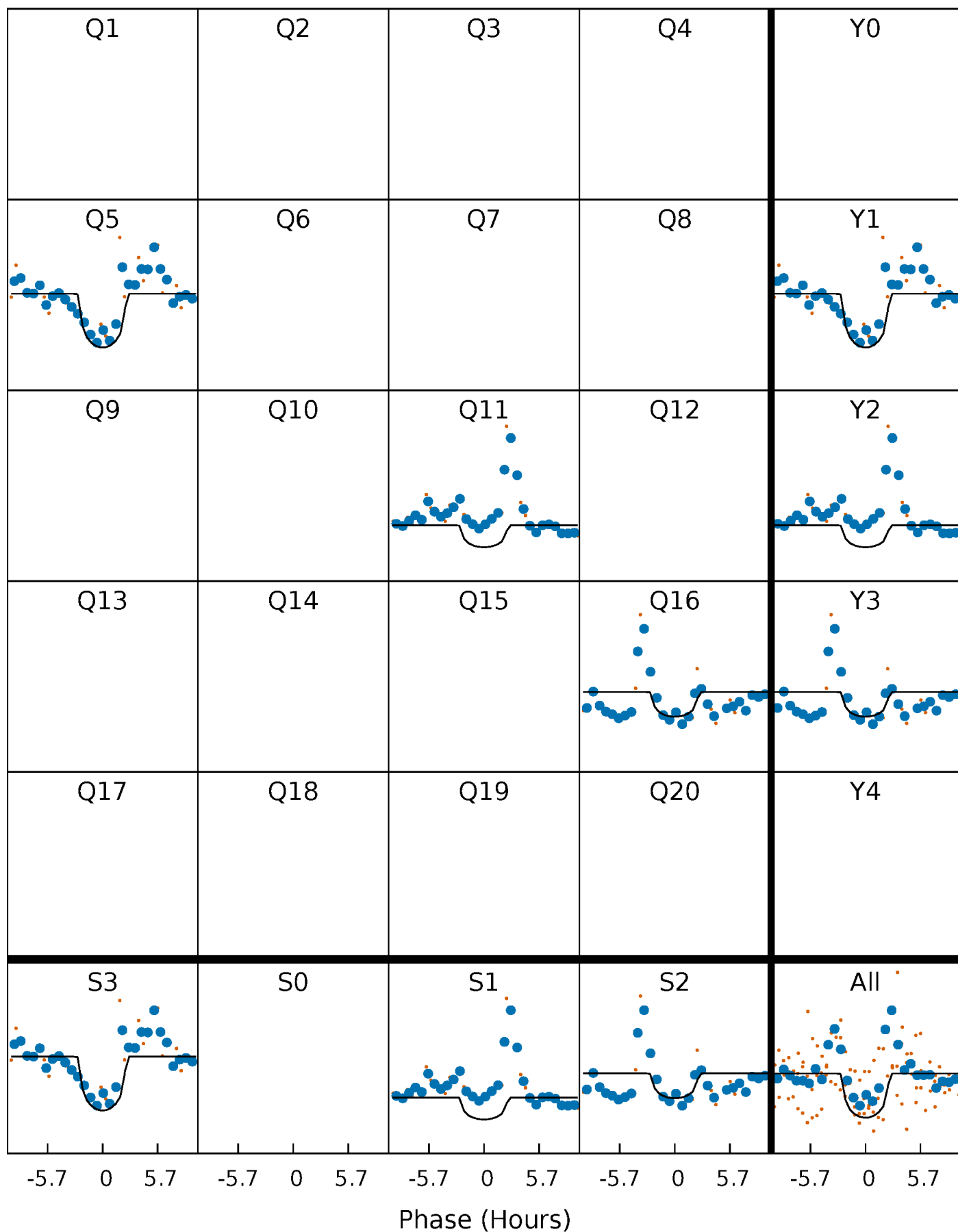
PDC Quarter-Phased Transit Curves

TCE 004249749-08 $P=501.969206$ Days $T_0=511.912106$ (BKJD)



