

KIC 006206885

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})
006206885-01	OBS	No	345.651210	223.355470	1246.1	7.996	18.0	8.0	3.92	4927	27.81	9.63
006206885-02	OBS	No	654.141900	140.872505	1822.4	8.376	17.0	10.0	3.92	4927	30.21	4.11
006206885-03	OBS	No	528.477233	521.532483	1269.7	3.422	14.3	8.5	3.92	4927	13.91	5.47
006206885-04	OBS	No	525.880068	149.129297	1138.2	6.688	15.2	7.4	3.92	4927	13.61	5.50
006206885-05	OBS	No	150.748756	267.590328	650.5	2.353	13.6	6.1	3.92	4927	10.40	29.11
006206885-06	OBS	No	552.632441	225.549643	731.6	6.000	12.5	-1.0	3.92	4927	10.31	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006206885-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—HALO_GHOST
006206885-02	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
006206885-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-04	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—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
006206885-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

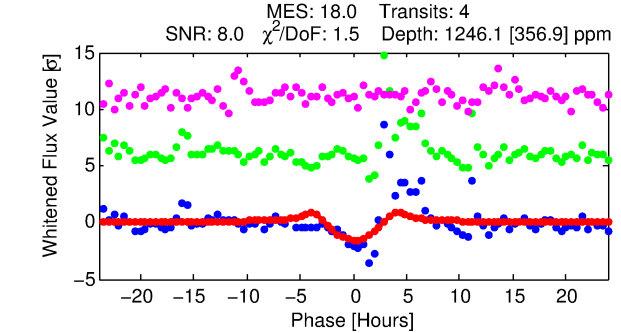
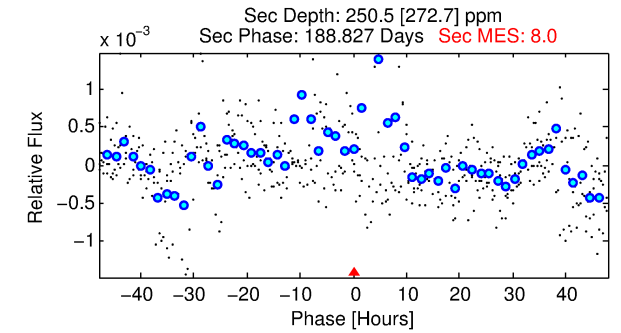
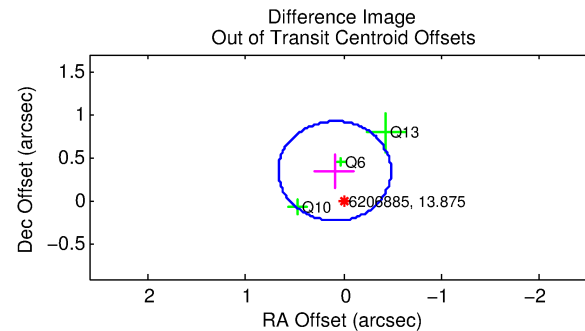
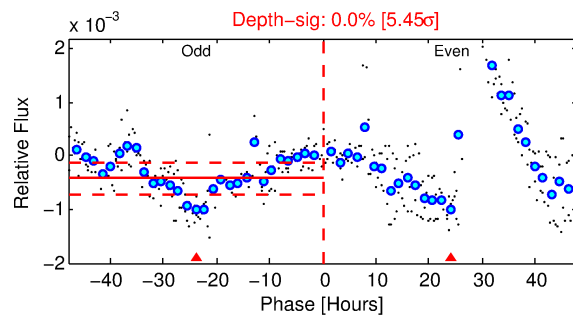
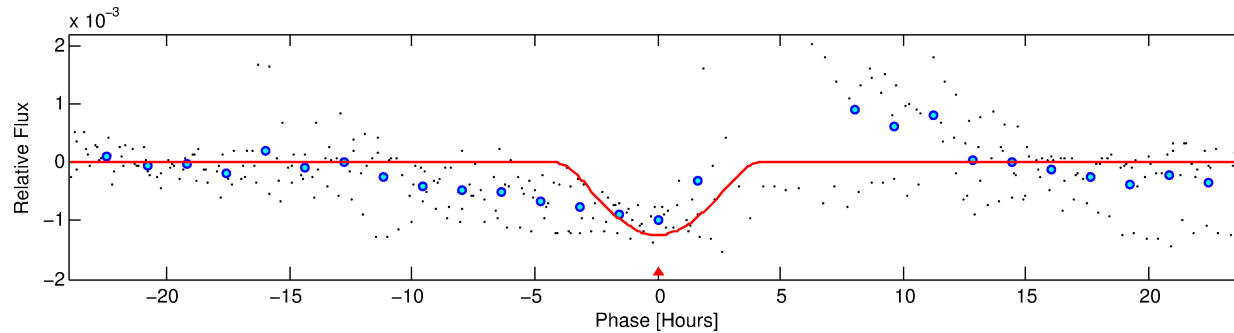
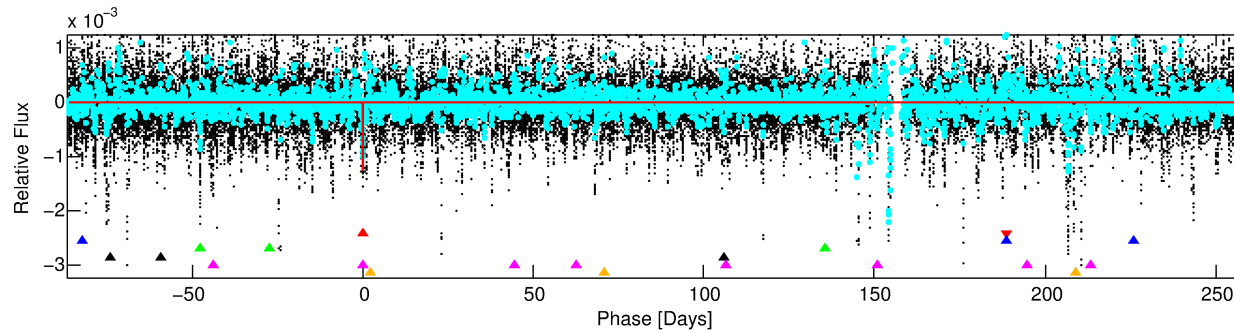
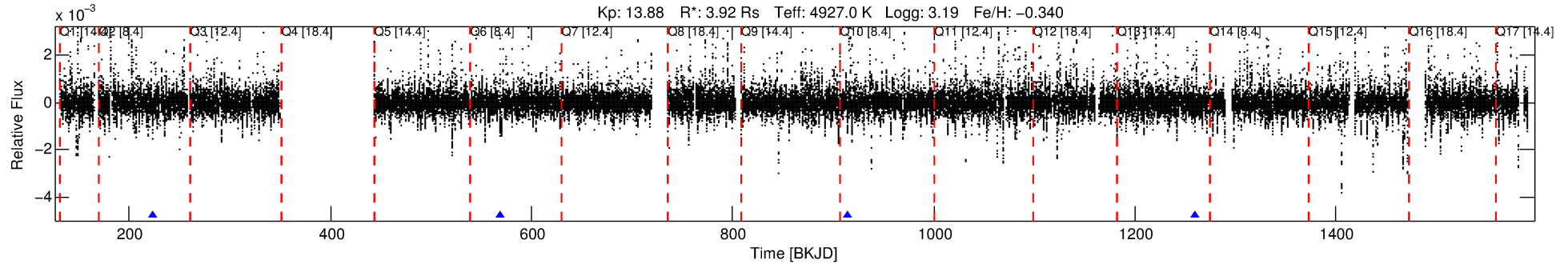
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006206885-01

No Significant Match Found

DV One-Page Summary

KIC: 6206885 Candidate: 1 of 6 Period: 345.651 d



DV Fit Results:

Period = 345.65121 [0.01158] d
Epoch = 223.3555 [0.0206] BKJD
Rp/R* = 0.0649 [0.2062]
a/R* = 121.05 [85.23]
b = 1.00 [0.28]
Seff = 9.63 [6.08]
Teq = 449 [71] K
Rp = 27.81 [89.63] Re
a = 0.9189 [0.4101] AU
Ag = 150.48 [974.03] [0.15 σ]
Teffp = 2432 [3918] K [0.51 σ]

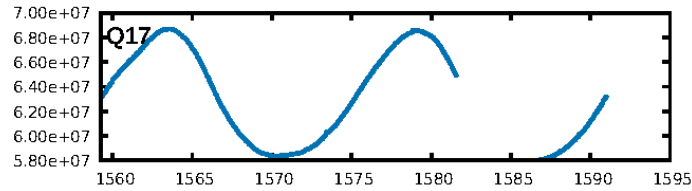
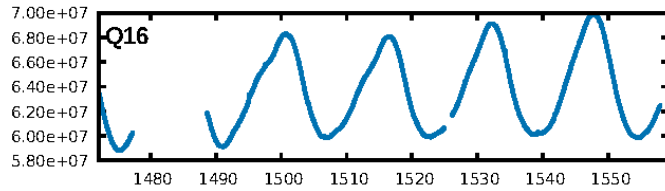
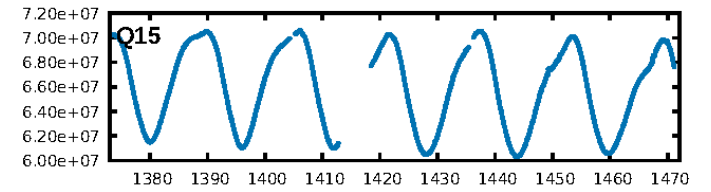
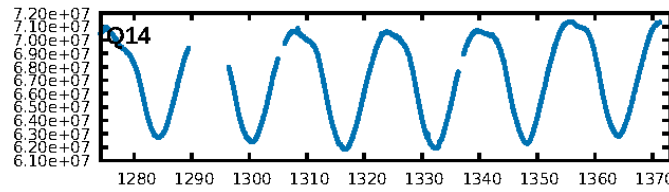
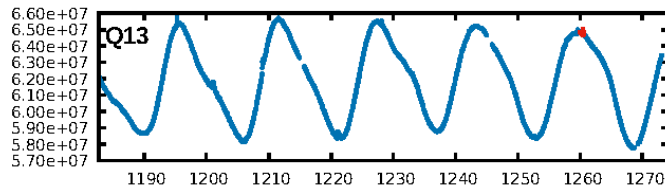
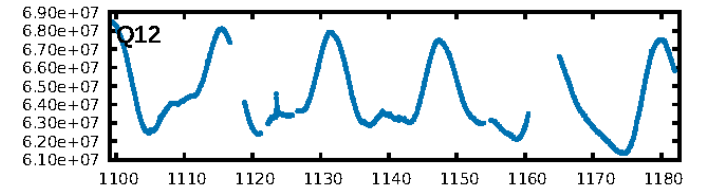
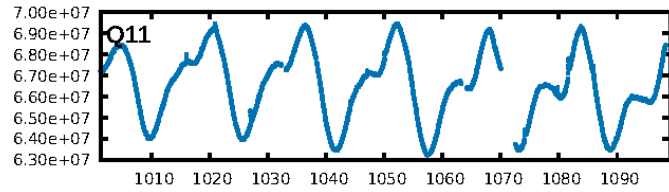
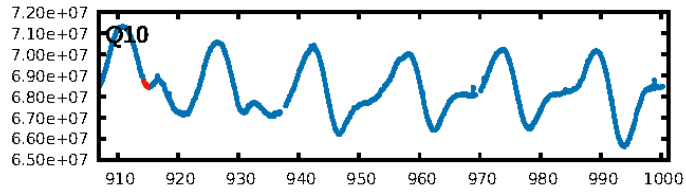
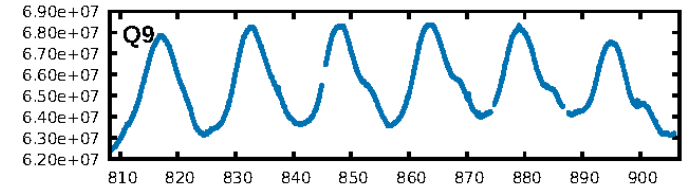
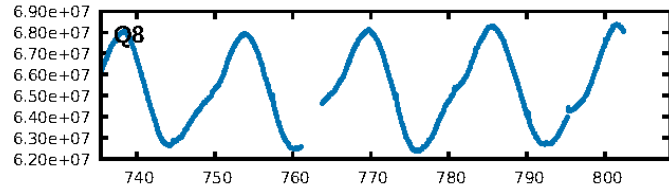
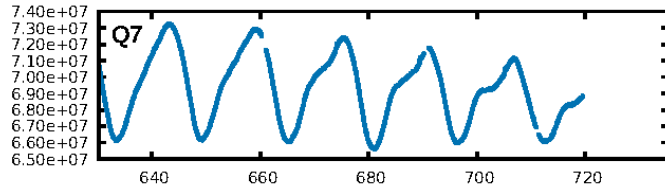
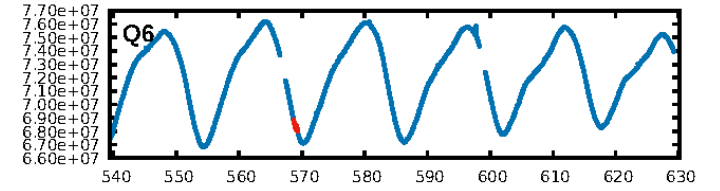
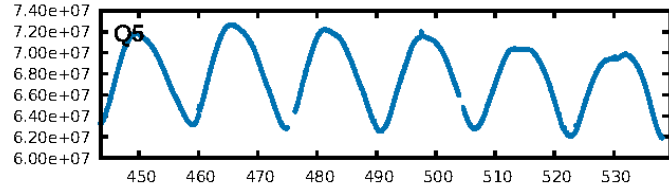
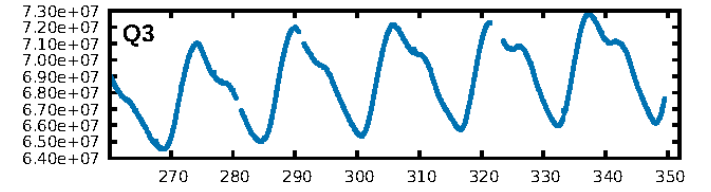
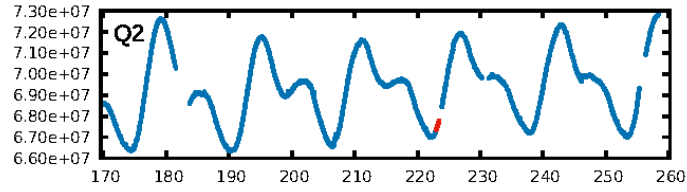
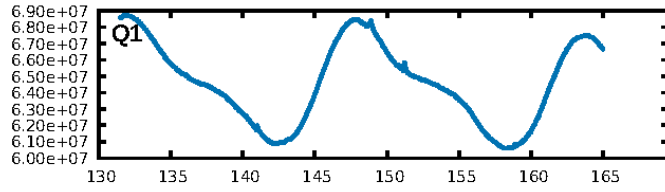
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [561.19 σ]
LongPeriod-sig: 100.0% [414.94 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 77.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.06725
Centroid-sig: 55.2%
Centroid-so: 0.257 arcsec [0.64 σ]
OotOffset-rm: 0.361 arcsec [1.88 σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-rm: 0.145 arcsec [0.72 σ]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.67 [2/3]

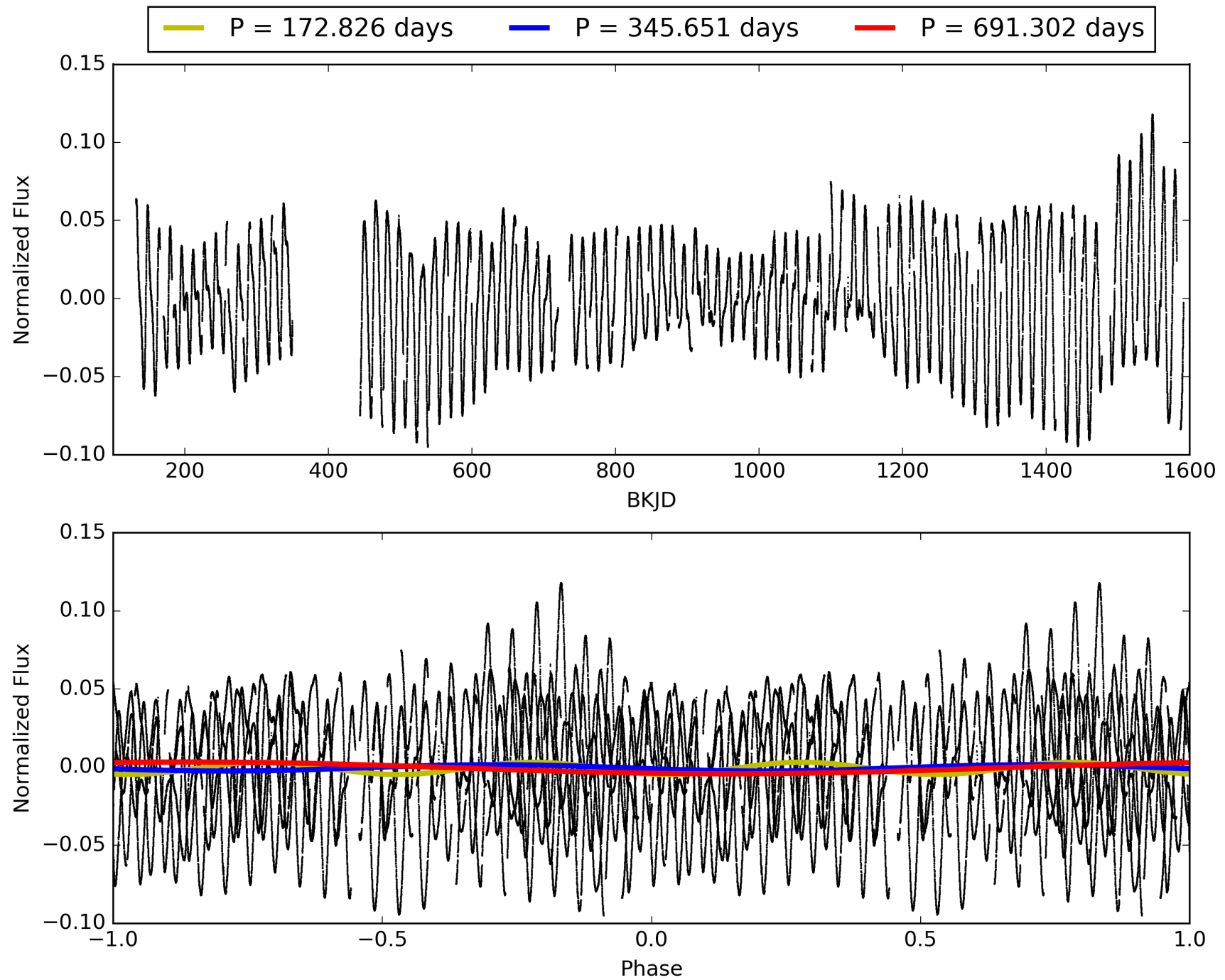
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:01:02 Z

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

TCE 006206885-01, PDC Light Curves

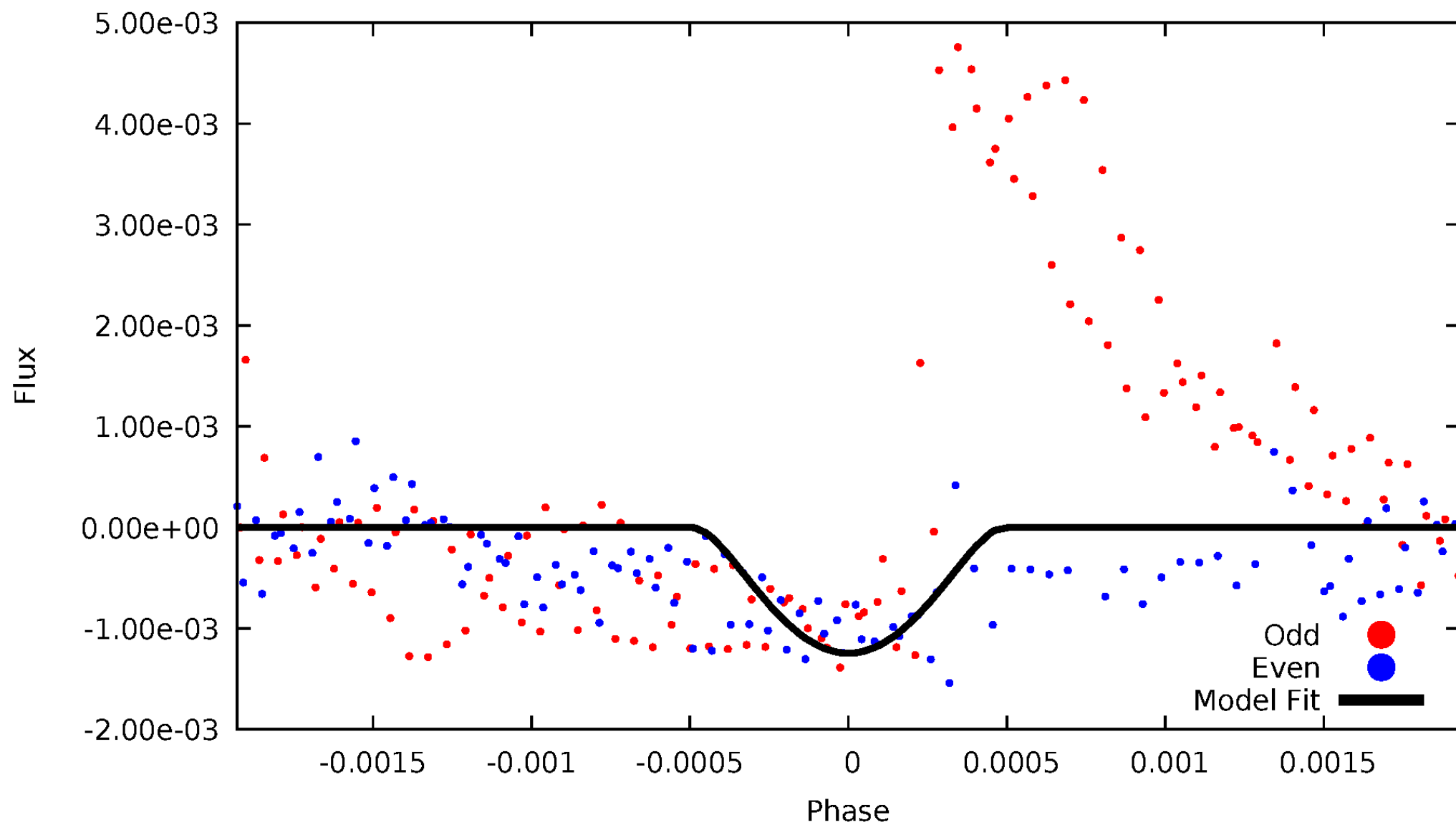


TCE 006206885-01



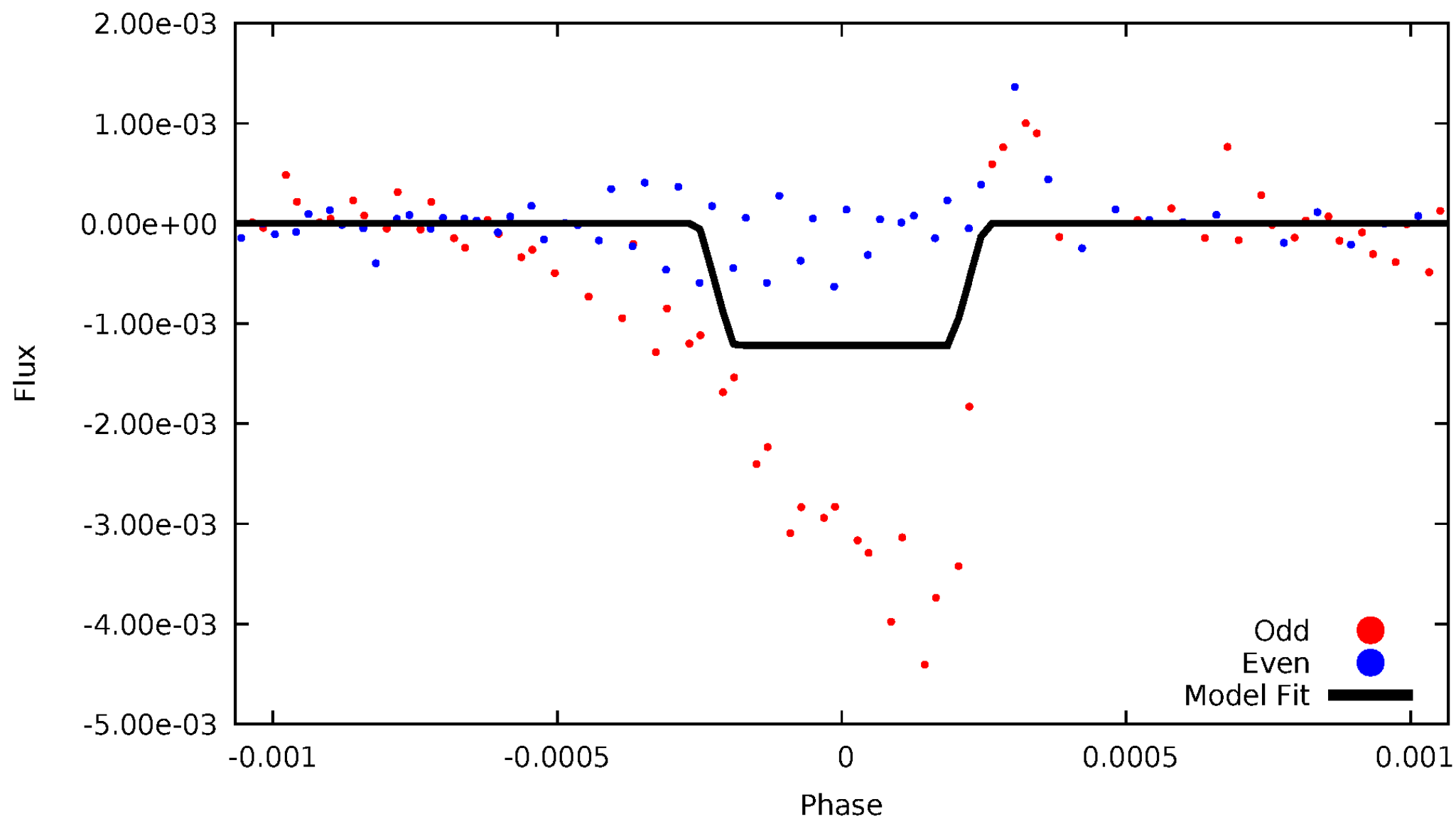
DV Odd/Even

TCE 006206885-01



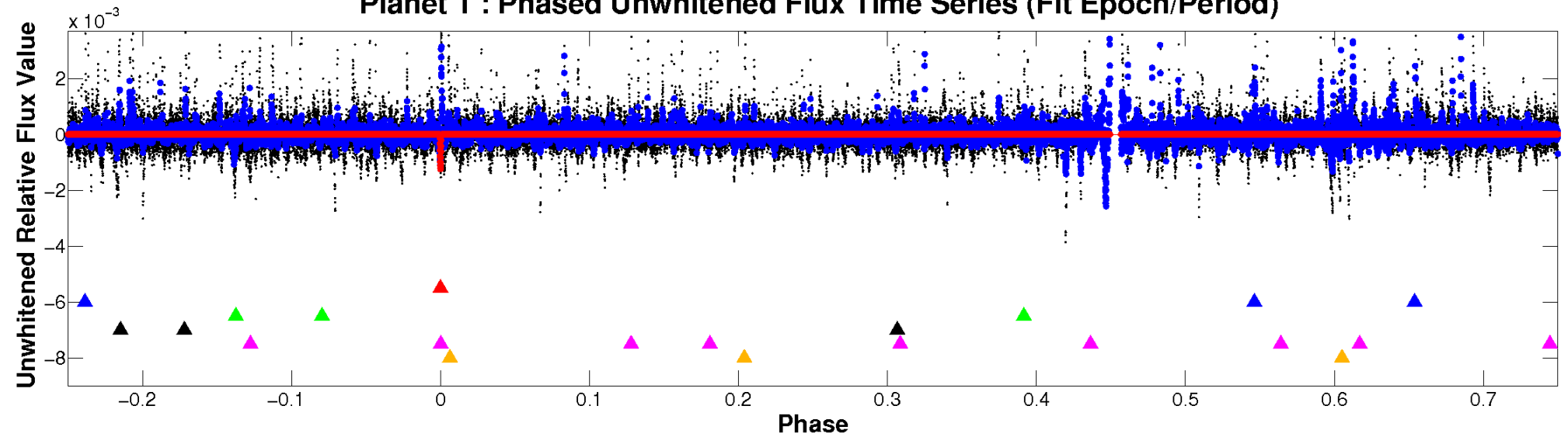
ALT Odd/Even

TCE 006206885-01

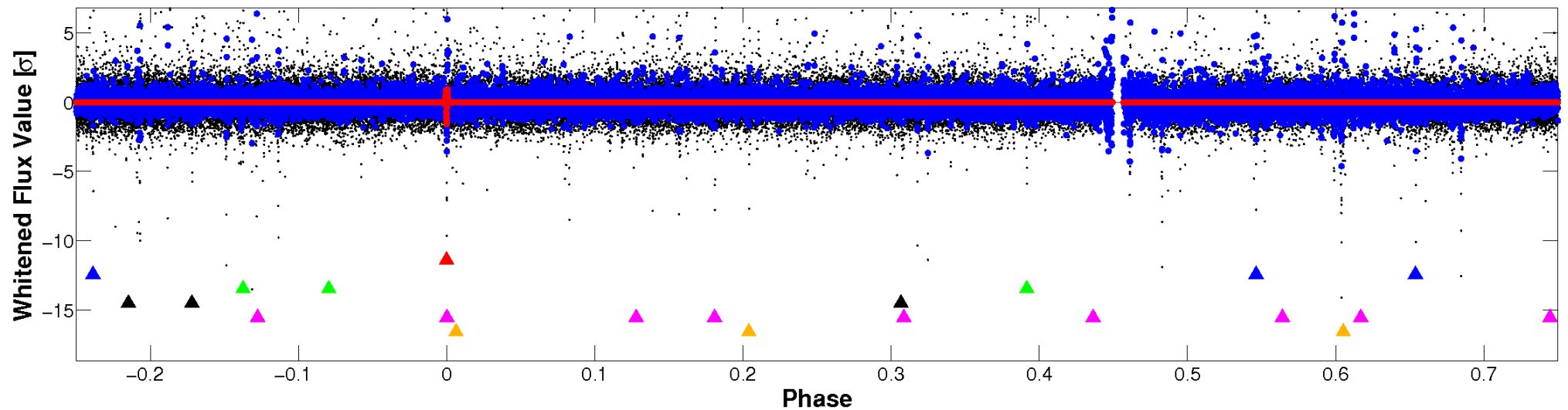


Non-Whitened Vs. Whitened Light Curve

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

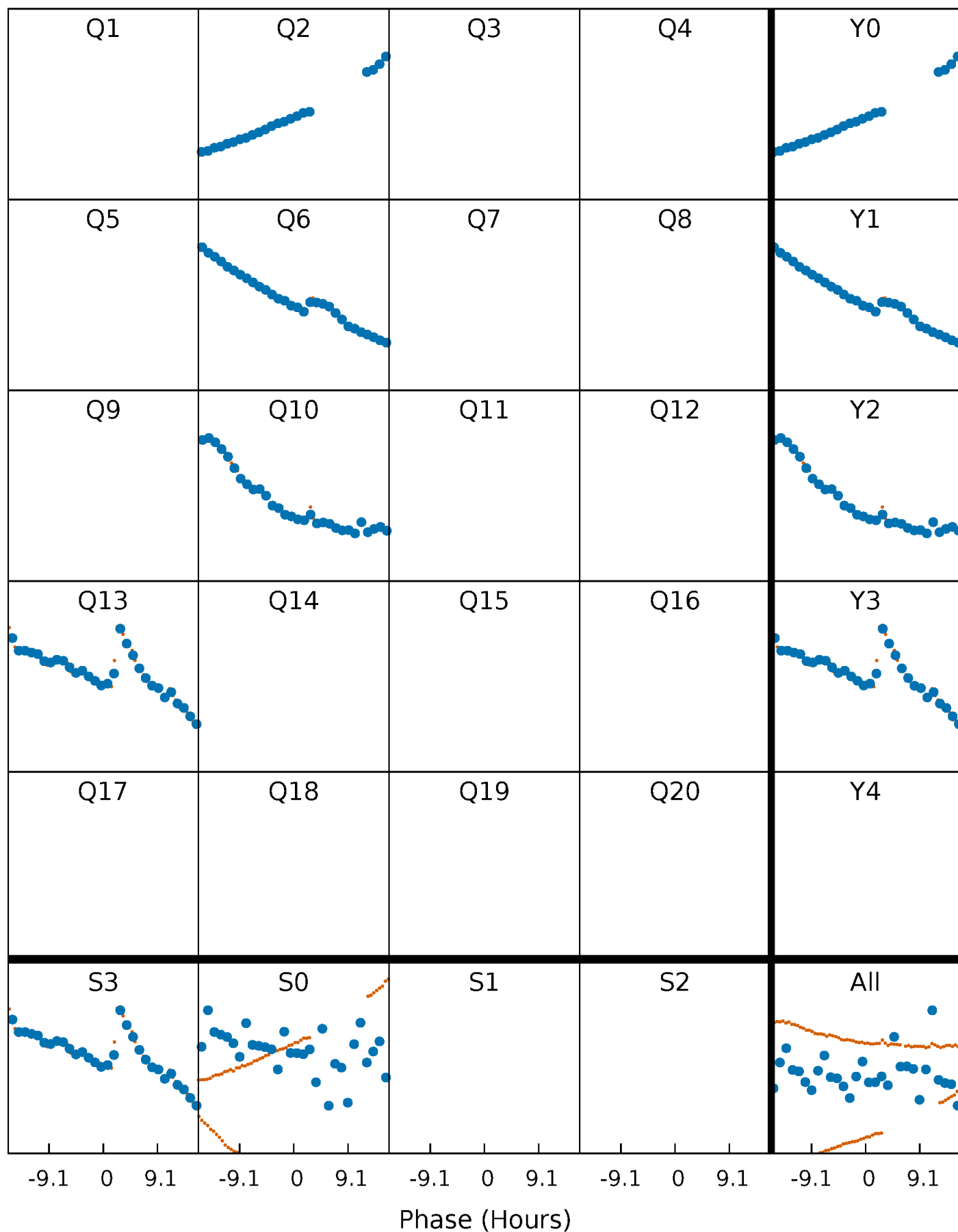


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



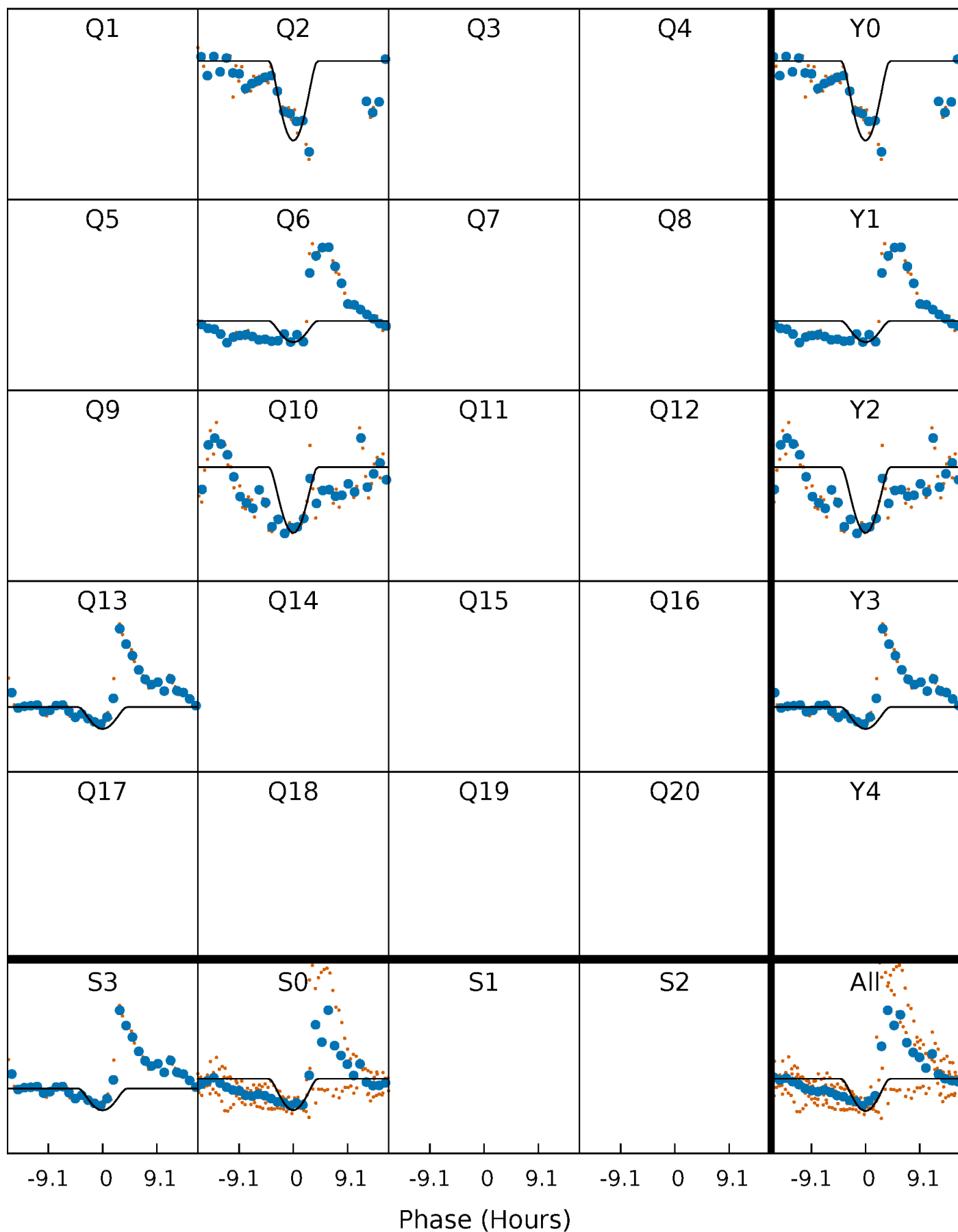
PDC Quarter-Phased Transit Curves

TCE 006206885-01 P=345.651210 Days $T_0=223.355470$ (BKJD)



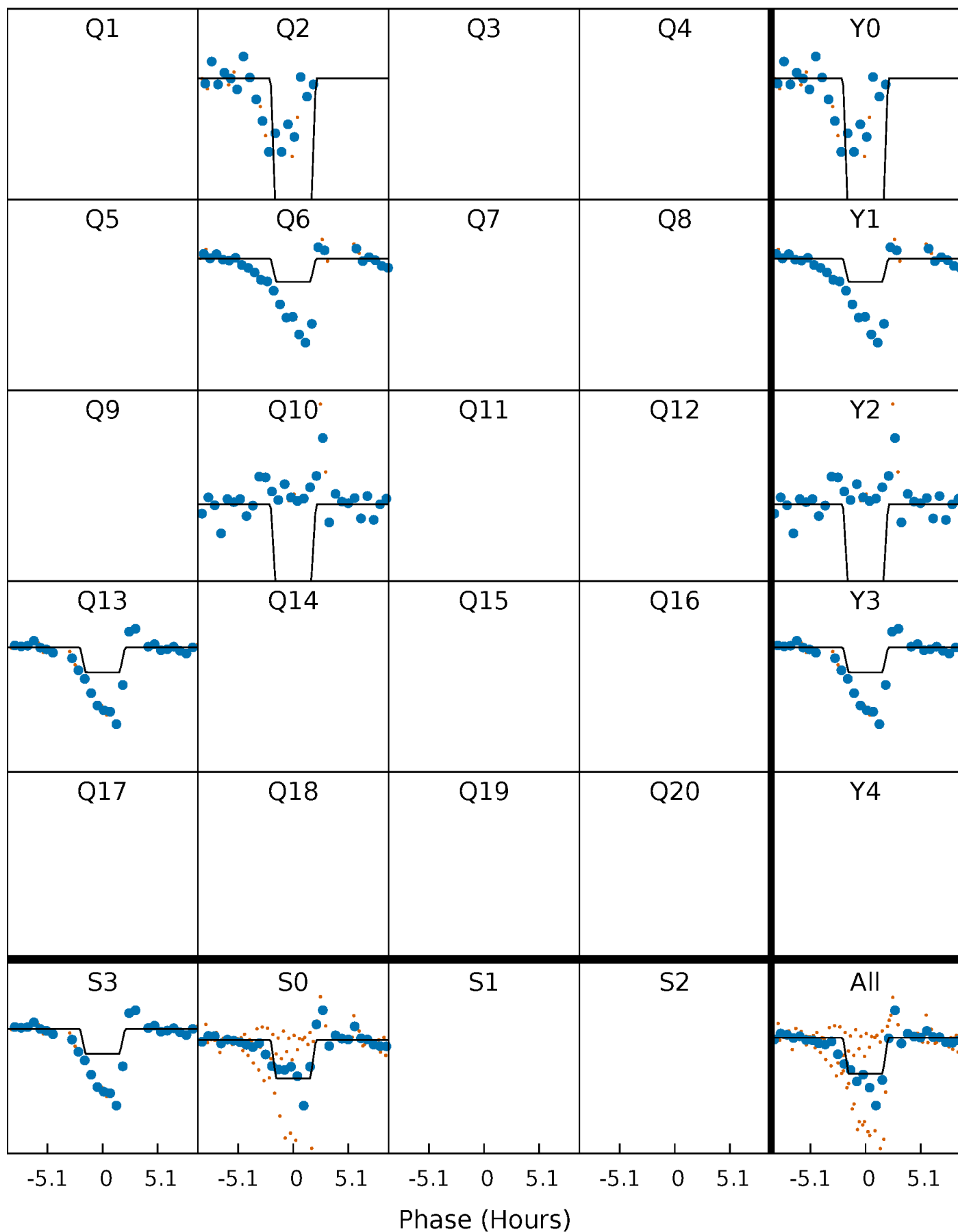
DV Quarter-Phased Transit Curves

TCE 006206885-01 P=345.651210 Days $T_0=223.355470$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

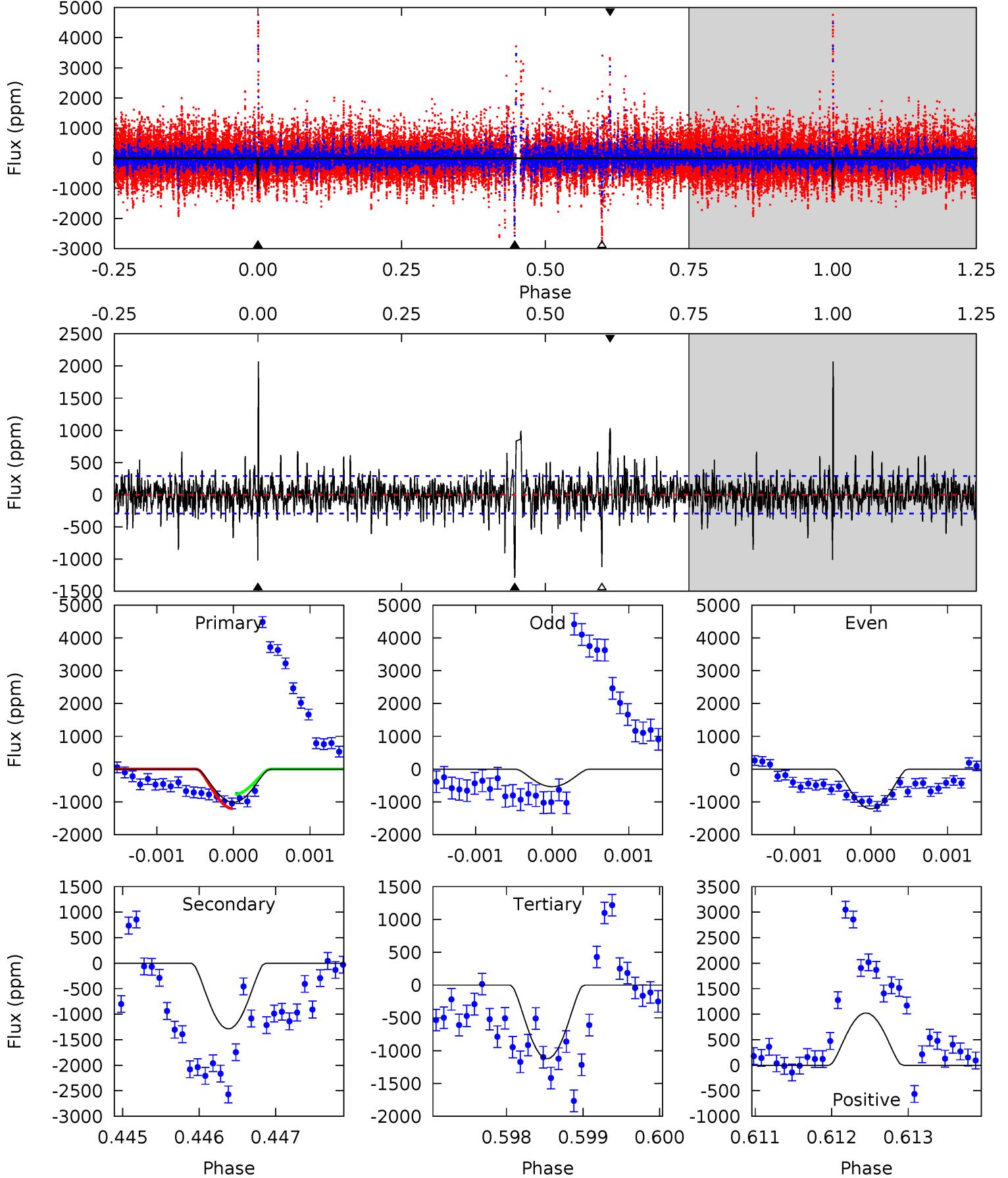
TCE 006206885-01 P=345.640479 Days $T_0=223.388536$ (BKJD)



DV Model-Shift Uniqueness Test

006206885-01, P = 345.651210 Days, E = 223.355470 Days

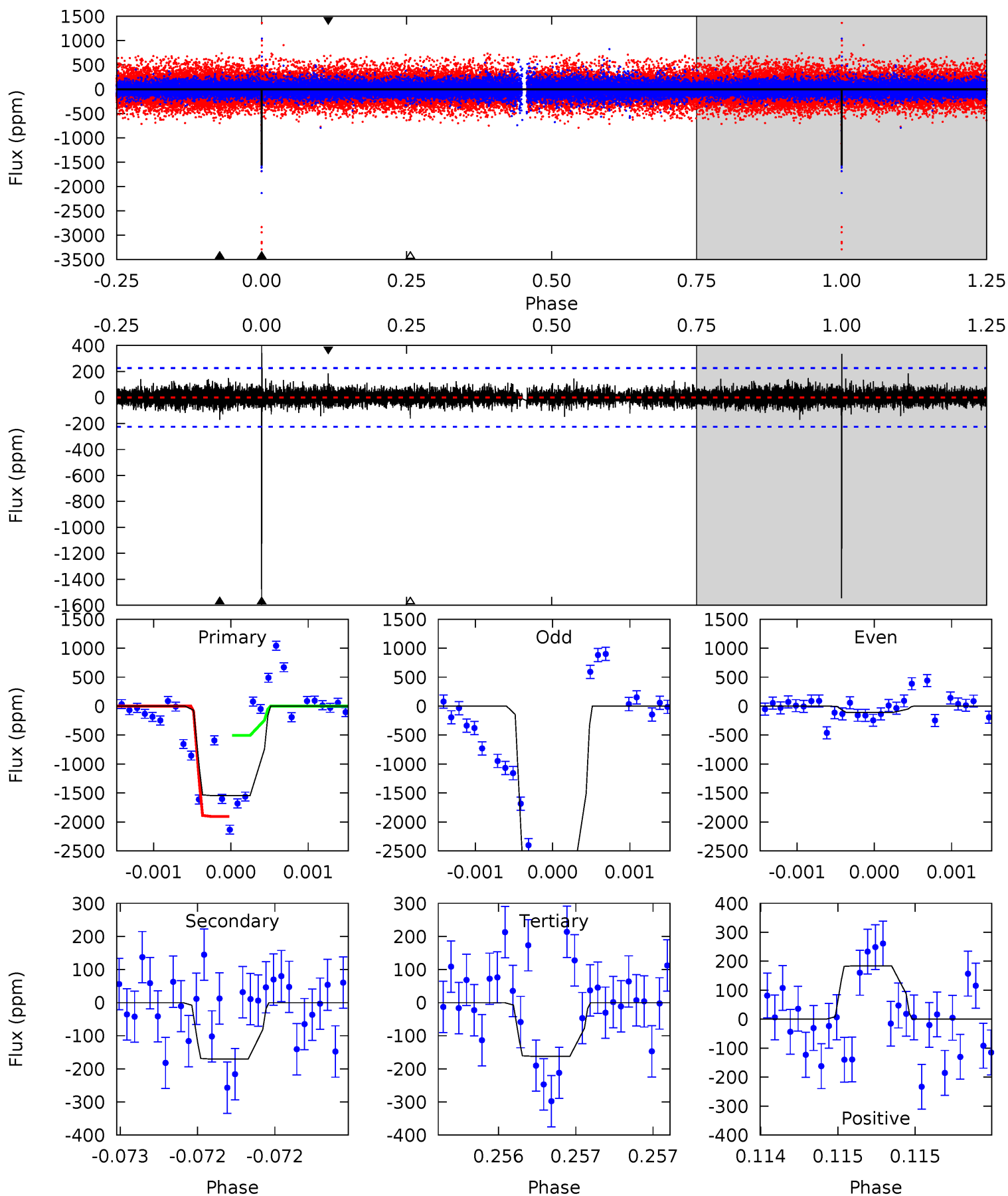
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	24.1	21.0	19.2	5.45	3.28	3.46	-2.13	-0.27	3.08	4.94	5.50	0.85	0.62	4.08



Alt Model-Shift Uniqueness Test

006206885-01, P = 345.640479 Days, E = 223.388536 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.1	4.20	3.99	4.54	5.57	3.47	0.84	34.1	33.6	0.21	-0.34	49.2	1.00	0.18	16.3



Stellar Parameters For KIC 006206885

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4927^{+137}_{-1}	$3.188^{+0.325}_{-0.325}$	$-0.340^{+0.300}_{-0.200}$	$3.924^{+2.178}_{-1.173}$	$0.865^{+0.336}_{-0.084}$	$0.020^{+0.041}_{-0.013}$
	+3%/-0%	+10%/-10%	+88%/-59%	+56%/-30%	+39%/-10%	+202%/-65%
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 006206885-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1287 ± 53	$72.82^{+84.49}_{-50.42}$	629^{+77}_{-67}	2936^{+1231}_{-496}	121^{+1101}_{-95}
Alt.	-170 ± 41	$63.17^{+81.74}_{-43.50}$	621^{+84}_{-61}	2327^{+863}_{-383}	20^{+178}_{-16}

