

KIC 005254176

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})
005254176-01	OBS	No	49.744989	181.162047	2481.7	2.500	18.6	-1.0	1.60	6899	8.06	61.98
005254176-02	OBS	No	64.169469	144.513235	95.9	0.524	18.9	0.2	1.60	6899	1.67	44.14
005254176-03	OBS	No	50.756128	131.926869	6518.1	7.255	14.2	4.4	1.60	6899	15.77	60.34
005254176-04	OBS	No	22.594120	139.986889	4767.8	2.787	16.1	7.8	1.60	6899	17.79	177.53
005254176-05	OBS	No	67.455465	176.368400	11342.8	5.400	10.2	9.3	1.60	6899	29.68	41.30
005254176-06	OBS	No	27.709152	155.582033	1038.5	3.000	9.6	-1.0	1.60	6899	5.21	135.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005254176-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005254176-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
005254176-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
005254176-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
005254176-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005254176-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—CENT_NOFITS

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

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

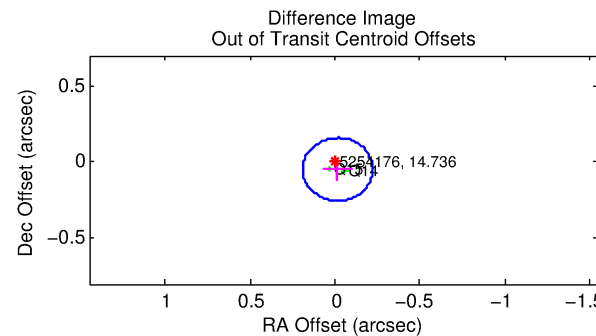
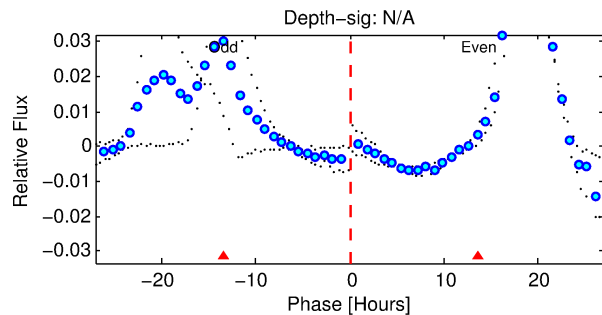
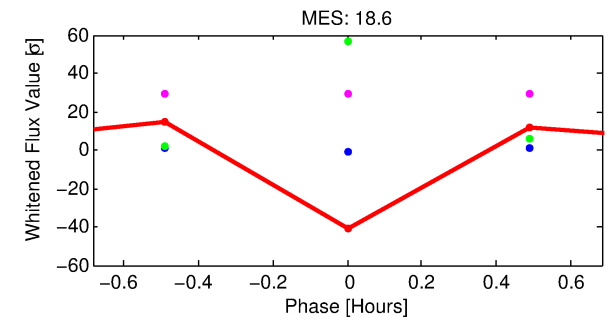
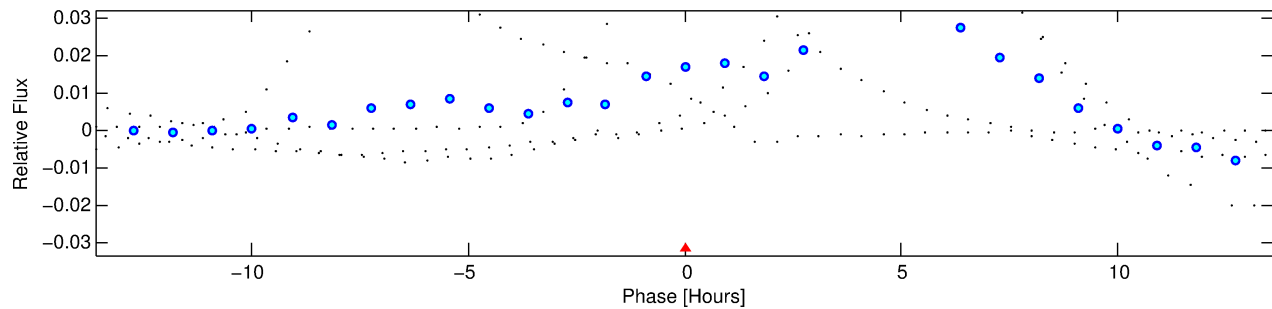
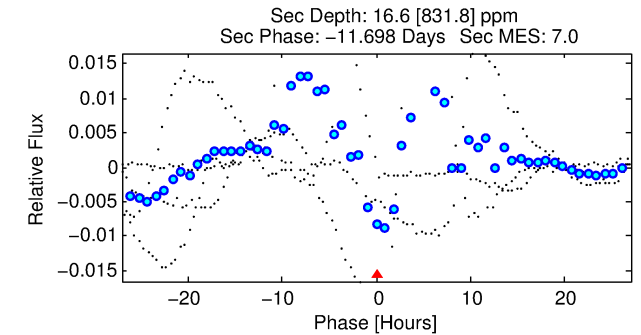
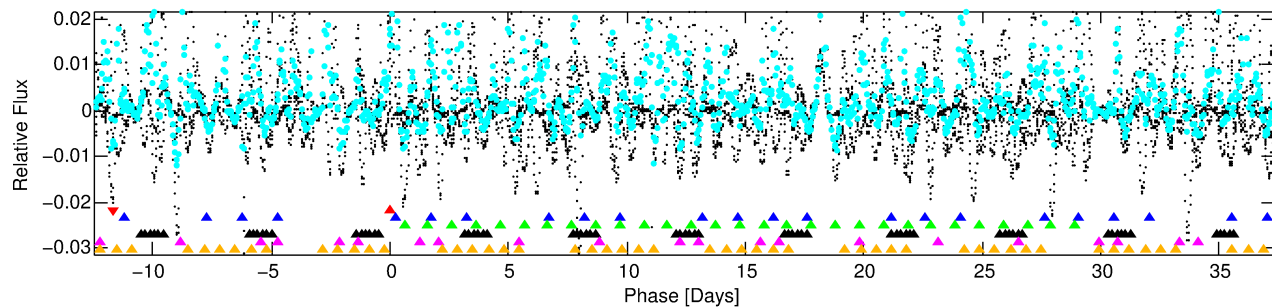
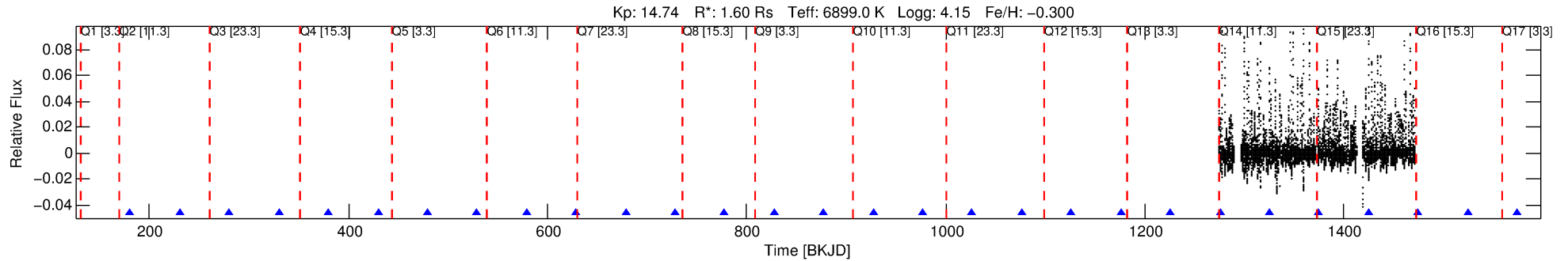
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005254176-01

No Significant Match Found

DV One-Page Summary

KIC: 5254176 Candidate: 1 of 6 Period: 49.745 d



TPS TCE Results:

Period = 49.74499 d
Epoch = 181.1620 BKJD

DV fit results are unavailable

DV Diagnostic Results:

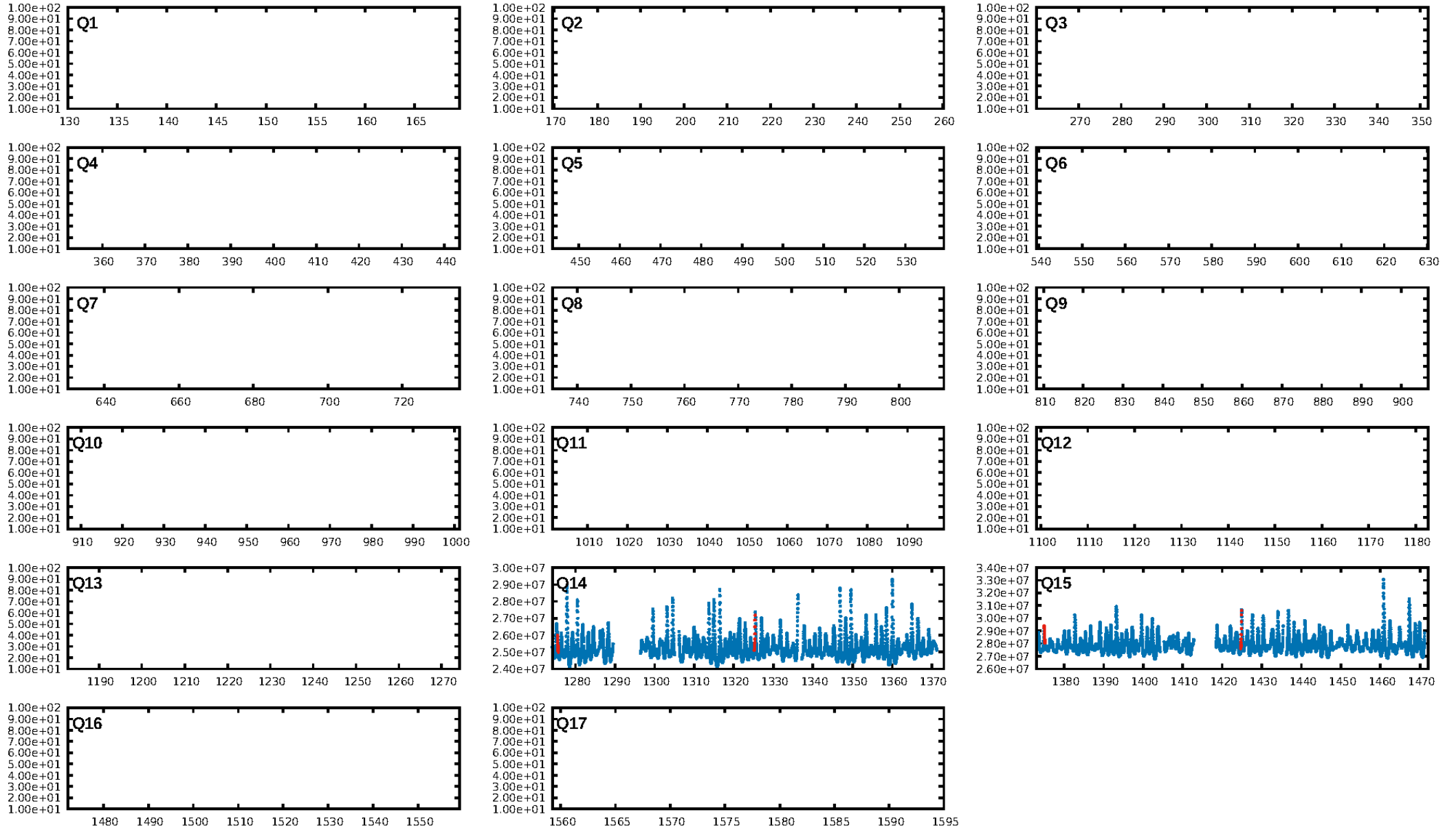
ShortPeriod-sig: 100.0% [135.43σ]
LongPeriod-sig: 99.8% [3.16σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.8706

Centroid-sig: 0.9%
Centroid-so: 2.005 arcsec [1.81σ]
OotOffset-rm: 0.050 arcsec [0.72σ]
KicOffset-rm: 0.153 arcsec [1.44σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]

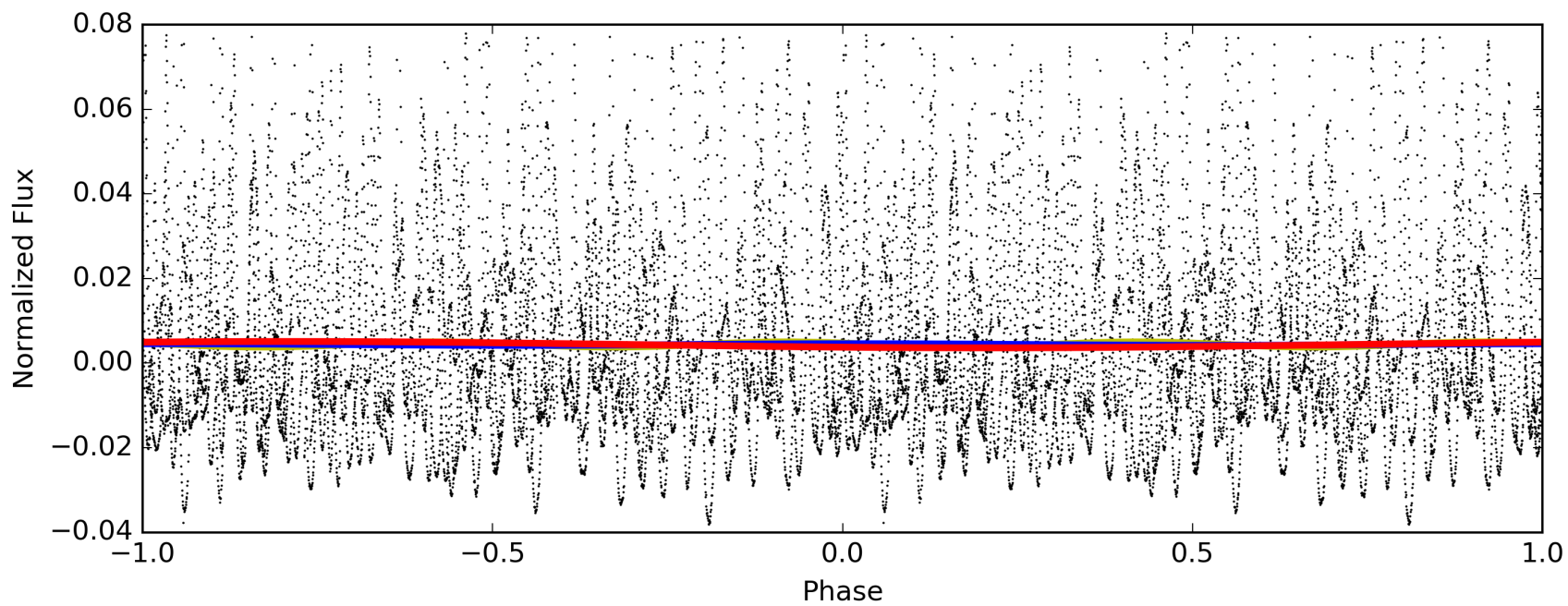
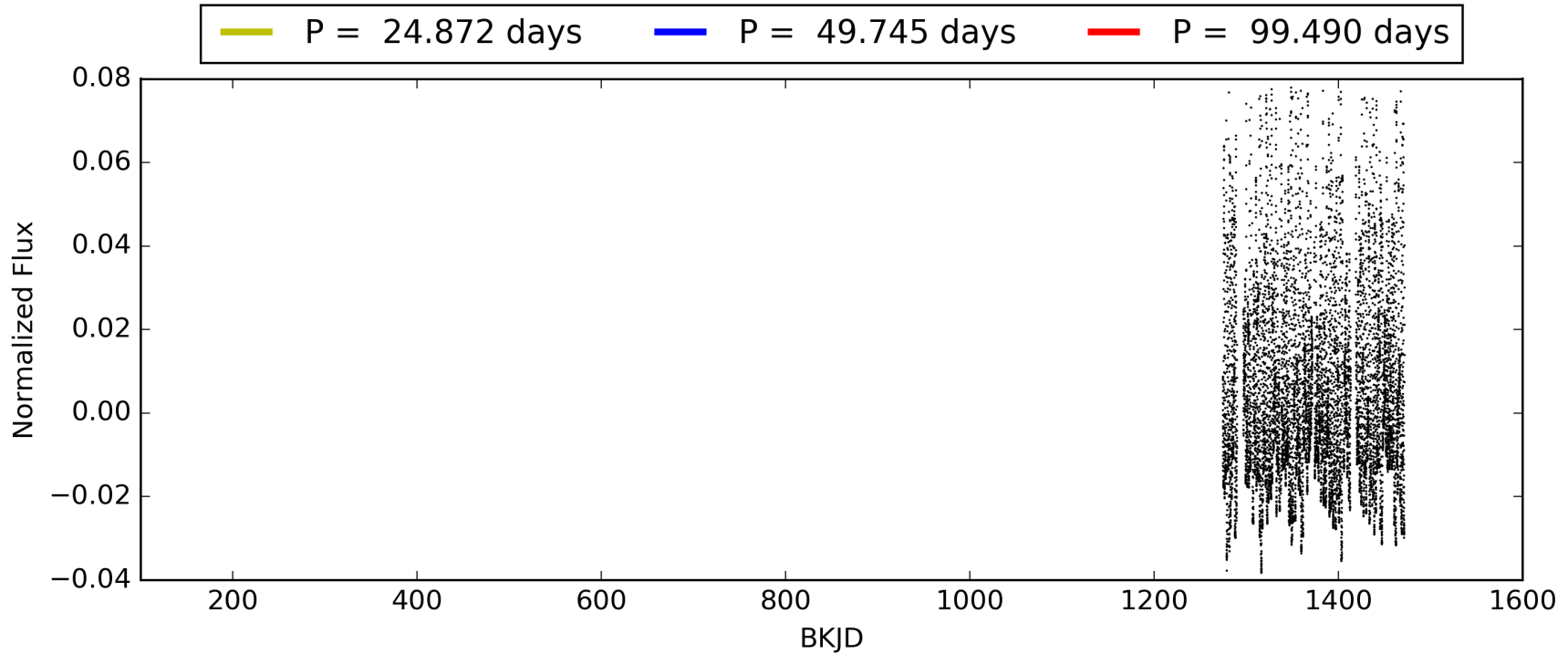
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 06:51:19 Z

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

TCE 005254176-01, PDC Light Curves

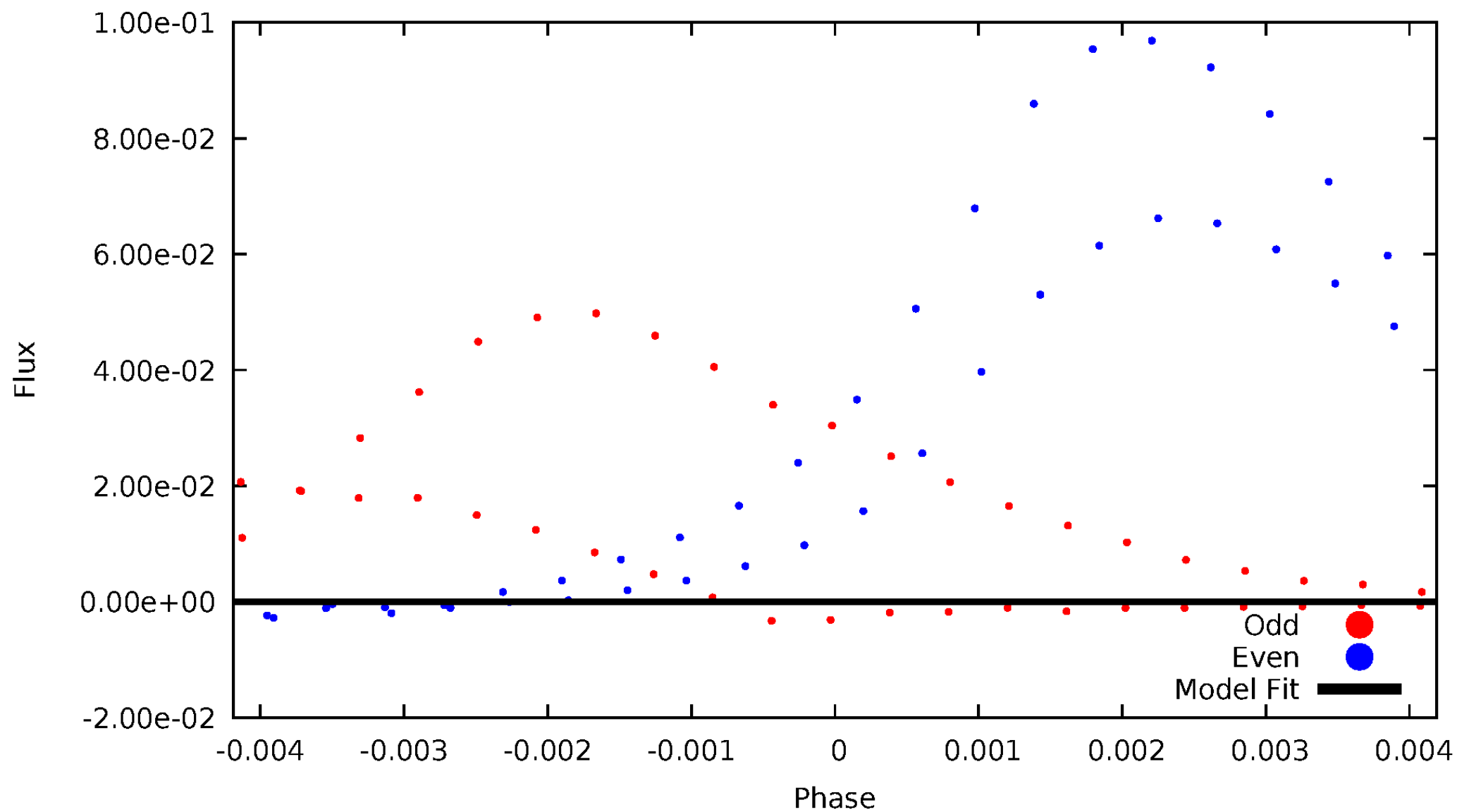


TCE 005254176-01



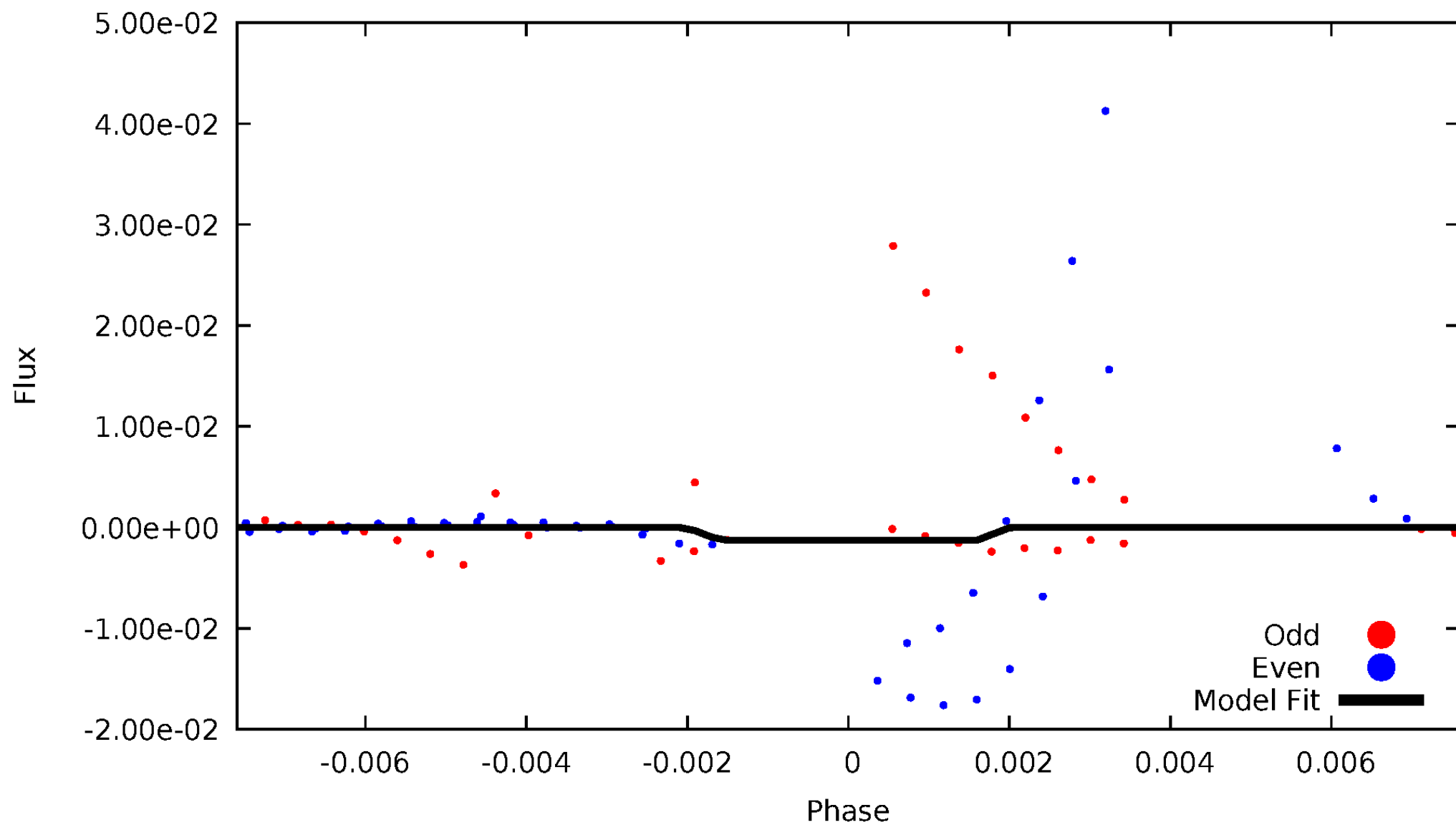
DV Odd/Even

TCE 005254176-01



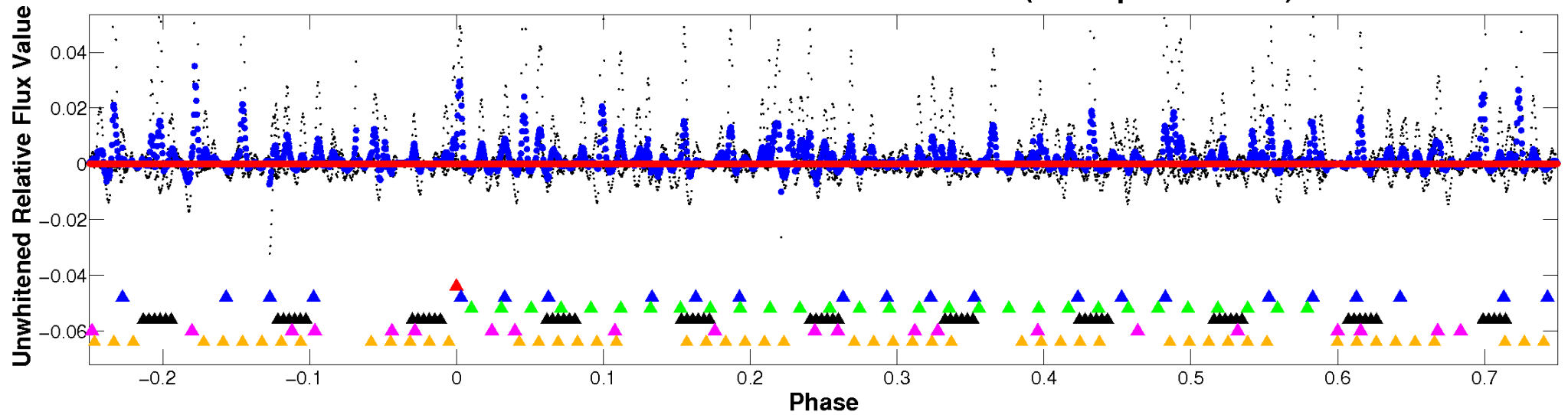
ALT Odd/Even

TCE 005254176-01

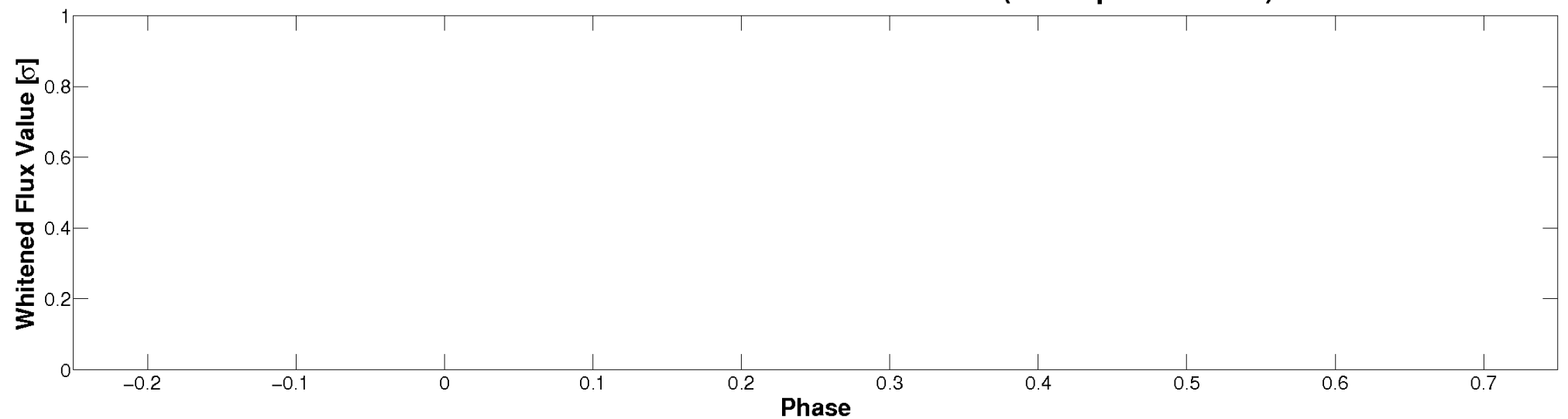


Non-Whitened Vs. Whitened Light Curve

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

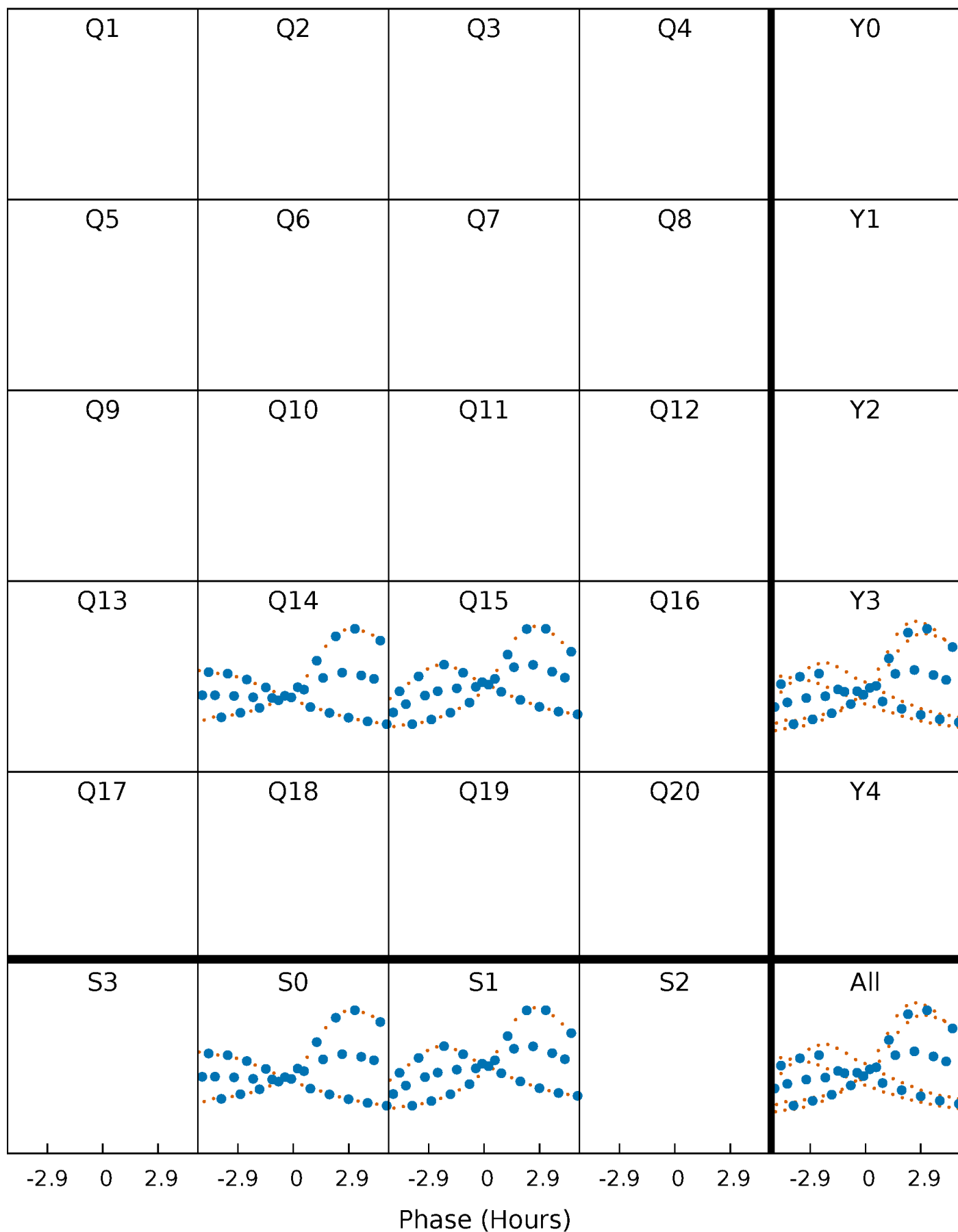


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



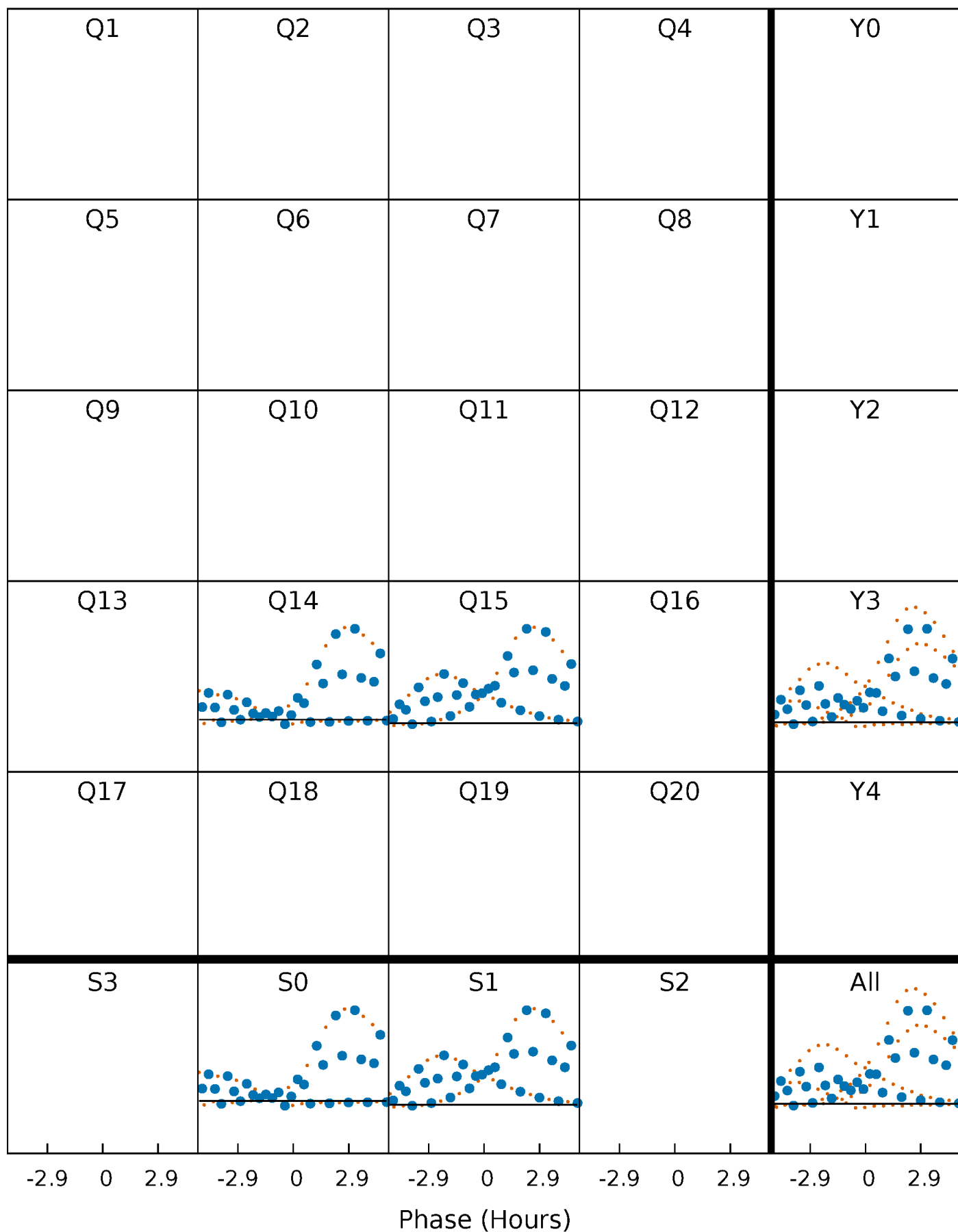
PDC Quarter-Phased Transit Curves

TCE 005254176-01 P= 49.744989 Days $T_0=181.162047$ (BKJD)



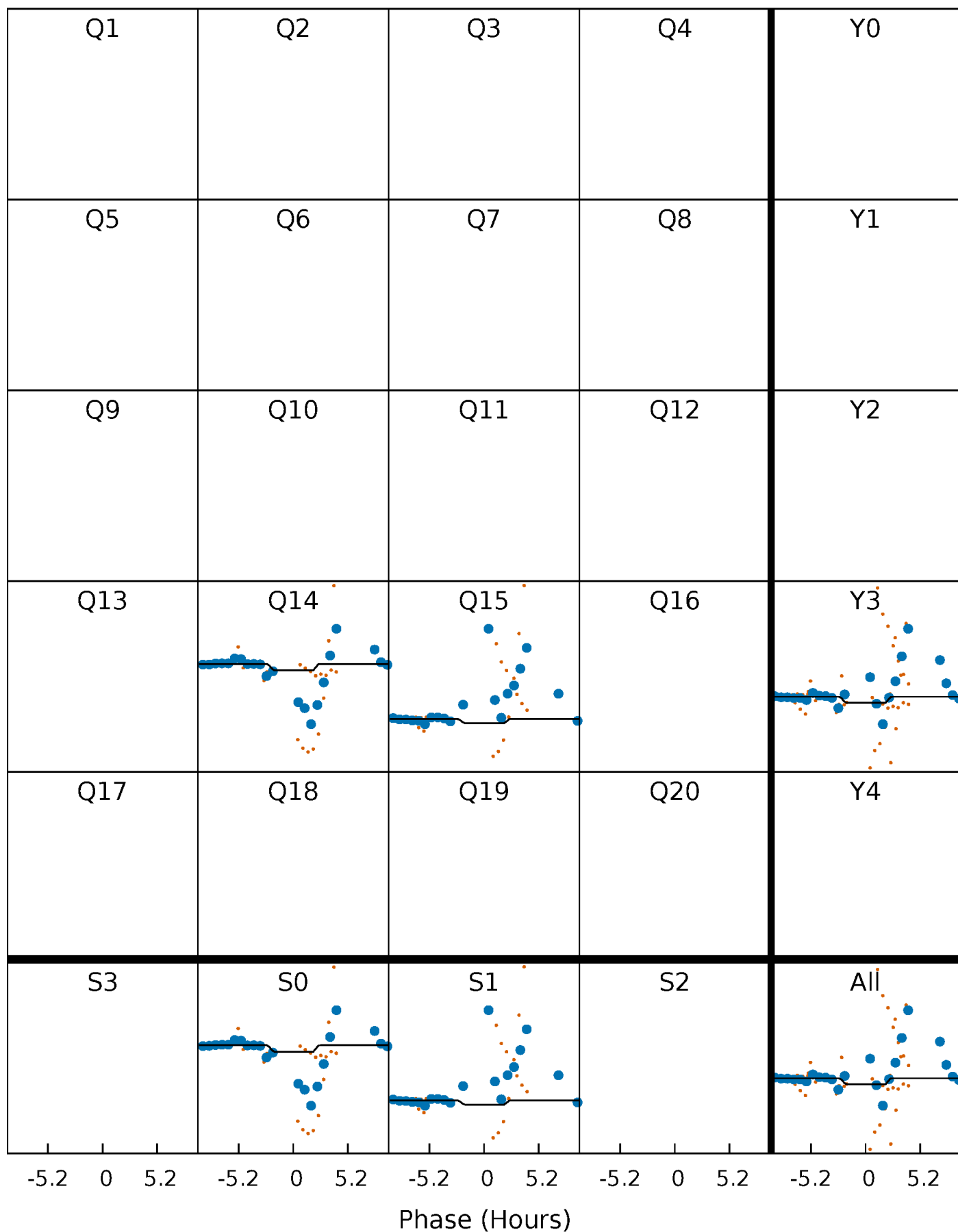
DV Quarter-Phased Transit Curves

TCE 005254176-01 P= 49.744989 Days $T_0=181.162047$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

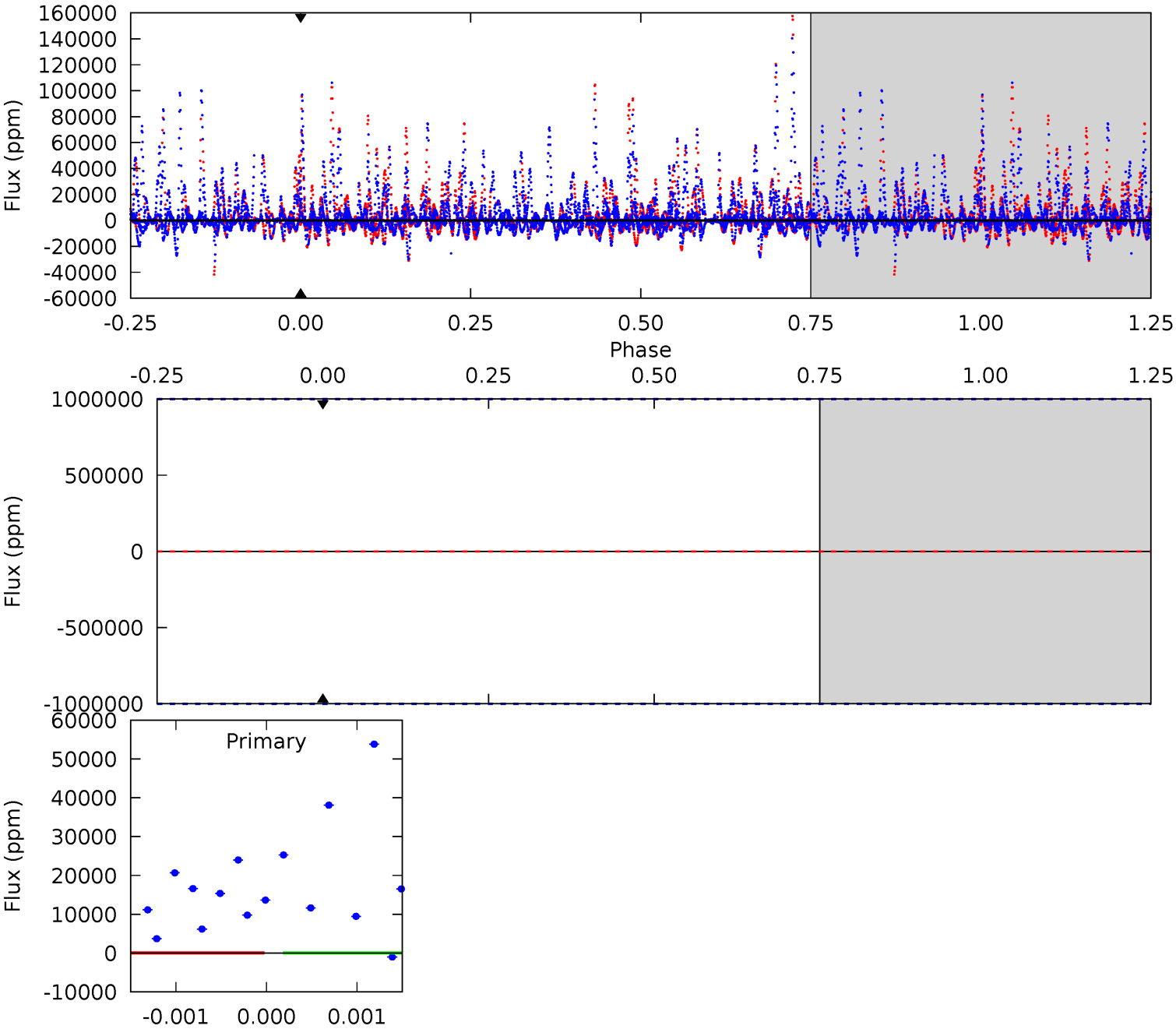
TCE 005254176-01 P= 49.744989 Days $T_0=181.072071$ (BKJD)



