

KIC 005565606

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})
005565606-02	OBS	No	346.240163	427.948764	13807.4	29.477	44.5	39.7	0.72	4773	15.59	0.32
005565606-03	OBS	No	318.652188	192.364998	7087.6	60.343	42.7	14.6	0.72	4773	11.48	0.35
005565606-06	OBS	No	438.485500	551.537684	7284.4	53.909	20.9	13.3	0.72	4773	11.63	0.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005565606-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005565606-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005565606-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

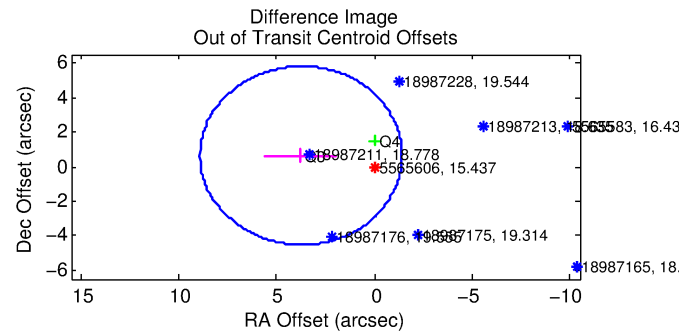
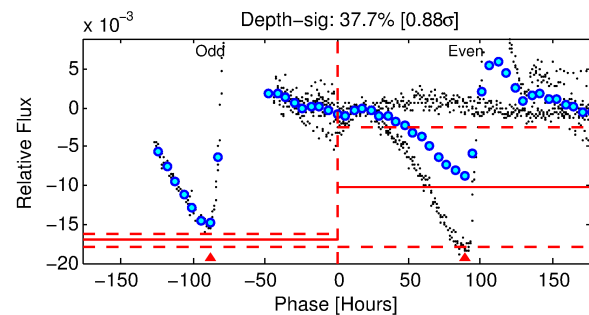
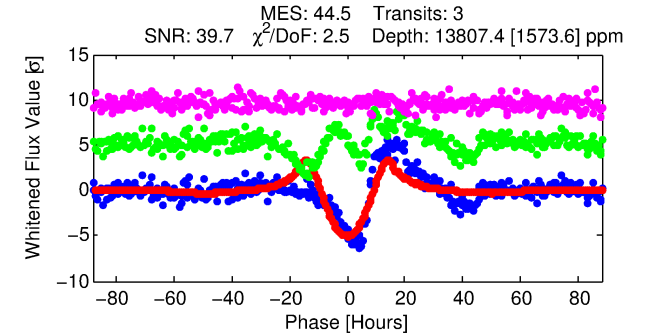
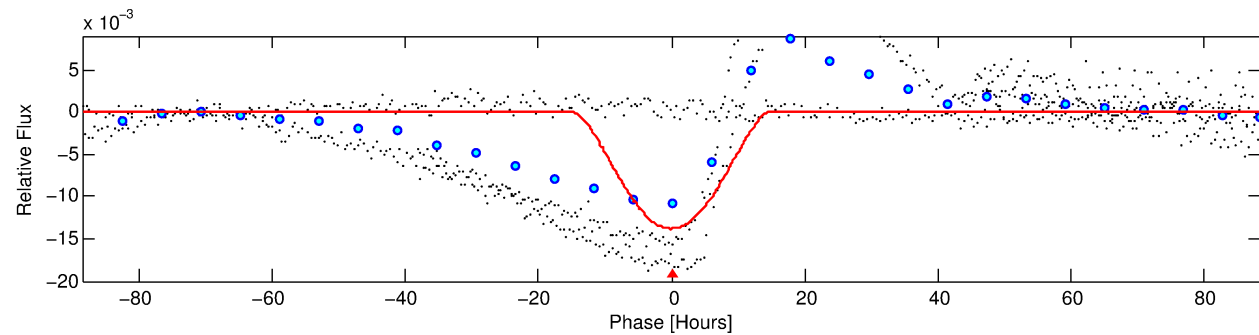
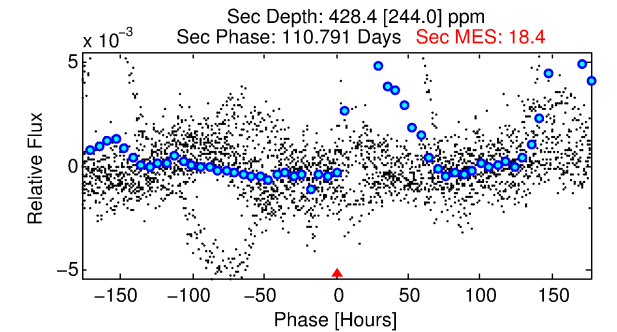
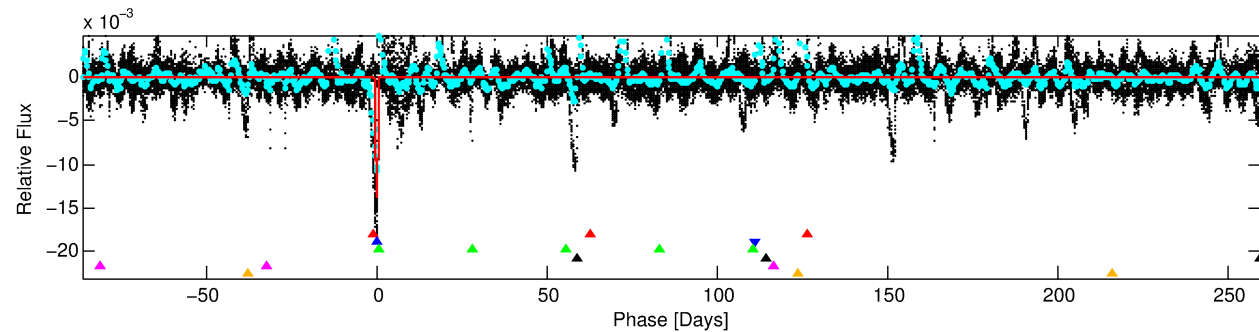
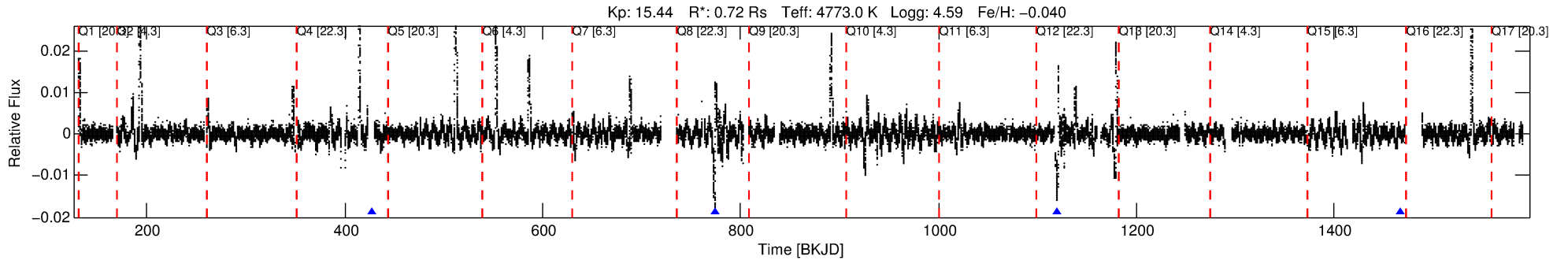
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005565606-02

No Significant Match Found

DV One-Page Summary

KIC: 5565606 Candidate: 2 of 6 Period: 346.240 d



DV Fit Results:

Period = 346.24016 [0.01080] d
Epoch = 427.9488 [0.0216] BKJD
Rp/R* = 0.1987 [0.1946]
a/R* = 59.33 [6.36]
b = 1.00 [0.25]
Seff = 0.32 [0.05]
Teq = 192 [7] K
Rp = 15.59 [15.33] Re
a = 0.8692 [0.0590] AU
Ag = 732.53 [1495.29] [0.49σ]
Teffp = 1540 [787] K [1.71σ]

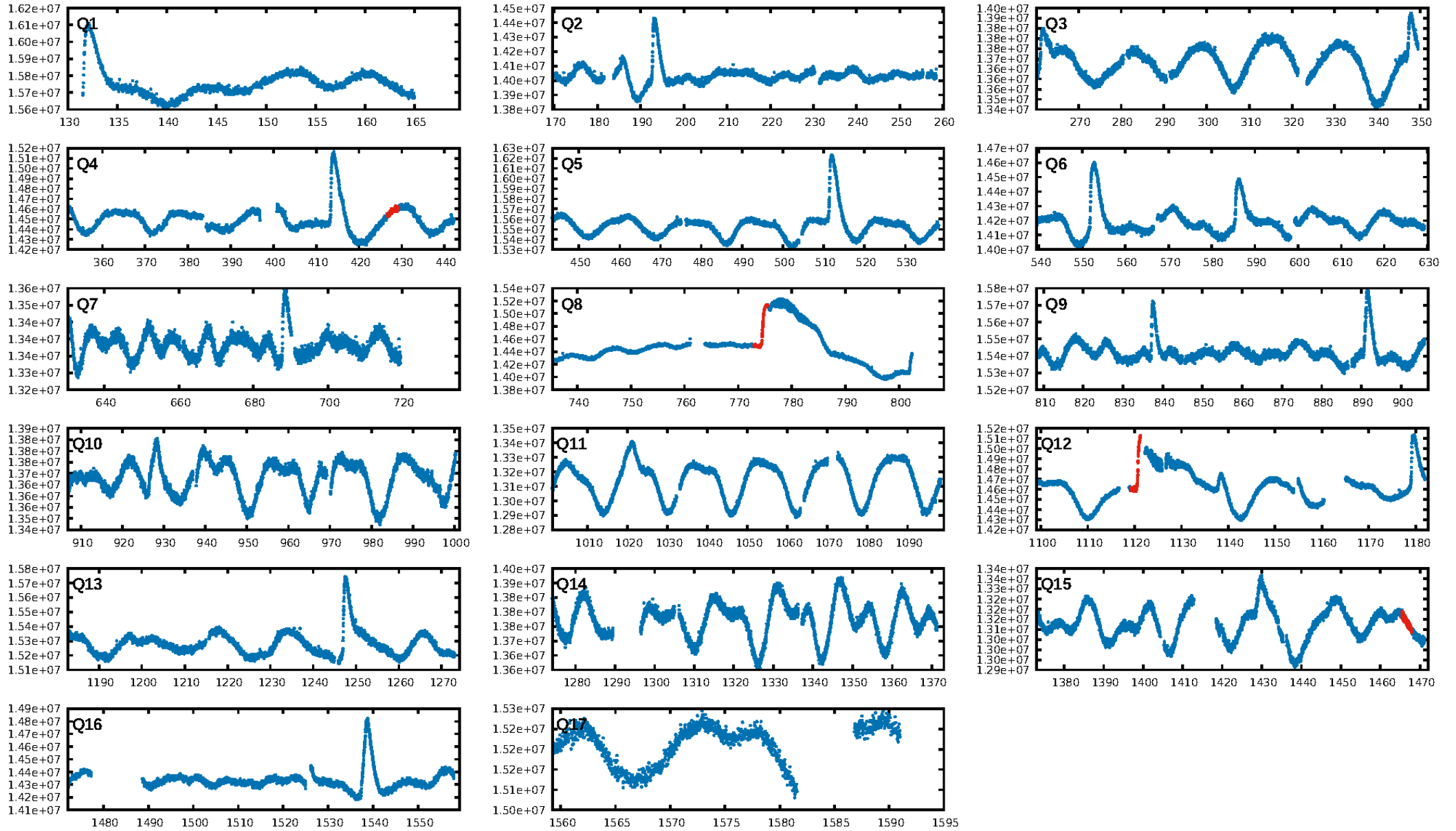
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.86σ]
LongPeriod-sig: 100.0% [26.76σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 0.0%
Bootstrap-pfa: 2.86e-84
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.996
Centroid-sig: 0.0%
Centroid-so: 2.542 arcsec [4.63σ]
OotOffset-rm: 3.802 arcsec [2.21σ]
KicOffset-rm: 3.930 arcsec [2.20σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.33 [1/3]

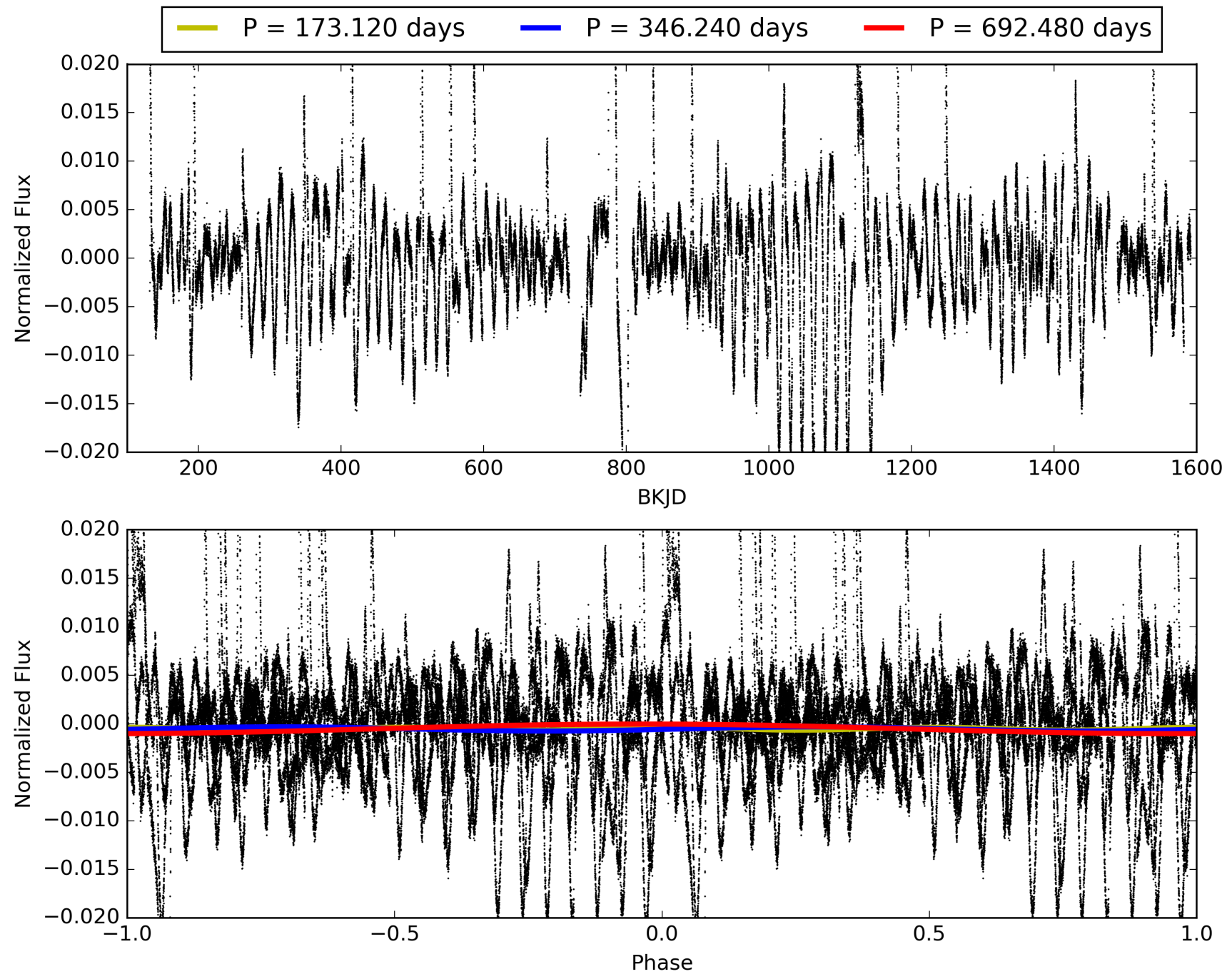
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:44:04 Z