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 $A_{obs} \gg 1.0$

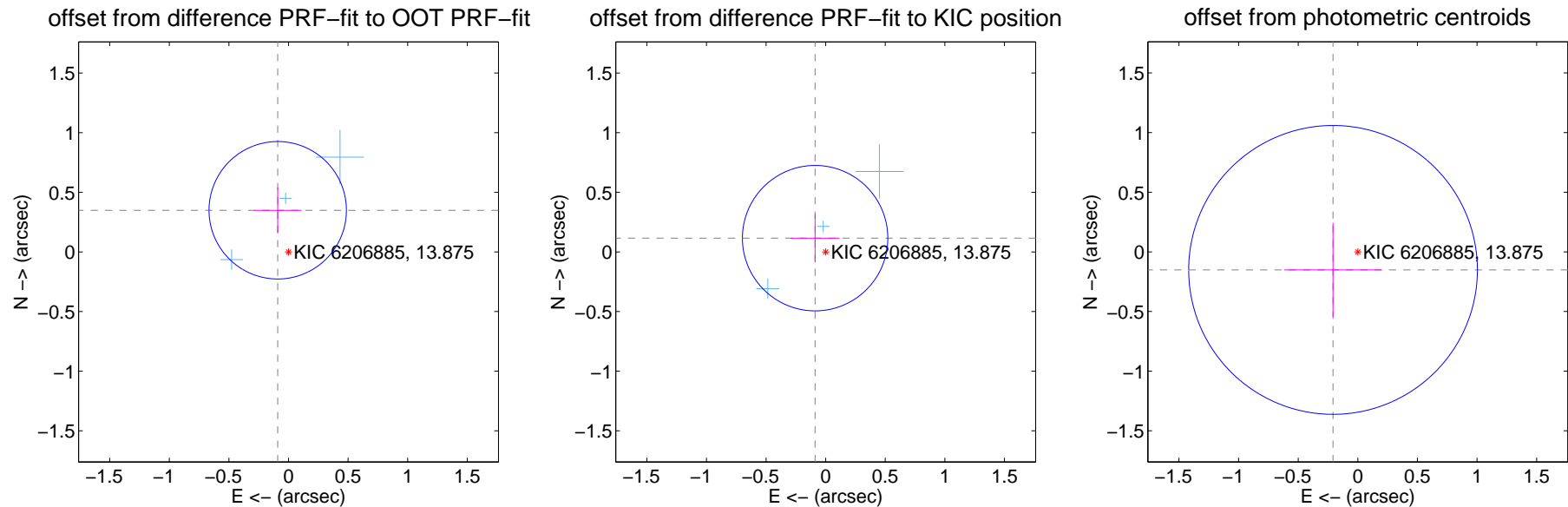
DV Centroid Data

Supplemental centroid analysis for 006206885-01. Kepler magnitude: 13.88. Transit SNR 8.01

There are 3 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	0.361 ± 0.192	1.88	0.090 ± 0.199	0.349 ± 0.192
PRF-fit source offset from KIC position	0.145 ± 0.203	0.72	0.088 ± 0.204	0.115 ± 0.203
photometric centroid source offset	0.26 ± 0.40	0.64	0.21 ± 0.41	-0.15 ± 0.39

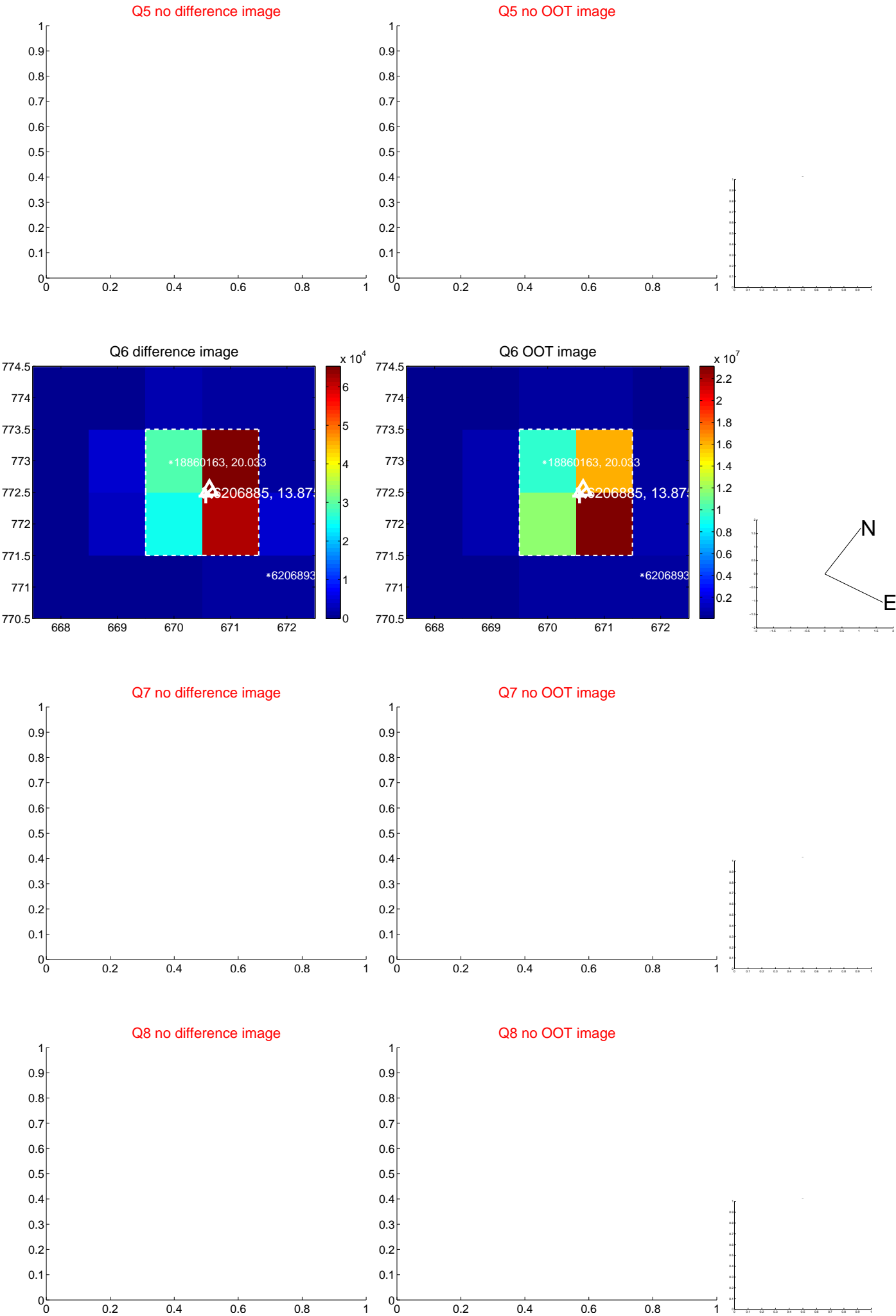


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

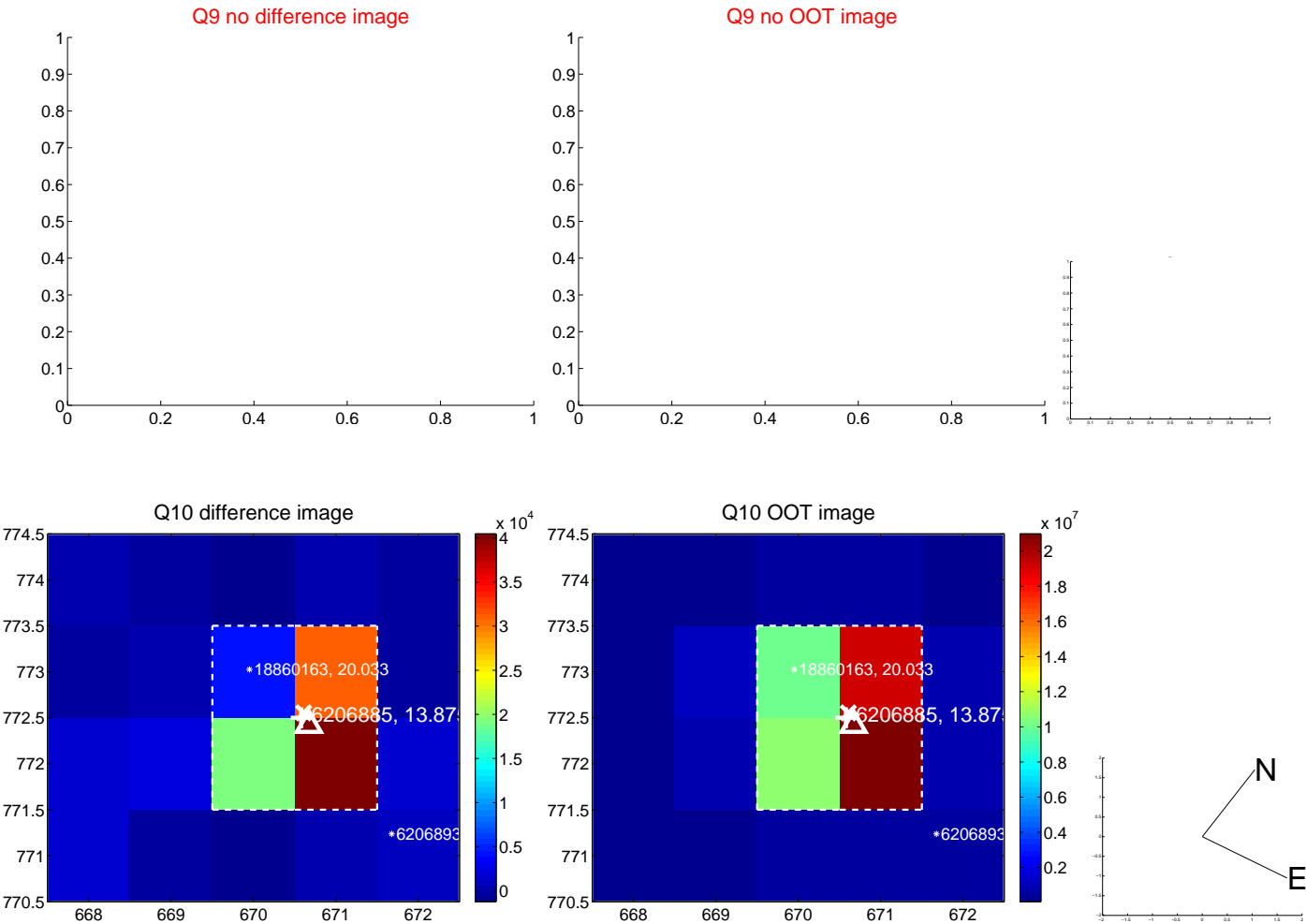
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



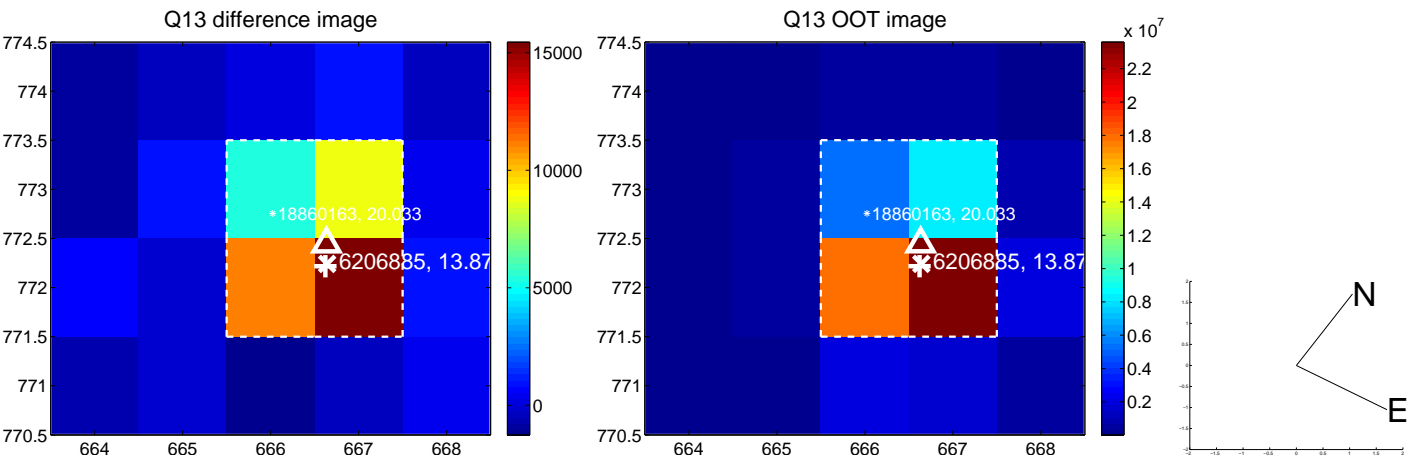
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



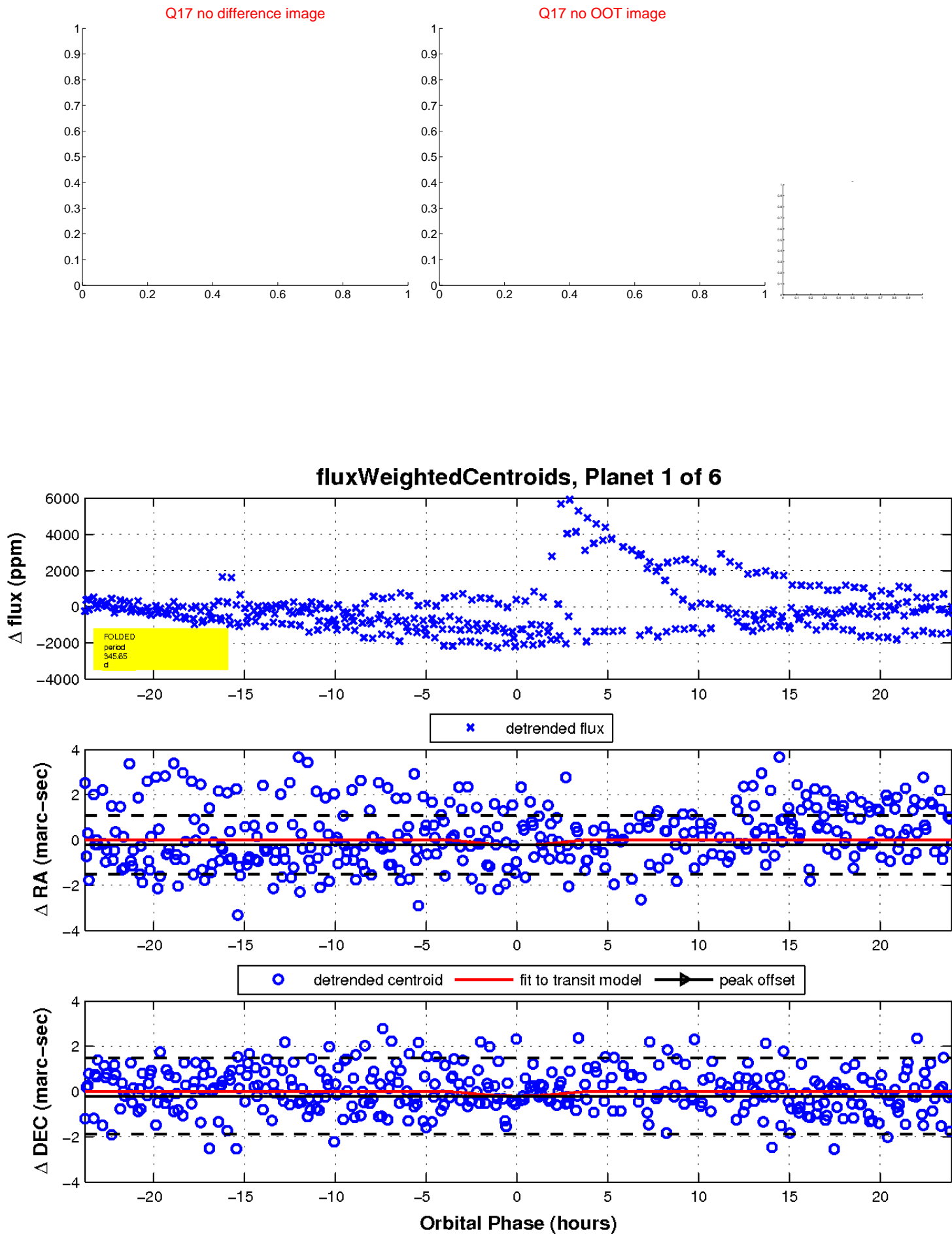
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

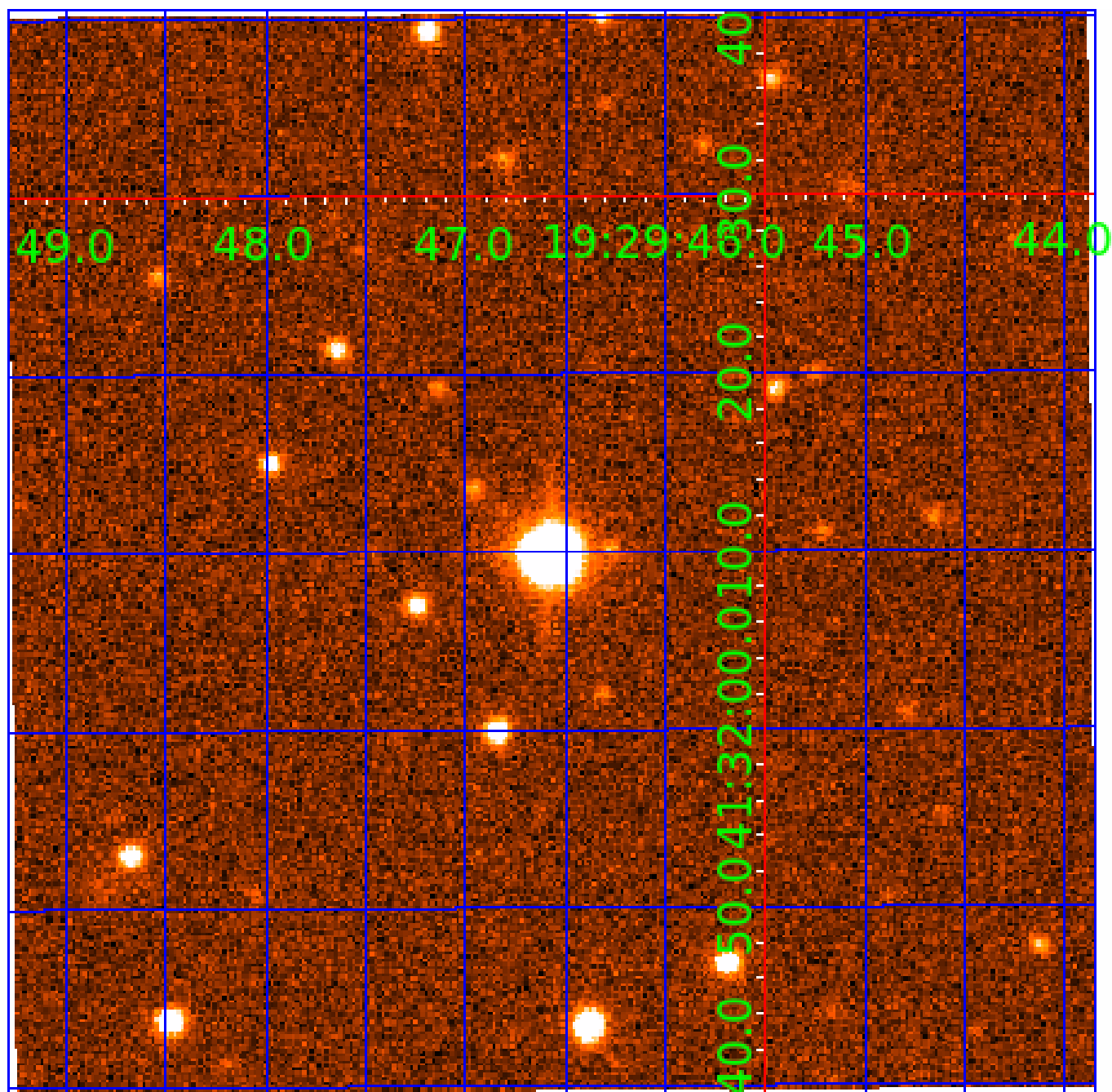


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006206885

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})
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Robovetter Results

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006206885-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-04	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—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
006206885-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

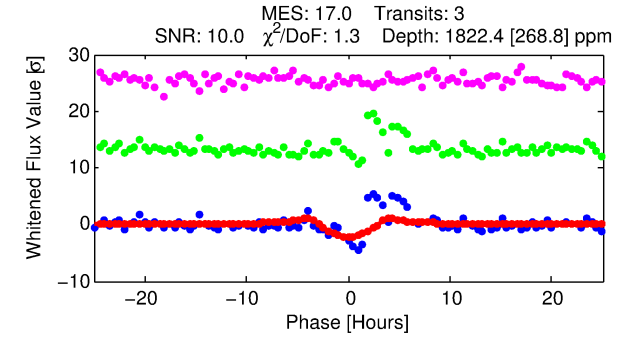
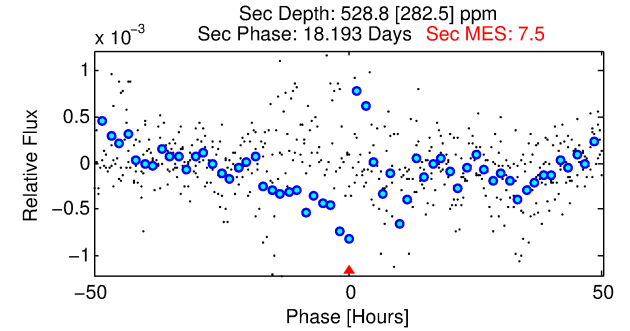
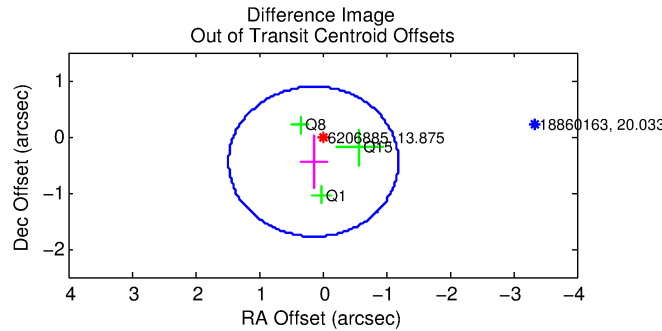
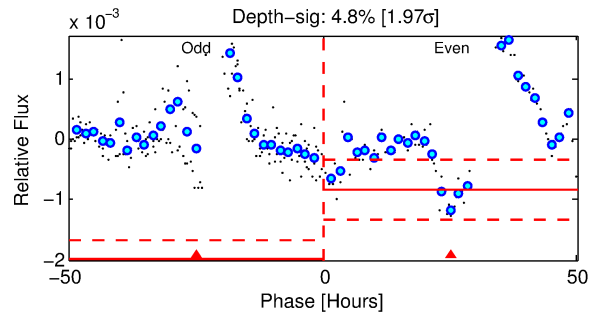
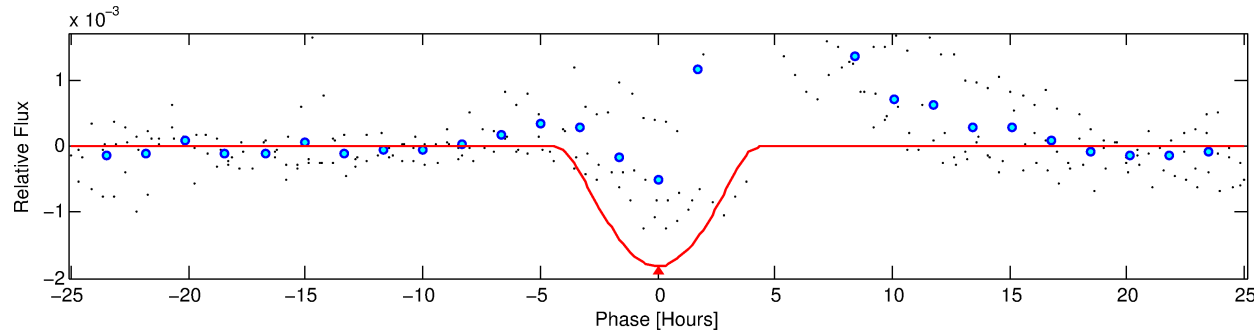
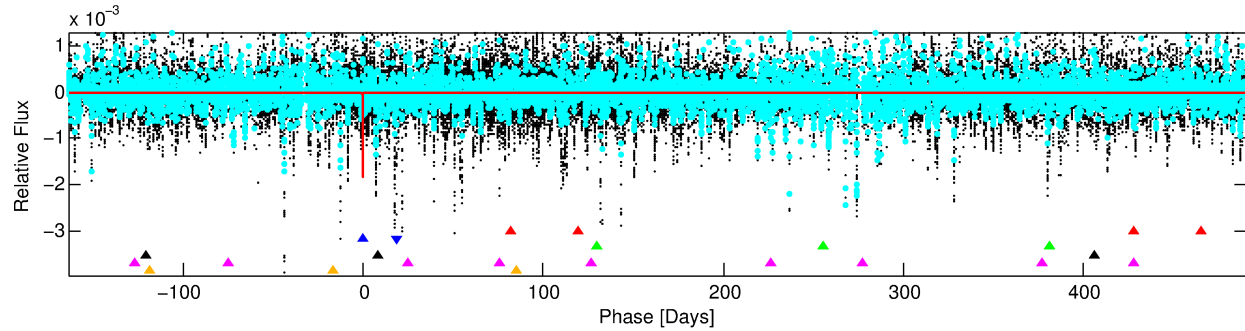
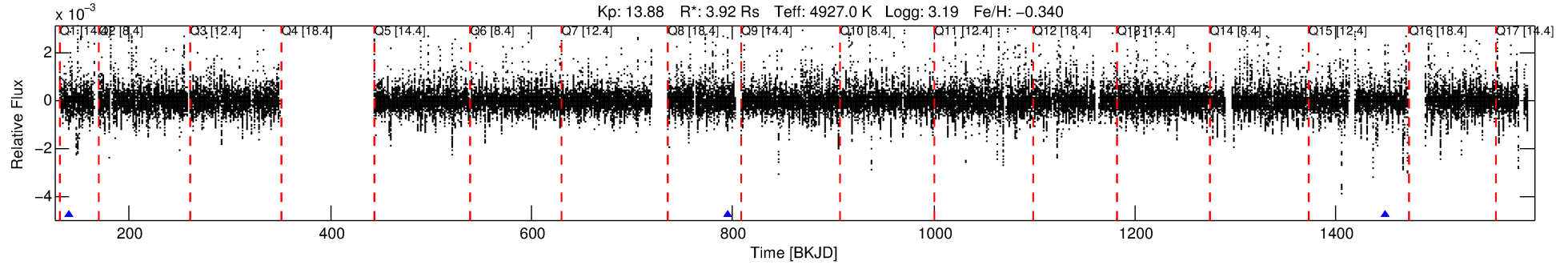
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006206885-02

No Significant Match Found

DV One-Page Summary

KIC: 6206885 Candidate: 2 of 6 Period: 654.142 d



DV Fit Results:

Period = 654.14190 [0.01111] d
Epoch = 140.8725 [0.0145] BKJD
Rp/R* = 0.0706 [0.1246]
a/R* = 243.69 [104.45]
b = 0.99 [0.19]
Seff = 4.11 [2.60]
Teq = 363 [57] K
Rp = 30.21 [55.93] Re
a = 1.4059 [0.6274] AU
Ag = 629.97 [2283.96] [0.28 σ]
Teffp = 2813 [2513] K [0.97 σ]

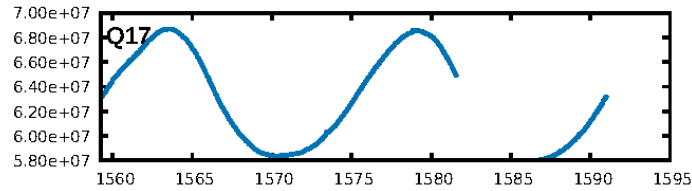
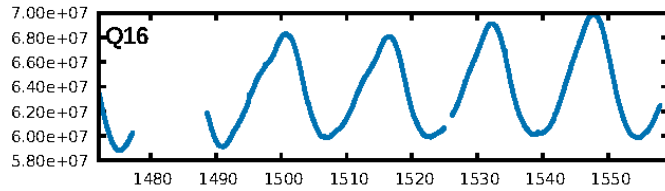
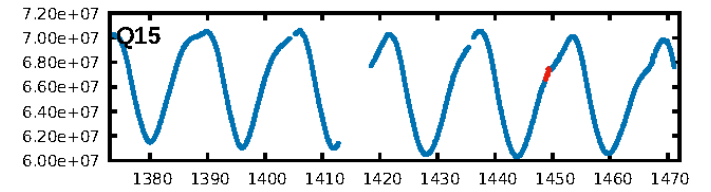
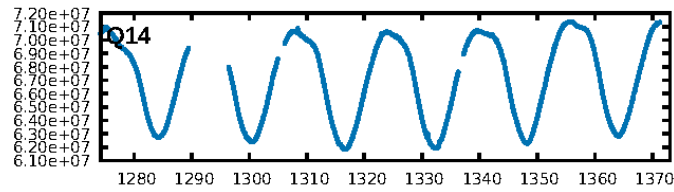
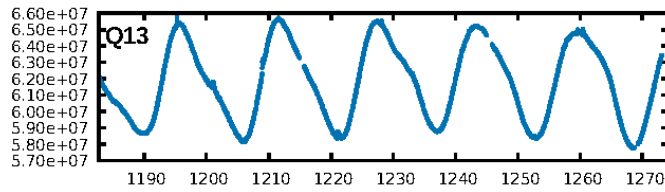
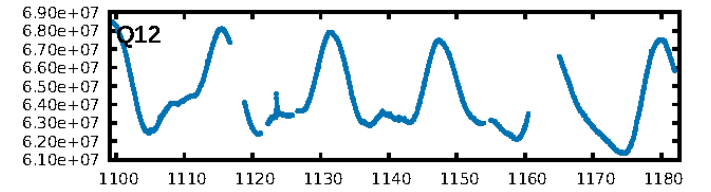
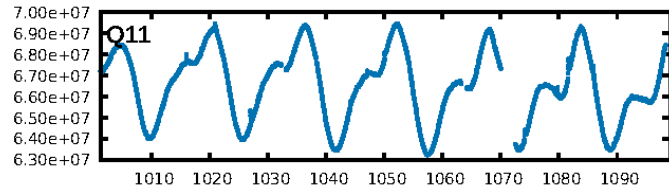
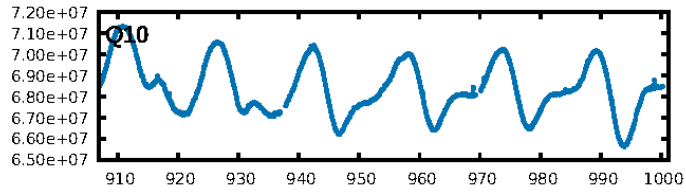
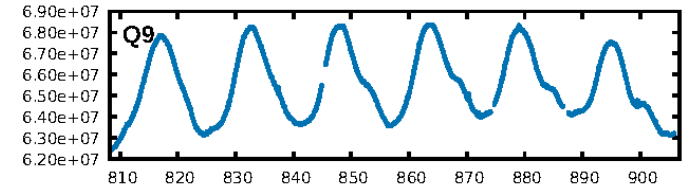
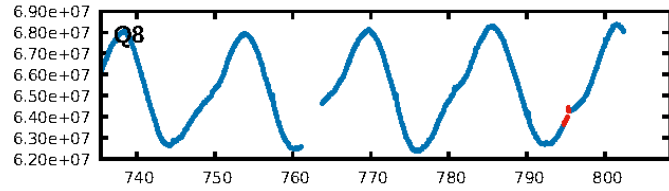
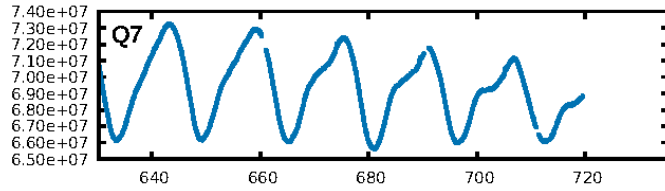
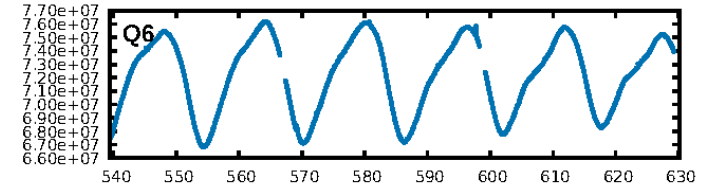
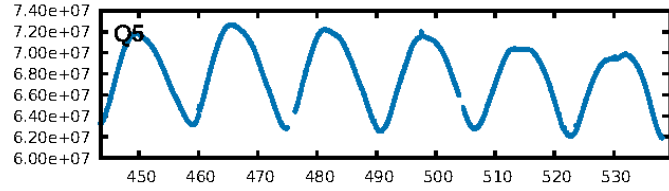
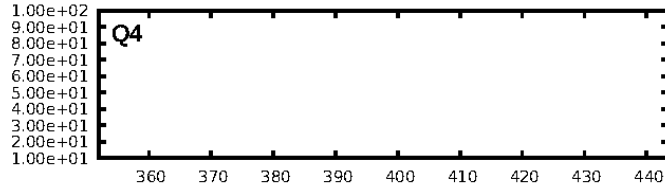
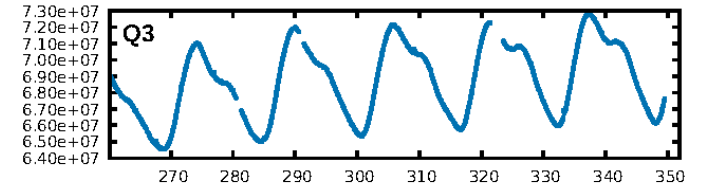
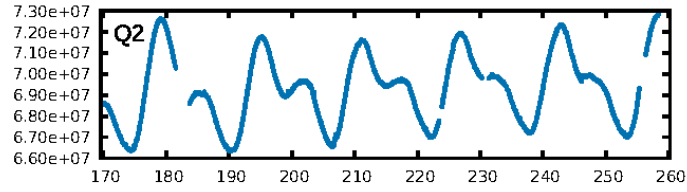
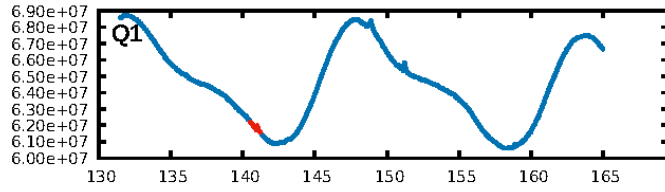
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [236.46 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.9%
ModelChiSquareGof-sig: 63.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.9246
Centroid-sig: 22.0%
Centroid-so: 0.186 arcsec [0.48 σ]
OotOffset-rm: 0.468 arcsec [1.05 σ]
OotOffset-st: 0/1/1/1 [3]
KicOffset-rm: 0.652 arcsec [1.51 σ]
KicOffset-st: 0/1/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

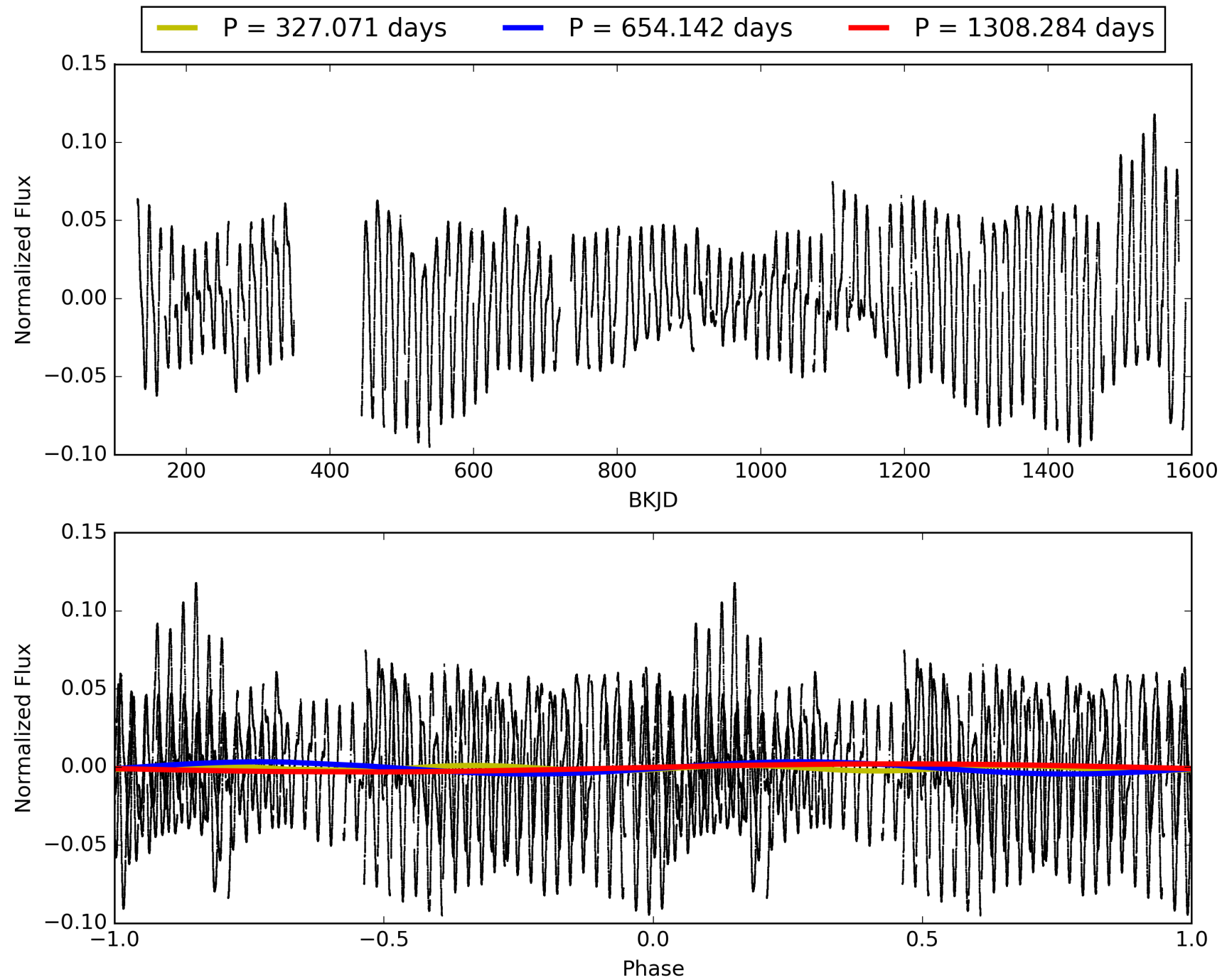
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:01:15 Z