DV Model-Shift Uniqueness Test

005254176-01, P = 49.744989 Days, E = 181.162047 Days

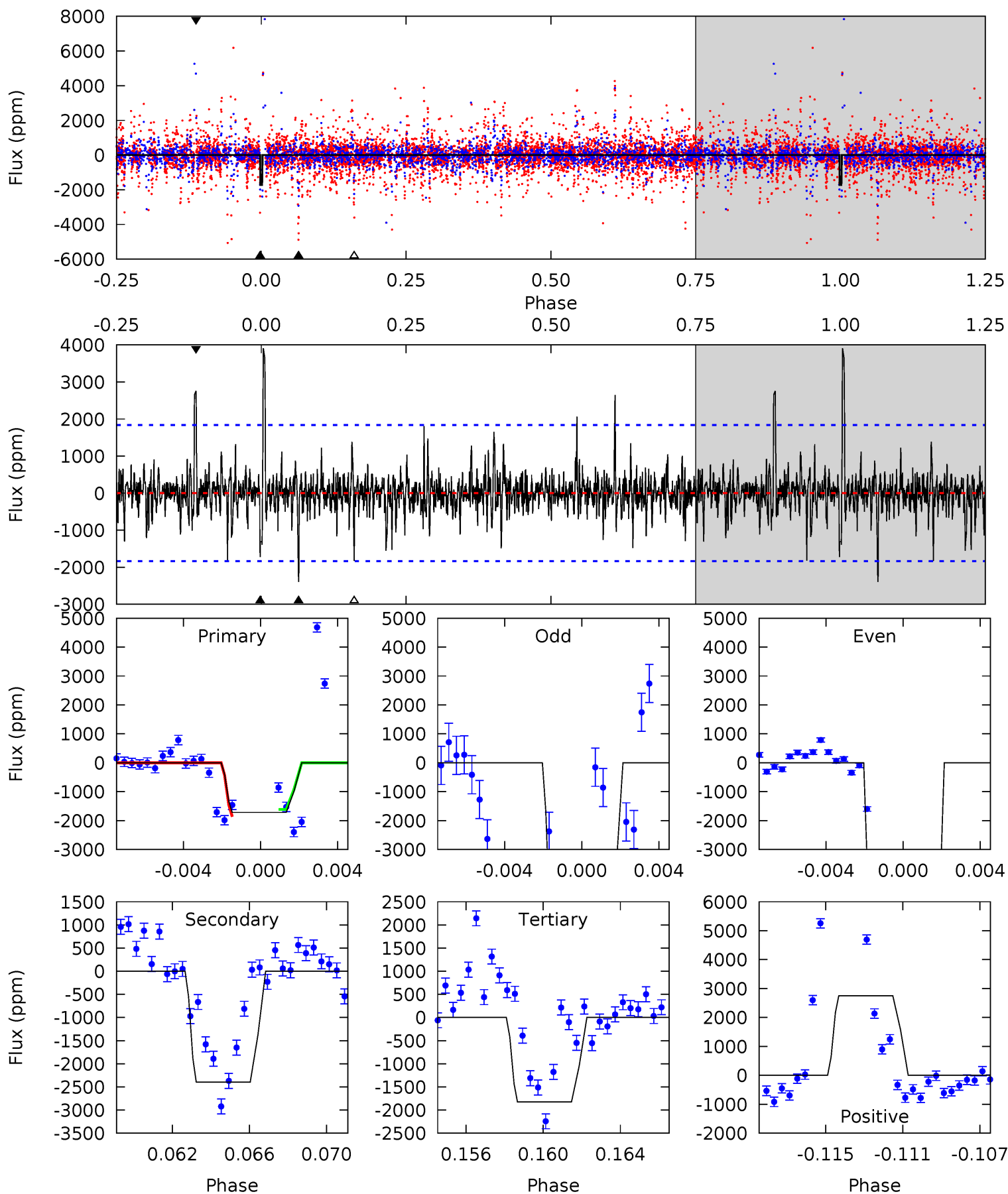
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005254176-01, P = 49.744989 Days, E = 181.072071 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.86	6.78	5.17	7.79	5.19	2.87	1.11	-0.31	-2.93	1.61	-1.02	13.1	0.10	0.62	0.36



Stellar Parameters For KIC 005254176

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6899^{+216}_{-288}	$4.146^{+0.180}_{-0.180}$	$-0.300^{+0.300}_{-0.300}$	$1.599^{+0.467}_{-0.382}$	$1.309^{+0.190}_{-0.232}$	$0.452^{+0.440}_{-0.221}$
	+3%/-4%	+4%/-4%	+100%/-100%	+29%/-24%	+15%/-18%	+98%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005254176-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$15.32^{+14.53}_{-10.02}$	994^{+81}_{-67}	4693^{+22251}_{-26328}	344^{+38579}_{-25525}
Alt.	-2396 ± 354	$13.90^{+14.50}_{-10.00}$	997^{+86}_{-79}	5408^{+5883}_{-1363}	563^{+5961}_{-430}

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 $A_{obs} \gg 1.0$

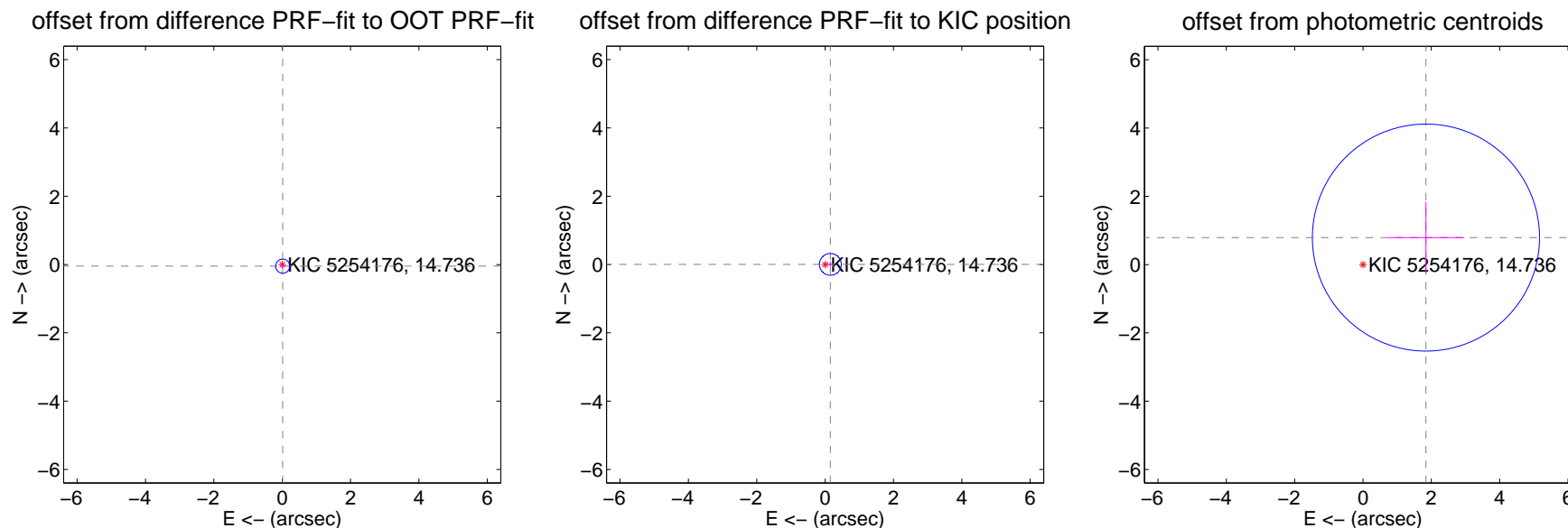
DV Centroid Data

Supplemental centroid analysis for 005254176-01. Kepler magnitude: 14.74. Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.050 ± 0.069	0.72	-0.015 ± 0.079	-0.048 ± 0.067
PRF-fit source offset from KIC position	0.153 ± 0.106	1.44	-0.153 ± 0.106	0.005 ± 0.081
photometric centroid source offset	2.01 ± 1.11	1.81	-1.84 ± 1.12	0.79 ± 1.04

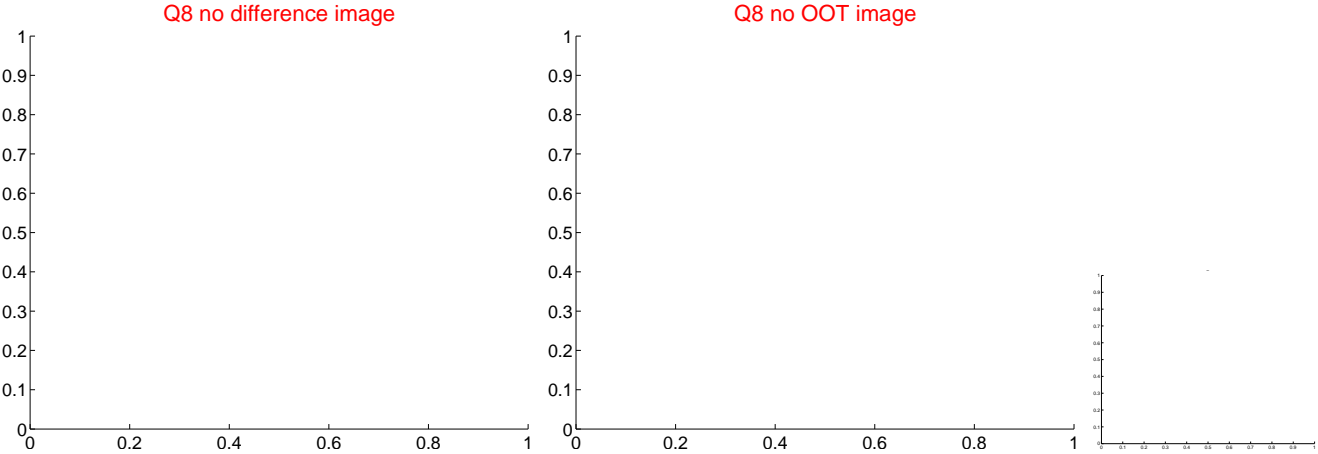
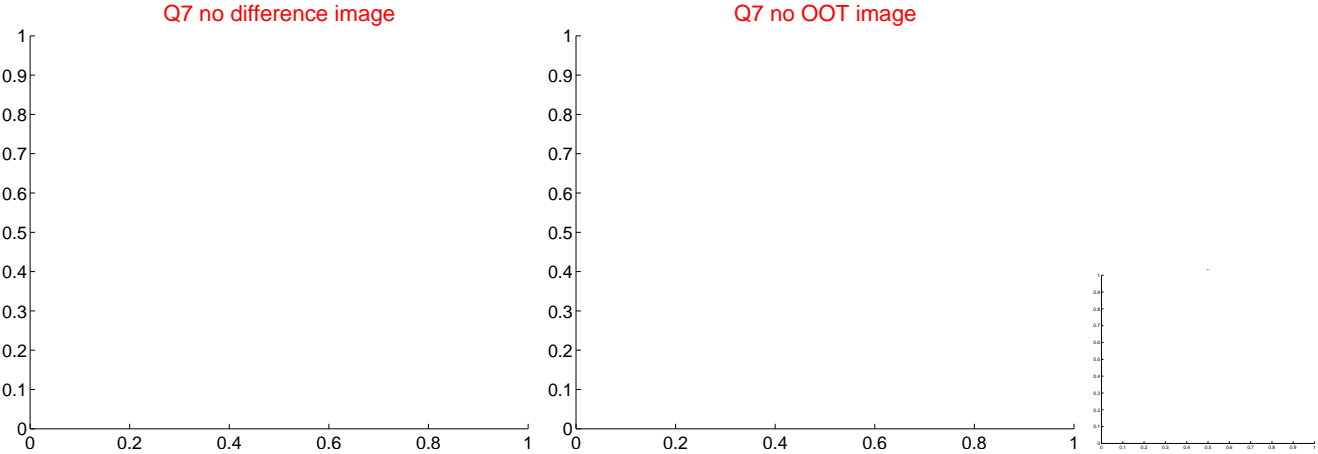
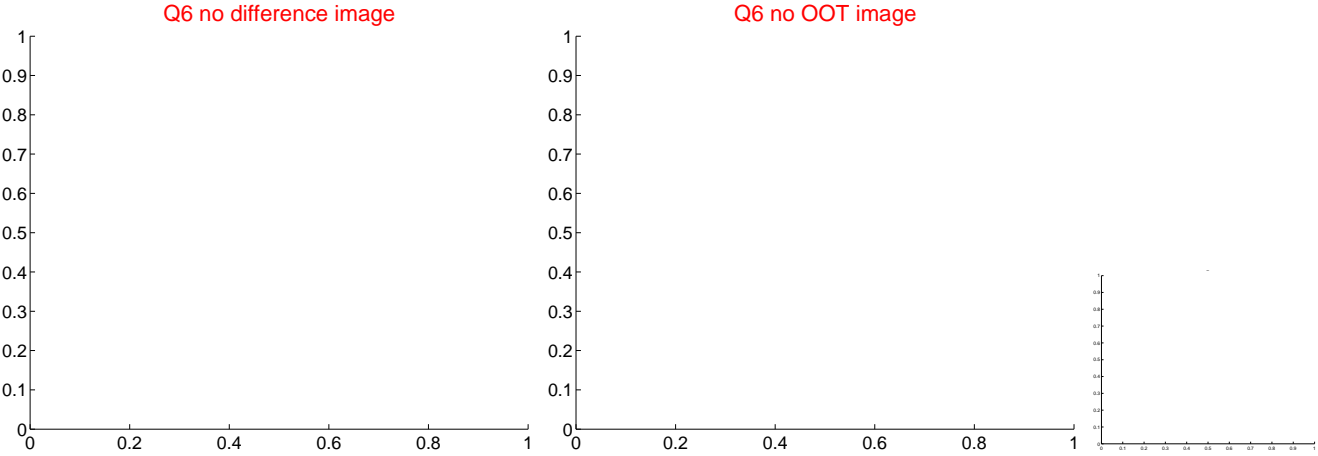
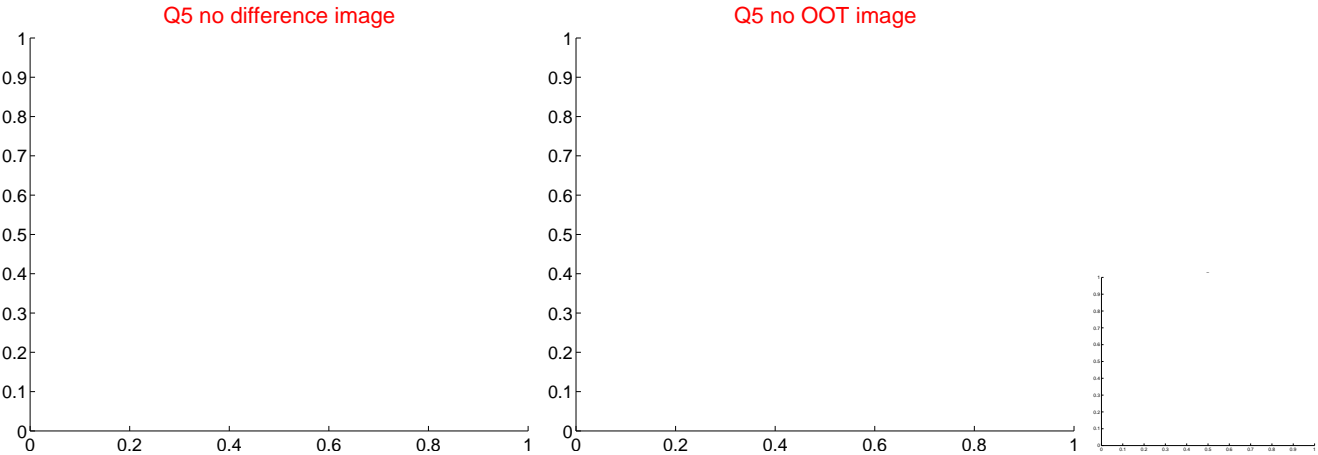


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

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



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

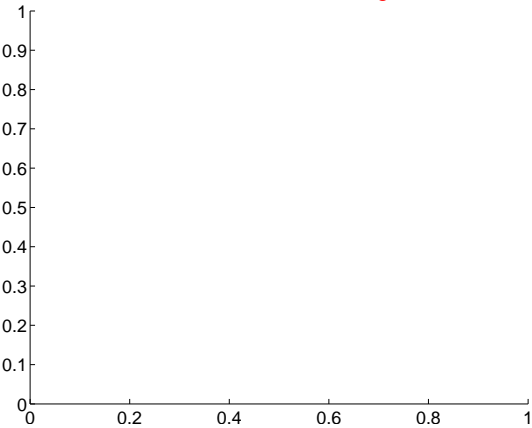


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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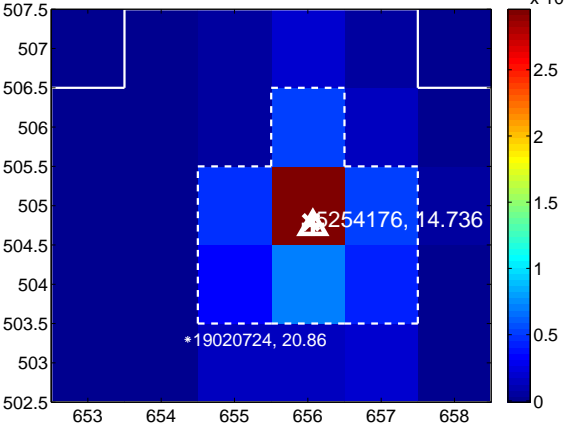
Q13 no difference image



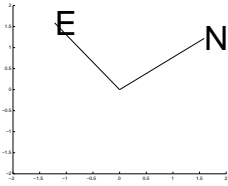
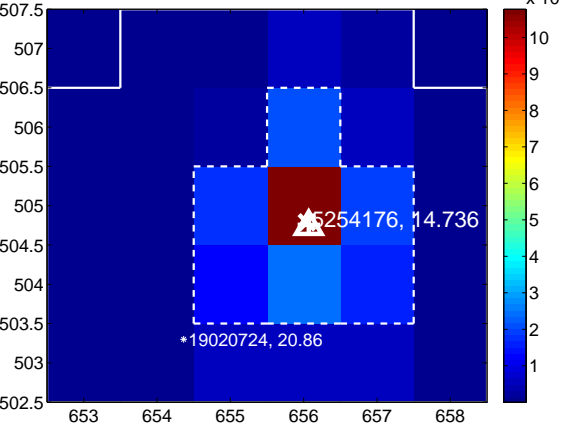
Q13 no OOT image



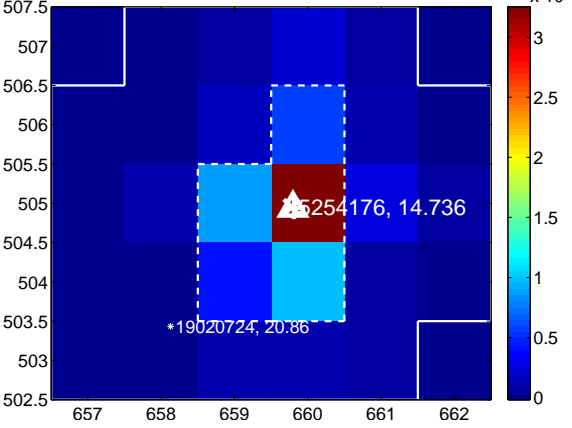
Q14 difference image



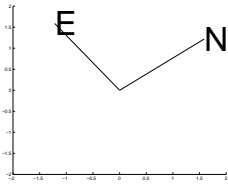
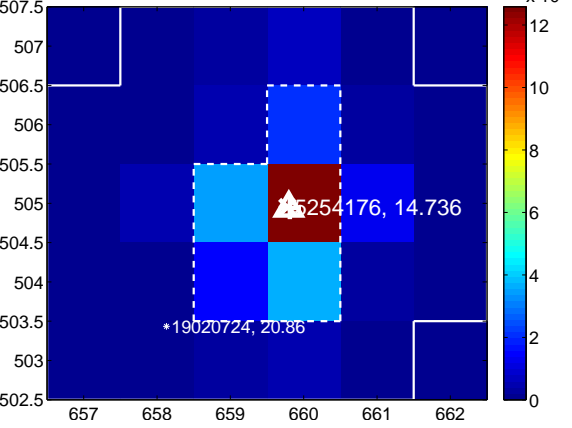
Q14 OOT image



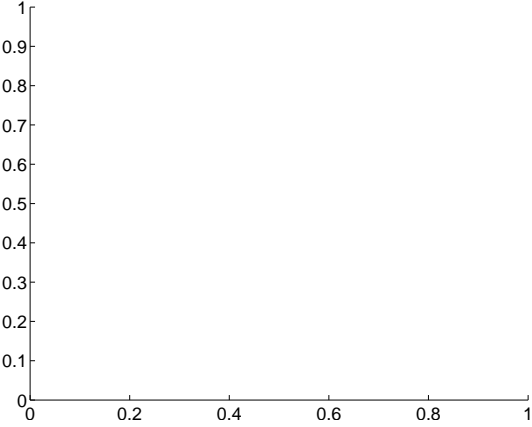
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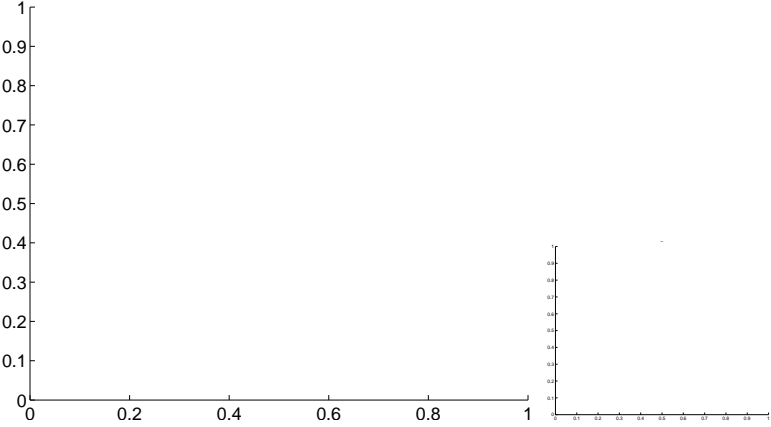
Q15 OOT image



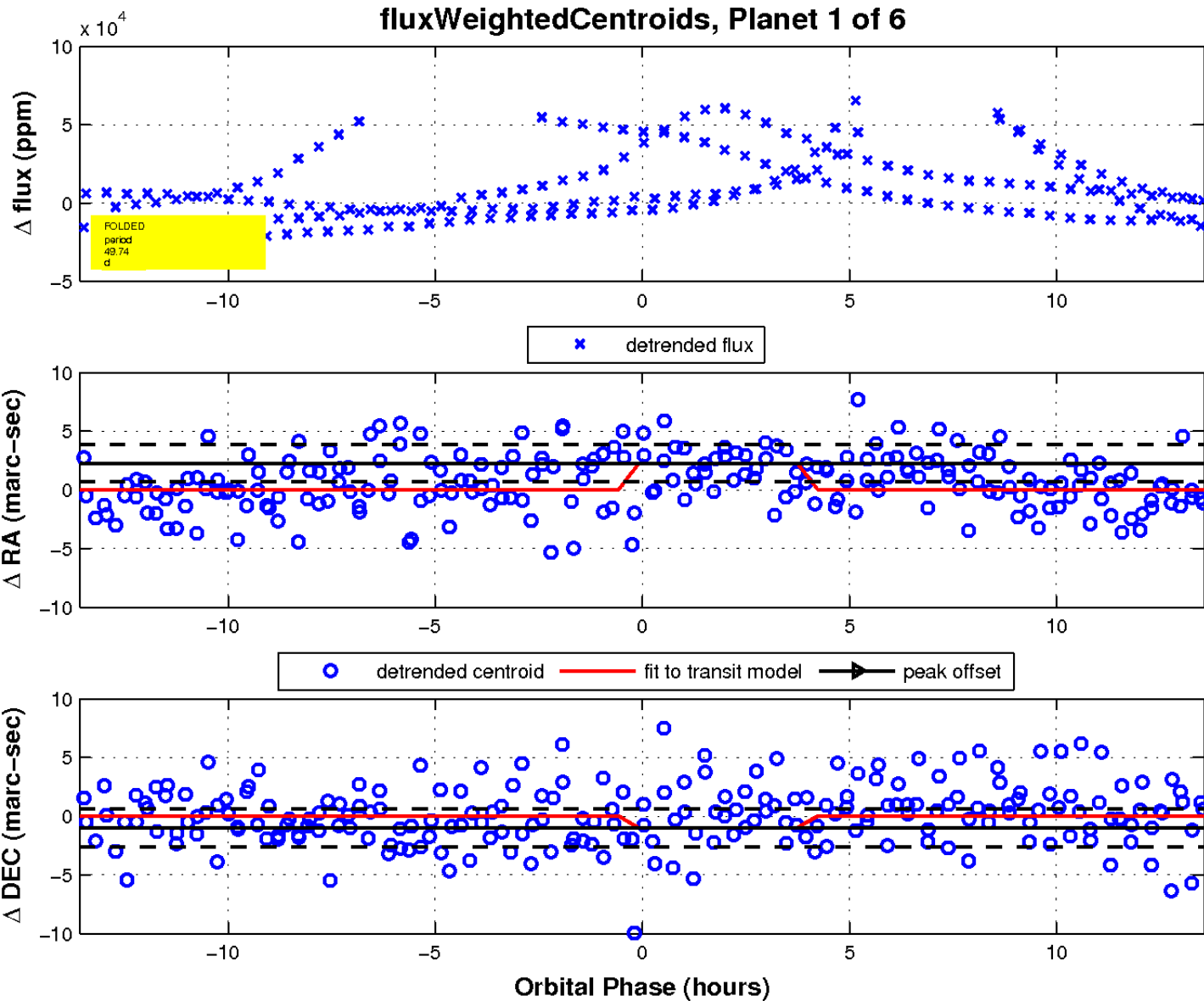
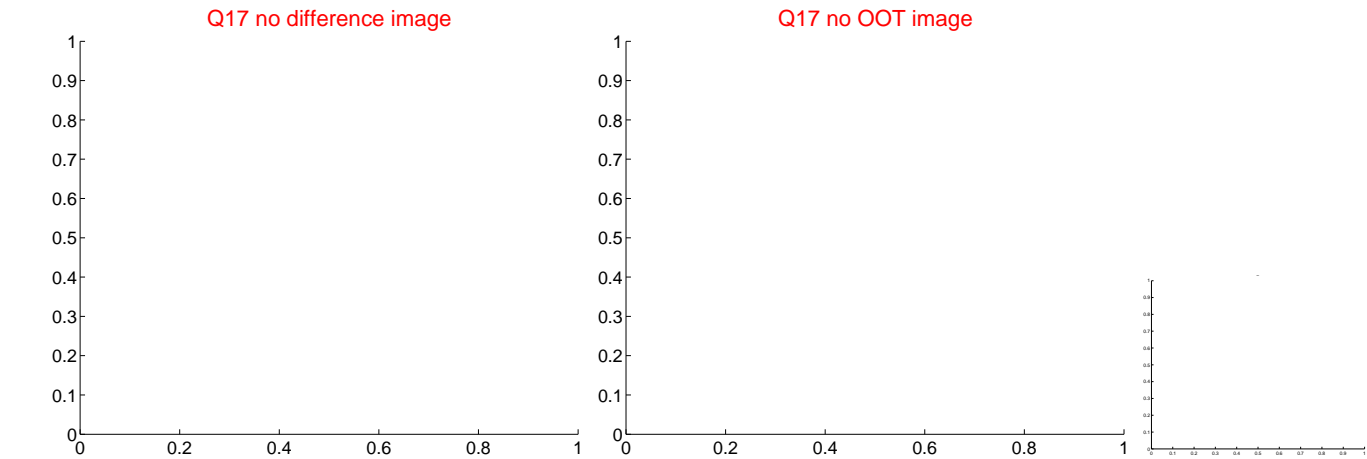
Q16 no difference image



Q16 no OOT image

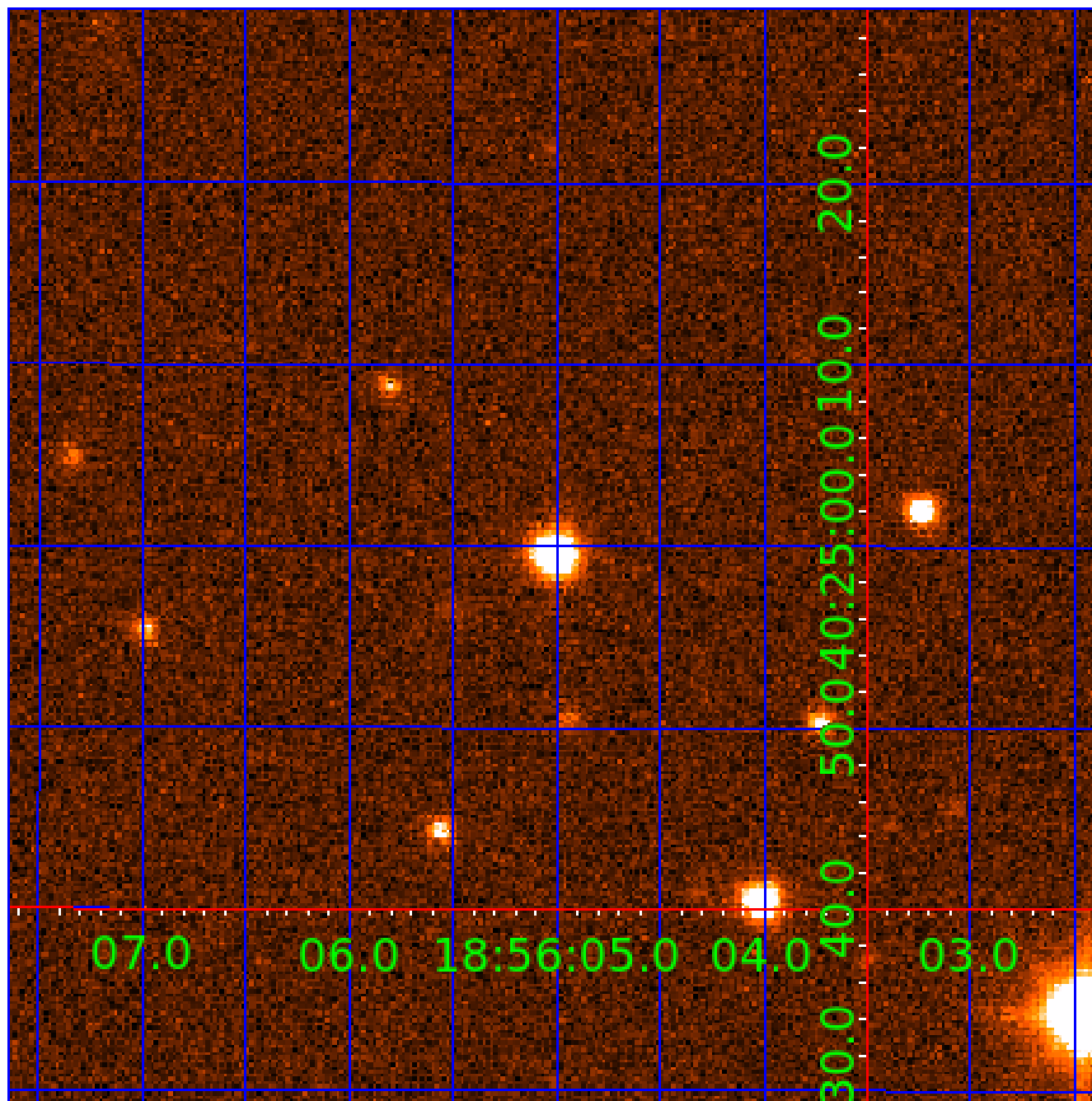


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005254176

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})
005254176-01	OBS	No	49.744989	181.162047	2481.7	2.500	18.6	-1.0	1.60	6899	8.06	61.98
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005254176-05	OBS	No	67.455465	176.368400	11342.8	5.400	10.2	9.3	1.60	6899	29.68	41.30
005254176-06	OBS	No	27.709152	155.582033	1038.5	3.000	9.6	-1.0	1.60	6899	5.21	135.24

Robovetter Results

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005254176-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
005254176-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
005254176-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
005254176-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005254176-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—CENT_NOFITS

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

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

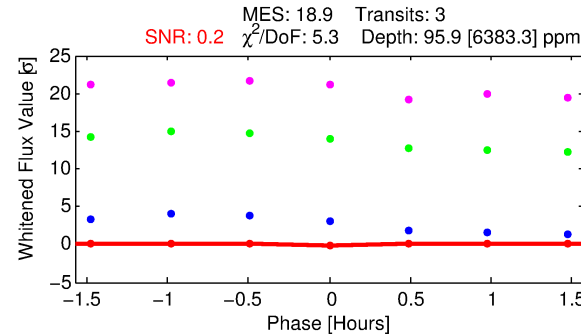
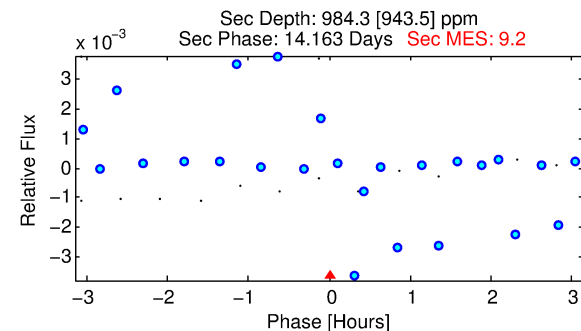
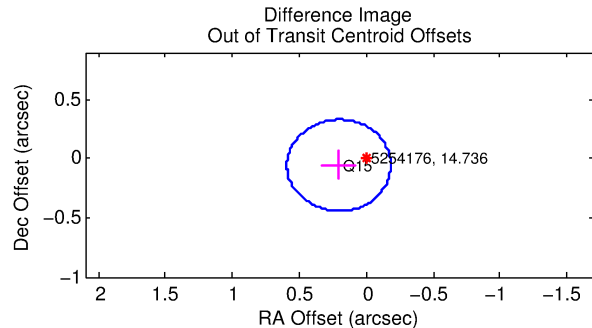
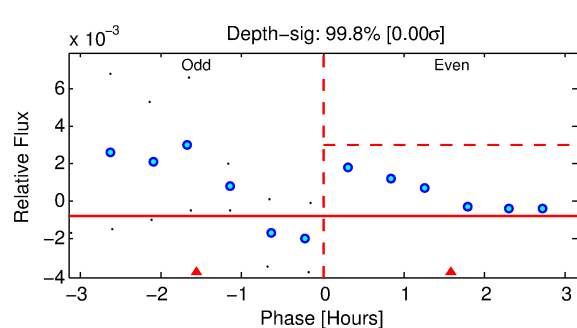
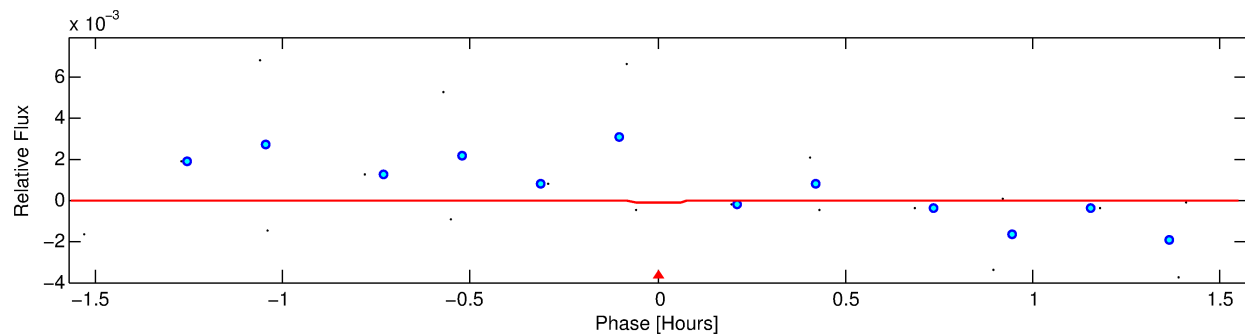
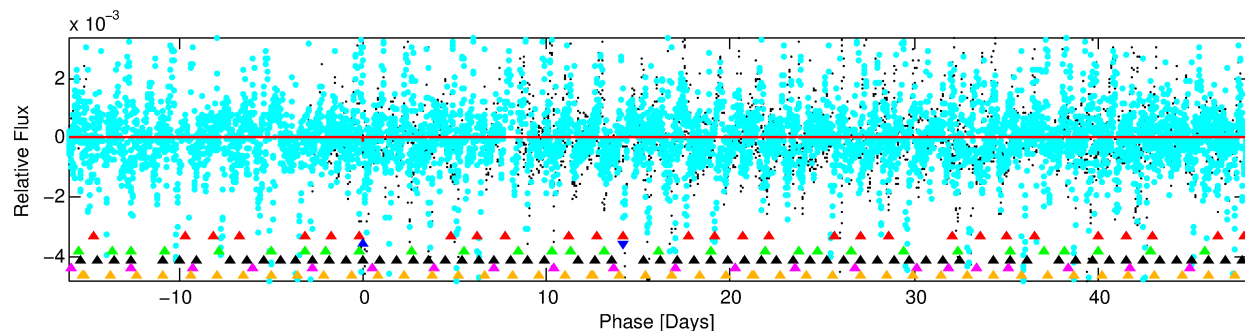
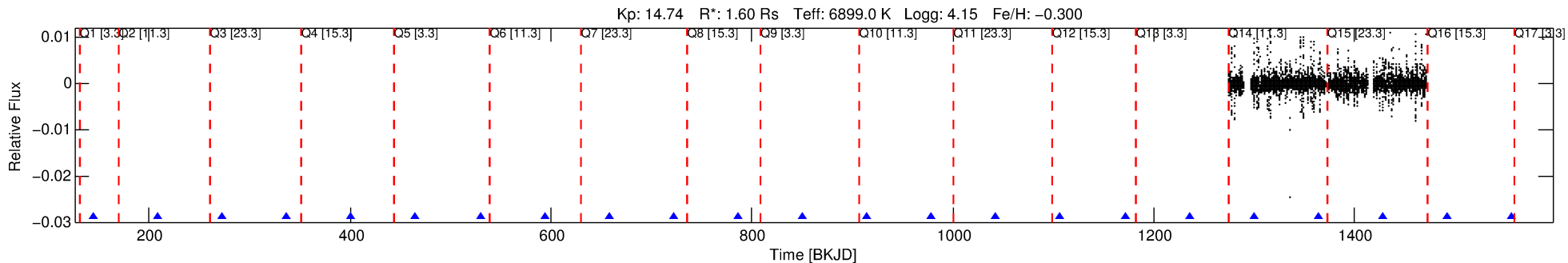
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005254176-02

No Significant Match Found

DV One-Page Summary

KIC: 5254176 Candidate: 2 of 6 Period: 64.169 d



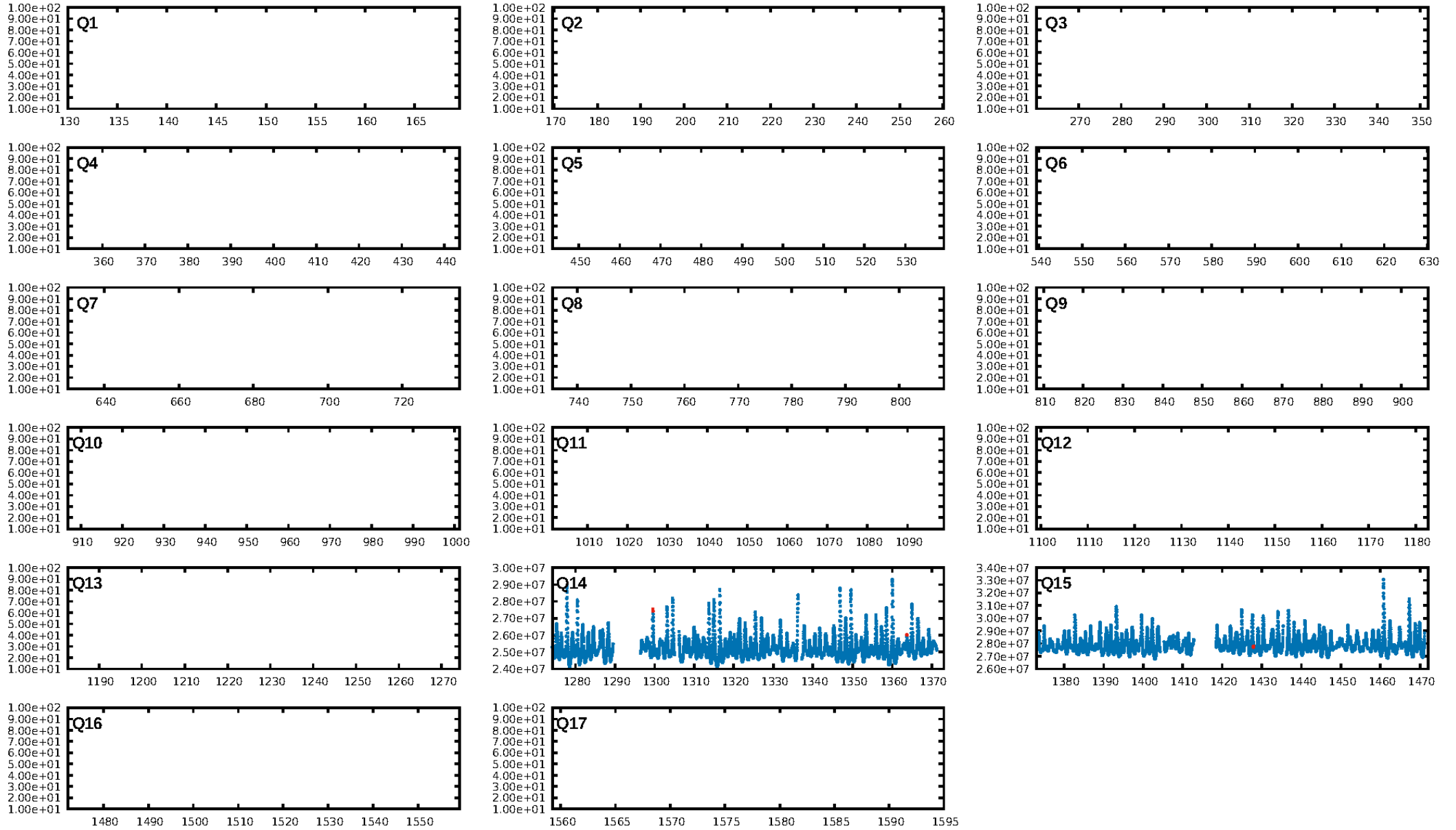
DV Fit Results:

Period = 64.16947 [0.82955] d
Epoch = 144.5132 [16.3364] BKJD
Rp/R* = 0.0095 [10.2196]
a/R* = 870.70 [5232646.64]
b = 0.39 [13296.49]
Seff = 44.14 [16.66]
Teq = 657 [62] K
Rp = 1.66 [1783.20] Re
a = 0.3429 [0.0819] AU
Ag = 22975.85 [49224499.51] [0.00σ]
Teffp = 12511 [6701014] K [0.00σ]

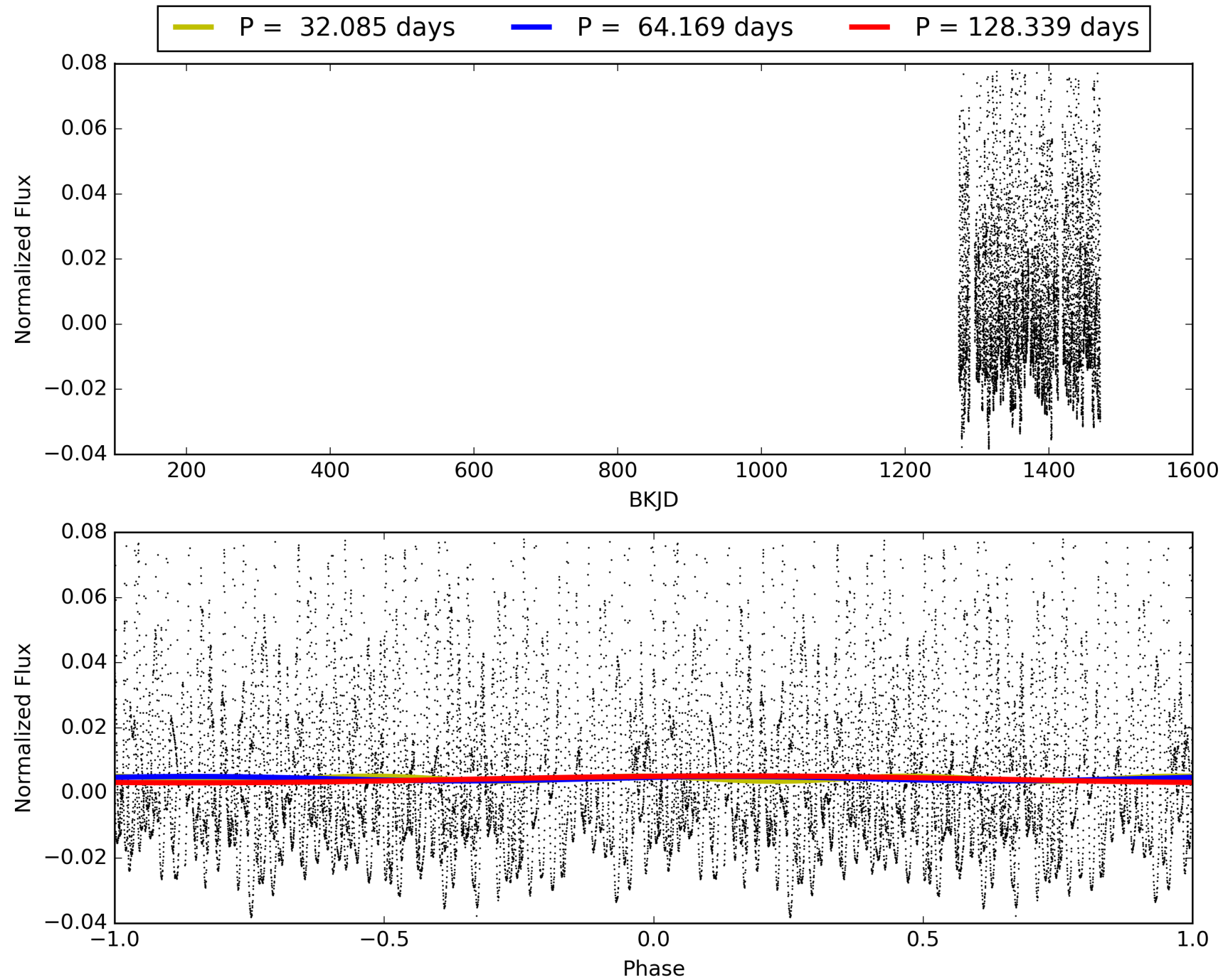
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [44.26σ]
LongPeriod-sig: 100.0% [14.54σ]
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 37.1%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.1976
Centroid-sig: 76.8%
Centroid-so: 21.866 arcsec [0.46σ]
OotOffset-rm: 0.213 arcsec [1.65σ]
KicOffset-rm: 0.094 arcsec [0.73σ]
OotOffset-st: 0/1/0/0 [1]
KicOffset-st: 0/1/0/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/1]