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

TCE 005565606-02, PDC Light Curves

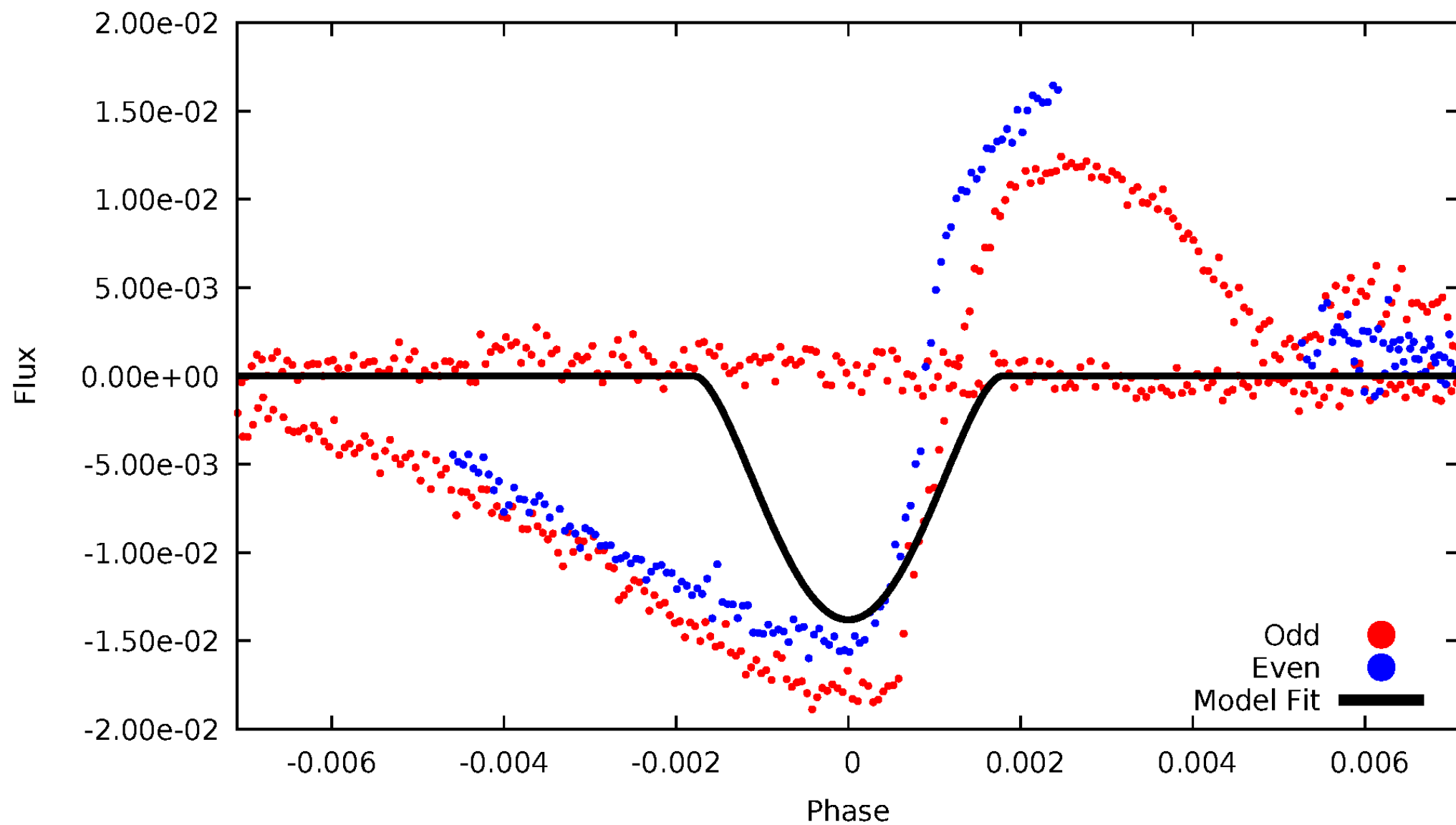


TCE 005565606-02



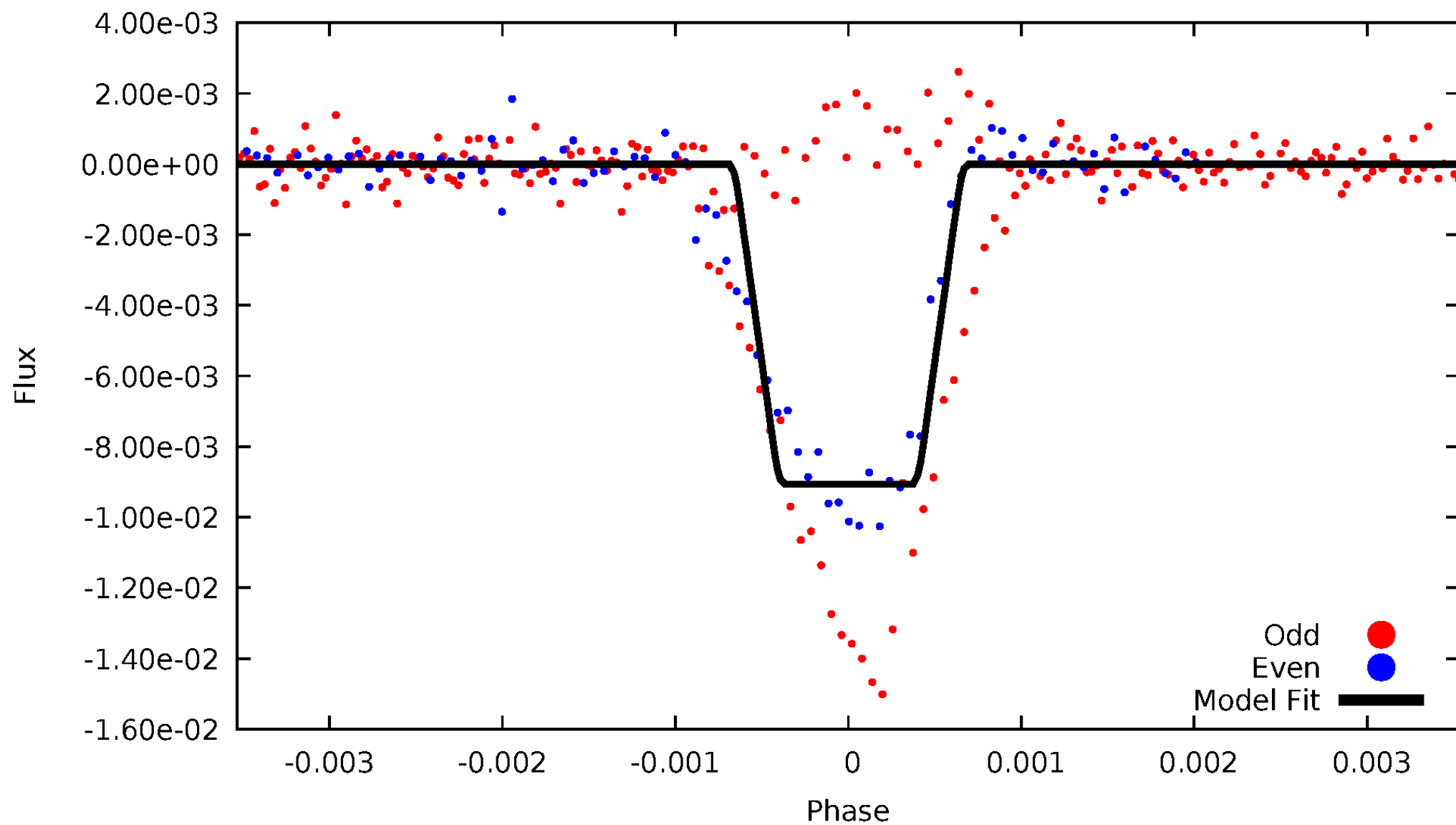
DV Odd/Even

TCE 005565606-02



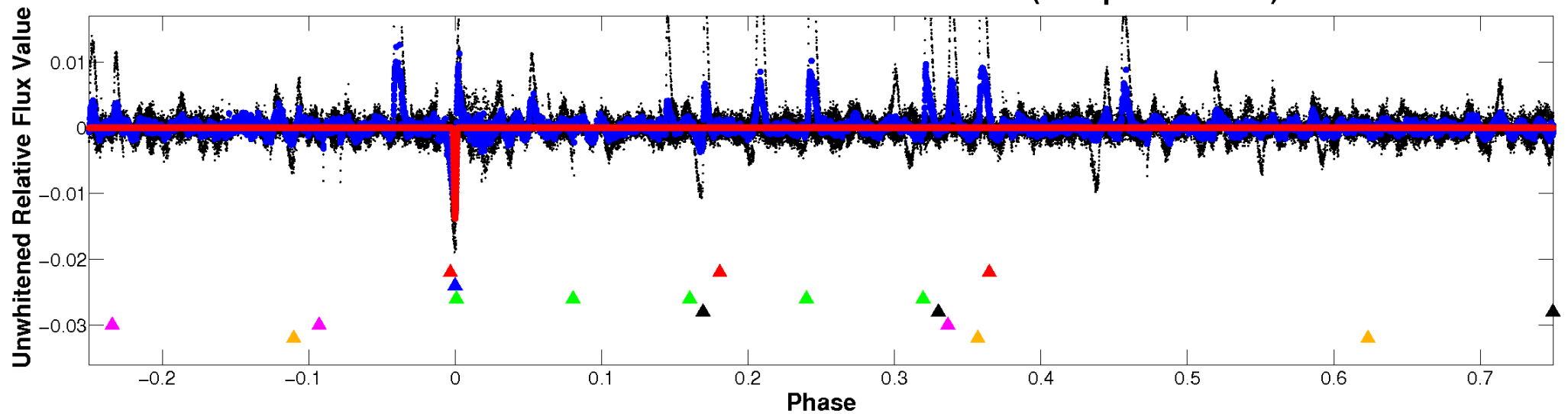
ALT Odd/Even

TCE 005565606-02

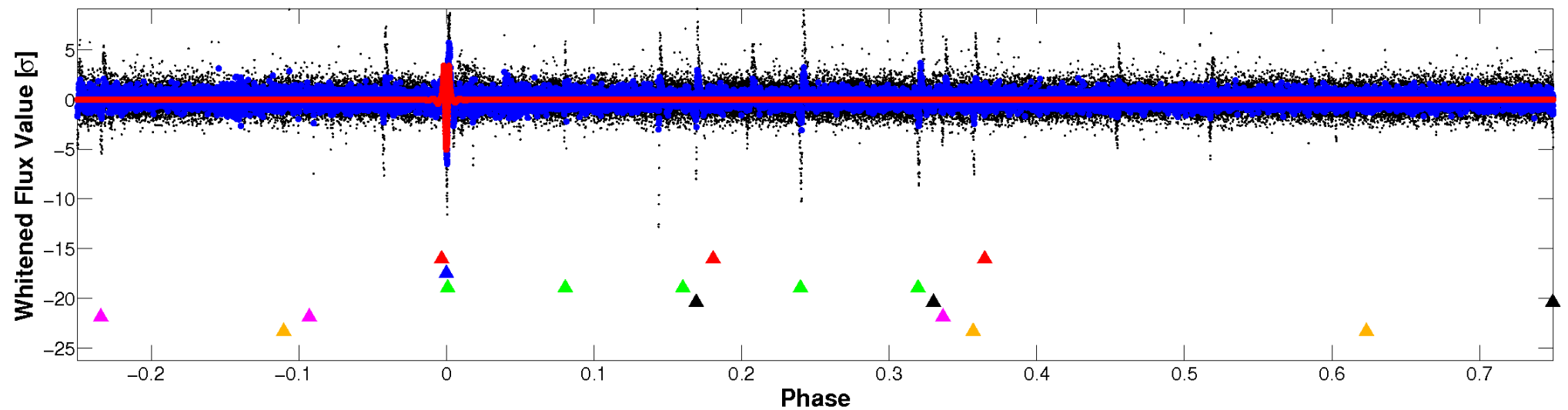


Non-Whitened Vs. Whitened Light Curve

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

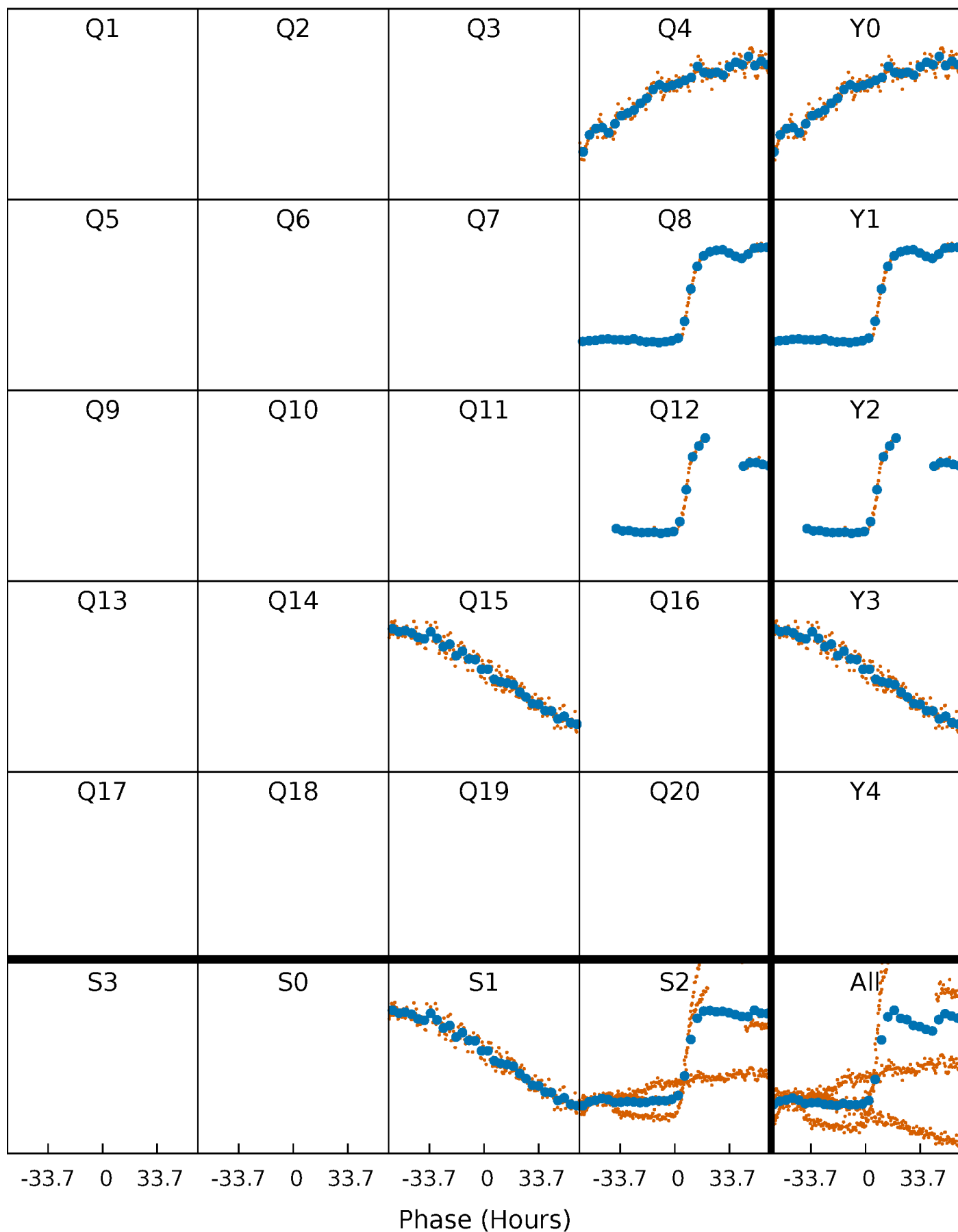