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

TCE 006206885-02, PDC Light Curves

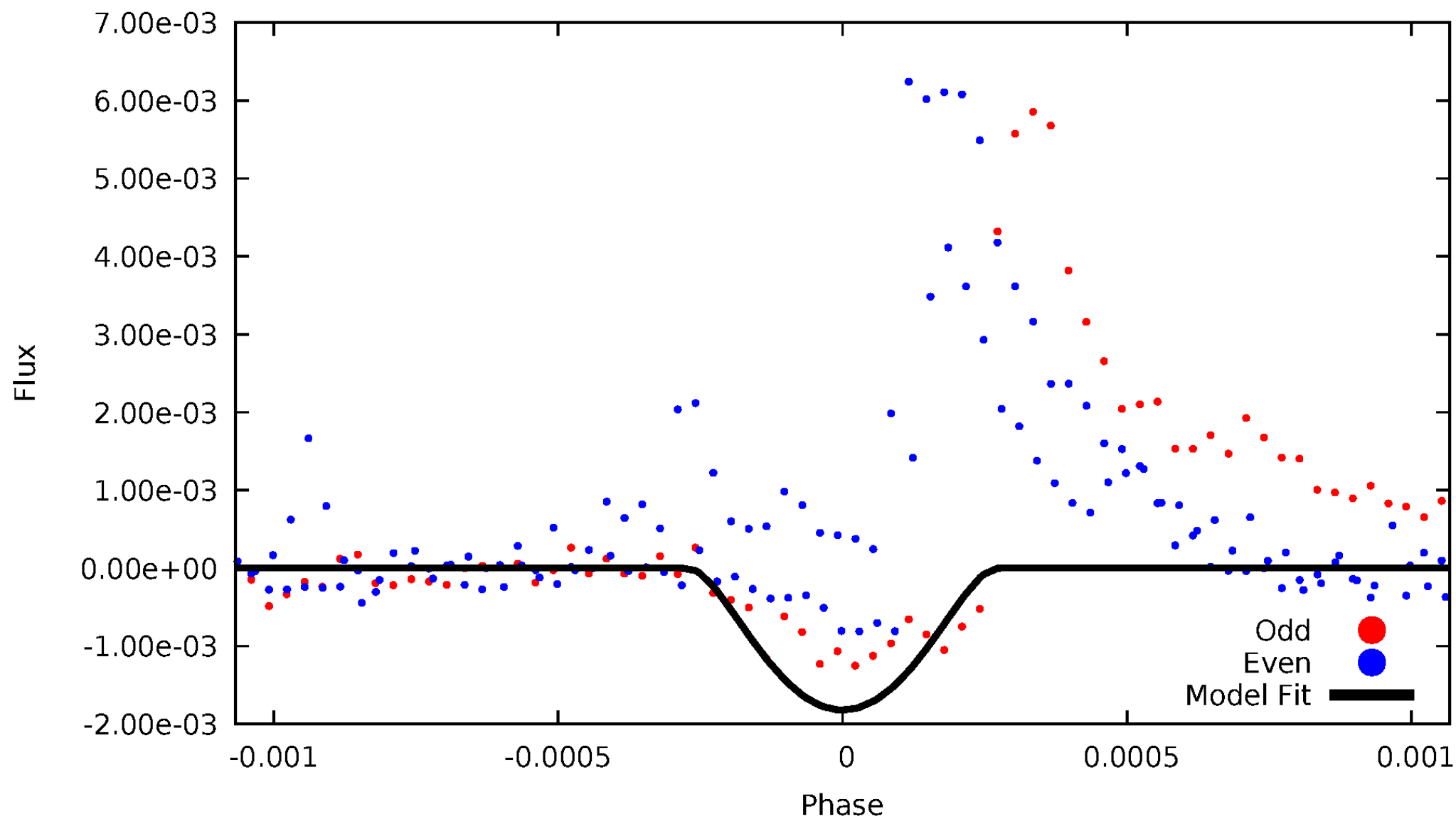


TCE 006206885-02



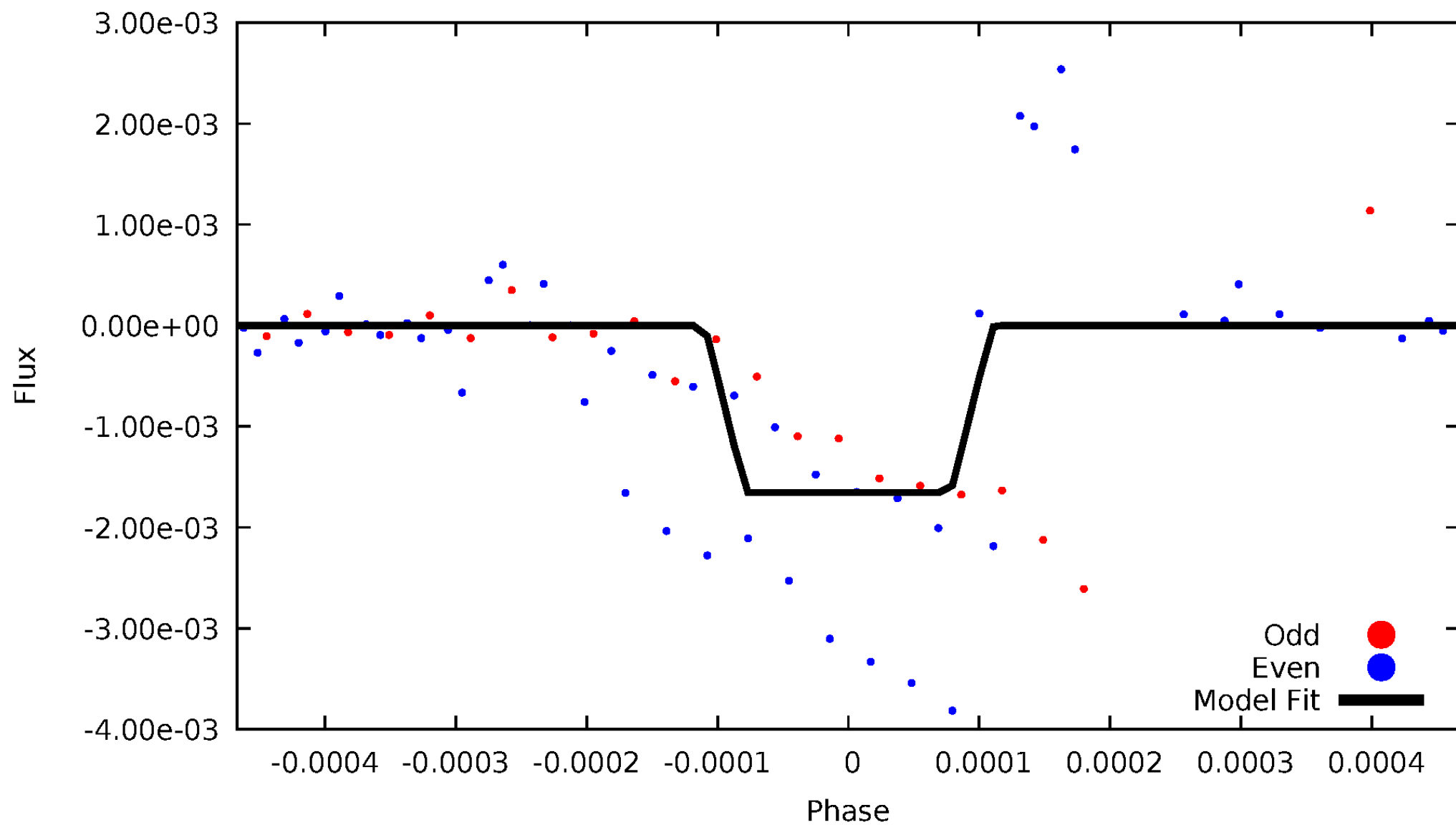
DV Odd/Even

TCE 006206885-02



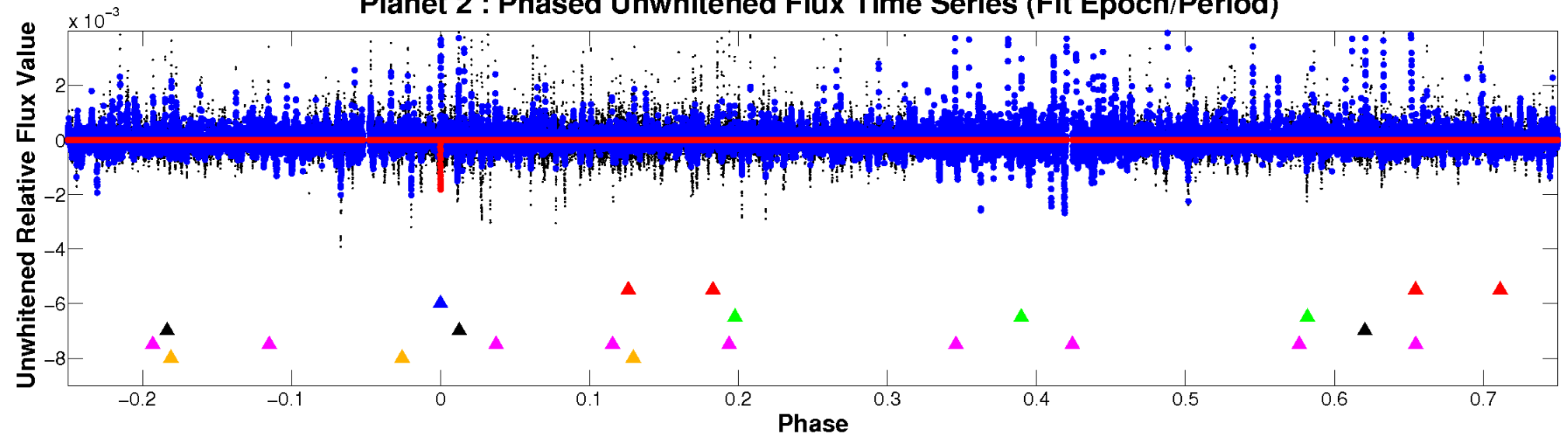
ALT Odd/Even

TCE 006206885-02

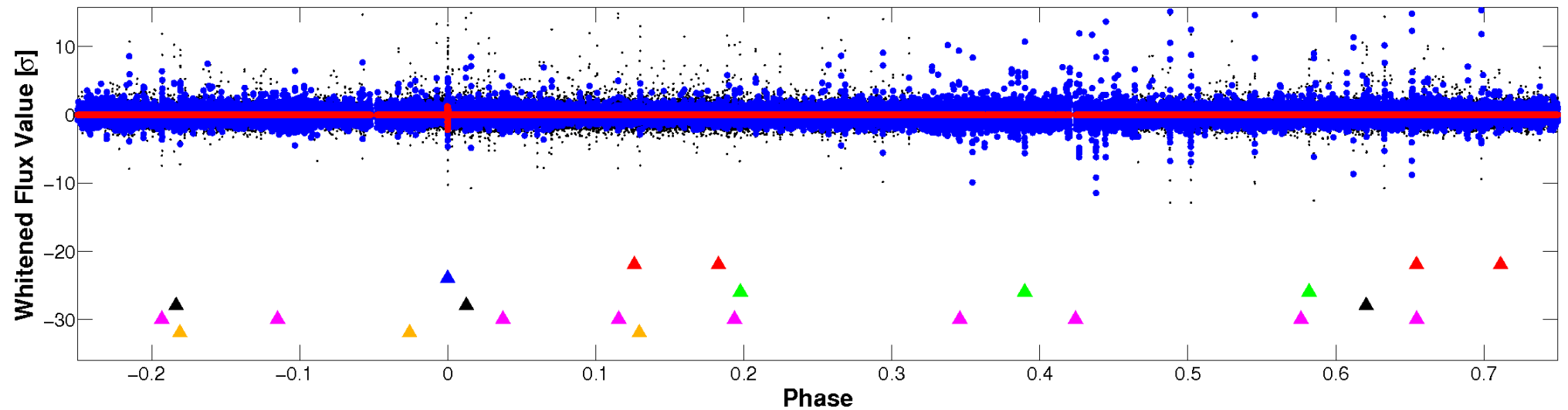


Non-Whitened Vs. Whitened Light Curve

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

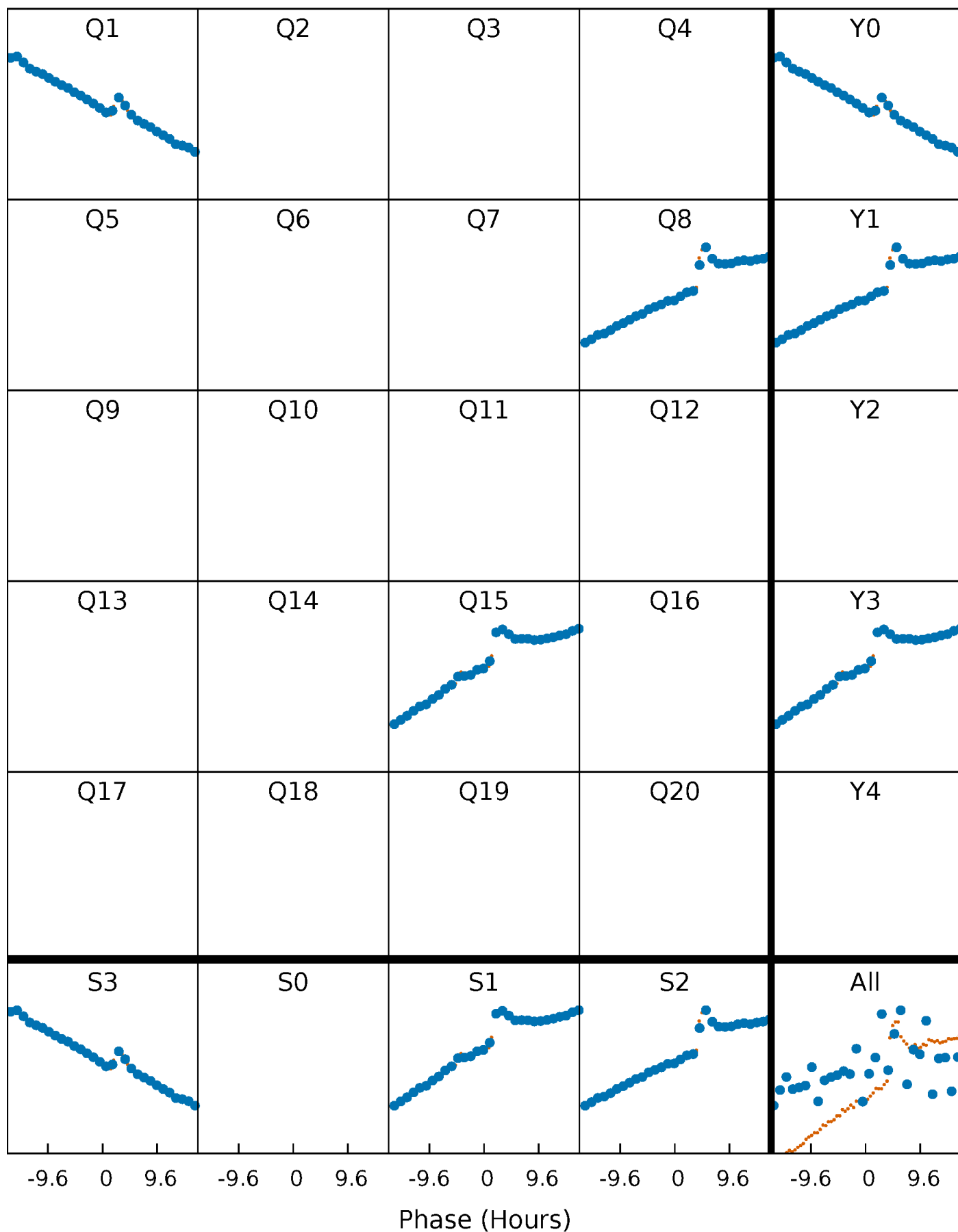


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



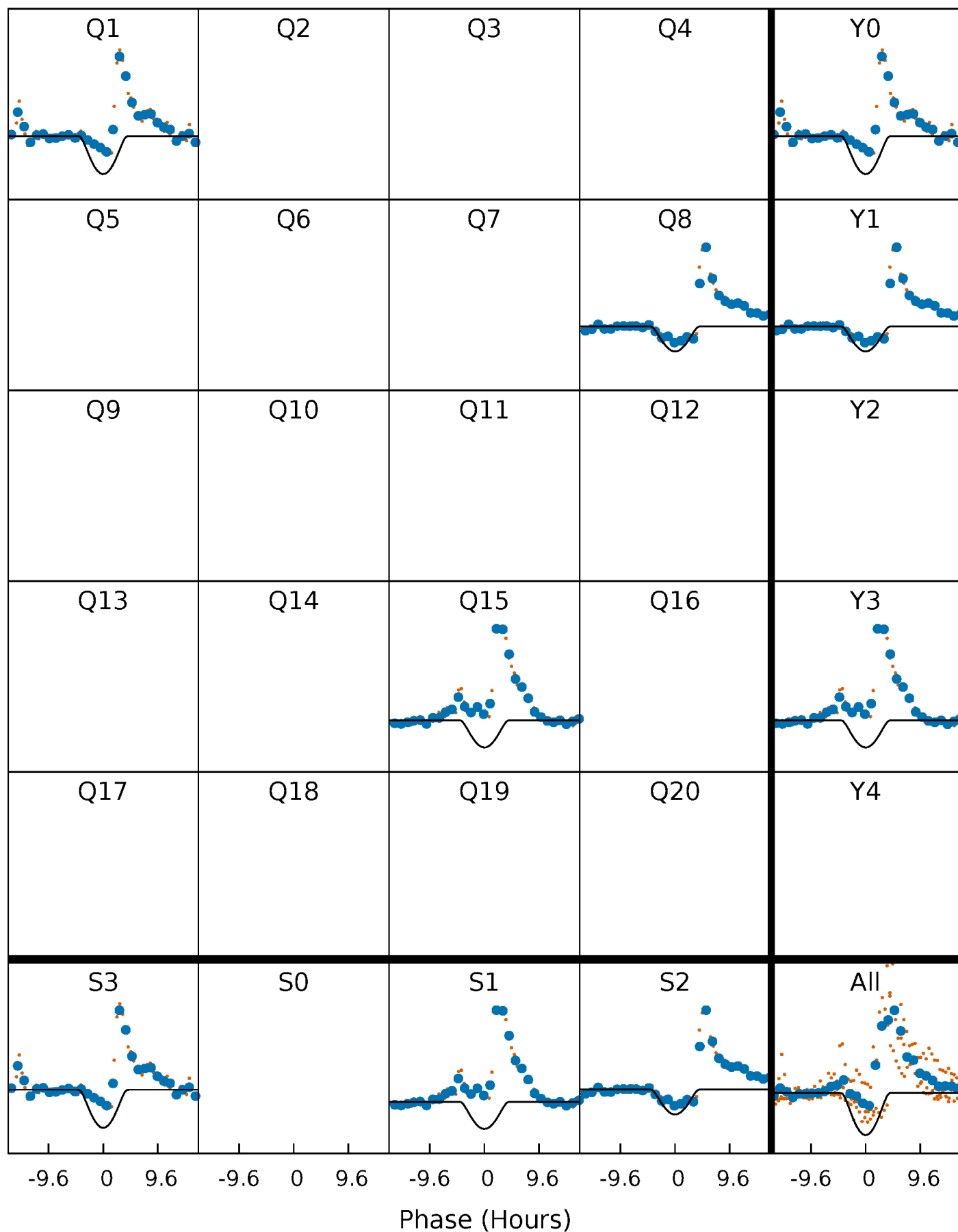
PDC Quarter-Phased Transit Curves

TCE 006206885-02 P=654.141900 Days $T_0=140.872505$ (BKJD)



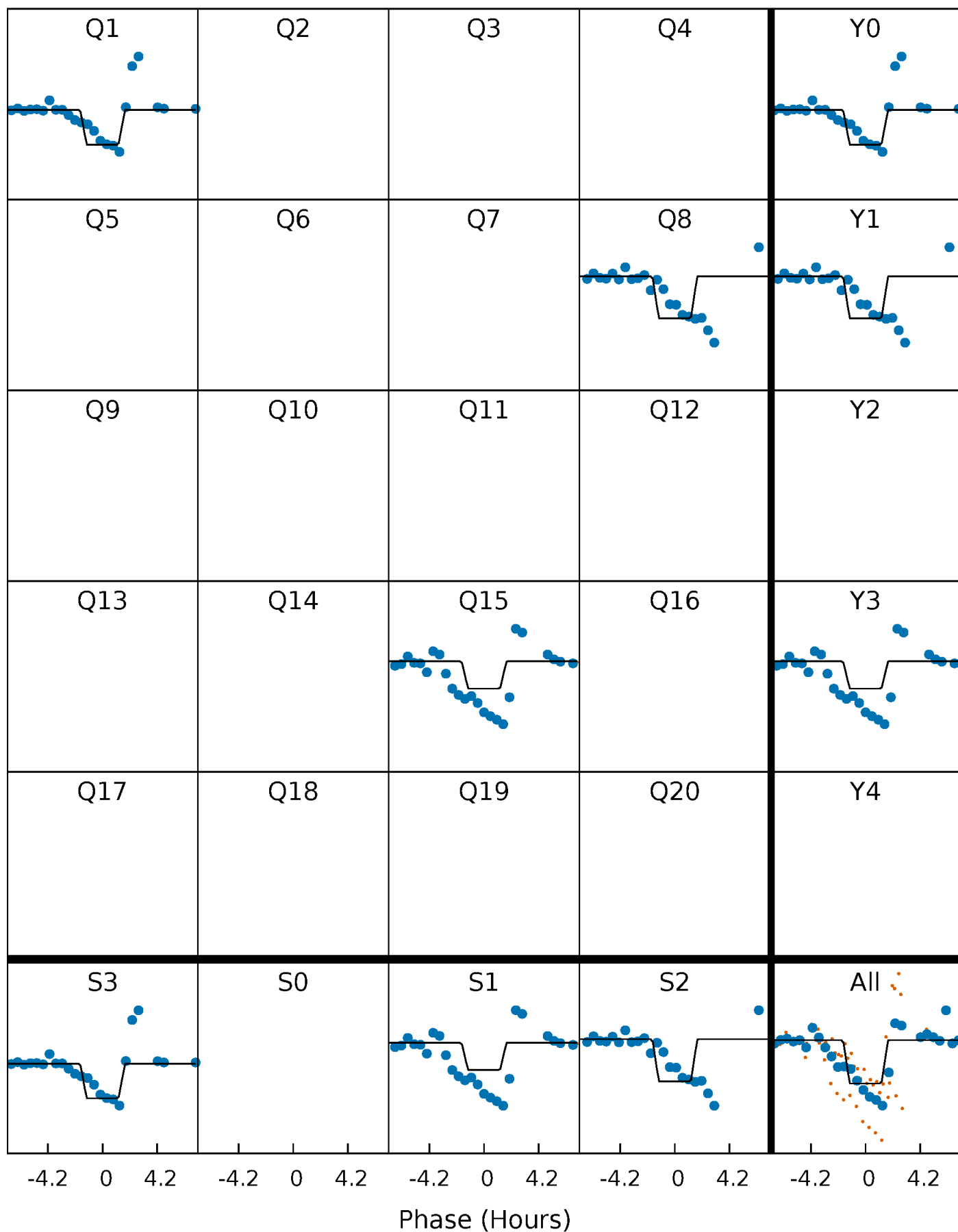
DV Quarter-Phased Transit Curves

TCE 006206885-02 $P=654.141900$ Days $T_0=140.872505$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

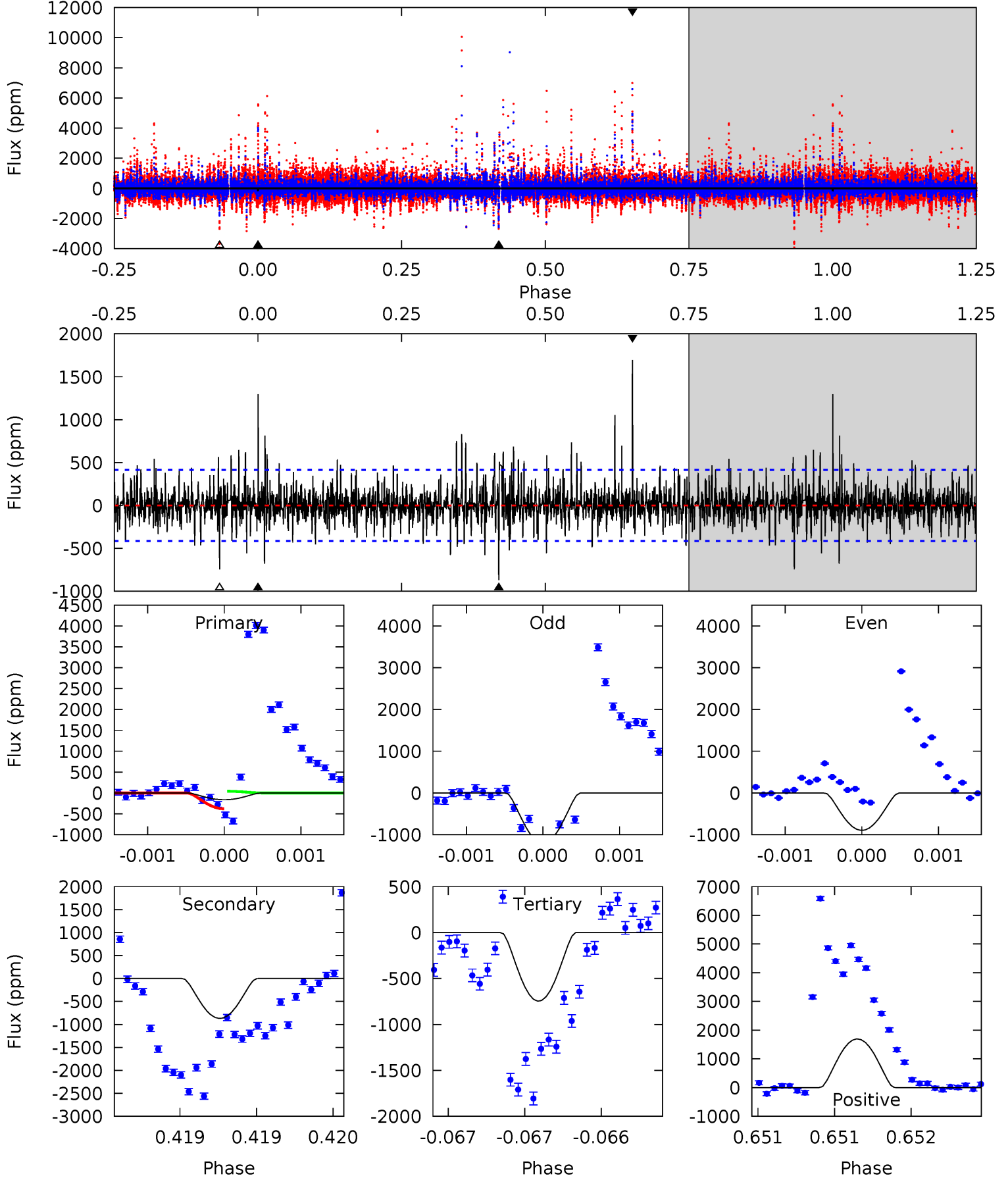
TCE 006206885-02 P=654.125934 Days $T_0=140.887651$ (BKJD)



DV Model-Shift Uniqueness Test

006206885-02, P = 654.141900 Days, E = 140.872505 Days

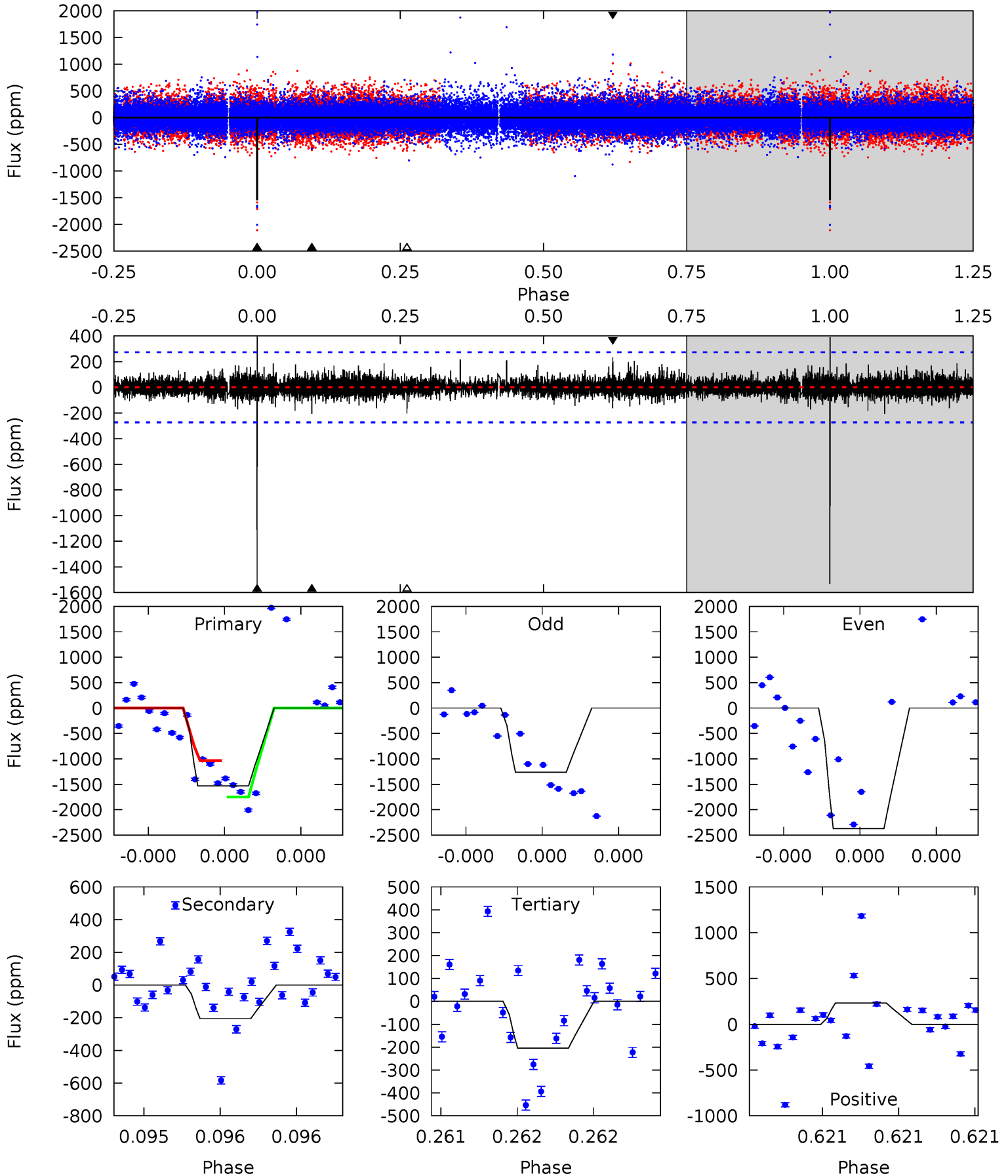
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.18	11.6	9.99	22.7	5.55	3.45	1.99	-7.81	-20.5	1.64	-11.1	1.97	5.30	0.66	2.24



Alt Model-Shift Uniqueness Test

006206885-02, P = 654.125934 Days, E = 140.887651 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.0	4.29	4.27	4.86	5.72	3.70	0.75	27.7	27.1	0.02	-0.57	13.4	1.32	0.20	7.19



Stellar Parameters For KIC 006206885

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4927^{+137}_{-1}	$3.188^{+0.325}_{-0.325}$	$-0.340^{+0.300}_{-0.200}$	$3.924^{+2.178}_{-1.173}$	$0.865^{+0.336}_{-0.084}$	$0.020^{+0.041}_{-0.013}$
	+3%/-0%	+10%/-10%	+88%/-59%	+56%/-30%	+39%/-10%	+202%/-65%
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 006206885-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-869 ± 75	$50.01^{+53.44}_{-32.71}$	503^{+69}_{-55}	3081^{+1212}_{-501}	401^{+2908}_{-305}
Alt.	-205 ± 48	$42.59^{+52.50}_{-29.82}$	507^{+58}_{-56}	2650^{+1095}_{-459}	125^{+1421}_{-100}

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

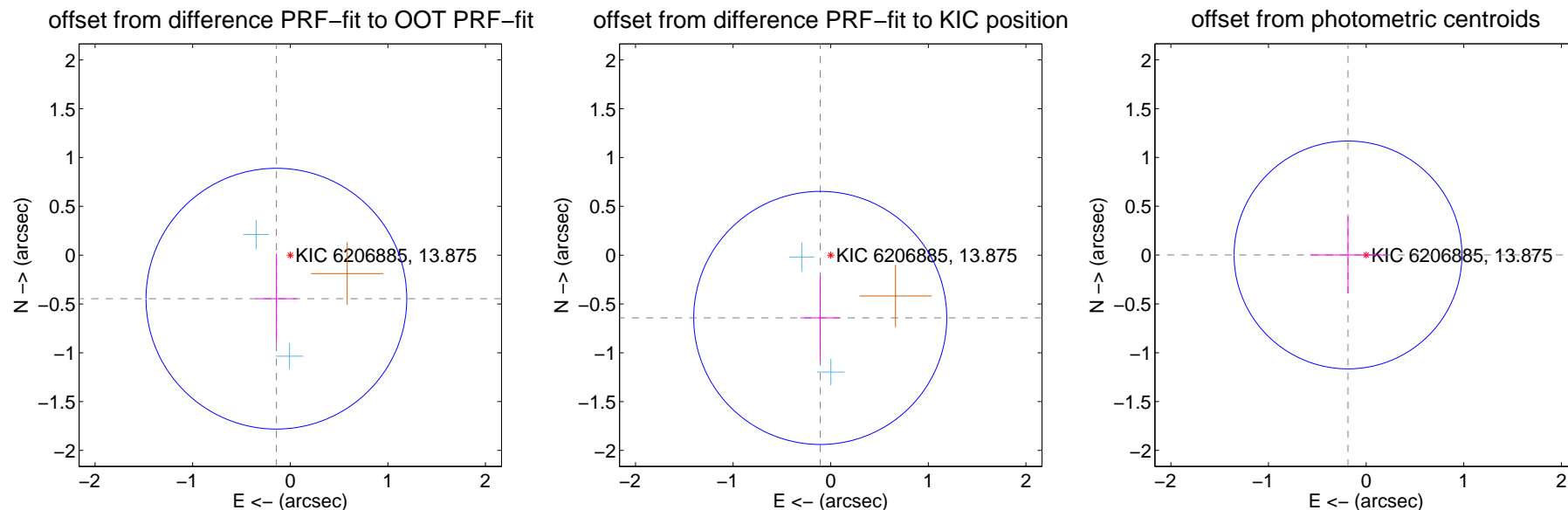
DV Centroid Data

Supplemental centroid analysis for 006206885-02. Kepler magnitude: 13.88. Transit SNR 10.01

There are 2 quarters with good PRF difference image offsets

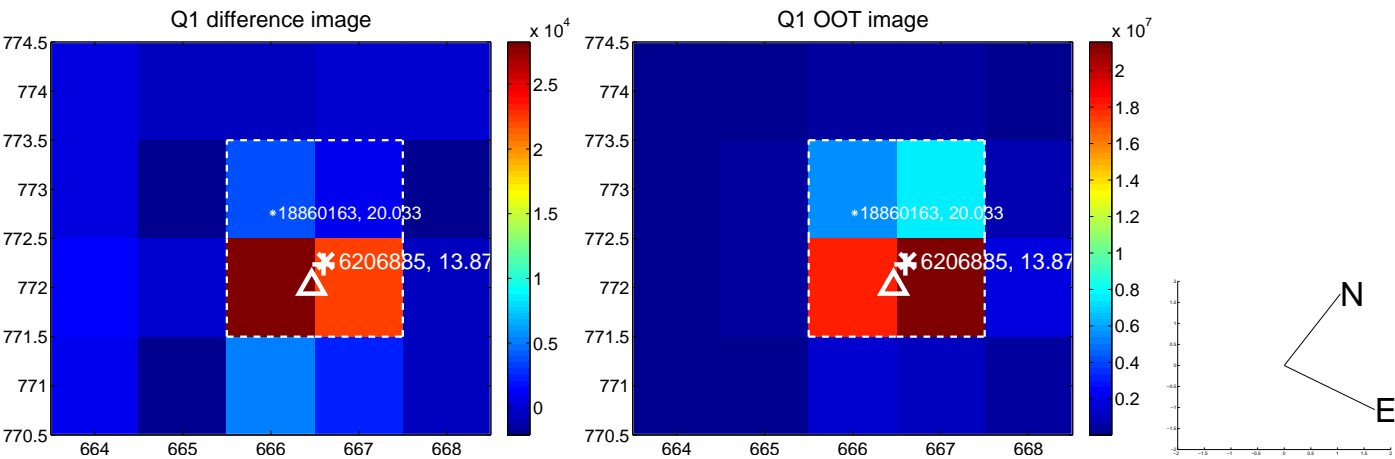
The direct PRF centroid is offset from the target star catalog position by about 0.24 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.468 ± 0.445	1.05	0.142 ± 0.209	-0.446 ± 0.462
PRF-fit source offset from KIC position	0.652 ± 0.432	1.51	0.107 ± 0.202	-0.643 ± 0.437
photometric centroid source offset	0.19 ± 0.39	0.48	0.19 ± 0.39	0.00 ± 0.39

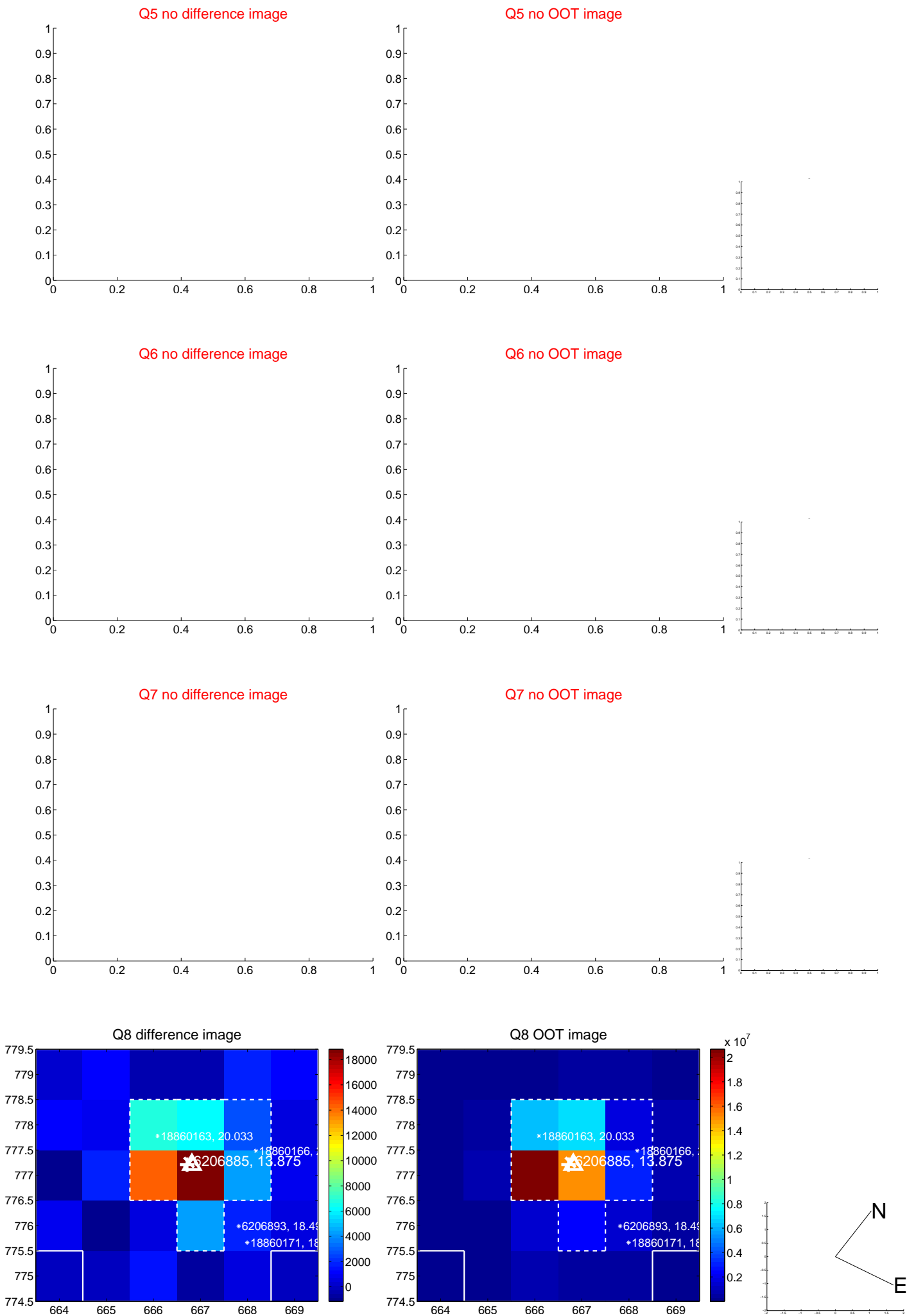


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q13 no difference image



Q13 no OOT image



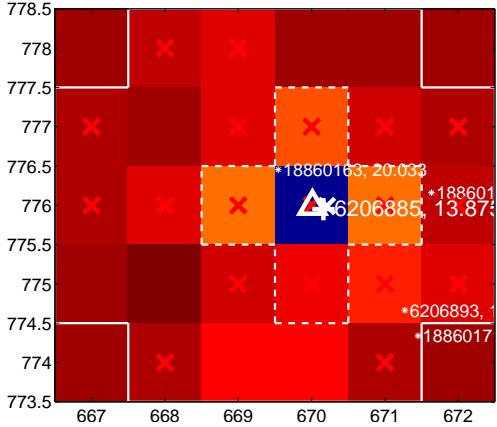
Q14 no difference image



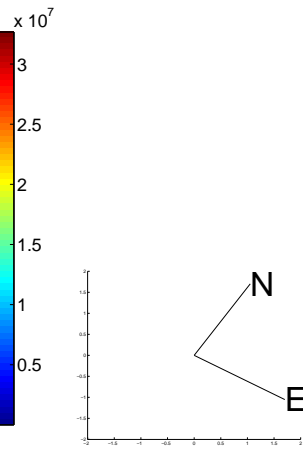
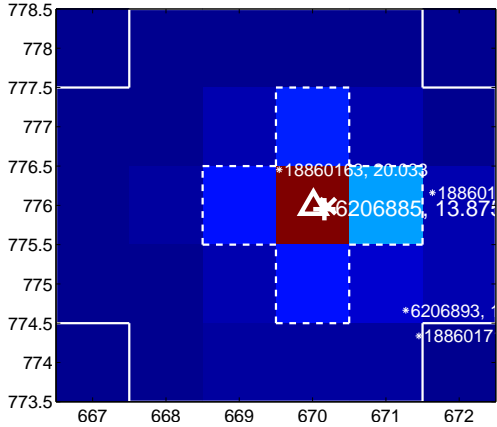
Q14 no OOT image



Q15 difference image. Poor Quality



Q15 OOT image



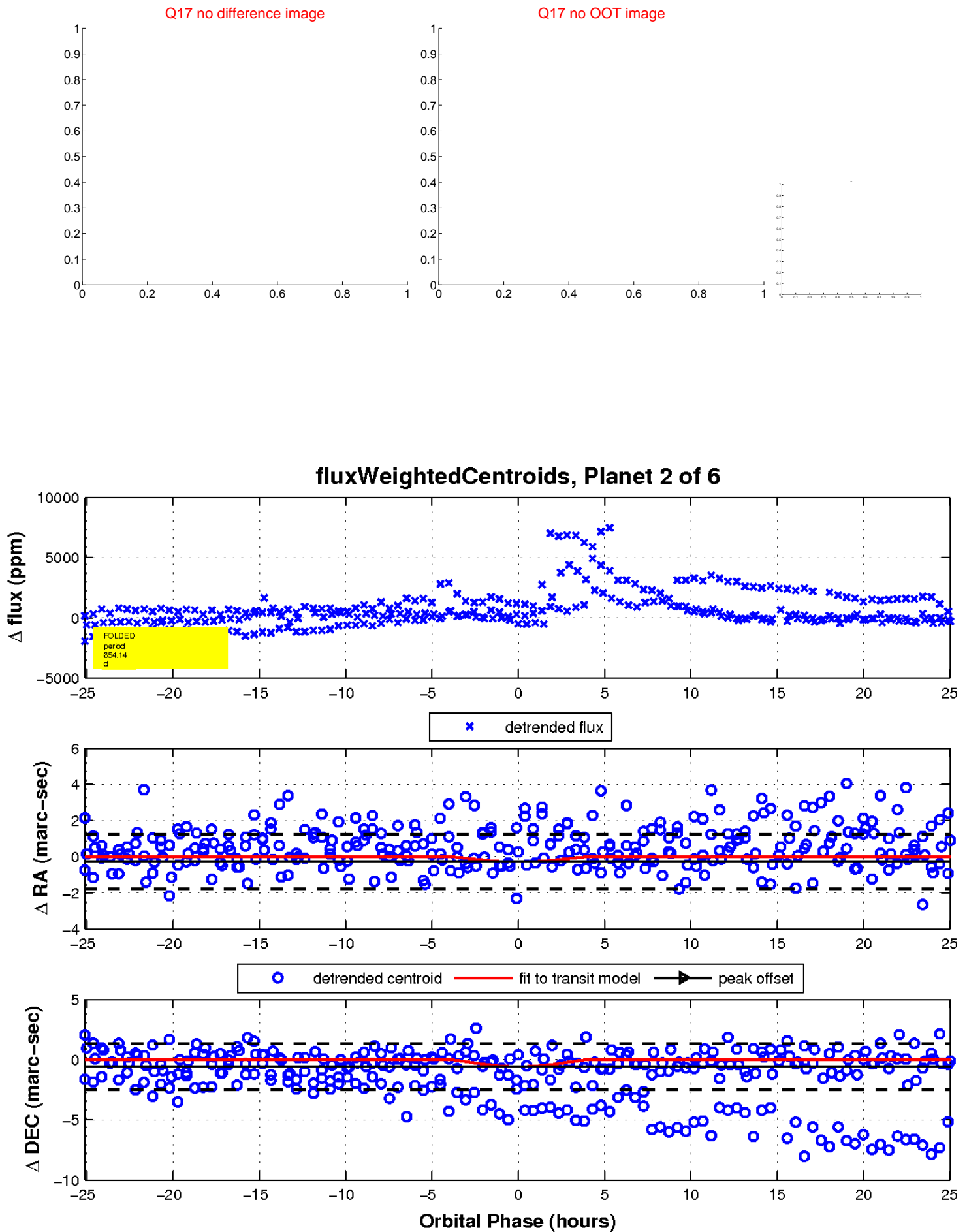
Q16 no difference image



Q16 no OOT image

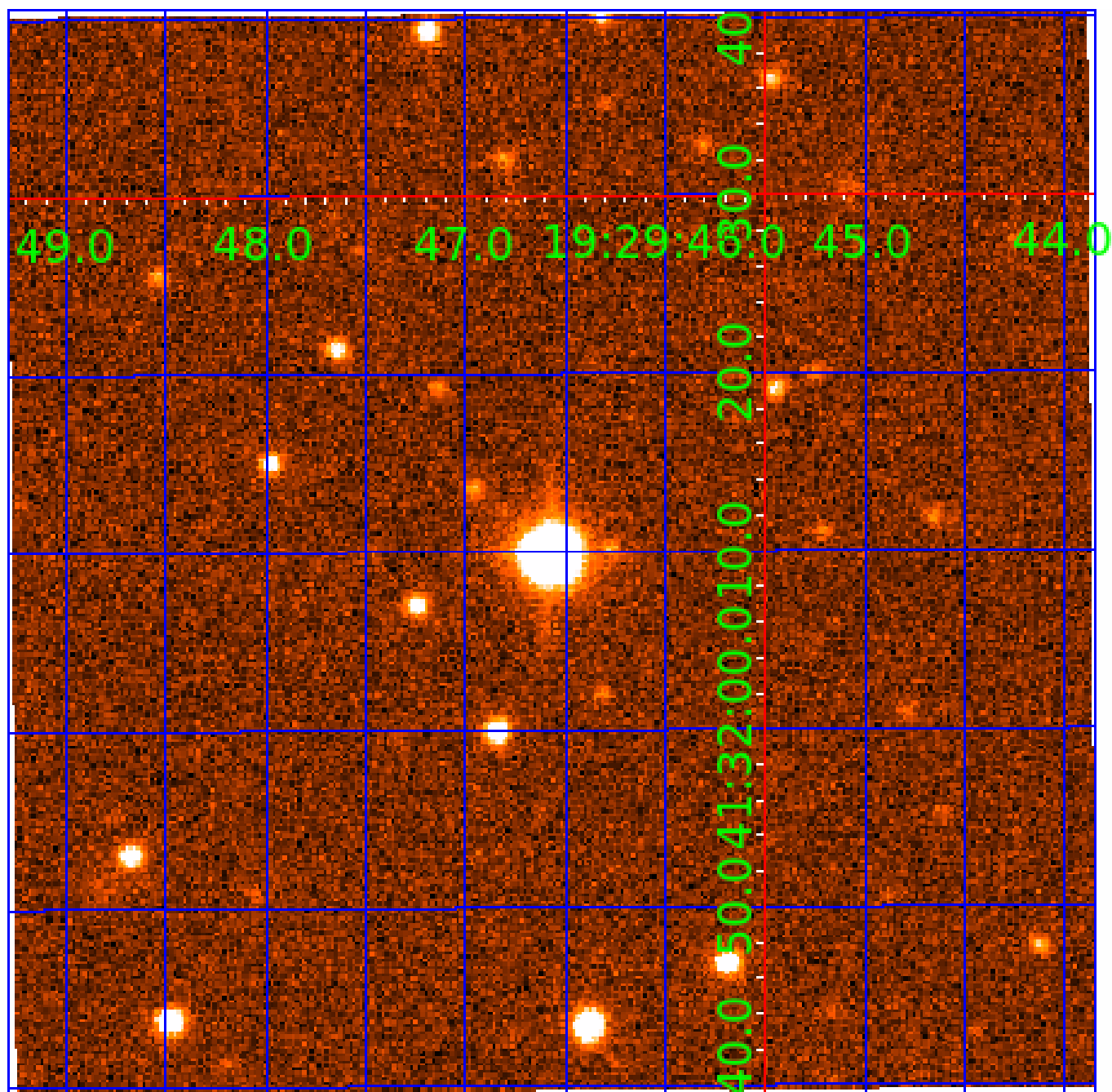


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006206885

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})
006206885-01	OBS	No	345.651210	223.355470	1246.1	7.996	18.0	8.0	3.92	4927	27.81	9.63
006206885-02	OBS	No	654.141900	140.872505	1822.4	8.376	17.0	10.0	3.92	4927	30.21	4.11
006206885-03	OBS	No	528.477233	521.532483	1269.7	3.422	14.3	8.5	3.92	4927	13.91	5.47
006206885-04	OBS	No	525.880068	149.129297	1138.2	6.688	15.2	7.4	3.92	4927	13.61	5.50
006206885-05	OBS	No	150.748756	267.590328	650.5	2.353	13.6	6.1	3.92	4927	10.40	29.11
006206885-06	OBS	No	552.632441	225.549643	731.6	6.000	12.5	-1.0	3.92	4927	10.31	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006206885-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—HALO_GHOST
006206885-02	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
006206885-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-04	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—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
006206885-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

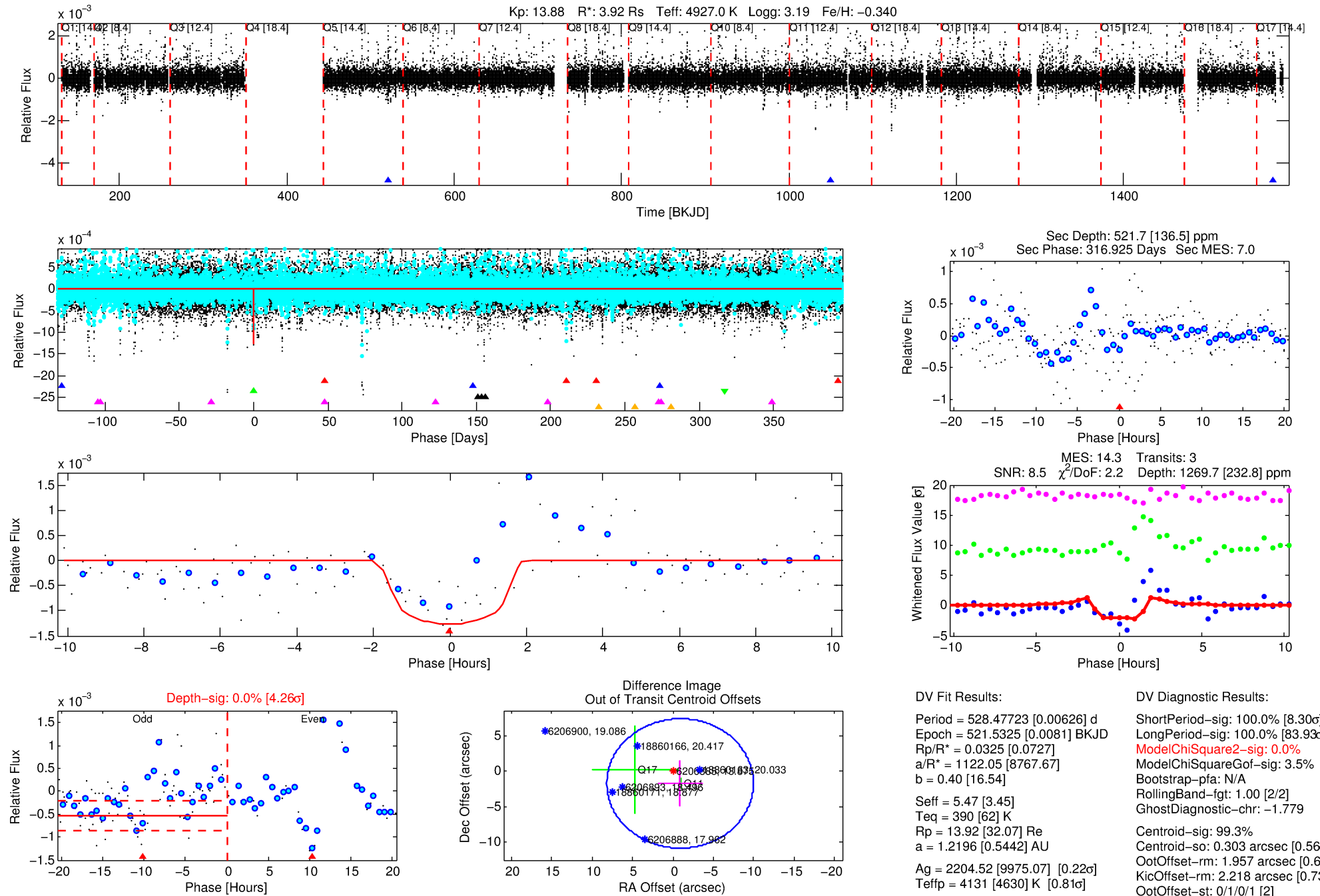
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006206885-03

No Significant Match Found

DV One-Page Summary

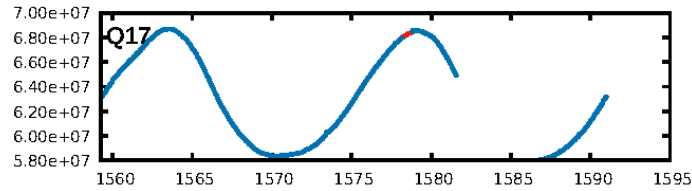
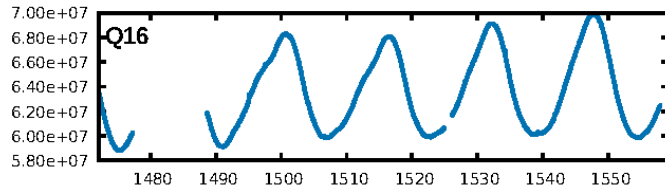
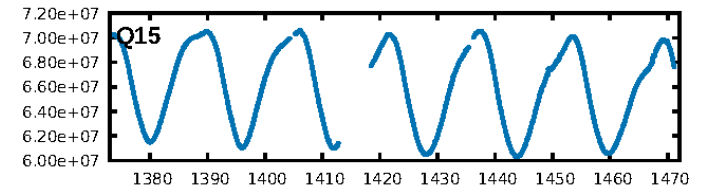
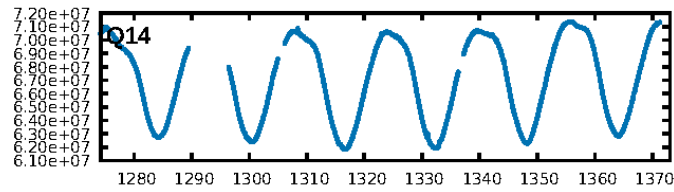
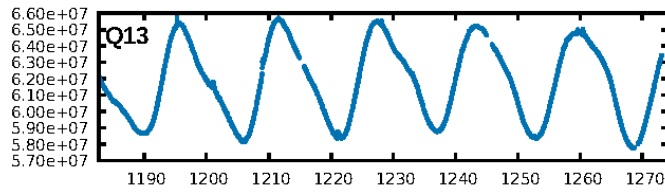
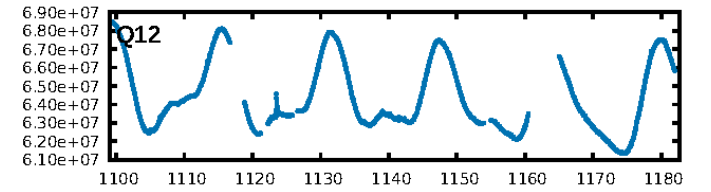
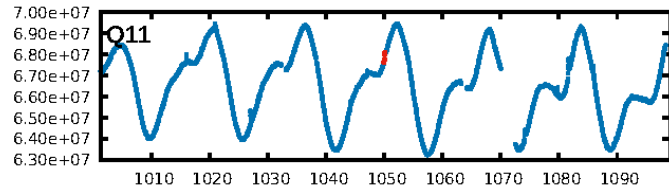
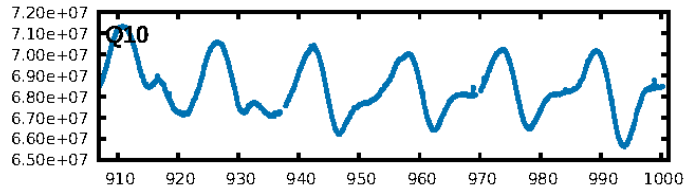
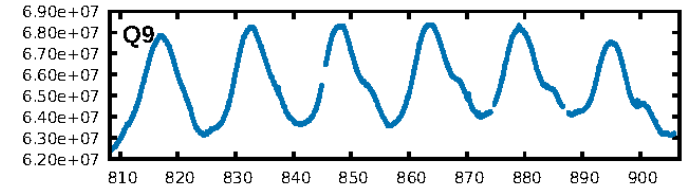
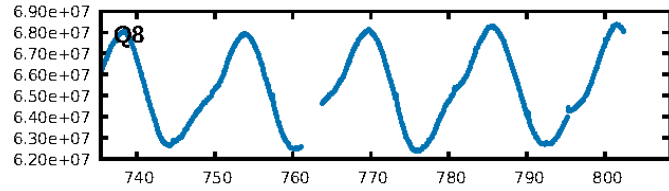
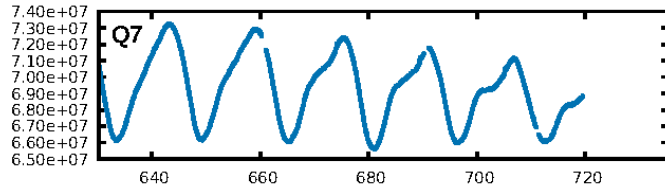
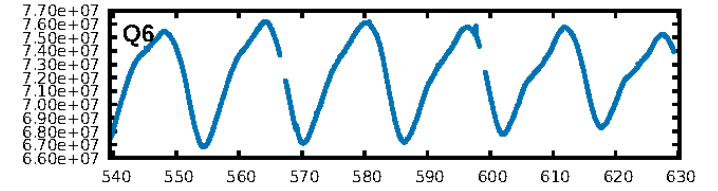
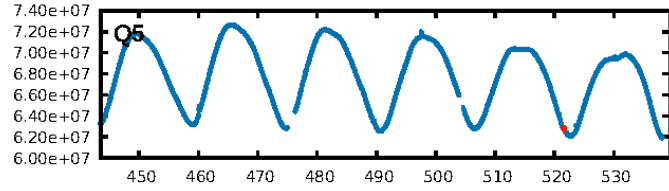
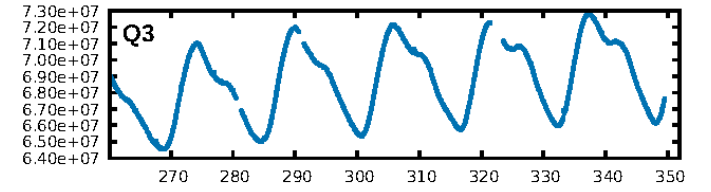
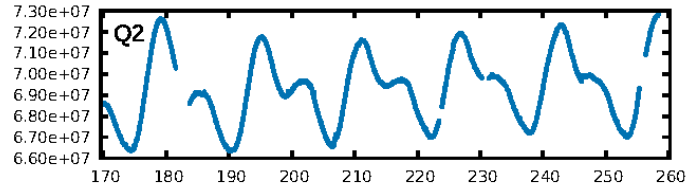
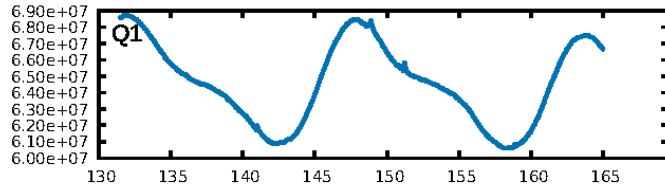
KIC: 6206885 Candidate: 3 of 6 Period: 528.477 d