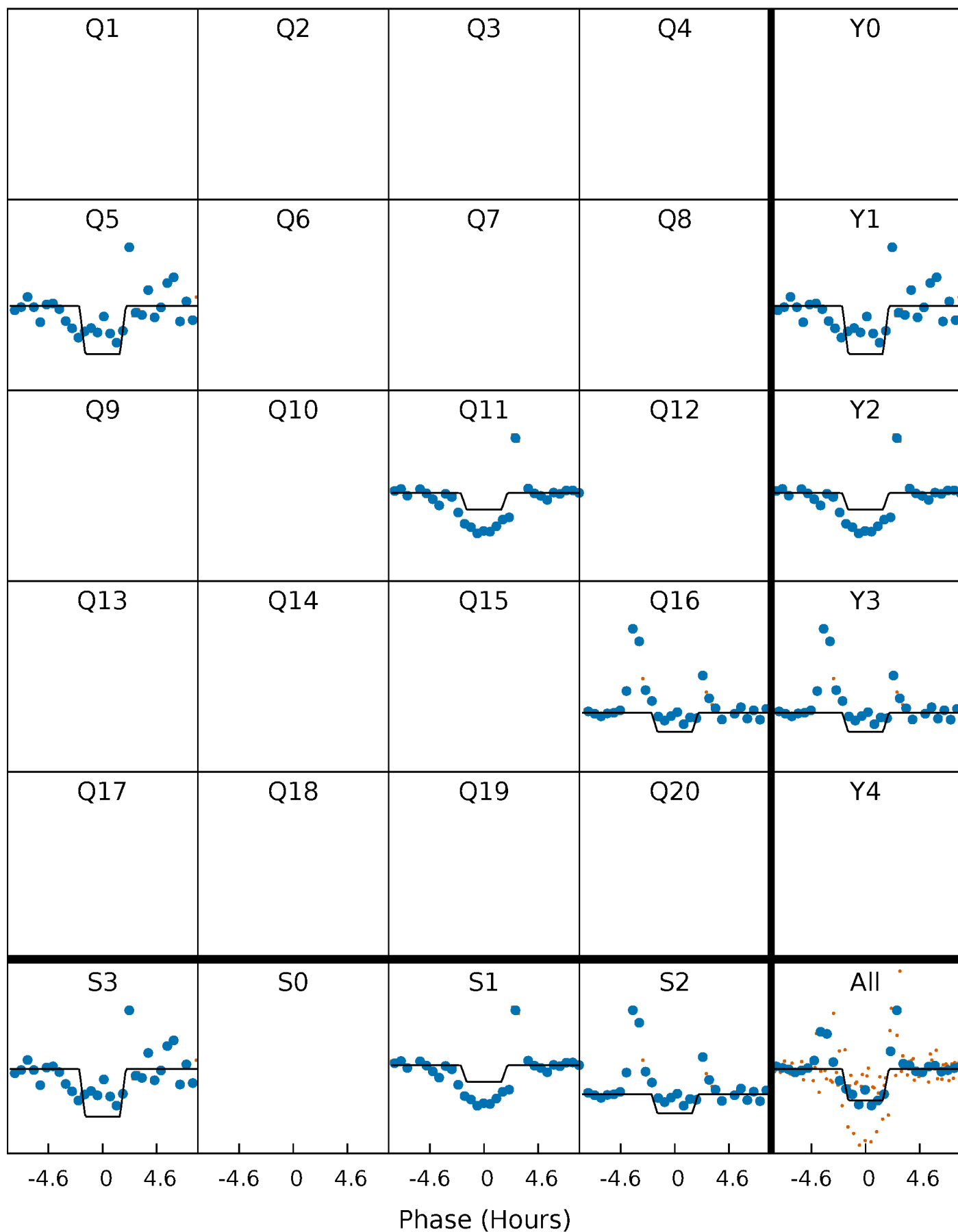
DV Quarter-Phased Transit Curves

TCE 004249749-08 $P=501.969206$ Days $T_0=511.912106$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