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



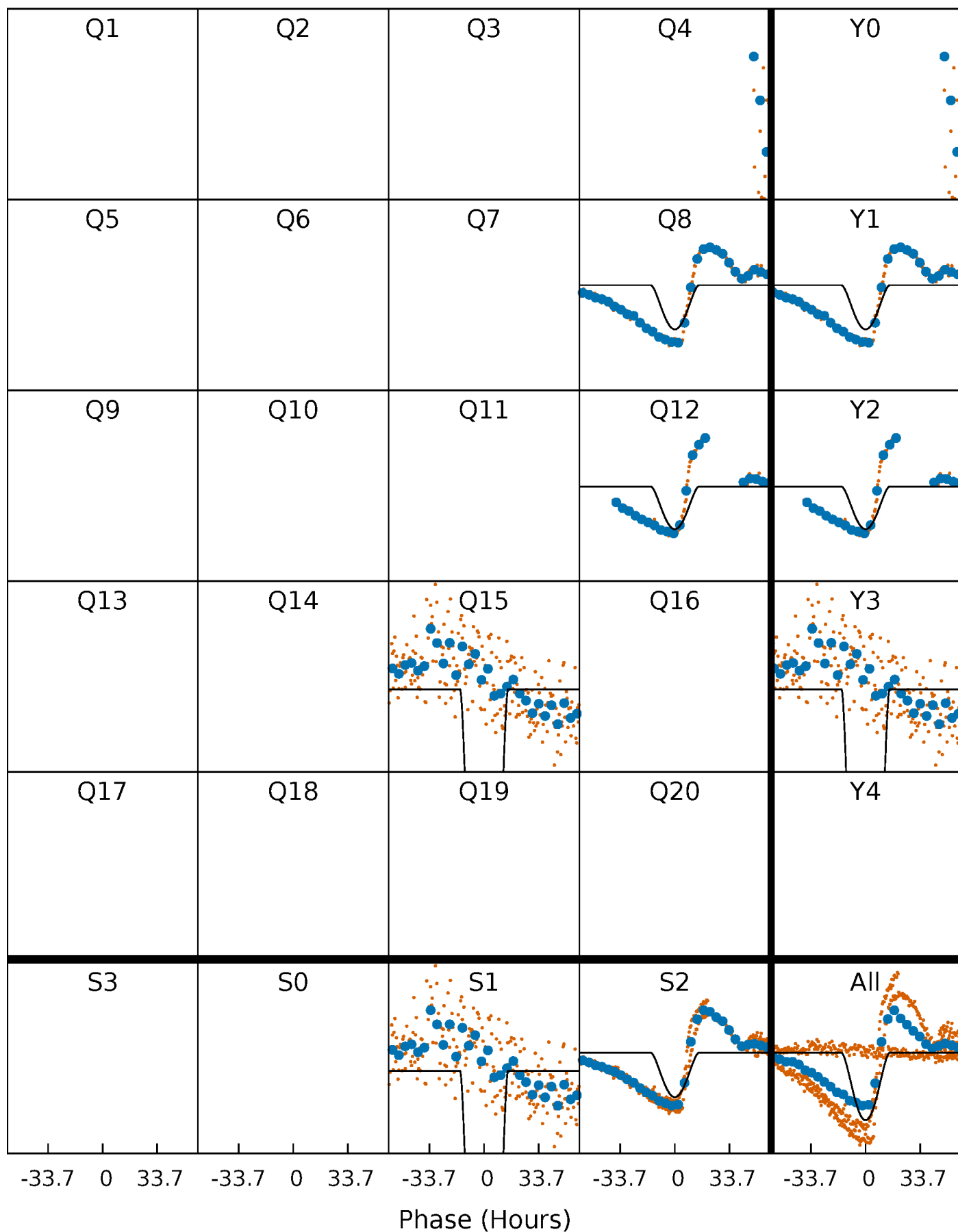
PDC Quarter-Phased Transit Curves

TCE 005565606-02 P=346.240163 Days $T_0=427.948764$ (BKJD)



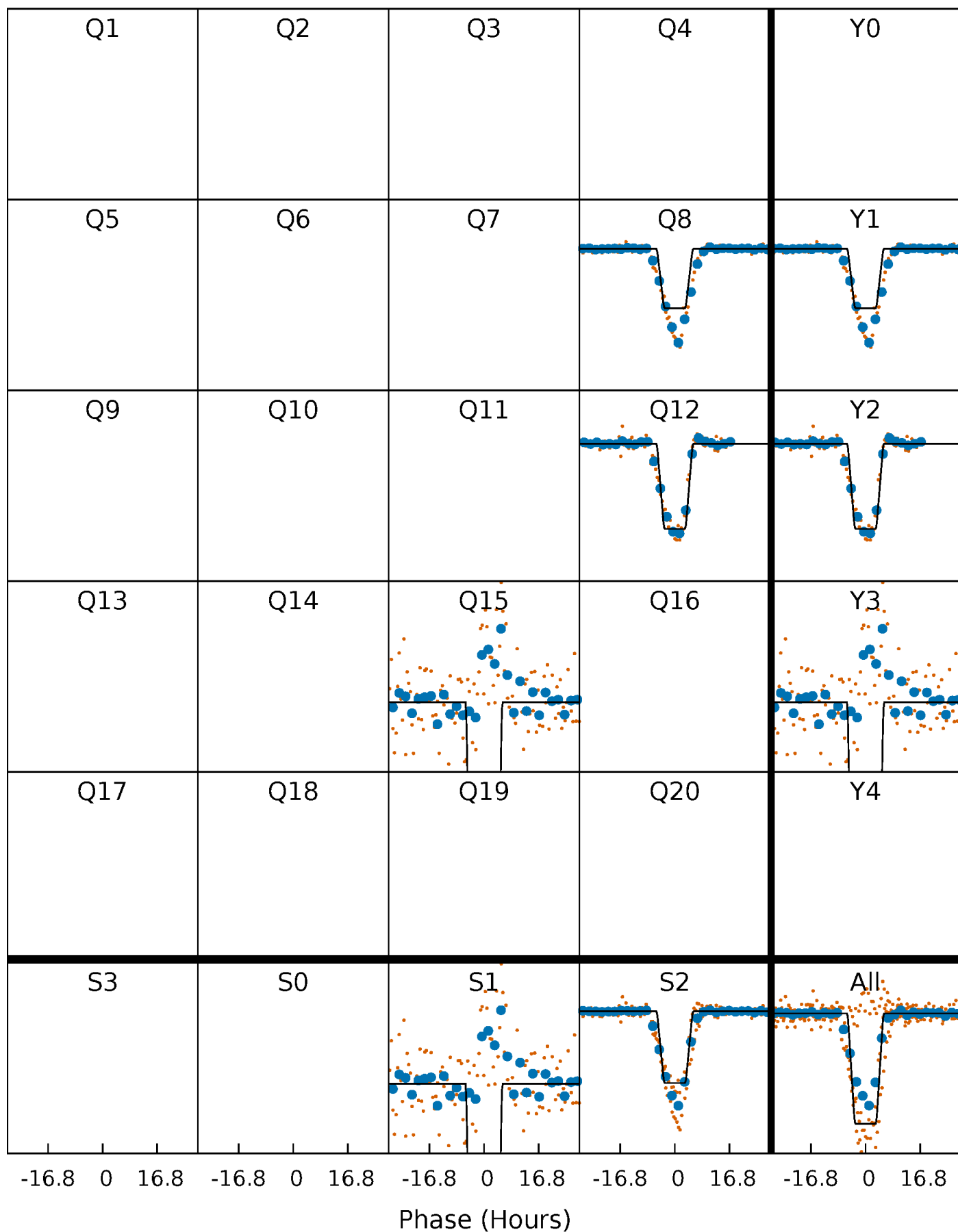
DV Quarter-Phased Transit Curves

TCE 005565606-02 $P=346.240163$ Days $T_0=427.948764$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

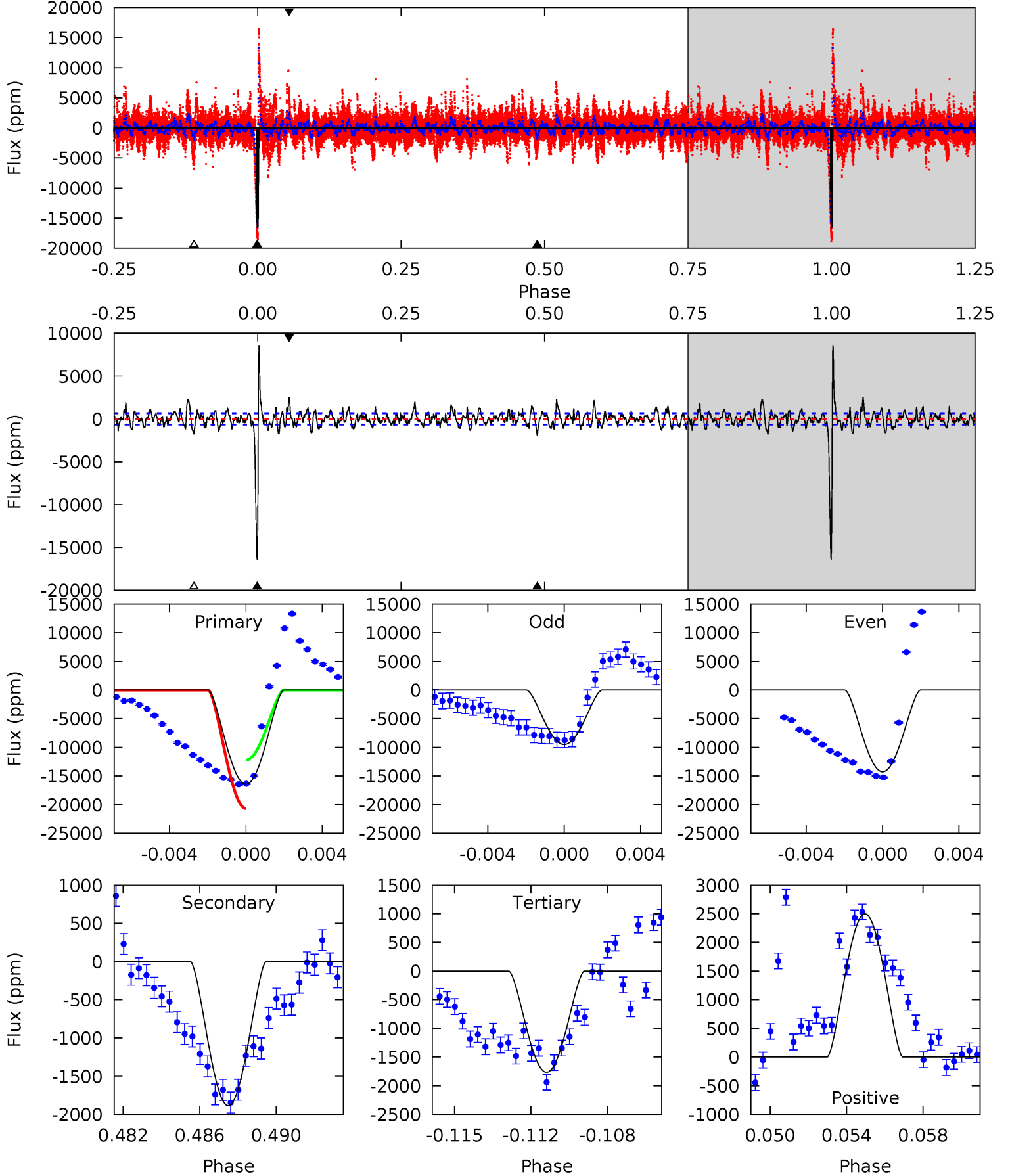
TCE 005565606-02 P=346.253485 Days $T_0=428.068854$ (BKJD)