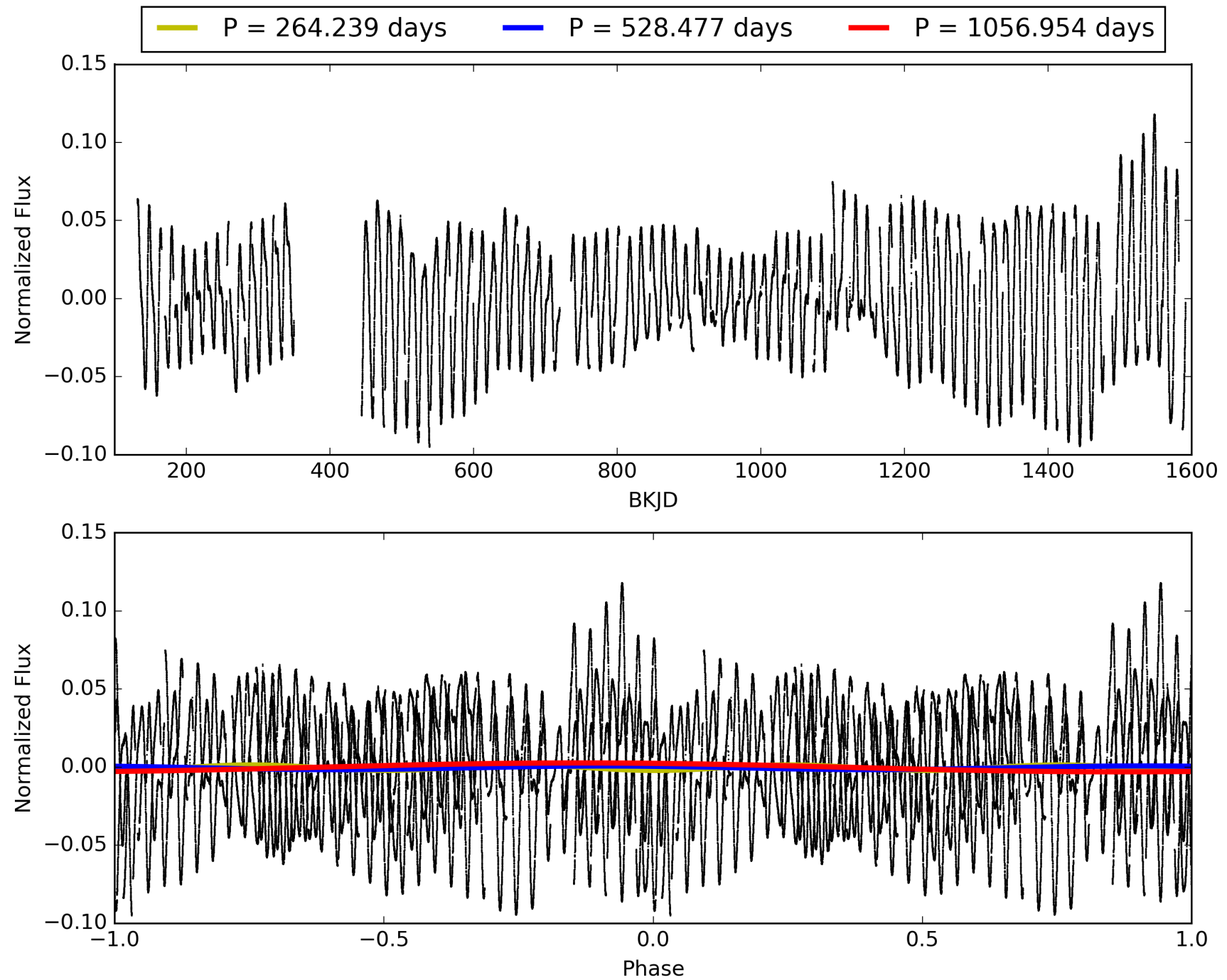
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:01:35 Z

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

TCE 006206885-03, PDC Light Curves

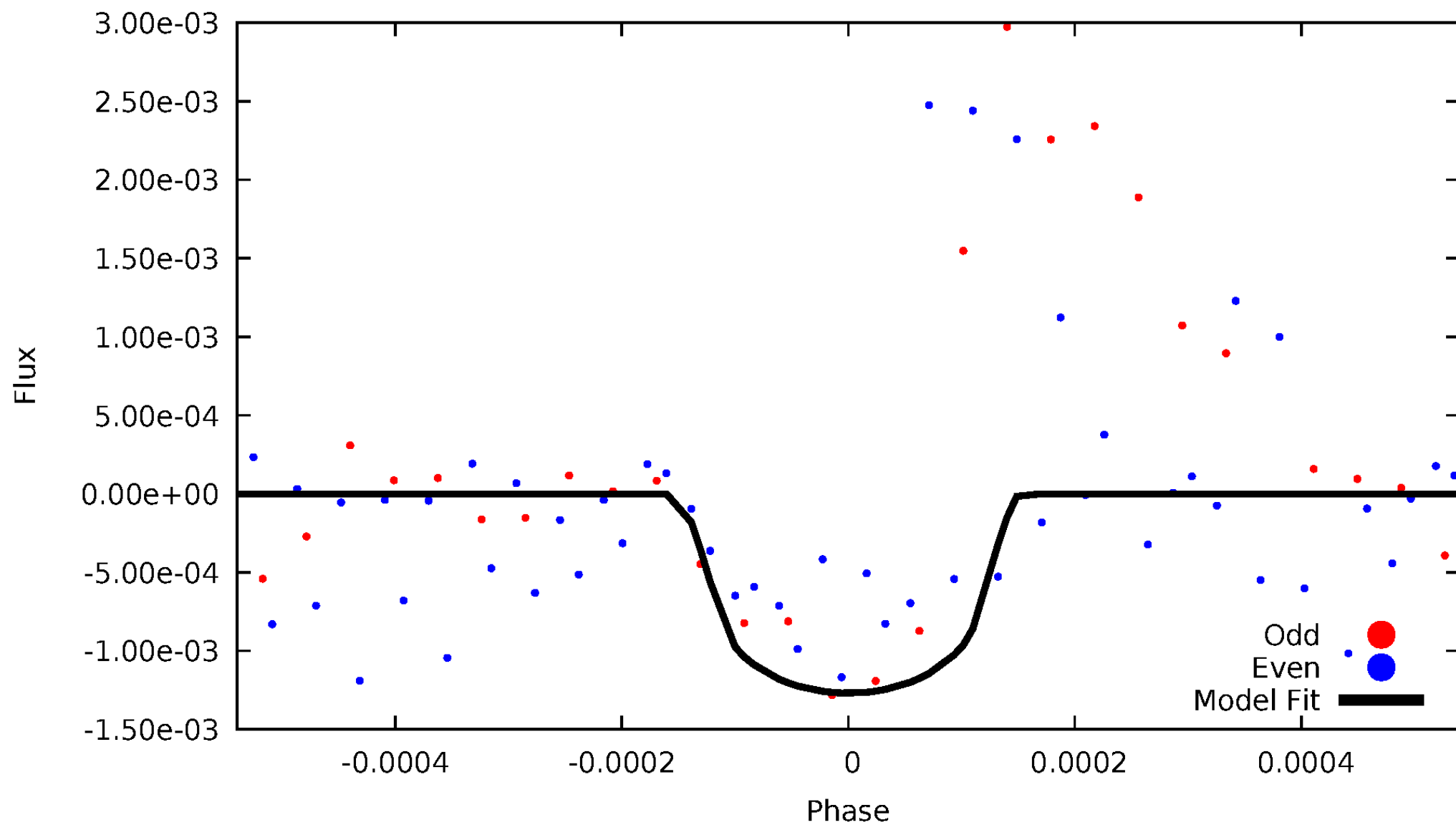


TCE 006206885-03



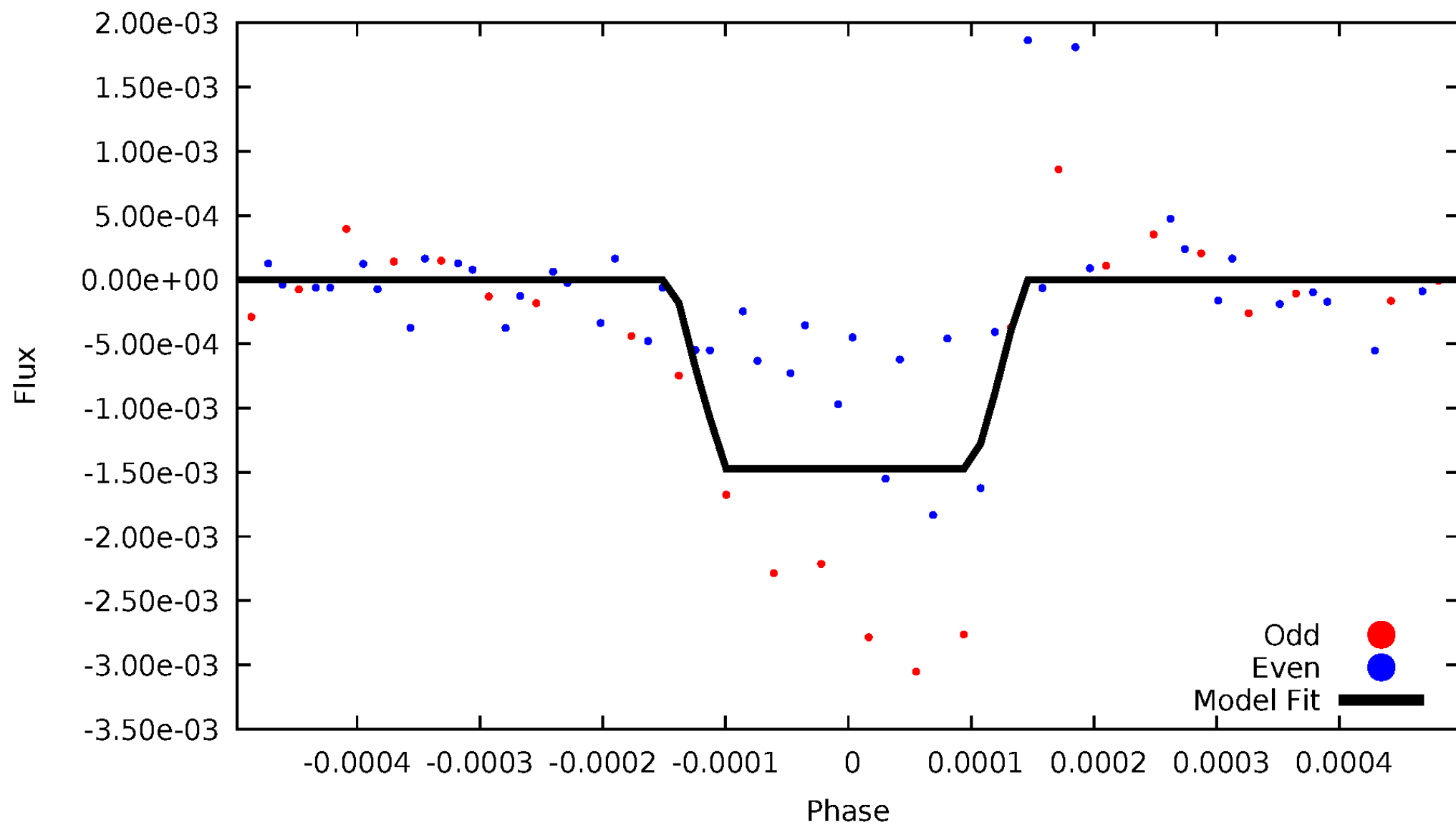
DV Odd/Even

TCE 006206885-03



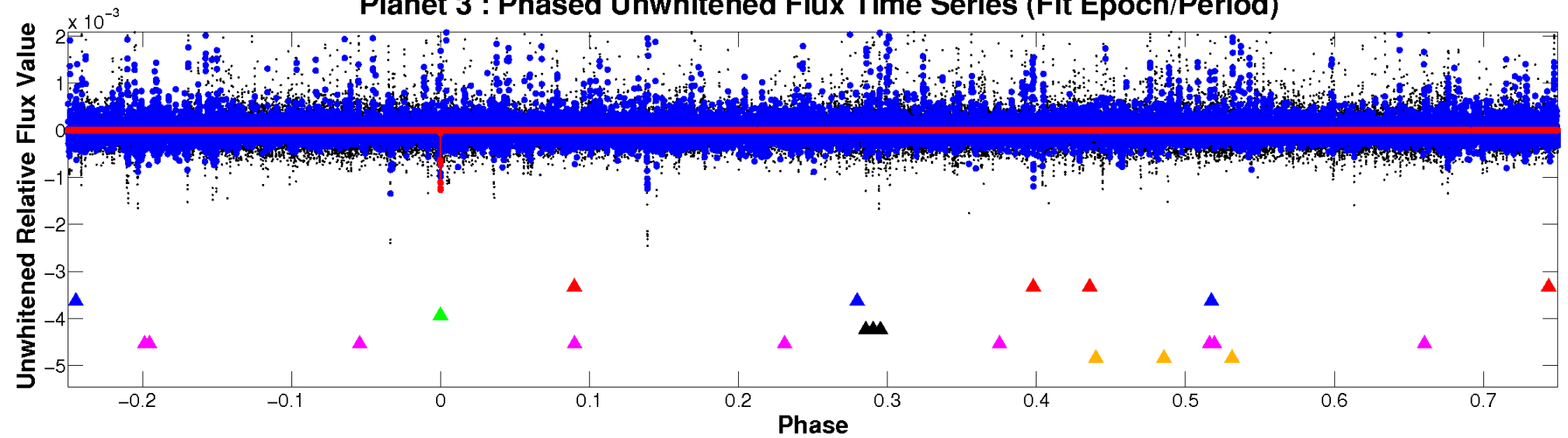
ALT Odd/Even

TCE 006206885-03

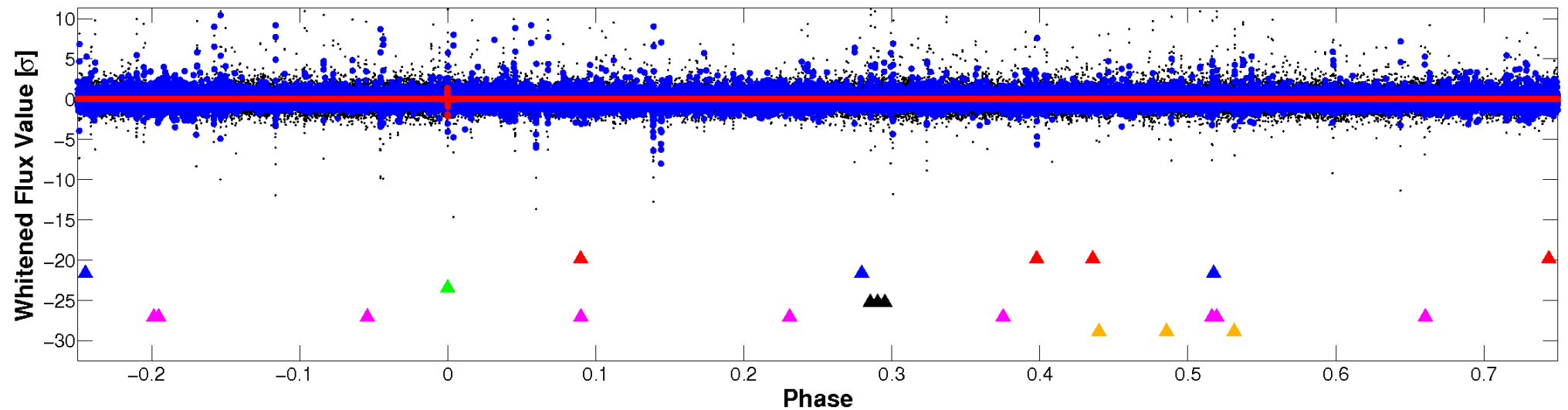


Non-Whitened Vs. Whitened Light Curve

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

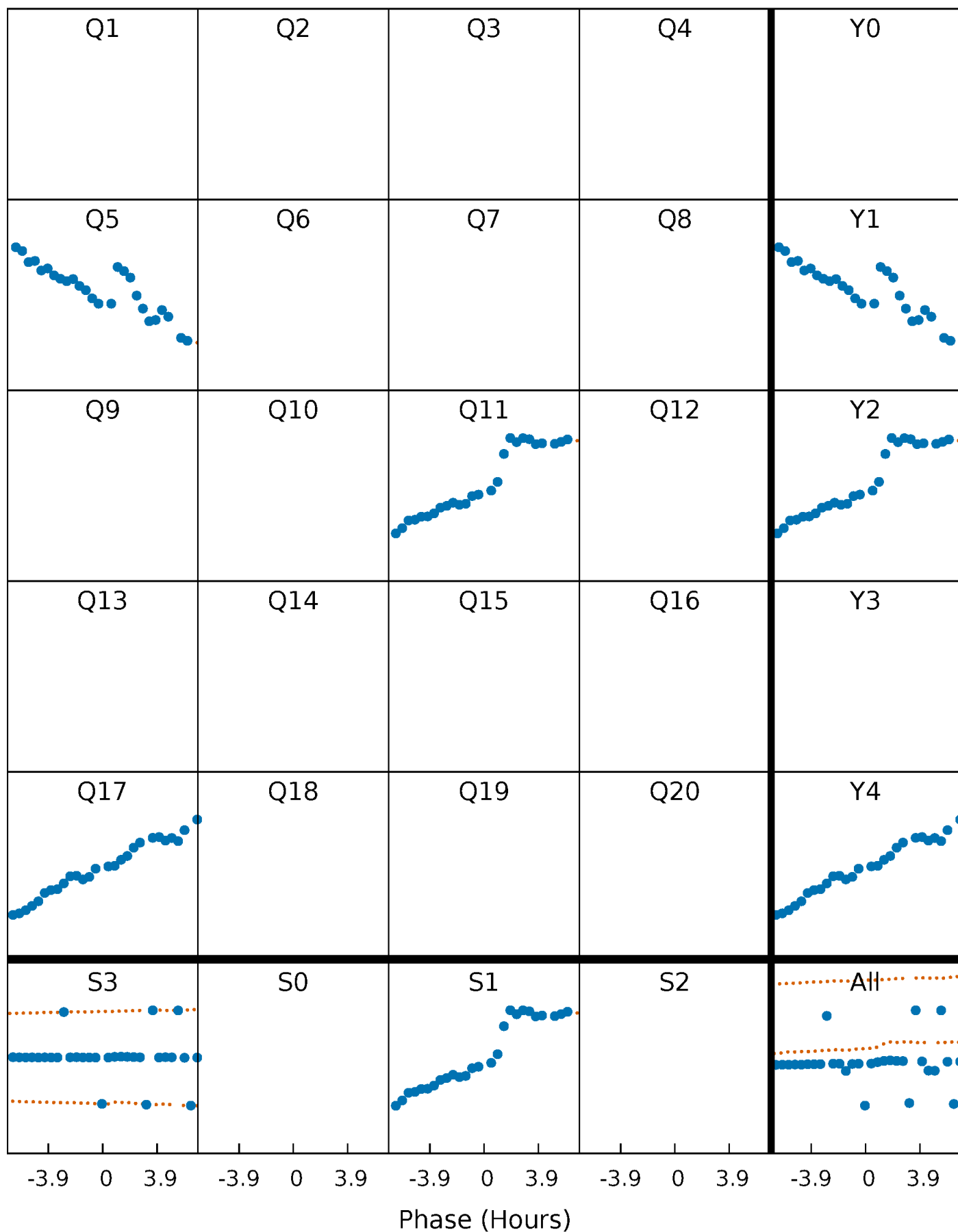


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



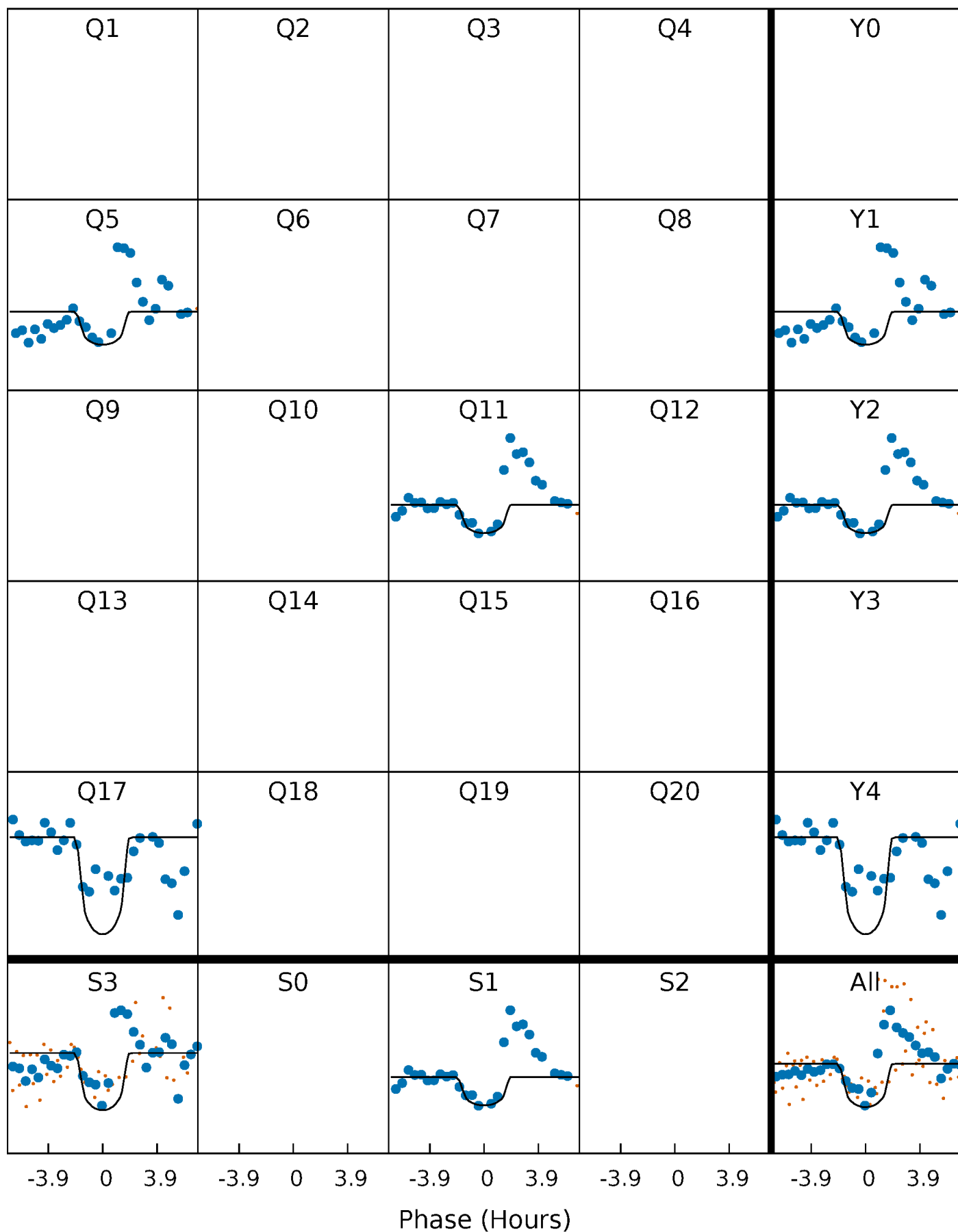
PDC Quarter-Phased Transit Curves

TCE 006206885-03 $P=528.477233$ Days $T_0=521.532483$ (BKJD)



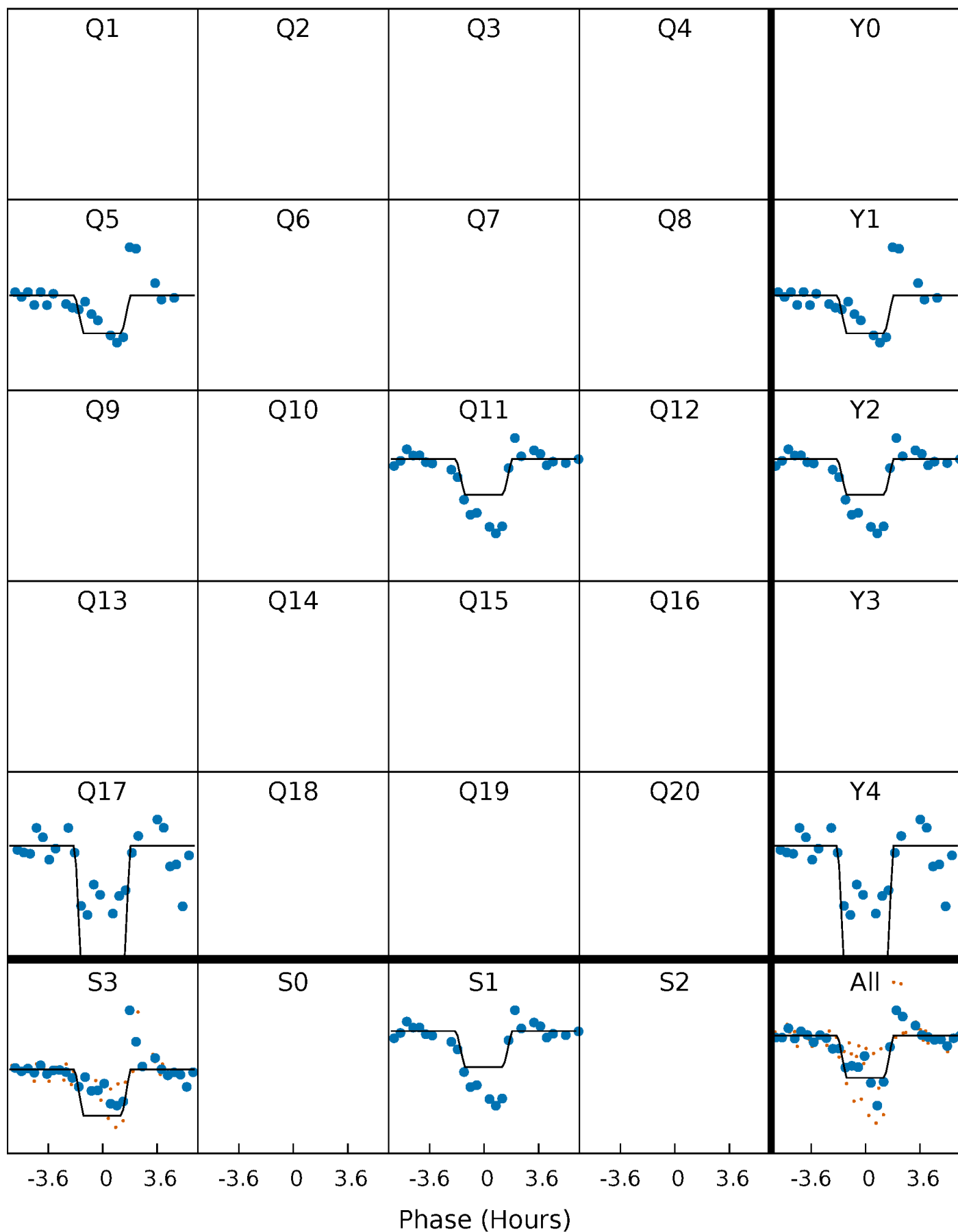
DV Quarter-Phased Transit Curves

TCE 006206885-03 P=528.477233 Days $T_0=521.532483$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

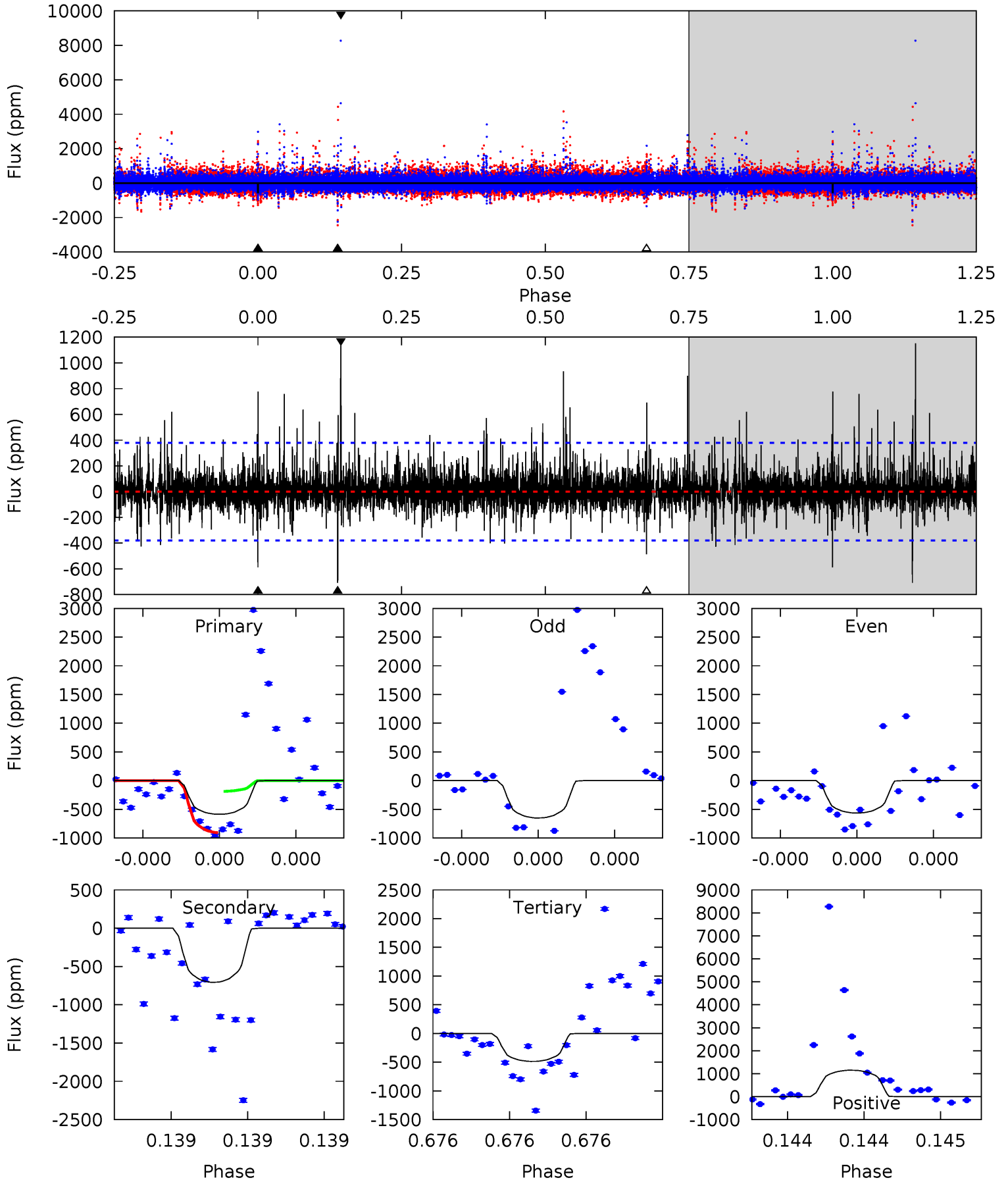
TCE 006206885-03 P=528.500407 Days $T_0=521.492872$ (BKJD)



DV Model-Shift Uniqueness Test

006206885-03, P = 528.477233 Days, E = 521.532483 Days

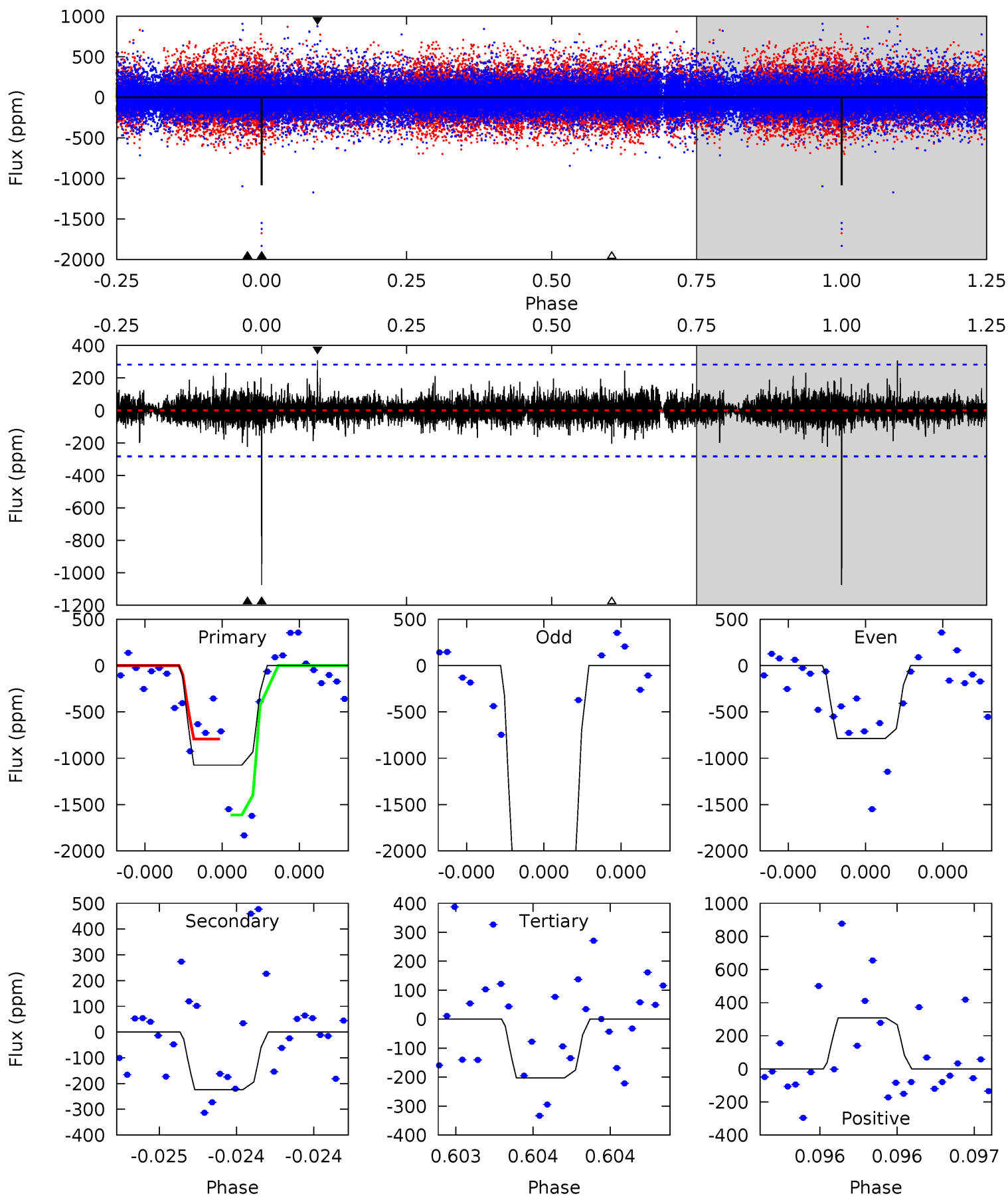
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.76	10.6	7.26	17.2	5.66	3.61	1.53	1.51	-8.42	3.30	-6.62	0.50	0.64	0.62	5.38



Alt Model-Shift Uniqueness Test

006206885-03, P = 528.500407 Days, E = 521.492872 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.6	4.51	4.08	6.19	5.68	3.64	0.84	17.5	15.4	0.42	-1.69	21.3	1.19	0.22	8.20



Stellar Parameters For KIC 006206885

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4927^{+137}_{-1}	$3.188^{+0.325}_{-0.325}$	$-0.340^{+0.300}_{-0.200}$	$3.924^{+2.178}_{-1.173}$	$0.865^{+0.336}_{-0.084}$	$0.020^{+0.041}_{-0.013}$
	+3%/-0%	+10%/-10%	+88%/-59%	+56%/-30%	+39%/-10%	+202%/-65%
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 006206885-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-707 ± 67	$27.59^{+30.16}_{-18.23}$	545^{+75}_{-64}	3536^{+1874}_{-603}	793^{+6159}_{-615}
Alt.	-224 ± 50	$28.13^{+27.49}_{-19.21}$	539^{+77}_{-59}	2986^{+1323}_{-476}	245^{+2270}_{-186}

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 $A_{obs} \gg 1.0$

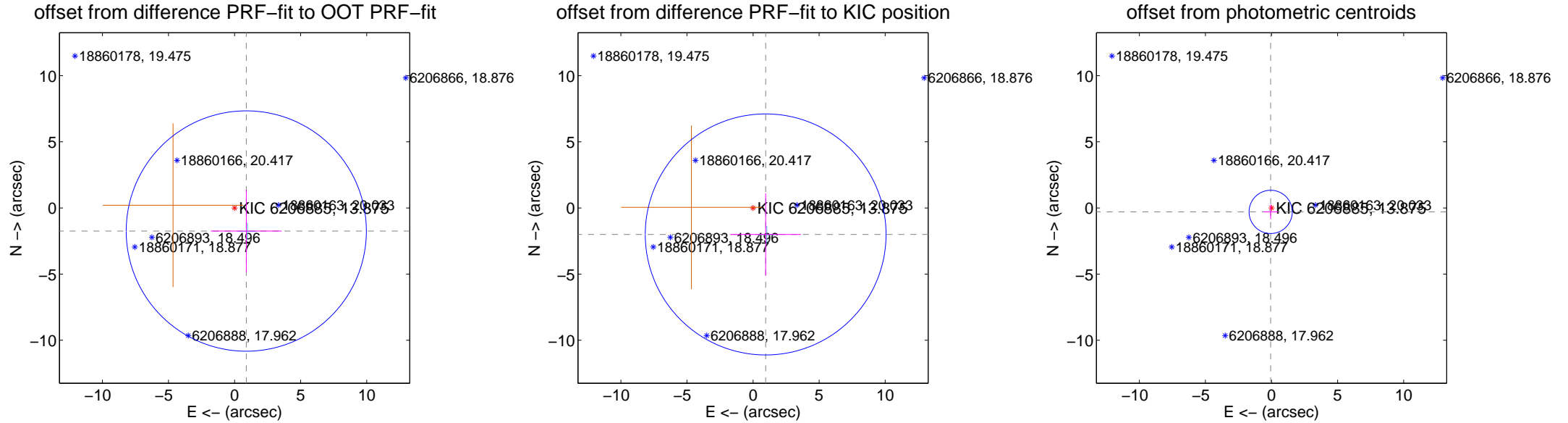
DV Centroid Data

Supplemental centroid analysis for 006206885-03. Kepler magnitude: 13.88. Transit SNR 8.50

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.957 ± 3.029	0.65	-0.886 ± 2.680	-1.745 ± 3.112
PRF-fit source offset from KIC position	2.218 ± 3.037	0.73	-0.954 ± 2.680	-2.003 ± 3.112
photometric centroid source offset	0.30 ± 0.54	0.56	0.06 ± 0.55	-0.30 ± 0.54

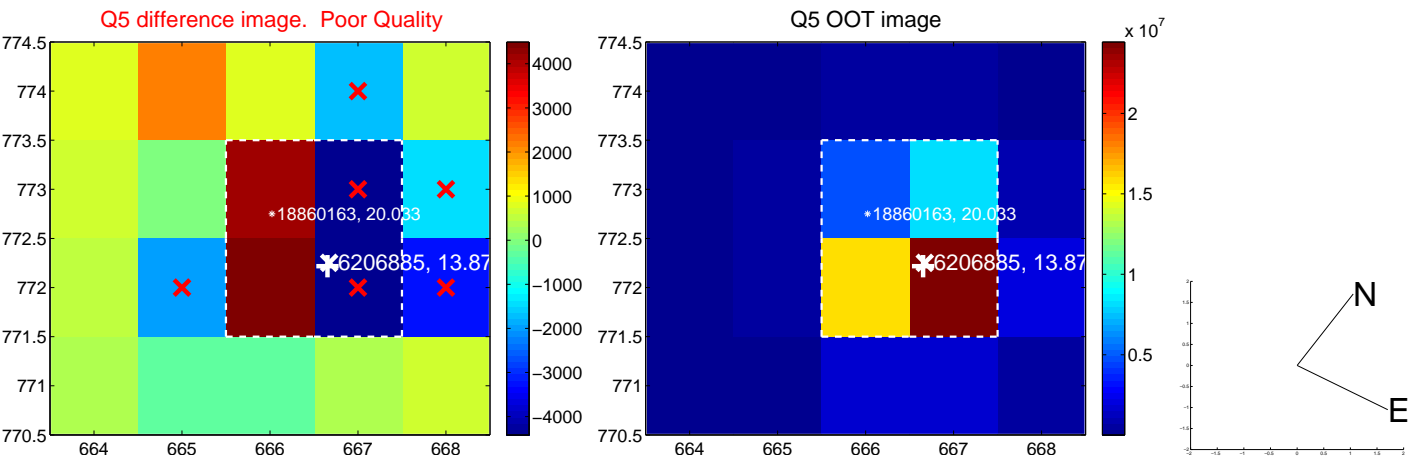


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

Q9 no difference image



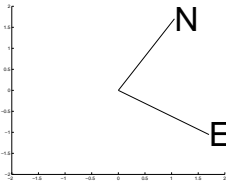
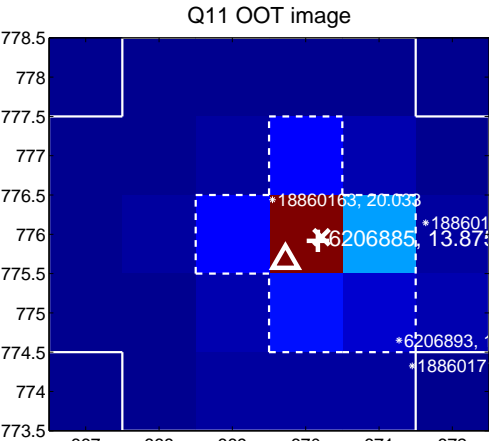
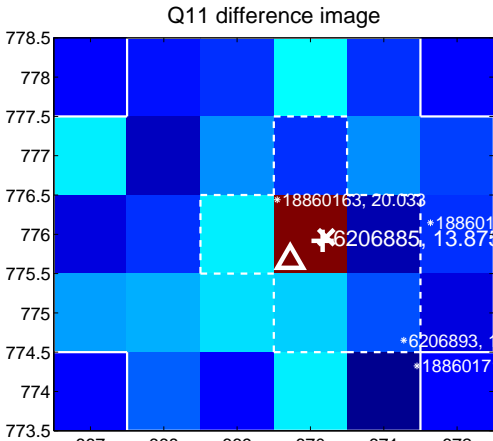
Q9 no OOT image



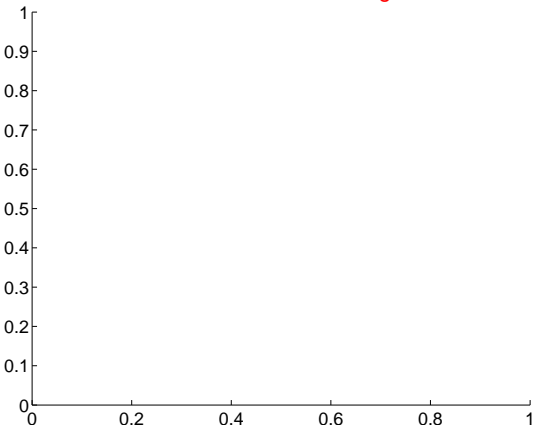
Q10 no difference image



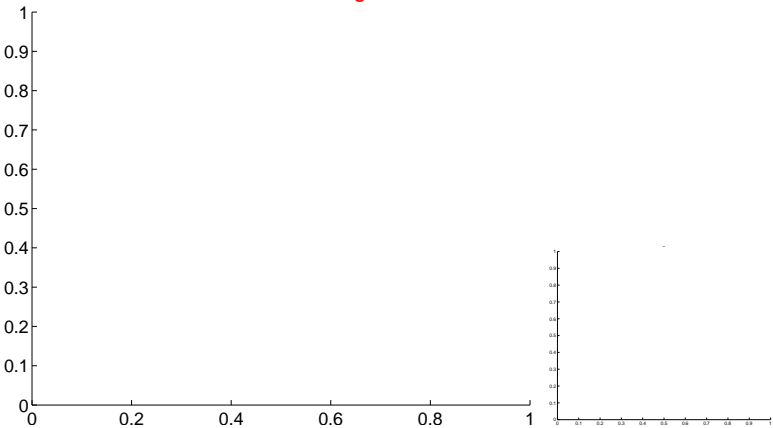
Q10 no OOT image



Q12 no difference image



Q12 no OOT image

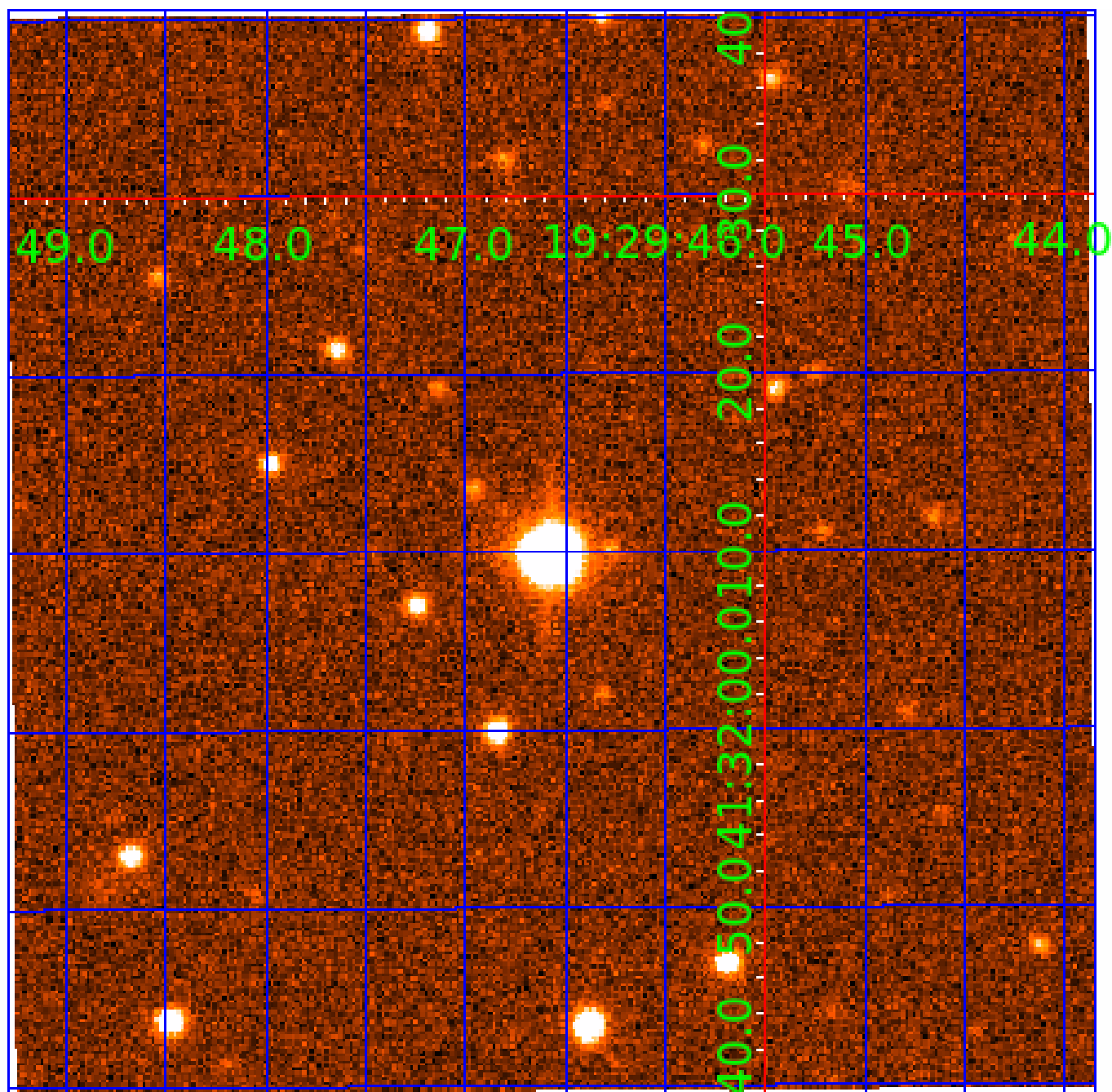


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006206885

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})
006206885-01	OBS	No	345.651210	223.355470	1246.1	7.996	18.0	8.0	3.92	4927	27.81	9.63
006206885-02	OBS	No	654.141900	140.872505	1822.4	8.376	17.0	10.0	3.92	4927	30.21	4.11
006206885-03	OBS	No	528.477233	521.532483	1269.7	3.422	14.3	8.5	3.92	4927	13.91	5.47
006206885-04	OBS	No	525.880068	149.129297	1138.2	6.688	15.2	7.4	3.92	4927	13.61	5.50
006206885-05	OBS	No	150.748756	267.590328	650.5	2.353	13.6	6.1	3.92	4927	10.40	29.11
006206885-06	OBS	No	552.632441	225.549643	731.6	6.000	12.5	-1.0	3.92	4927	10.31	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006206885-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—HALO_GHOST
006206885-02	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
006206885-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-04	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—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
006206885-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