TCE 005254176-02, PDC Light Curves

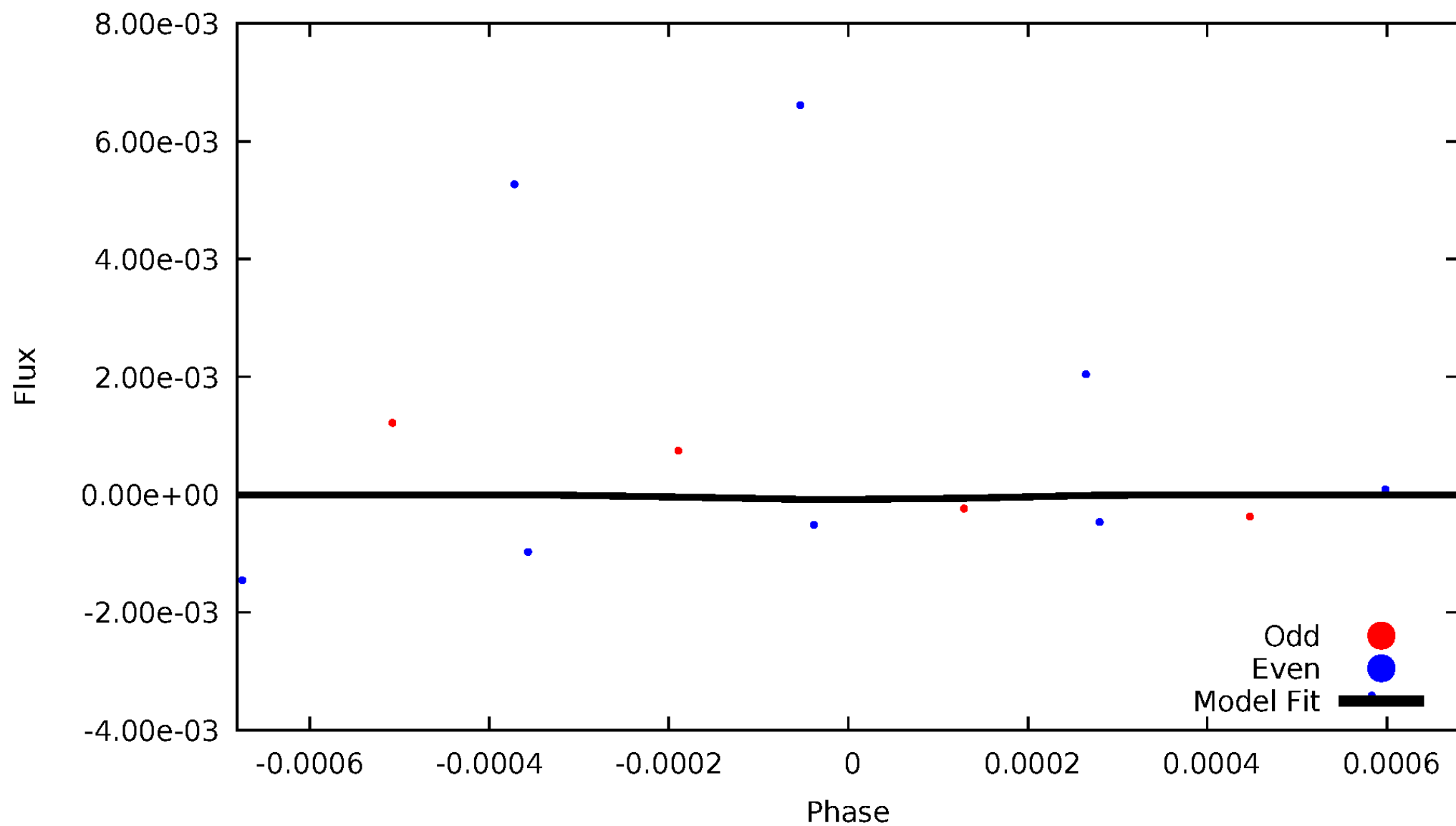


TCE 005254176-02



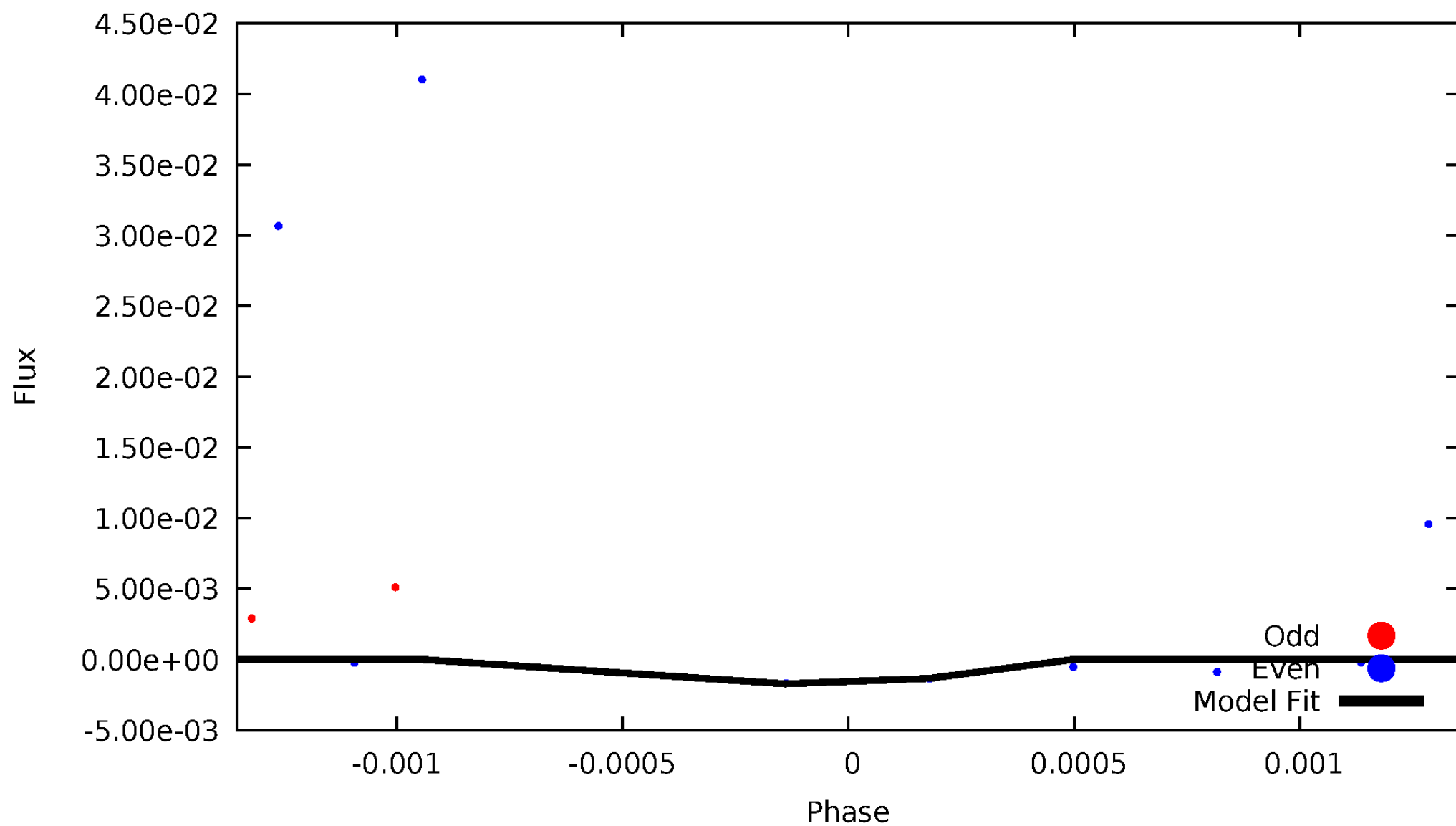
DV Odd/Even

TCE 005254176-02



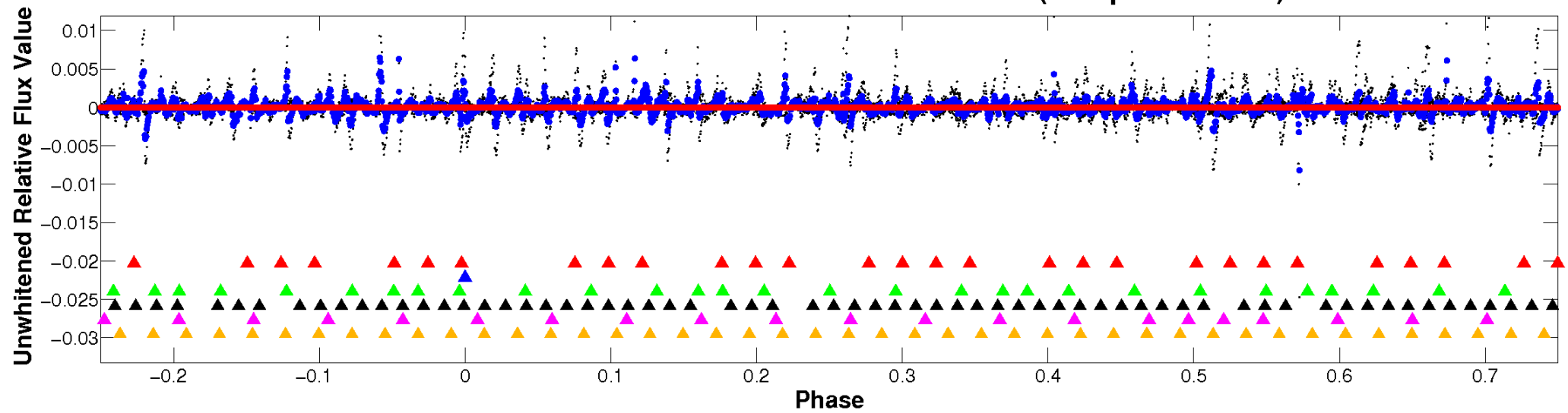
ALT Odd/Even

TCE 005254176-02

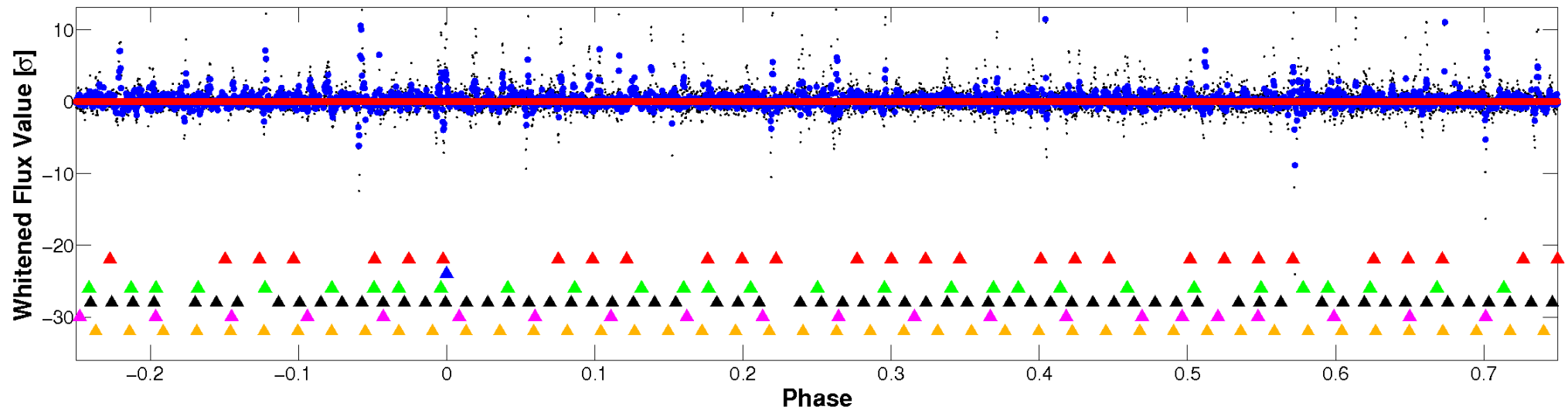


Non-Whitened Vs. Whitened Light Curve

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

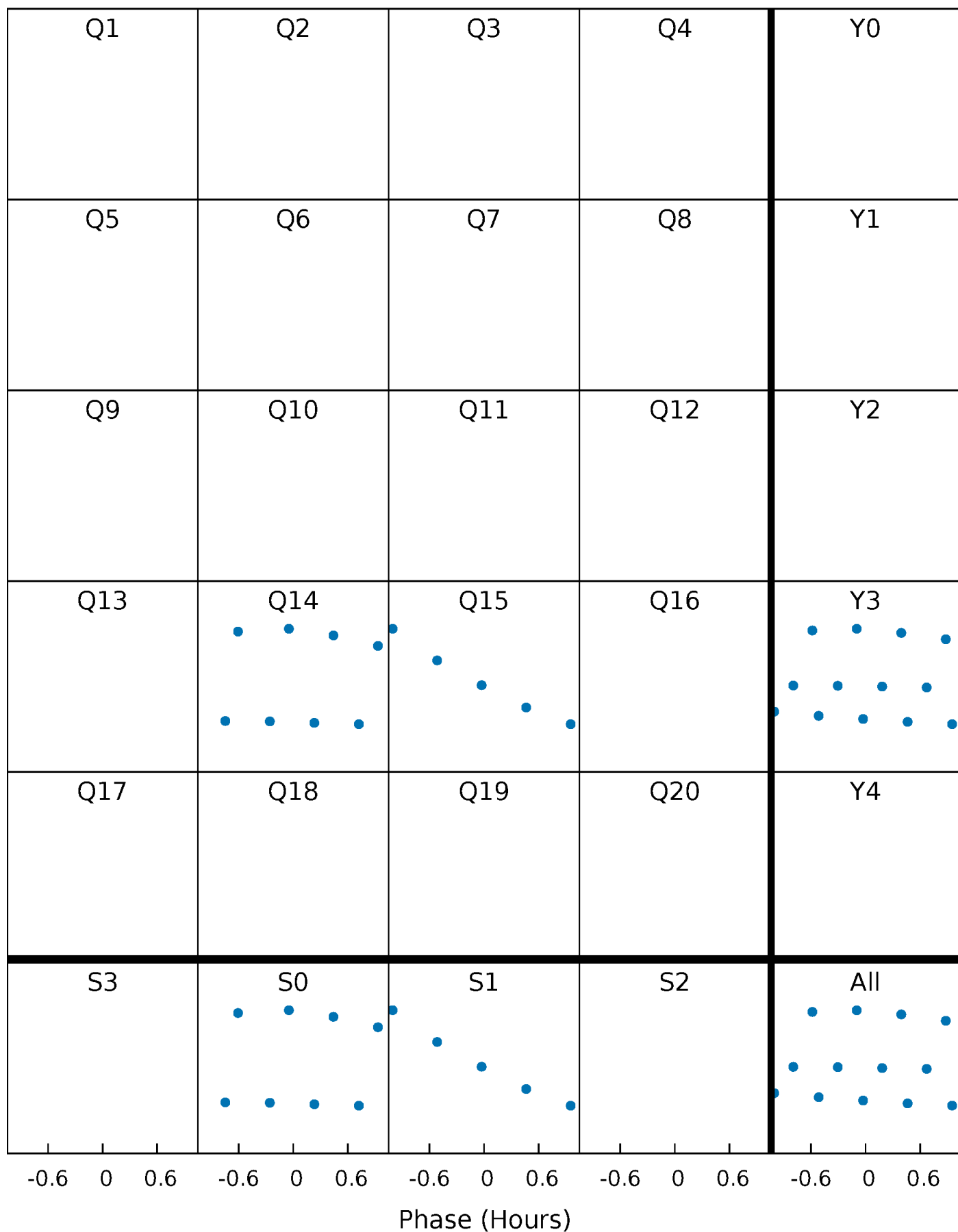


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



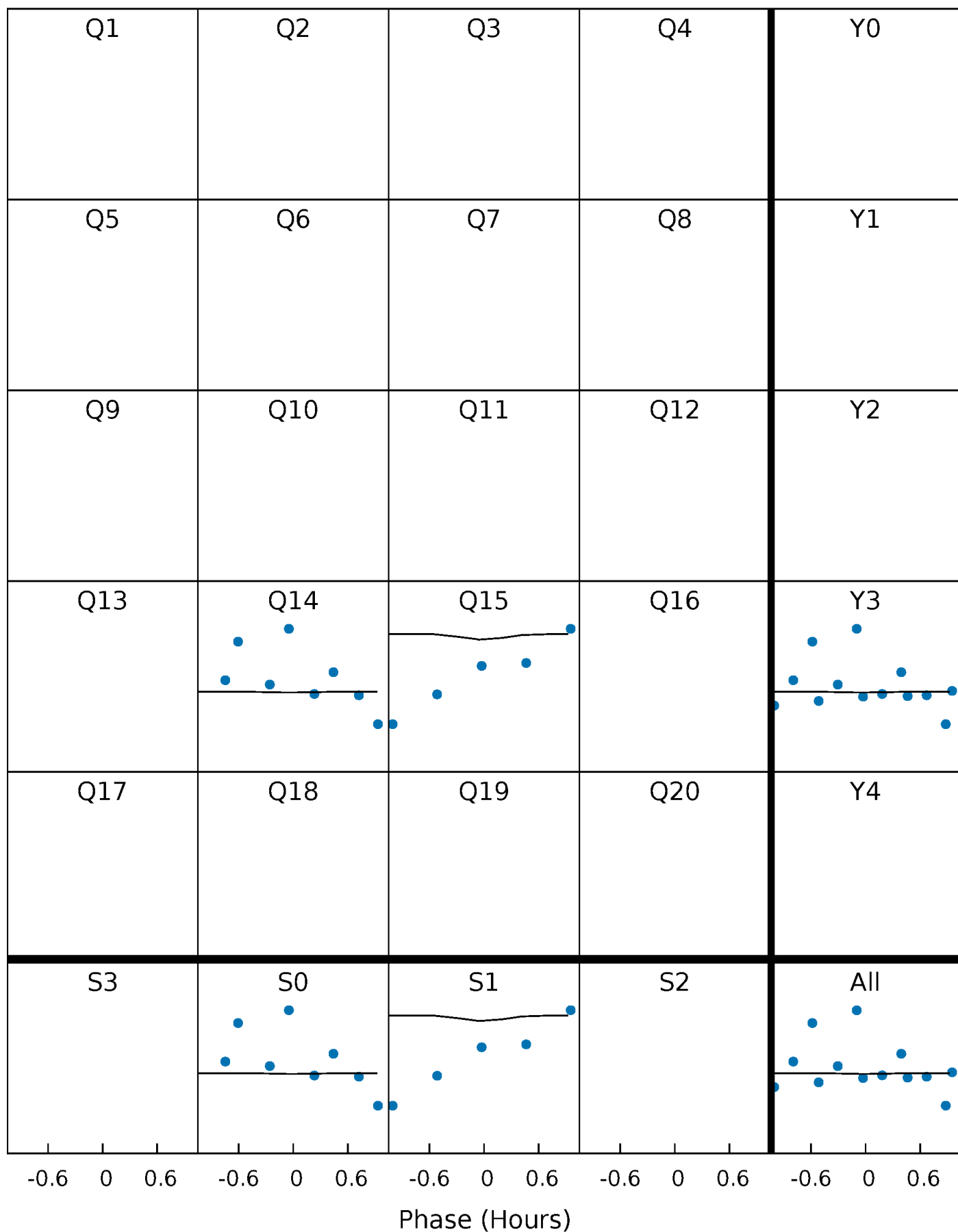
PDC Quarter-Phased Transit Curves

TCE 005254176-02 P= 64.169469 Days $T_0=144.513235$ (BKJD)



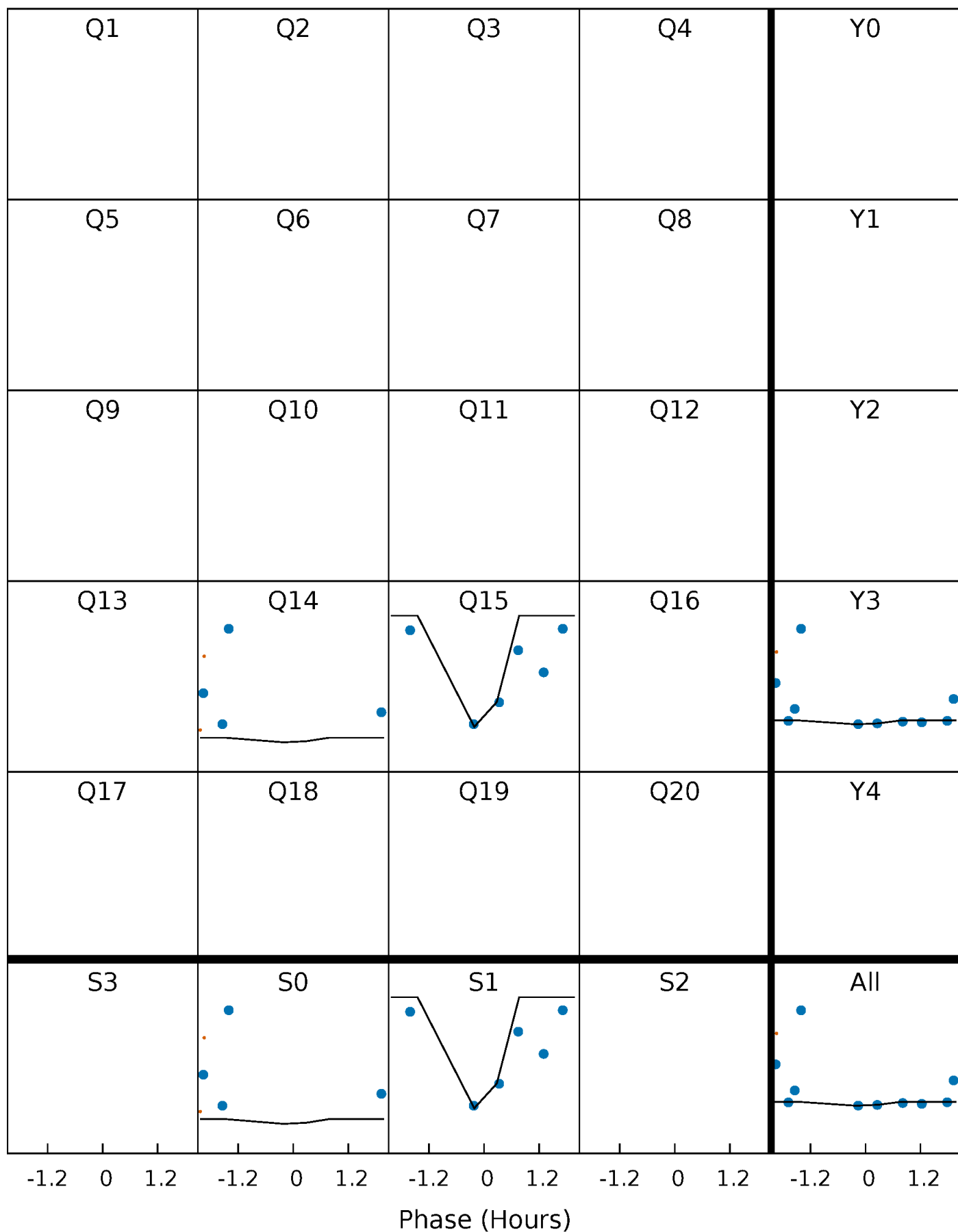
DV Quarter-Phased Transit Curves

TCE 005254176-02 P= 64.169469 Days $T_0=144.513235$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

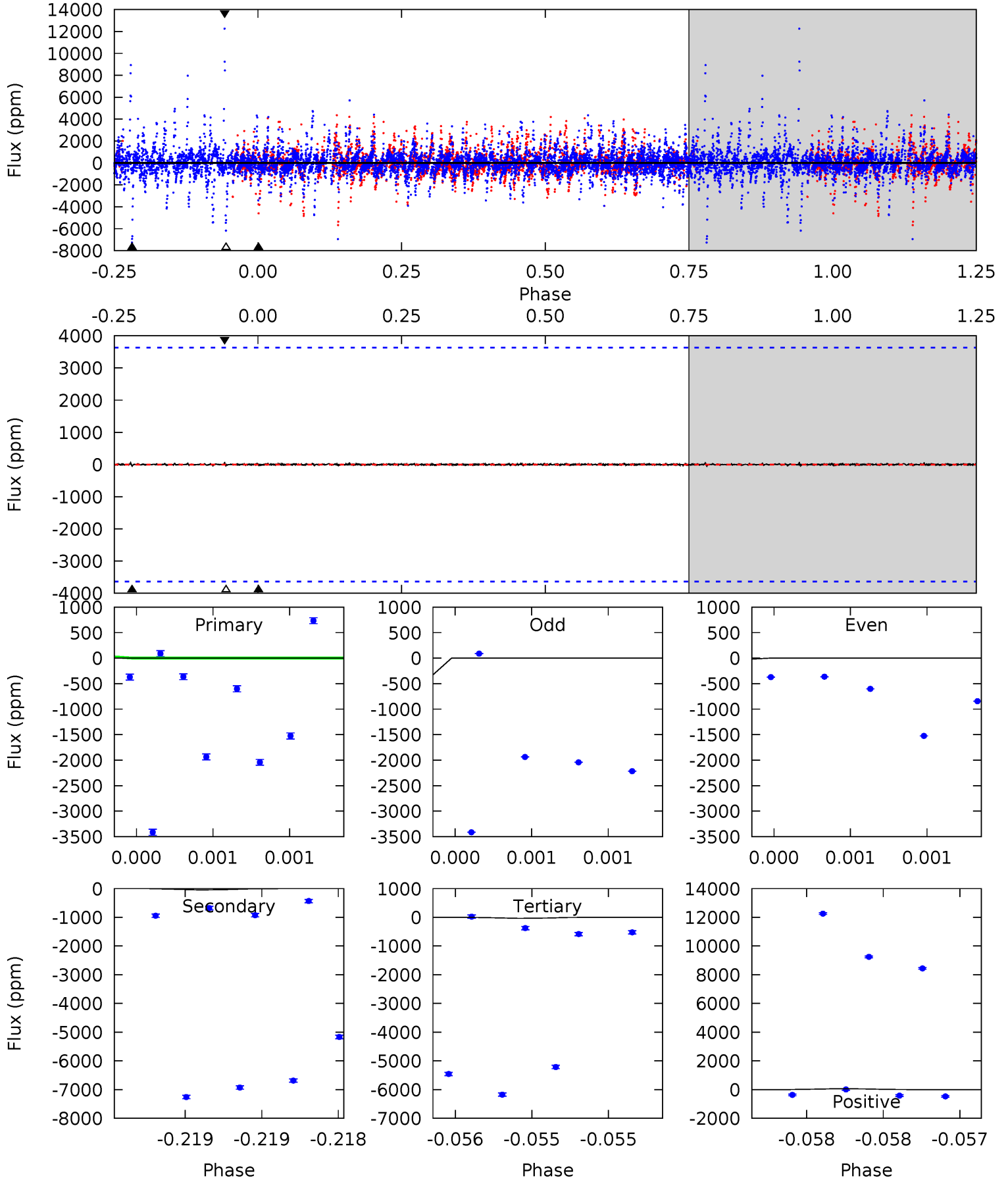
TCE 005254176-02 P= 64.164558 Days $T_0=144.617884$ (BKJD)



DV Model-Shift Uniqueness Test

005254176-02, P = 64.169469 Days, E = 144.513235 Days

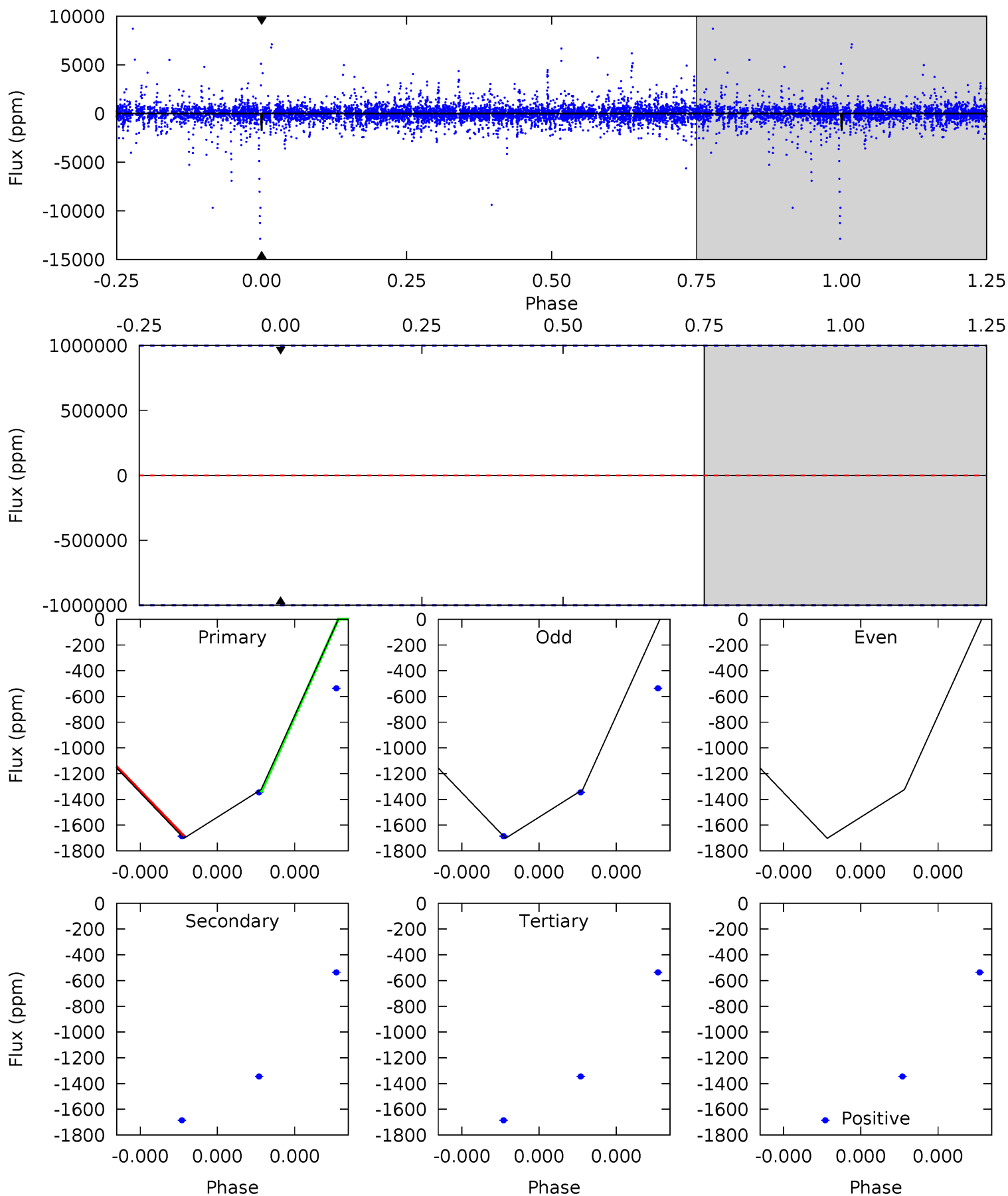
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.03	0.07	0.06	0.10	5.58	3.50	0.01	-0.02	-0.07	0.02	-0.03	1.61	8.76	0.58	0.02



Alt Model-Shift Uniqueness Test

005254176-02, P = 64.164558 Days, E = 144.617884 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	0.00



Stellar Parameters For KIC 005254176

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6899^{+216}_{-288}	$4.146^{+0.180}_{-0.180}$	$-0.300^{+0.300}_{-0.300}$	$1.599^{+0.467}_{-0.382}$	$1.309^{+0.190}_{-0.232}$	$0.452^{+0.440}_{-0.221}$
	+3%/-4%	+4%/-4%	+100%/-100%	+29%/-24%	+15%/-18%	+98%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005254176-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-46 ± 651	$1239.13^{+1271.14}_{-906.12}$	920^{+64}_{-67}	-1787^{+90}_{-71}	$0.001^{+0.060}_{-0.040}$
Alt.	-0 ± 1000000	$1183.05^{+1308.47}_{-834.55}$	915^{+71}_{-67}	-1699^{+4364}_{-723}	$0.123^{+11.564}_{-5.762}$

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 $A_{obs} \gg 1.0$

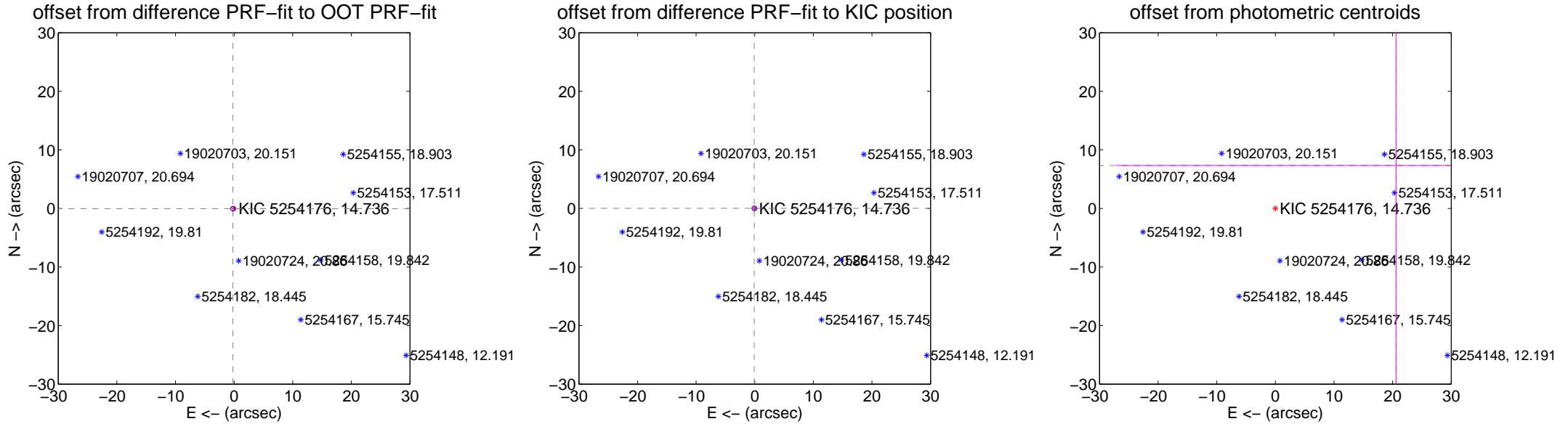
DV Centroid Data

Supplemental centroid analysis for 005254176-02. Kepler magnitude: 14.74. Transit SNR 0.16

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.213 ± 0.129	1.65	0.205 ± 0.130	-0.056 ± 0.118
PRF-fit source offset from KIC position	0.094 ± 0.129	0.73	0.091 ± 0.130	0.023 ± 0.118
photometric centroid source offset	21.87 ± 47.13	0.46	-20.60 ± 47.76	7.34 ± 41.87



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.

Q13 no difference image



Q13 no OOT image



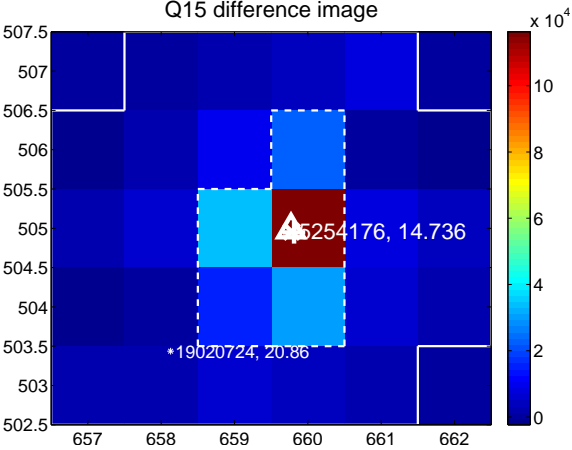
Q14 no difference image



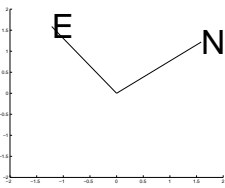
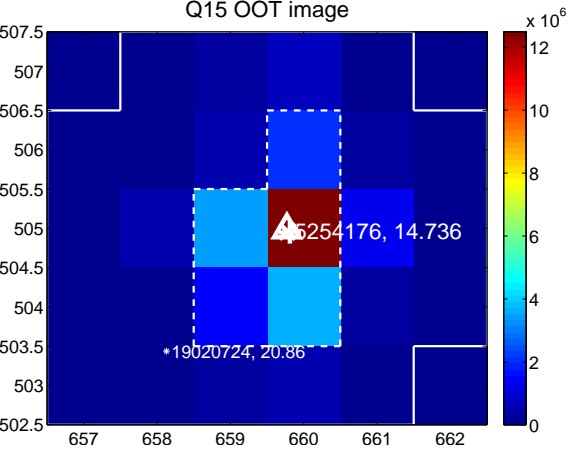
Q14 no OOT image



Q15 difference image



Q15 OOT image



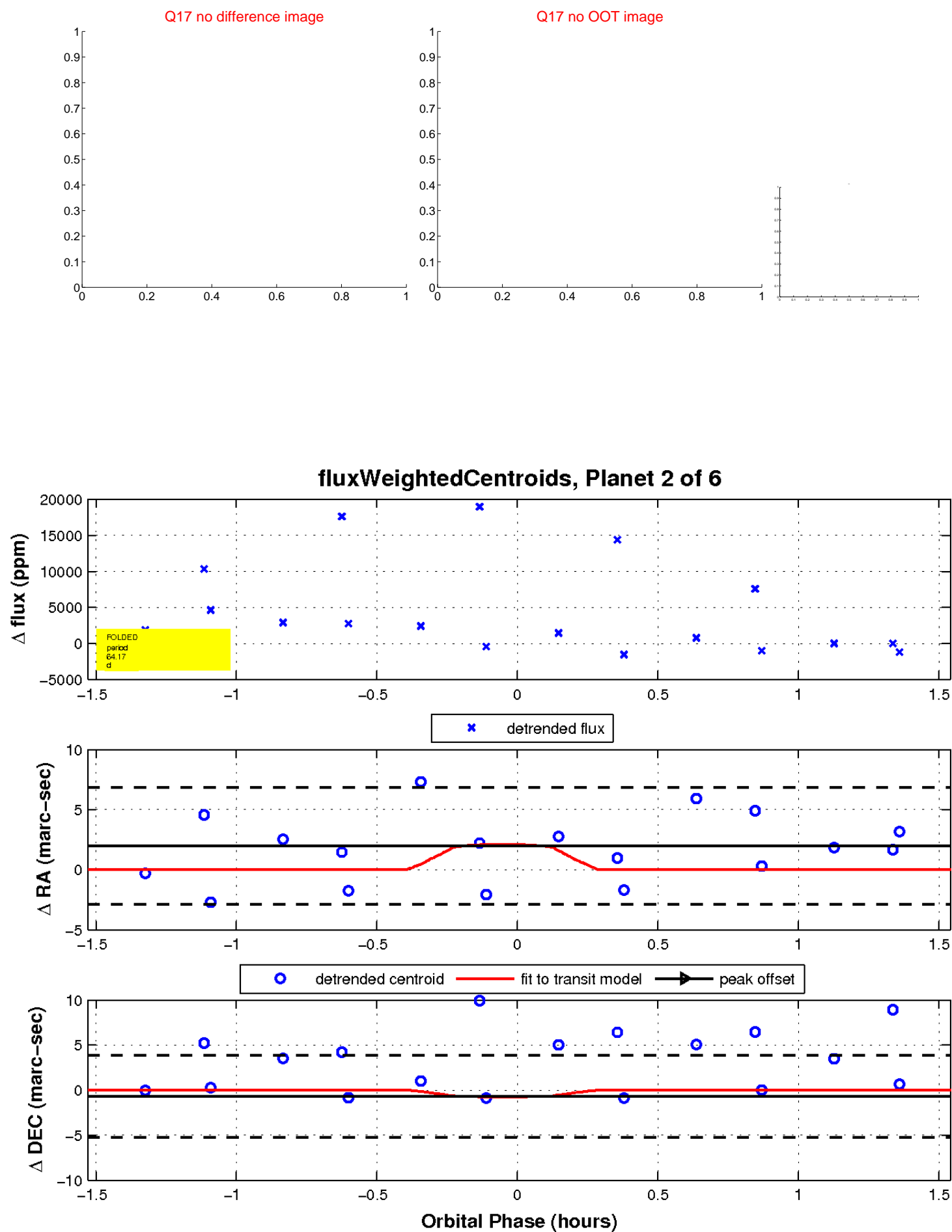
Q16 no difference image



Q16 no OOT image

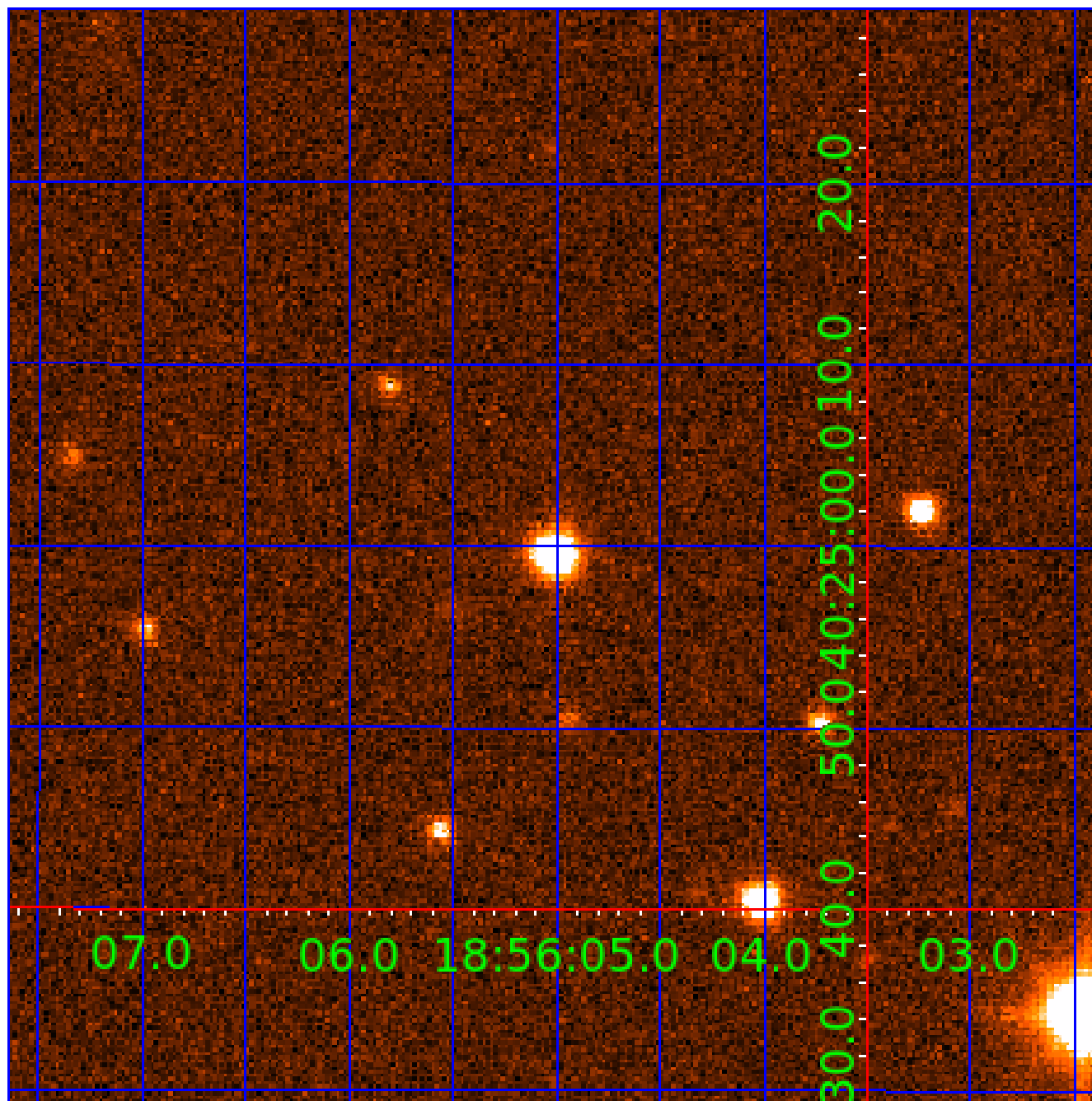


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005254176

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})
005254176-01	OBS	No	49.744989	181.162047	2481.7	2.500	18.6	-1.0	1.60	6899	8.06	61.98
005254176-02	OBS	No	64.169469	144.513235	95.9	0.524	18.9	0.2	1.60	6899	1.67	44.14
005254176-03	OBS	No	50.756128	131.926869	6518.1	7.255	14.2	4.4	1.60	6899	15.77	60.34
005254176-04	OBS	No	22.594120	139.986889	4767.8	2.787	16.1	7.8	1.60	6899	17.79	177.53
005254176-05	OBS	No	67.455465	176.368400	11342.8	5.400	10.2	9.3	1.60	6899	29.68	41.30
005254176-06	OBS	No	27.709152	155.582033	1038.5	3.000	9.6	-1.0	1.60	6899	5.21	135.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005254176-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005254176-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
005254176-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
005254176-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
005254176-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005254176-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—CENT_NOFITS