DV Model-Shift Uniqueness Test

005565606-02, P = 346.240163 Days, E = 81.708601 Days

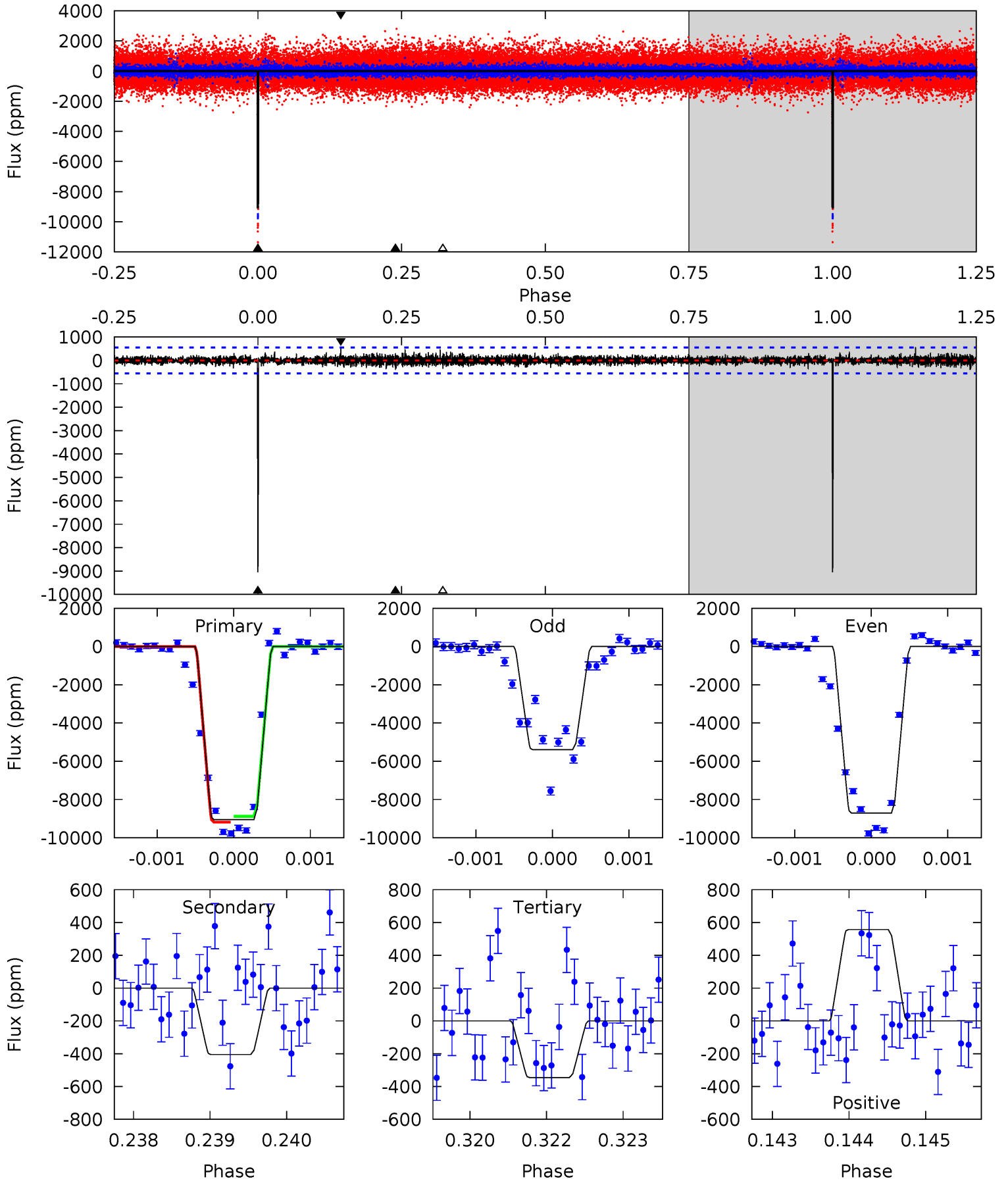
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
126.6	14.5	13.6	19.2	5.22	2.91	5.16	113.0	107.4	0.93	-4.72	11.0	0.78	0.34	32.8



Alt Model-Shift Uniqueness Test

005565606-02, P = 346.253485 Days, E = 81.815369 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
88.5	3.96	3.37	5.45	5.40	3.20	0.90	85.1	83.1	0.58	-1.49	21.6	0.76	0.06	0



Stellar Parameters For KIC 005565606

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4773^{+143}_{-143}	$4.588^{+0.045}_{-0.036}$	$-0.040^{+0.300}_{-0.300}$	$0.719^{+0.057}_{-0.063}$	$0.731^{+0.073}_{-0.060}$	$2.769^{+0.577}_{-0.397}$
	+3%/-3%	+1%/-1%	+750%/-750%	+8%/-9%	+10%/-8%	+21%/-14%
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 005565606-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1886 ± 130	$18.70^{+14.18}_{-11.41}$	268^{+10}_{-9}	2770^{+897}_{-378}	2297^{+12419}_{-1556}
Alt.	-405 ± 102	$13.40^{+11.35}_{-9.23}$	266^{+10}_{-9}	2459^{+936}_{-334}	949^{+8650}_{-683}

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 $A_{obs} \gg 1.0$

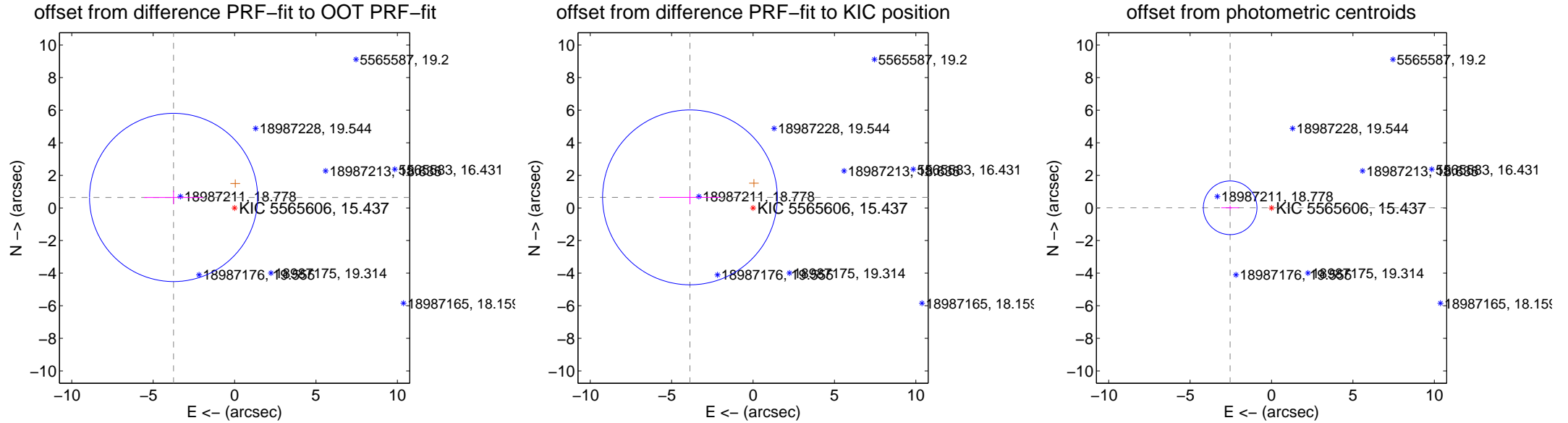
DV Centroid Data

Supplemental centroid analysis for 005565606-02. Kepler magnitude: 15.44. Transit SNR 39.66

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.802 ± 1.721	2.21	3.747 ± 1.816	0.644 ± 0.414
PRF-fit source offset from KIC position	3.930 ± 1.788	2.20	3.876 ± 1.883	0.650 ± 0.422
photometric centroid source offset	2.54 ± 0.55	4.63	2.54 ± 0.55	0.01 ± 0.14



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 are from the UKIRT catalog.

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

Q1 no difference image



Q1 no OOT image



Q2 no difference image



Q2 no OOT image



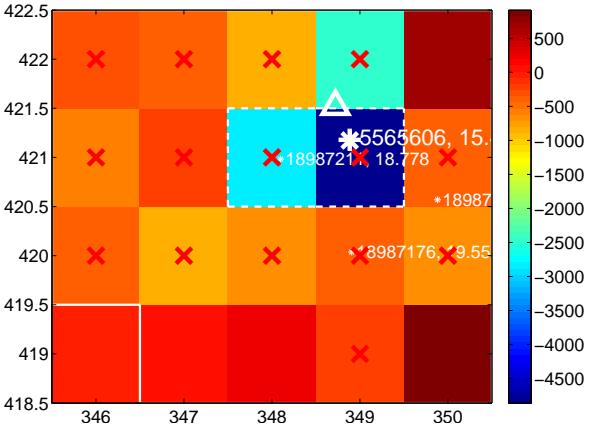
Q3 no difference image



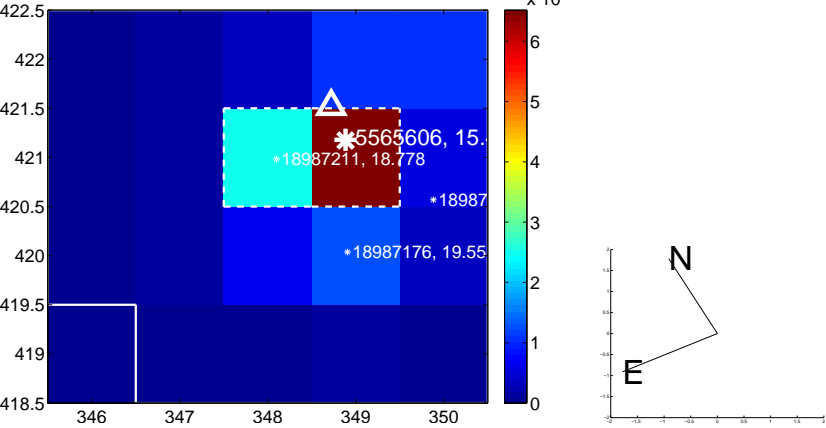
Q3 no OOT image



Q4 difference image. Poor Quality



Q4 OOT image



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

Q5 no difference image



Q5 no OOT image



Q6 no difference image



Q6 no OOT image



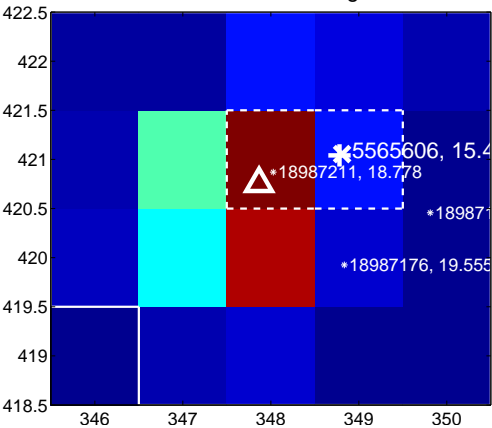
Q7 no difference image



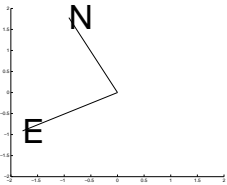
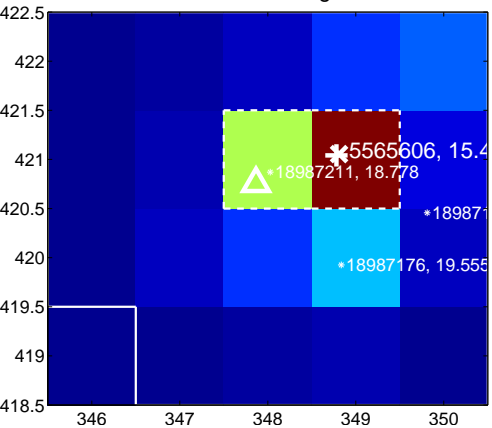
Q7 no OOT image