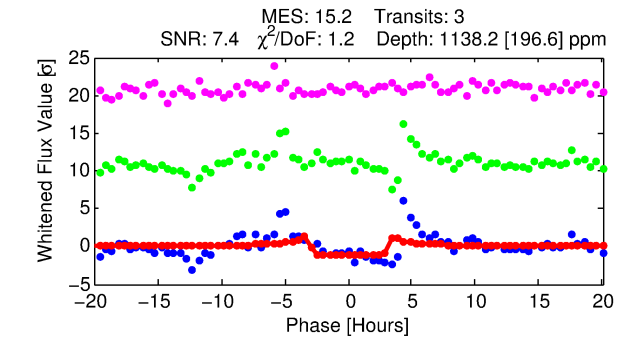
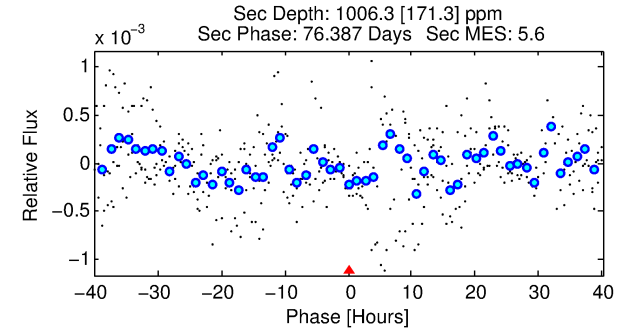
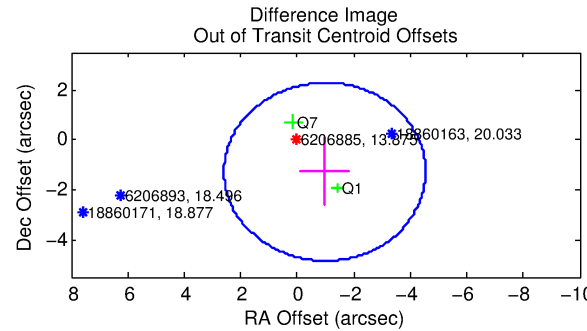
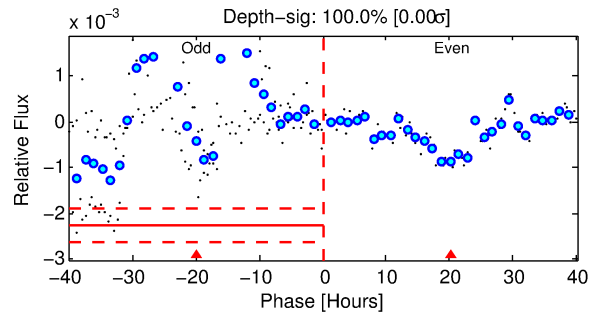
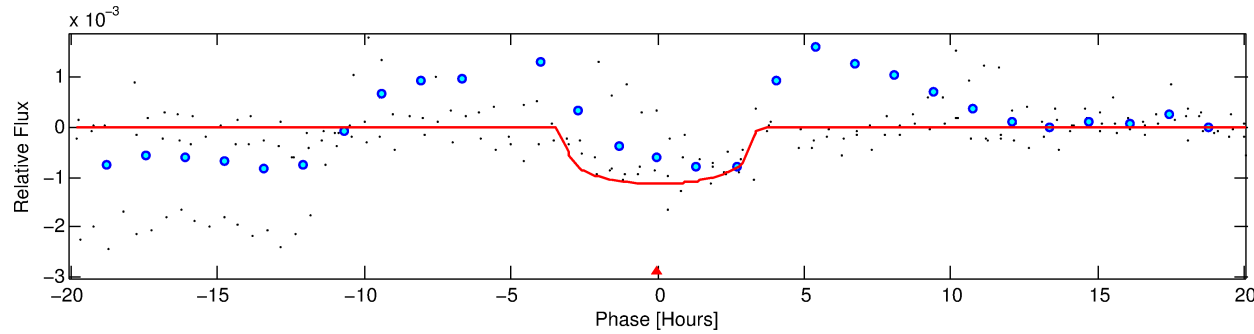
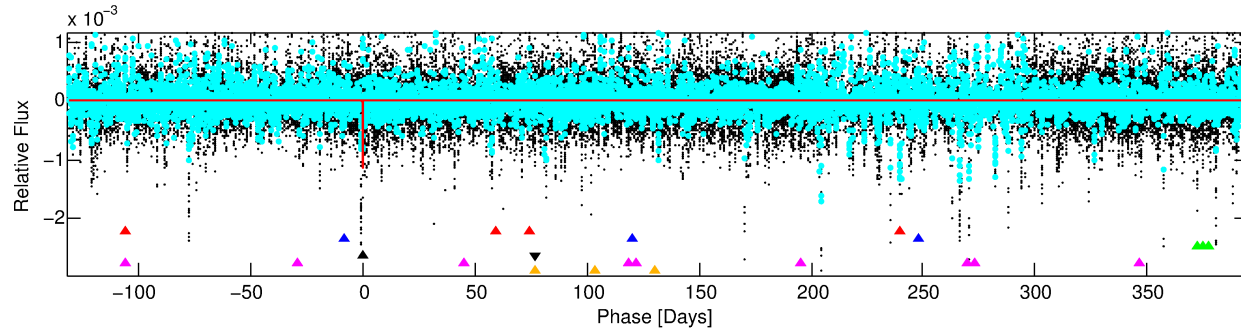
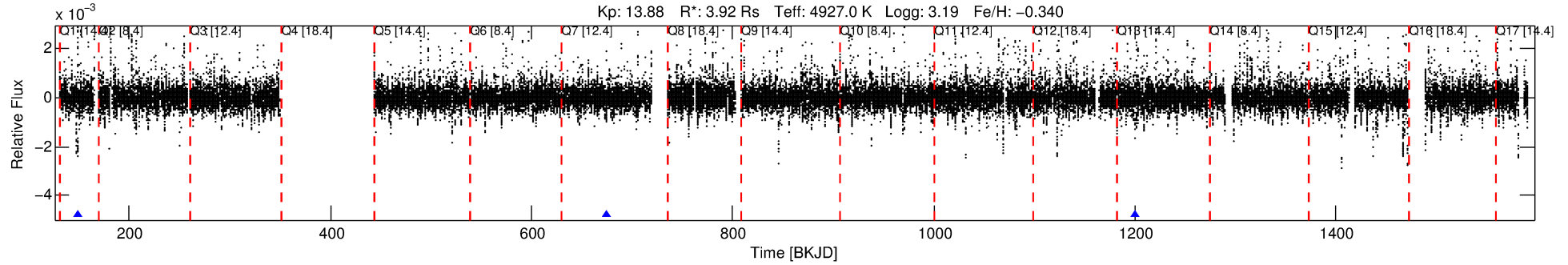
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006206885-04

No Significant Match Found

DV One-Page Summary

KIC: 6206885 Candidate: 4 of 6 Period: 525.880 d



DV Fit Results:

Period = 525.88007 [0.00741] d
Epoch = 149.1293 [0.0106] BKJD
Rp/R* = 0.0318 [0.0288]
a/R* = 512.20 [1625.88]
b = 0.58 [3.67]
Seff = 5.50 [3.47]
Teq = 391 [62] K
Rp = 13.61 [14.47] Re
a = 1.2156 [0.5425] AU
Ag = 4418.20 [8504.90] [0.52σ]
Teffp = 4923 [2247] K [2.02σ]

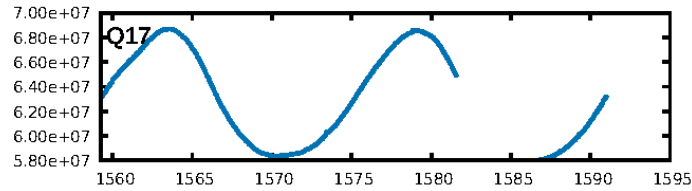
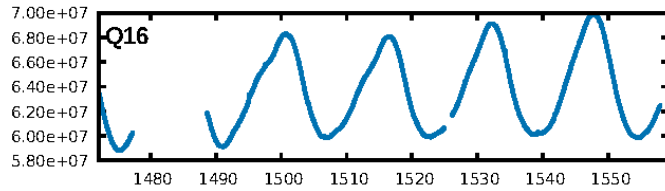
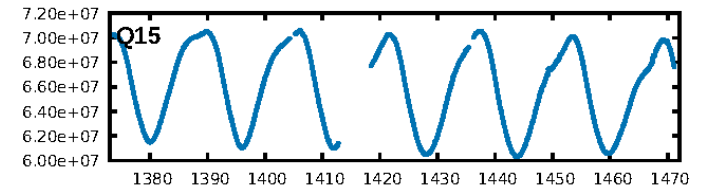
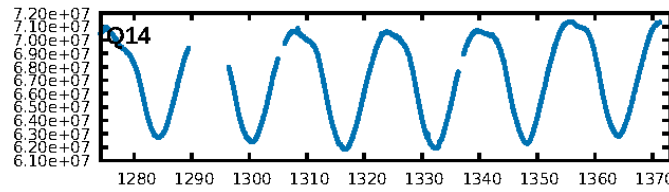
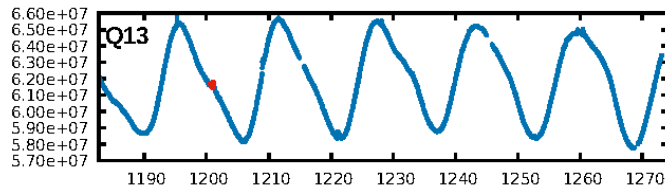
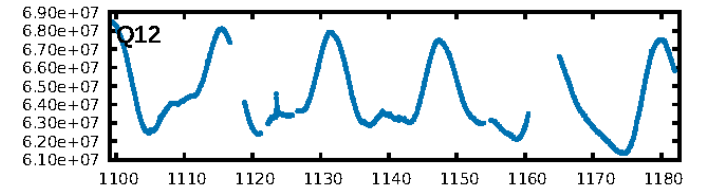
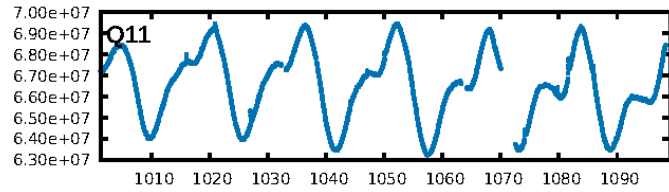
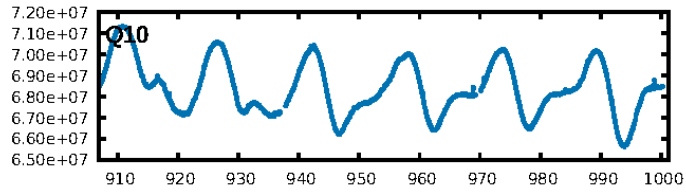
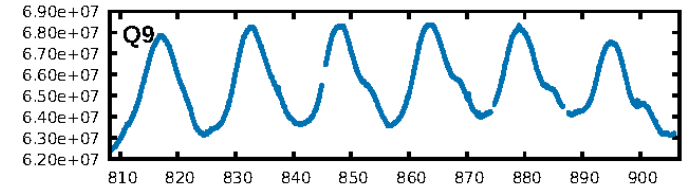
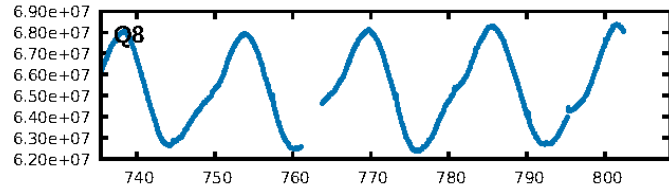
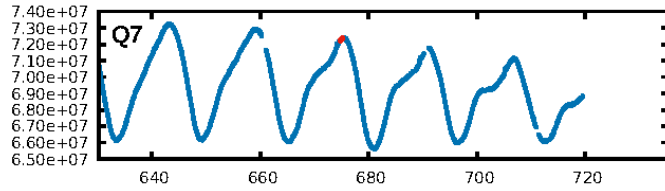
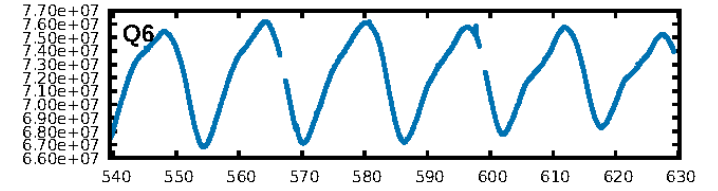
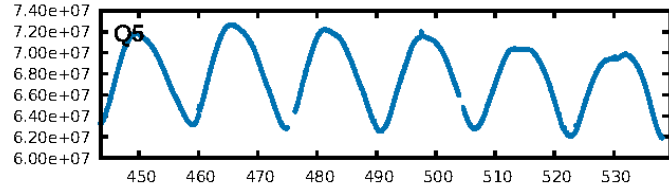
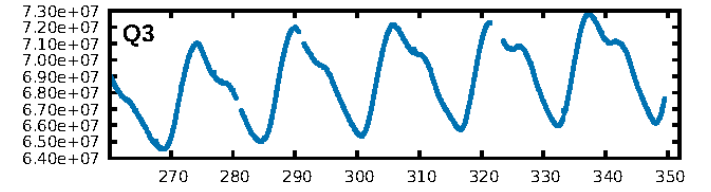
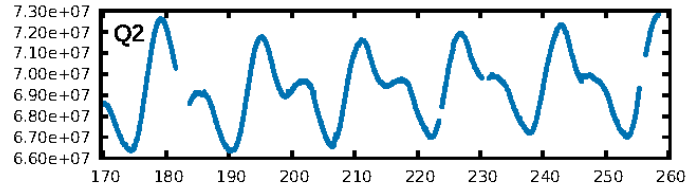
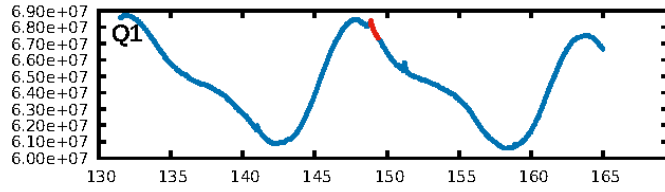
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [414.94σ]
LongPeriod-sig: 100.0% [8.30σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 83.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: -0.7571
Centroid-sig: 0.1%
Centroid-so: 1.016 arcsec [1.99σ]
OotOffset-rm: 1.614 arcsec [1.36σ]
KicOffset-rm: 1.766 arcsec [1.23σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

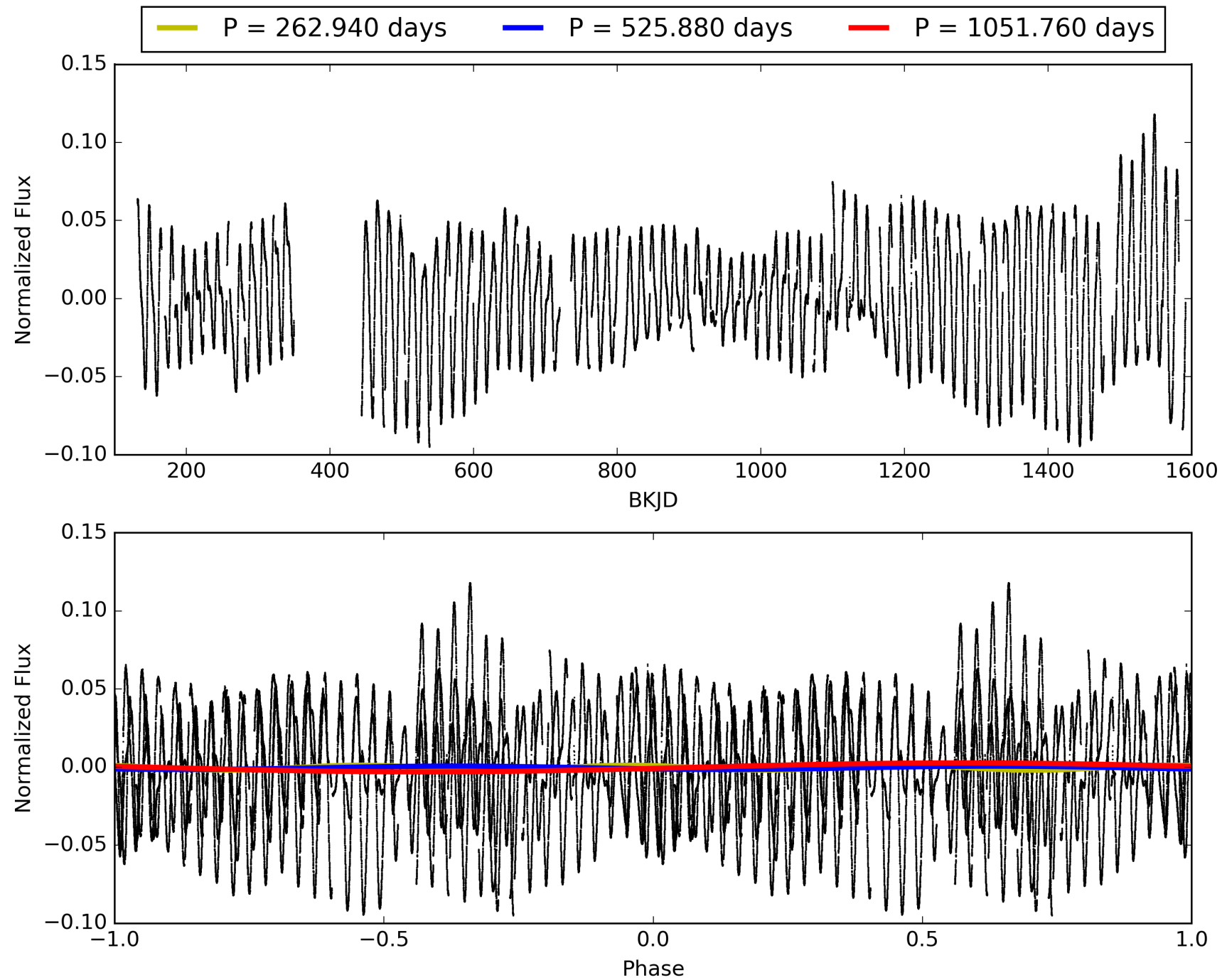
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:01:48 Z

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

TCE 006206885-04, PDC Light Curves

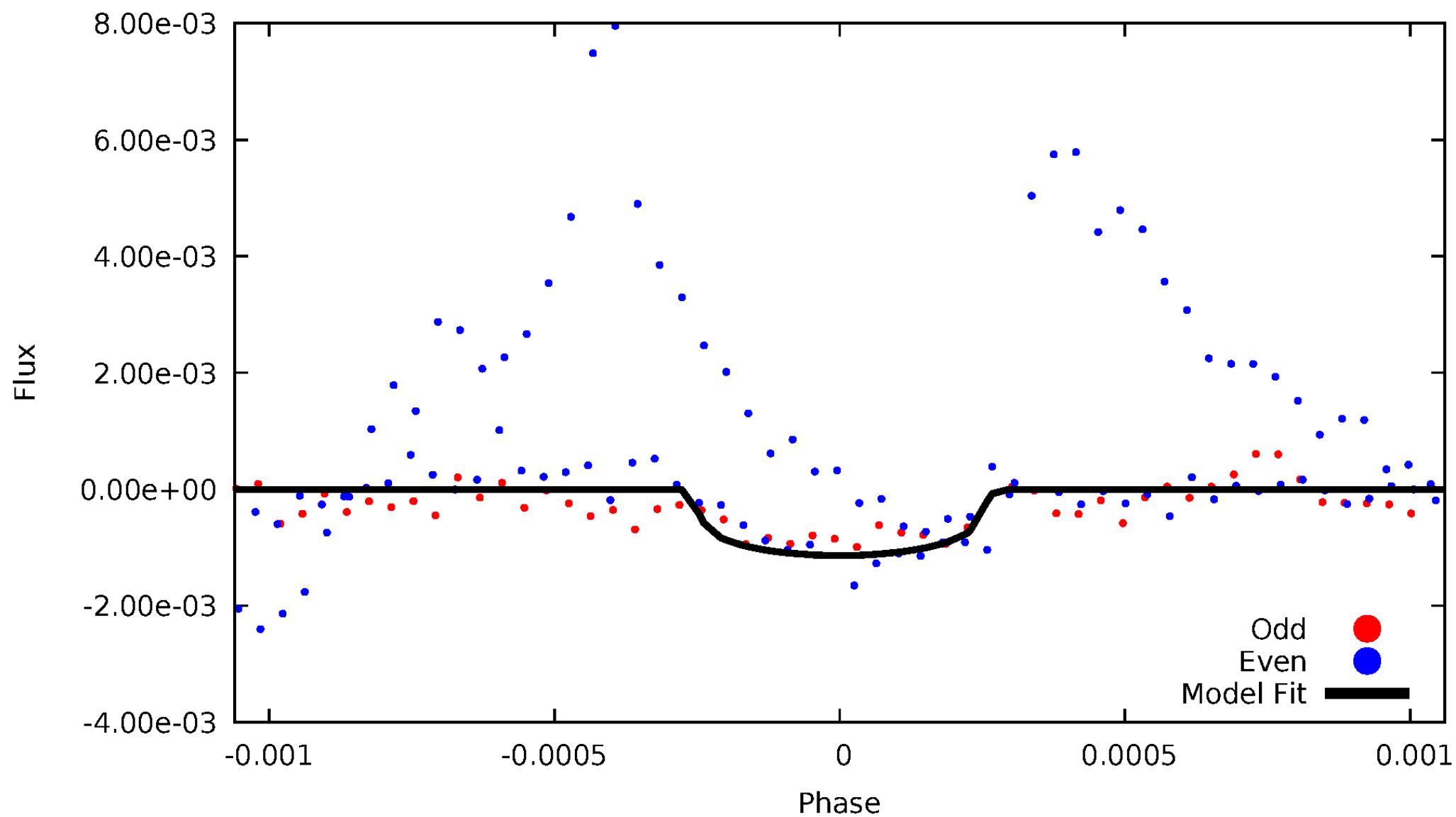


TCE 006206885-04



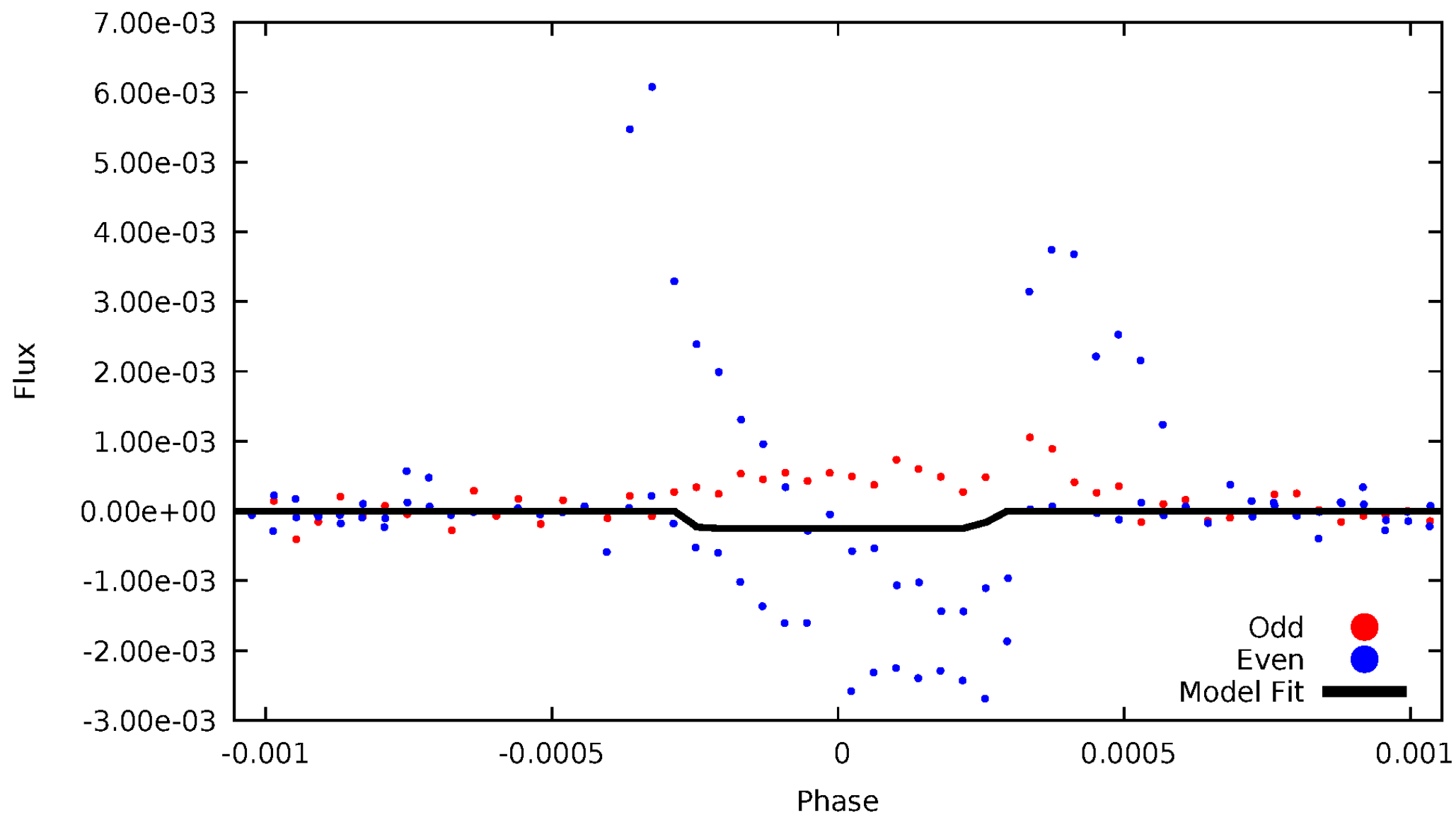
DV Odd/Even

TCE 006206885-04



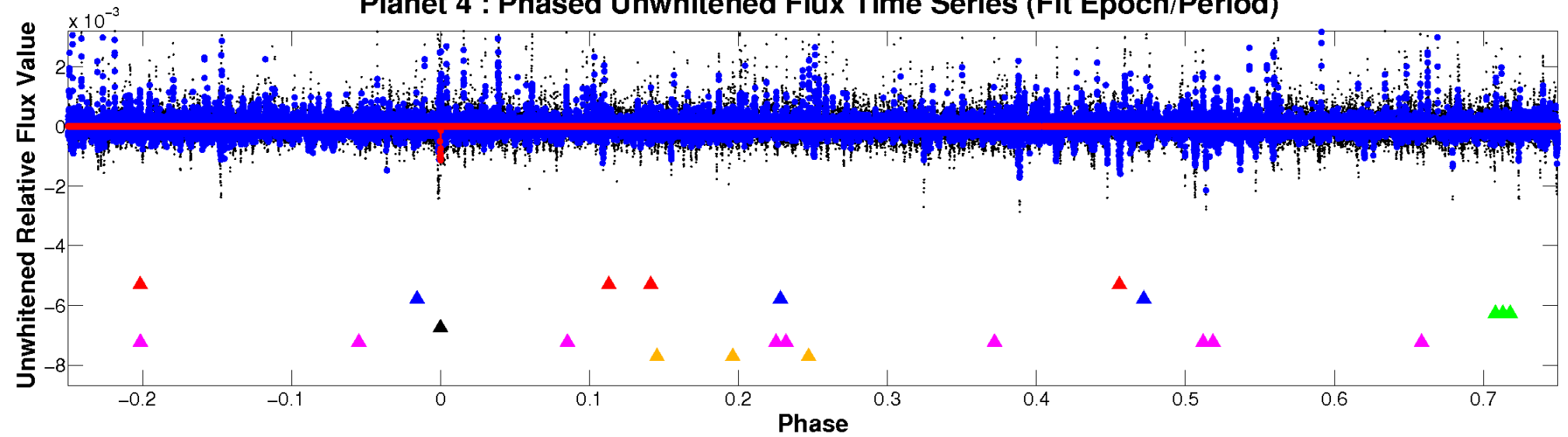
ALT Odd/Even

TCE 006206885-04

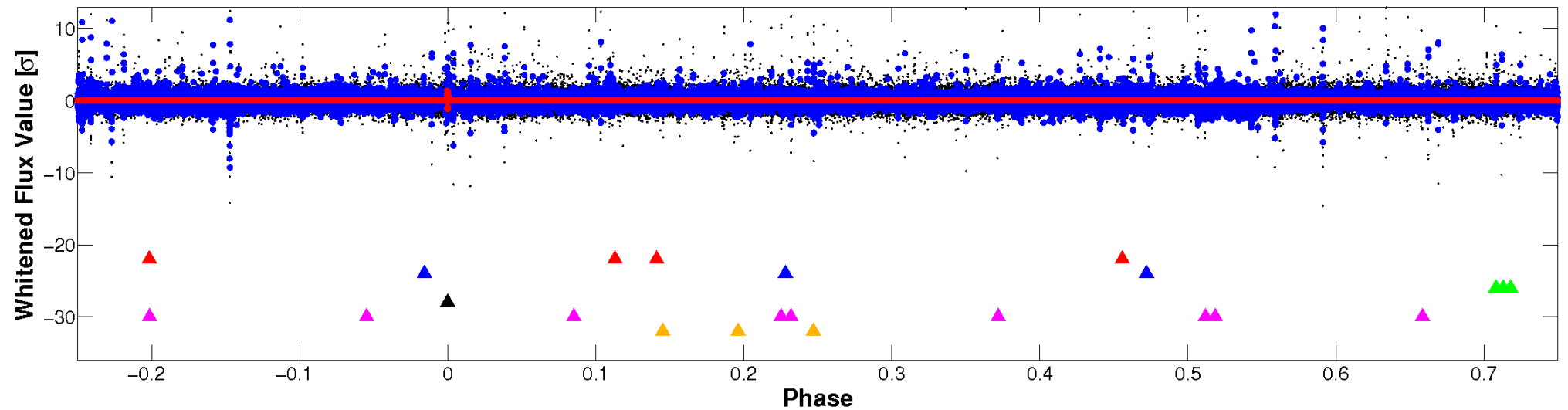


Non-Whitened Vs. Whitened Light Curve

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

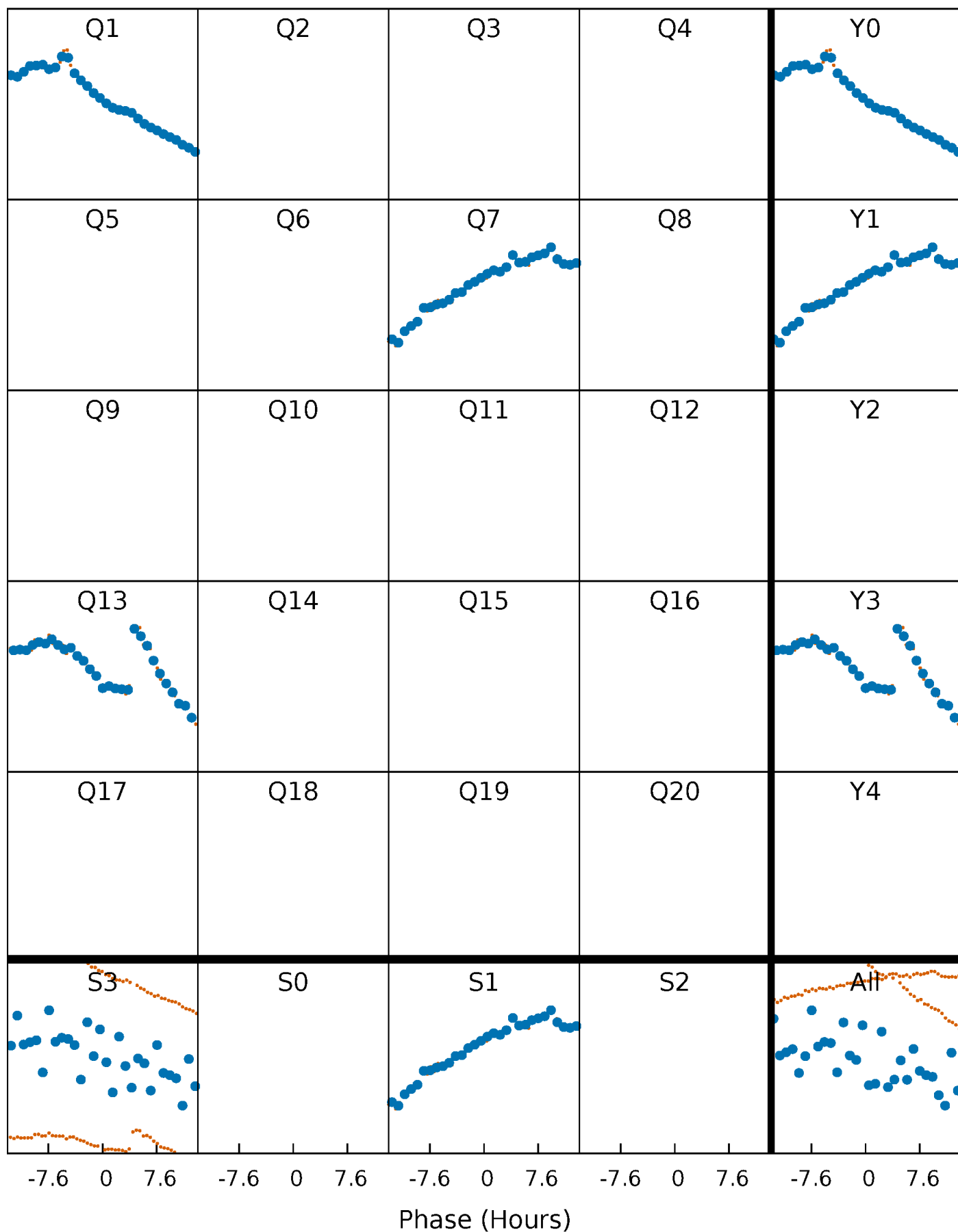


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



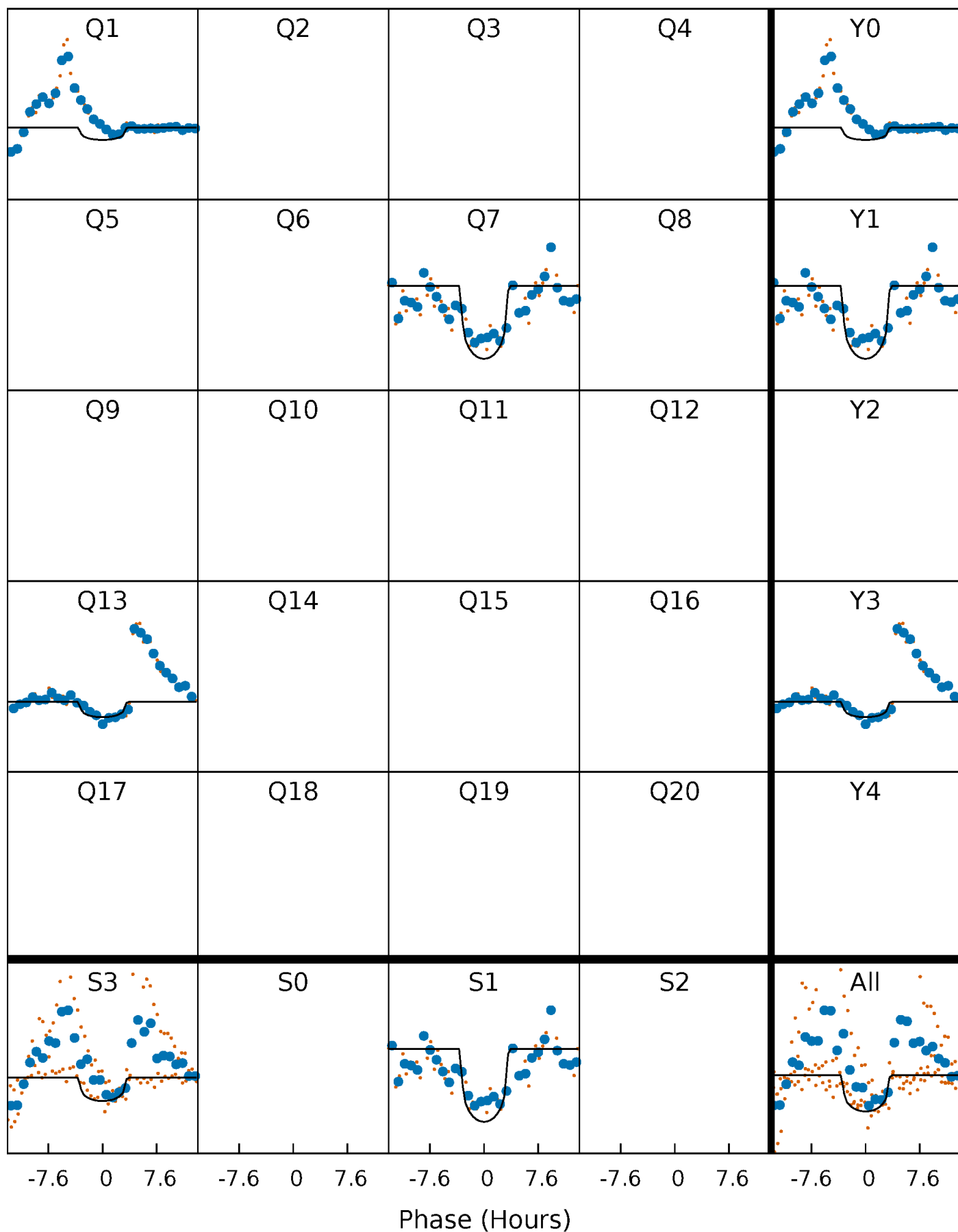
PDC Quarter-Phased Transit Curves

TCE 006206885-04 P=525.880068 Days $T_0=149.129297$ (BKJD)



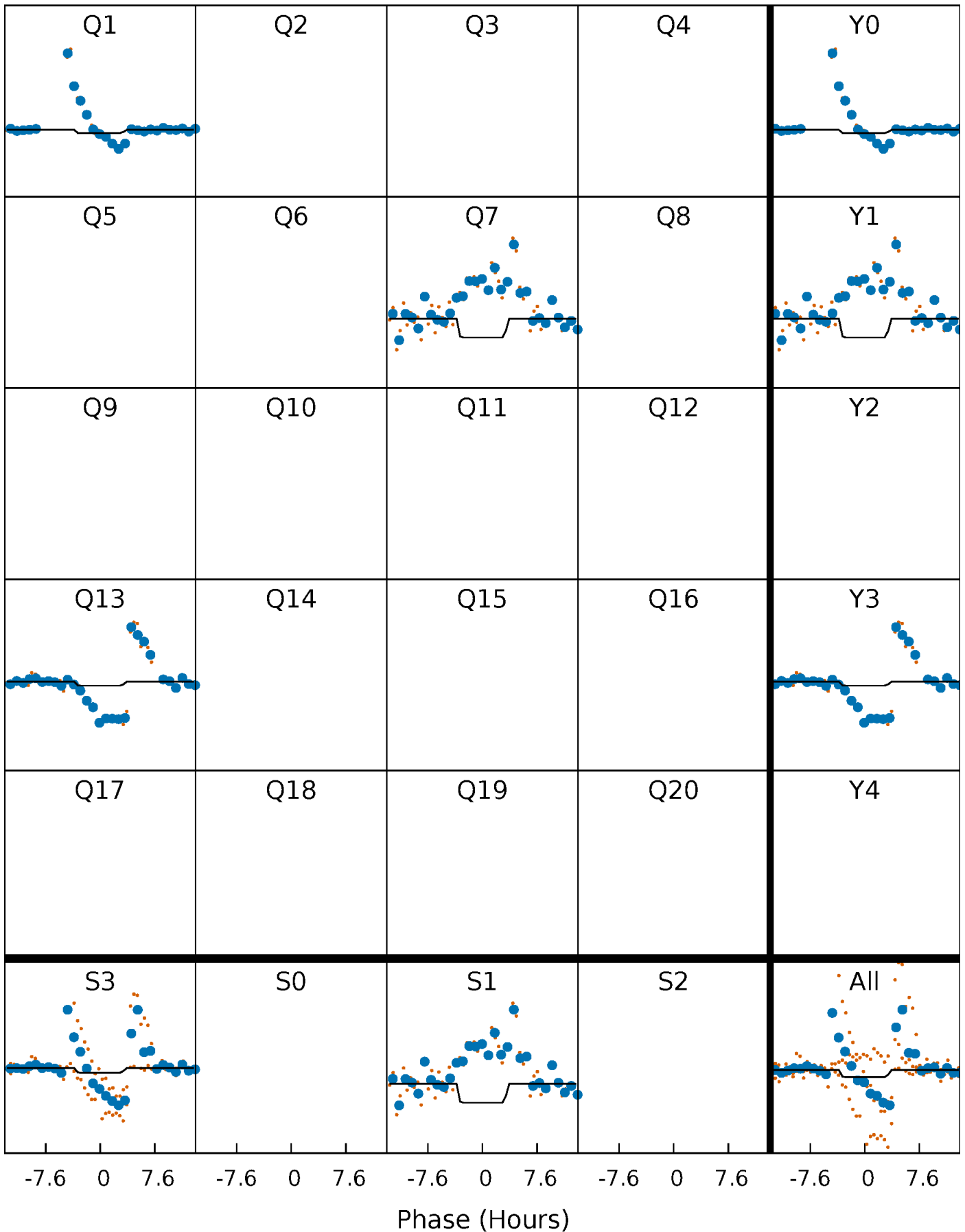
DV Quarter-Phased Transit Curves

TCE 006206885-04 $P=525.880068$ Days $T_0=149.129297$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

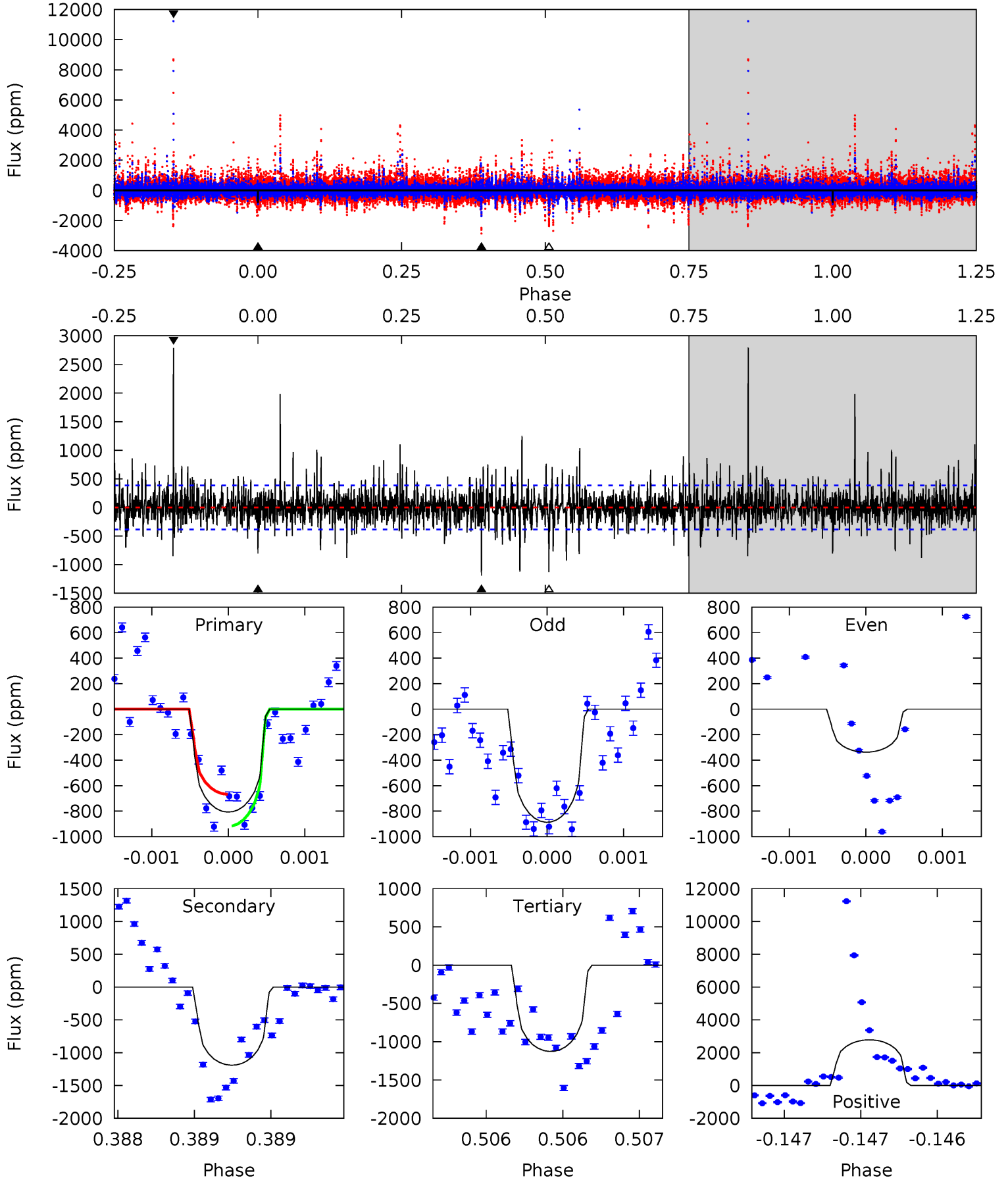
TCE 006206885-04 $P=525.898534$ Days $T_0=149.093412$ (BKJD)



DV Model-Shift Uniqueness Test

006206885-04, P = 525.880068 Days, E = 149.129297 Days

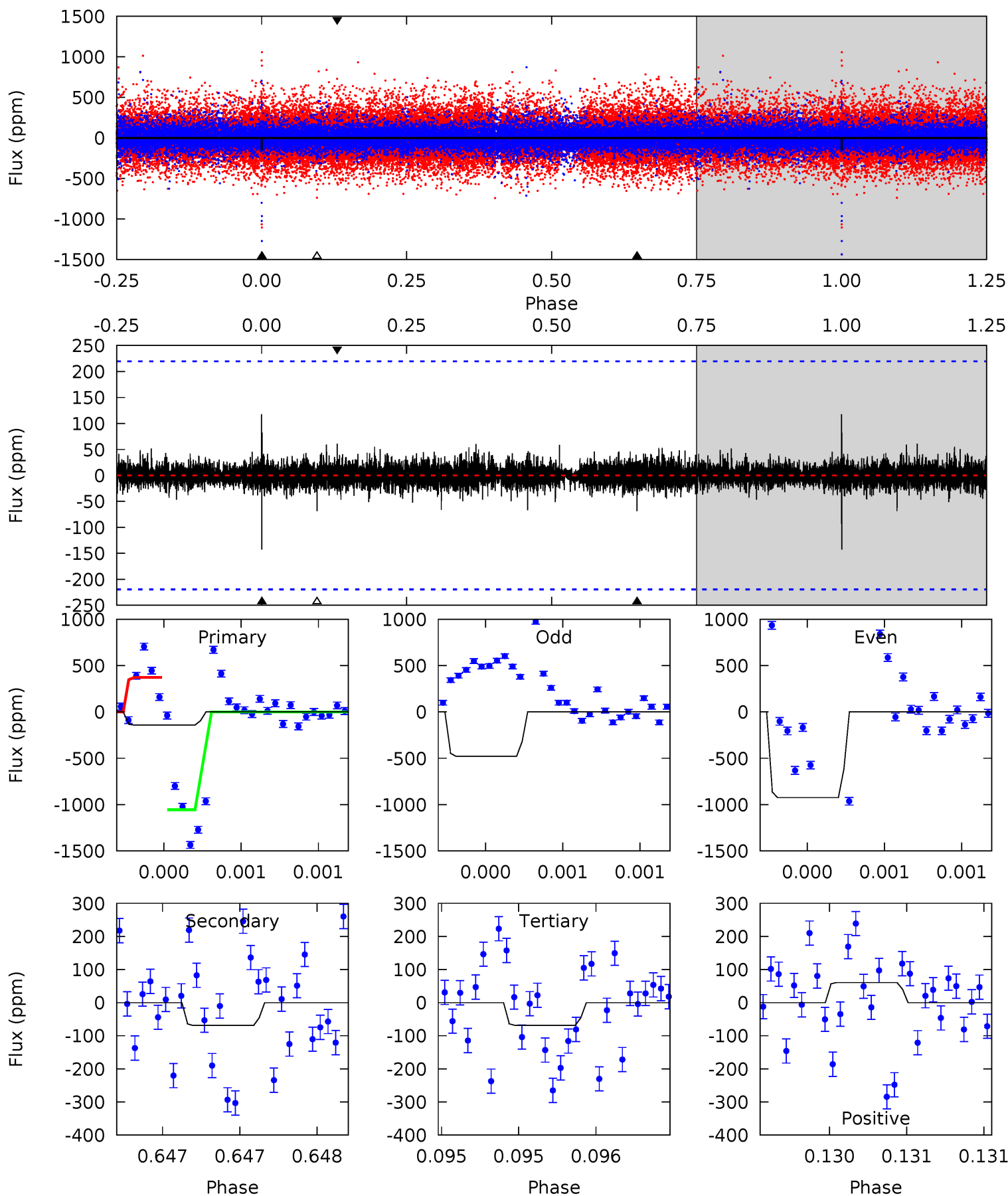
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	17.2	16.3	40.2	5.56	3.46	3.04	-4.61	-28.5	0.92	-23.0	3.63	0.62	0.70	1.79



Alt Model-Shift Uniqueness Test

006206885-04, P = 525.898534 Days, E = 149.093412 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.61	1.74	1.73	1.54	5.56	3.46	0.32	1.88	2.07	0.01	0.21	7.65	20.1	0.45	8.25



Stellar Parameters For KIC 006206885

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4927^{+137}_{-1}	$3.188^{+0.325}_{-0.325}$	$-0.340^{+0.300}_{-0.200}$	$3.924^{+2.178}_{-1.173}$	$0.865^{+0.336}_{-0.084}$	$0.020^{+0.041}_{-0.013}$
	+3%/-0%	+10%/-10%	+88%/-59%	+56%/-30%	+39%/-10%	+202%/-65%
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 006206885-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1191 ± 69	$15.74^{+12.83}_{-9.37}$	542^{+74}_{-60}	4851^{+2543}_{-912}	4197^{+21506}_{-2945}
Alt.	-69 ± 39	$11.78^{+11.38}_{-8.12}$	541^{+75}_{-60}	3202^{+1531}_{-639}	366^{+3568}_{-294}

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

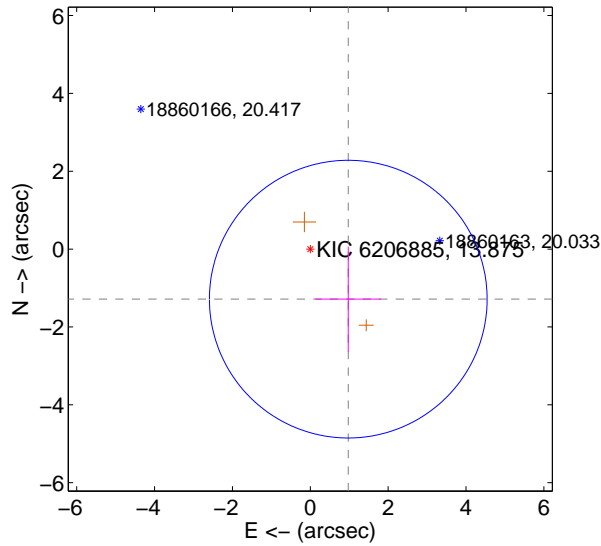
Supplemental centroid analysis for 006206885-04. Kepler magnitude: 13.88. Transit SNR 7.44

There are 0 quarters with good PRF difference image offsets

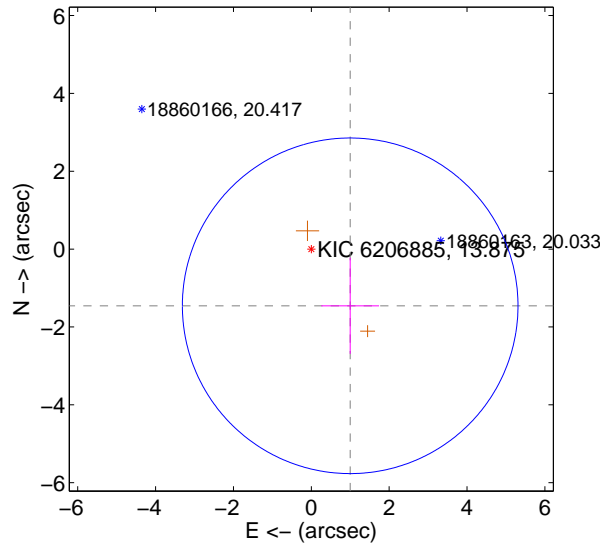
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.614 ± 1.189	1.36	-0.976 ± 0.844	-1.285 ± 1.348
PRF-fit source offset from KIC position	1.766 ± 1.437	1.23	-0.999 ± 0.742	-1.456 ± 1.235
photometric centroid source offset	1.02 ± 0.51	1.99	-0.87 ± 0.51	0.53 ± 0.52