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

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

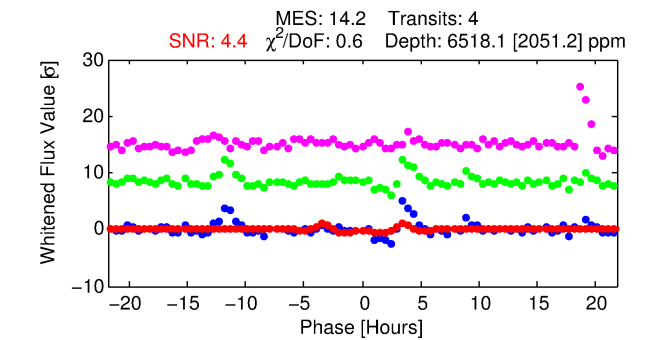
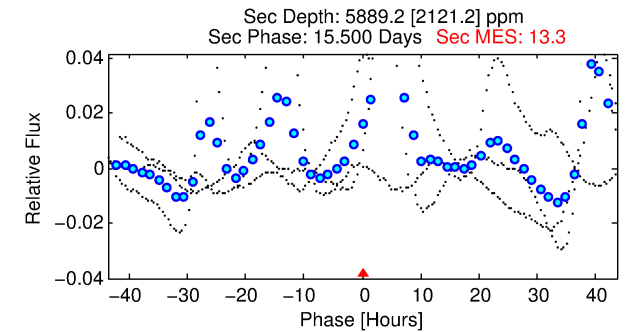
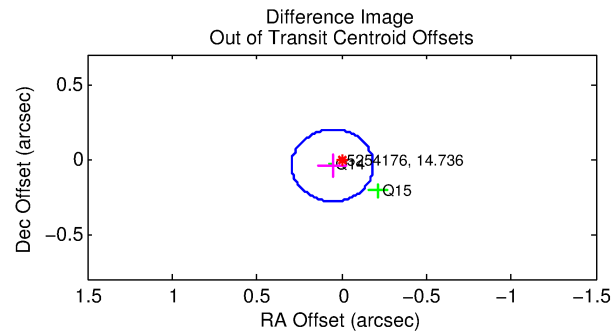
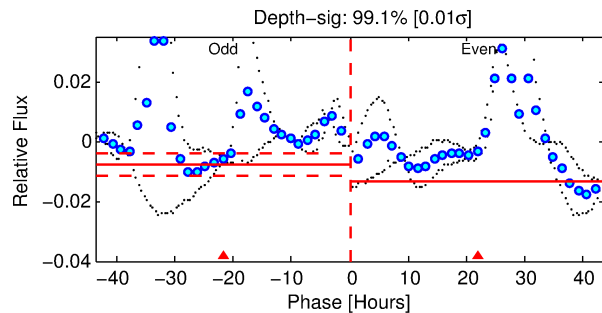
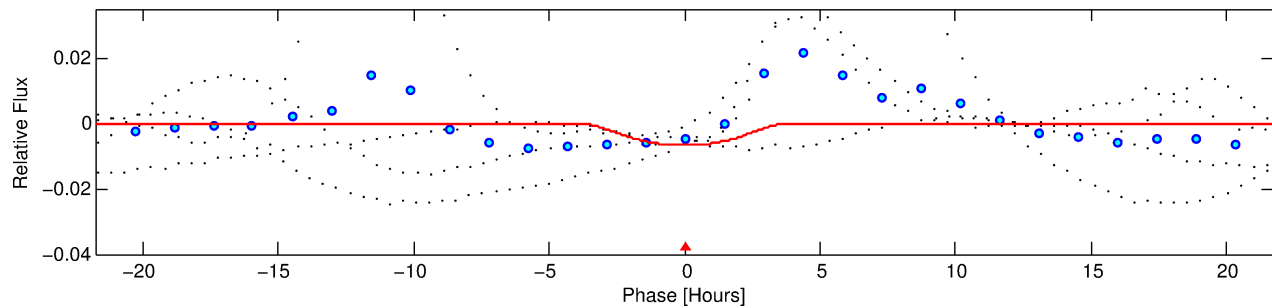
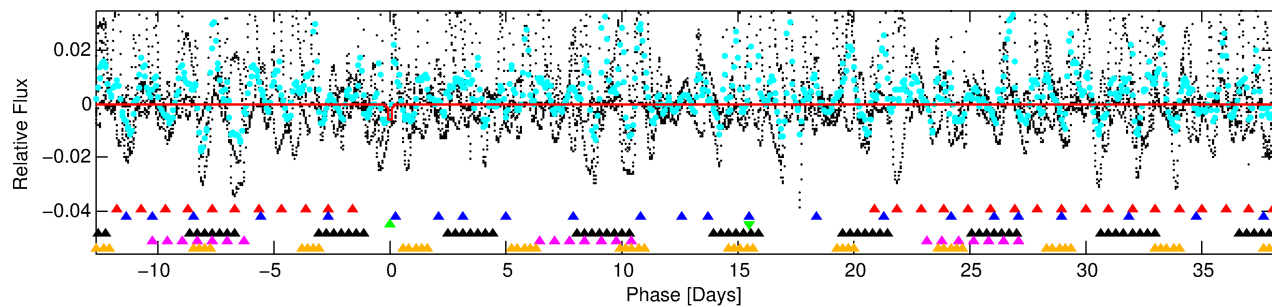
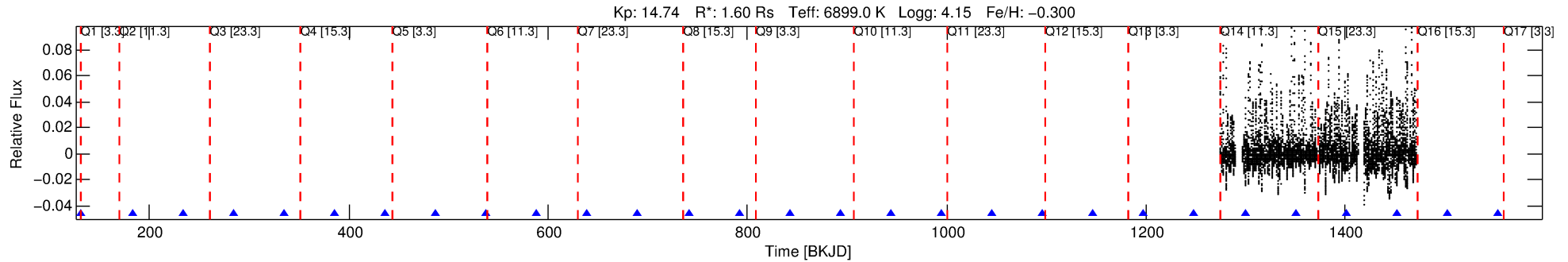
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005254176-03

No Significant Match Found

DV One-Page Summary

KIC: 5254176 Candidate: 3 of 6 Period: 50.756 d



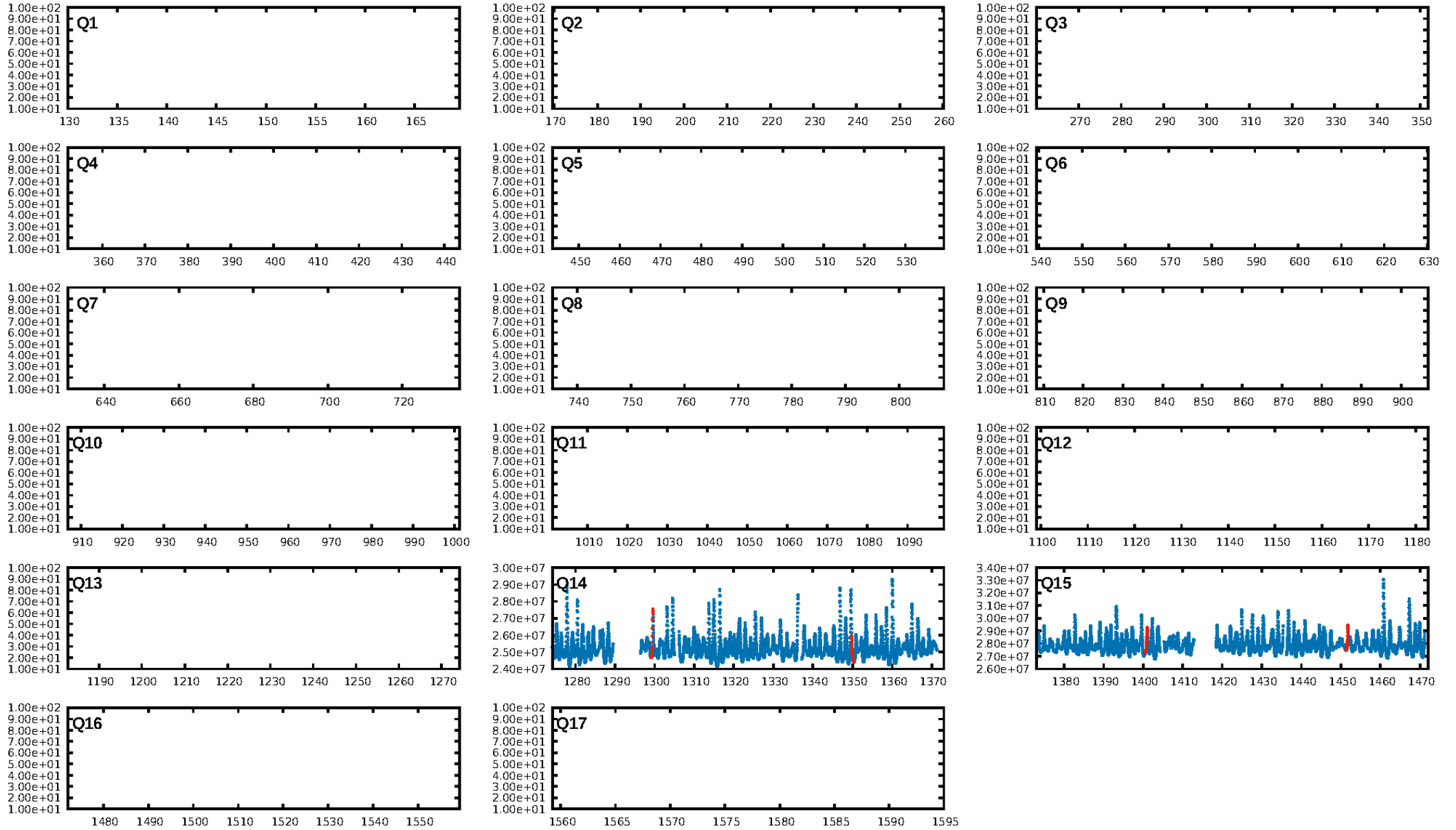
DV Fit Results:

Period = 50.75613 [0.00484] d
Epoch = 131.9269 [0.1191] BKJD
Rp/R* = 0.0904 [0.0206]
a/R* = 31.03 [2.56]
b = 0.92 [0.03]
Seff = 60.34 [22.75]
Teq = 711 [67] K
Rp = 15.77 [5.84] Re
a = 0.2933 [0.0700] AU
Ag = 1120.45 [752.97] [1.49 σ]
Teffp = 6357 [960] K [5.86 σ]

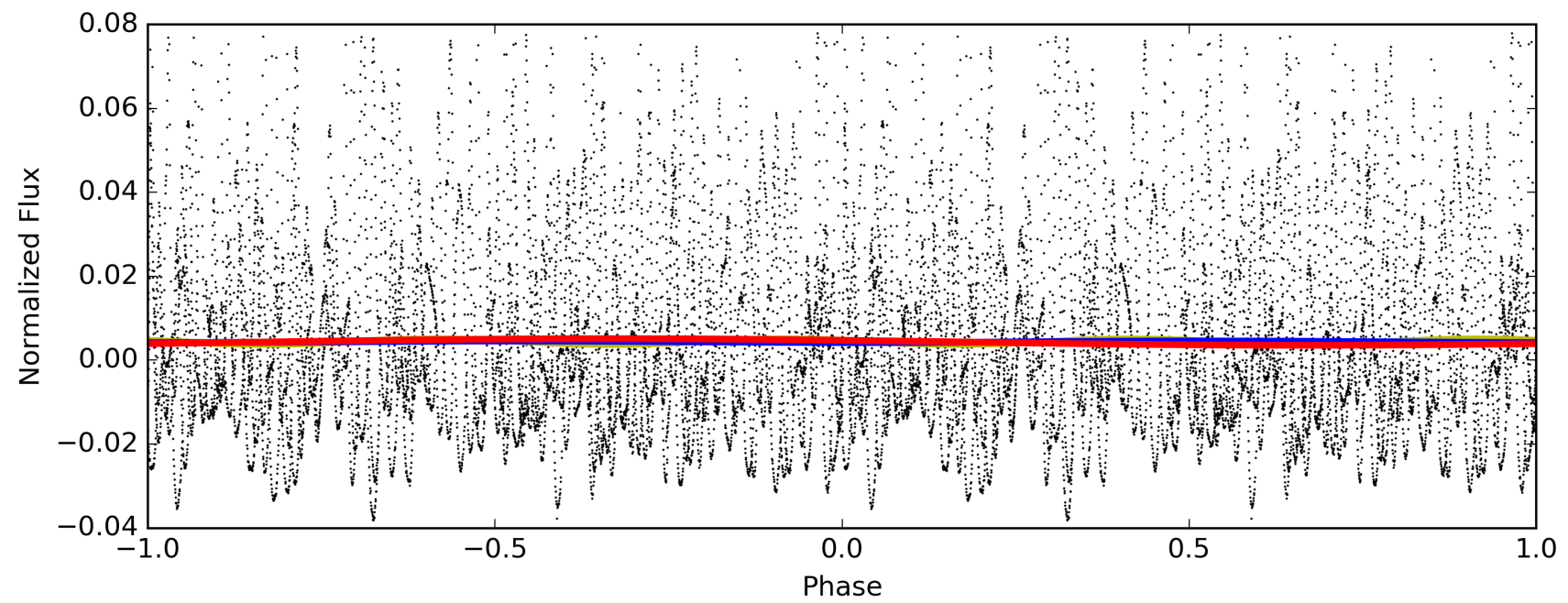
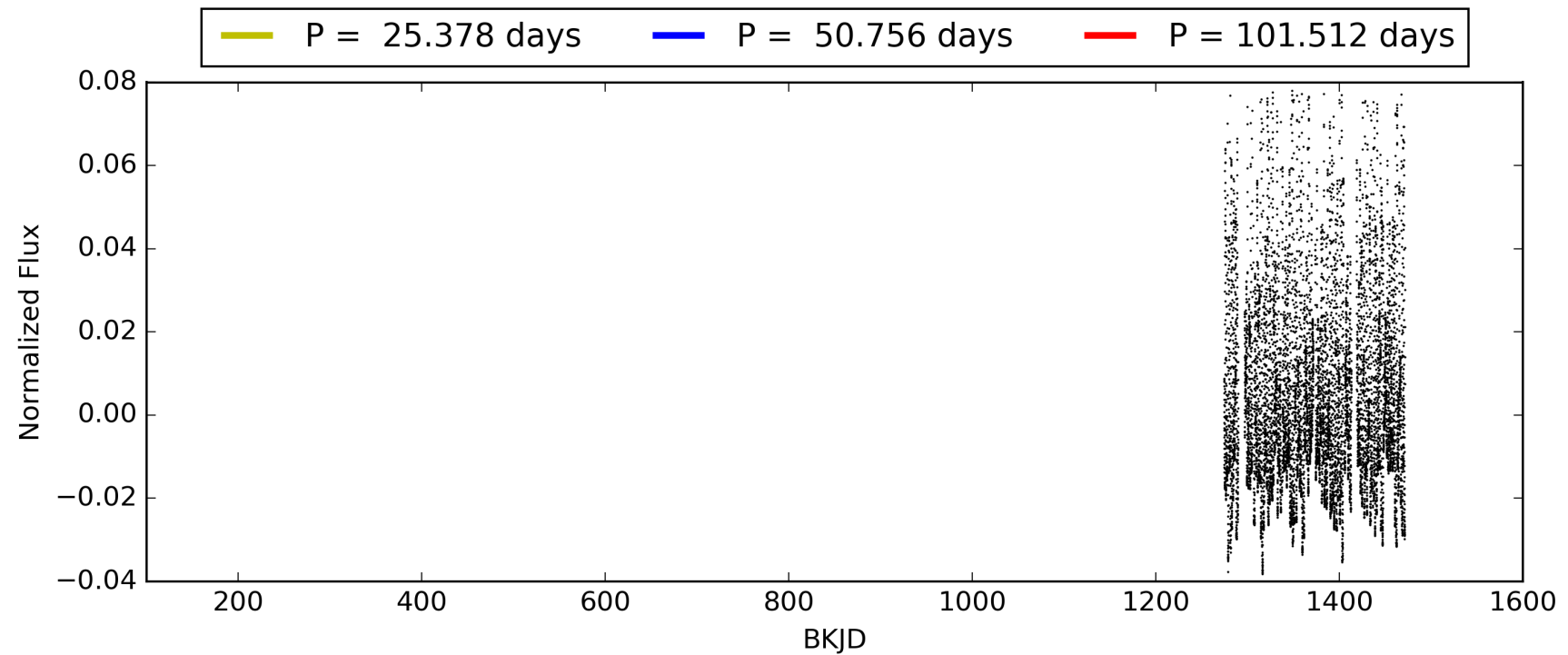
DV Diagnostic Results:

ShortPeriod-sig: 99.8% [3.16 σ]
LongPeriod-sig: 100.0% [44.26 σ]
ModelChiSquare2-sig: 54.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 7.094
Centroid-sig: 0.5%
Centroid-so: 0.417 arcsec [1.78 σ]
OotOffset-rm: 0.068 arcsec [0.85 σ]
KicOffset-rm: 0.103 arcsec [1.14 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 005254176-03, PDC Light Curves

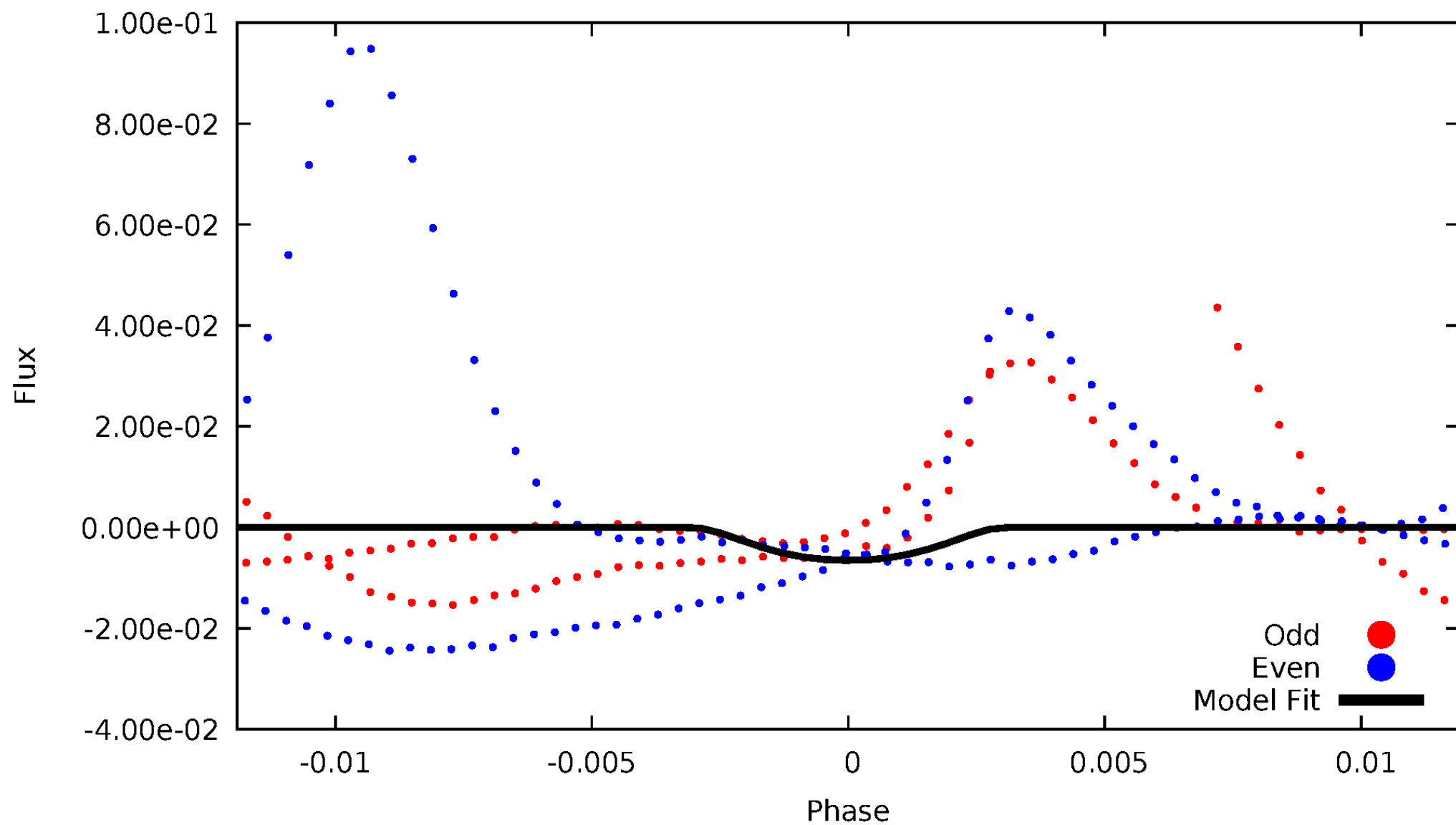


TCE 005254176-03



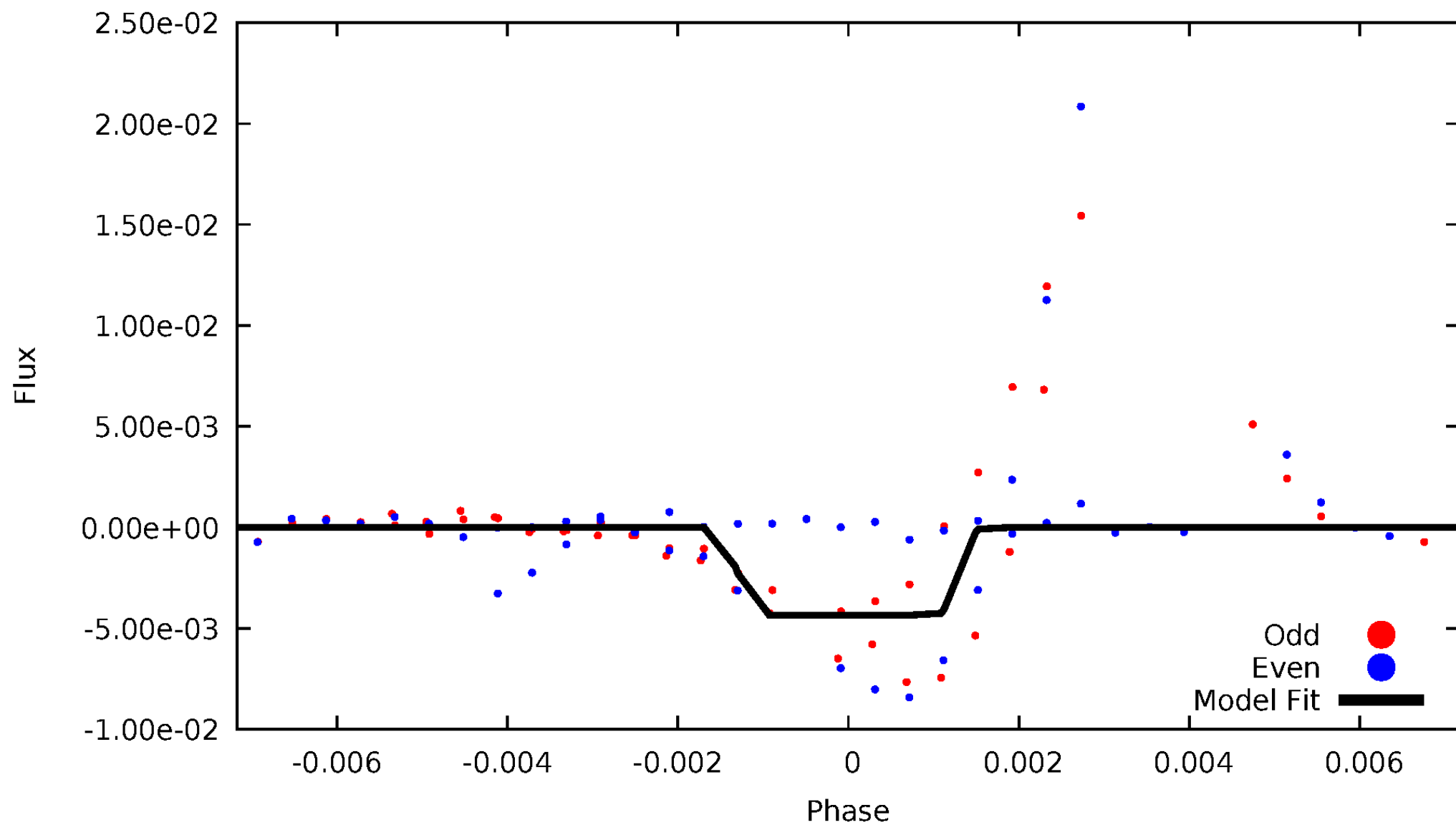
DV Odd/Even

TCE 005254176-03



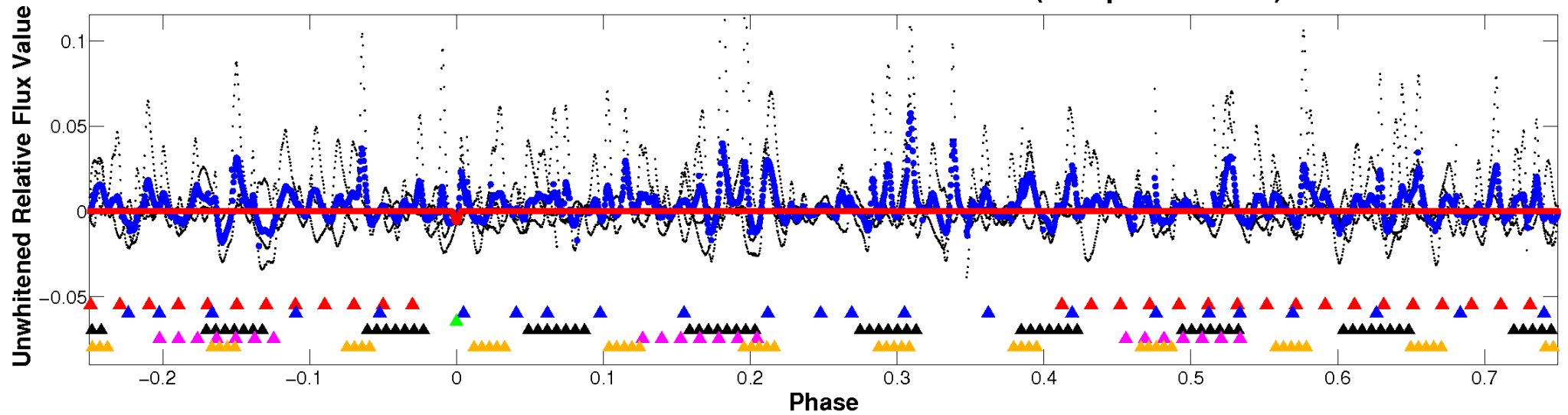
ALT Odd/Even

TCE 005254176-03

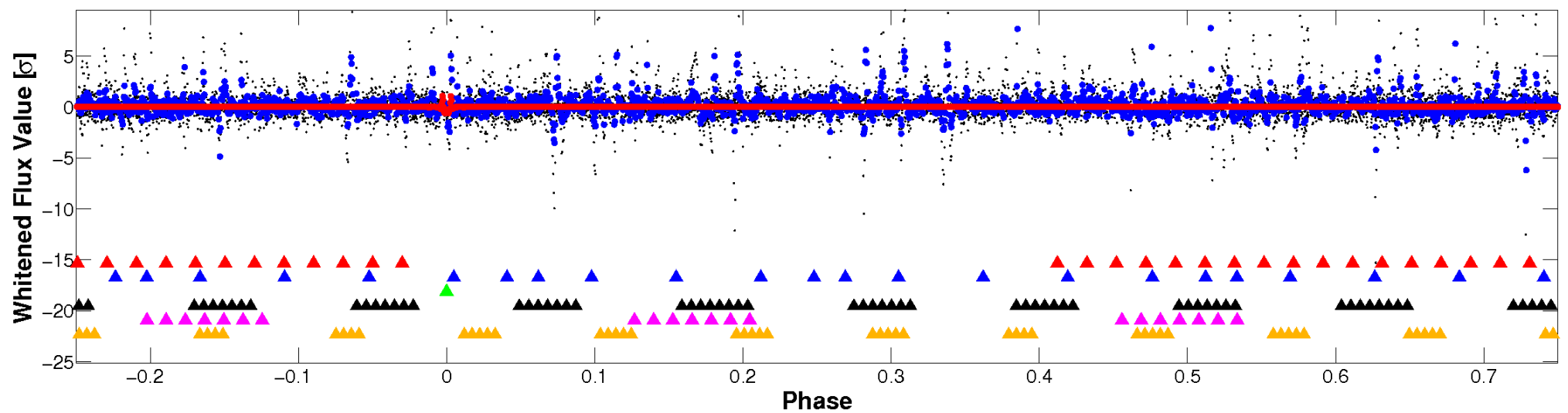


Non-Whitened Vs. Whitened Light Curve

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

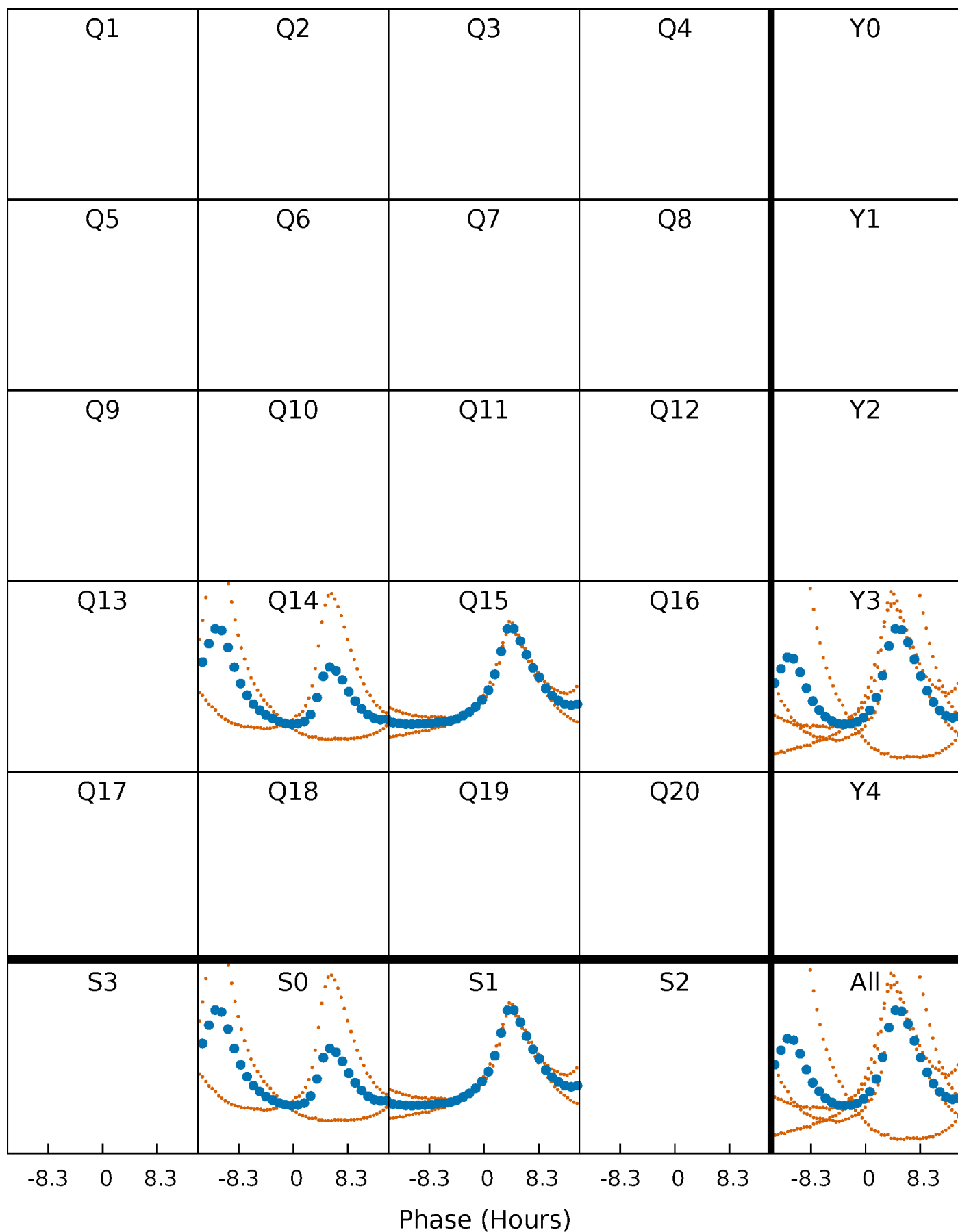


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



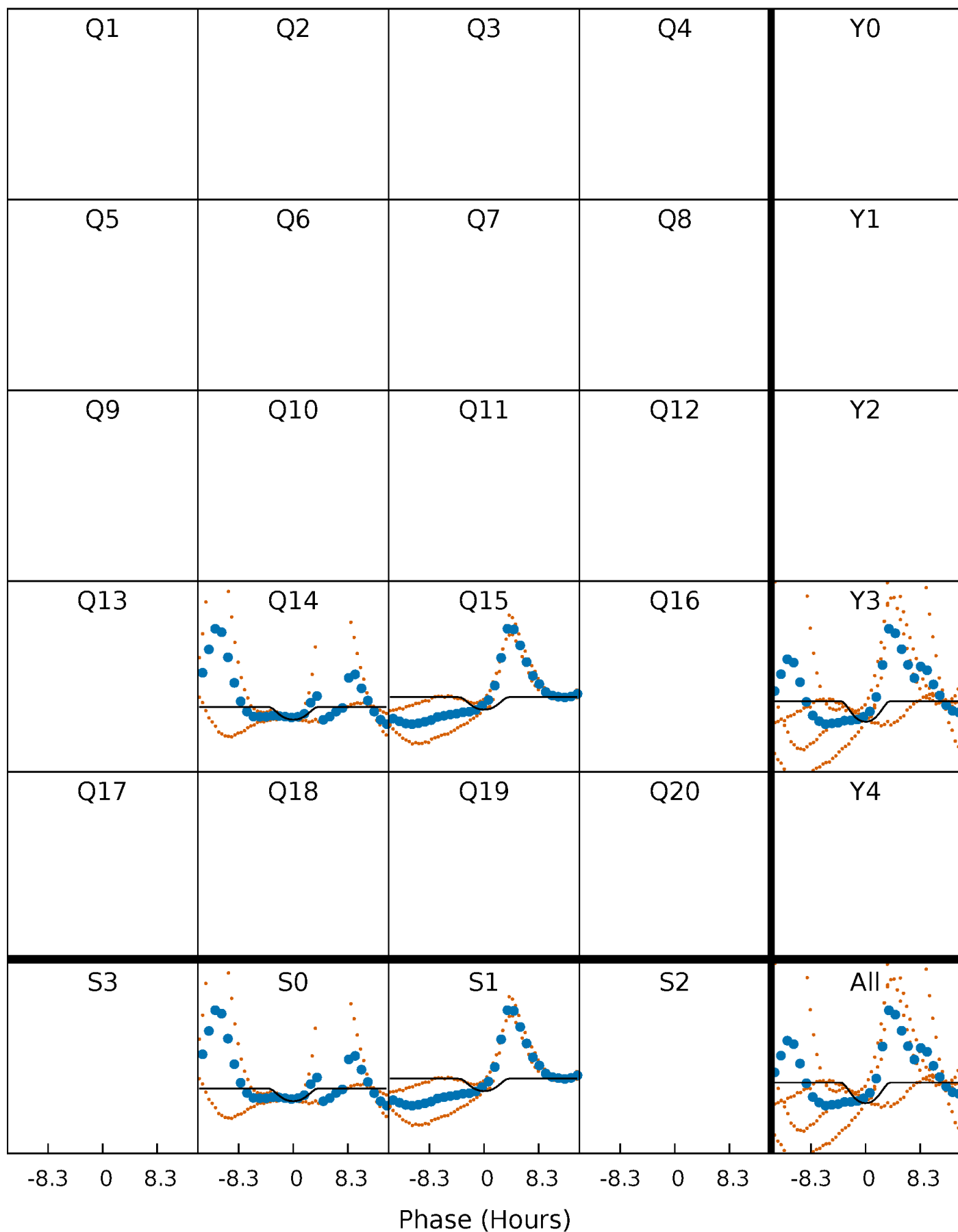
PDC Quarter-Phased Transit Curves

TCE 005254176-03 P= 50.756128 Days $T_0=131.926869$ (BKJD)



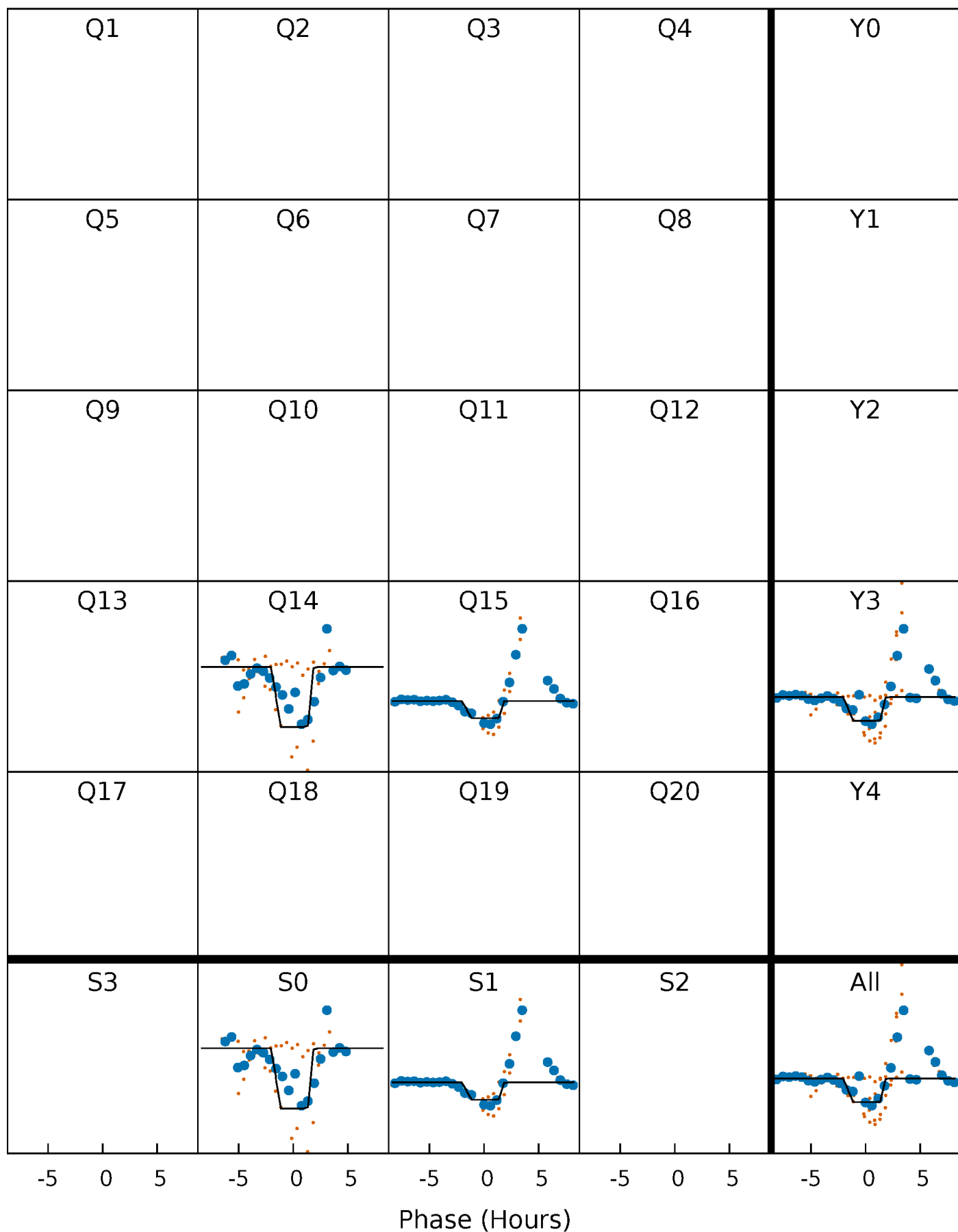
DV Quarter-Phased Transit Curves

TCE 005254176-03 P= 50.756128 Days $T_0=131.926869$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

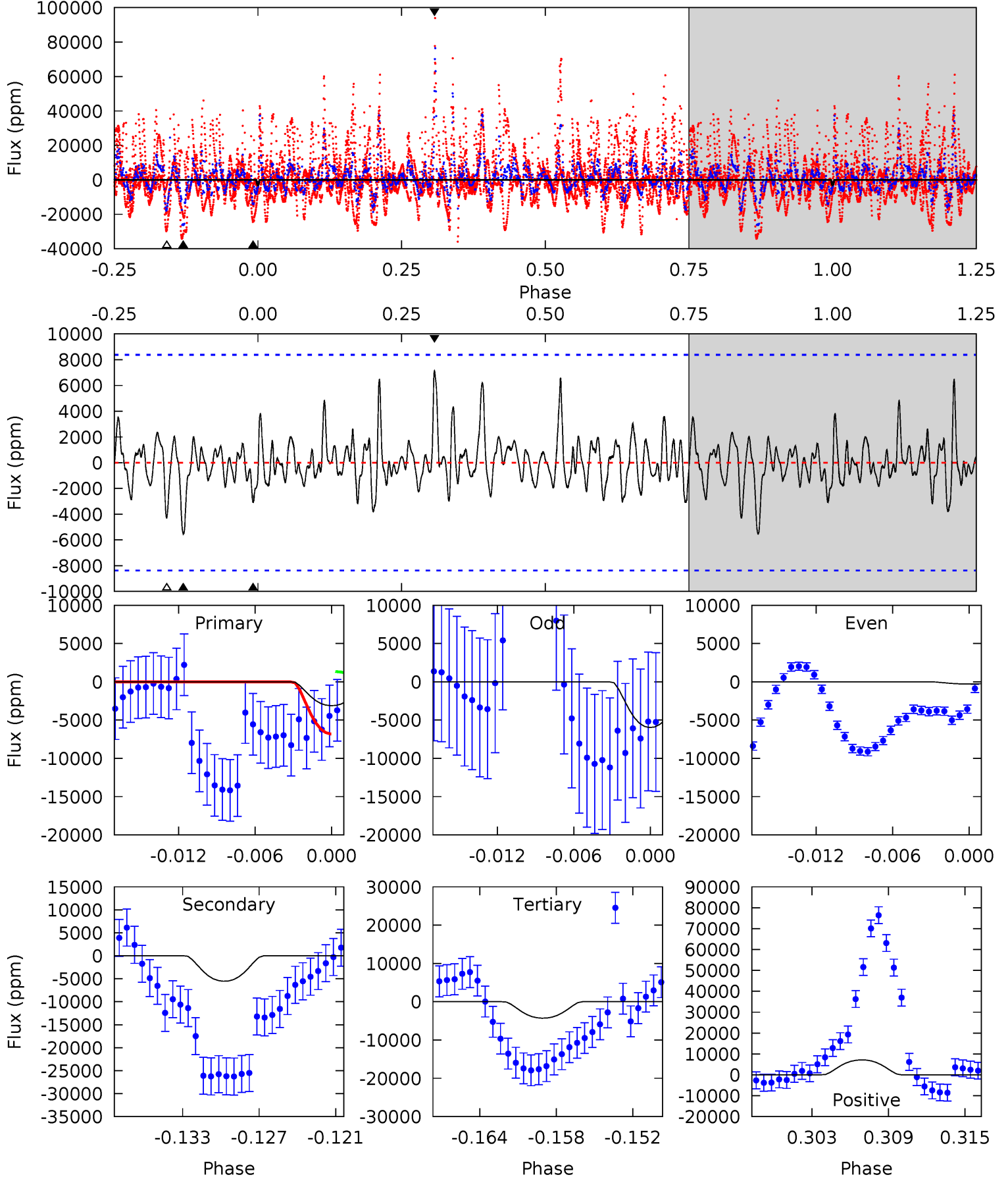
TCE 005254176-03 P= 50.755047 Days $T_0=131.955081$ (BKJD)



DV Model-Shift Uniqueness Test

005254176-03, P = 50.756128 Days, E = 131.926869 Days

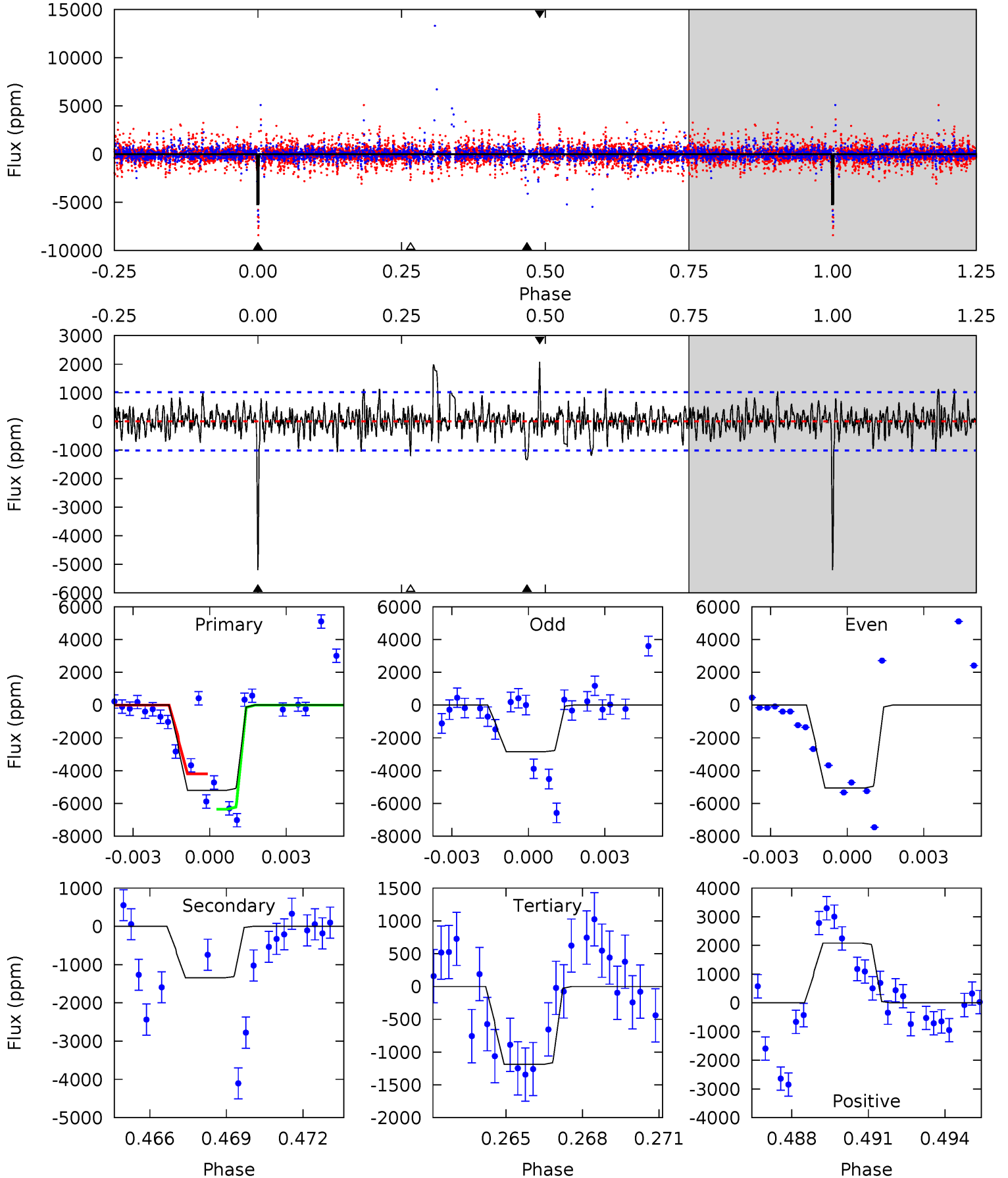
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.91	3.39	2.62	4.37	5.12	2.74	0.99	-0.72	-2.46	0.76	-0.98	1.23	0.67	0.56	1.74



Alt Model-Shift Uniqueness Test

005254176-03, P = 50.755047 Days, E = 131.955081 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.7	6.91	6.11	10.7	5.24	2.95	1.66	20.6	16.0	0.79	-3.80	5.97	0.90	0.29	4.96



Stellar Parameters For KIC 005254176

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6899^{+216}_{-288}	$4.146^{+0.180}_{-0.180}$	$-0.300^{+0.300}_{-0.300}$	$1.599^{+0.467}_{-0.382}$	$1.309^{+0.190}_{-0.232}$	$0.452^{+0.440}_{-0.221}$
	+3%/-4%	+4%/-4%	+100%/-100%	+29%/-24%	+15%/-18%	+98%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005254176-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-5538 ± 1636	$15.79^{+4.36}_{-4.20}$	990^{+76}_{-70}	6184^{+1026}_{-783}	1026^{+841}_{-470}
Alt.	-1343 ± 194	$11.29^{+4.15}_{-3.58}$	990^{+82}_{-70}	5220^{+1026}_{-629}	496^{+638}_{-235}

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 $A_{obs} \gg 1.0$

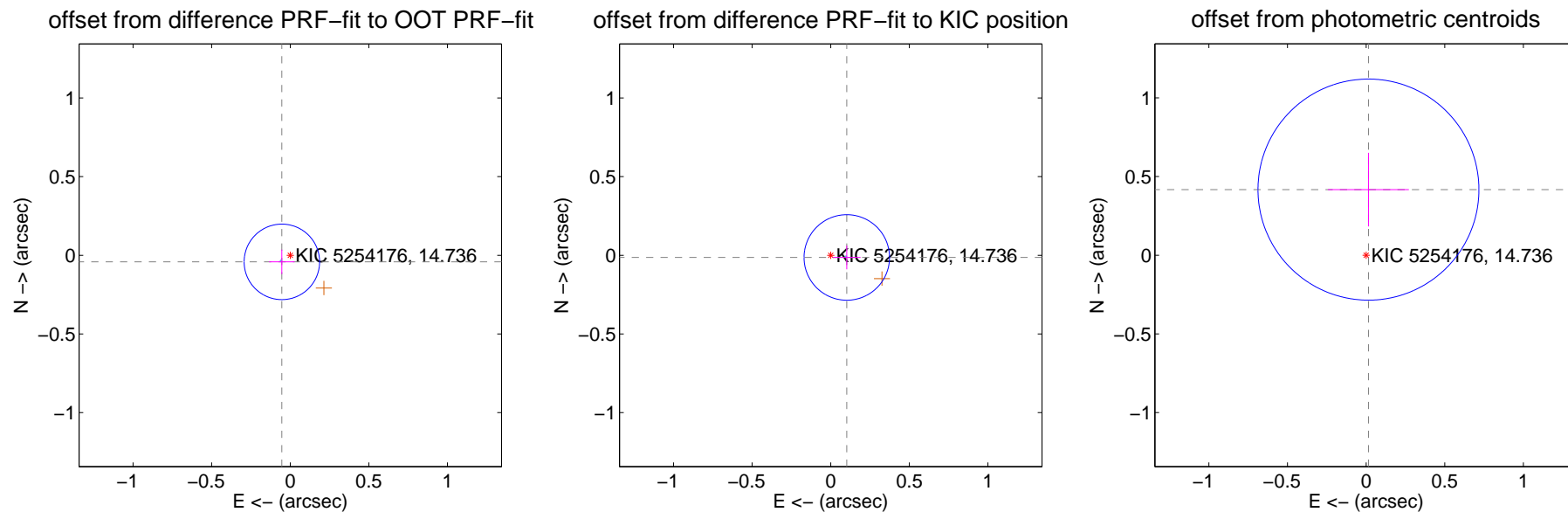
DV Centroid Data

Supplemental centroid analysis for 005254176-03. Kepler magnitude: 14.74. Transit SNR 4.41

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.068 ± 0.080	0.85	0.053 ± 0.081	-0.042 ± 0.078
PRF-fit source offset from KIC position	0.103 ± 0.091	1.14	-0.102 ± 0.088	-0.014 ± 0.075
photometric centroid source offset	0.42 ± 0.23	1.78	-0.01 ± 0.26	0.42 ± 0.23



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.