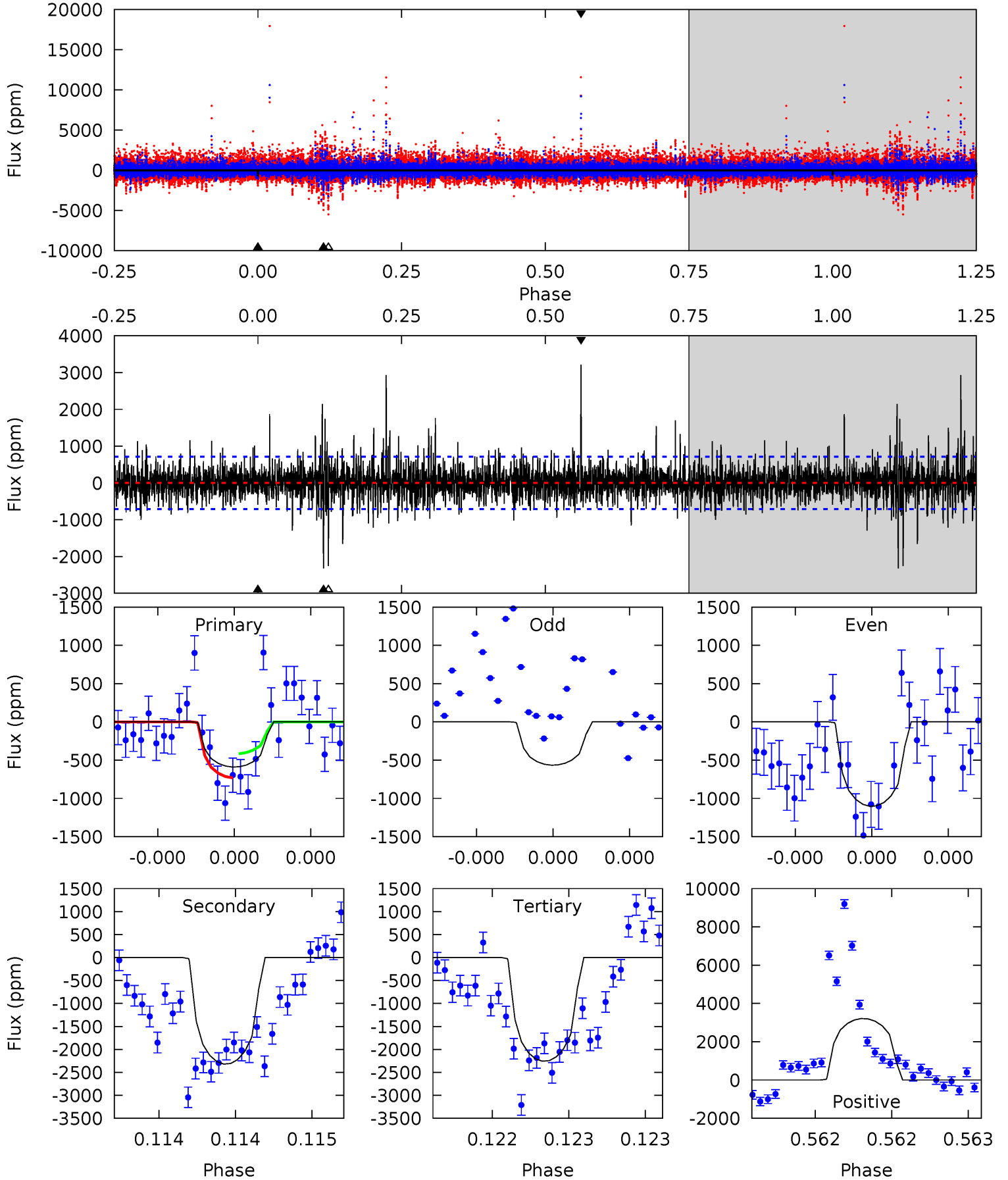
TCE 004249749-08 P=501.977646 Days $T_0=511.900116$ (BKJD)