Q8 difference image



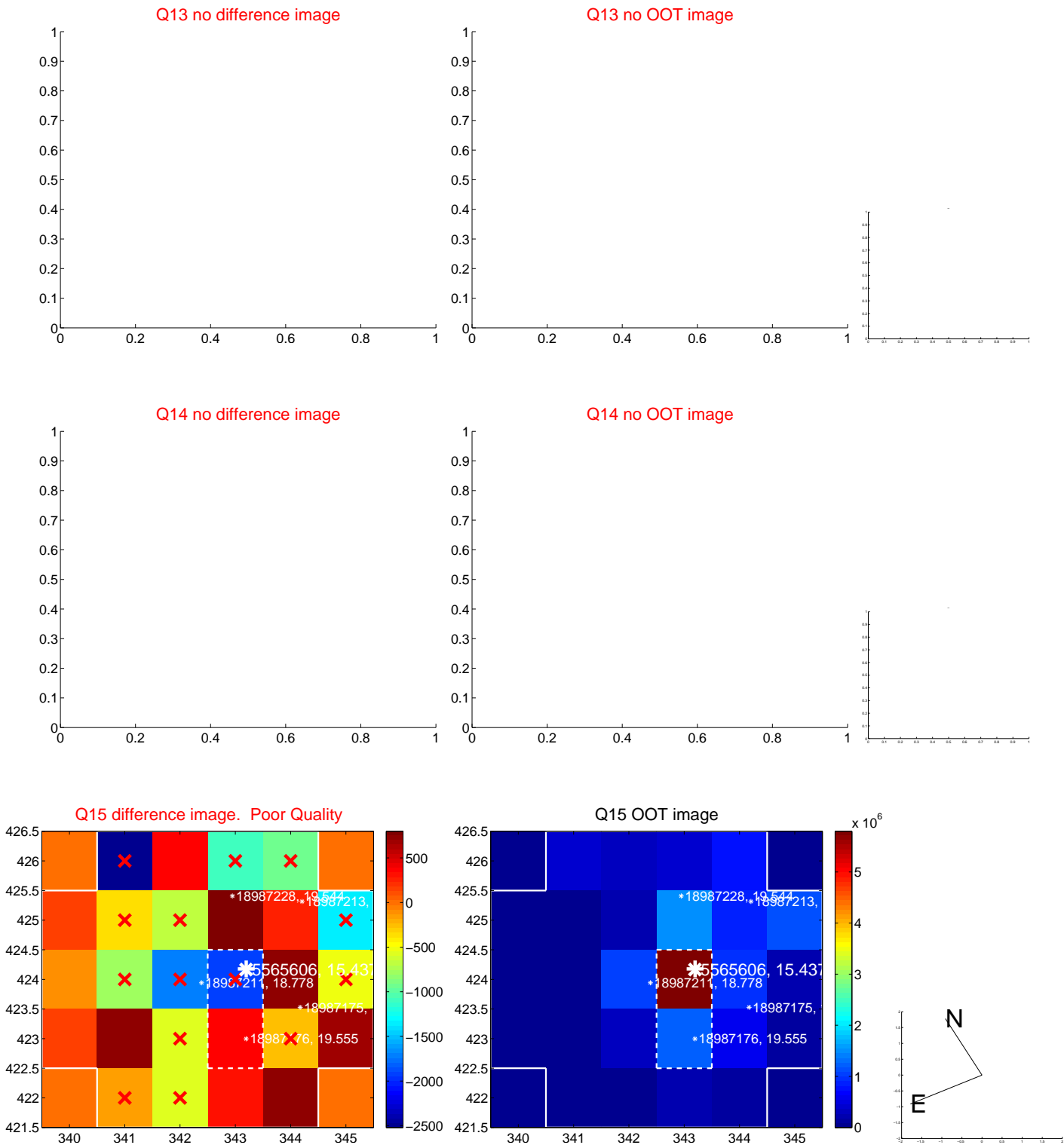
Q8 OOT image



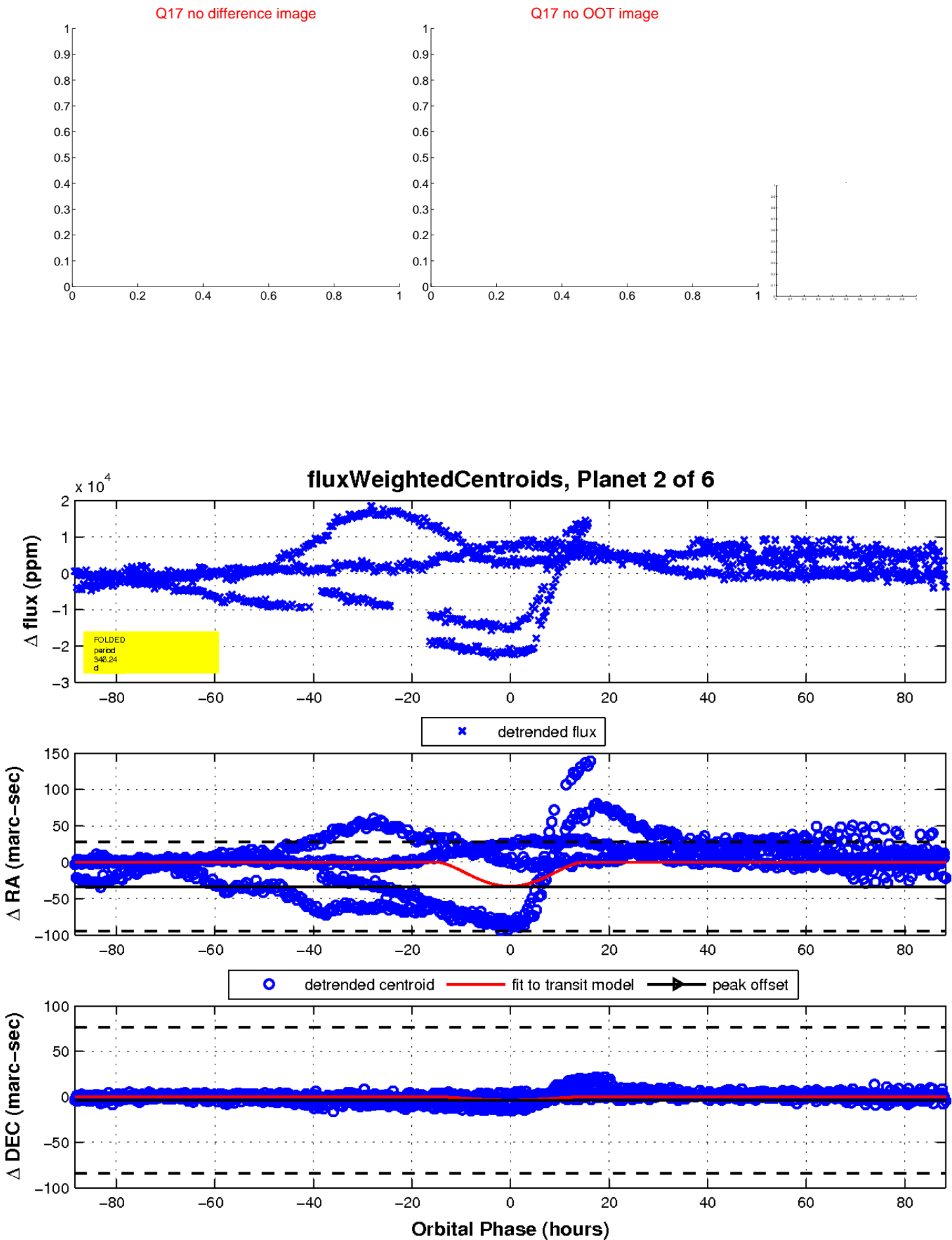
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



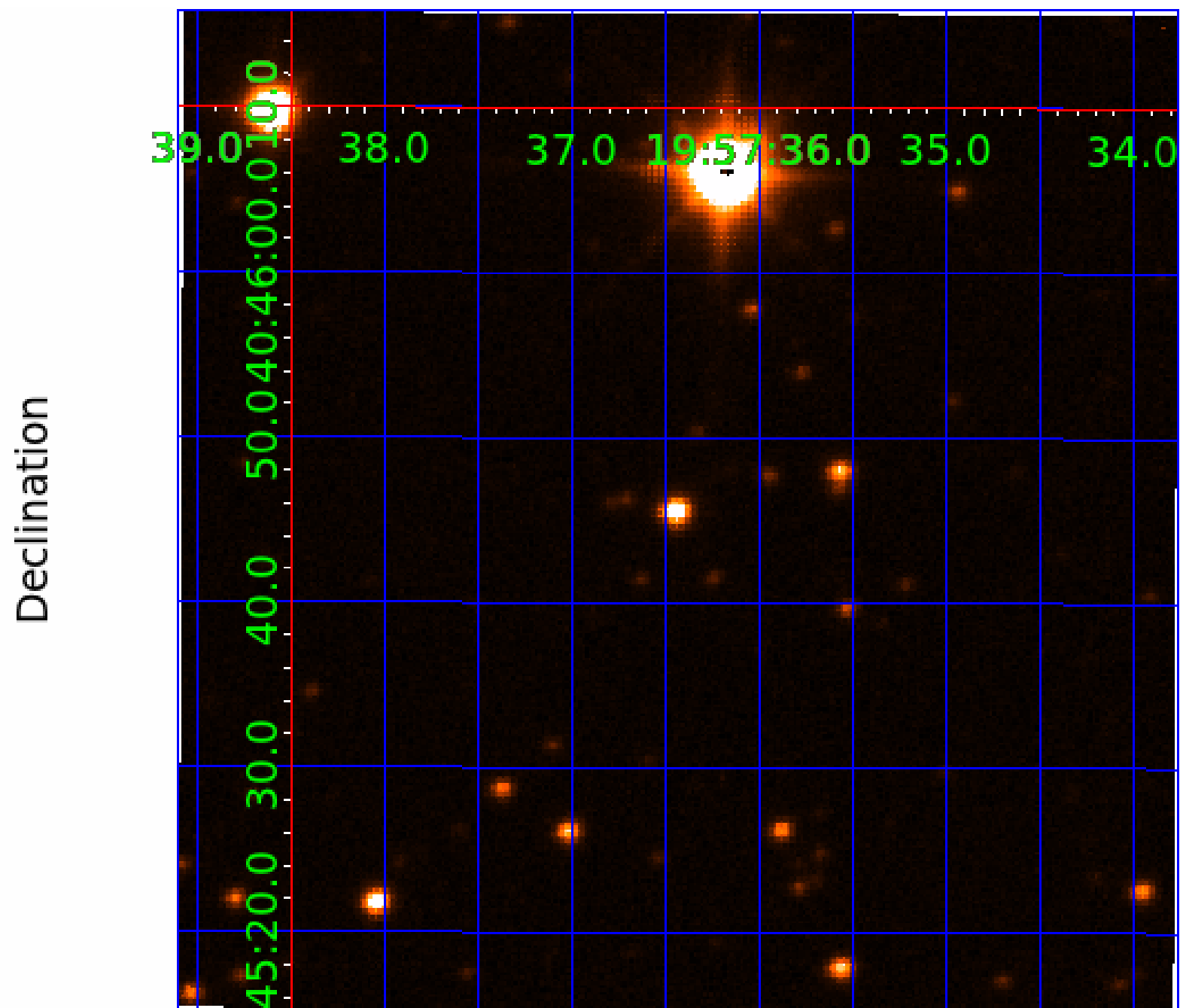
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005565606

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})
005565606-02	OBS	No	346.240163	427.948764	13807.4	29.477	44.5	39.7	0.72	4773	15.59	0.32
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005565606-06	OBS	No	438.485500	551.537684	7284.4	53.909	20.9	13.3	0.72	4773	11.63	0.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005565606-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005565606-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005565606-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

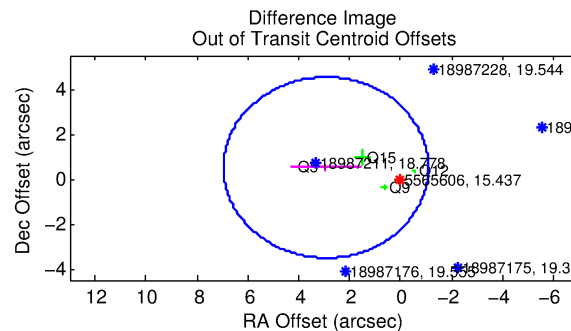
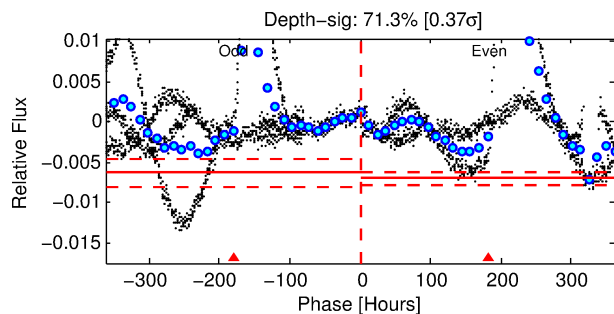
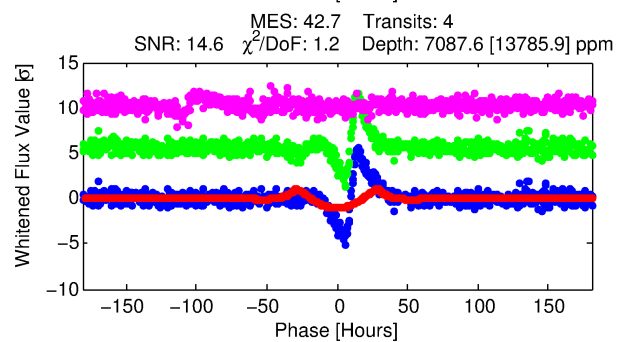
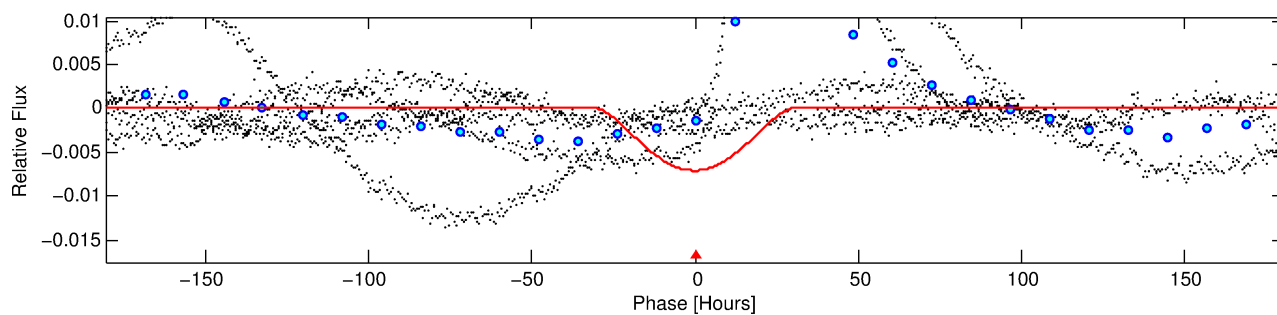
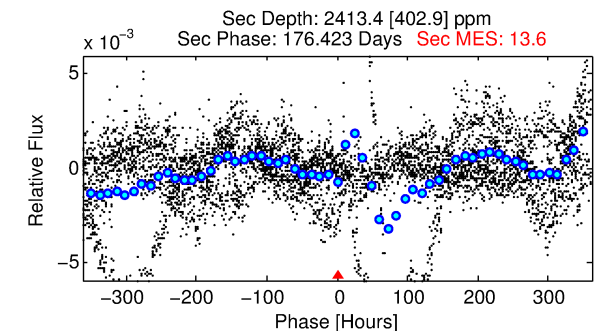
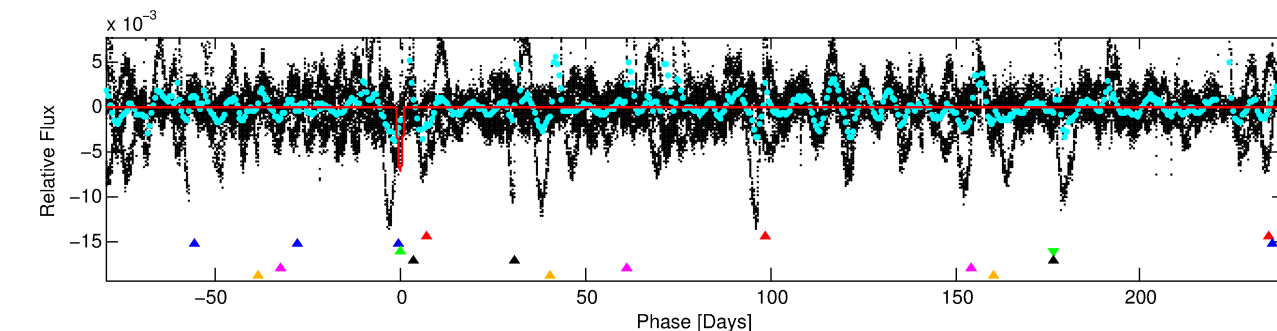
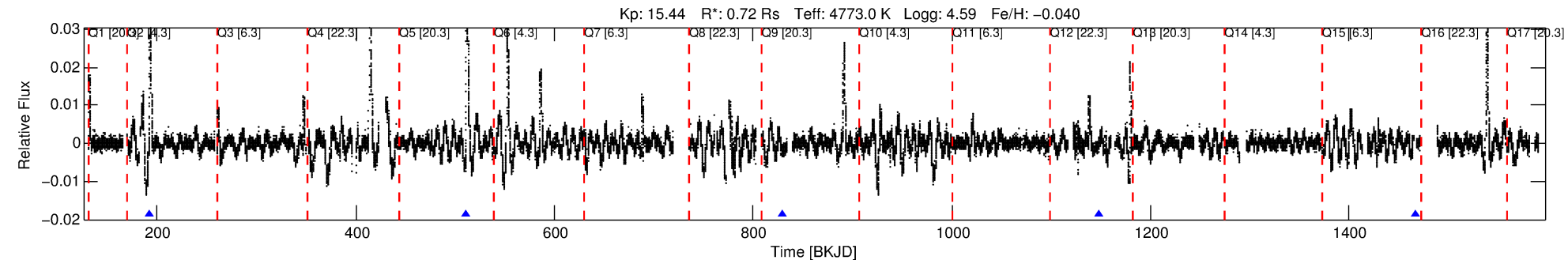
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005565606-03