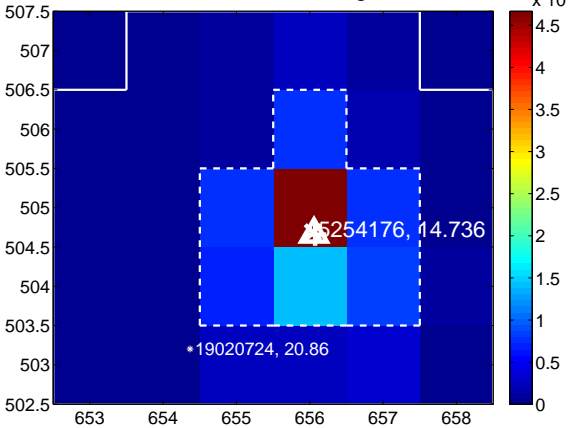
Q13 no difference image



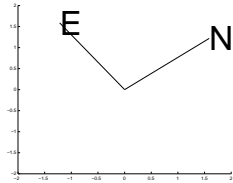
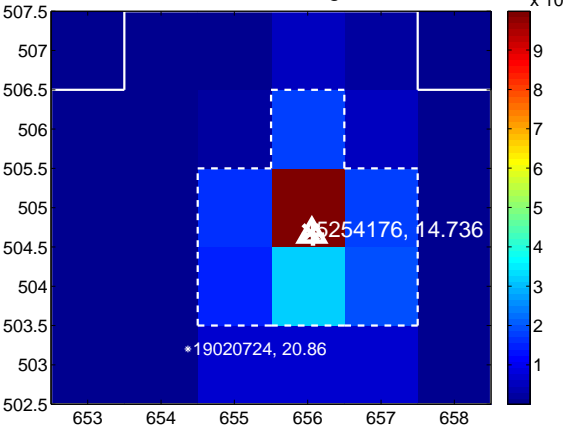
Q13 no OOT image



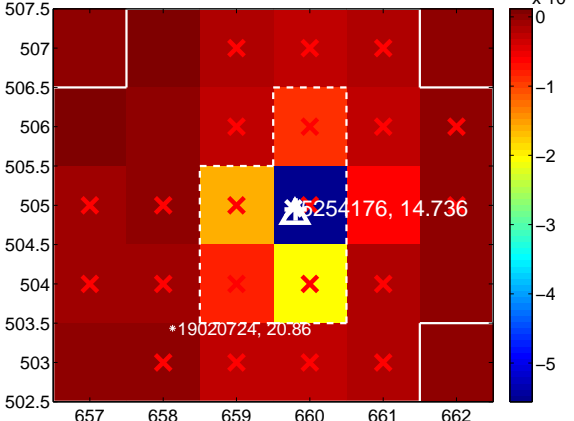
Q14 difference image



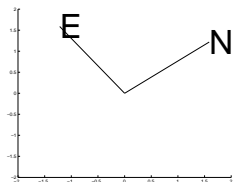
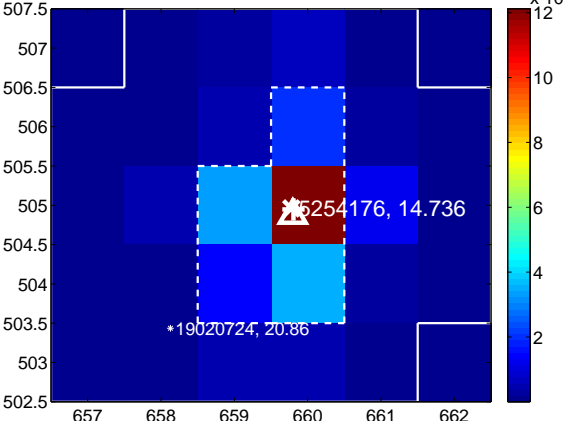
Q14 OOT image



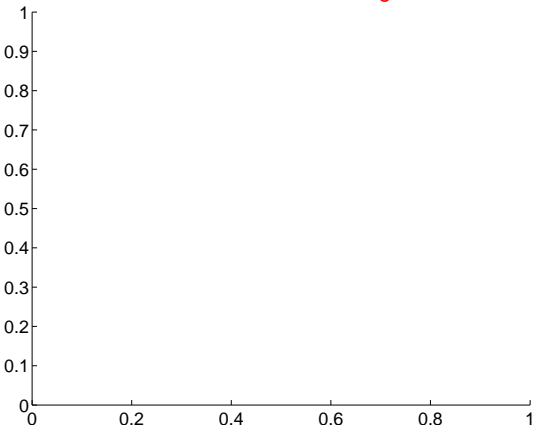
Q15 difference image. Poor Quality



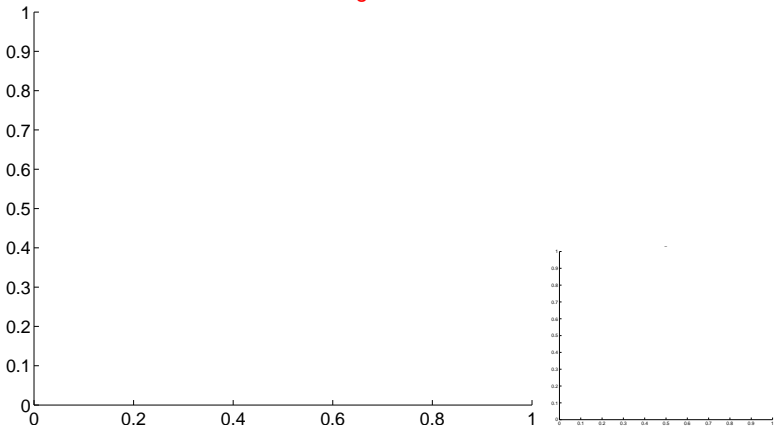
Q15 OOT image



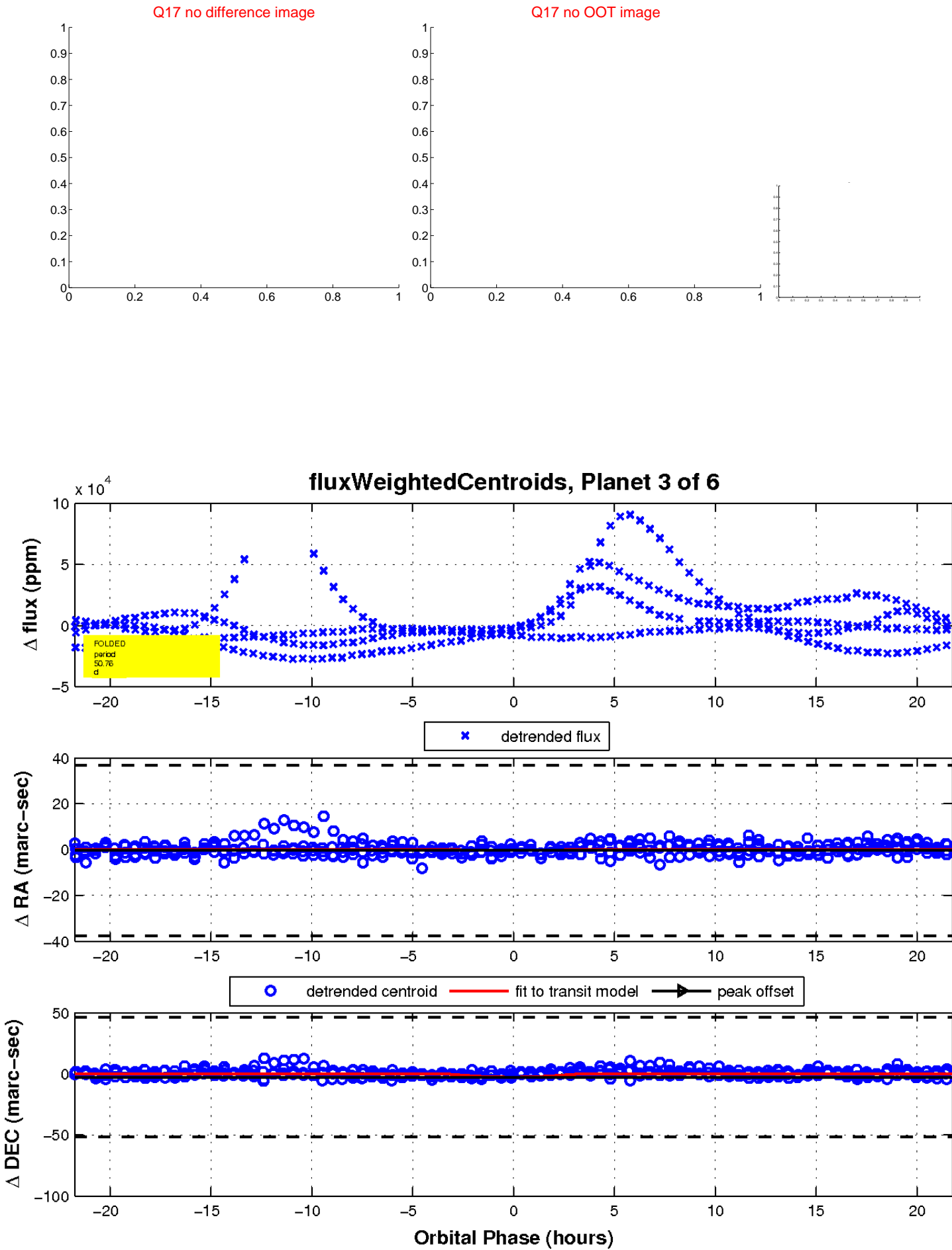
Q16 no difference image



Q16 no OOT image

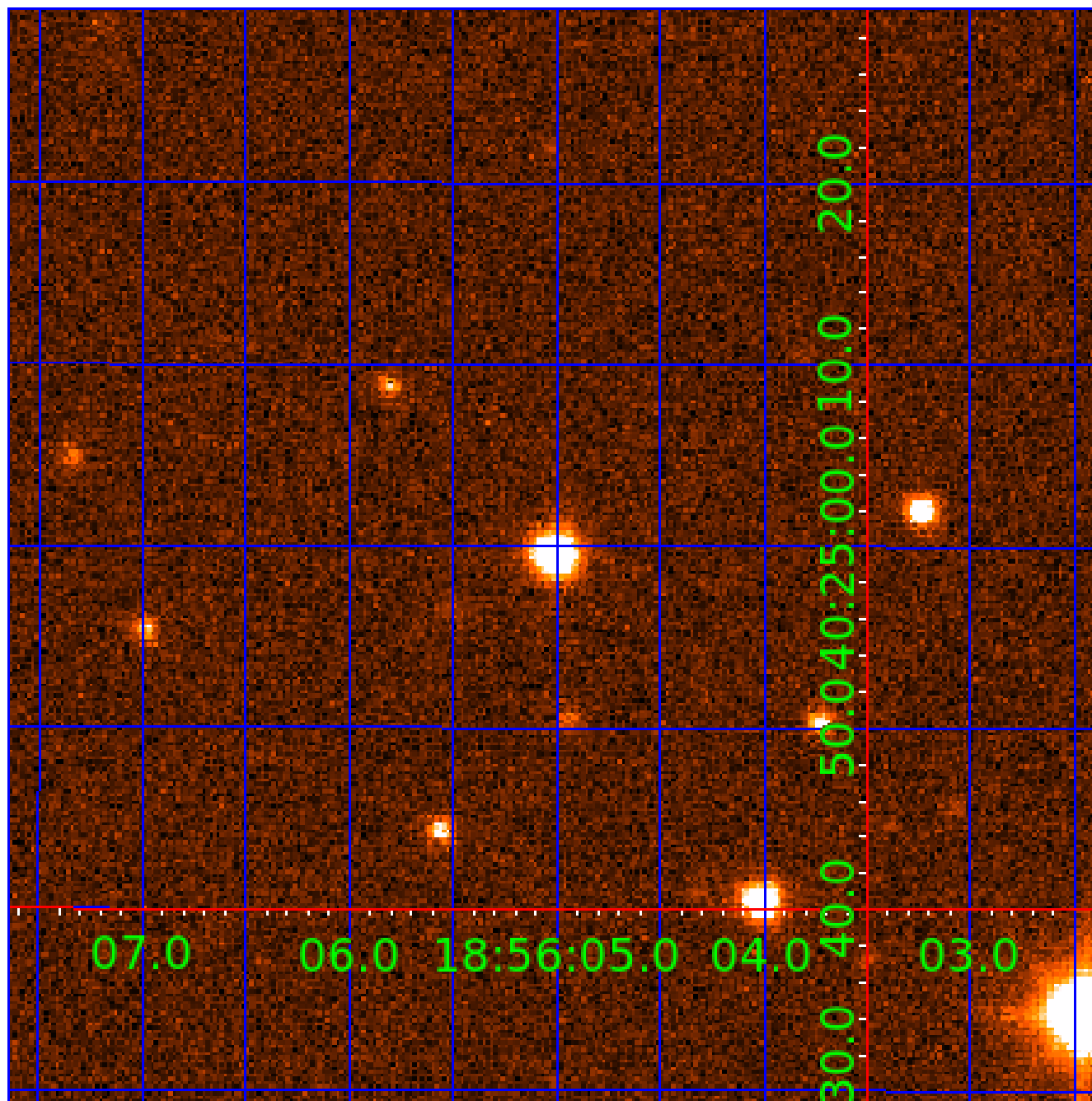


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005254176

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})
005254176-01	OBS	No	49.744989	181.162047	2481.7	2.500	18.6	-1.0	1.60	6899	8.06	61.98
005254176-02	OBS	No	64.169469	144.513235	95.9	0.524	18.9	0.2	1.60	6899	1.67	44.14
005254176-03	OBS	No	50.756128	131.926869	6518.1	7.255	14.2	4.4	1.60	6899	15.77	60.34
005254176-04	OBS	No	22.594120	139.986889	4767.8	2.787	16.1	7.8	1.60	6899	17.79	177.53
005254176-05	OBS	No	67.455465	176.368400	11342.8	5.400	10.2	9.3	1.60	6899	29.68	41.30
005254176-06	OBS	No	27.709152	155.582033	1038.5	3.000	9.6	-1.0	1.60	6899	5.21	135.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005254176-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005254176-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
005254176-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
005254176-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
005254176-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005254176-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—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.

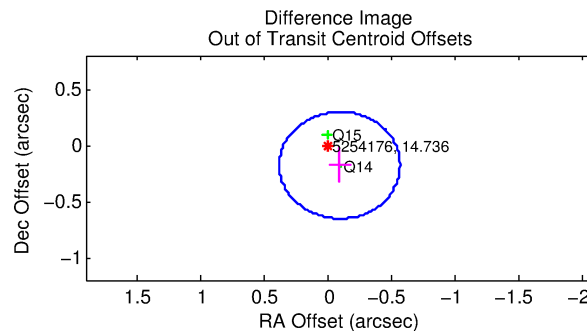
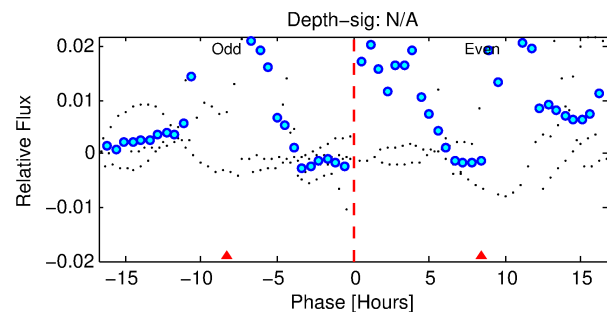
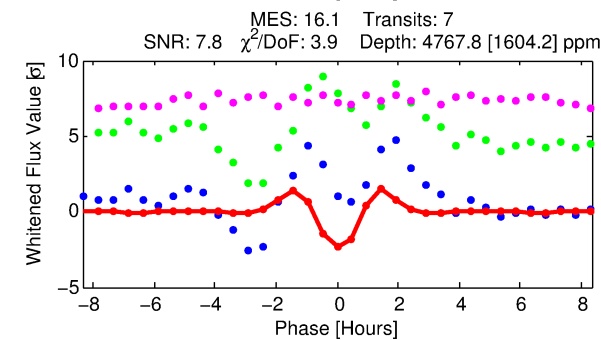
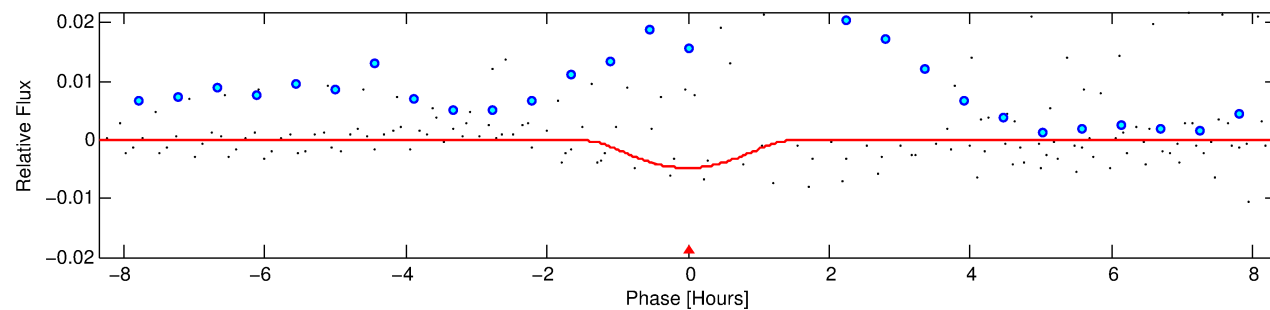
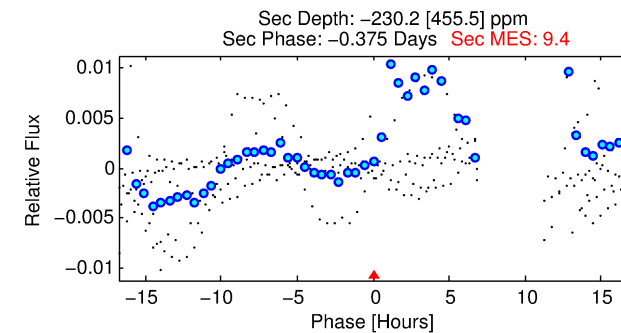
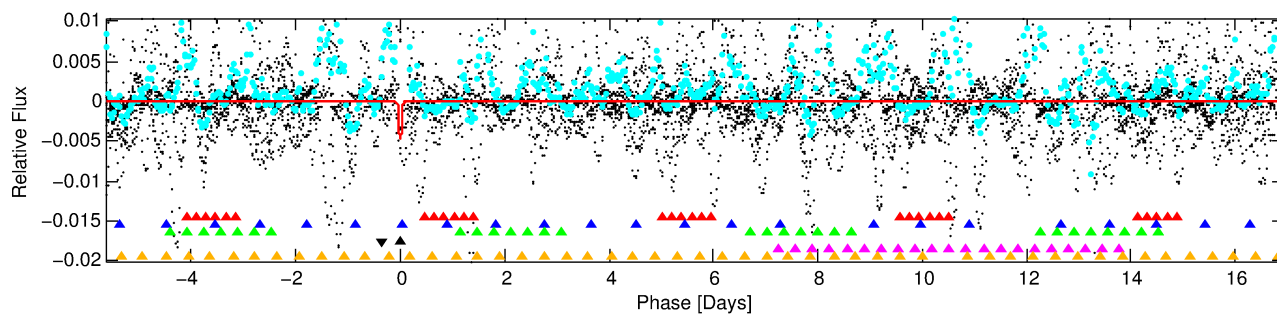
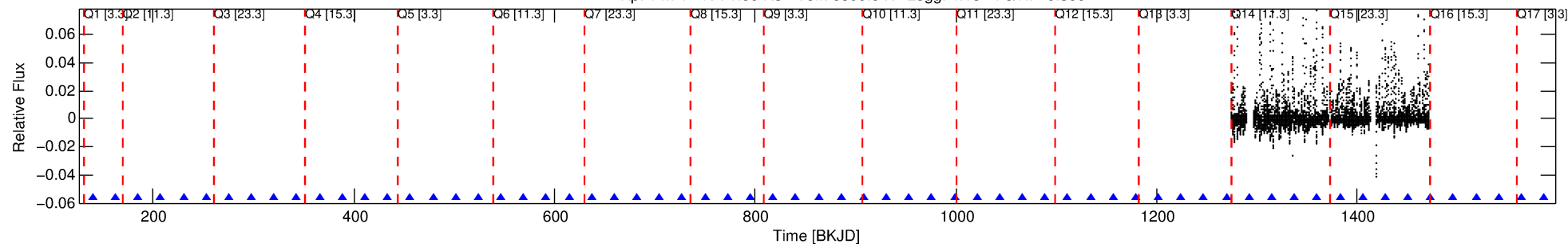
Ephemeris Match Information For 005254176-04

No Significant Match Found

DV One-Page Summary

KIC: 5254176 Candidate: 4 of 6 Period: 22.594 d

Kp: 14.74 R*: 1.60 Rs Teff: 6899.0 K Logg: 4.15 Fe/H: -0.300



DV Fit Results:

Period = 22.59412 [0.00276] d
Epoch = 139.9869 [0.1493] BKJD
Rp/R* = 0.1020 [0.4562]
a/R* = 31.00 [36.38]
b = 0.98 [0.73]
Seff = 177.53 [66.93]
Teq = 931 [88] K
Rp = 17.79 [79.78] Re
a = 0.1710 [0.0408] AU
Ag = N/A
Teffp = N/A

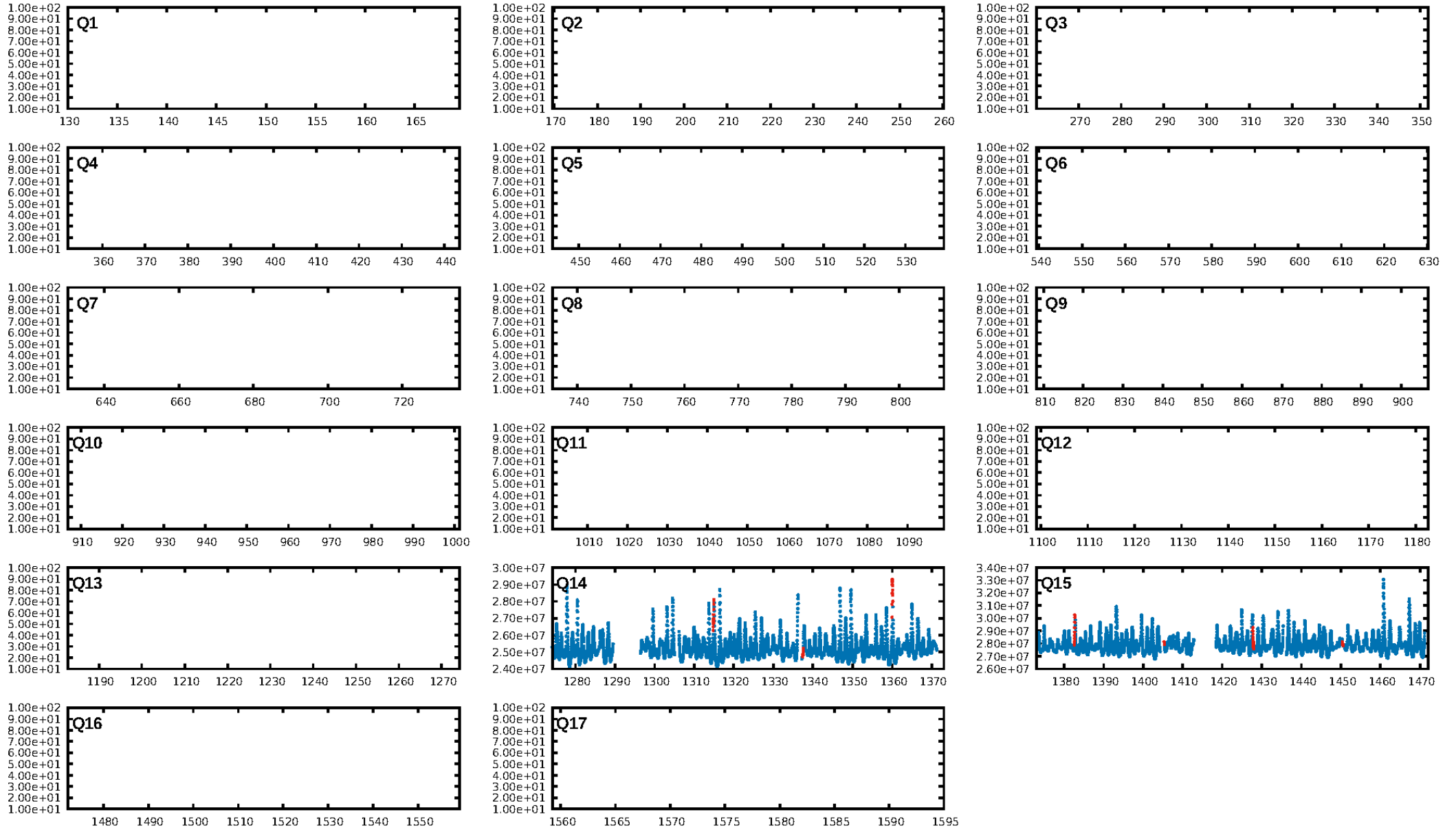
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [29.98σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 0.5983
Centroid-sig: 46.6%
Centroid-so: 0.393 arcsec [1.06σ]
OotOffset-rm: 0.203 arcsec [1.28σ]
KicOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

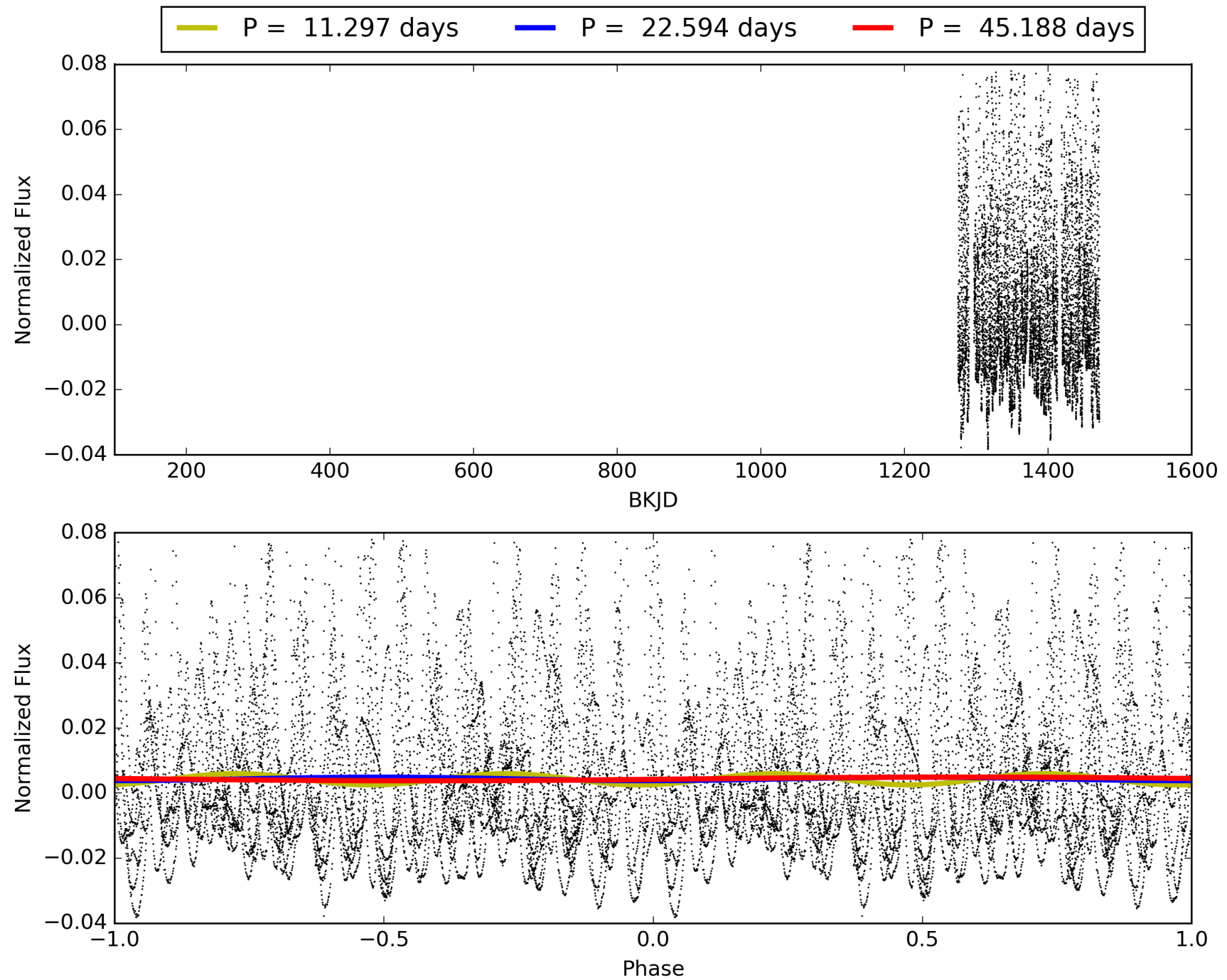
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 06:51:30 Z

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

TCE 005254176-04, PDC Light Curves

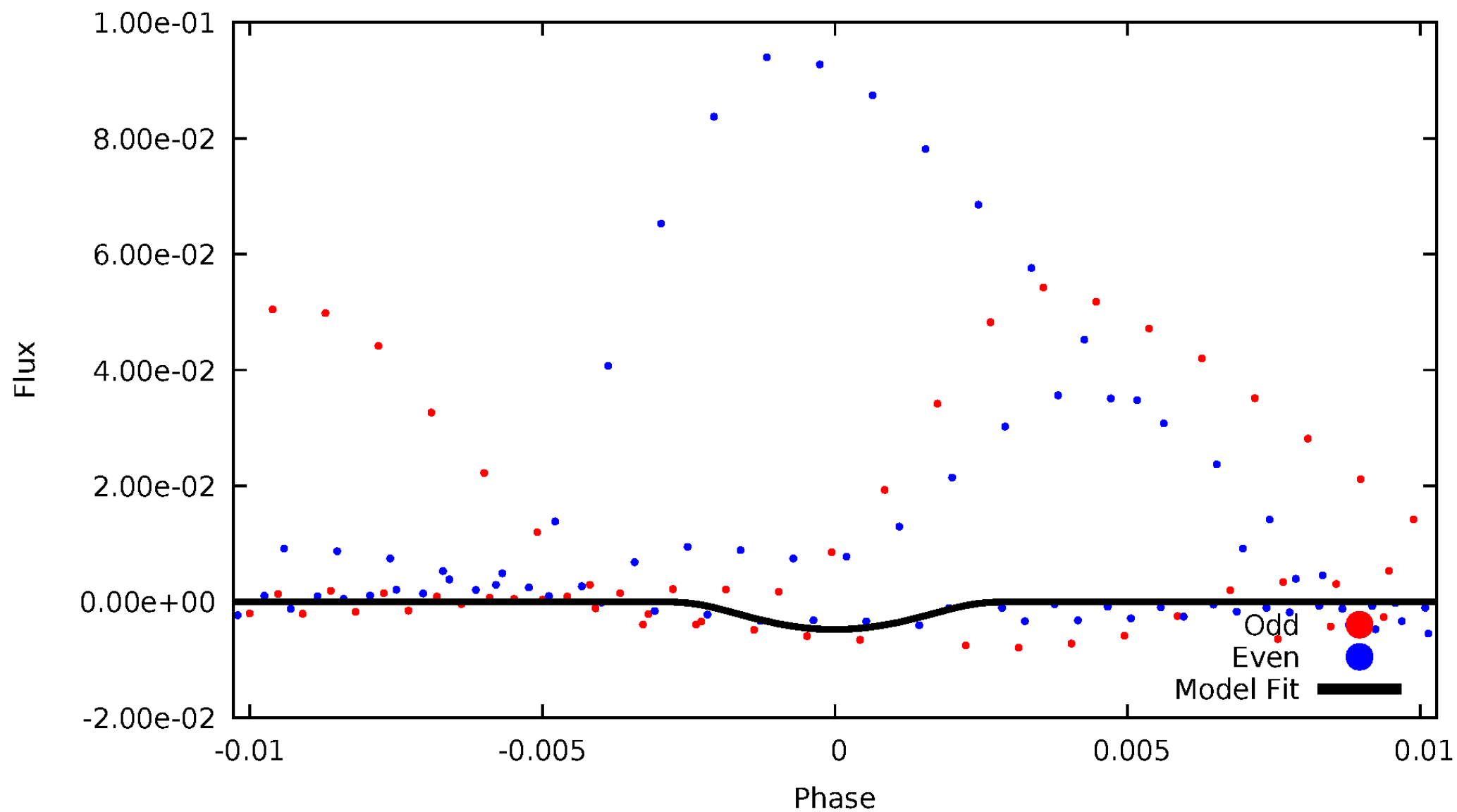


TCE 005254176-04



DV Odd/Even

TCE 005254176-04

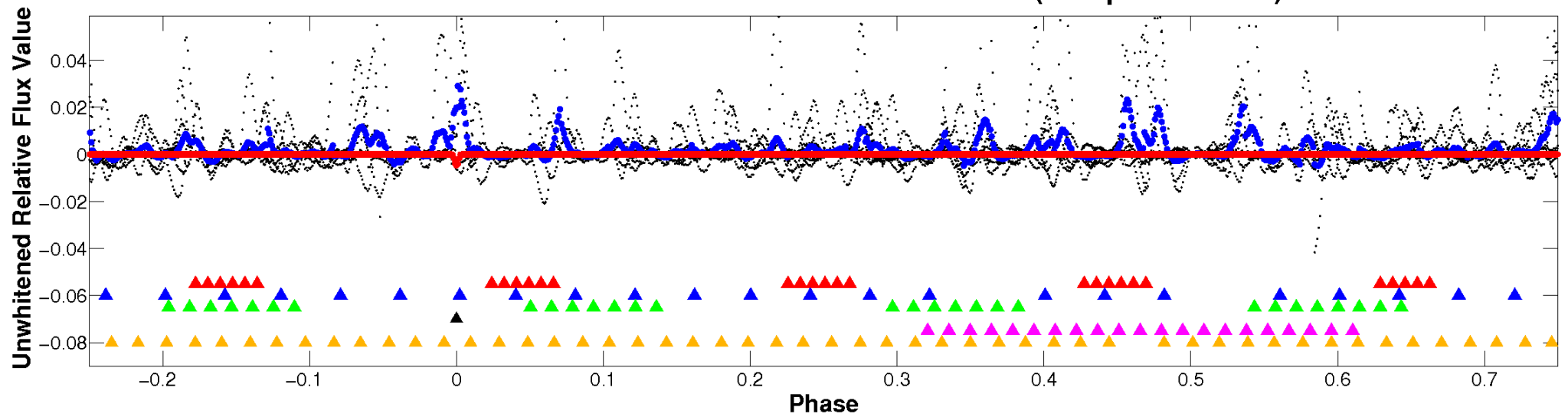


ALT Odd/Even

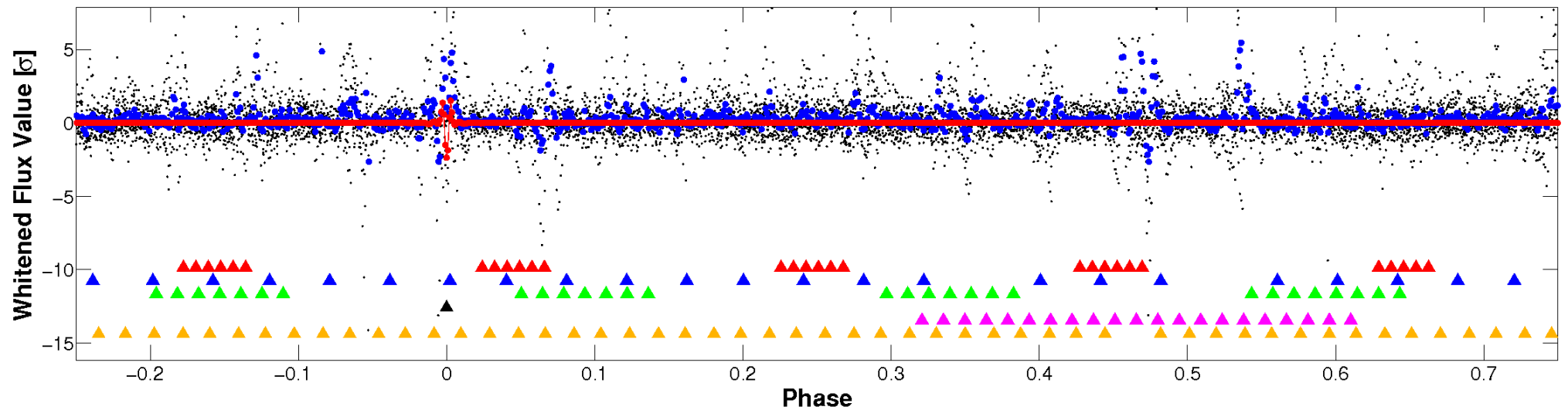
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

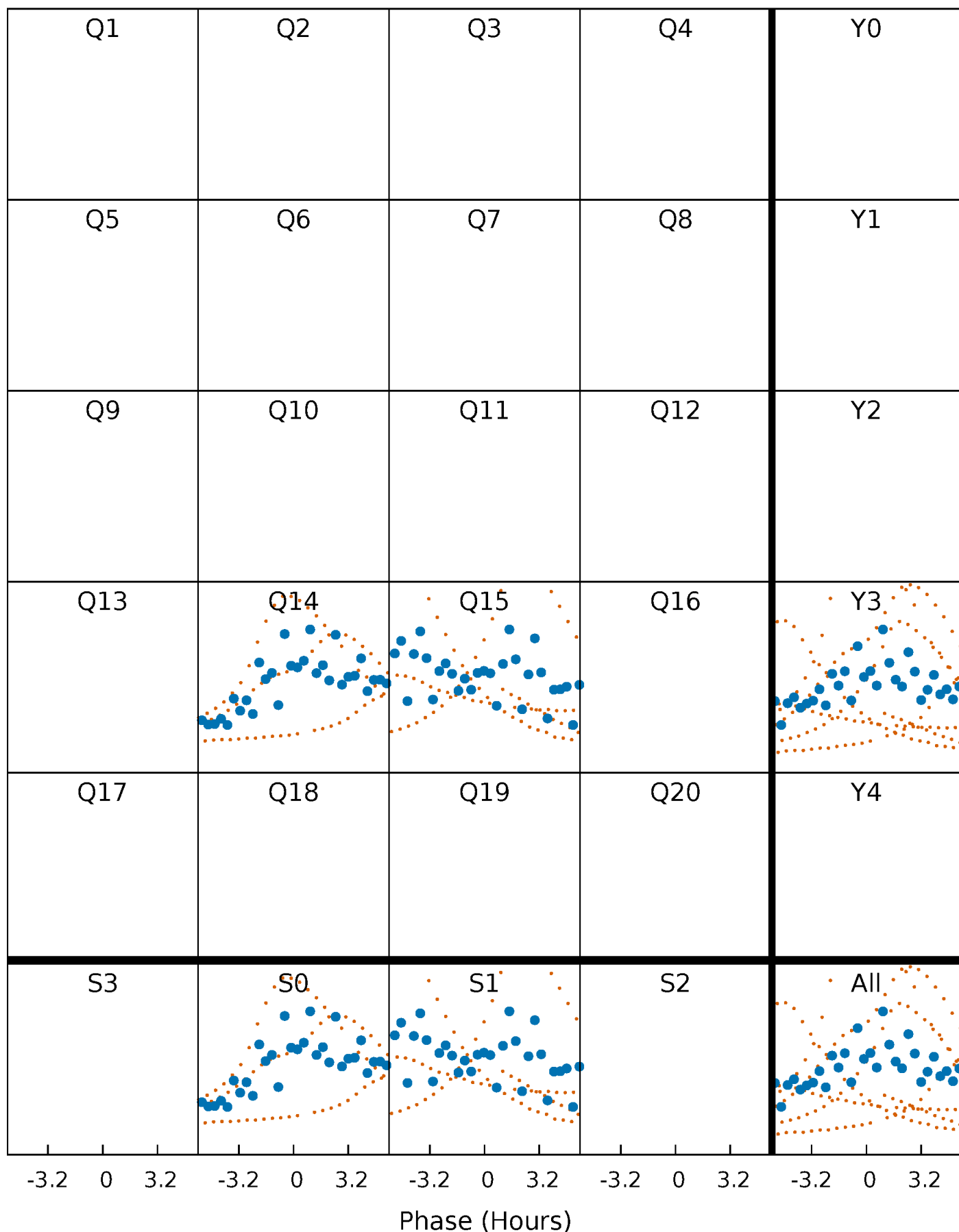


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



PDC Quarter-Phased Transit Curves

TCE 005254176-04 P= 22.594120 Days $T_0=139.986889$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 005254176-04 P= 22.594120 Days $T_0=139.986889$ (BKJD)

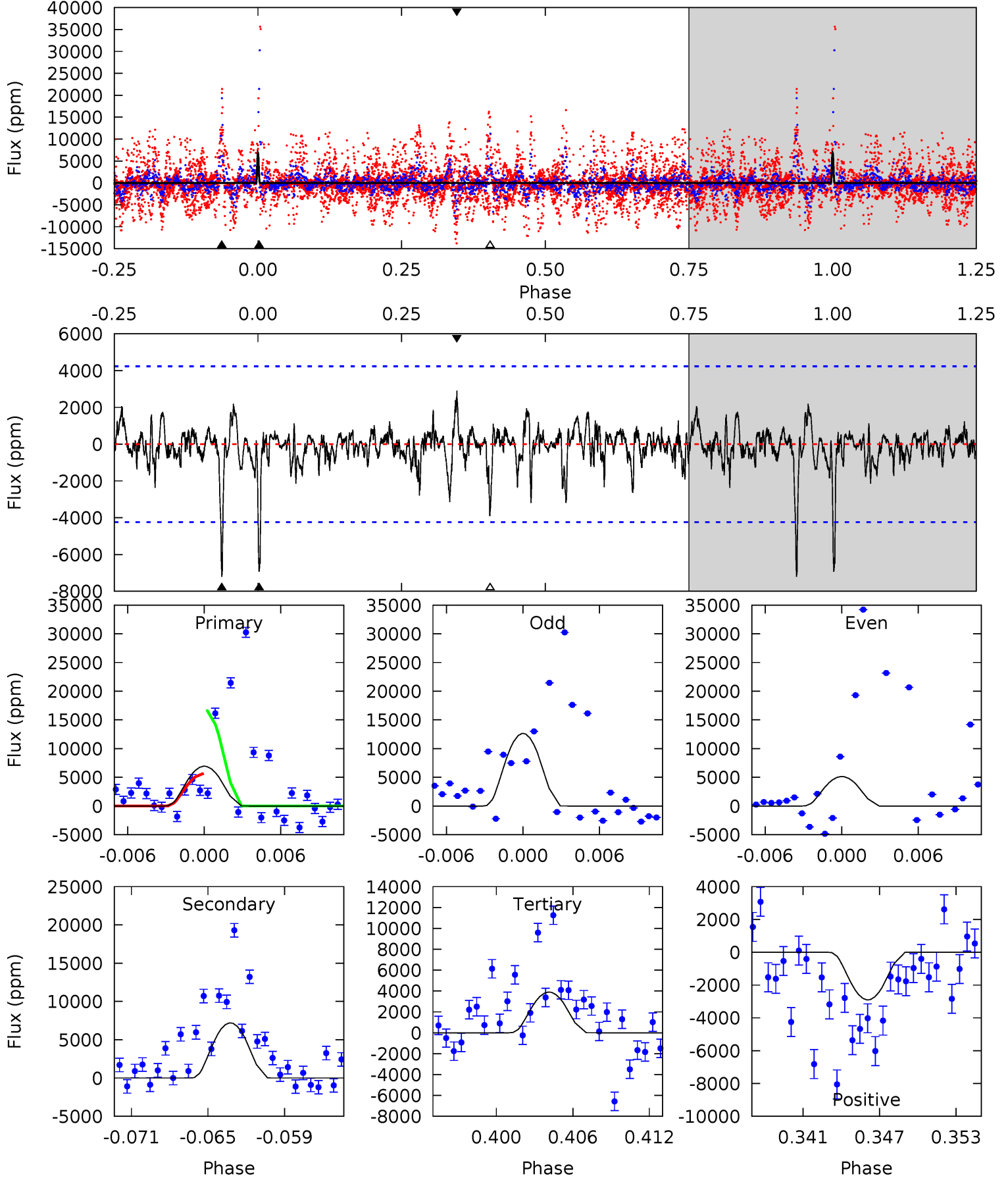


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

005254176-04, P = 22.594120 Days, E = 139.986889 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.40	8.72	4.72	3.52	5.13	2.75	0.94	3.68	4.88	4.00	5.20	4.21	4.67	0.29	6.20



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 005254176

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6899^{+216}_{-288}	$4.146^{+0.180}_{-0.180}$	$-0.300^{+0.300}_{-0.300}$	$1.599^{+0.467}_{-0.382}$	$1.309^{+0.190}_{-0.232}$	$0.452^{+0.440}_{-0.221}$
	+3%/-4%	+4%/-4%	+100%/-100%	+29%/-24%	+15%/-18%	+98%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005254176-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-7205 ± 826	$60.36^{+66.63}_{-40.01}$	1300^{+108}_{-95}	3780^{+2088}_{-784}	32^{+254}_{-24}
Alt.	N/A	N/A	N/A	N/A	N/A

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

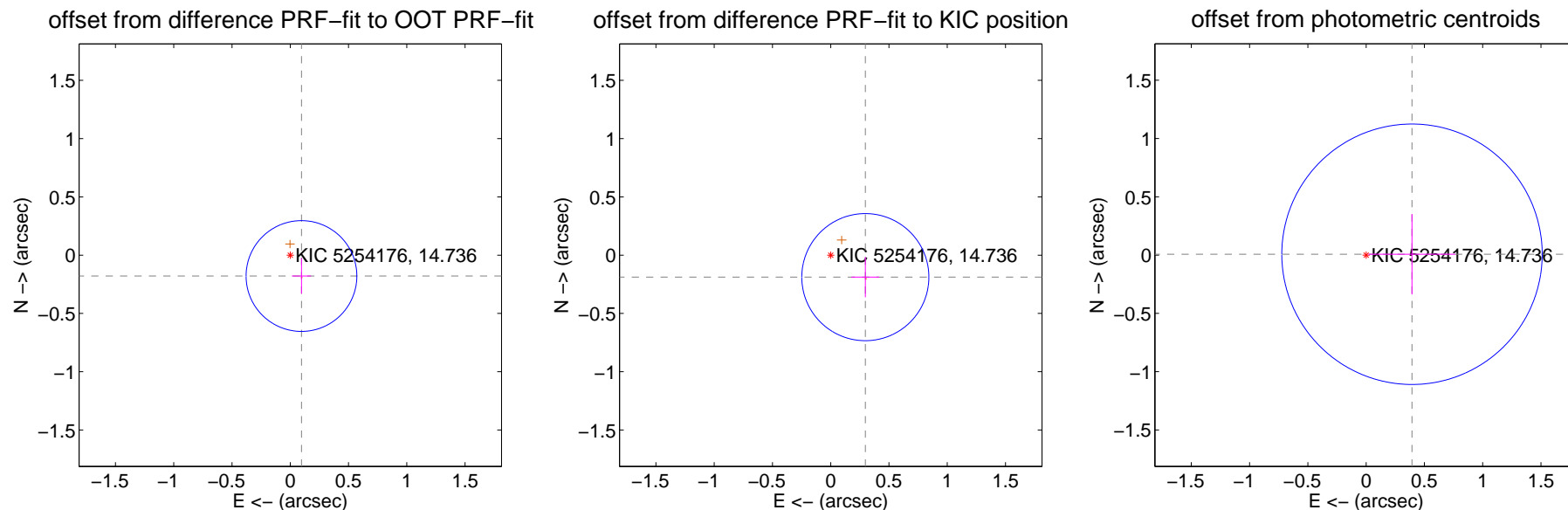
DV Centroid Data

Supplemental centroid analysis for 005254176-04. Kepler magnitude: 14.74. Transit SNR 7.77

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.203 ± 0.158	1.28	-0.096 ± 0.082	-0.179 ± 0.153
PRF-fit source offset from KIC position	0.352 ± 0.182	1.94	-0.297 ± 0.120	-0.189 ± 0.173
photometric centroid source offset	0.39 ± 0.37	1.06	-0.39 ± 0.37	0.01 ± 0.34



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.