DV Model-Shift Uniqueness Test

004249749-08, P = 501.969206 Days, E = 9.942900 Days

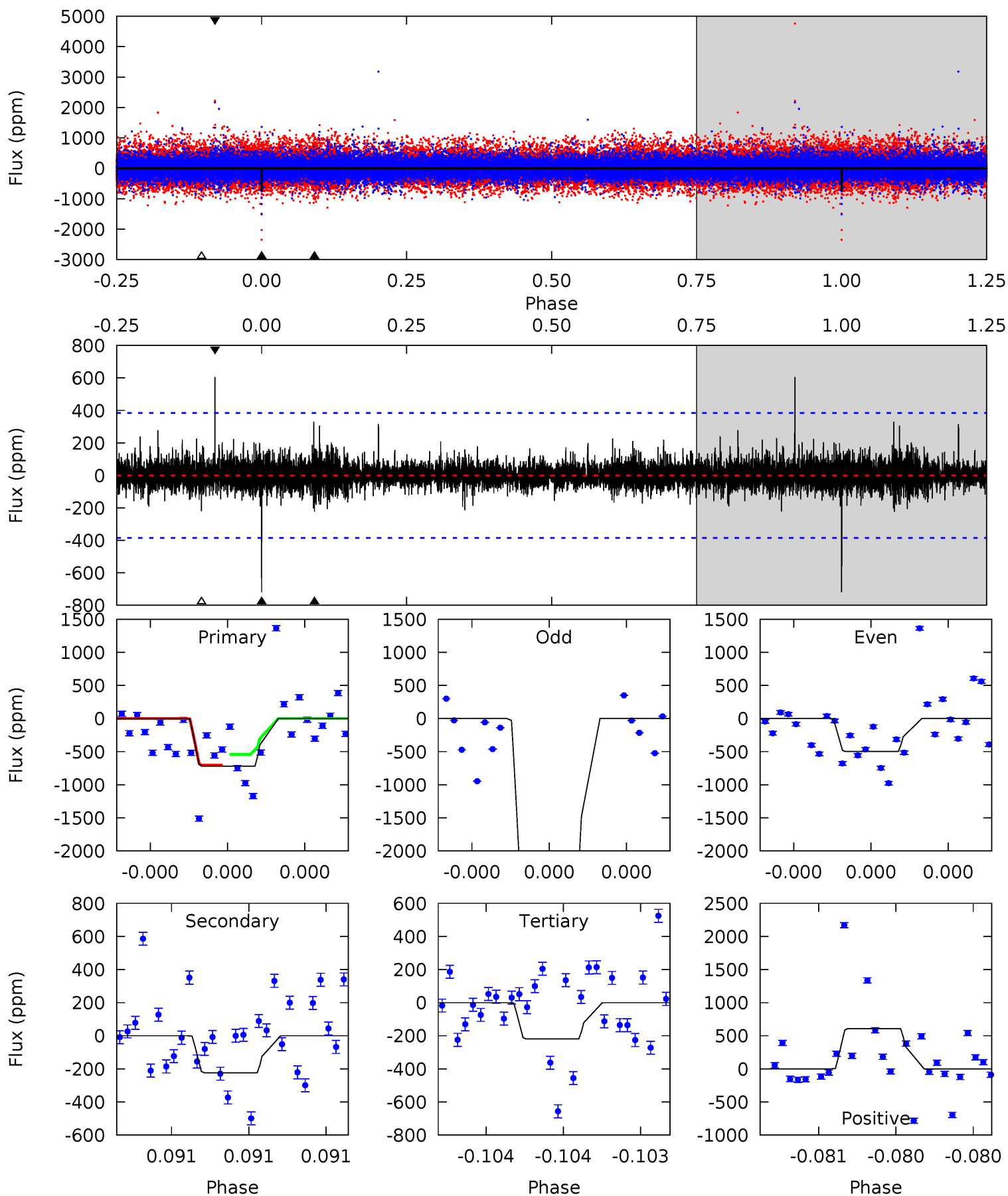
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.64	18.3	17.8	25.3	5.59	3.51	2.62	-13.1	-20.6	0.49	-7.02	1.37	0.63	0.58	1.22



Alt Model-Shift Uniqueness Test

004249749-08, P = 501.977646 Days, E = 9.922470 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	3.28	3.21	8.89	5.64	3.58	0.69	7.33	1.65	0.07	-5.61	15.1	1.73	0.46	0



Stellar Parameters For KIC 004249749

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4399^{+132}_{-132}	$4.592^{+0.053}_{-0.018}$	$0.100^{+0.250}_{-0.300}$	$0.692^{+0.033}_{-0.059}$	$0.683^{+0.055}_{-0.050}$	$2.902^{+0.625}_{-0.250}$
	+3%/-3%	+1%/-0%	+250%/-300%	+5%/-9%	+8%/-7%	+22%/-9%
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 004249749-08 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2320 ± 127	$3.01^{+1.94}_{-1.77}$	215^{+8}_{-7}	4759^{+2582}_{-818}	$172554^{+834812}_{-110767}$
Alt.	-224 ± 68	$2.99^{+1.81}_{-1.83}$	215^{+7}_{-8}	3163^{+1259}_{-431}	$16520^{+101490}_{-10928}$