No Significant Match Found

DV One-Page Summary

KIC: 5565606 Candidate: 3 of 6 Period: 318.652 d



DV Fit Results:

Period = 318.65219 [0.02273] d
Epoch = 192.3650 [0.0377] BKJD
Rp/R* = 0.1464 [0.1233]
a/R* = 22.64 [2.76]
b = 1.00 [0.01]
Seff = 0.36 [0.05]
Teq = 197 [7] K
Rp = 11.48 [9.73] Re
a = 0.8224 [0.0558] AU
Ag = 6808.53 [11543.79] [0.59σ]
Teff = 2765 [1173] K [2.19σ]

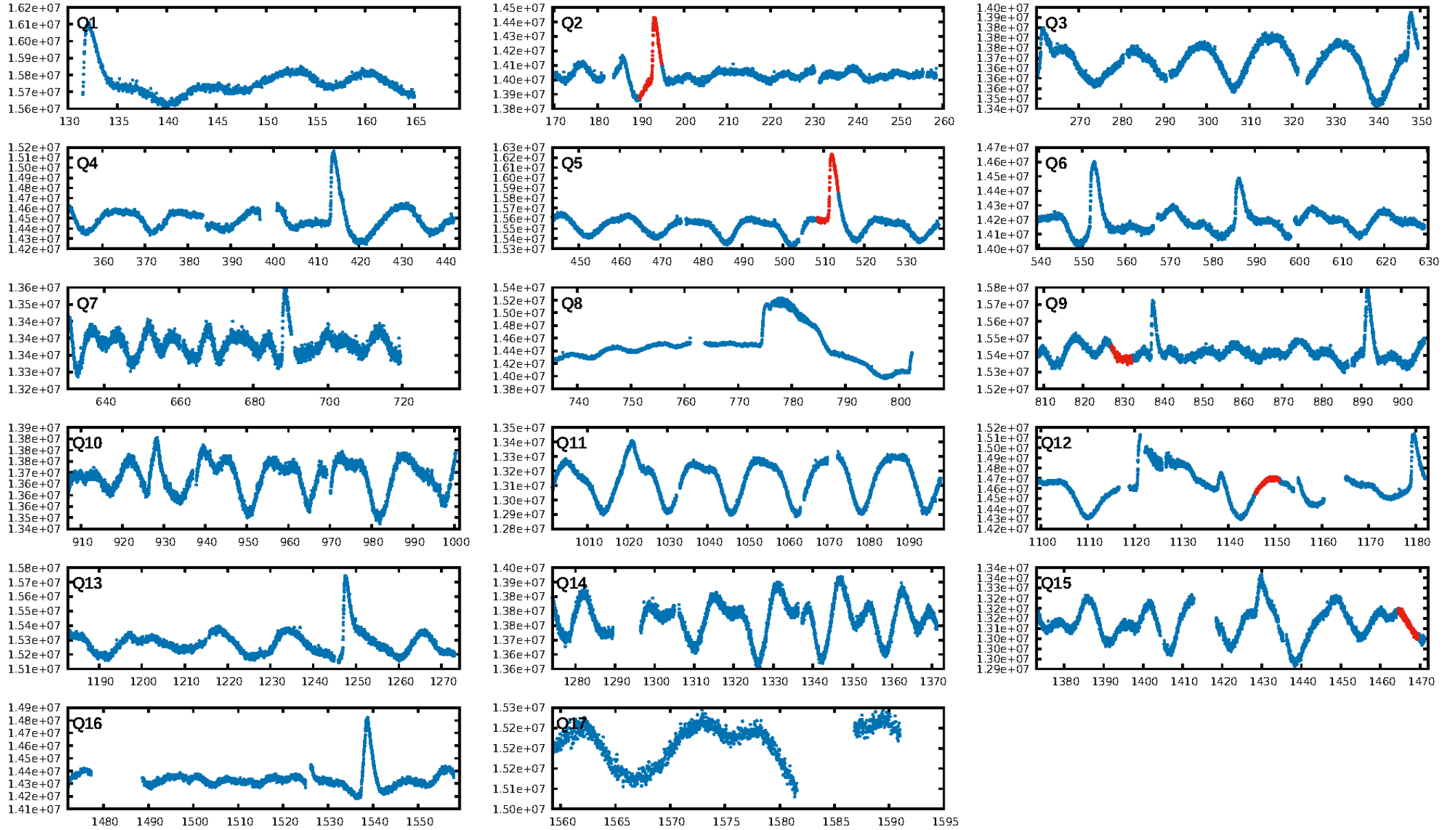
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [9.86σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 6.27e-61
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.607
Centroid-sig: 0.0%
Centroid-so: 3.903 arcsec [3.66σ]
OotOffset-rm: 2.977 arcsec [2.22σ]
KicOffset-rm: 3.062 arcsec [2.28σ]
OotOffset-st: 0/1/1/2 [4]
KicOffset-st: 0/1/1/2 [4]
DiffImageQuality-fgm: 0.50 [2/4]
DiffImageOverlap-fno: 0.60 [3/5]

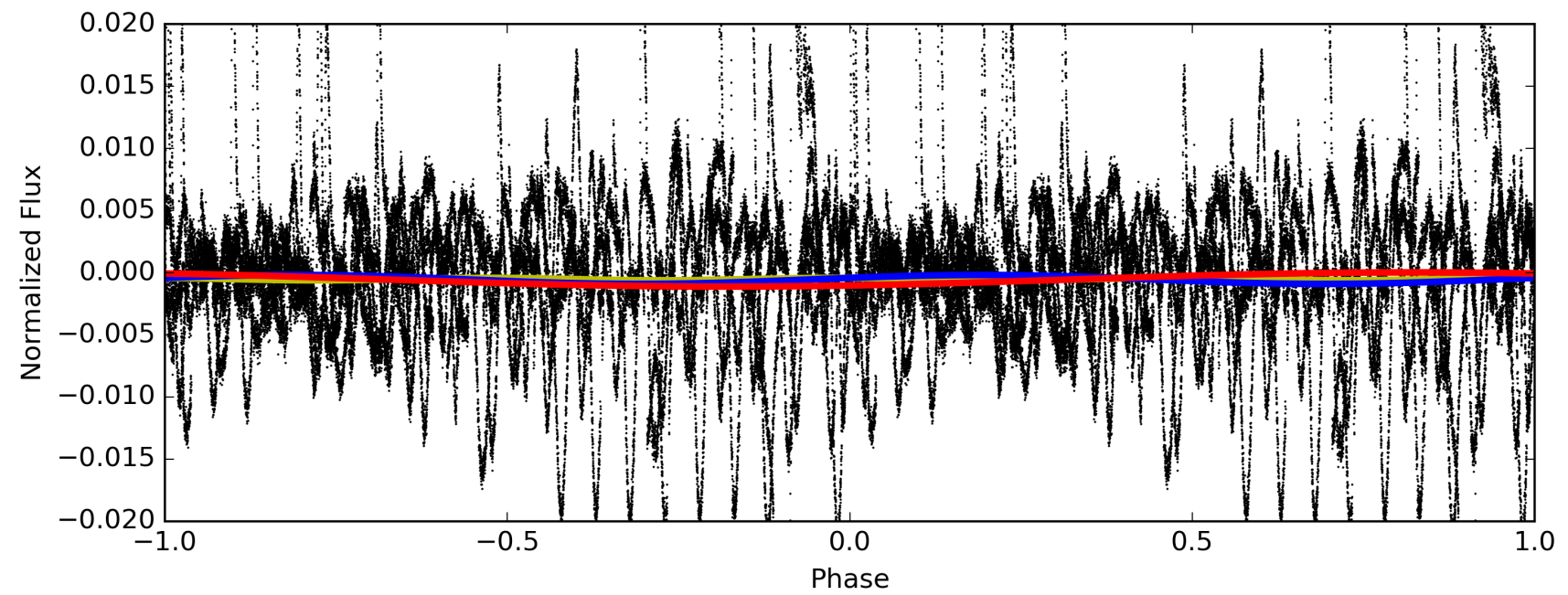
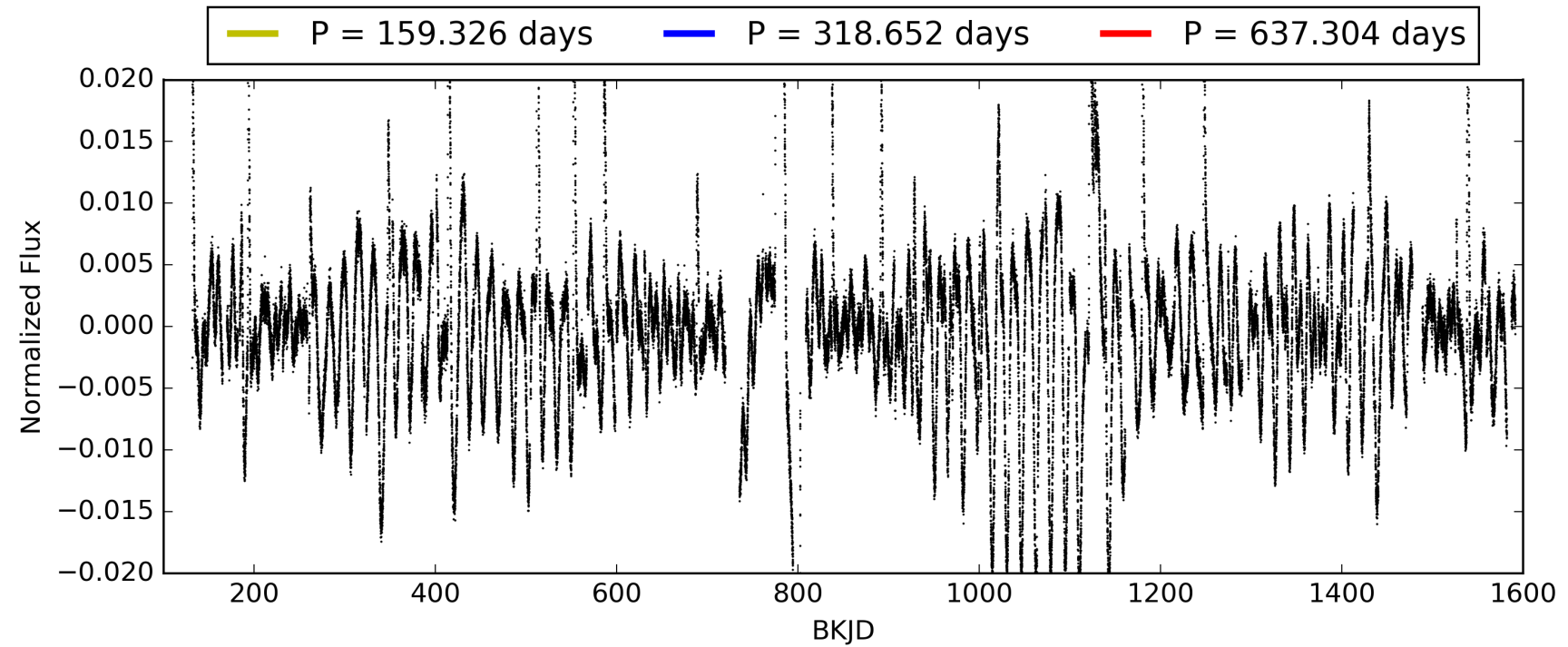
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:44:12 Z