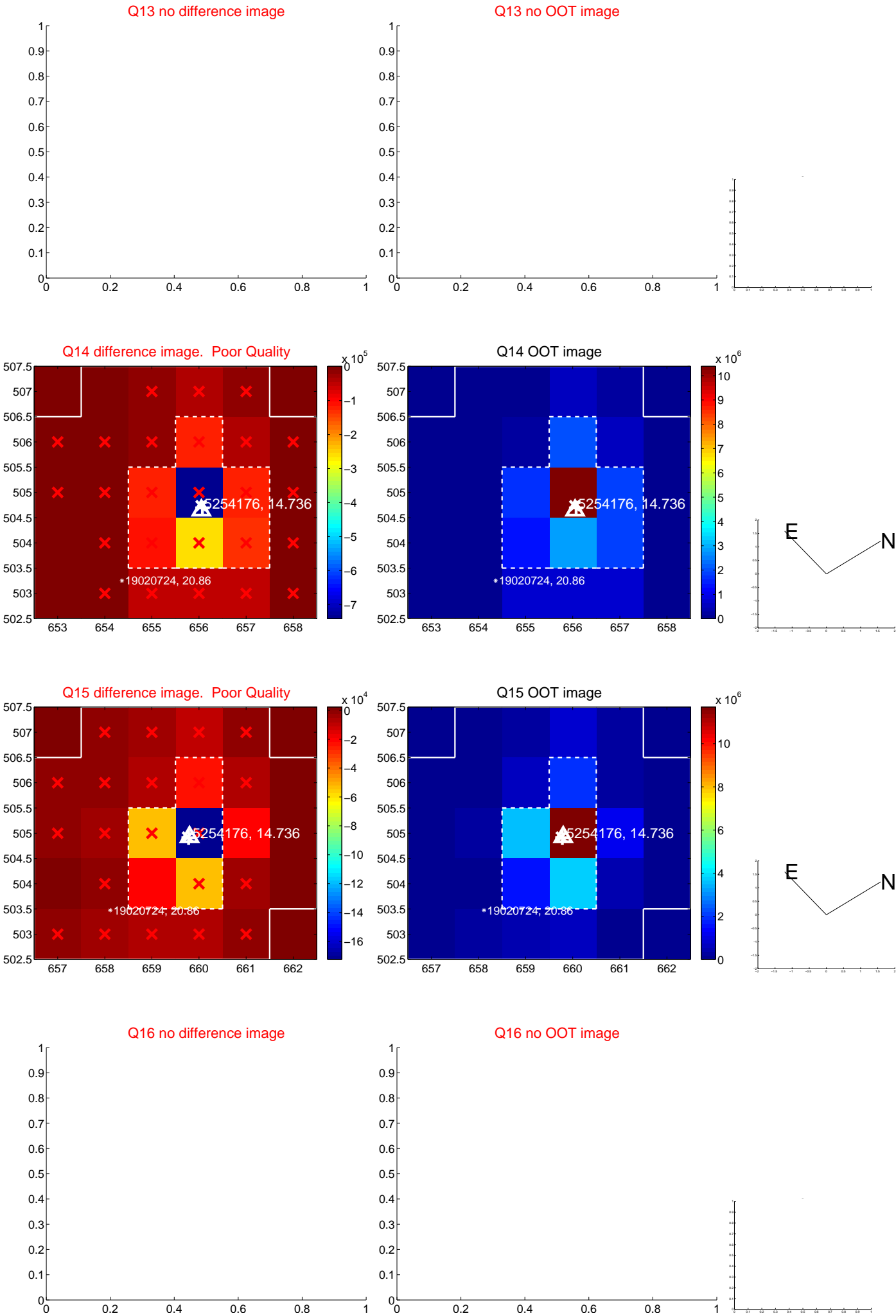
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



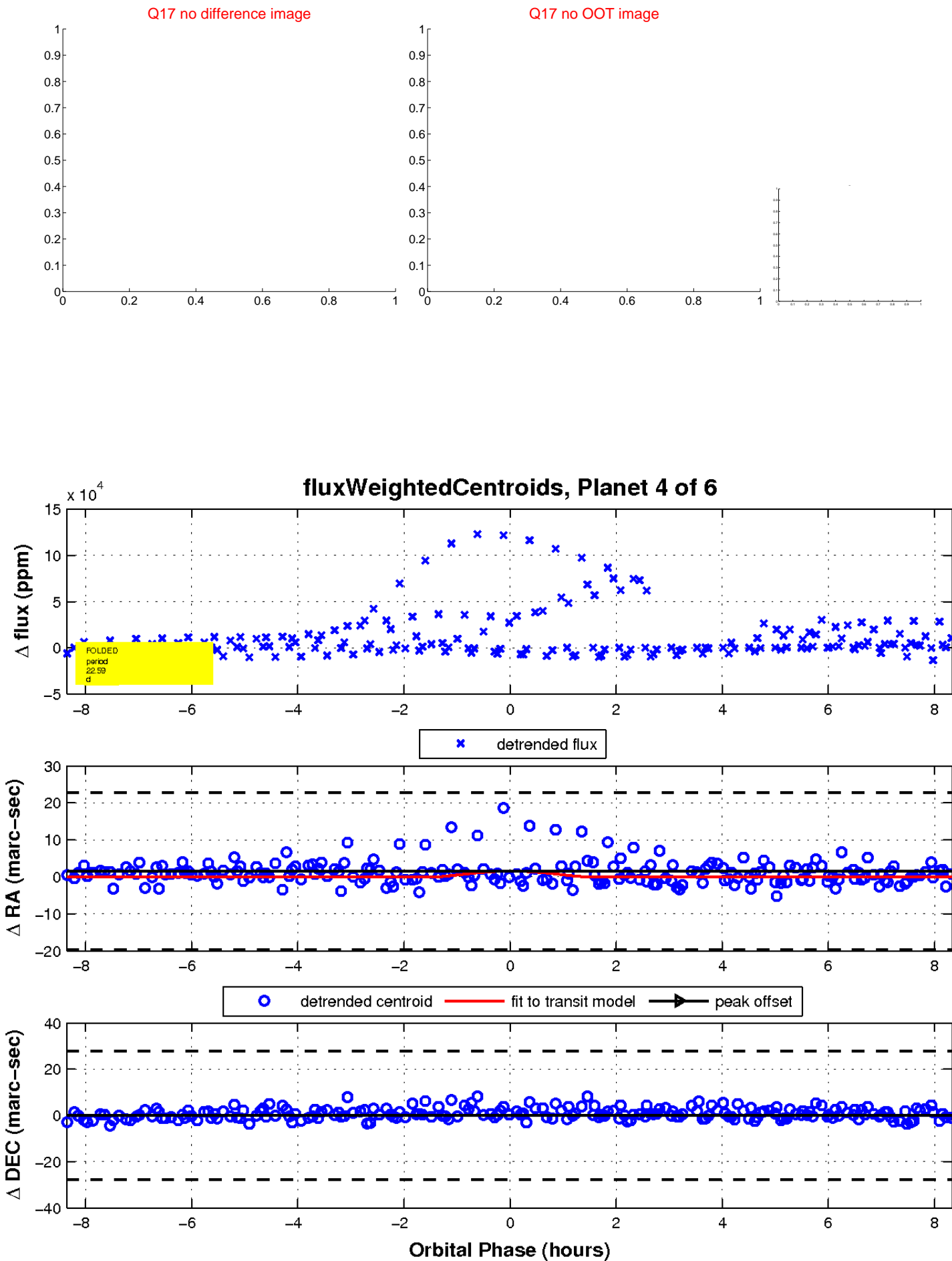
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

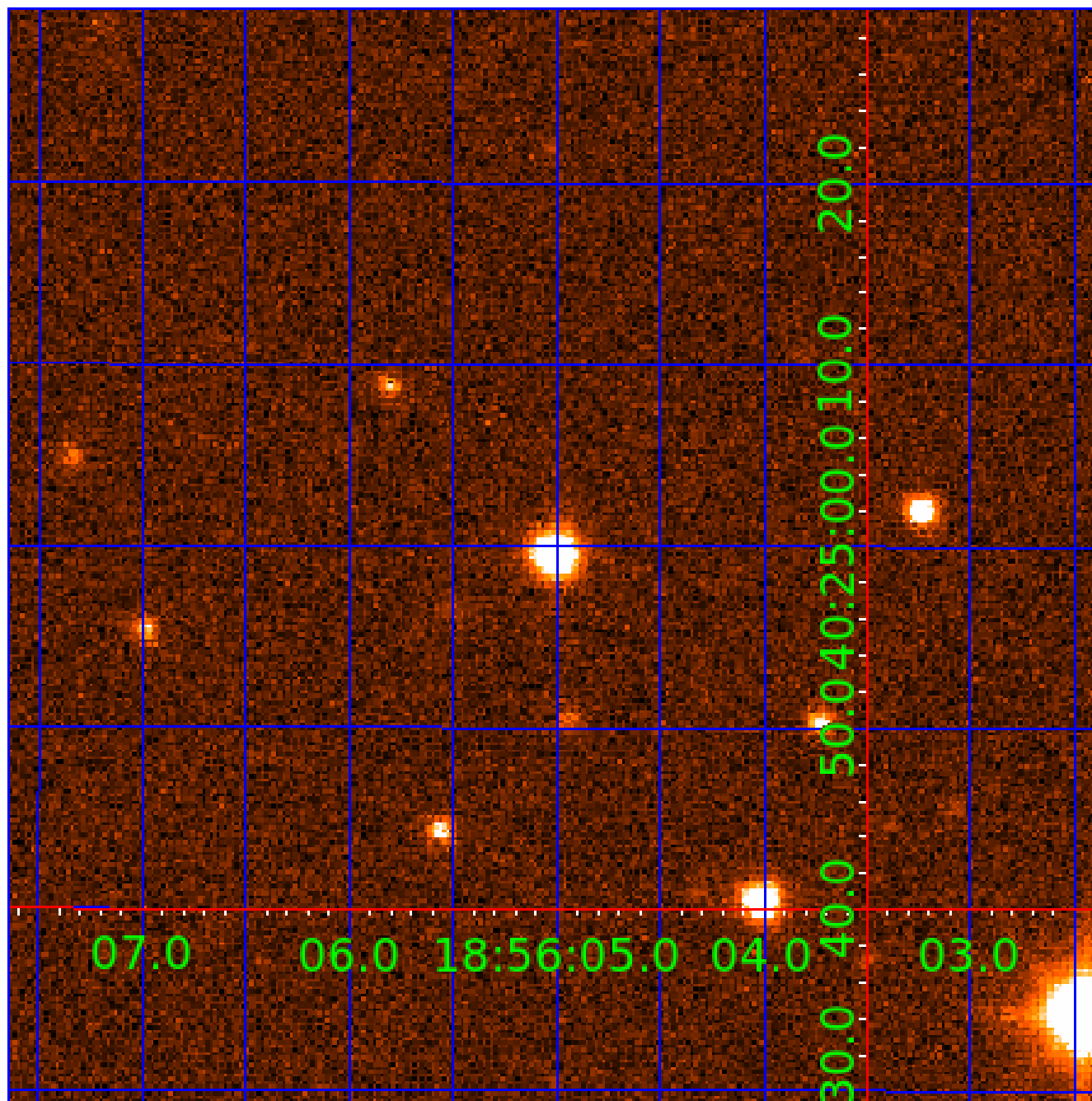


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005254176

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})
005254176-01	OBS	No	49.744989	181.162047	2481.7	2.500	18.6	-1.0	1.60	6899	8.06	61.98
005254176-02	OBS	No	64.169469	144.513235	95.9	0.524	18.9	0.2	1.60	6899	1.67	44.14
005254176-03	OBS	No	50.756128	131.926869	6518.1	7.255	14.2	4.4	1.60	6899	15.77	60.34
005254176-04	OBS	No	22.594120	139.986889	4767.8	2.787	16.1	7.8	1.60	6899	17.79	177.53
005254176-05	OBS	No	67.455465	176.368400	11342.8	5.400	10.2	9.3	1.60	6899	29.68	41.30
005254176-06	OBS	No	27.709152	155.582033	1038.5	3.000	9.6	-1.0	1.60	6899	5.21	135.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005254176-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005254176-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
005254176-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
005254176-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
005254176-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005254176-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—CENT_NOFITS

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

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

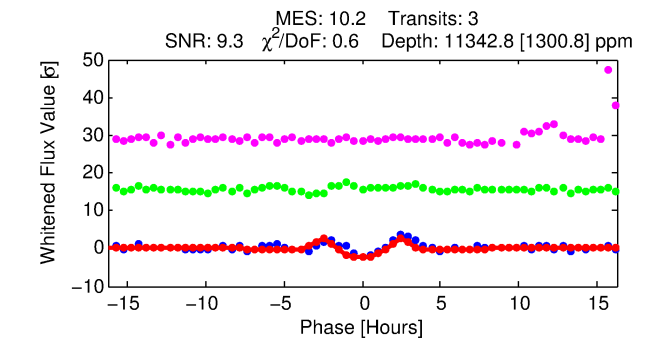
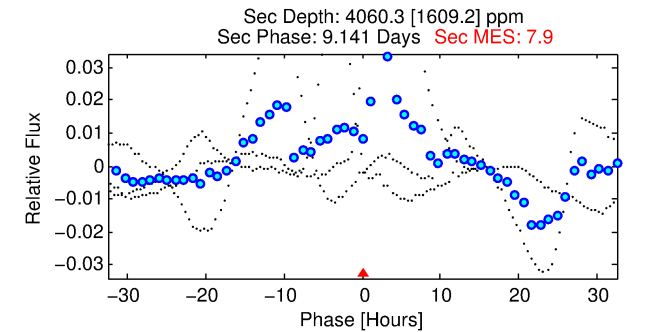
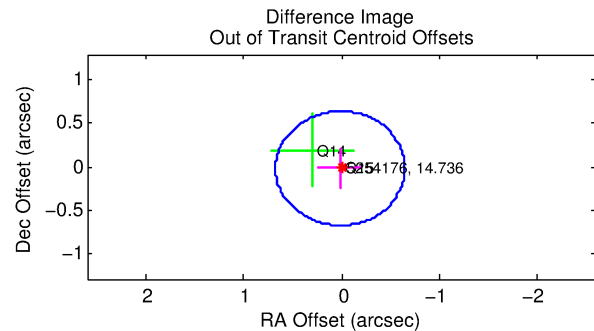
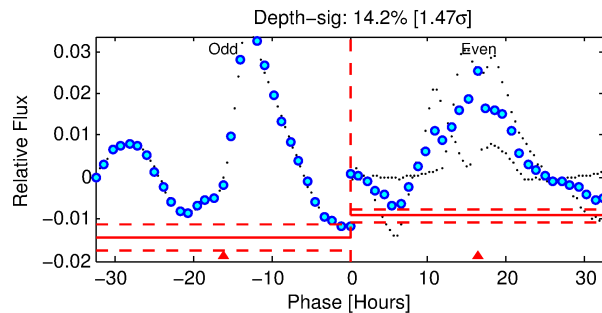
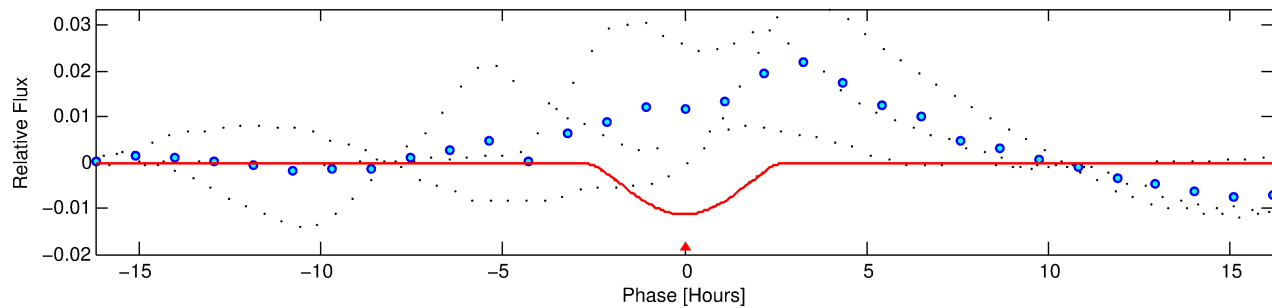
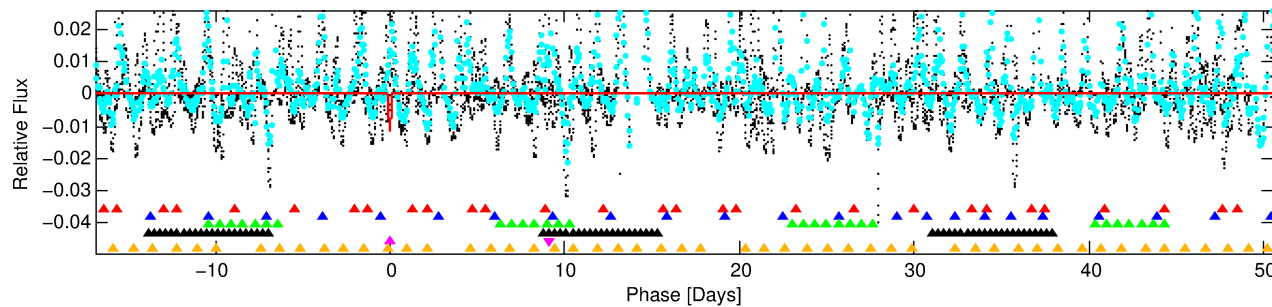
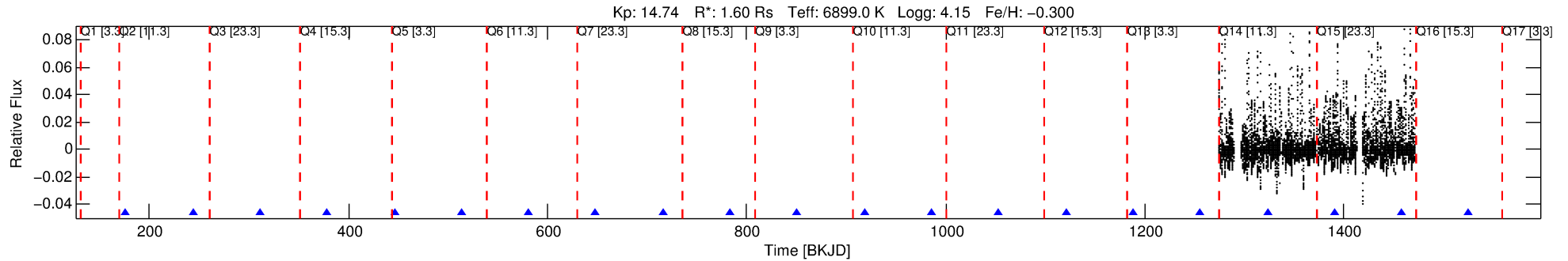
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005254176-05

No Significant Match Found

DV One-Page Summary

KIC: 5254176 Candidate: 5 of 6 Period: 67.455 d



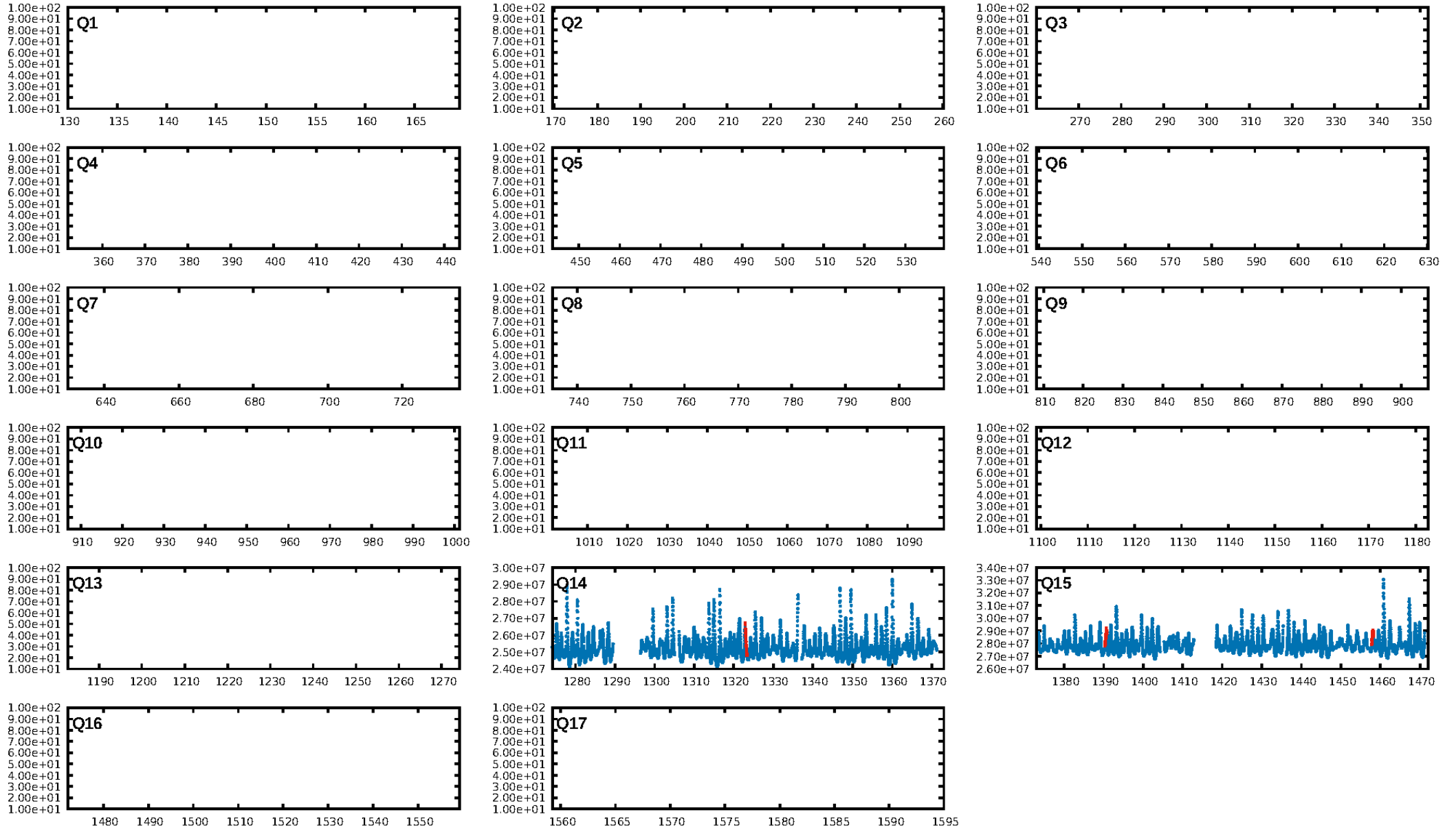
DV Fit Results:

Period = 67.45547 [0.00242] d
Epoch = 176.3684 [0.0441] BKJD
Rp/R* = 0.1701 [0.1604]
a/R* = 58.17 [8.37]
b = 1.00 [0.22]
Seff = 41.30 [15.57]
Teq = 646 [61] K
Rp = 29.68 [29.31] Re
a = 0.3545 [0.0846] AU
Ag = 318.73 [623.83] [0.51 σ]
Teffp = 4223 [2043] K [1.75 σ]

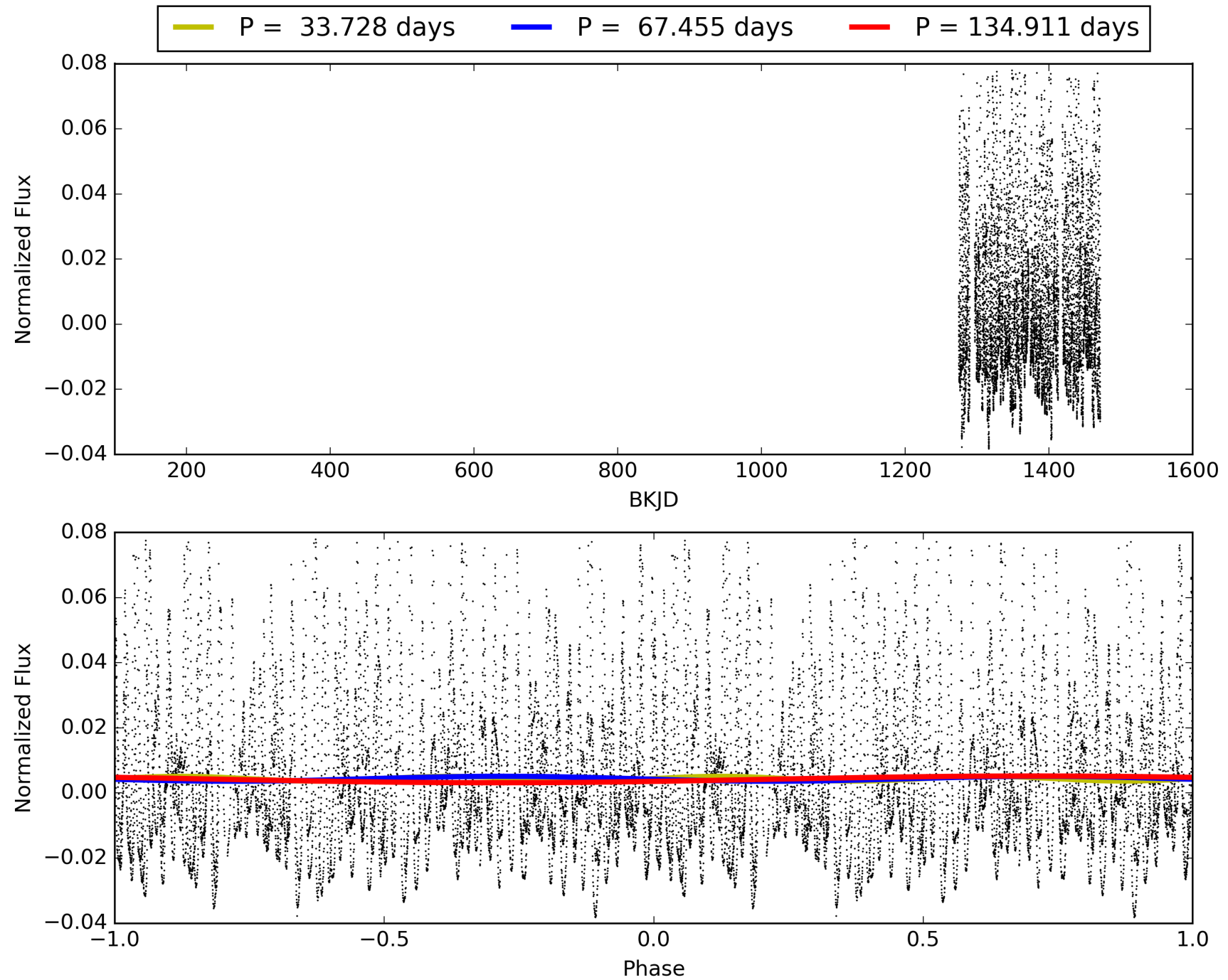
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.54 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 4.4%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.968
Centroid-sig: 20.8%
Centroid-so: 0.242 arcsec [1.33 σ]
OotOffset-rm: 0.024 arcsec [0.11 σ]
KicOffset-rm: 0.081 arcsec [0.37 σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [2/2]

TCE 005254176-05, PDC Light Curves

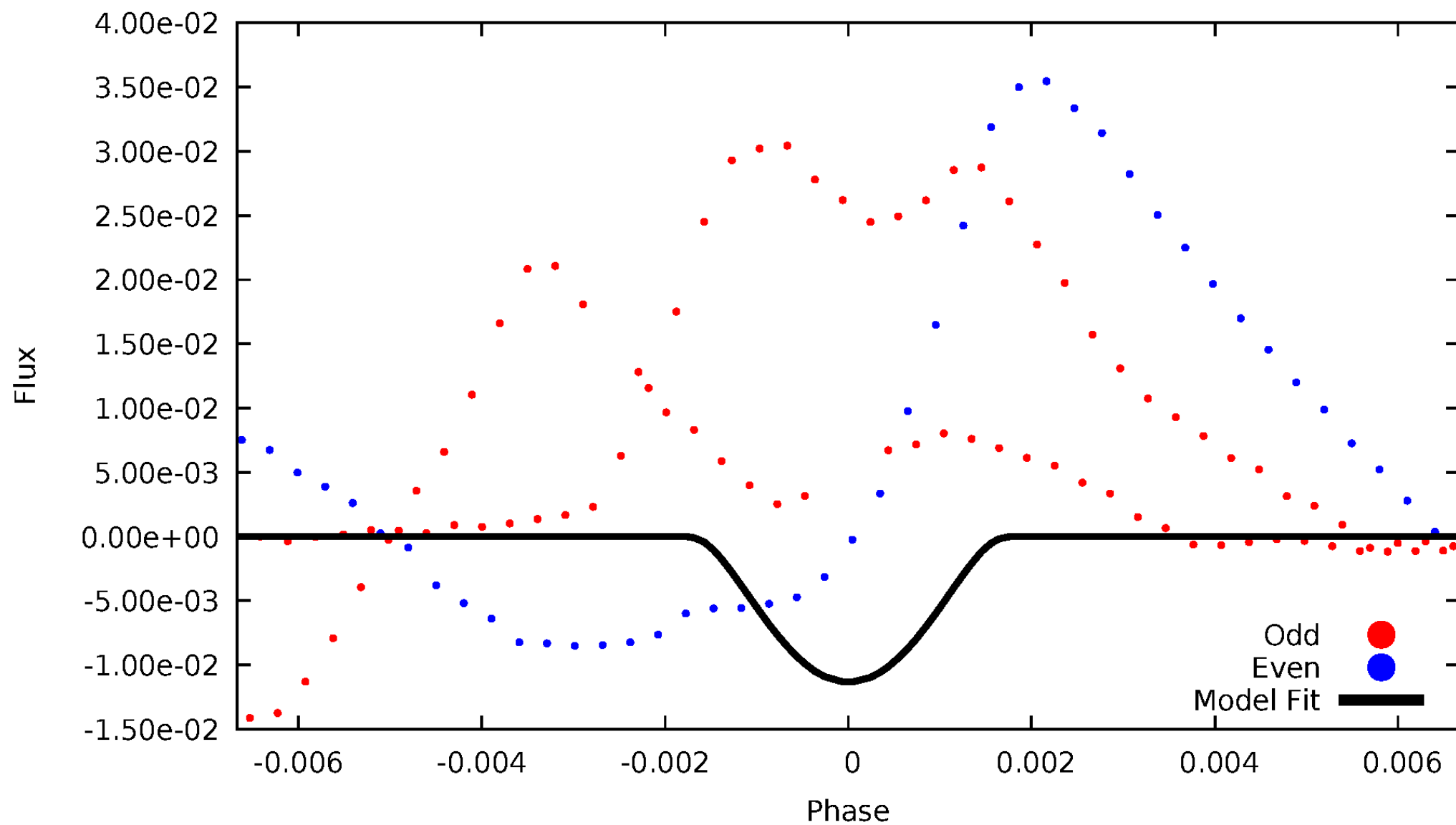


TCE 005254176-05



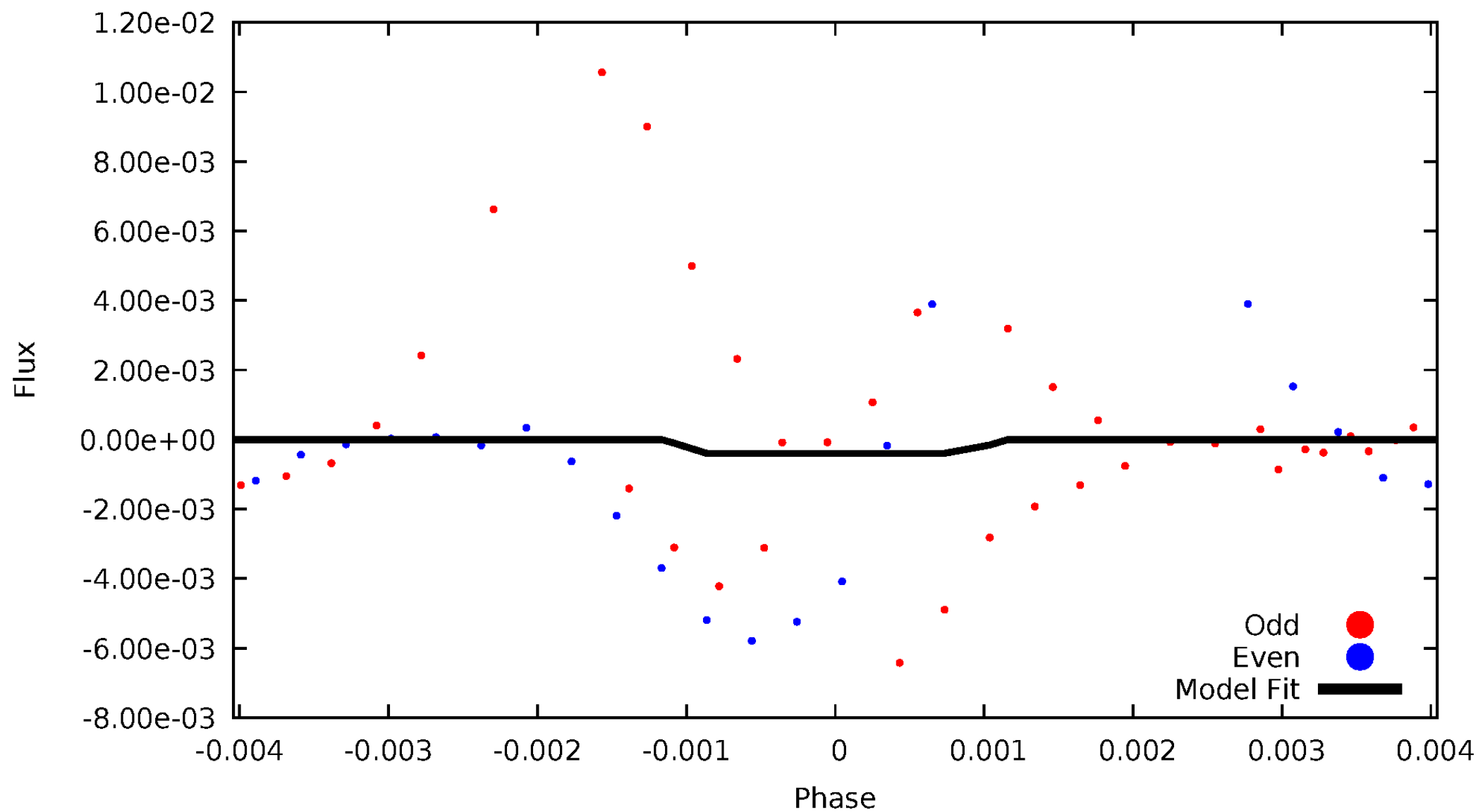
DV Odd/Even

TCE 005254176-05



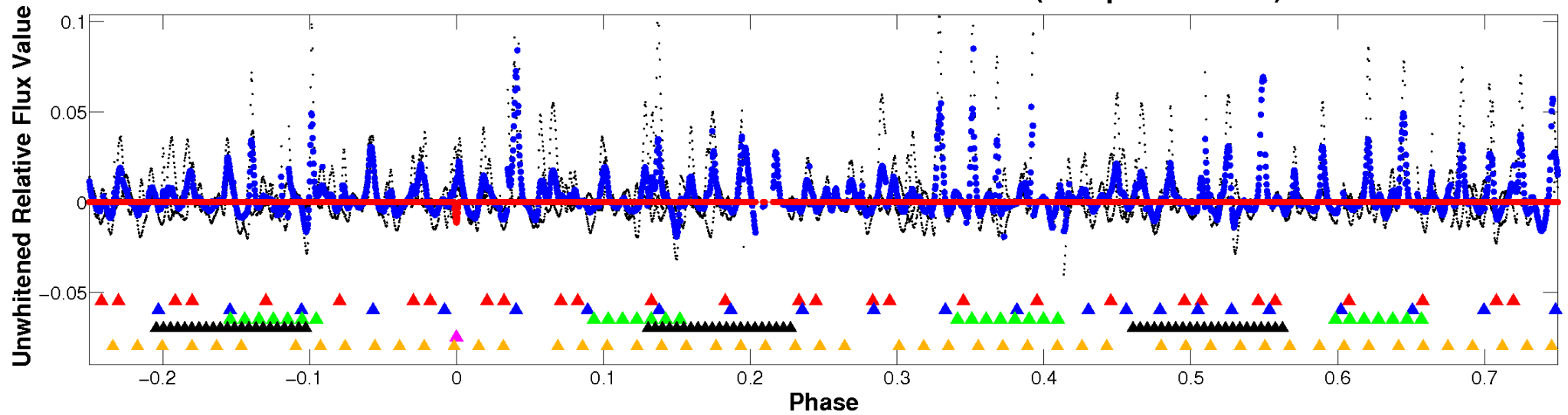
ALT Odd/Even

TCE 005254176-05

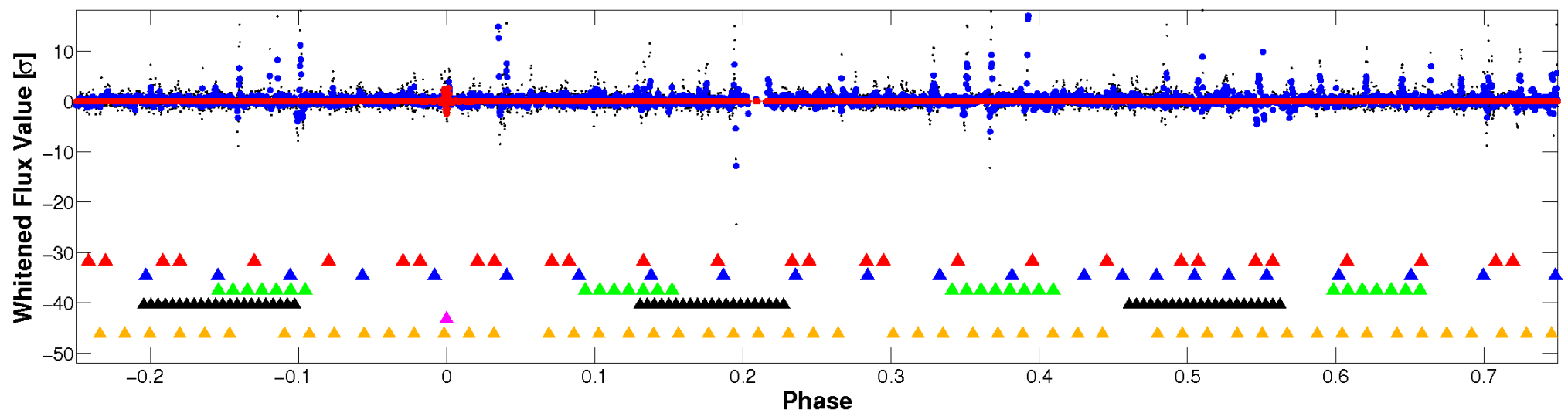


Non-Whitened Vs. Whitened Light Curve

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

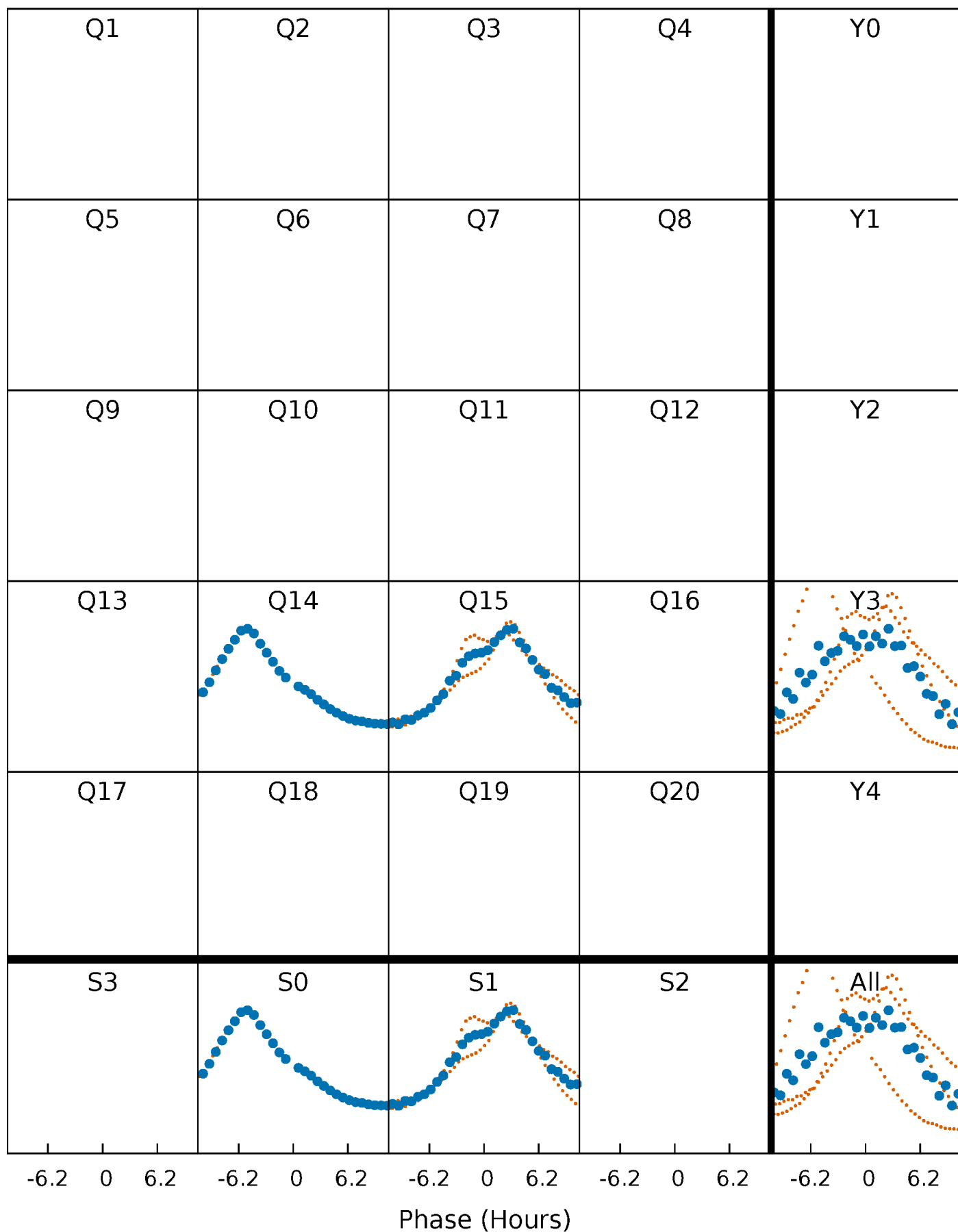


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



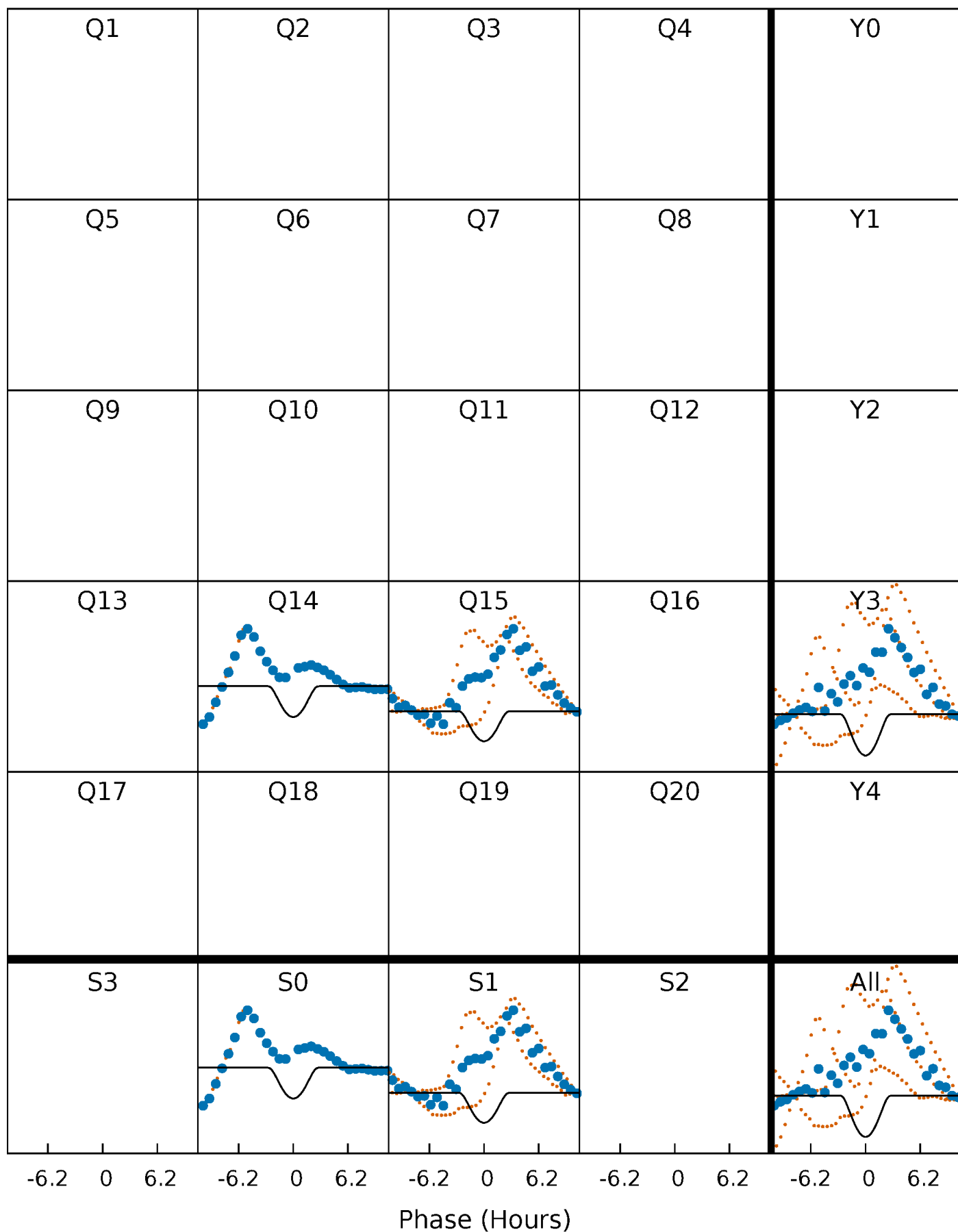
PDC Quarter-Phased Transit Curves

TCE 005254176-05 $P = 67.455465$ Days $T_0 = 176.368400$ (BKJD)