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

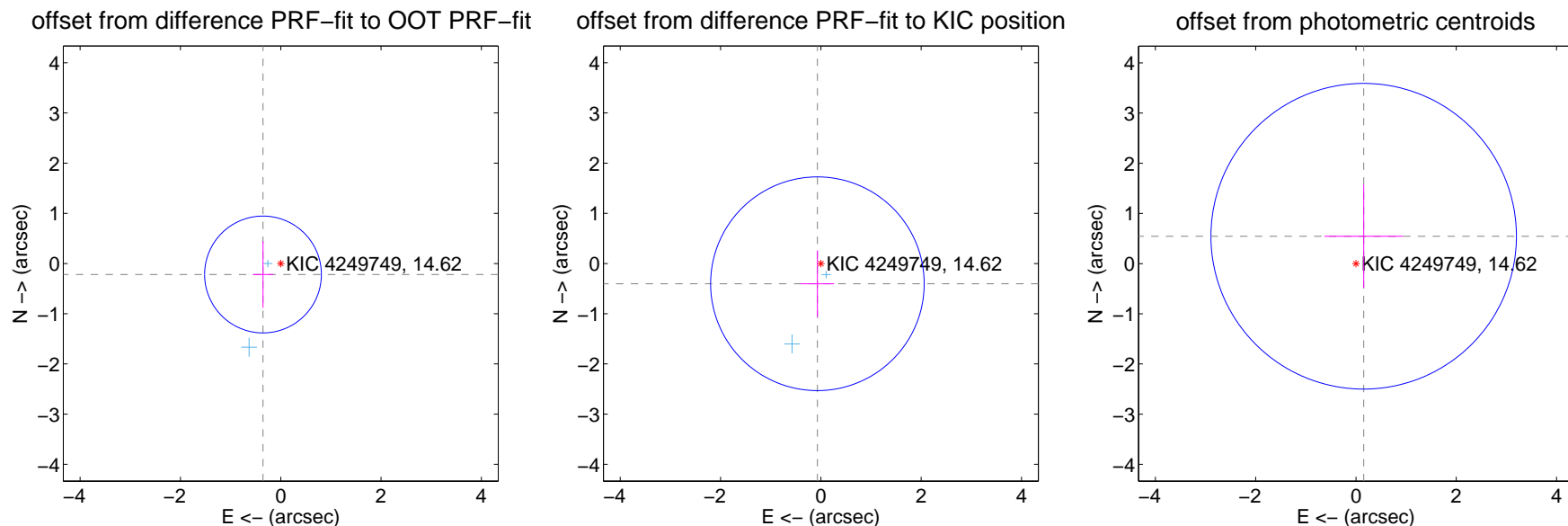
DV Centroid Data

Supplemental centroid analysis for 004249749-08. Kepler magnitude: 14.62. Transit SNR 7.35

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.43 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.416 ± 0.388	1.07	0.354 ± 0.202	-0.218 ± 0.662
PRF-fit source offset from KIC position	0.408 ± 0.710	0.58	0.069 ± 0.332	-0.403 ± 0.664
photometric centroid source offset	0.57 ± 1.02	0.56	-0.15 ± 0.78	0.55 ± 1.03