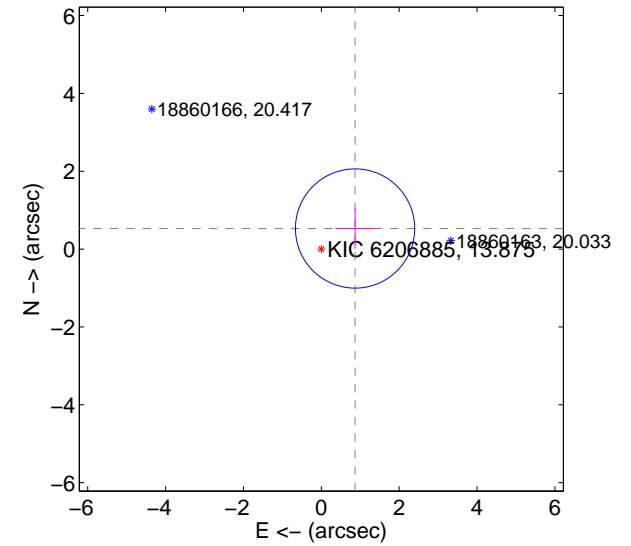
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

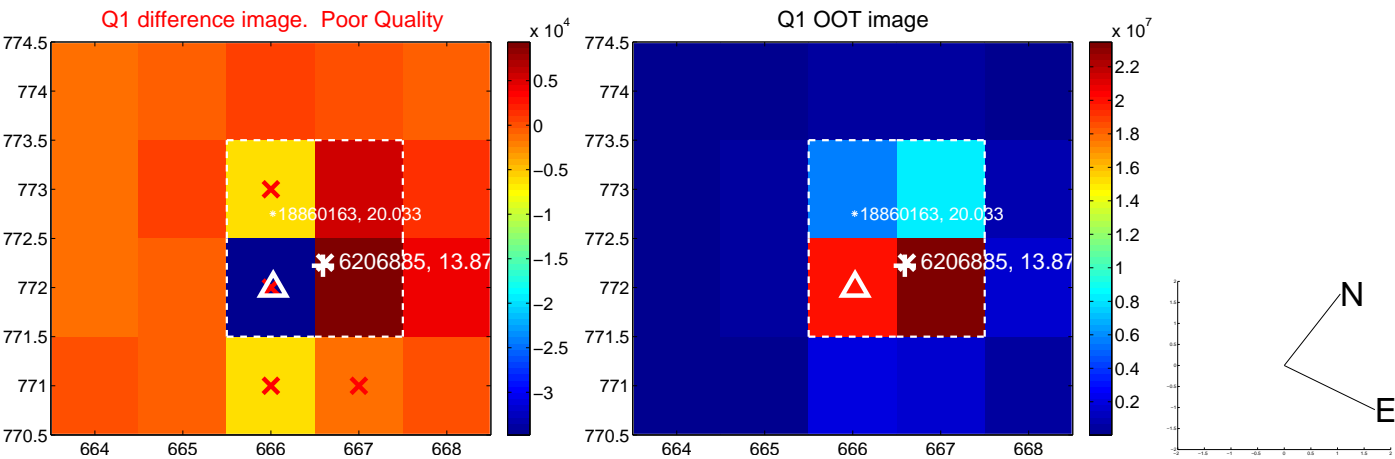


offset from photometric centroids



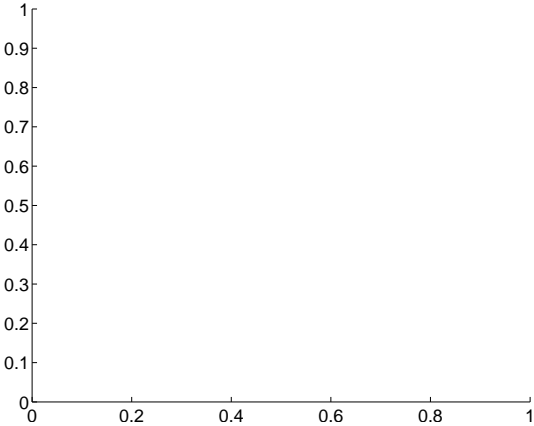
Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

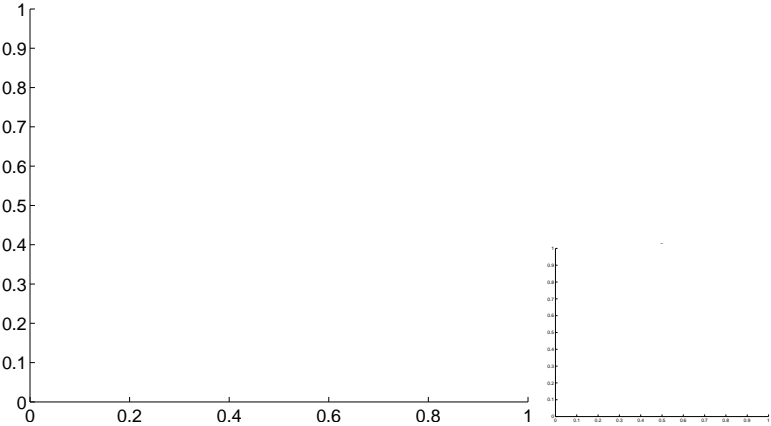


white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

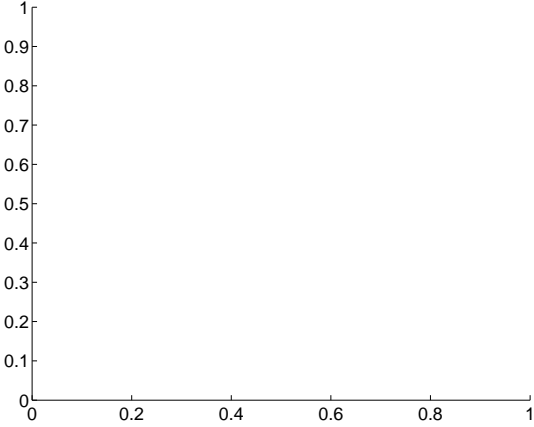
Q5 no difference image



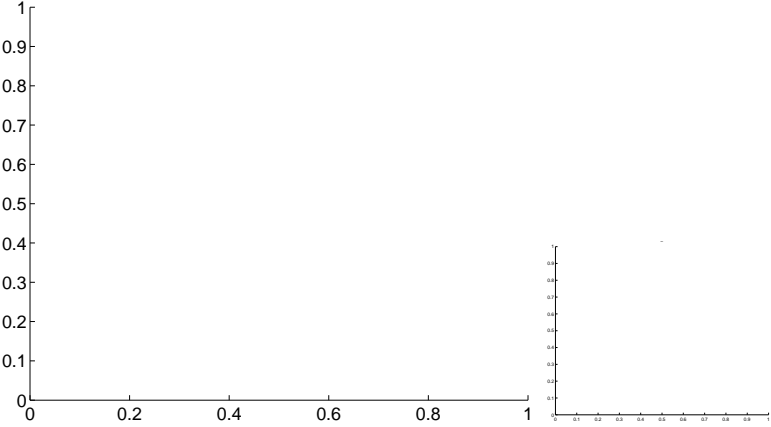
Q5 no OOT image



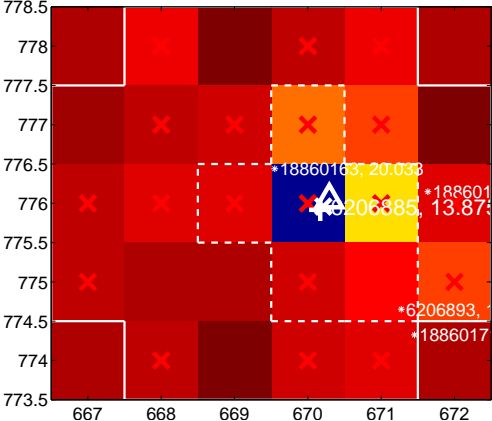
Q6 no difference image



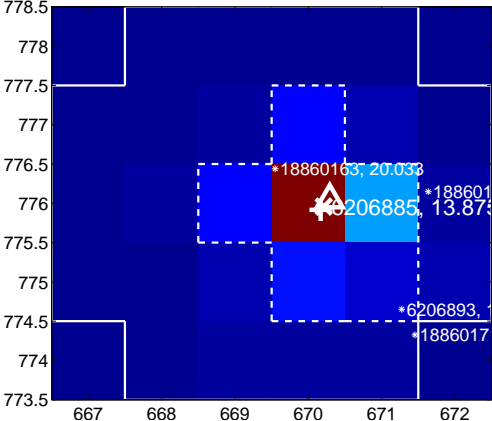
Q6 no OOT image



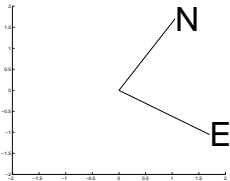
Q7 difference image. Poor Quality



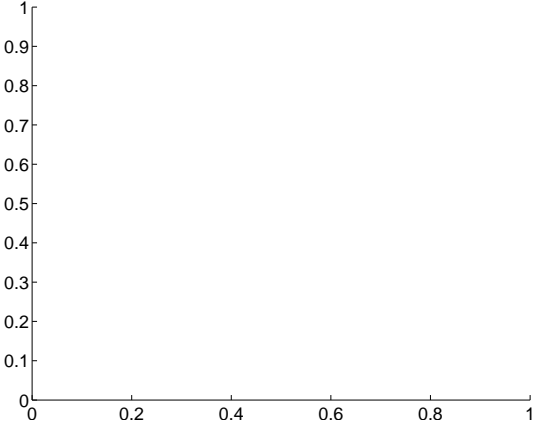
Q7 OOT image



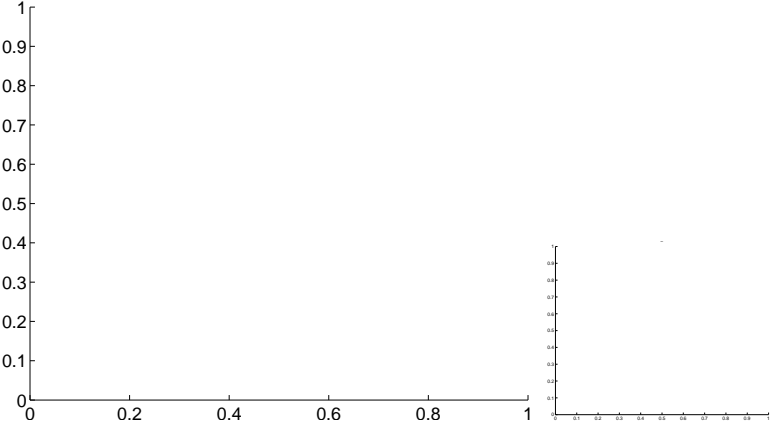
$\times 10^7$



Q8 no difference image



Q8 no OOT image



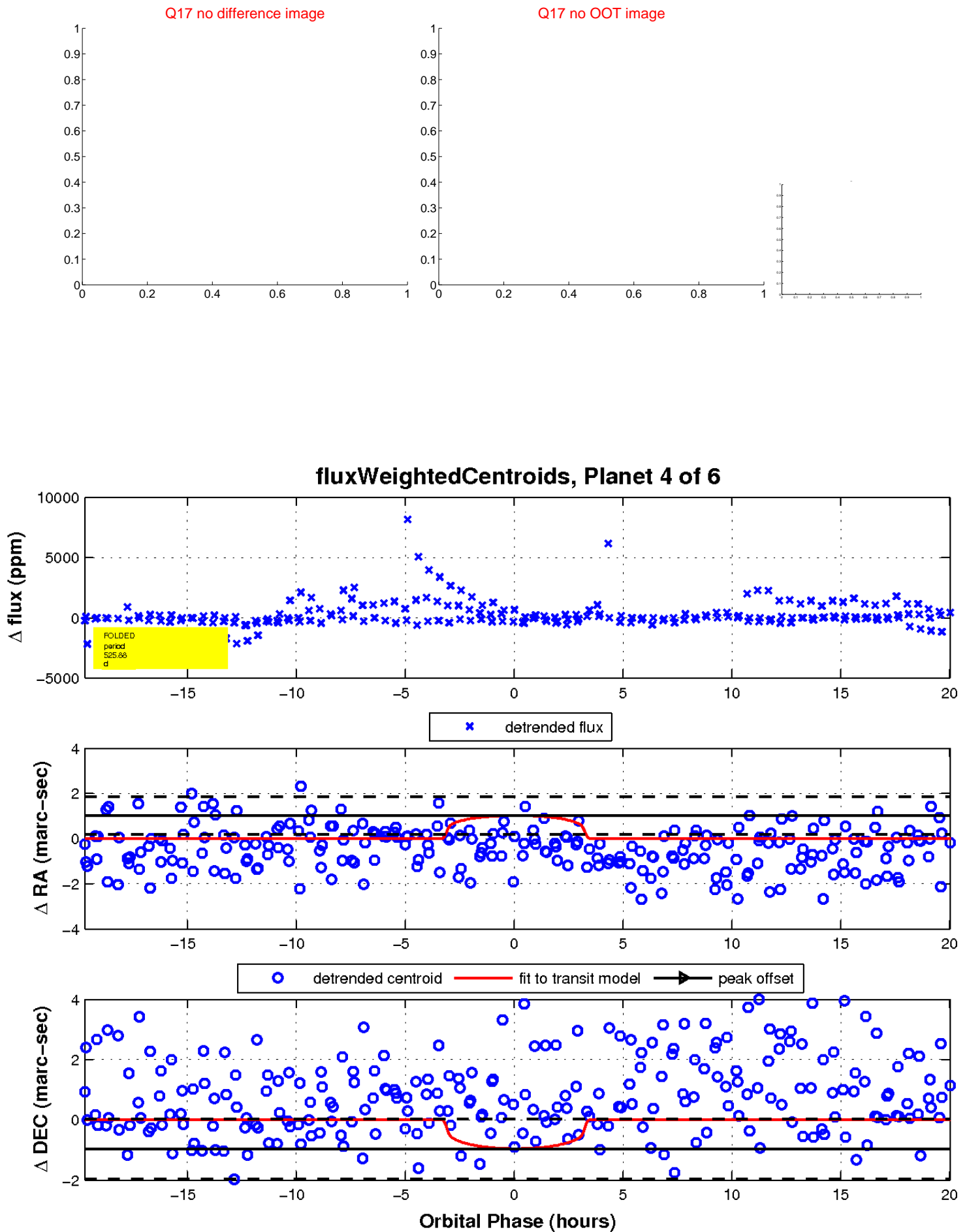
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

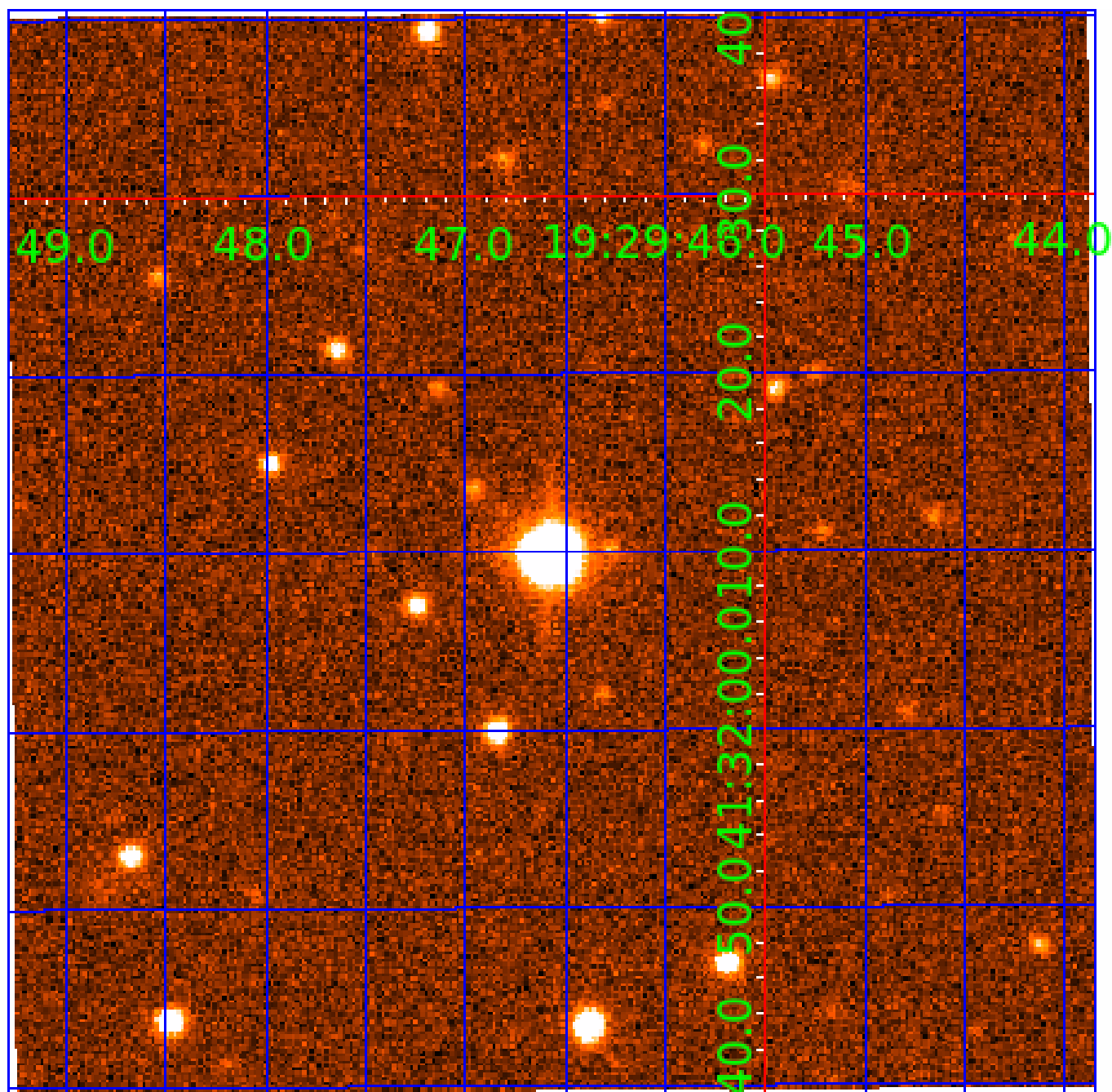


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006206885

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})
006206885-01	OBS	No	345.651210	223.355470	1246.1	7.996	18.0	8.0	3.92	4927	27.81	9.63
006206885-02	OBS	No	654.141900	140.872505	1822.4	8.376	17.0	10.0	3.92	4927	30.21	4.11
006206885-03	OBS	No	528.477233	521.532483	1269.7	3.422	14.3	8.5	3.92	4927	13.91	5.47
006206885-04	OBS	No	525.880068	149.129297	1138.2	6.688	15.2	7.4	3.92	4927	13.61	5.50
006206885-05	OBS	No	150.748756	267.590328	650.5	2.353	13.6	6.1	3.92	4927	10.40	29.11
006206885-06	OBS	No	552.632441	225.549643	731.6	6.000	12.5	-1.0	3.92	4927	10.31	5.15

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006206885-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—HALO_GHOST
006206885-02	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
006206885-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-04	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—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
006206885-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

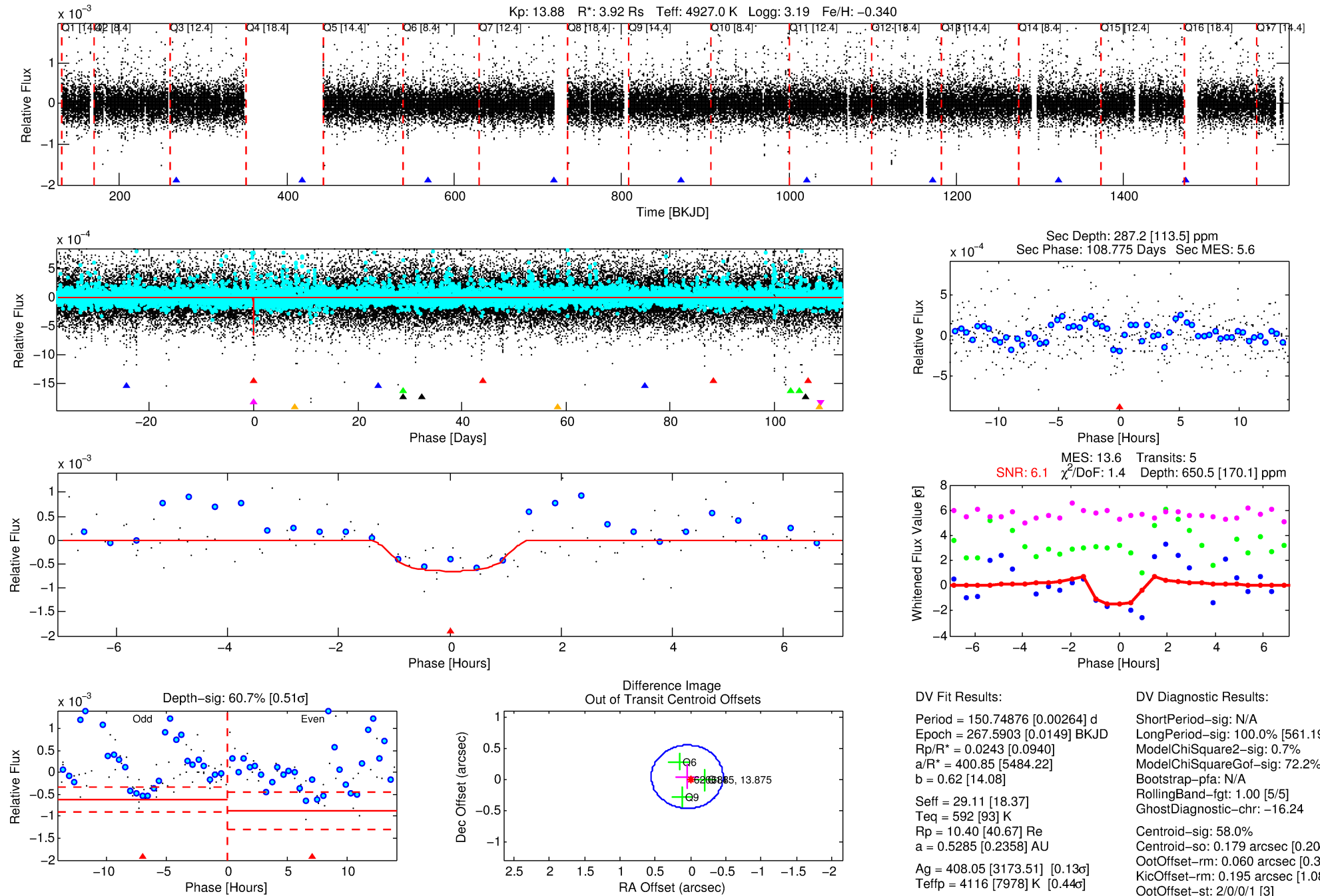
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006206885-05

No Significant Match Found

DV One-Page Summary

KIC: 6206885 Candidate: 5 of 6 Period: 150.749 d



DV Fit Results:

Period = 150.74876 [0.00264] d
Epoch = 267.5903 [0.0149] BKJD
Rp/R* = 0.0243 [0.0940]
a/R* = 400.85 [5484.22]
b = 0.62 [14.08]
Seff = 29.11 [18.37]
Teq = 592 [93] K
Rp = 10.40 [40.67] Re
a = 0.5285 [0.2358] AU
Ag = 408.05 [3173.51] [0.13σ]
Teffp = 4116 [7978] K [0.44σ]

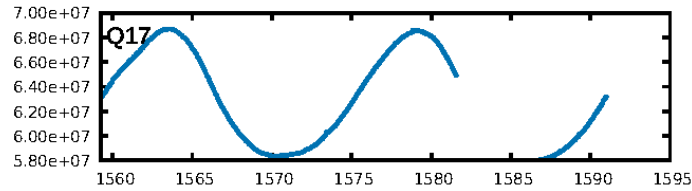
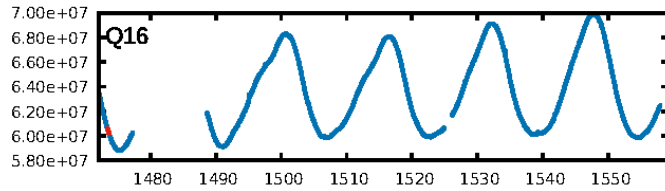
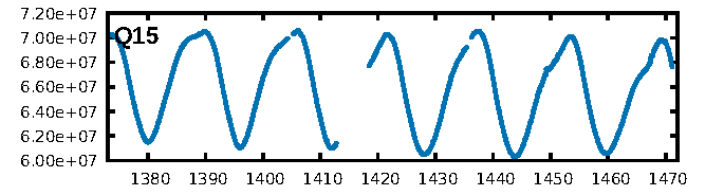
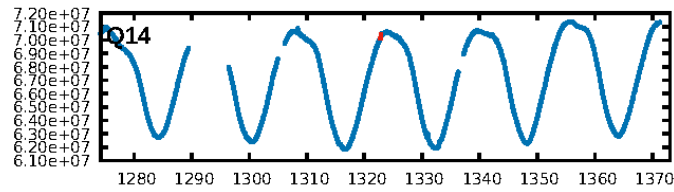
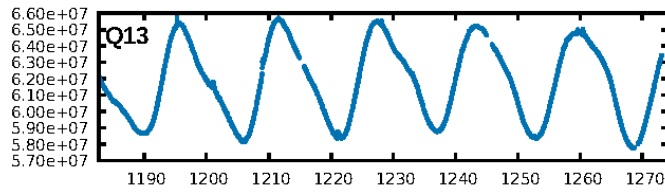
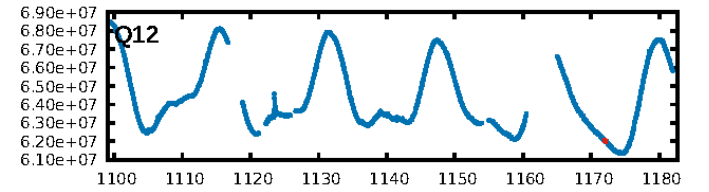
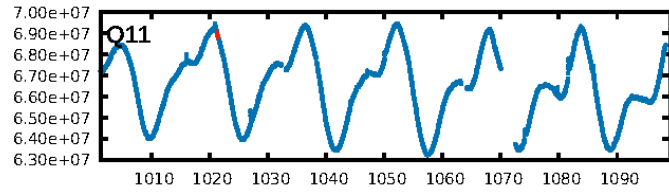
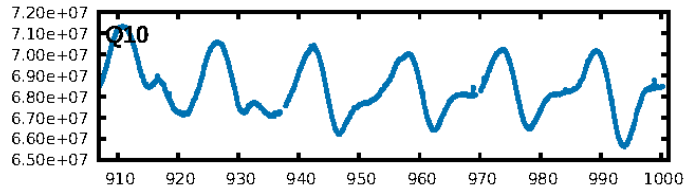
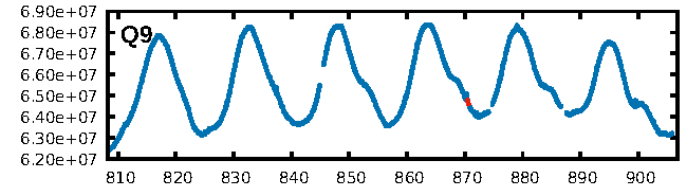
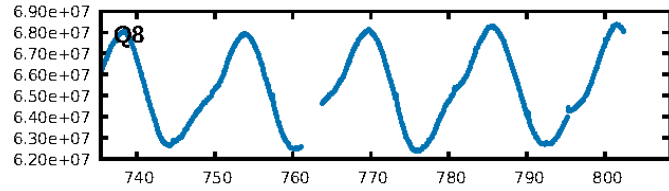
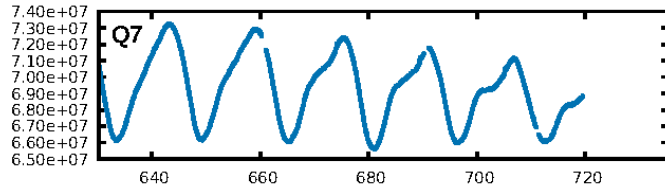
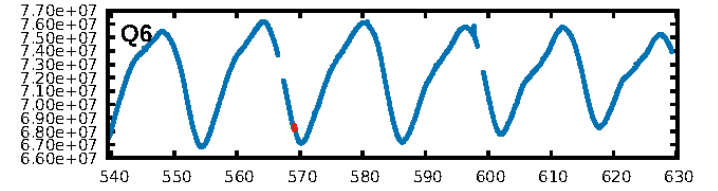
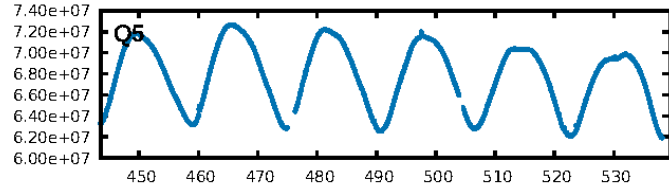
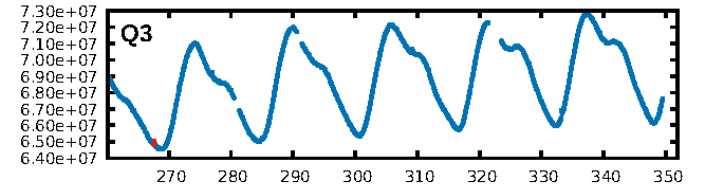
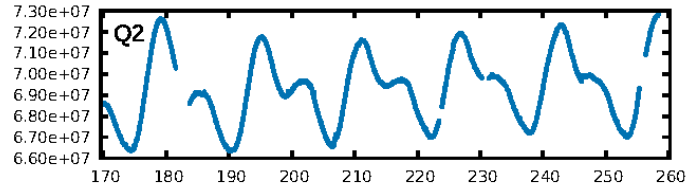
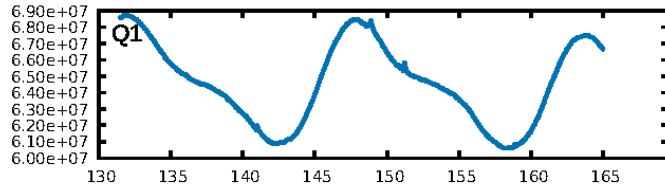
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [561.19σ]
ModelChiSquare2-sig: 0.7%
ModelChiSquareGof-sig: 72.2%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: -16.24
Centroid-sig: 58.0%
Centroid-so: 0.179 arcsec [0.20σ]
OotOffset-rm: 0.060 arcsec [0.35σ]
KicOffset-rm: 0.195 arcsec [1.08σ]
OotOffset-st: 2/0/0/1 [3]
KicOffset-st: 2/0/0/1 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.67 [2/3]

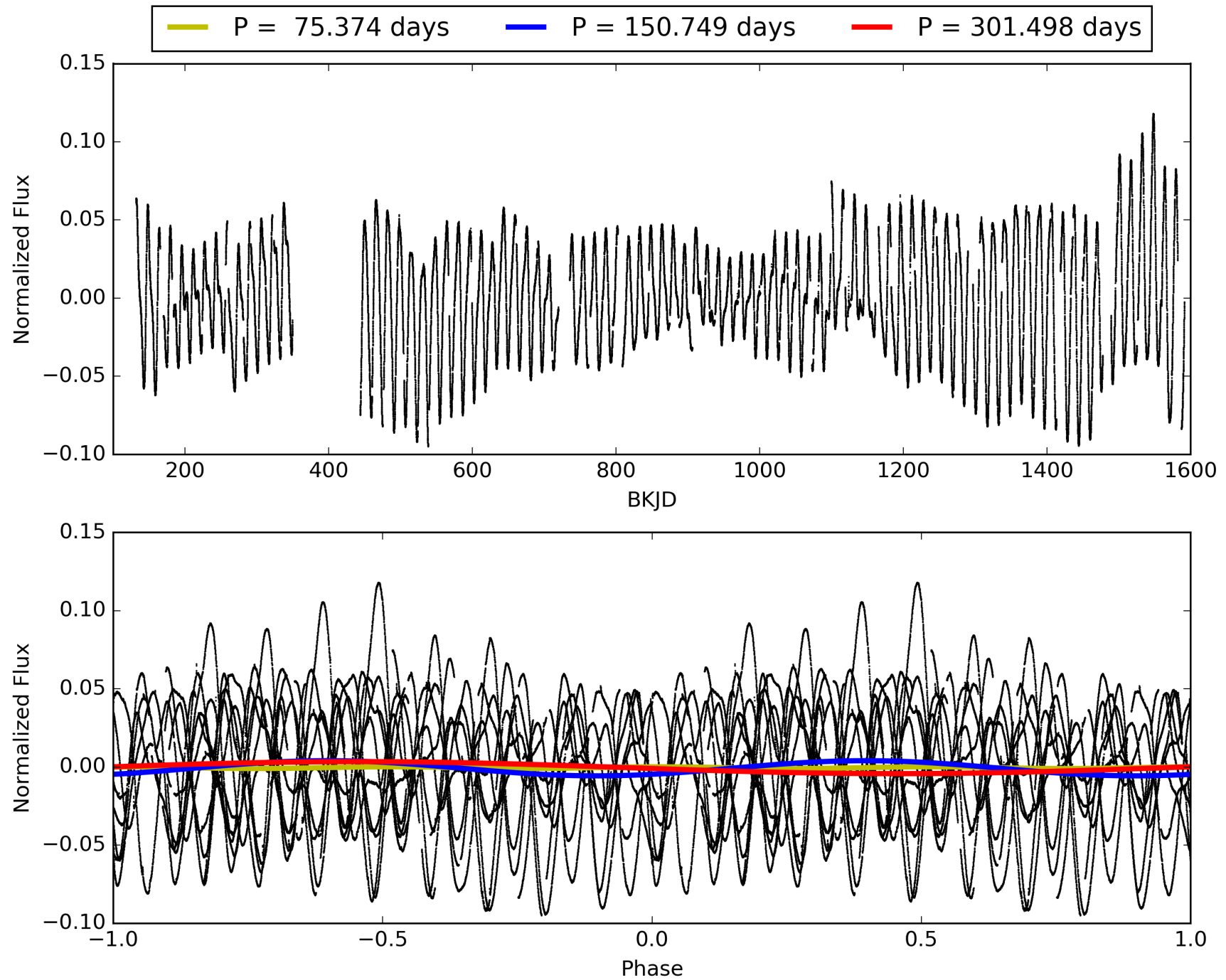
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:02:00 Z

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

TCE 006206885-05, PDC Light Curves

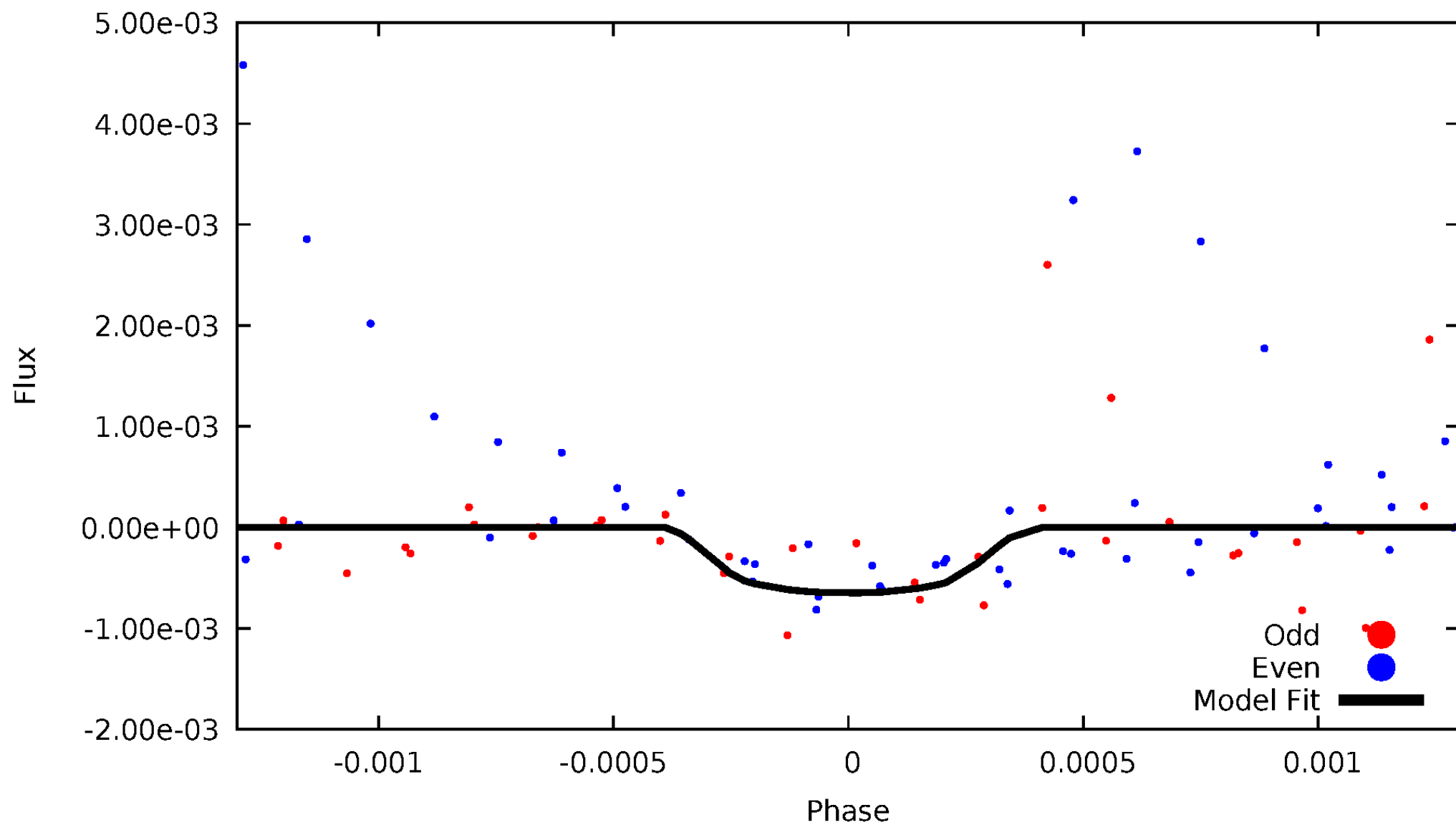


TCE 006206885-05



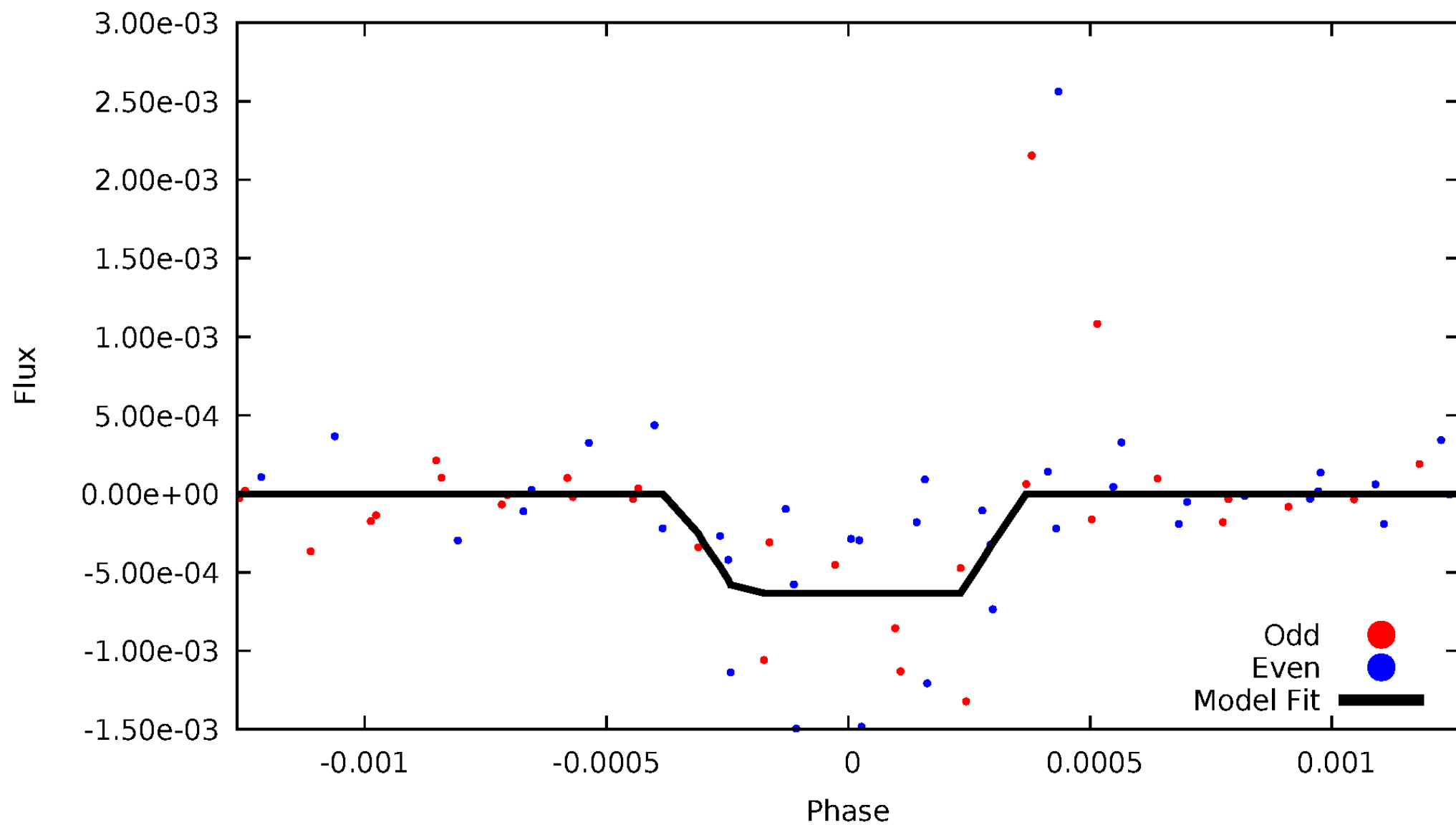
DV Odd/Even

TCE 006206885-05



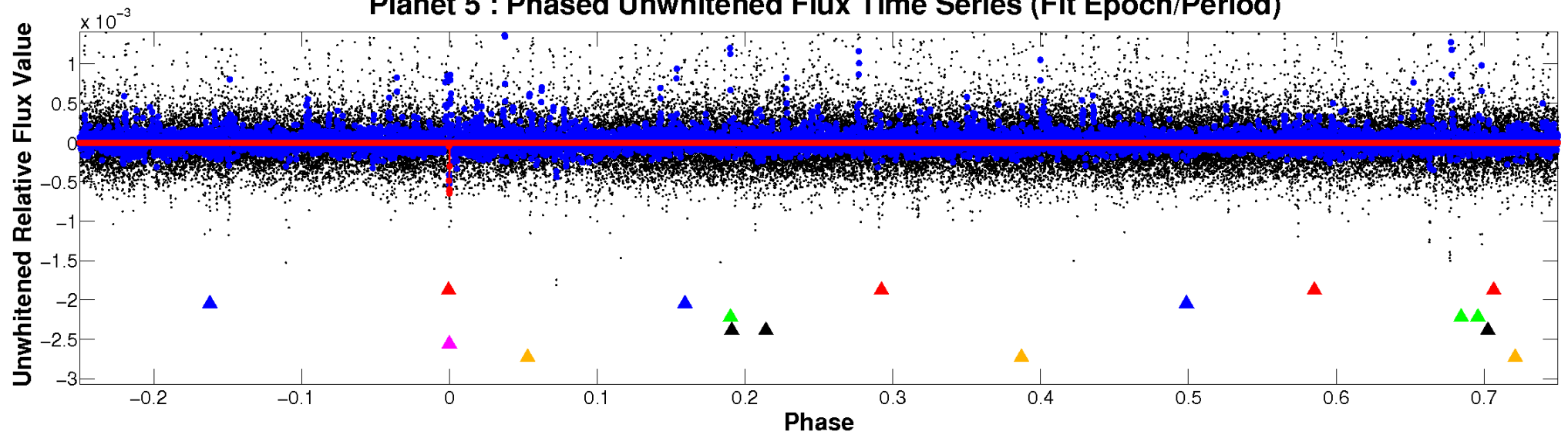
ALT Odd/Even

TCE 006206885-05

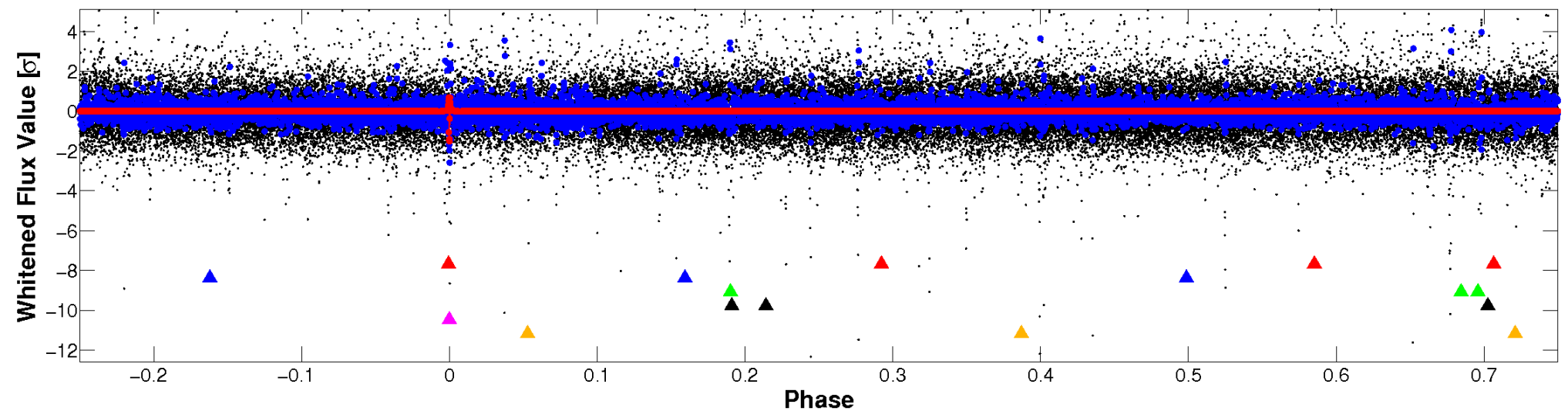


Non-Whitened Vs. Whitened Light Curve

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

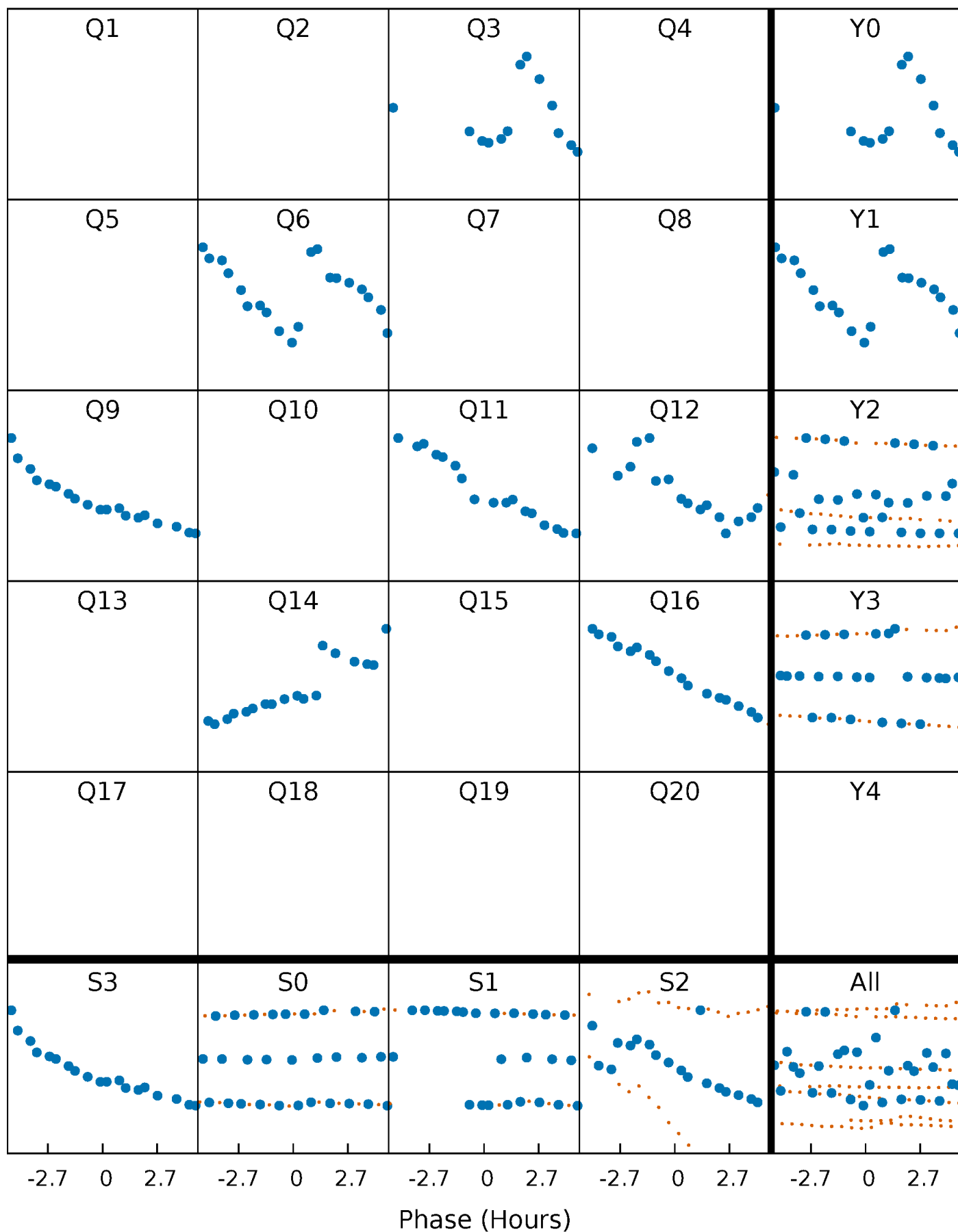


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



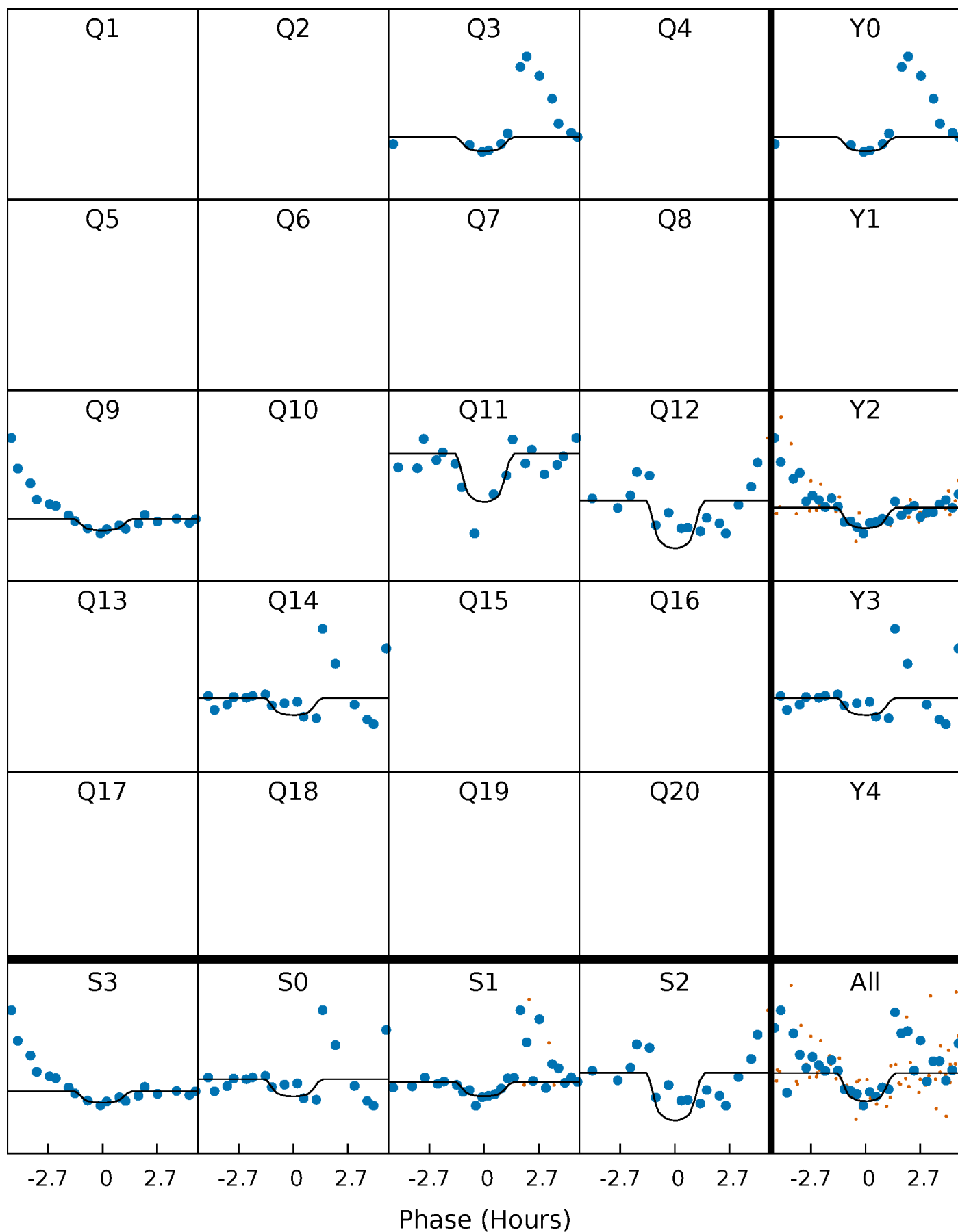
PDC Quarter-Phased Transit Curves

TCE 006206885-05 $P=150.748756$ Days $T_0=267.590328$ (BKJD)