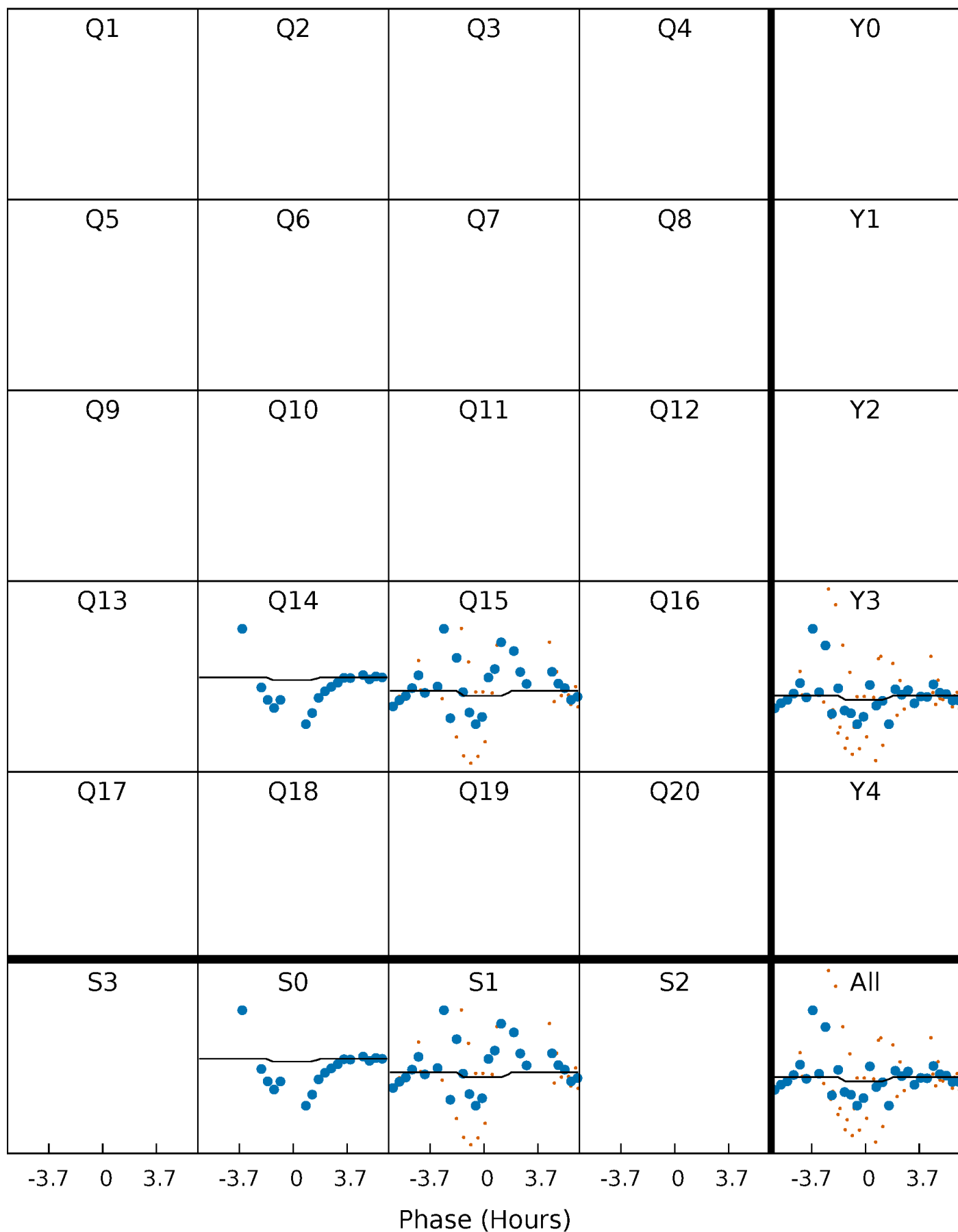
DV Quarter-Phased Transit Curves

TCE 005254176-05 P= 67.455465 Days $T_0=176.368400$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

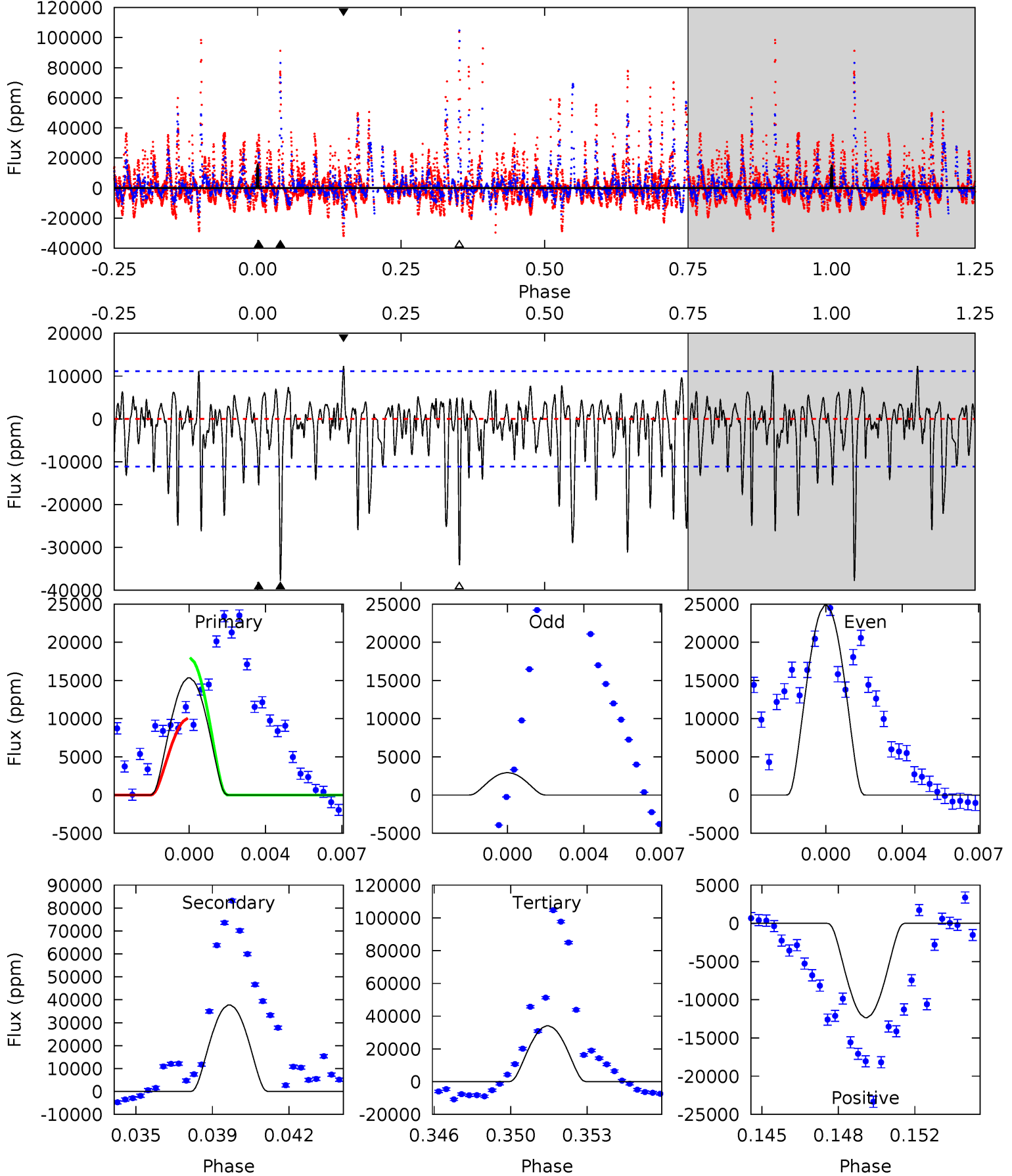
TCE 005254176-05 $P = 67.475524$ Days $T_0 = 176.027623$ (BKJD)



DV Model-Shift Uniqueness Test

005254176-05, P = 67.455465 Days, E = 176.368400 Days

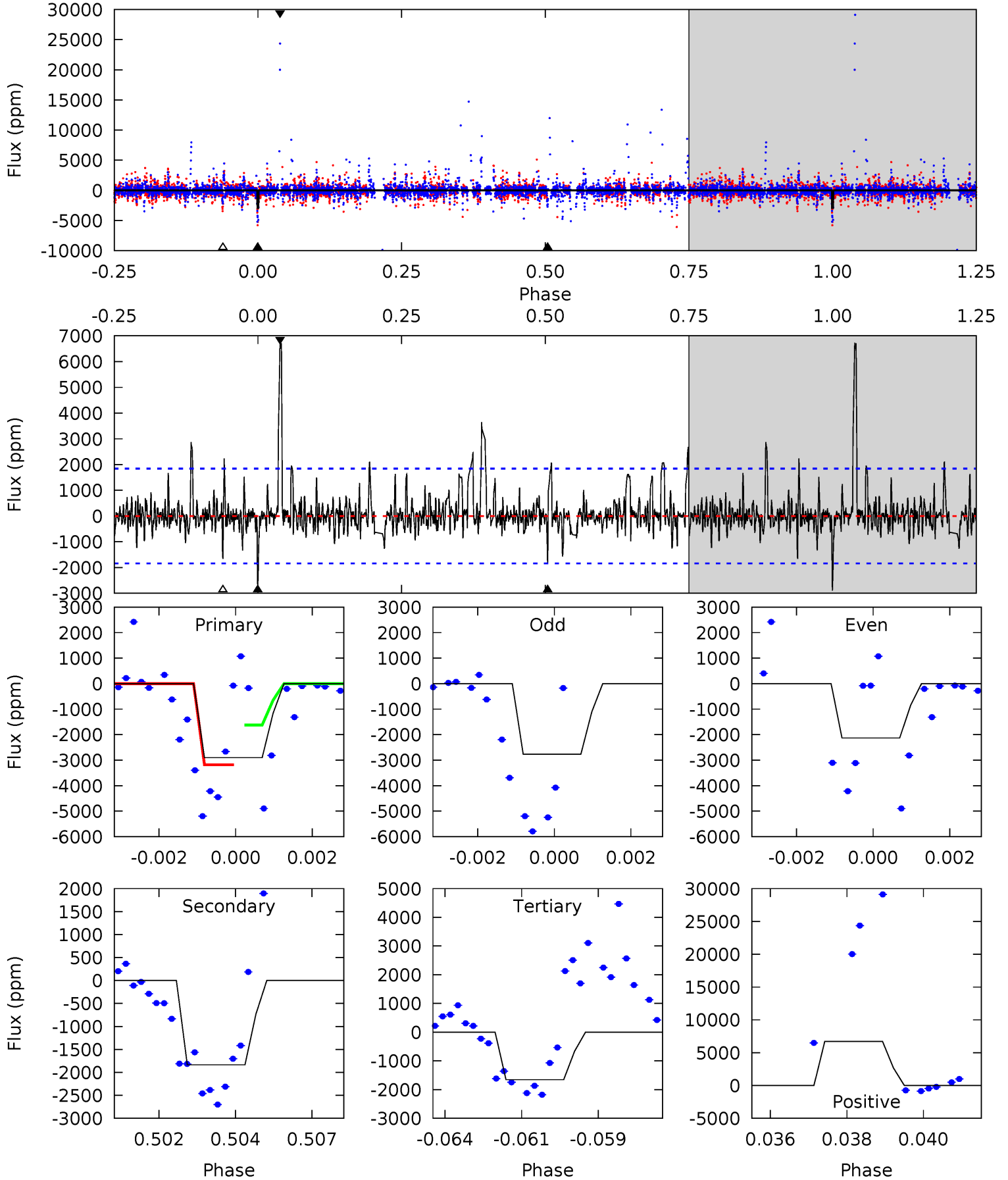
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.19	17.7	16.0	5.79	5.22	2.92	2.77	-8.78	1.40	1.72	11.9	4.22	1.94	0.25	1.86



Alt Model-Shift Uniqueness Test

005254176-05, P = 67.475524 Days, E = 176.027623 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.37	5.30	4.78	19.4	5.32	3.07	1.48	3.59	-11.0	0.52	-14.1	0.76	0.69	0.70	2.23



Stellar Parameters For KIC 005254176

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6899^{+216}_{-288}	$4.146^{+0.180}_{-0.180}$	$-0.300^{+0.300}_{-0.300}$	$1.599^{+0.467}_{-0.382}$	$1.309^{+0.190}_{-0.232}$	$0.452^{+0.440}_{-0.221}$
	+3%/-4%	+4%/-4%	+100%/-100%	+29%/-24%	+15%/-18%	+98%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005254176-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-37760 ± 2134	$34.78^{+28.38}_{-21.67}$	905^{+67}_{-71}	6845^{+6699}_{-1683}	2264^{+12939}_{-1597}
Alt.	-1835 ± 347	$19.39^{+21.78}_{-13.59}$	902^{+72}_{-69}	4420^{+3496}_{-1003}	339^{+3263}_{-265}

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 $A_{obs} \gg 1.0$

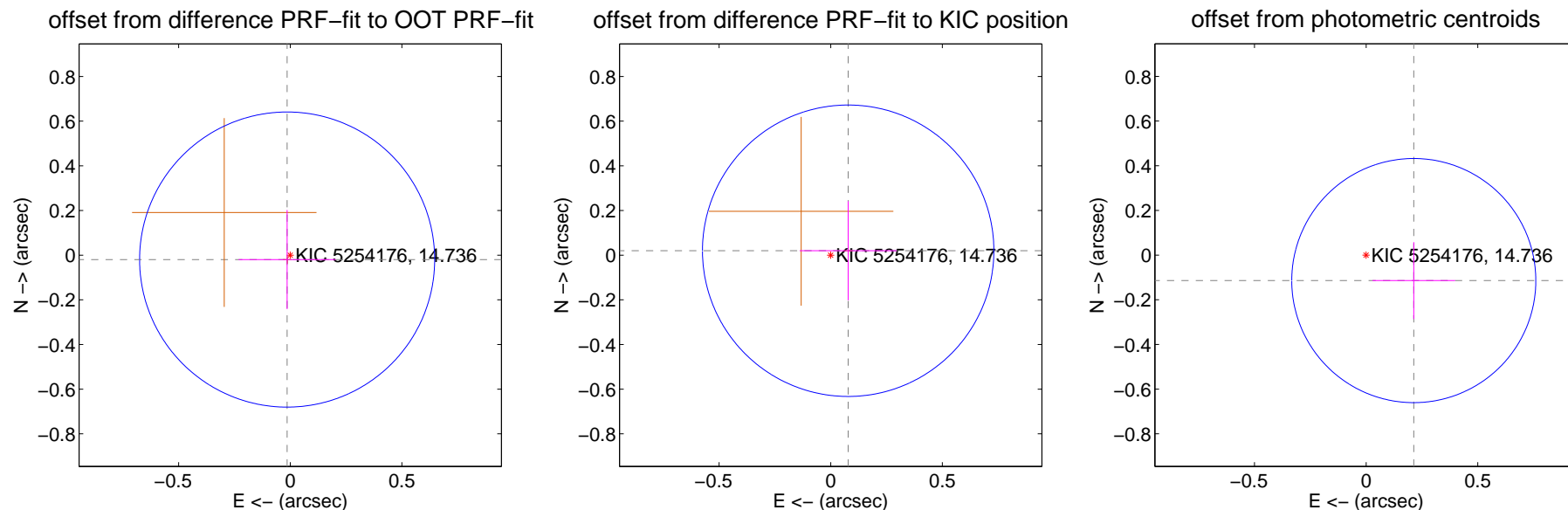
DV Centroid Data

Supplemental centroid analysis for 005254176-05. Kepler magnitude: 14.74. Transit SNR 9.29

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.024 ± 0.220	0.11	0.014 ± 0.217	-0.020 ± 0.222
PRF-fit source offset from KIC position	0.081 ± 0.217	0.37	-0.078 ± 0.217	0.020 ± 0.222
photometric centroid source offset	0.24 ± 0.18	1.33	-0.21 ± 0.18	-0.11 ± 0.17



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.



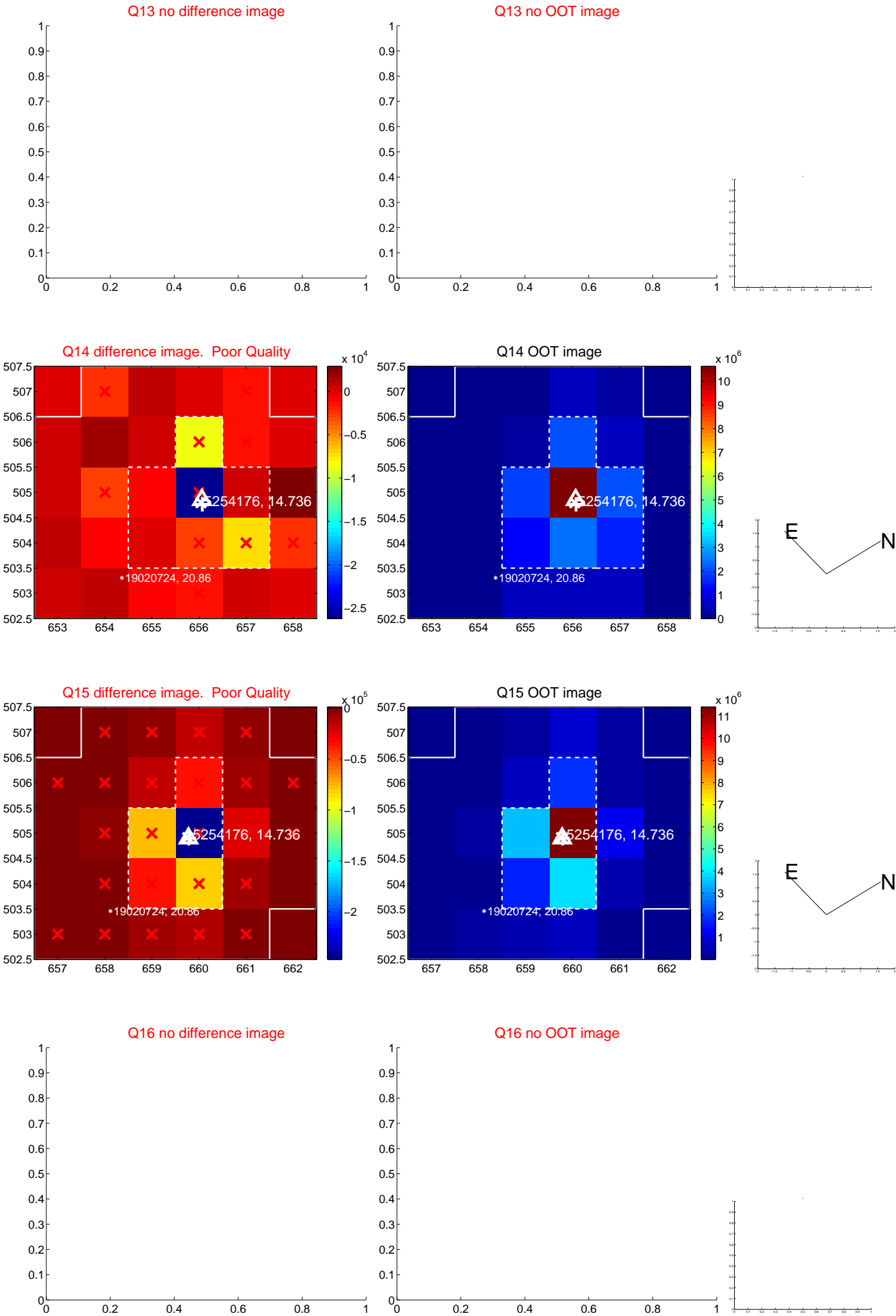
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



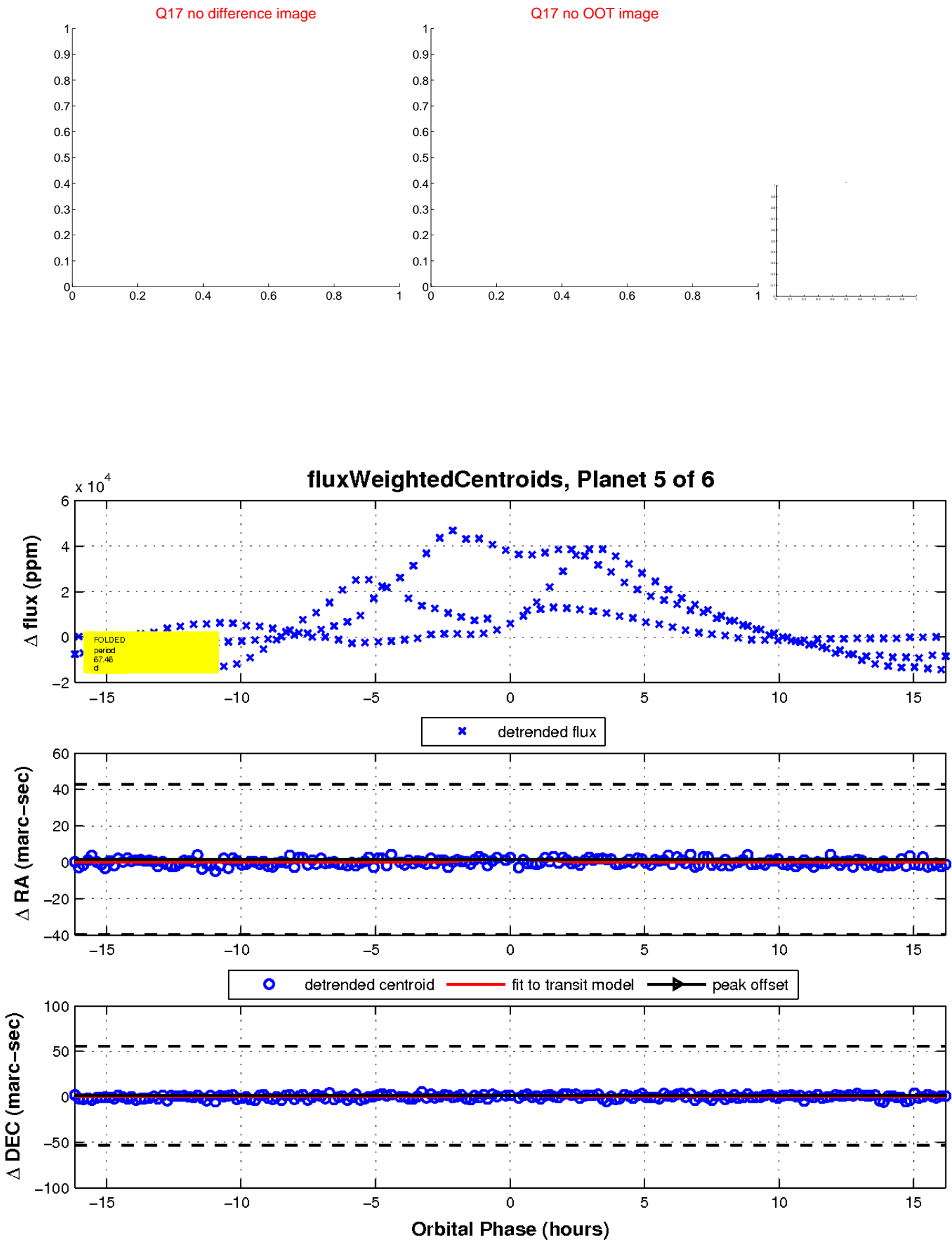
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

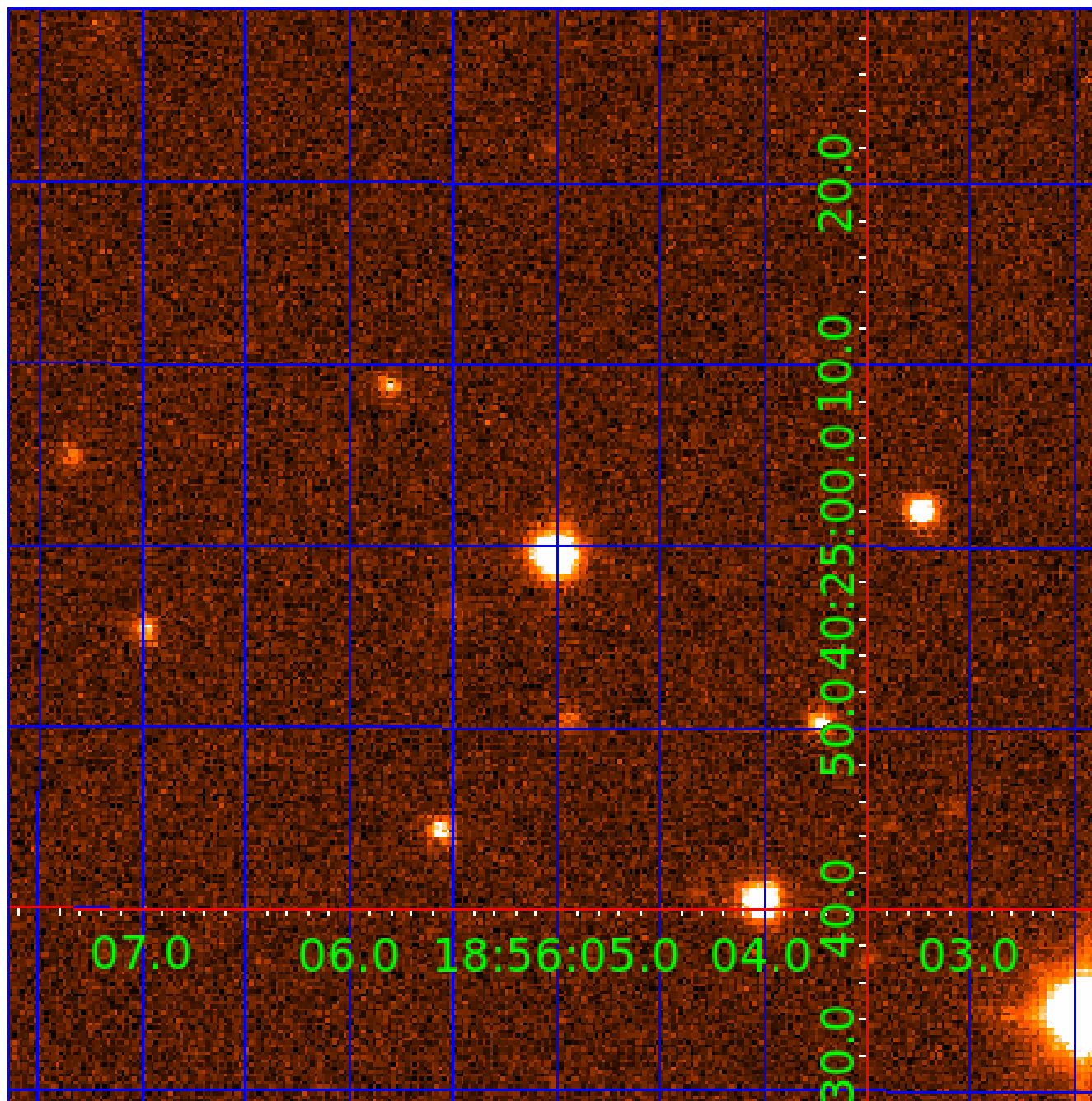


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005254176

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})
005254176-01	OBS	No	49.744989	181.162047	2481.7	2.500	18.6	-1.0	1.60	6899	8.06	61.98
005254176-02	OBS	No	64.169469	144.513235	95.9	0.524	18.9	0.2	1.60	6899	1.67	44.14
005254176-03	OBS	No	50.756128	131.926869	6518.1	7.255	14.2	4.4	1.60	6899	15.77	60.34
005254176-04	OBS	No	22.594120	139.986889	4767.8	2.787	16.1	7.8	1.60	6899	17.79	177.53
005254176-05	OBS	No	67.455465	176.368400	11342.8	5.400	10.2	9.3	1.60	6899	29.68	41.30
005254176-06	OBS	No	27.709152	155.582033	1038.5	3.000	9.6	-1.0	1.60	6899	5.21	135.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005254176-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_NOFITS
005254176-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—CENT_FEW_DIFFS—HALO_GHOST
005254176-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—CENT_FEW_DIFFS
005254176-04	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—CENT_FEW_DIFFS
005254176-05	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_FEW_DIFFS
005254176-06	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_POS_ALT—CENT_NOFITS

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

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

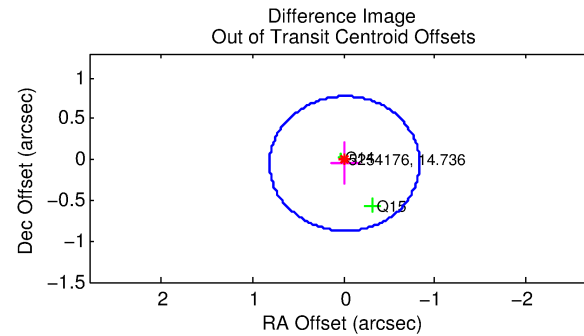
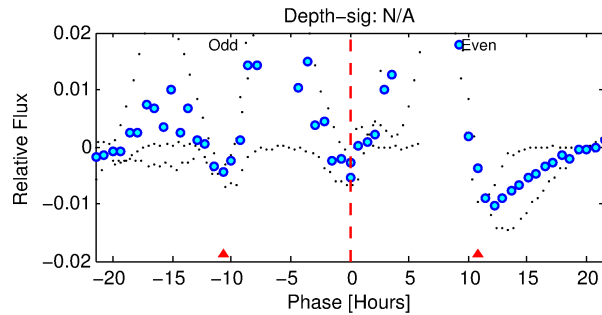
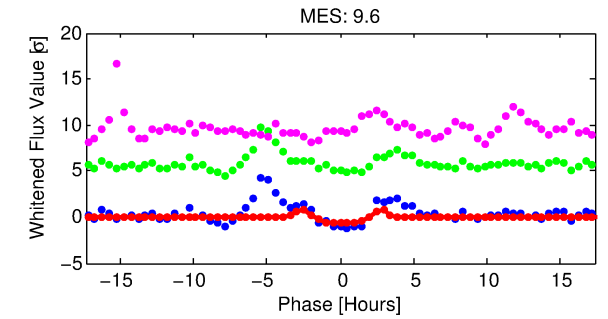
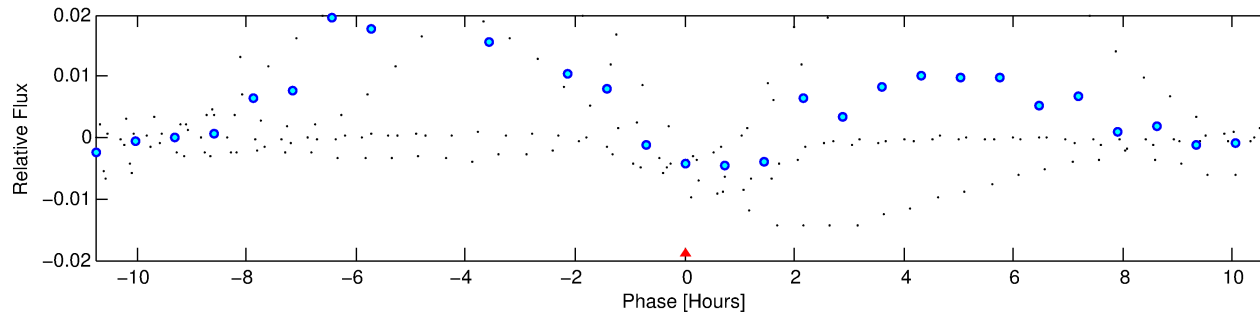
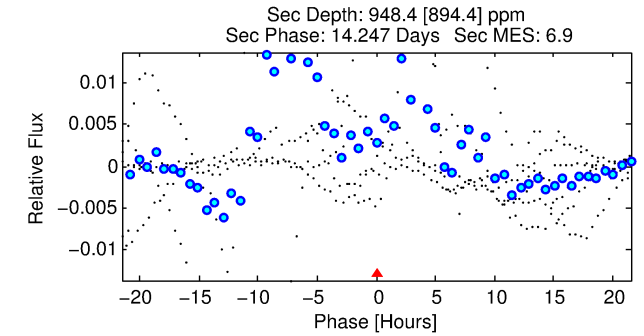
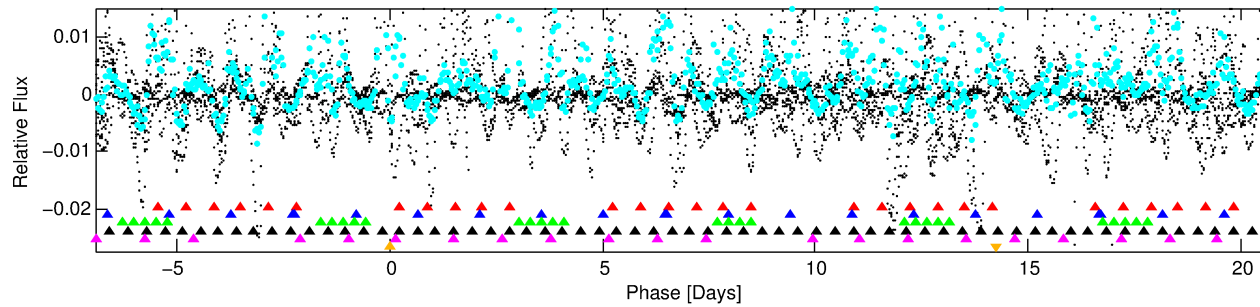
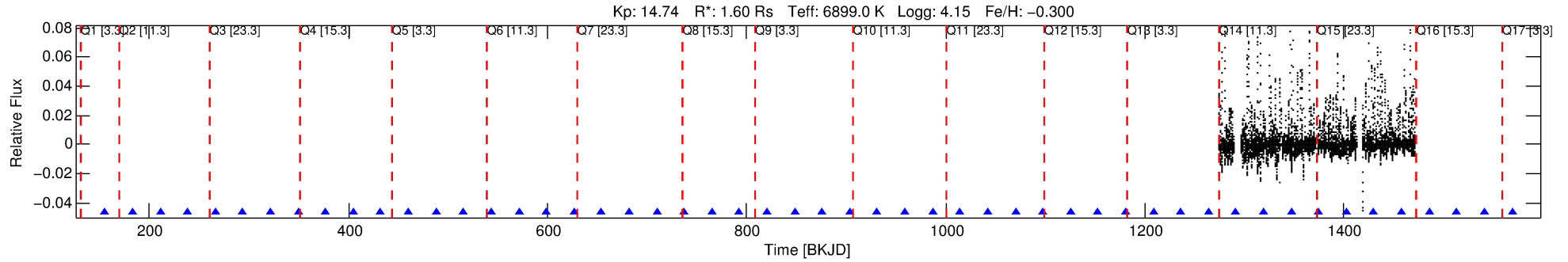
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005254176-06

No Significant Match Found

DV One-Page Summary

KIC: 5254176 Candidate: 6 of 6 Period: 27.709 d



TPS TCE Results:

Period = 27.70915 d
Epoch = 155.5820 BKJD

DV fit results are unavailable

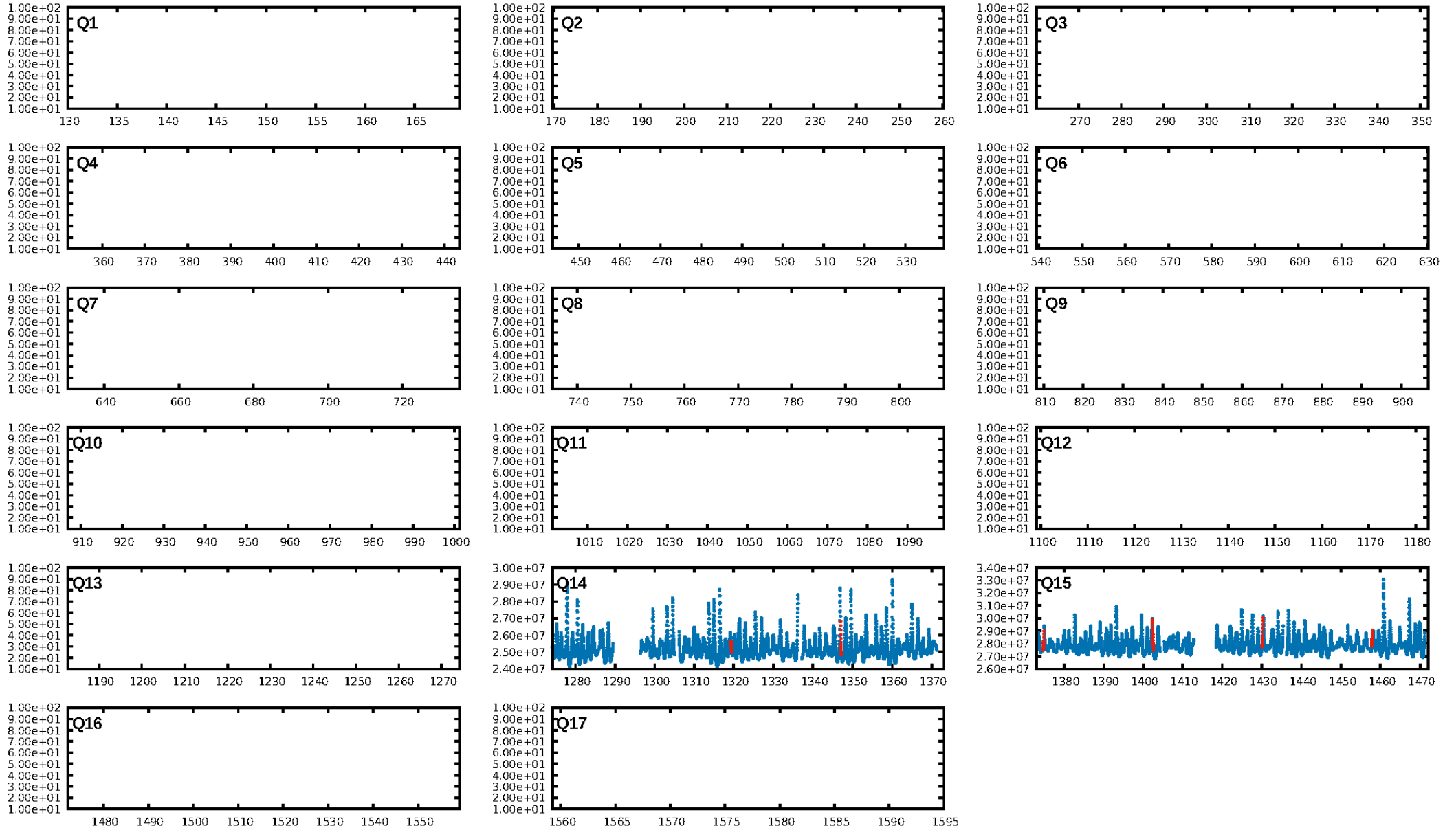
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [29.98σ]
LongPeriod-sig: 100.0% [135.43σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 1.187
Centroid-sig: 64.9%
Centroid-so: 0.114 arcsec [0.55σ]
OotOffset-rm: 0.050 arcsec [0.18σ]
KicOffset-rm: 0.195 arcsec [1.62σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [2/2]

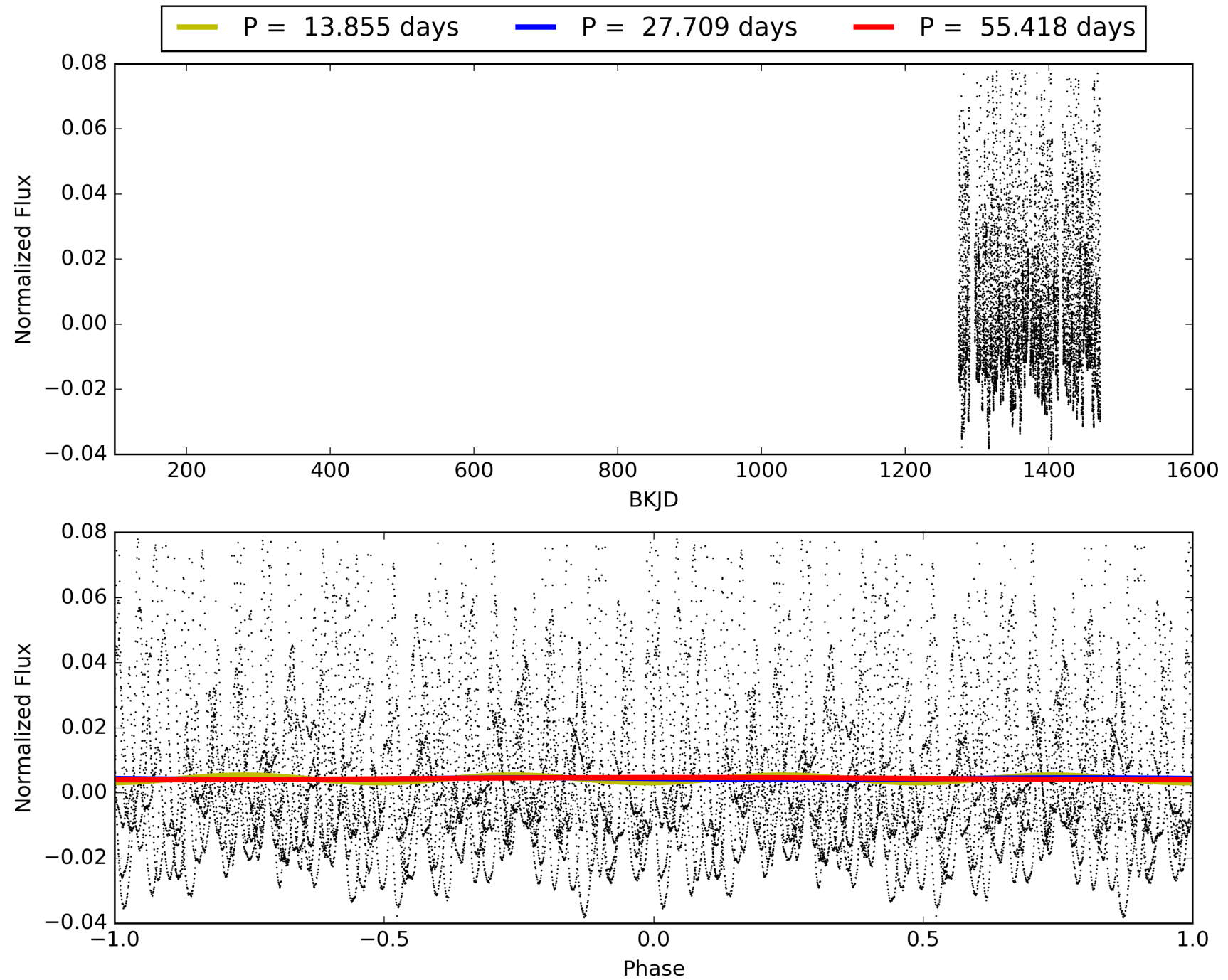
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 06:51:36 Z