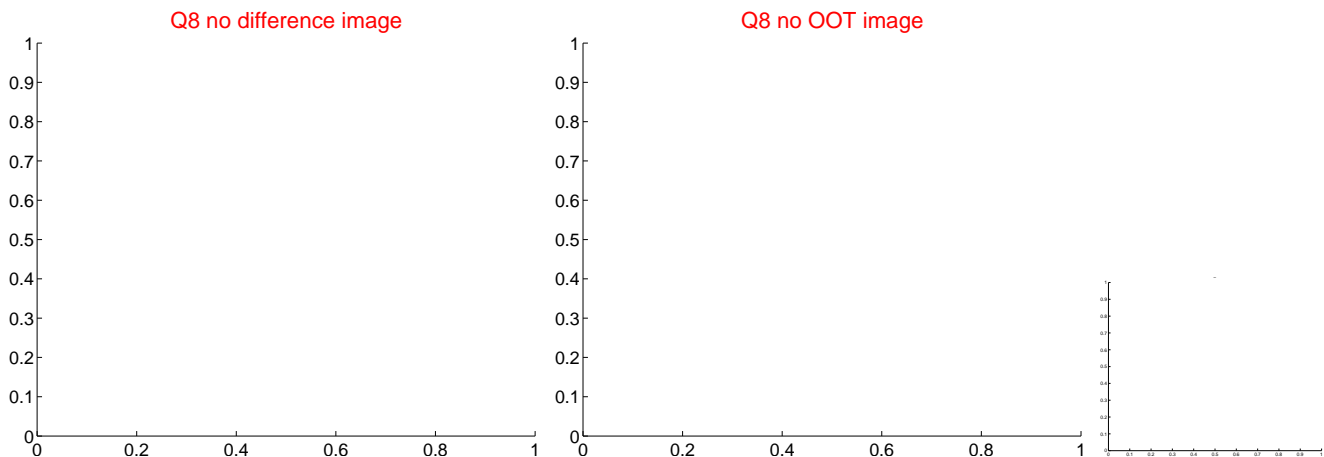
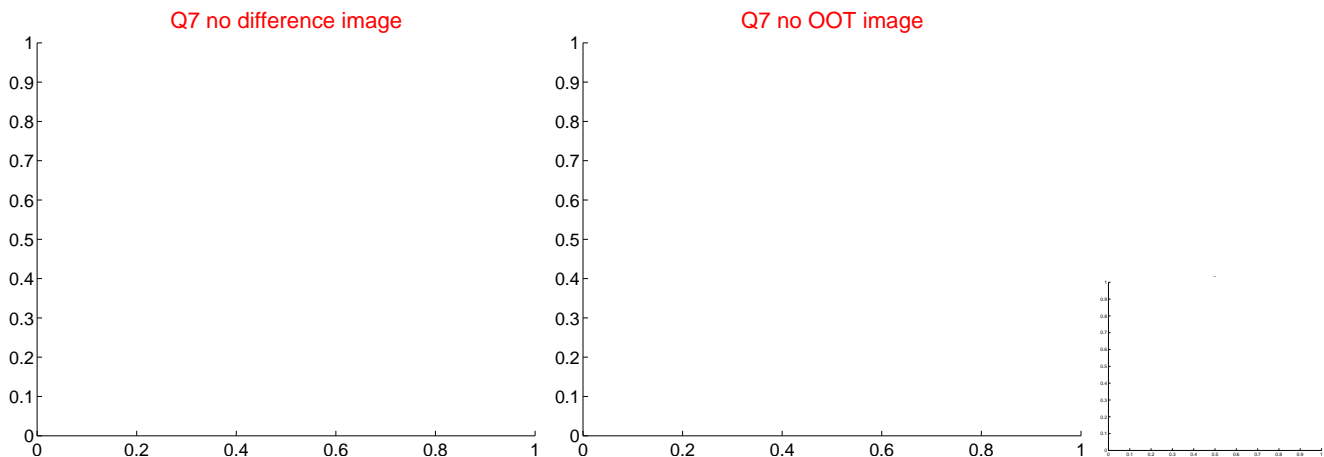
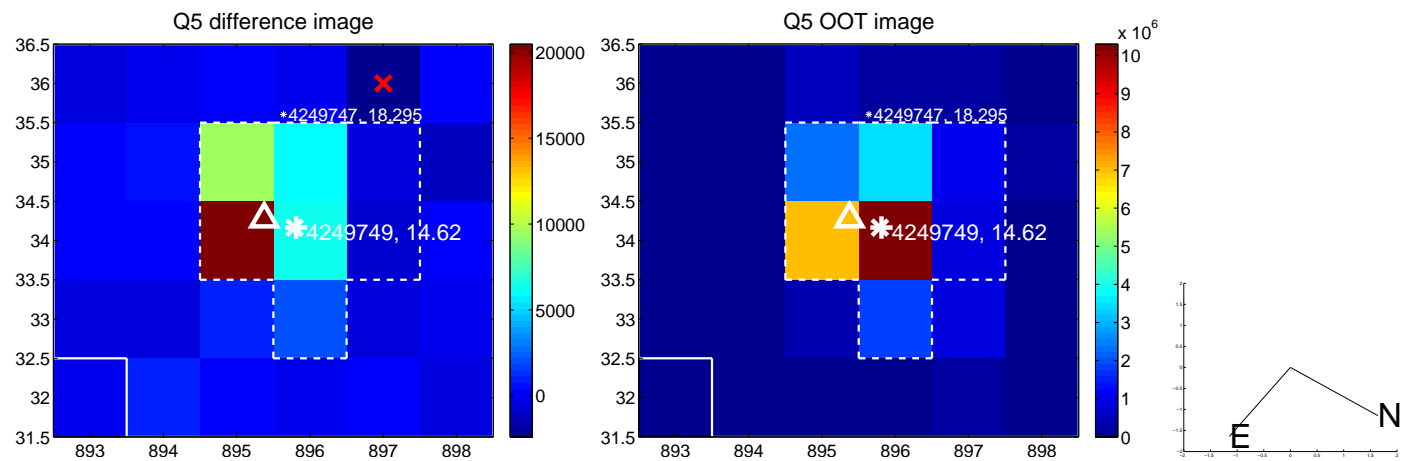