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

TCE 005565606-03, PDC Light Curves

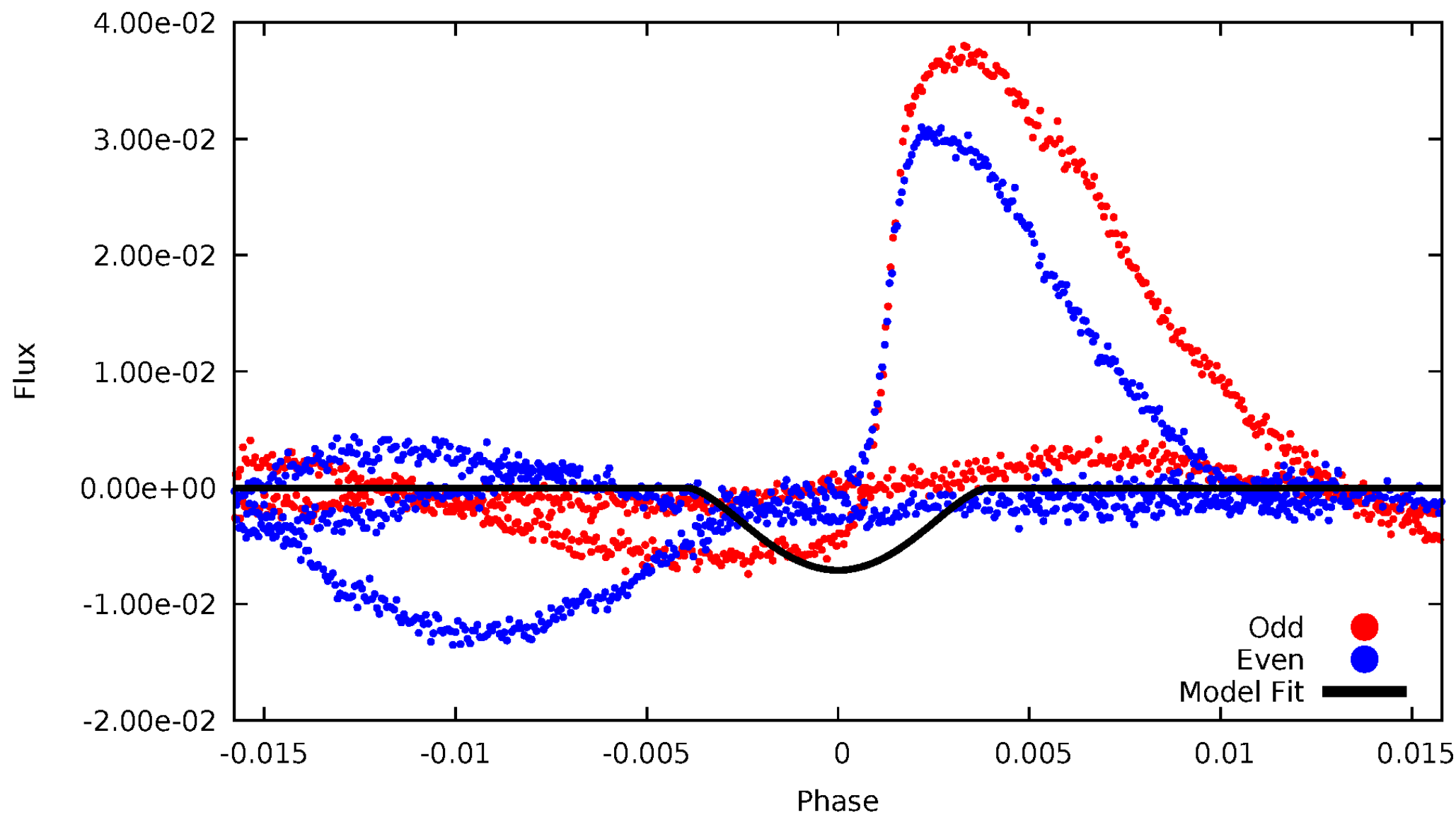


TCE 005565606-03



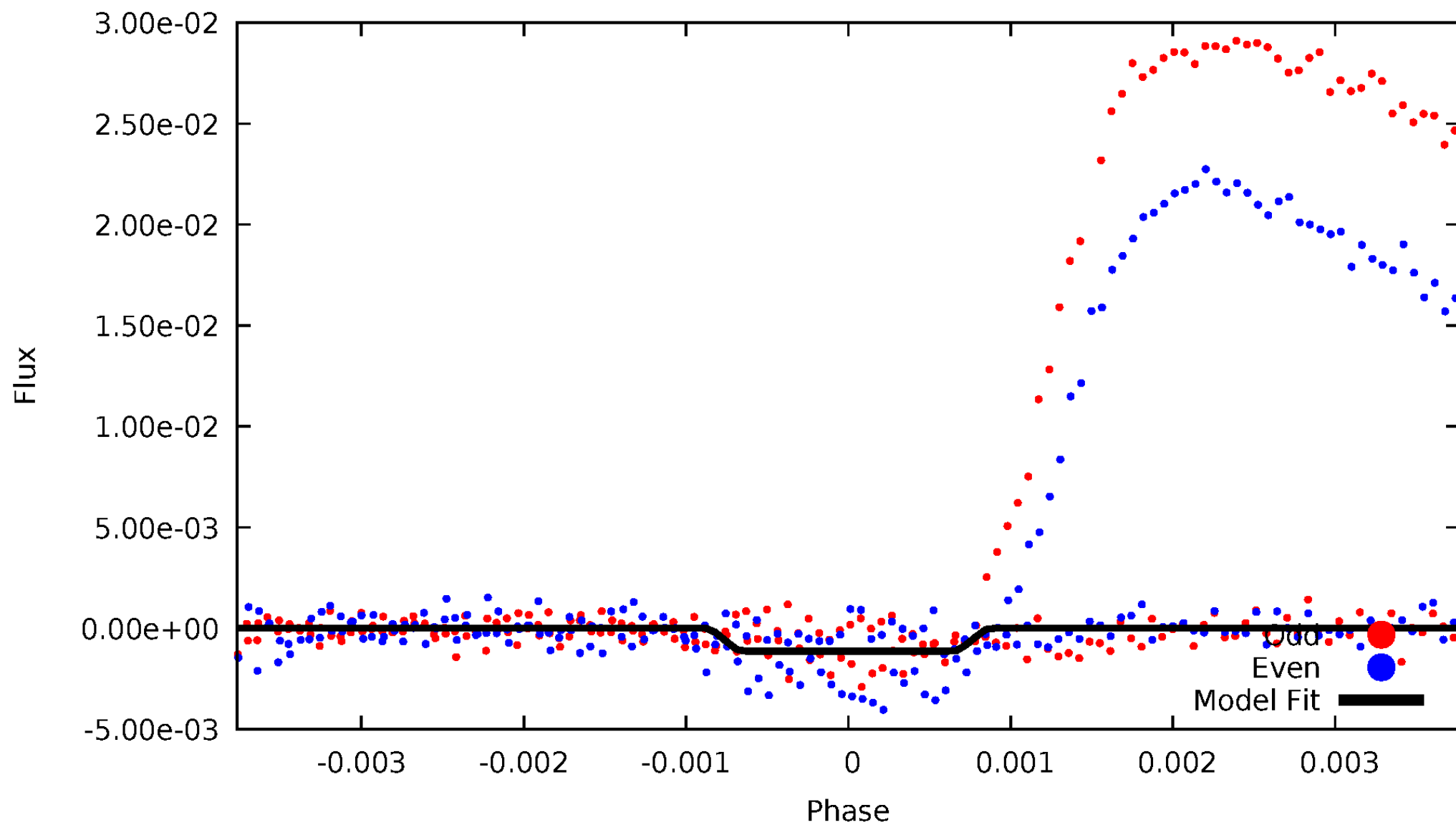
DV Odd/Even

TCE 005565606-03



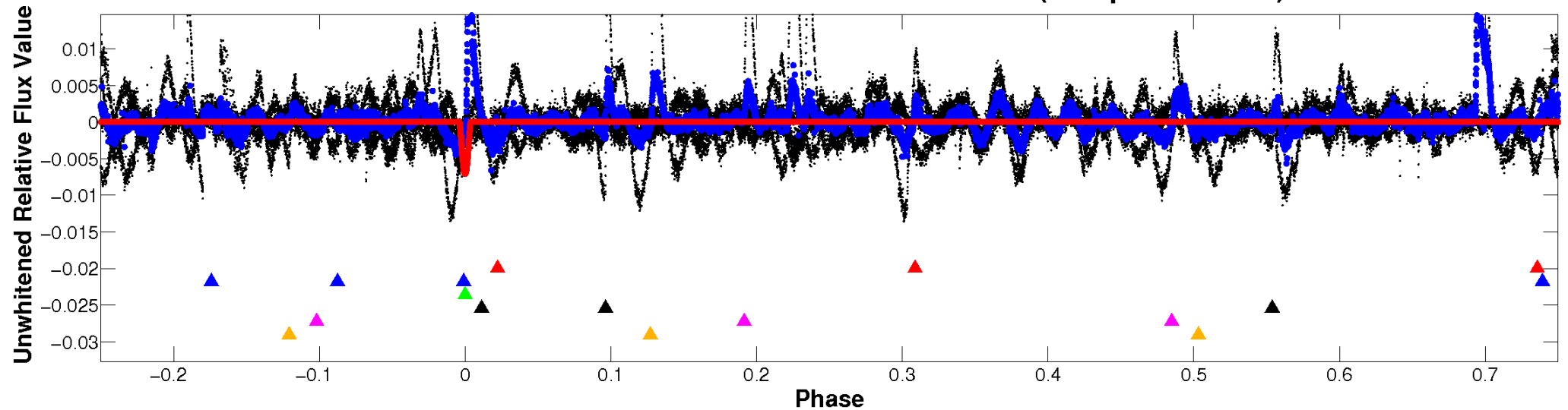
ALT Odd/Even

TCE 005565606-03

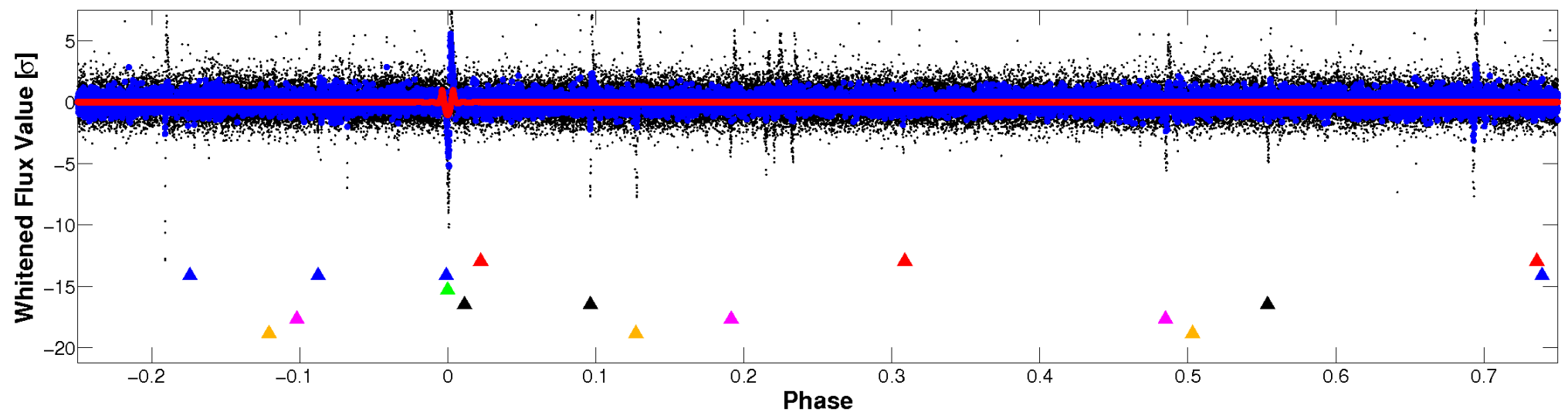


Non-Whitened Vs. Whitened Light Curve

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

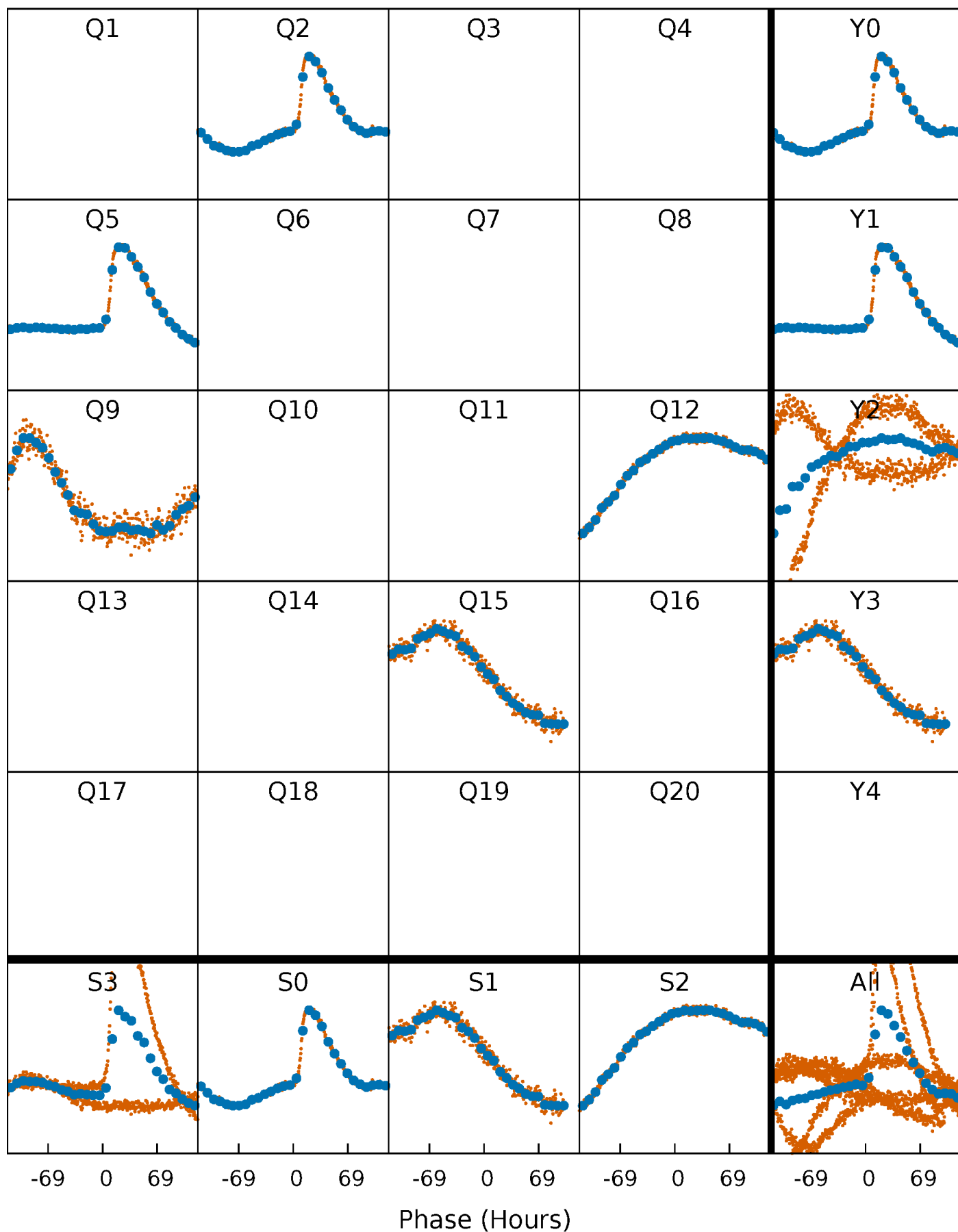