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

TCE 005254176-06, PDC Light Curves

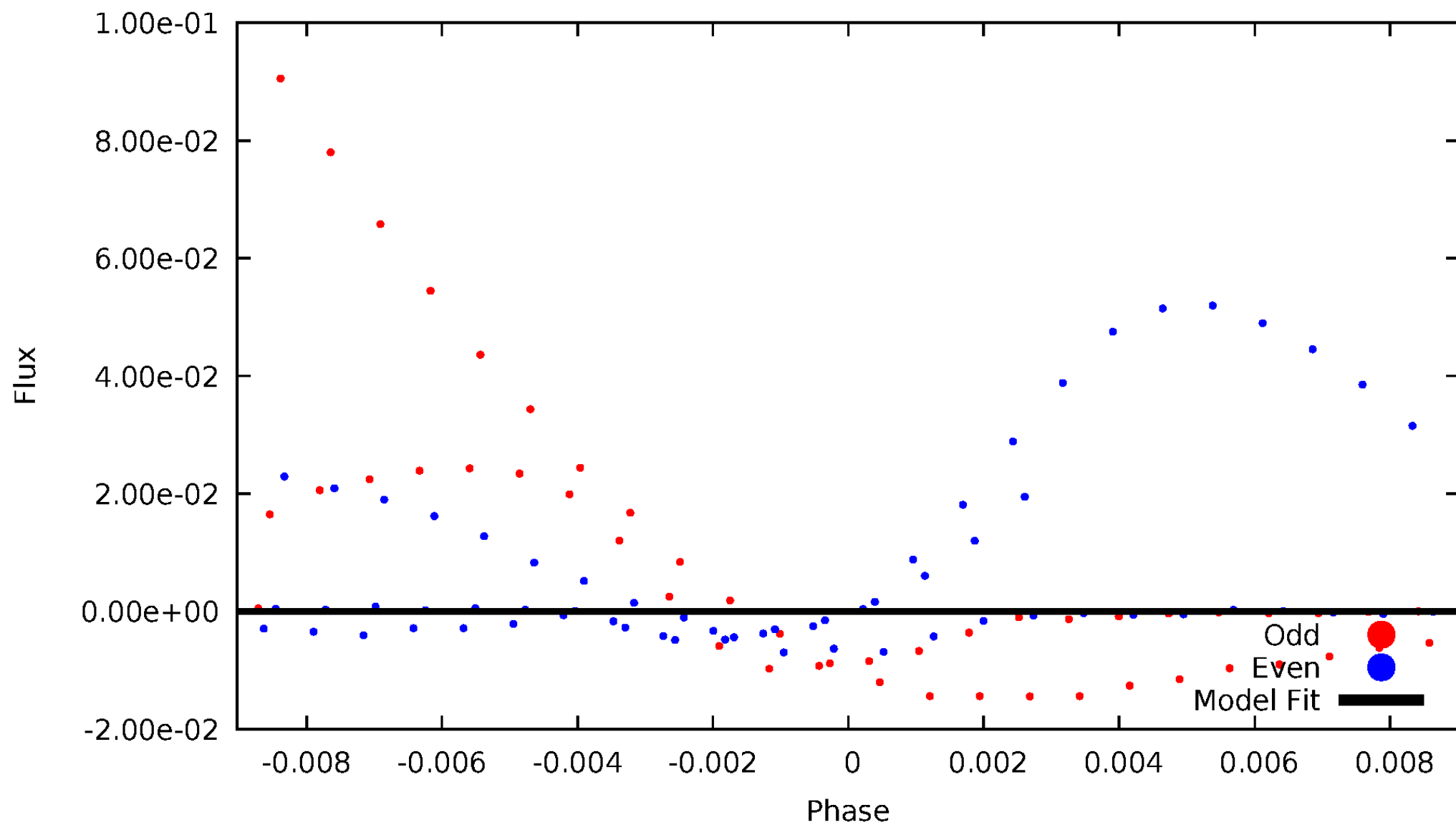


TCE 005254176-06



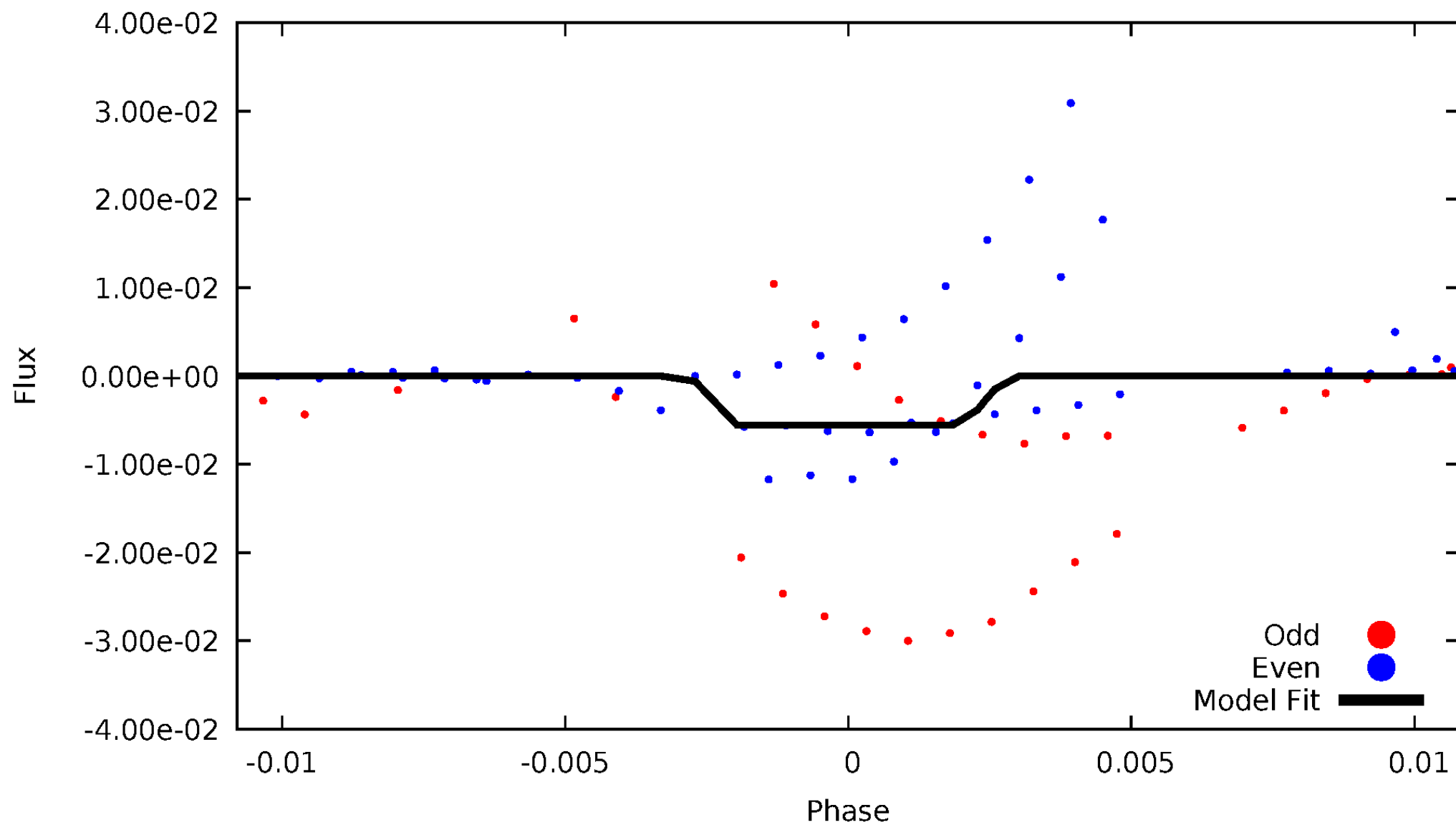
DV Odd/Even

TCE 005254176-06



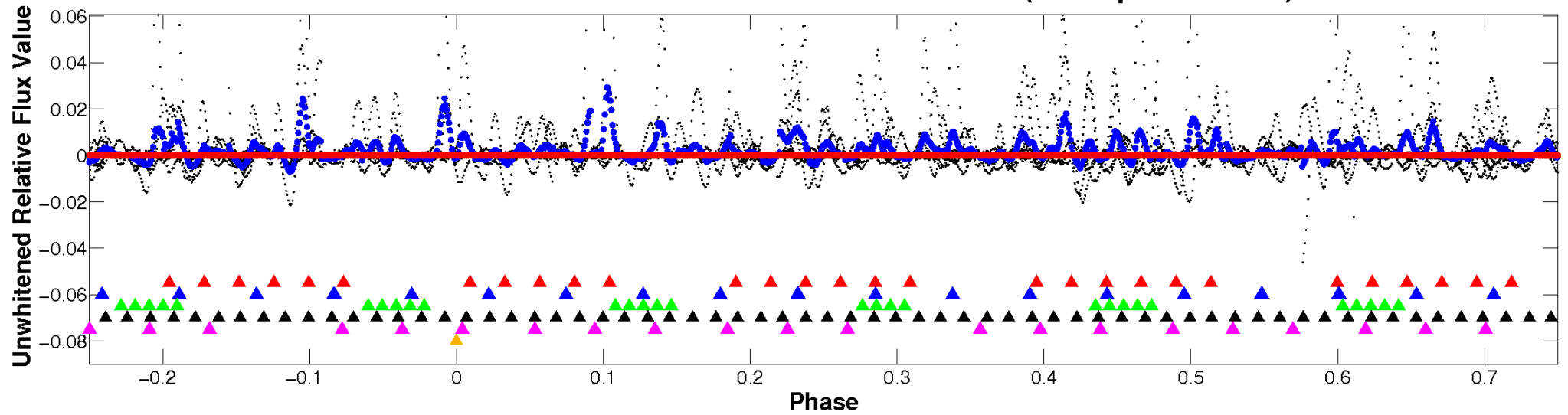
ALT Odd/Even

TCE 005254176-06

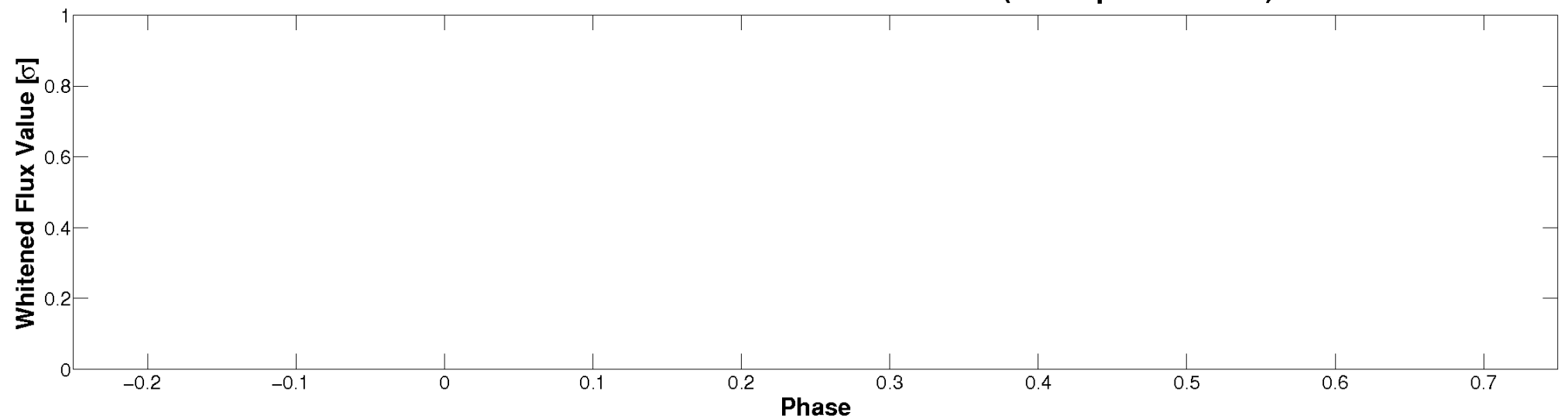


Non-Whitened Vs. Whitened Light Curve

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

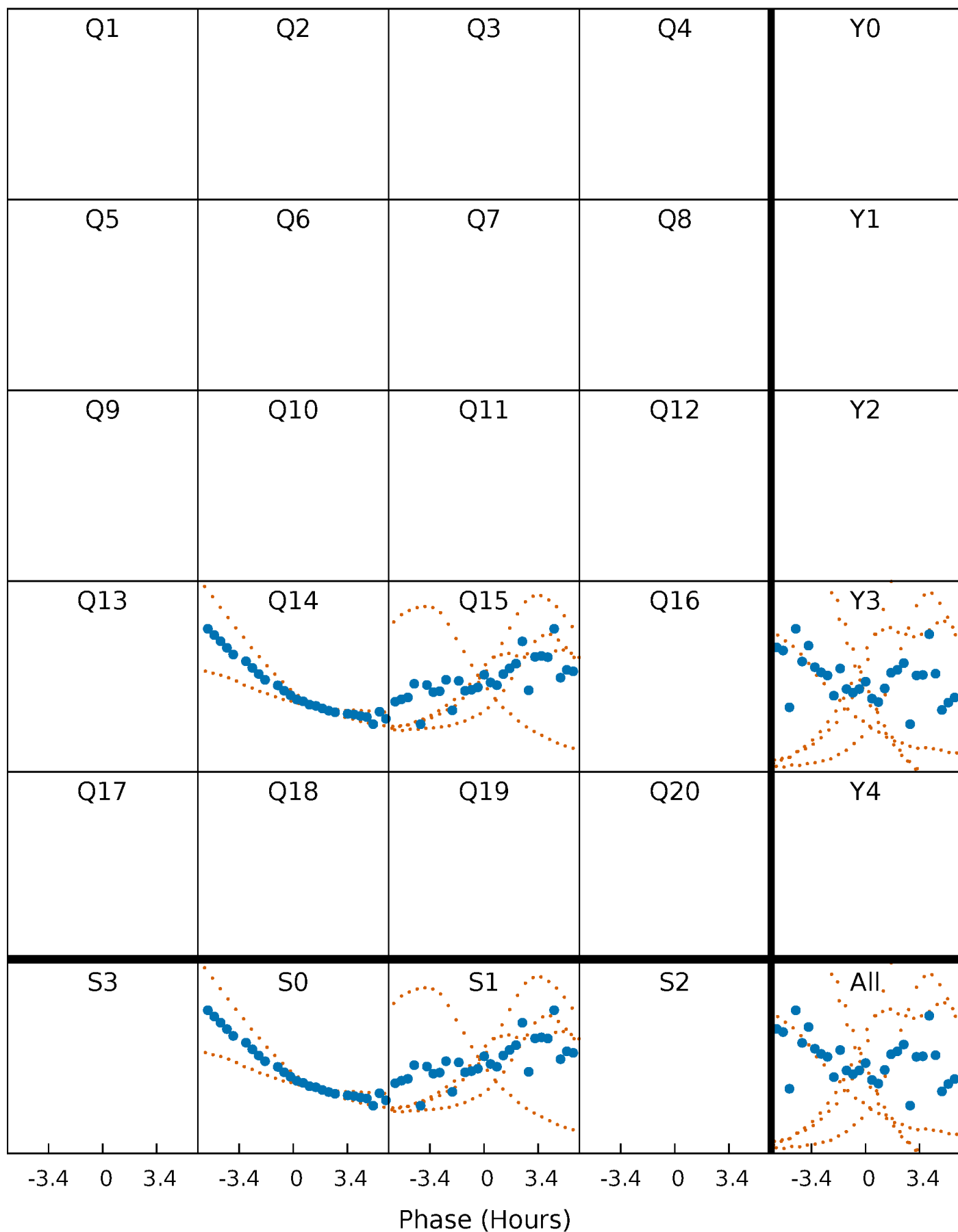


Planet 6 : Phased Whitened Flux Time Series (TPS Epoch/Period)



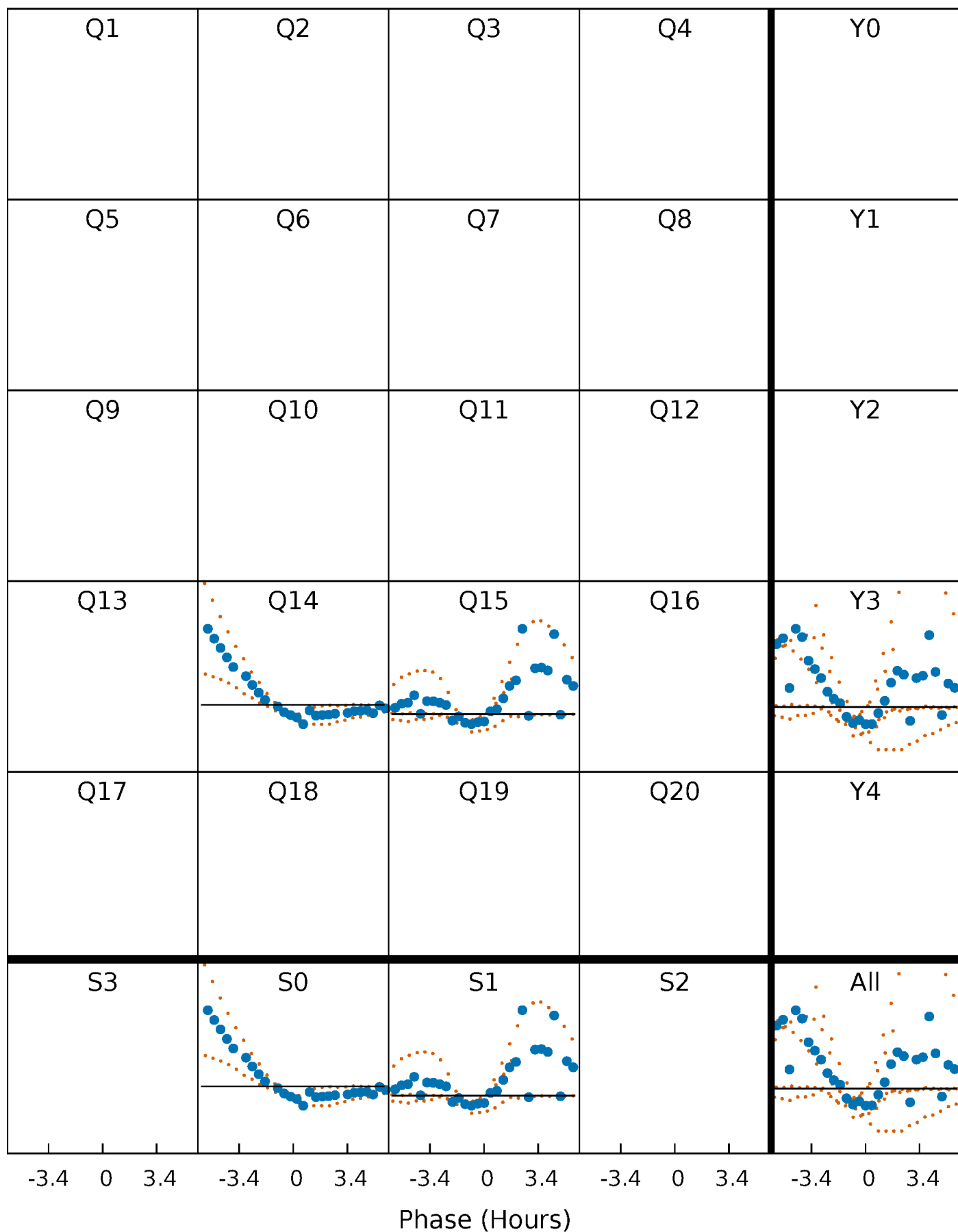
PDC Quarter-Phased Transit Curves

TCE 005254176-06 P= 27.709152 Days $T_0=155.582033$ (BKJD)



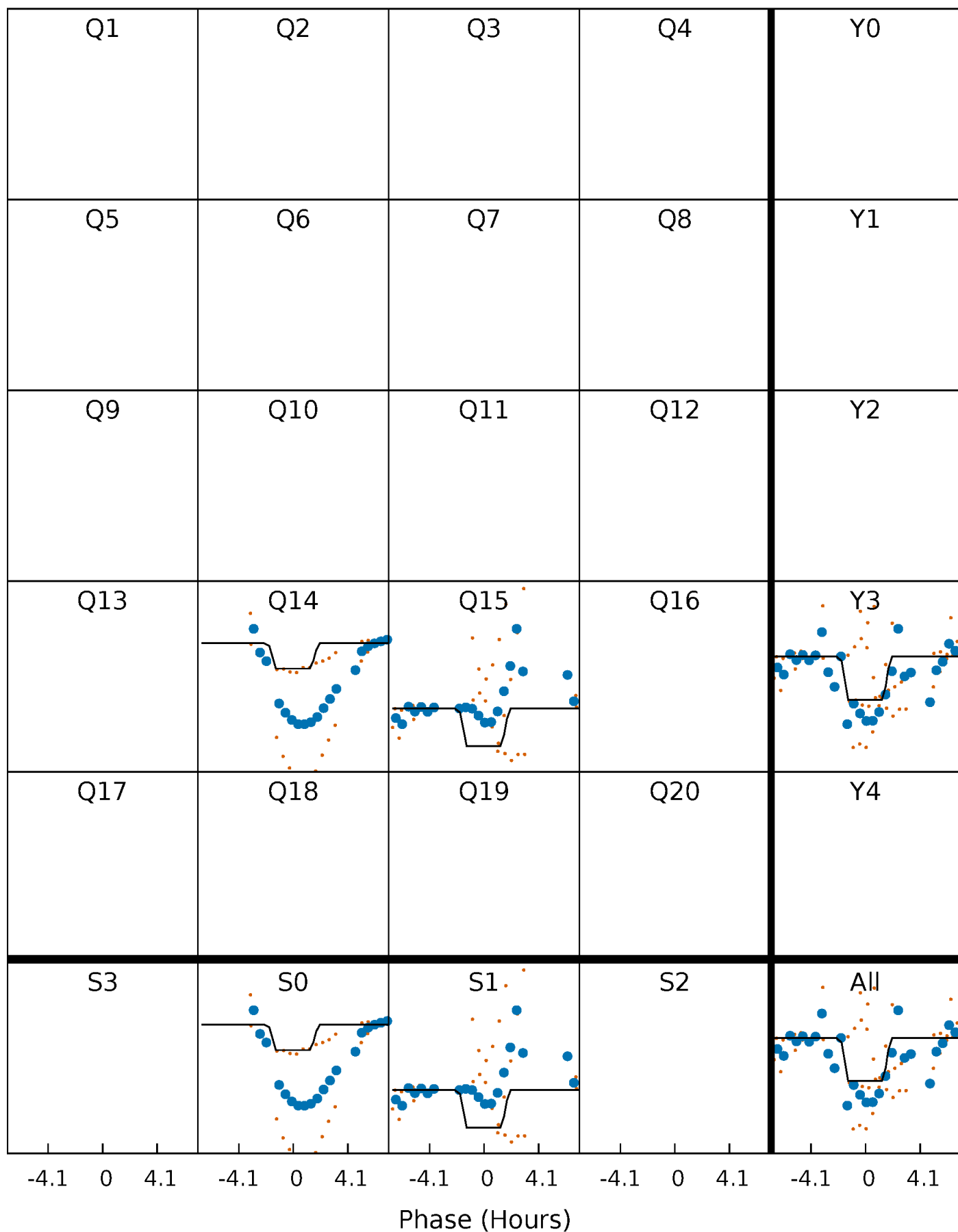
DV Quarter-Phased Transit Curves

TCE 005254176-06 P= 27.709152 Days $T_0=155.582033$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

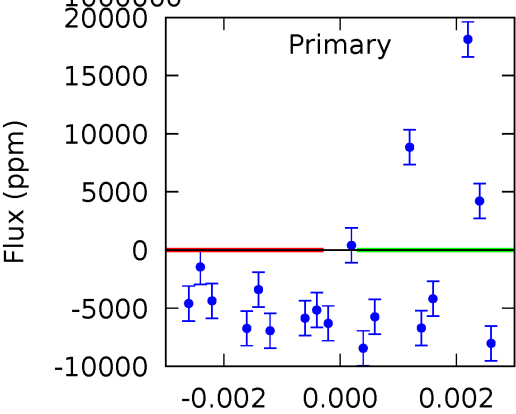
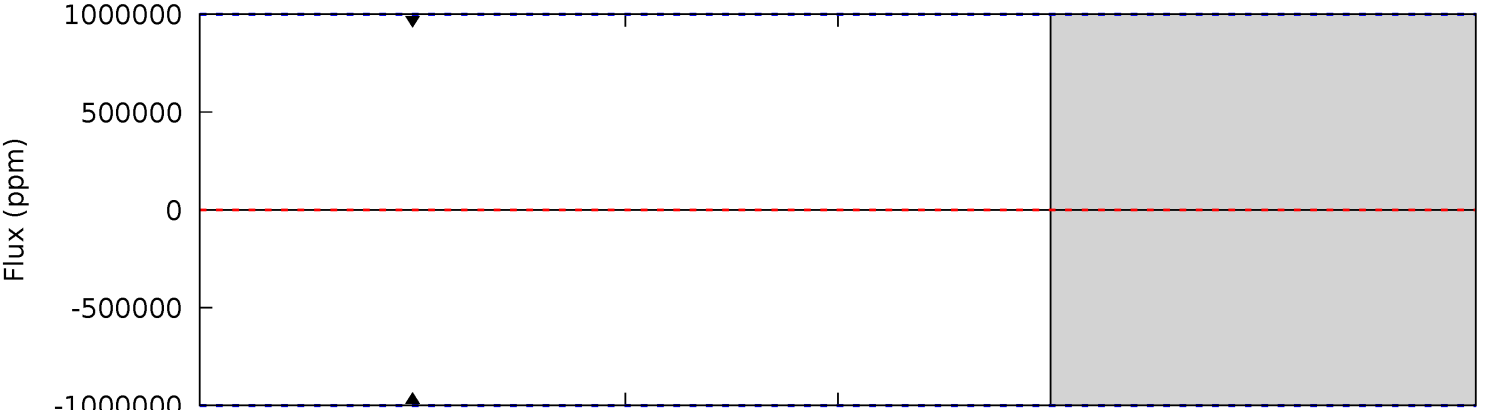
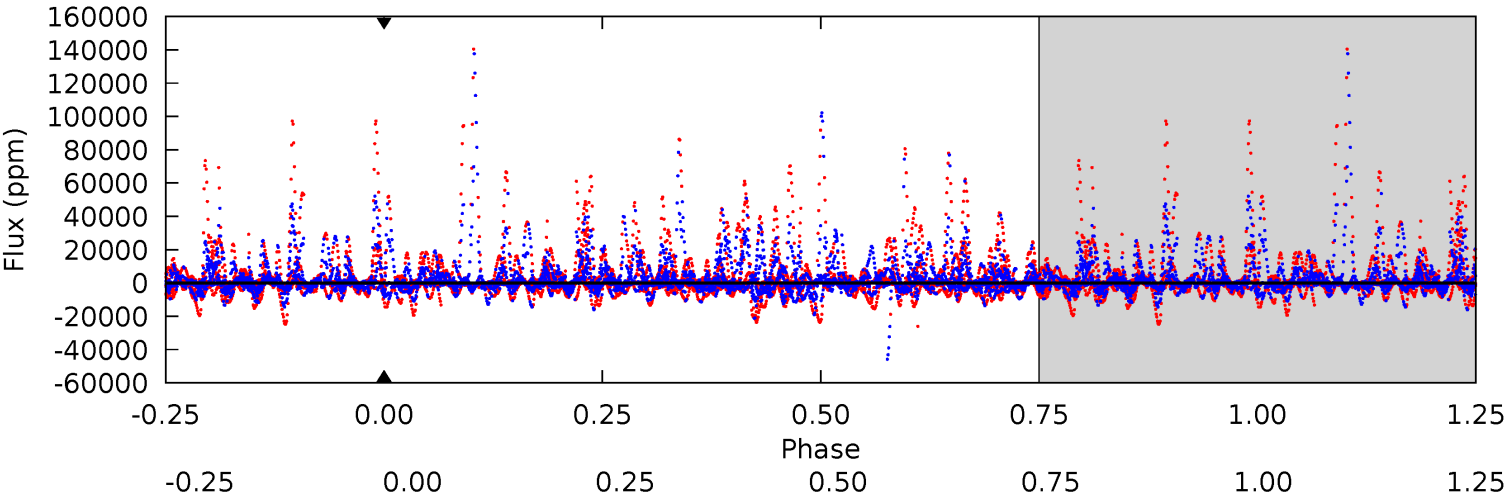
TCE 005254176-06 P= 27.709152 Days $T_0=155.545288$ (BKJD)



DV Model-Shift Uniqueness Test

005254176-06, P = 27.709152 Days, E = 155.582033 Days

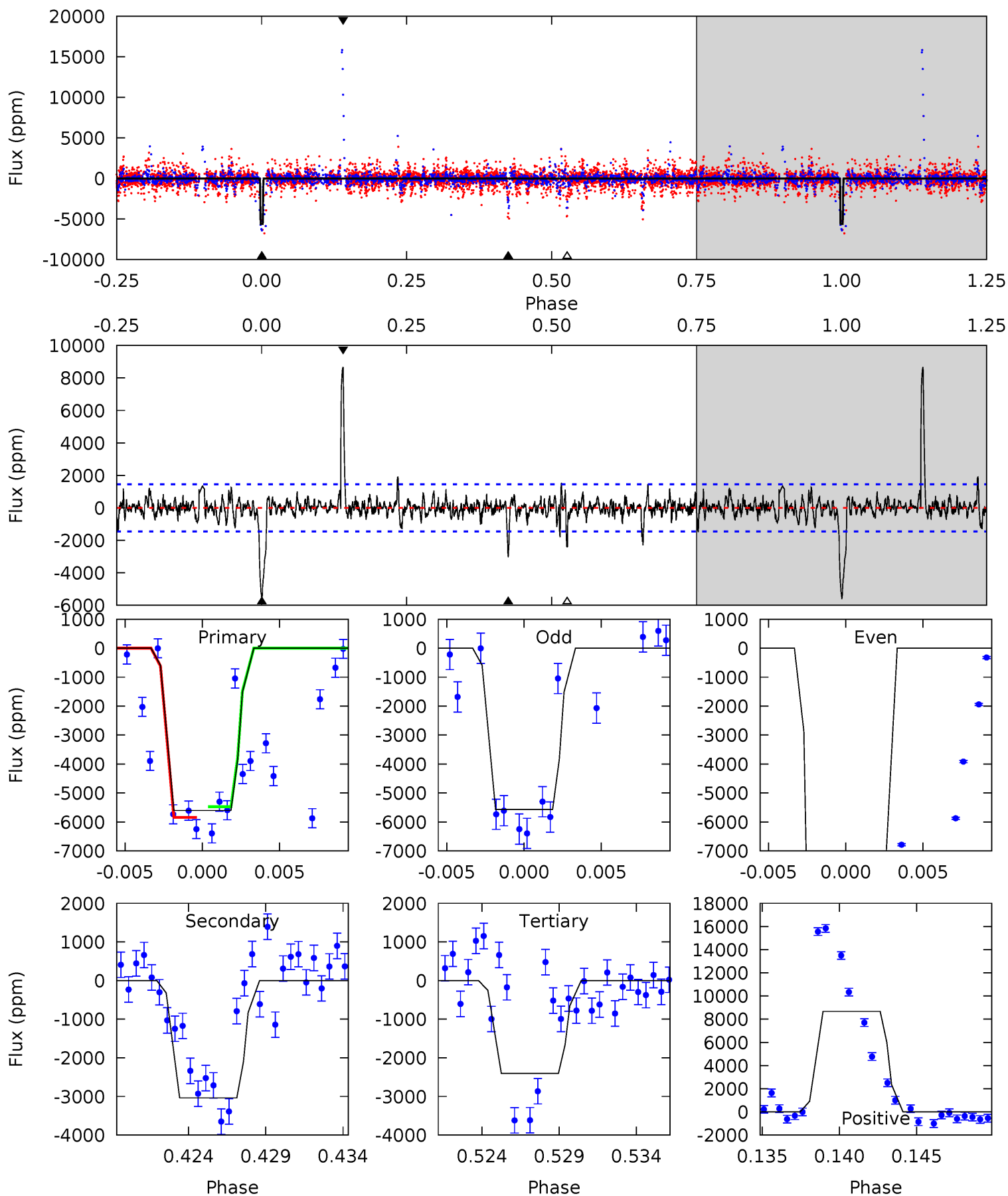
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005254176-06, P = 27.709152 Days, E = 155.545288 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.8	10.8	8.50	30.7	5.16	2.81	1.74	11.3	-10.8	2.26	-19.9	34.7	1.25	0.61	0.62



Stellar Parameters For KIC 005254176

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6899^{+216}_{-288}	$4.146^{+0.180}_{-0.180}$	$-0.300^{+0.300}_{-0.300}$	$1.599^{+0.467}_{-0.382}$	$1.309^{+0.190}_{-0.232}$	$0.452^{+0.440}_{-0.221}$
	+3%/-4%	+4%/-4%	+100%/-100%	+29%/-24%	+15%/-18%	+98%/-49%
Source	KIC0	KIC0	KIC0	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005254176-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$13.84^{+14.15}_{-9.37}$	1217^{+87}_{-93}	4529^{+24188}_{-30320}	90^{+18965}_{-16171}
Alt.	-3040 ± 283	$17.21^{+16.19}_{-10.69}$	1214^{+95}_{-87}	5155^{+3449}_{-1171}	215^{+1360}_{-159}

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 $A_{obs} \gg 1.0$

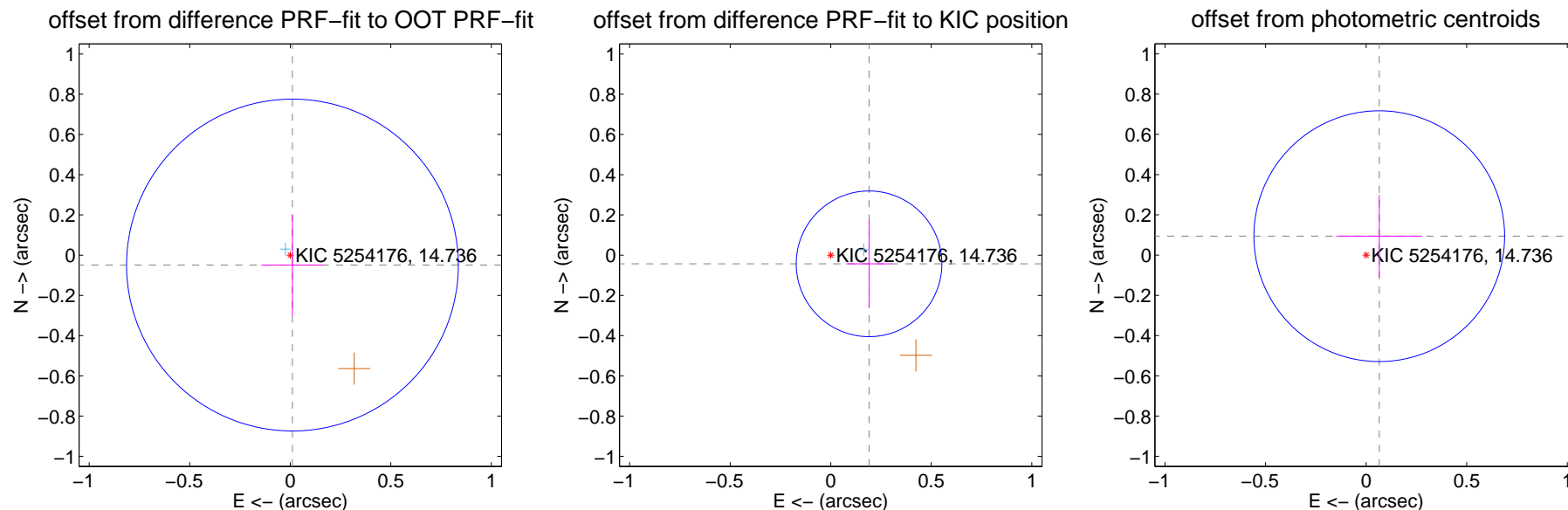
DV Centroid Data

Supplemental centroid analysis for 005254176-06. Kepler magnitude: 14.74. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.050 ± 0.275	0.18	-0.011 ± 0.155	-0.049 ± 0.251
PRF-fit source offset from KIC position	0.195 ± 0.121	1.62	-0.191 ± 0.113	-0.043 ± 0.219
photometric centroid source offset	0.11 ± 0.21	0.55	-0.07 ± 0.21	0.09 ± 0.21



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.

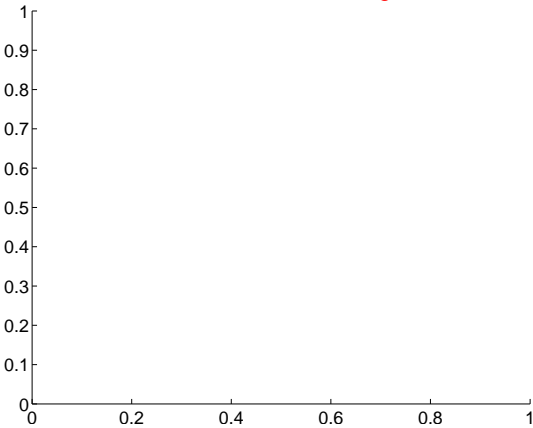


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

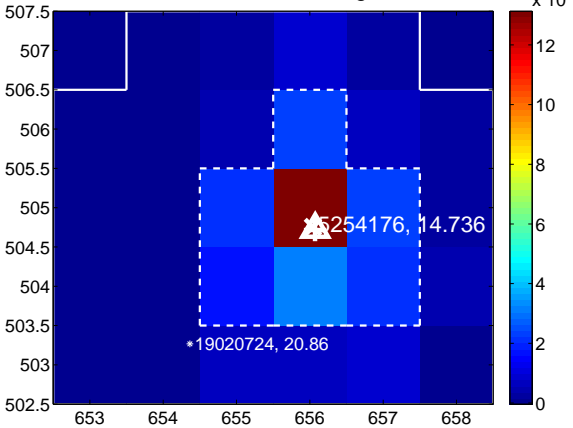
Q13 no difference image



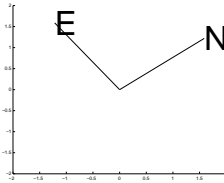
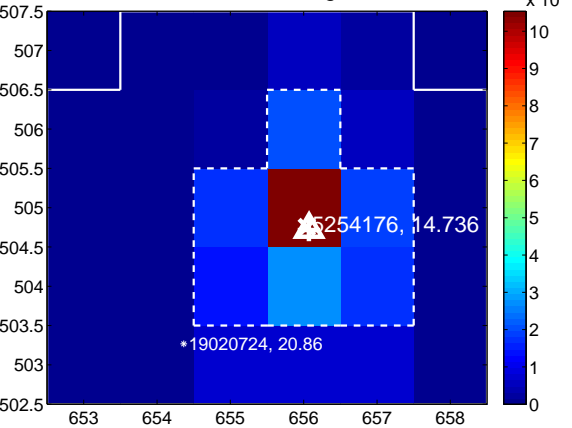
Q13 no OOT image



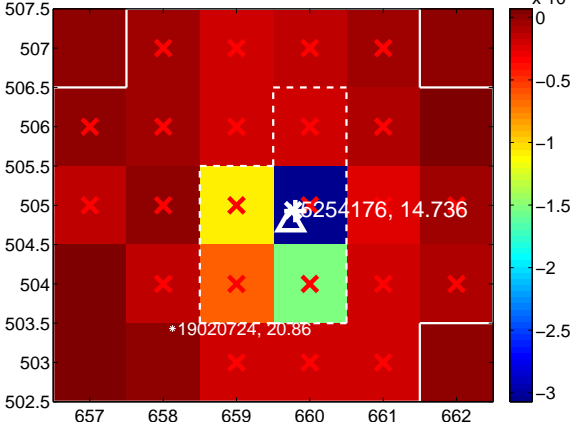
Q14 difference image



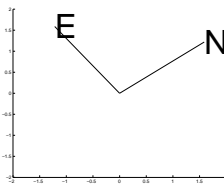
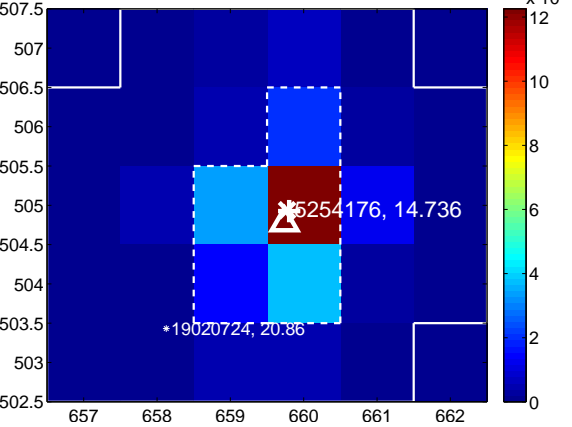
Q14 OOT image



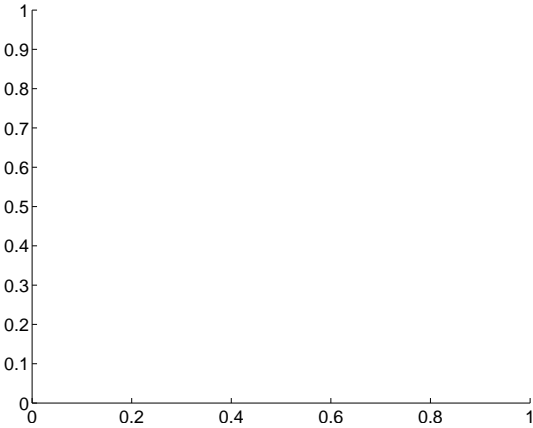
Q15 difference image. Poor Quality



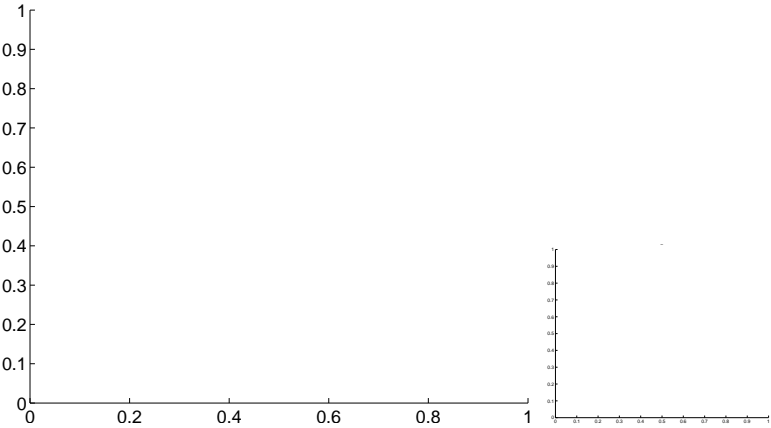
Q15 OOT image



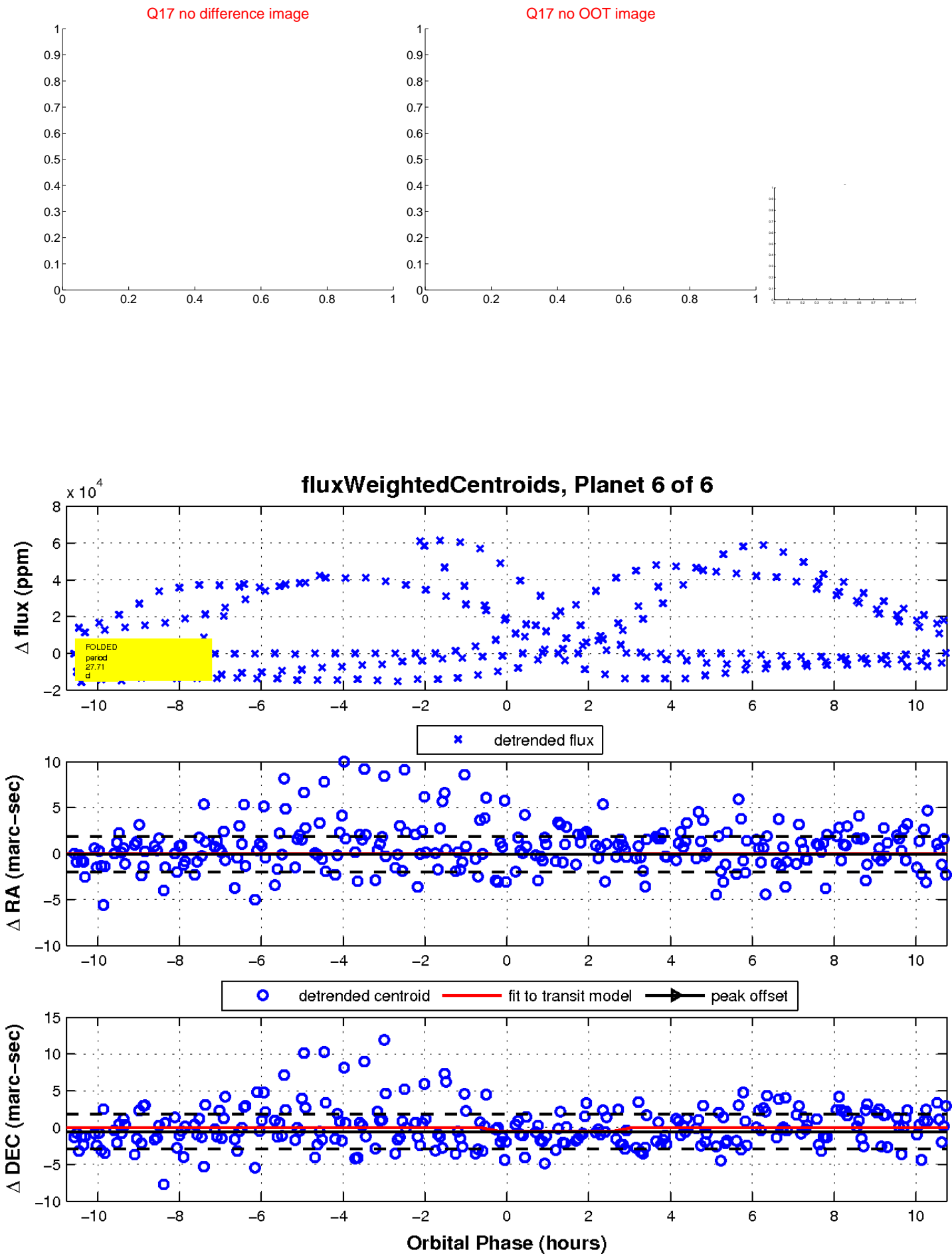
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

Declination