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

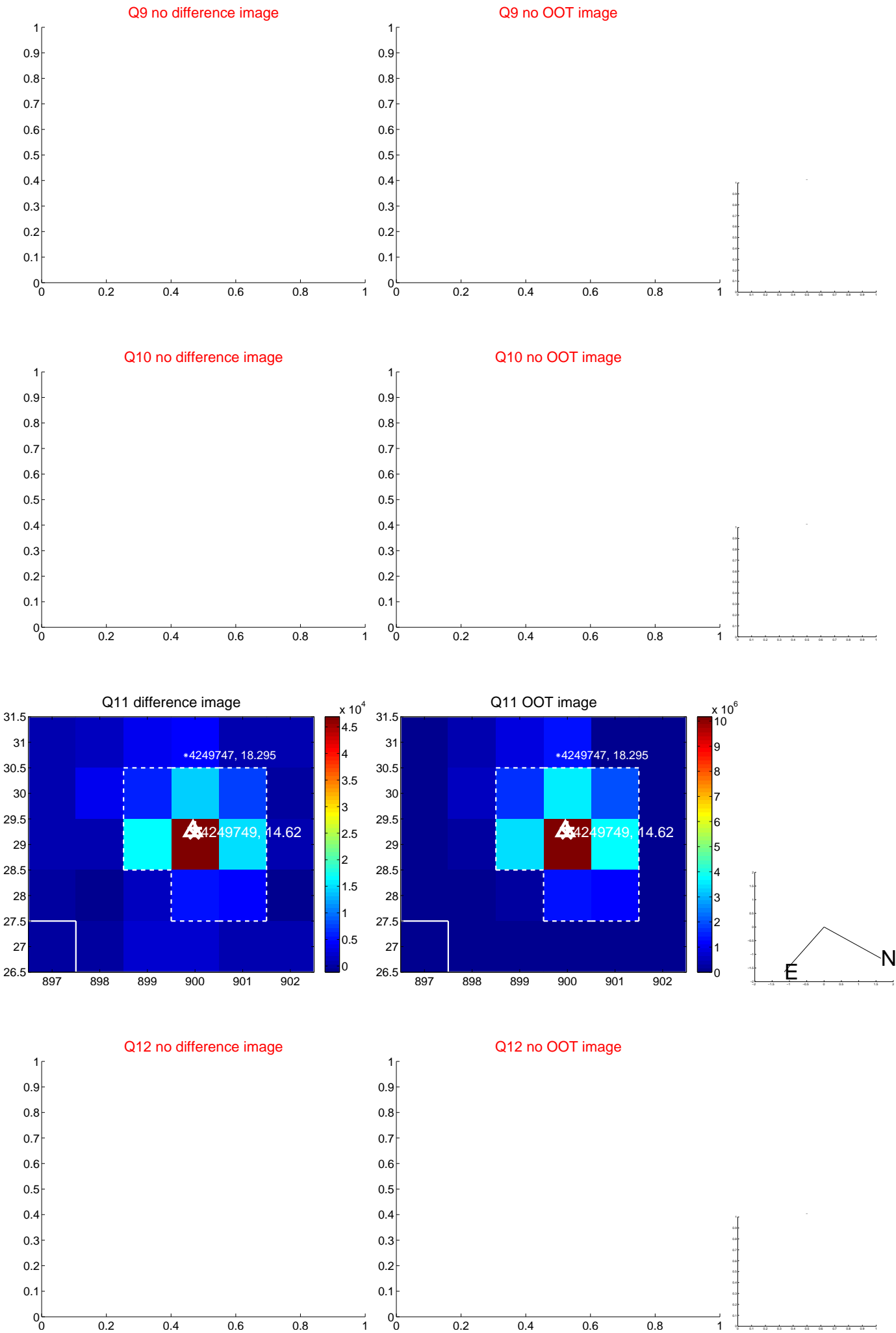
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