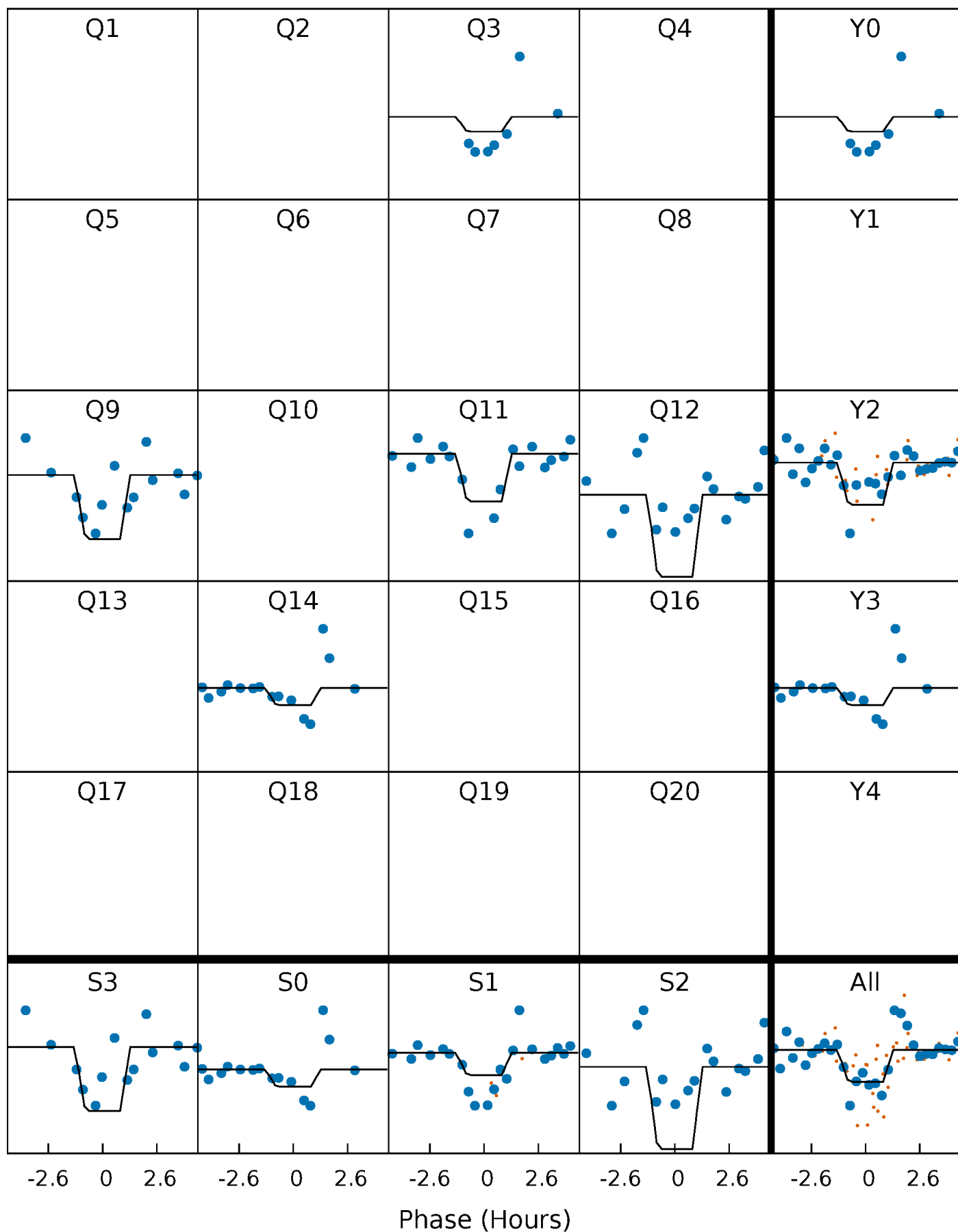
DV Quarter-Phased Transit Curves

TCE 006206885-05 $P=150.748756$ Days $T_0=267.590328$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

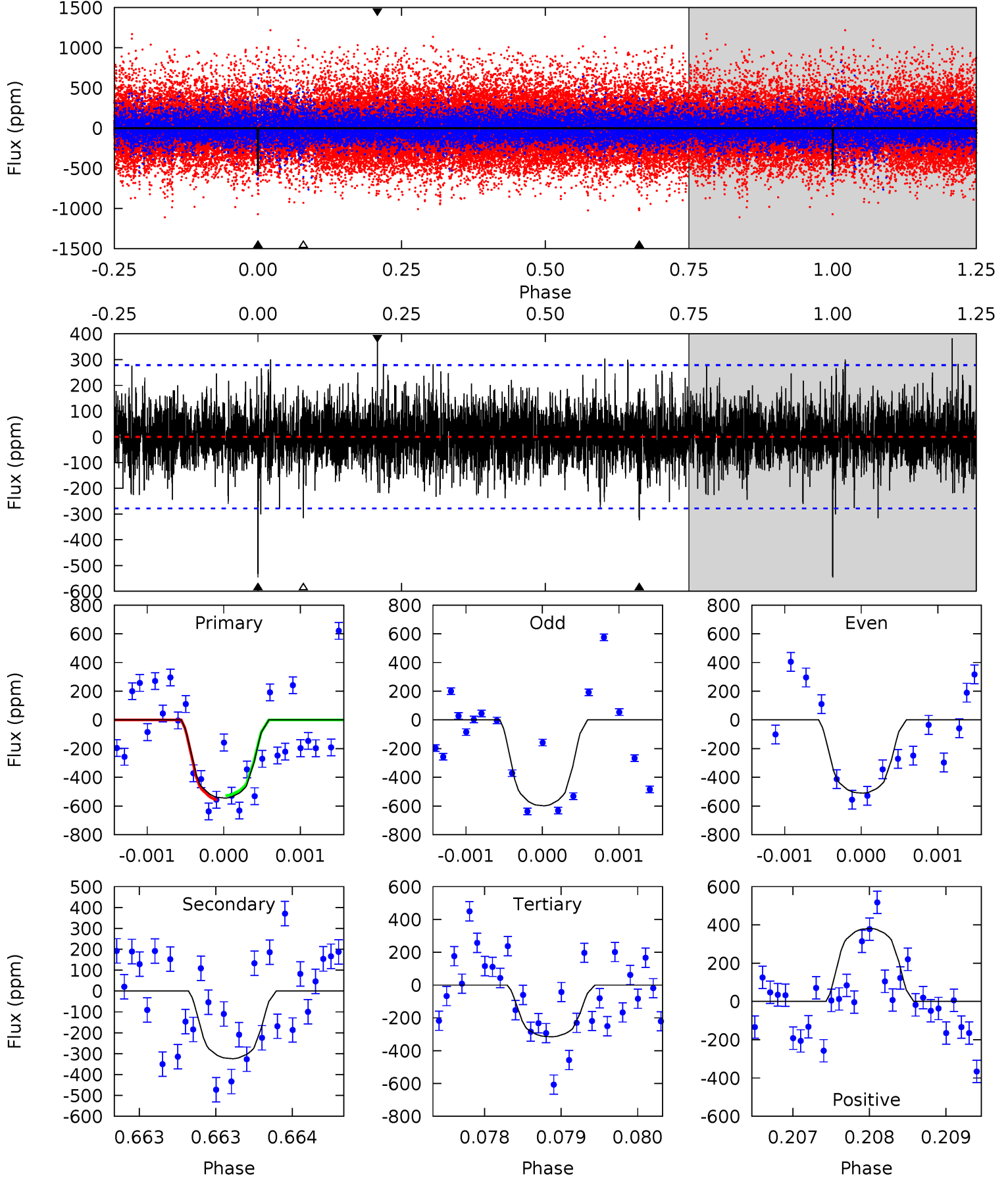
TCE 006206885-05 $P=150.748751$ Days $T_0=267.597092$ (BKJD)



DV Model-Shift Uniqueness Test

006206885-05, P = 150.748756 Days, E = 116.841572 Days

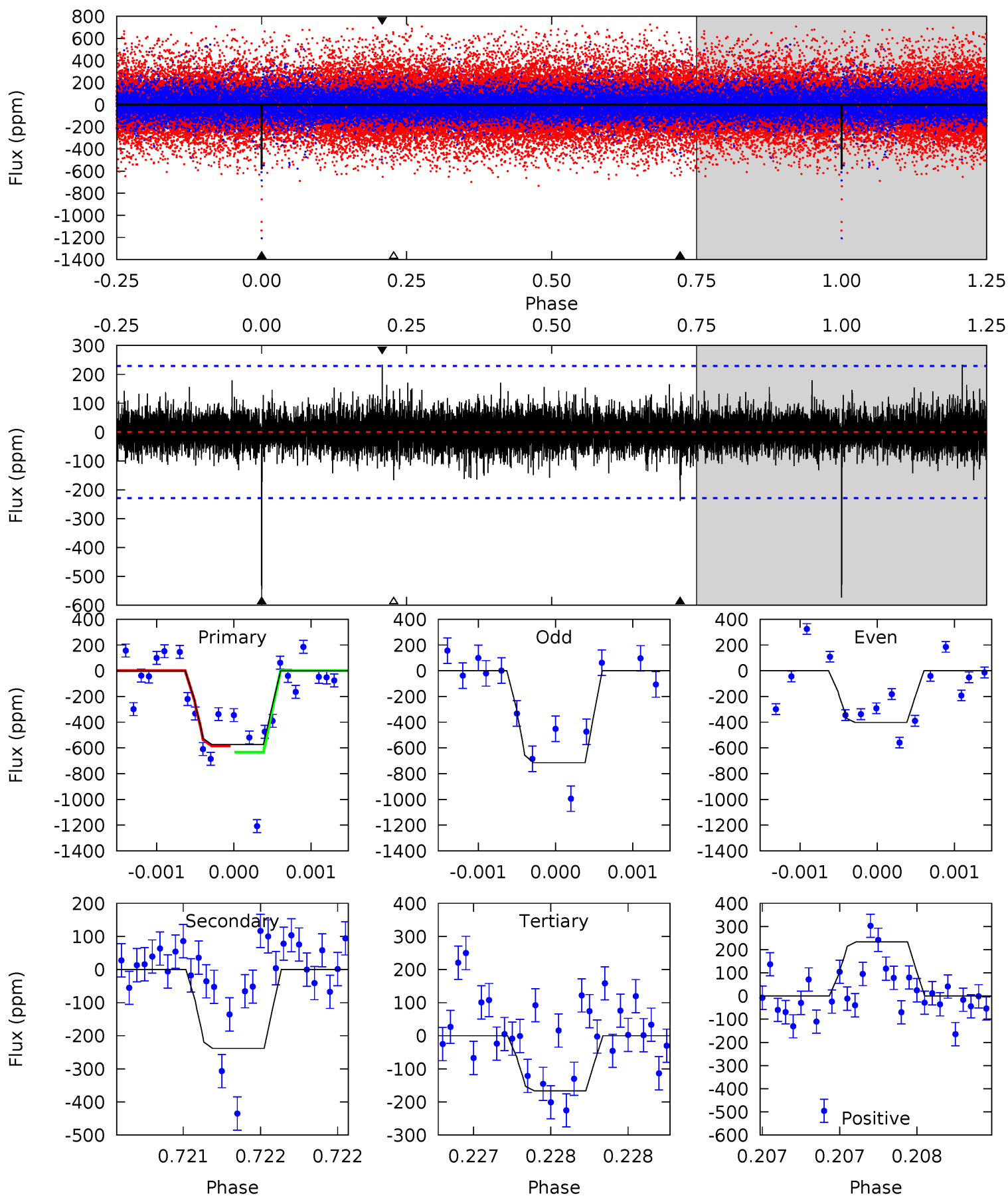
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.8	6.42	6.26	7.56	5.51	3.39	1.52	4.55	3.24	0.17	-1.14	0.83	1.04	0.41	0.30



Alt Model-Shift Uniqueness Test

006206885-05, P = 150.748751 Days, E = 116.848341 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.9	5.76	4.02	5.64	5.54	3.43	1.03	9.83	8.21	1.74	0.12	3.82	0.88	0.29	0.61



Stellar Parameters For KIC 006206885

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4927^{+137}_{-1}	$3.188^{+0.325}_{-0.325}$	$-0.340^{+0.300}_{-0.200}$	$3.924^{+2.178}_{-1.173}$	$0.865^{+0.336}_{-0.084}$	$0.020^{+0.041}_{-0.013}$
	+3%/-0%	+10%/-10%	+88%/-59%	+56%/-30%	+39%/-10%	+202%/-65%
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 006206885-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-324 ± 50	$30.90^{+34.95}_{-20.68}$	814^{+113}_{-84}	3029^{+1370}_{-516}	54^{+473}_{-41}
Alt.	-238 ± 41	$32.93^{+36.15}_{-21.75}$	828^{+110}_{-87}	2880^{+1085}_{-478}	35^{+272}_{-27}

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

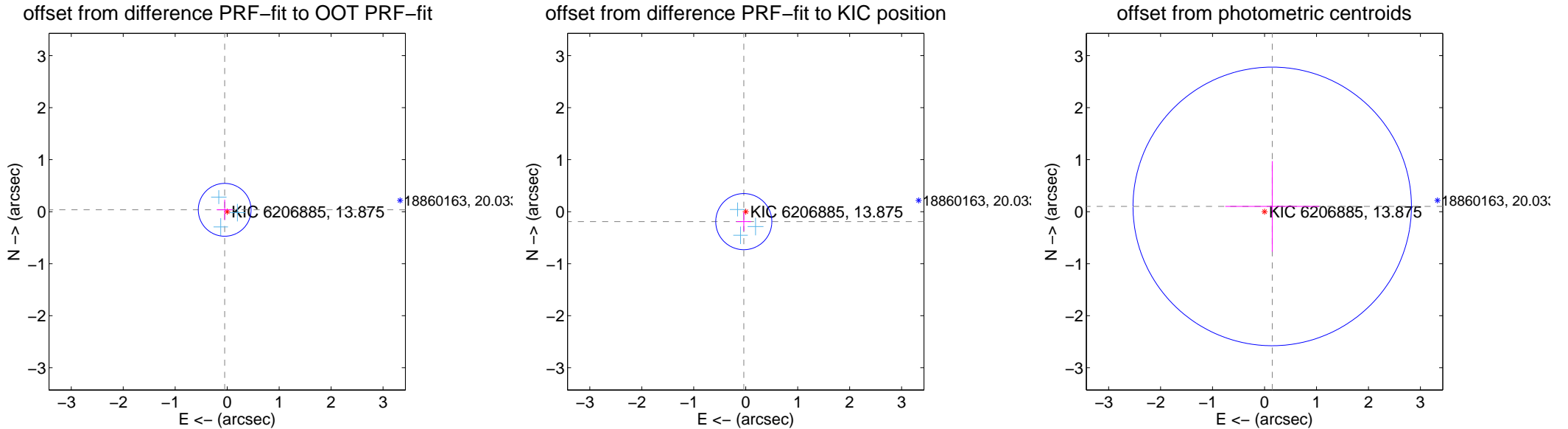
DV Centroid Data

Supplemental centroid analysis for 006206885-05. Kepler magnitude: 13.88. Transit SNR 6.15

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.060 ± 0.169	0.35	0.048 ± 0.153	0.036 ± 0.195
PRF-fit source offset from KIC position	0.195 ± 0.180	1.08	0.037 ± 0.140	-0.191 ± 0.181
photometric centroid source offset	0.18 ± 0.89	0.20	-0.15 ± 0.90	0.10 ± 0.87

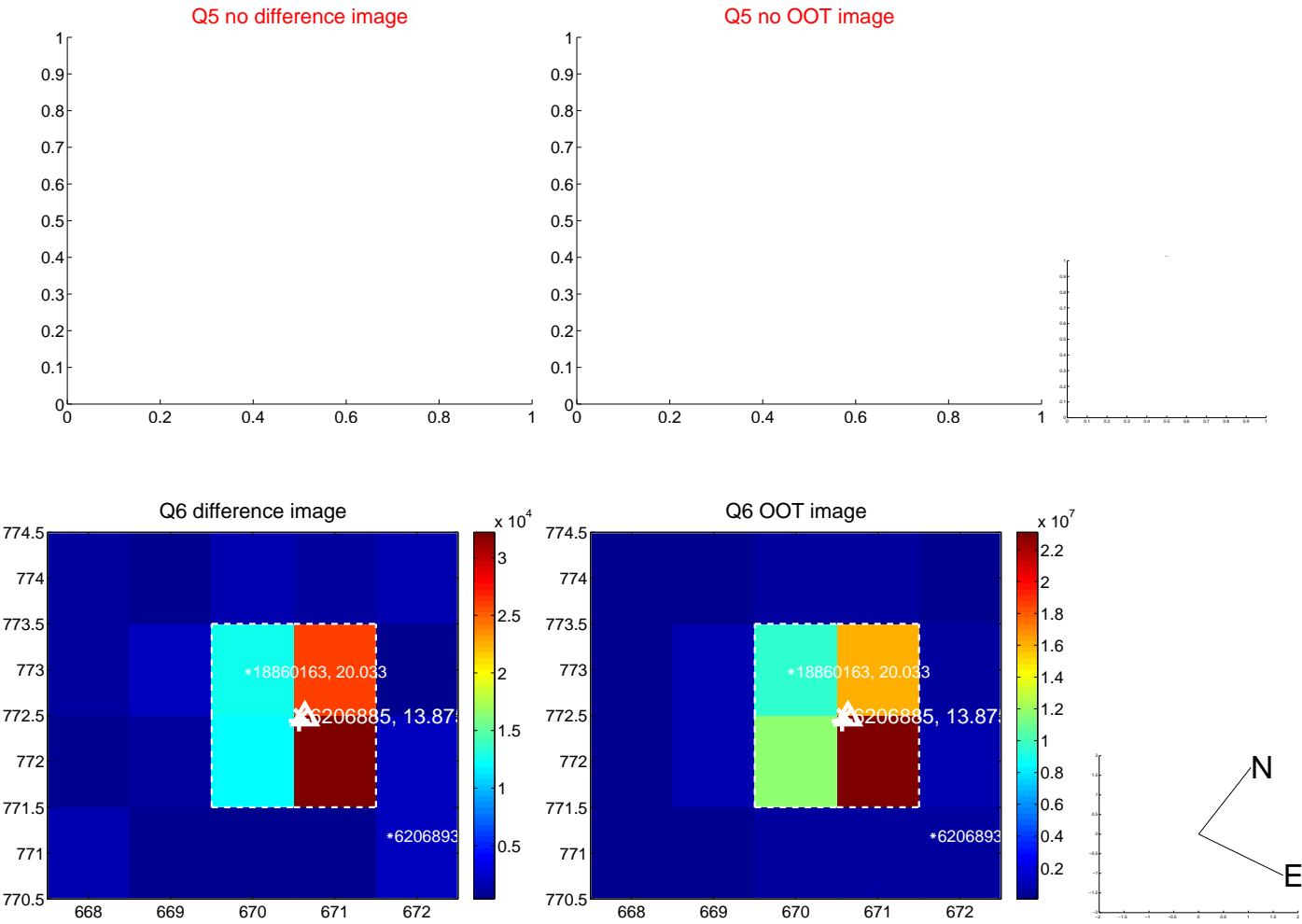


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

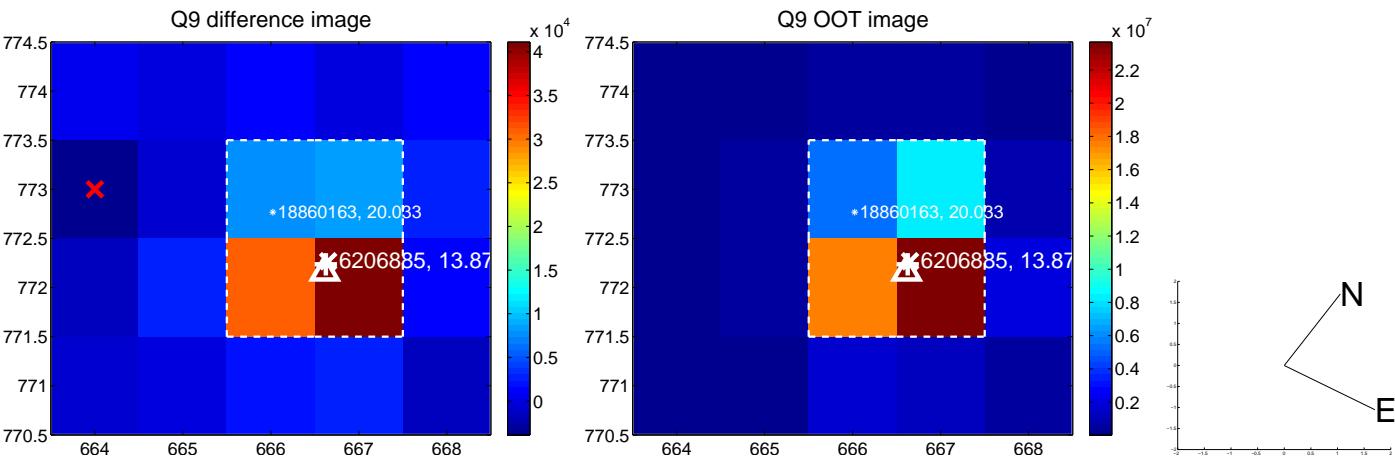
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



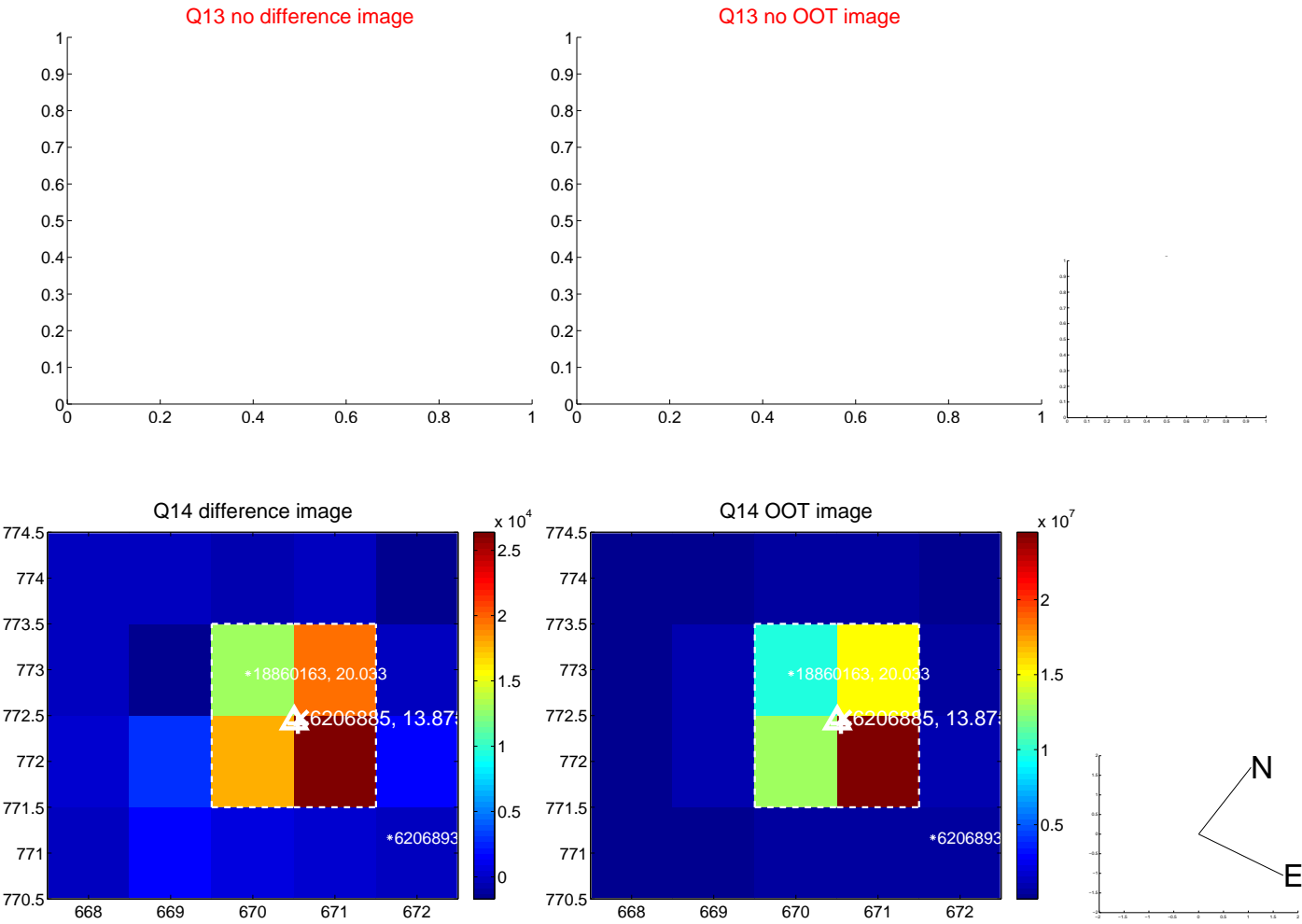
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



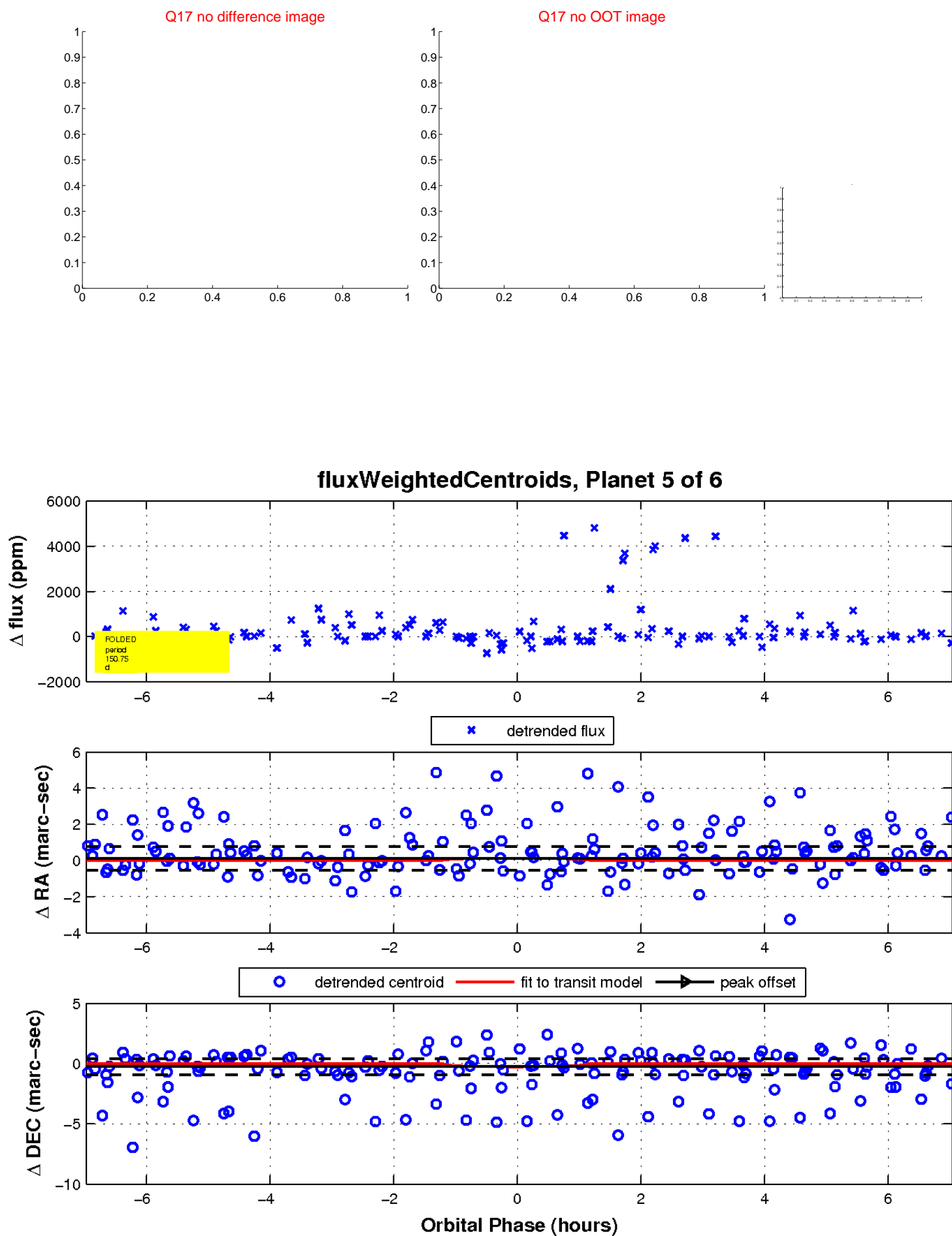
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

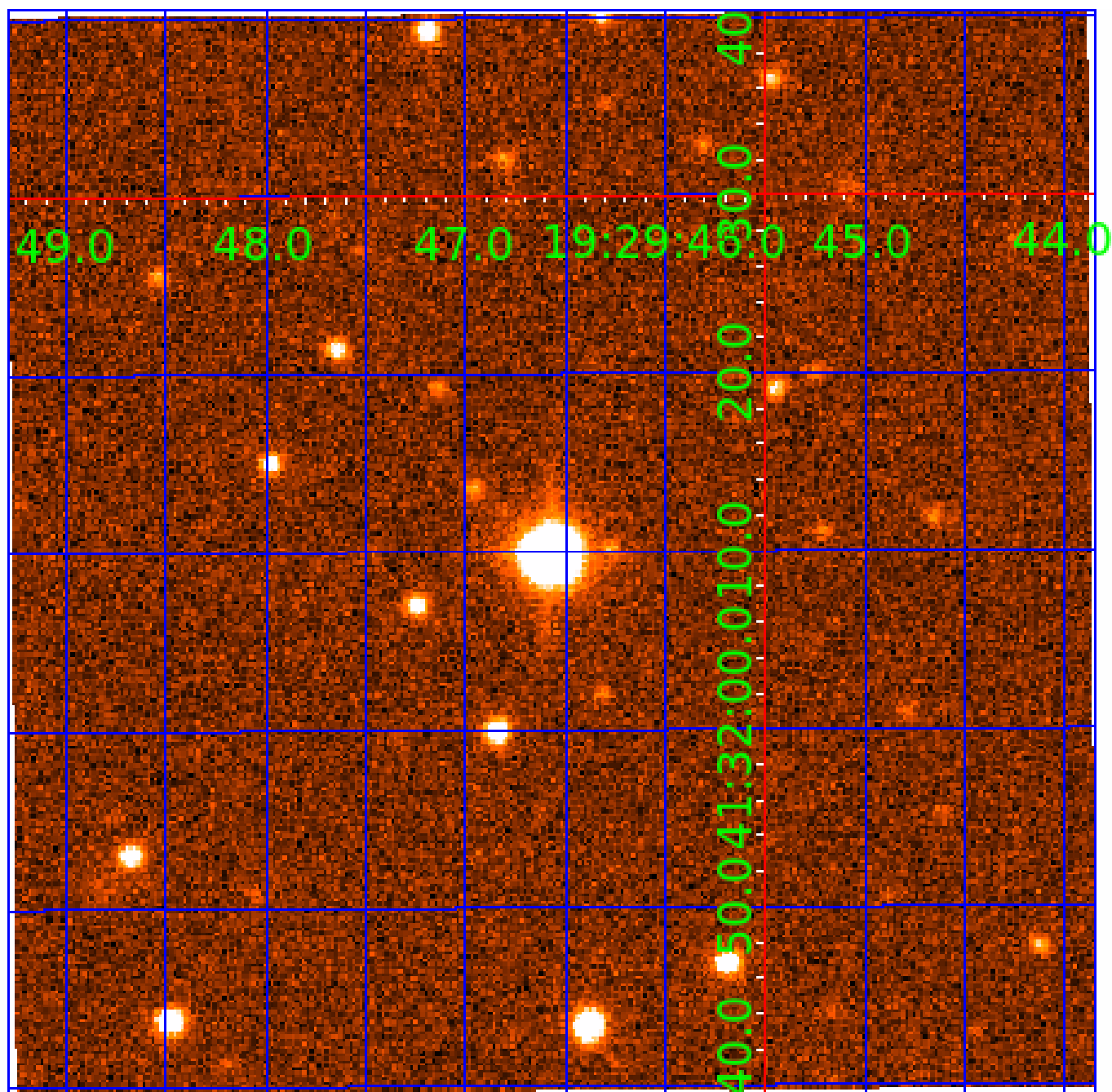


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 006206885

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})
006206885-01	OBS	No	345.651210	223.355470	1246.1	7.996	18.0	8.0	3.92	4927	27.81	9.63
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006206885-01	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—INCONSISTENT_TRANS—HALO_GHOST
006206885-02	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
006206885-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-04	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—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
006206885-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
006206885-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_NOFITS

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

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

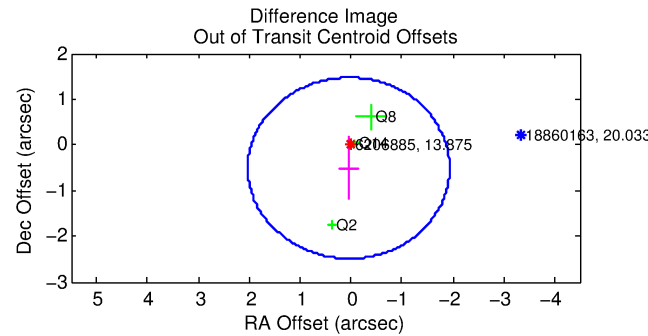
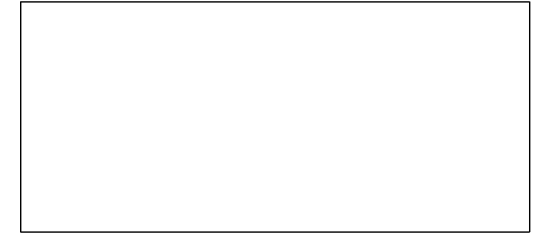
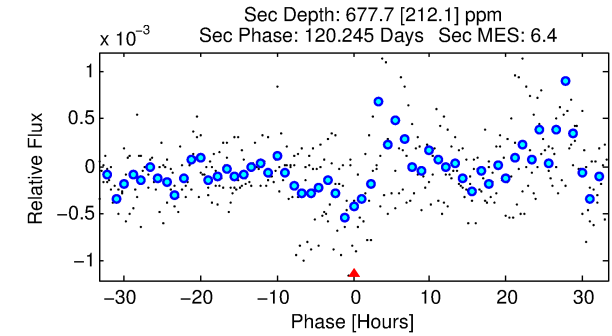
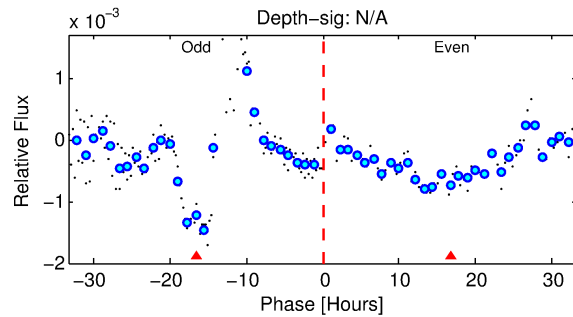
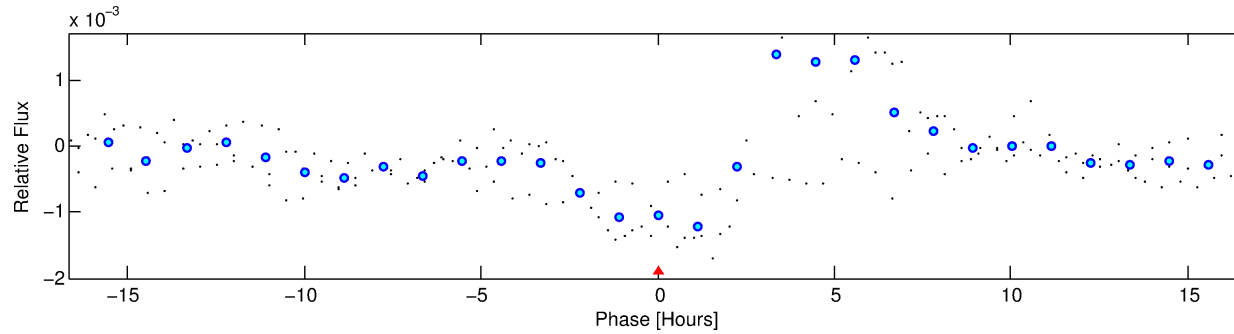
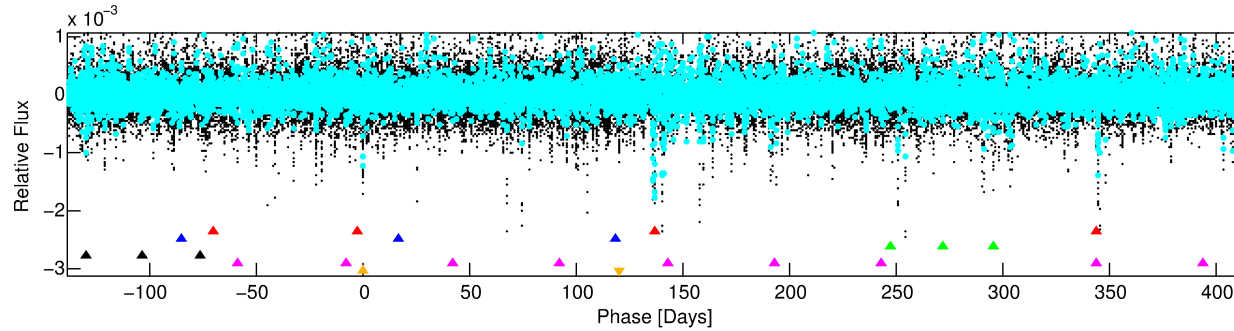
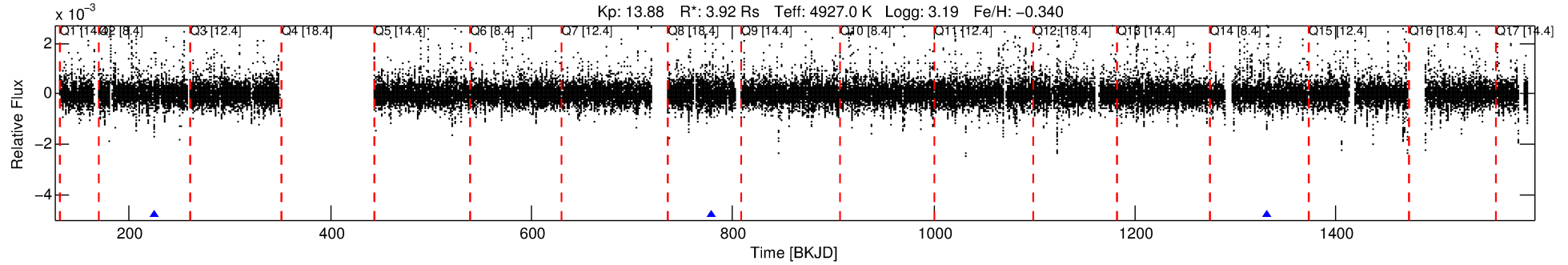
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 006206885-06

No Significant Match Found

DV One-Page Summary

KIC: 6206885 Candidate: 6 of 6 Period: 552.632 d



TPS TCE Results:

Period = 552.63244 d
Epoch = 225.5496 BKJD

DV fit results are unavailable

DV Diagnostic Results:

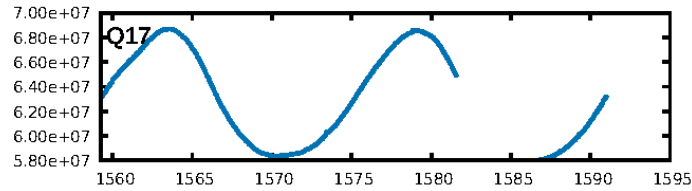
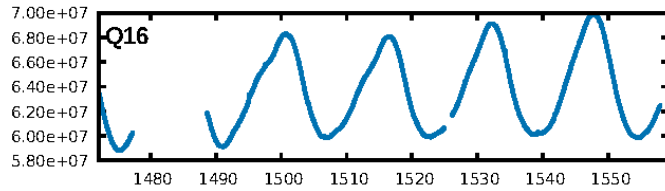
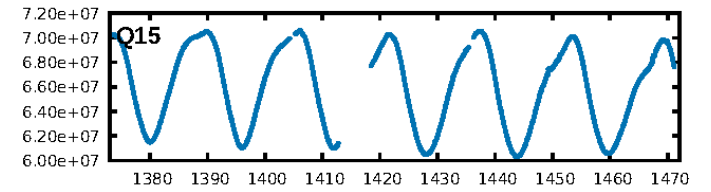
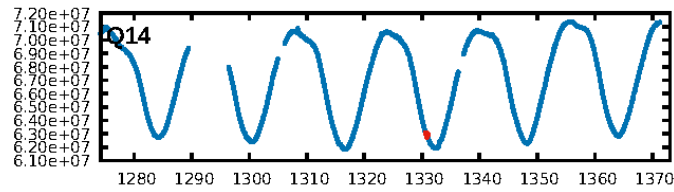
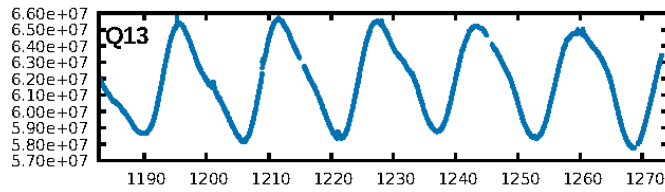
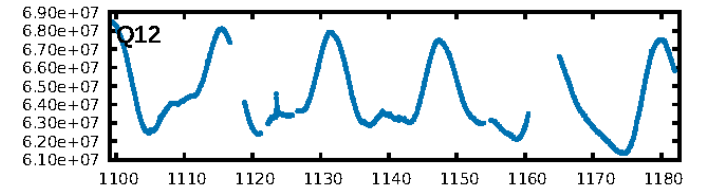
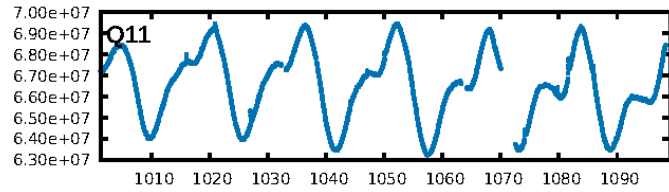
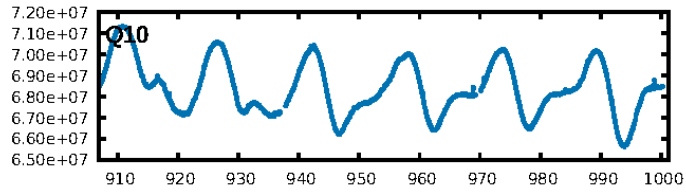
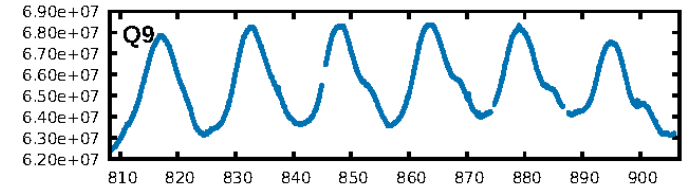
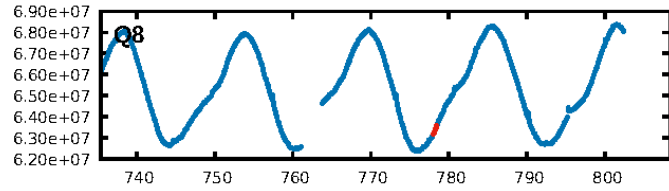
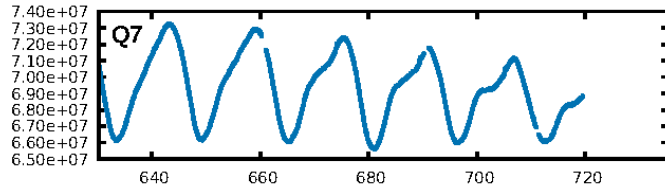
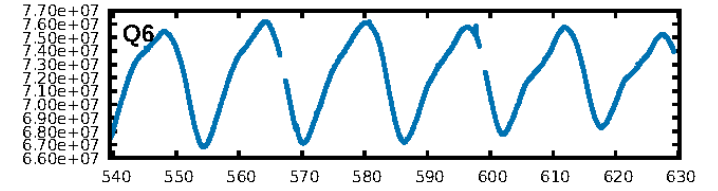
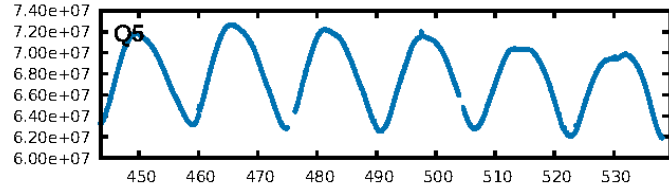
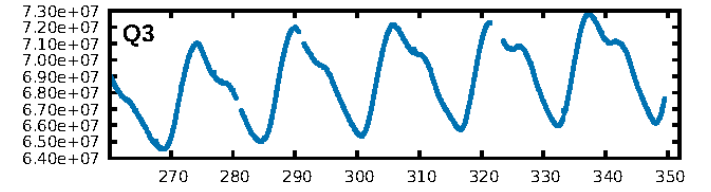
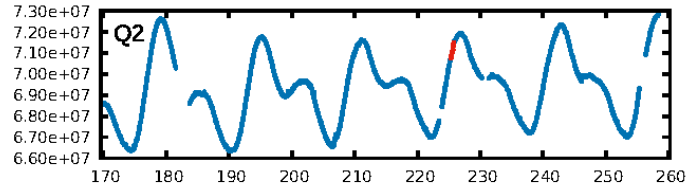
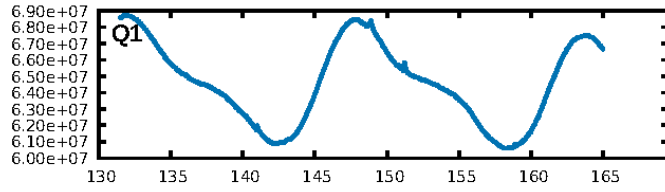
ShortPeriod-sig: 100.0% [83.93σ]
LongPeriod-sig: 100.0% [236.46σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.5508

Centroid-sig: 34.2%
Centroid-so: 0.500 arcsec [1.27σ]
OotOffset-rm: 0.507 arcsec [0.77σ]
OotOffset-st: 2/0/1/0 [3]
KicOffset-rm: 0.761 arcsec [0.93σ]
KicOffset-st: 2/0/1/0 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 1.00 [3/3]