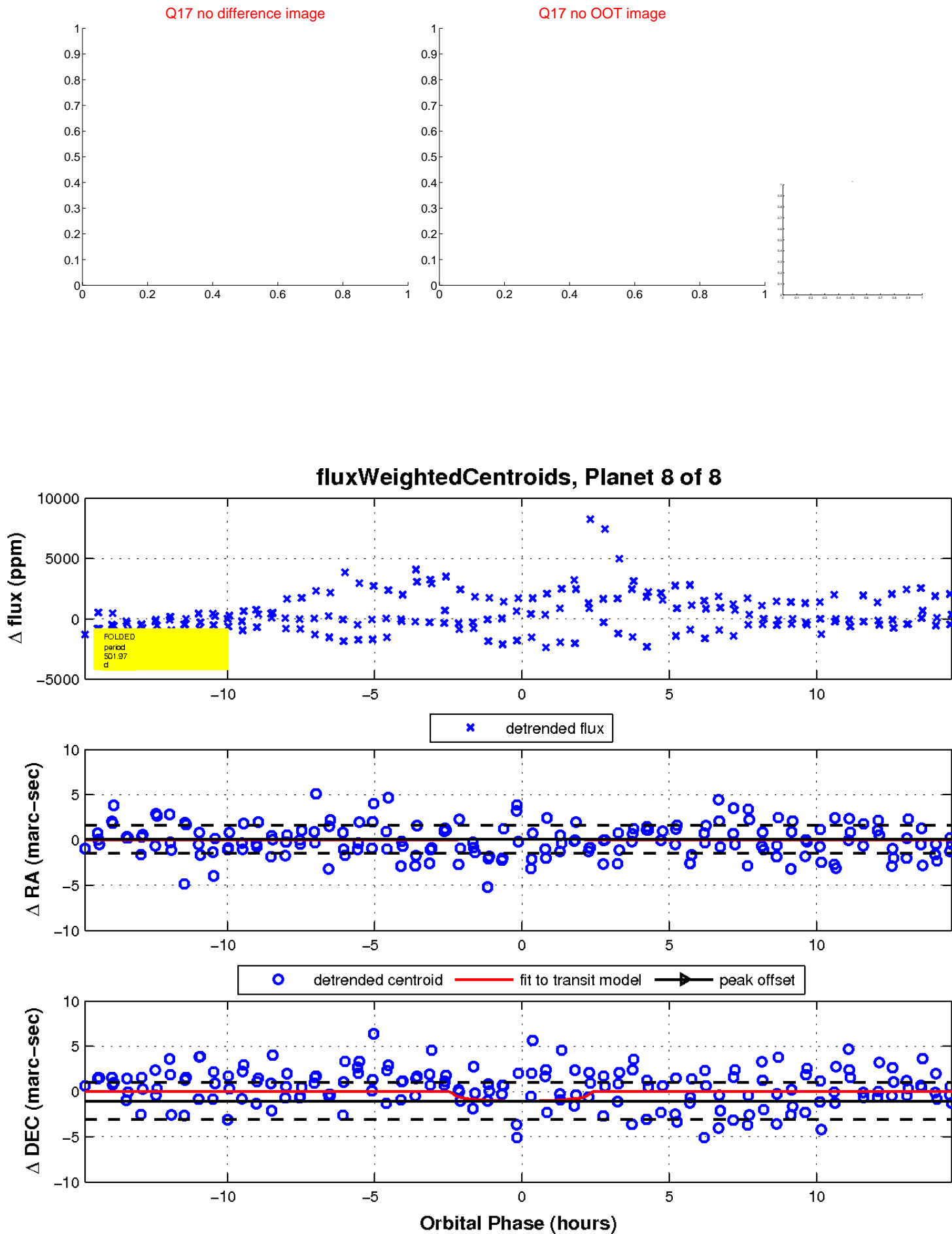
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