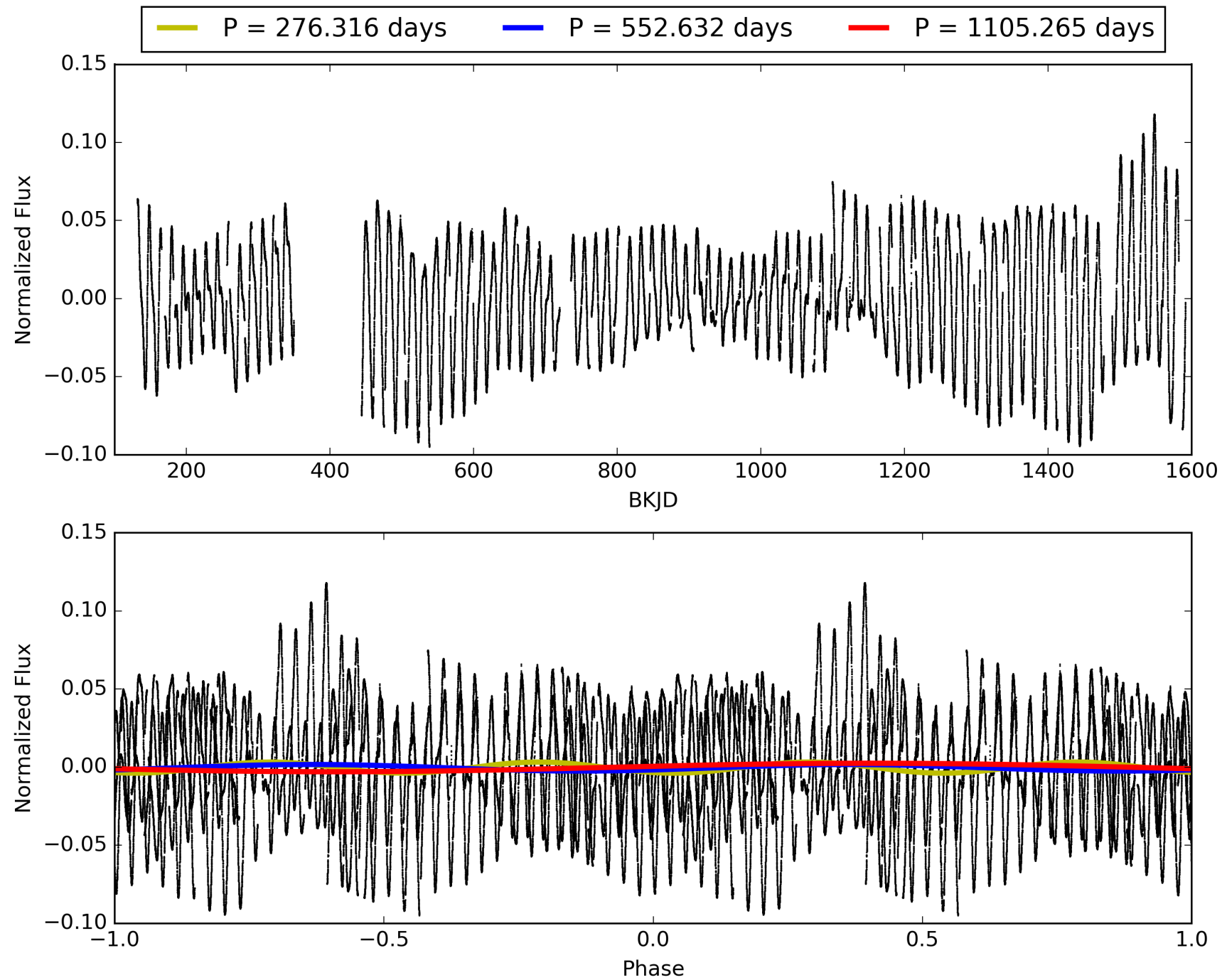
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:02:15 Z

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

TCE 006206885-06, PDC Light Curves

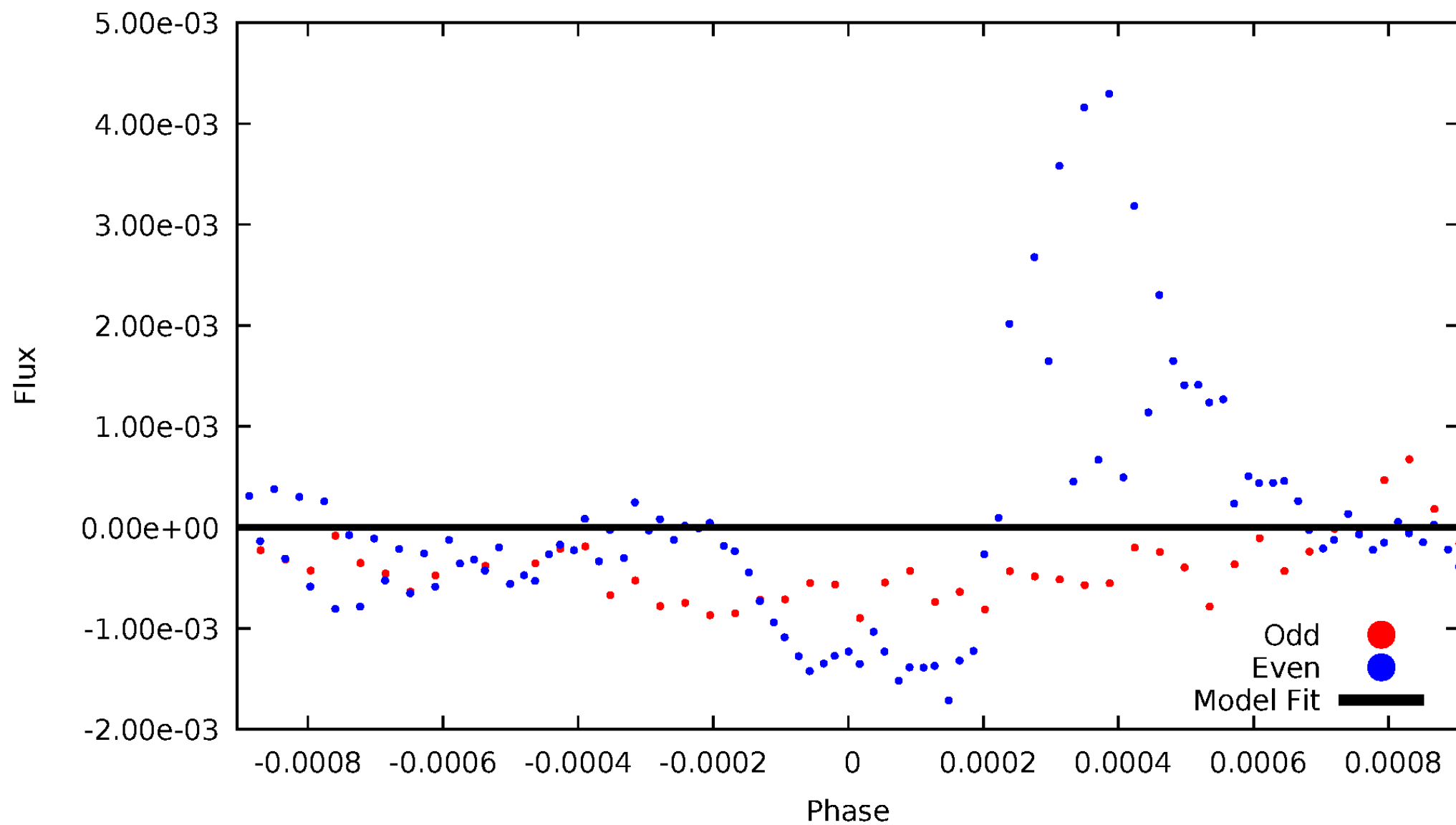


TCE 006206885-06



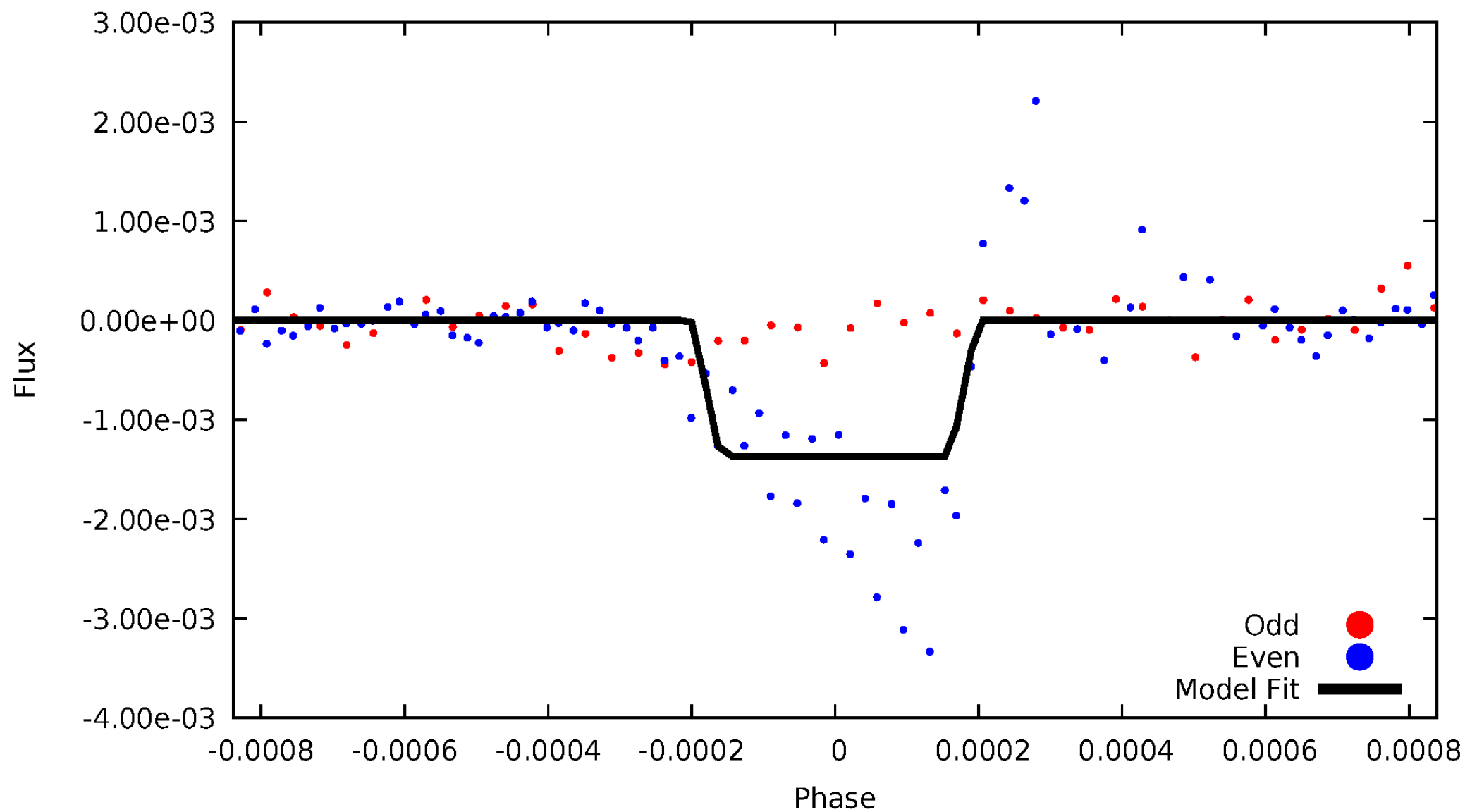
DV Odd/Even

TCE 006206885-06



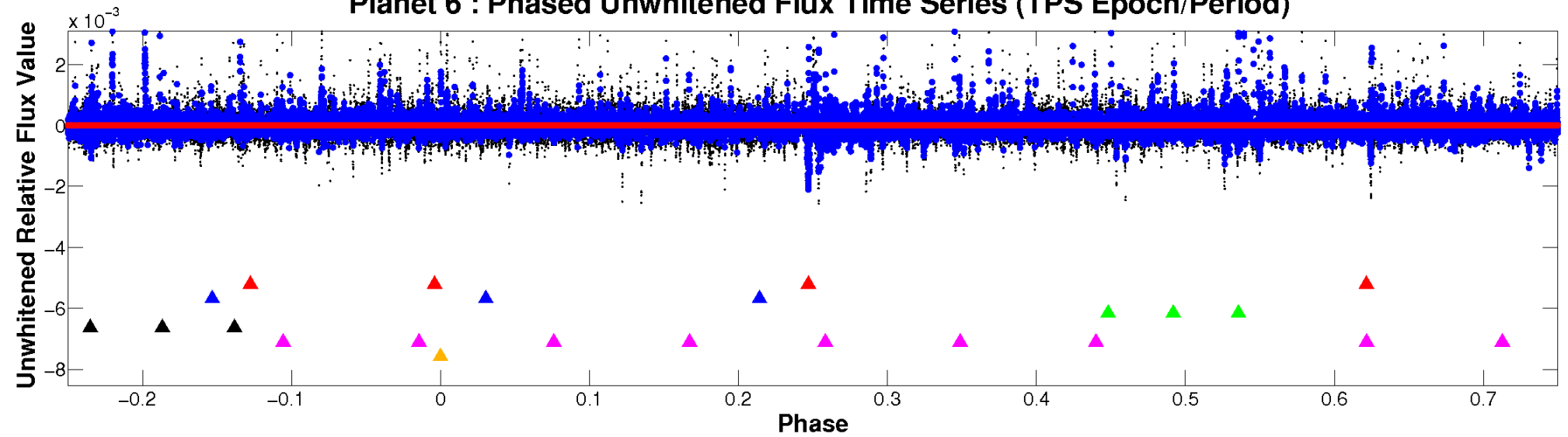
ALT Odd/Even

TCE 006206885-06

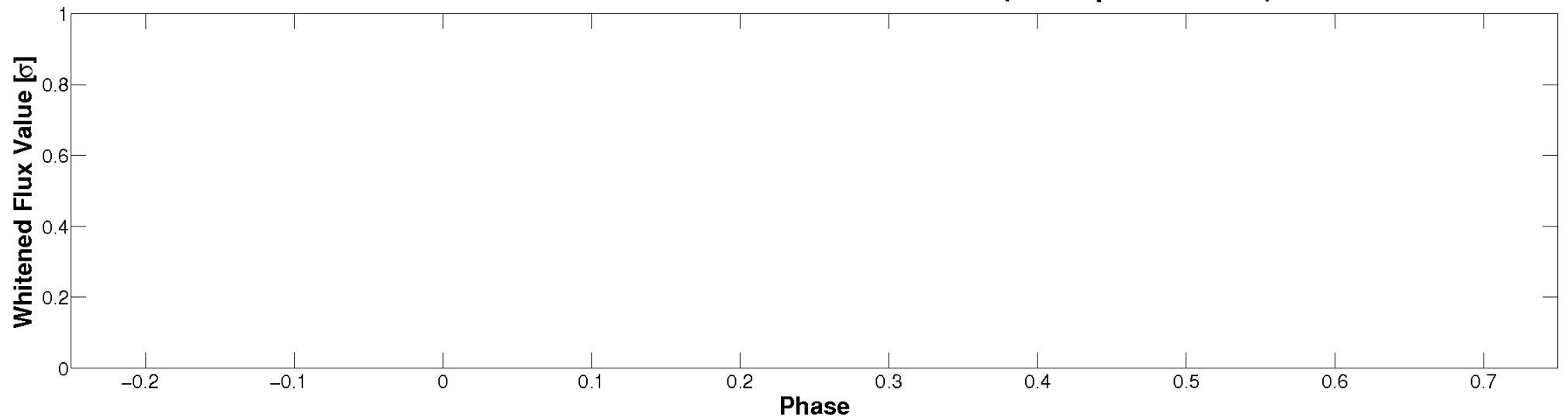


Non-Whitened Vs. Whitened Light Curve

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

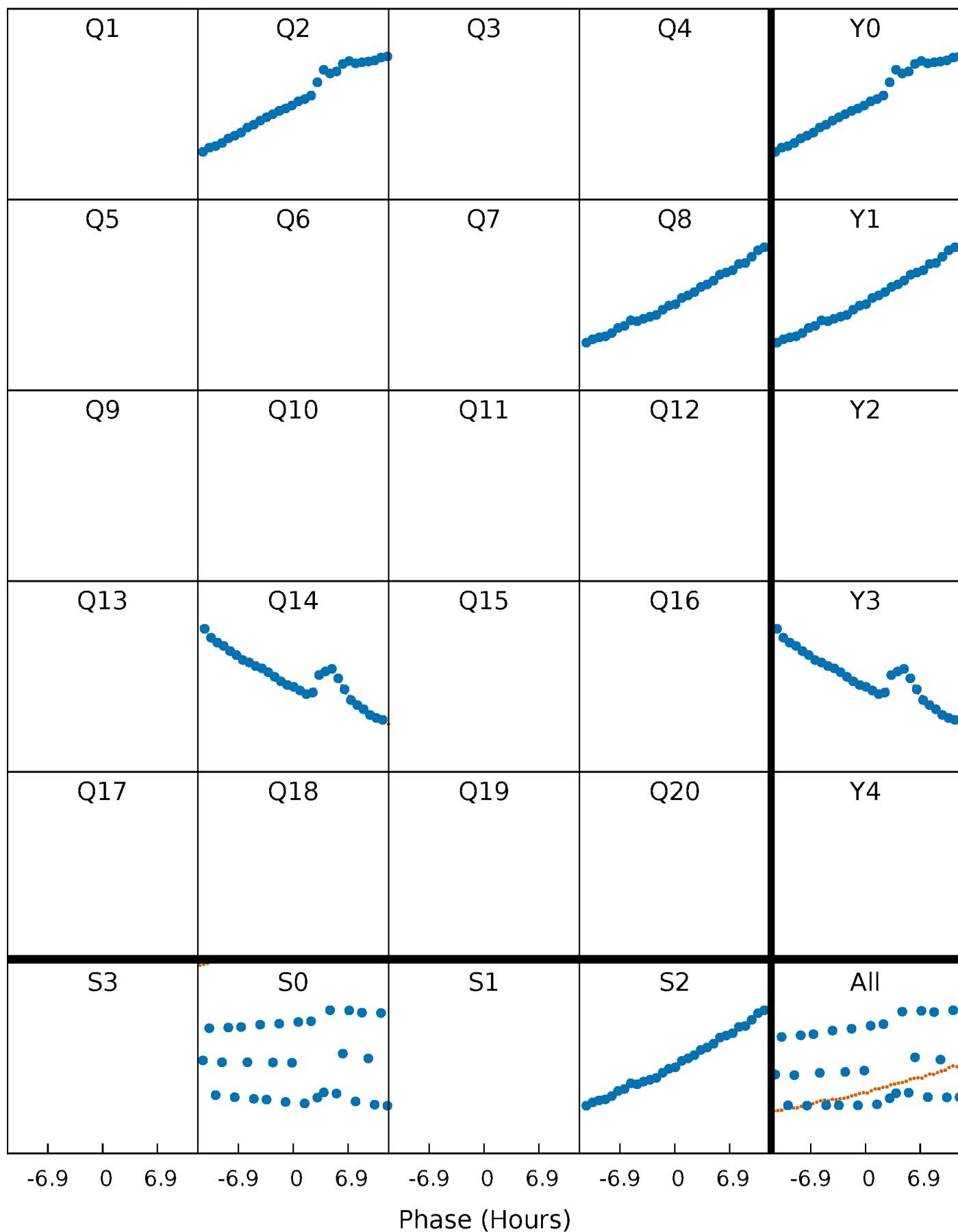


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



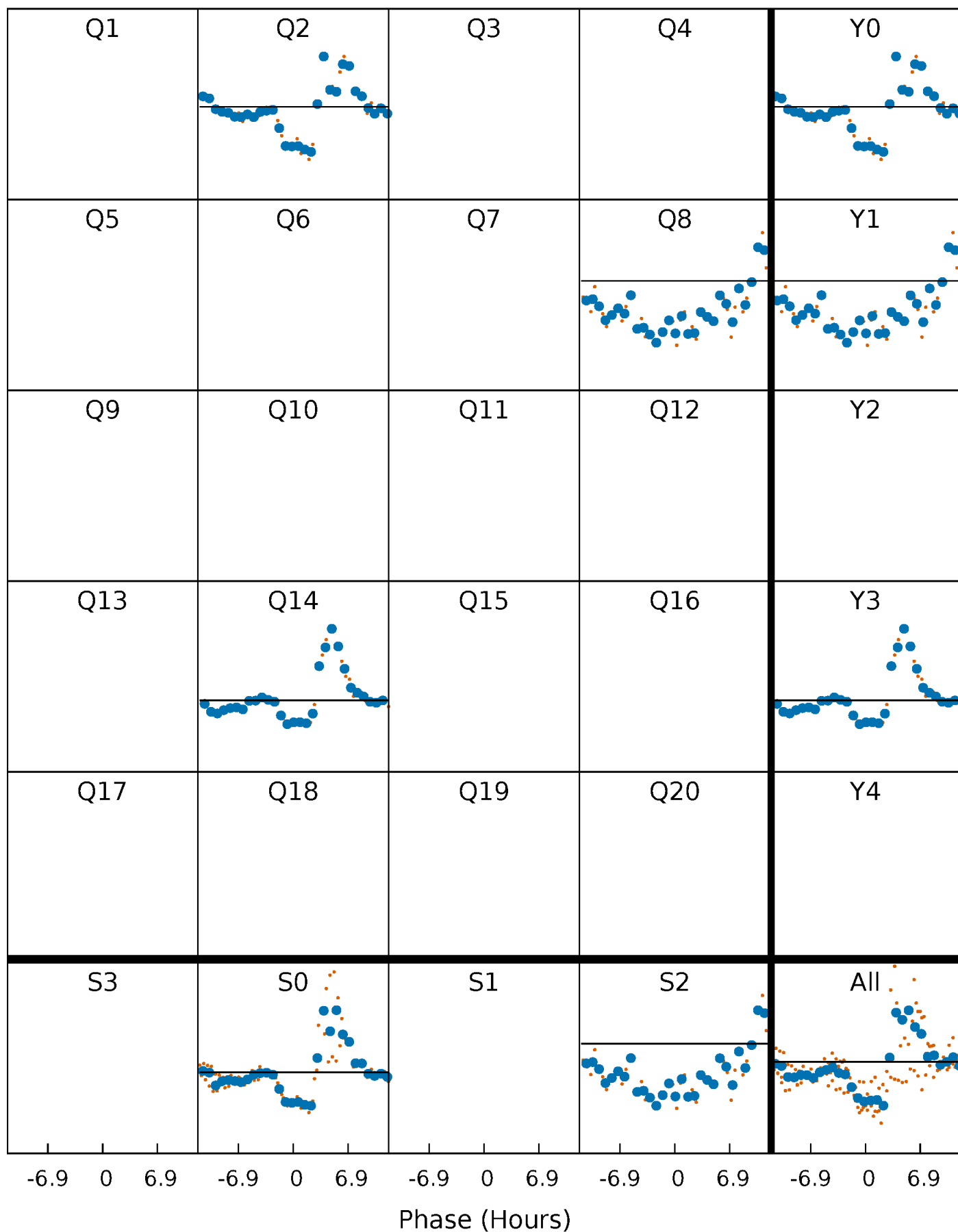
PDC Quarter-Phased Transit Curves

TCE 006206885-06 P=552.632441 Days $T_0=225.549643$ (BKJD)



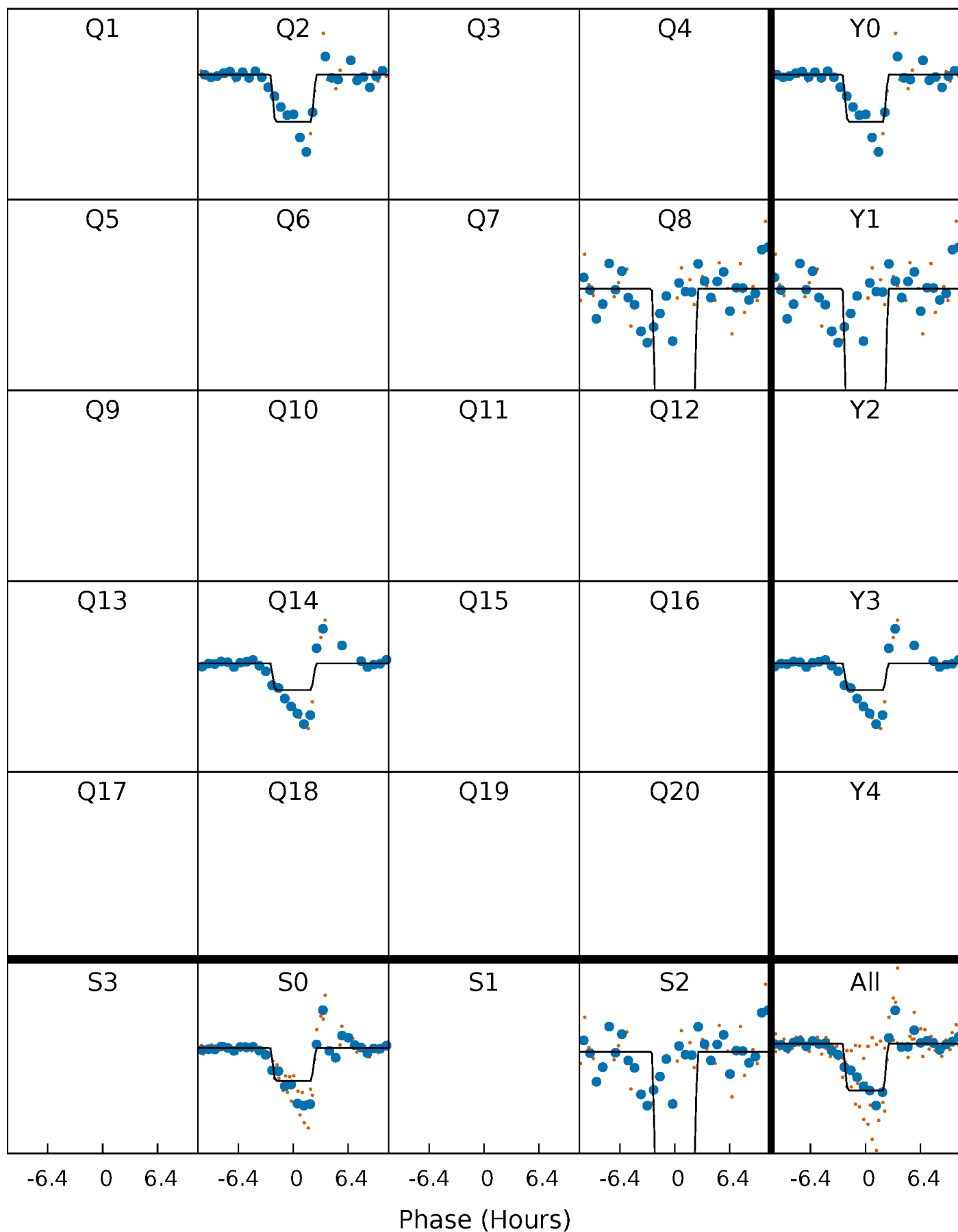
DV Quarter-Phased Transit Curves

TCE 006206885-06 P=552.632441 Days $T_0=225.549643$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

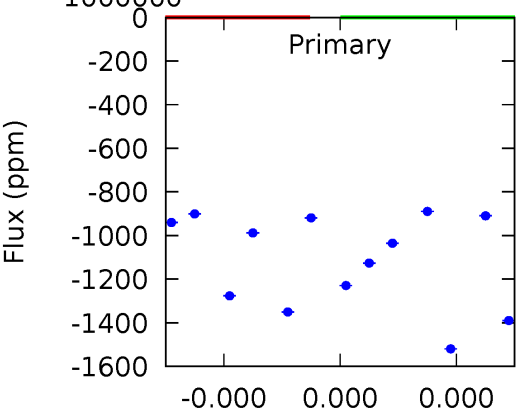
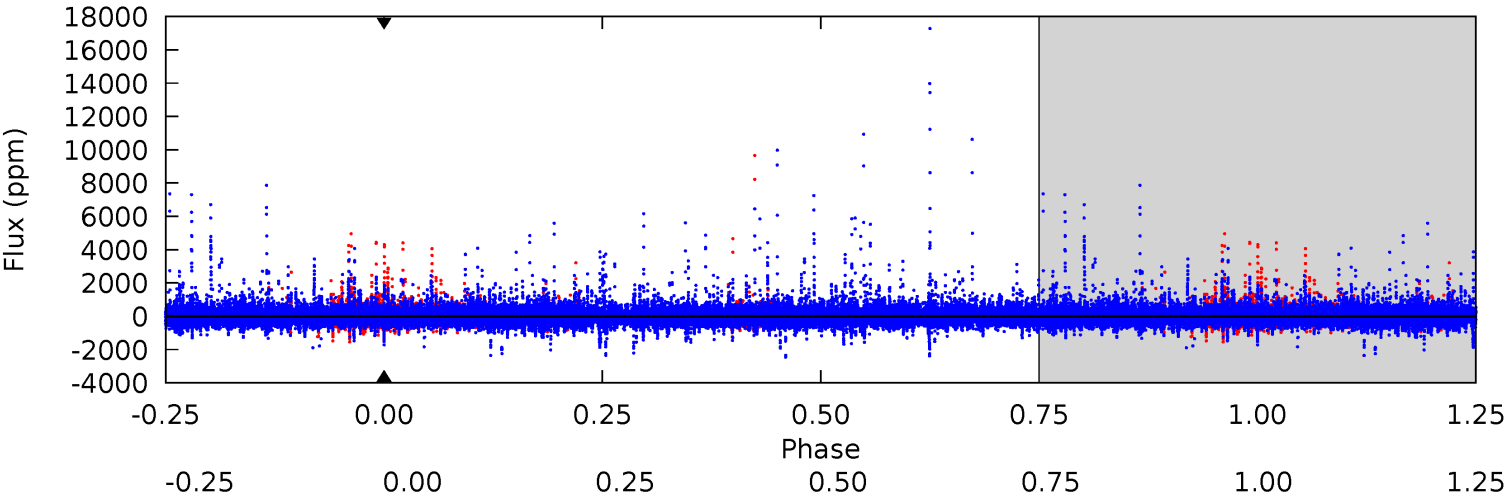
TCE 006206885-06 P=552.632441 Days $T_0=225.567587$ (BKJD)



DV Model-Shift Uniqueness Test

006206885-06, P = 552.632441 Days, E = 225.549643 Days

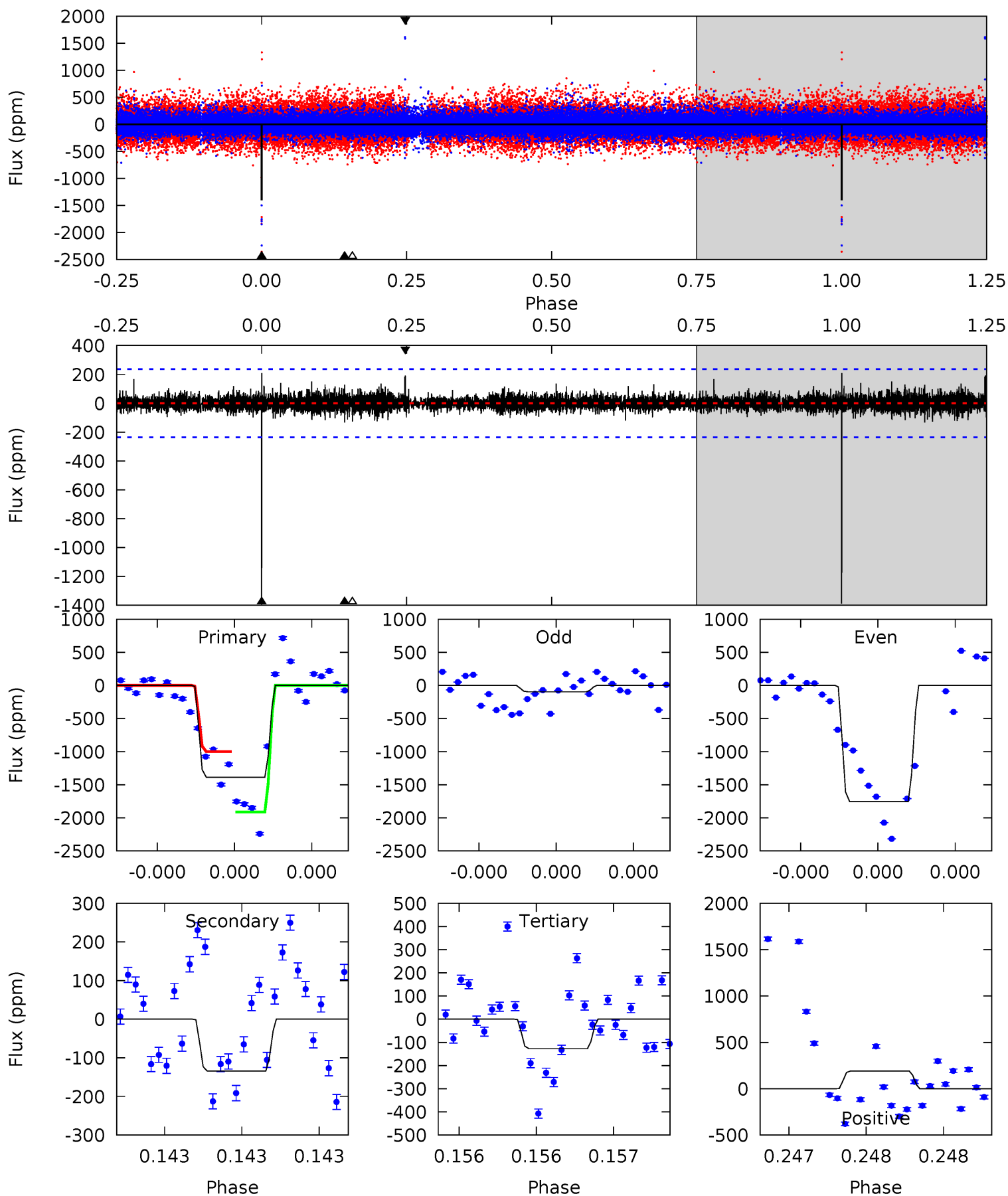
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

006206885-06, P = 552.632441 Days, E = 225.567587 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	3.20	3.02	4.56	5.62	3.55	0.66	30.0	28.5	0.17	-1.37	24.7	0.89	0.13	10.7



Stellar Parameters For KIC 006206885

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4927^{+137}_{-1}	$3.188^{+0.325}_{-0.325}$	$-0.340^{+0.300}_{-0.200}$	$3.924^{+2.178}_{-1.173}$	$0.865^{+0.336}_{-0.084}$	$0.020^{+0.041}_{-0.013}$
	+3%/-0%	+10%/-10%	+88%/-59%	+56%/-30%	+39%/-10%	+202%/-65%
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 006206885-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$34.68^{+35.48}_{-24.03}$	533^{+79}_{-53}	-2391^{+17404}_{-10894}	$-40.643^{+147881.811}_{-127496.148}$
Alt.	-134 ± 42	$36.26^{+35.91}_{-25.54}$	537^{+68}_{-57}	2621^{+1176}_{-410}	89^{+1040}_{-66}

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

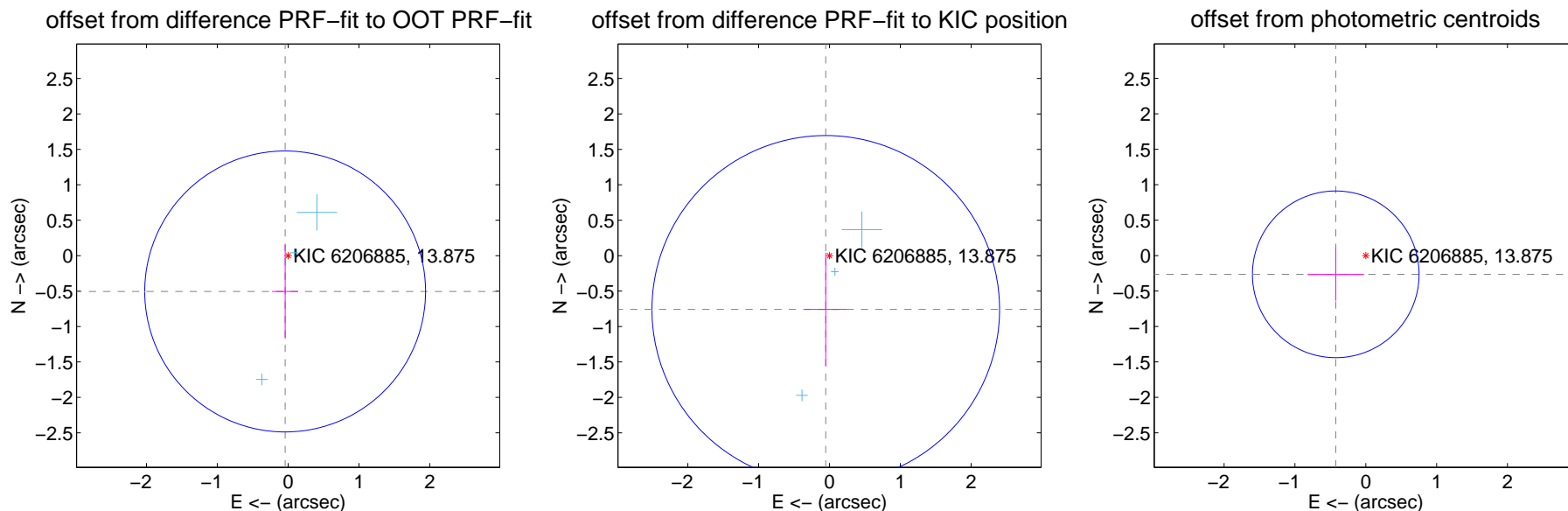
DV Centroid Data

Supplemental centroid analysis for 006206885-06. Kepler magnitude: 13.88. Transit SNR -1.00

There are 3 quarters with good PRF difference image offsets

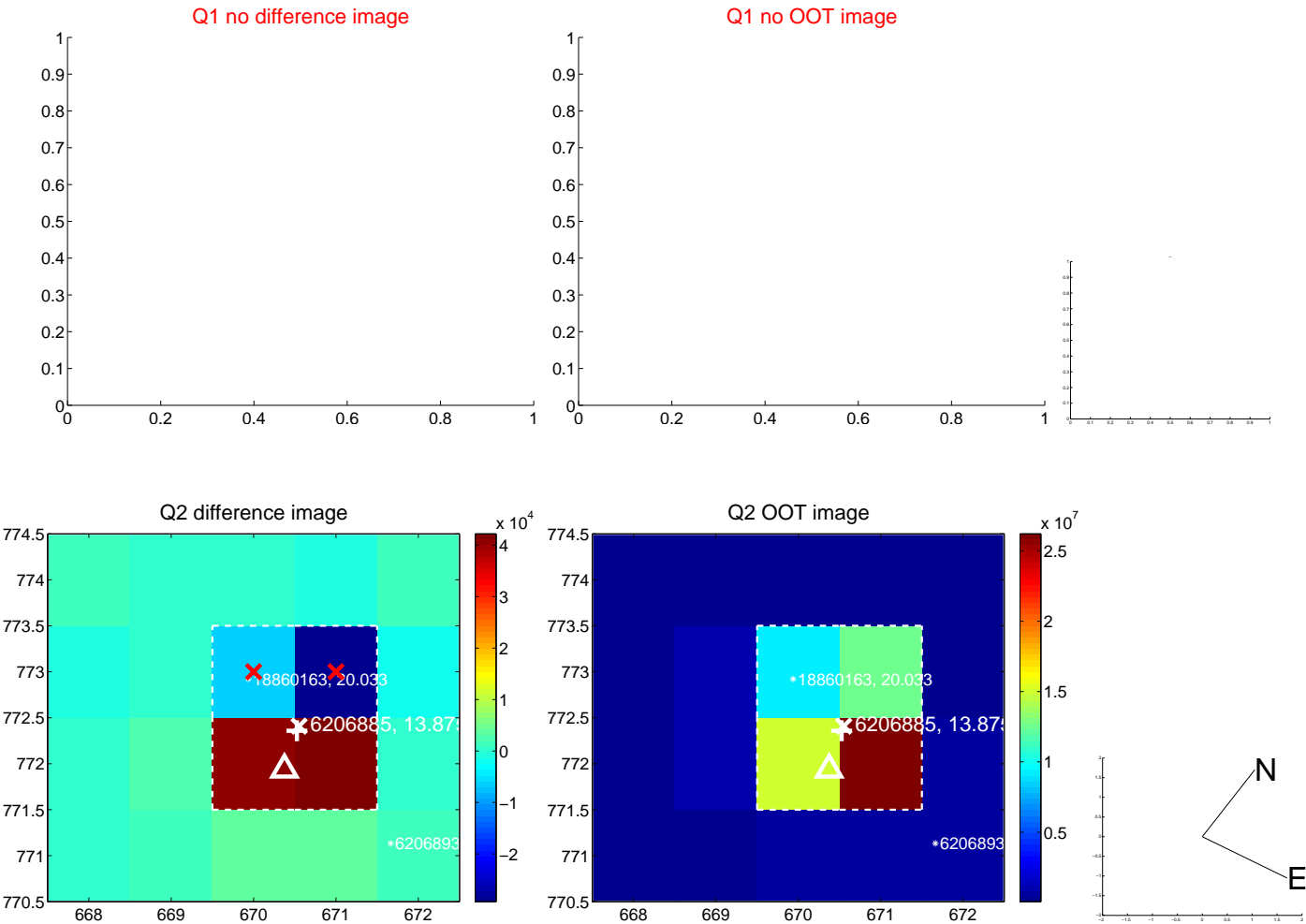
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.507 ± 0.661	0.77	0.042 ± 0.185	-0.505 ± 0.663
PRF-fit source offset from KIC position	0.761 ± 0.818	0.93	0.053 ± 0.296	-0.759 ± 0.800
photometric centroid source offset	0.50 ± 0.39	1.27	0.42 ± 0.40	-0.26 ± 0.37

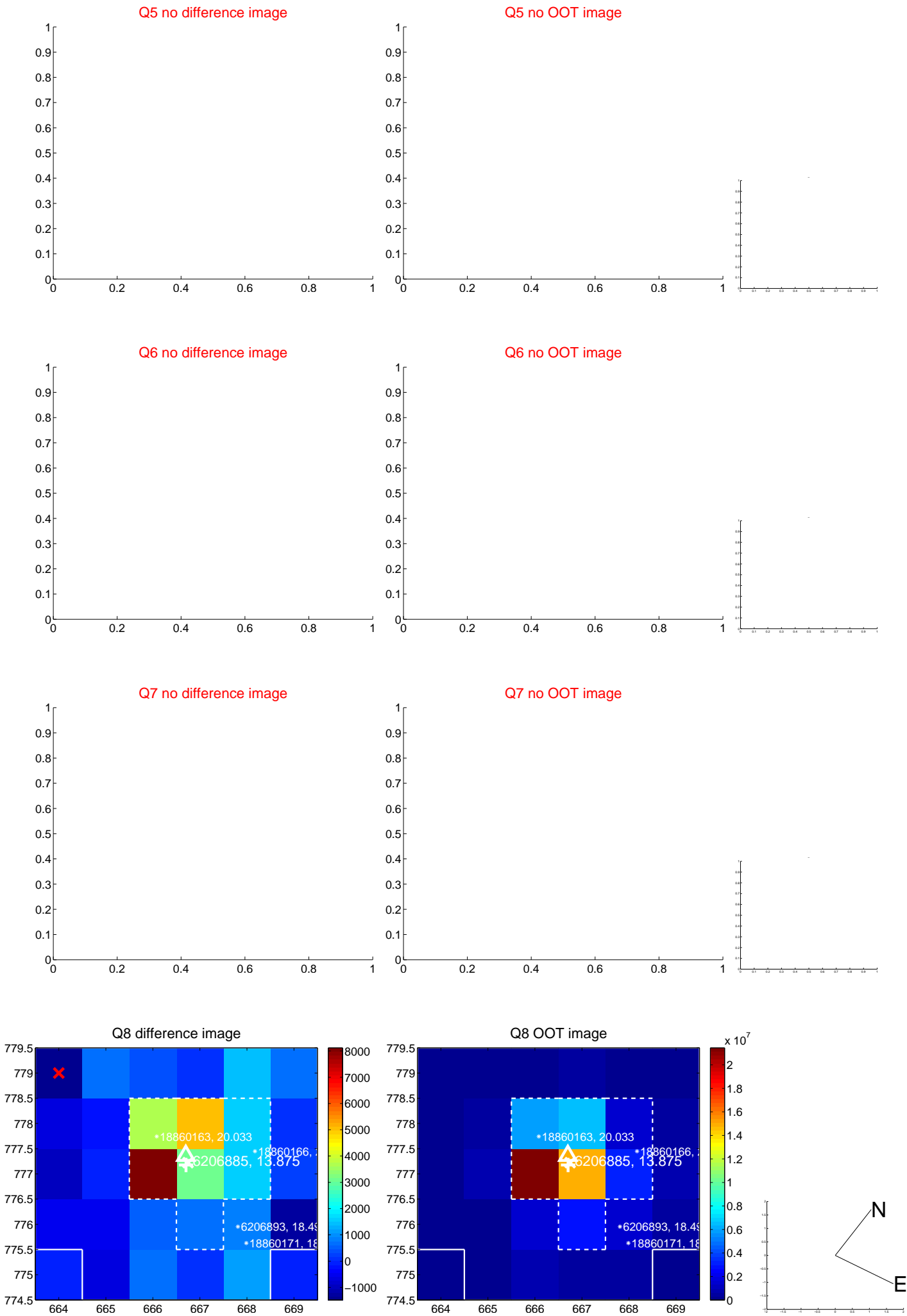


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

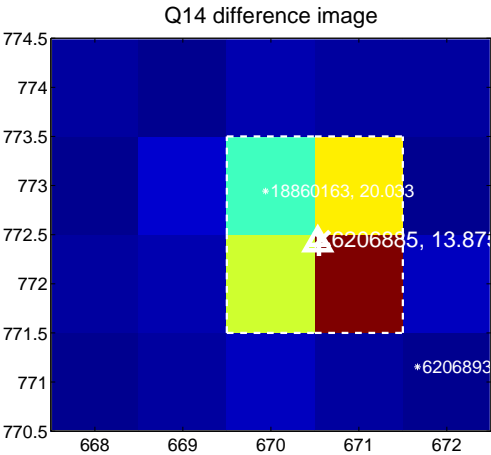
Q13 no difference image



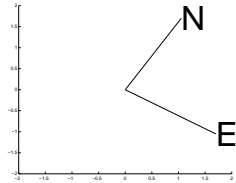
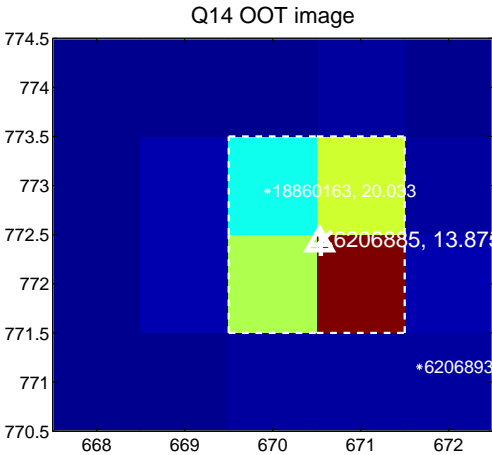
Q13 no OOT image



Q14 difference image



Q14 OOT image



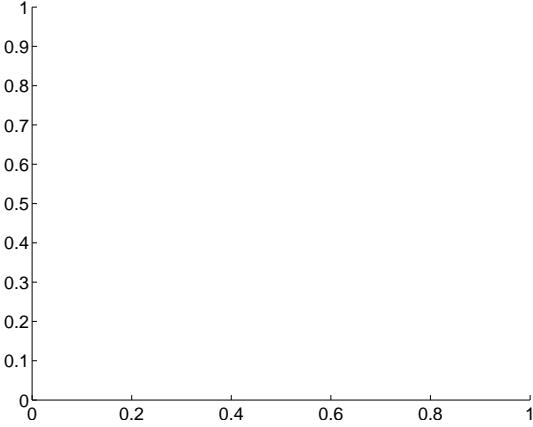
Q15 no difference image



Q15 no OOT image



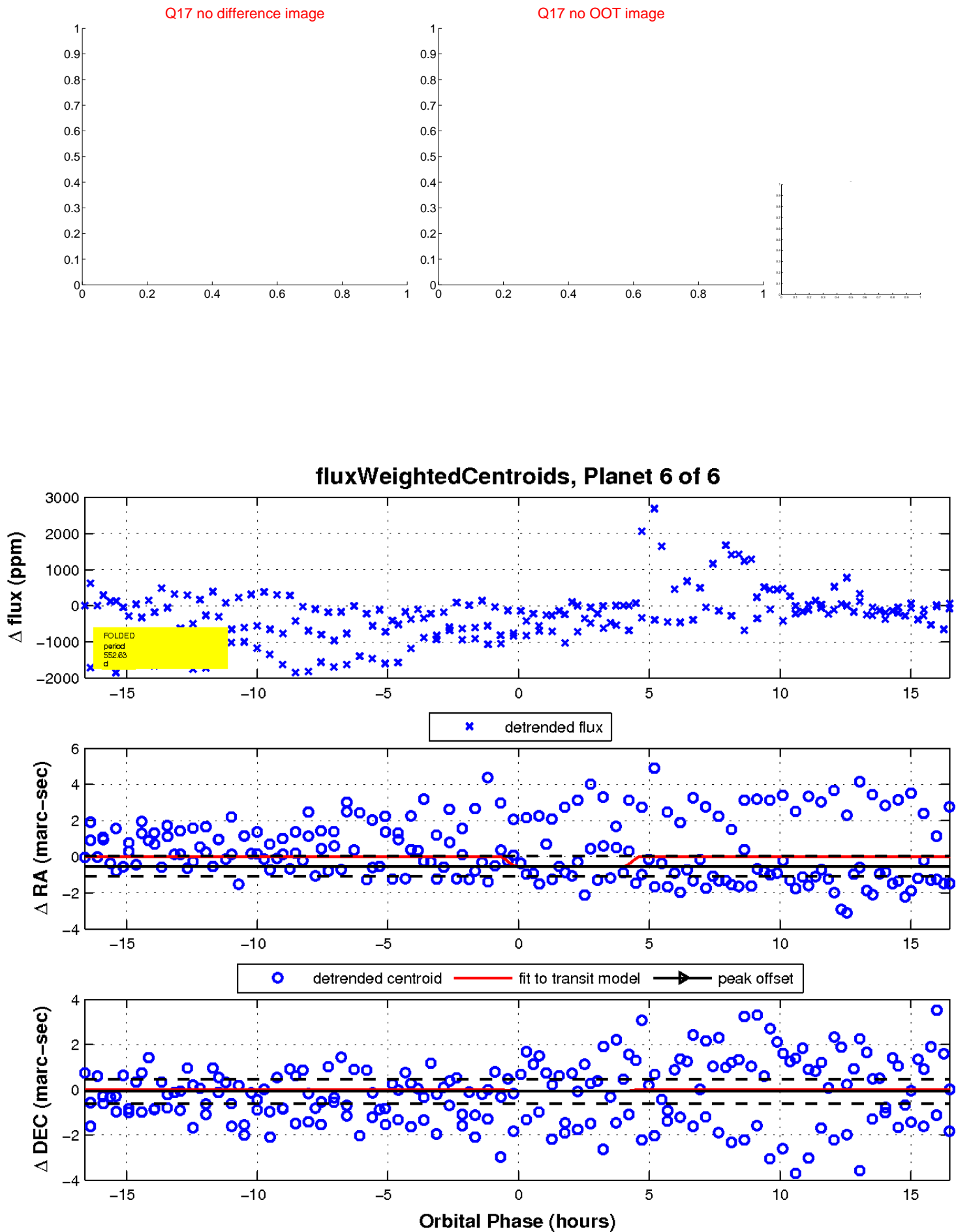
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