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



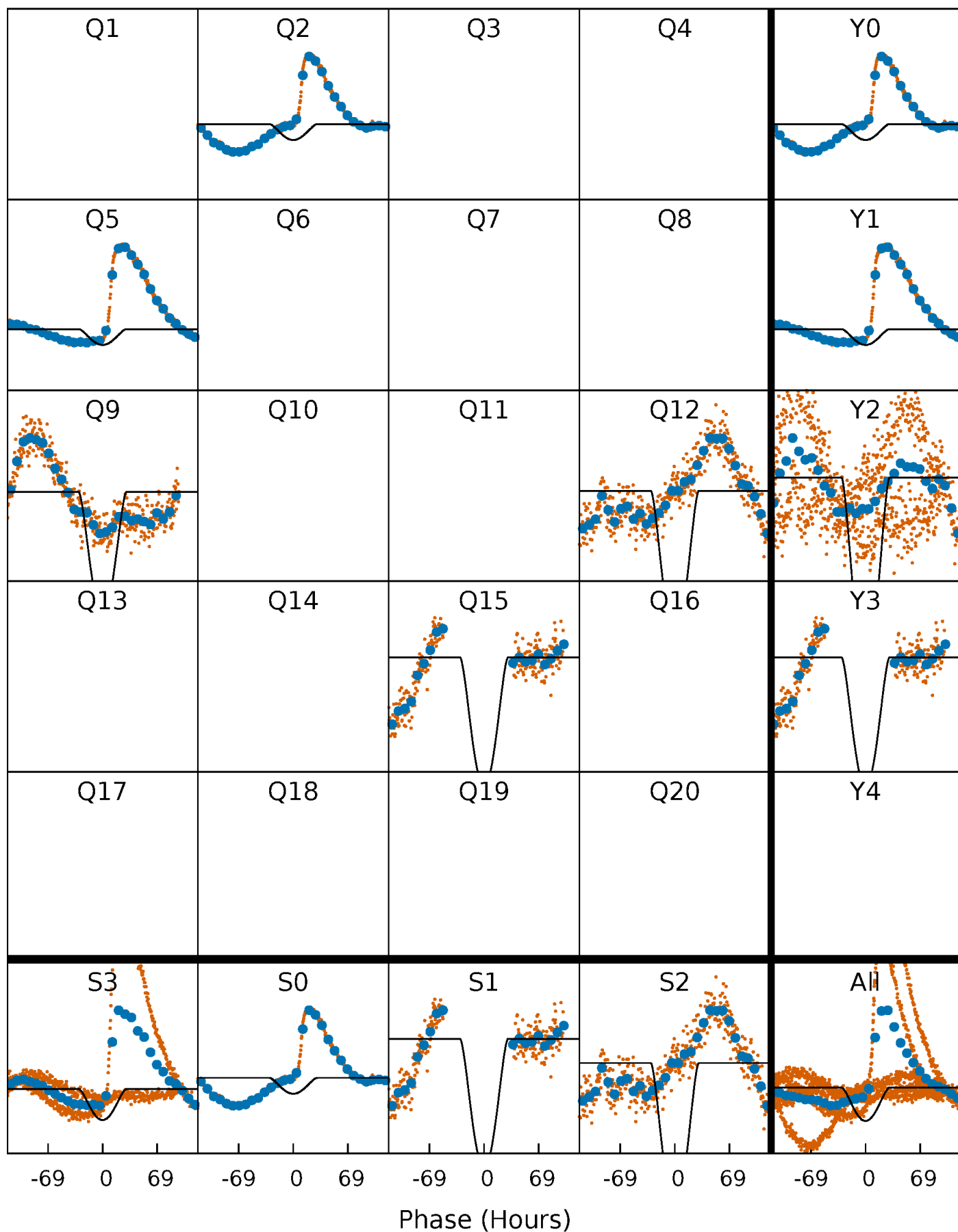
PDC Quarter-Phased Transit Curves

TCE 005565606-03 P=318.652188 Days $T_0=192.364998$ (BKJD)



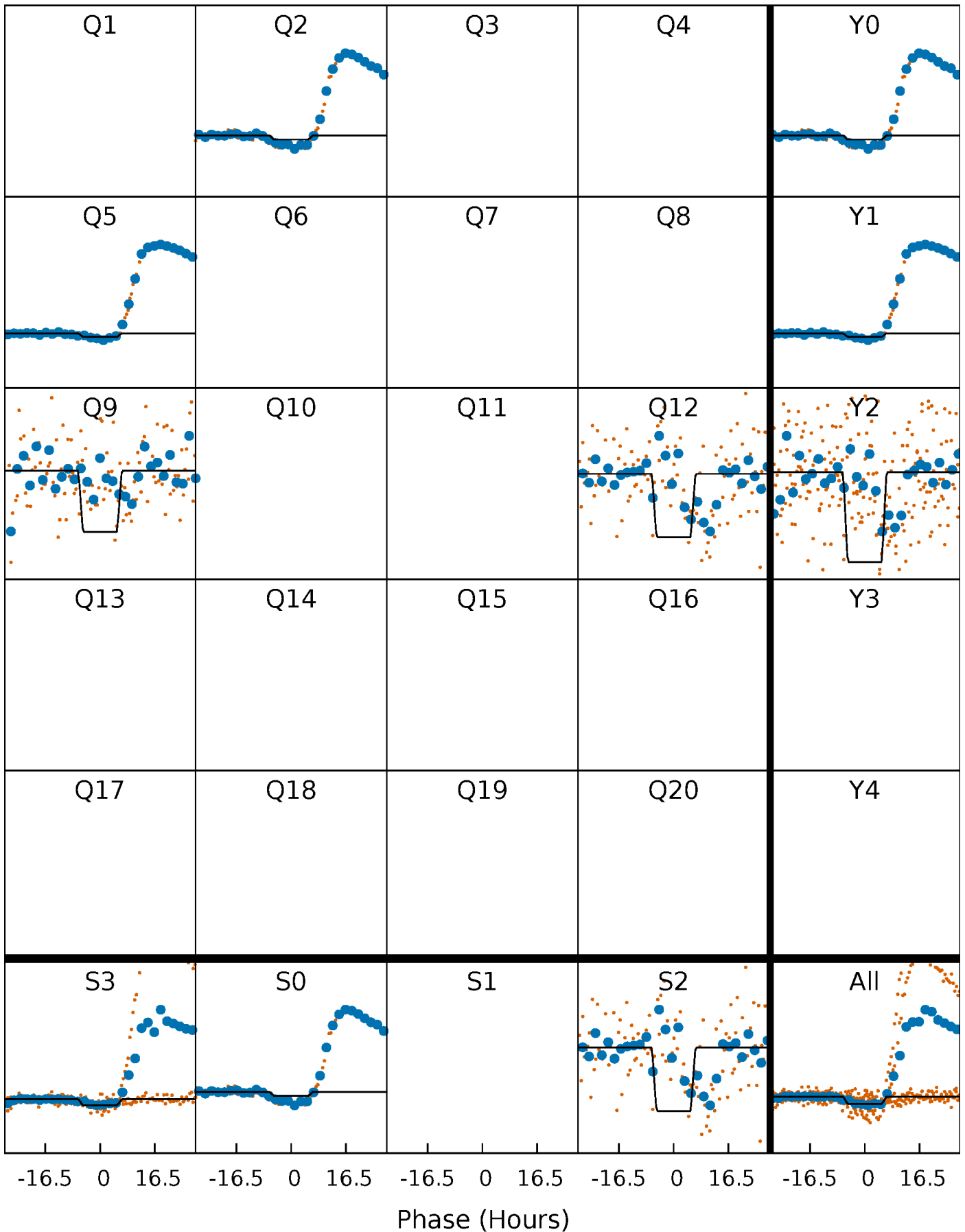
DV Quarter-Phased Transit Curves

TCE 005565606-03 $P=318.652188$ Days $T_0=192.364998$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

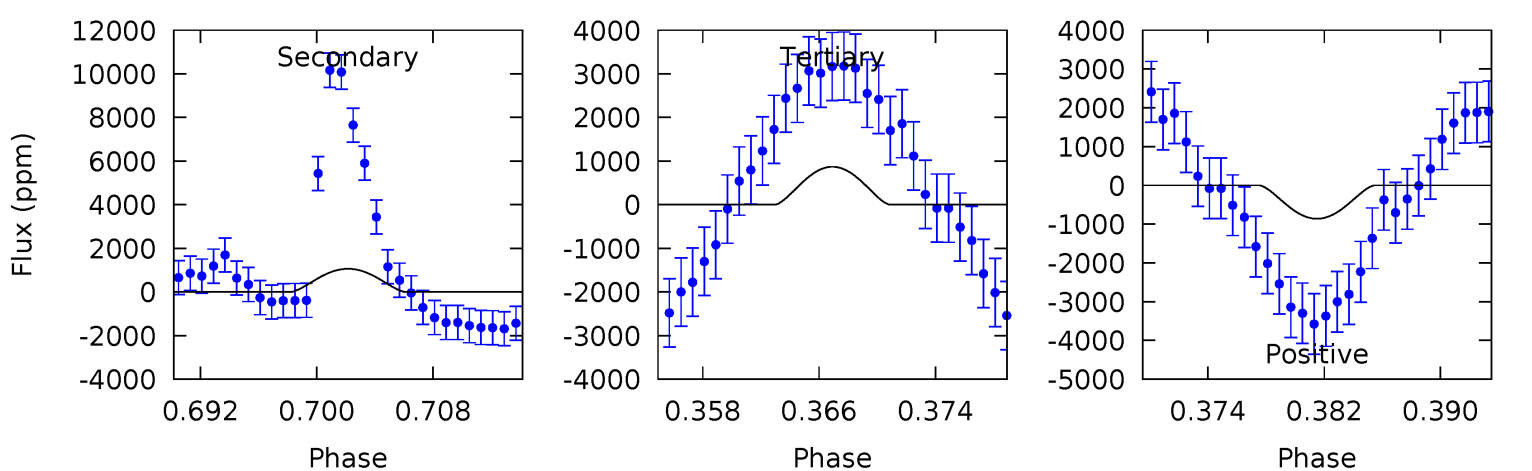
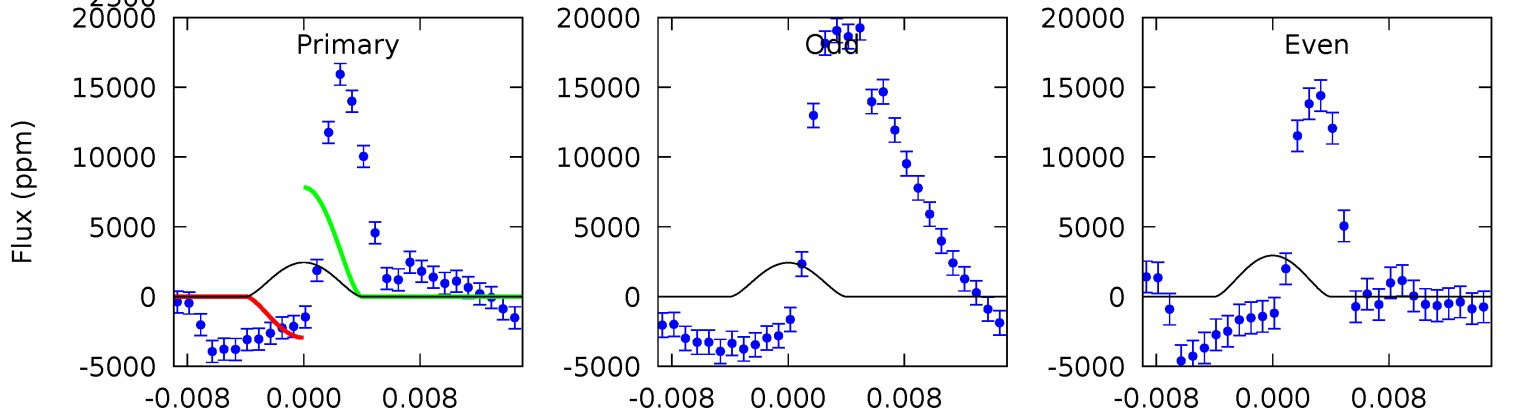
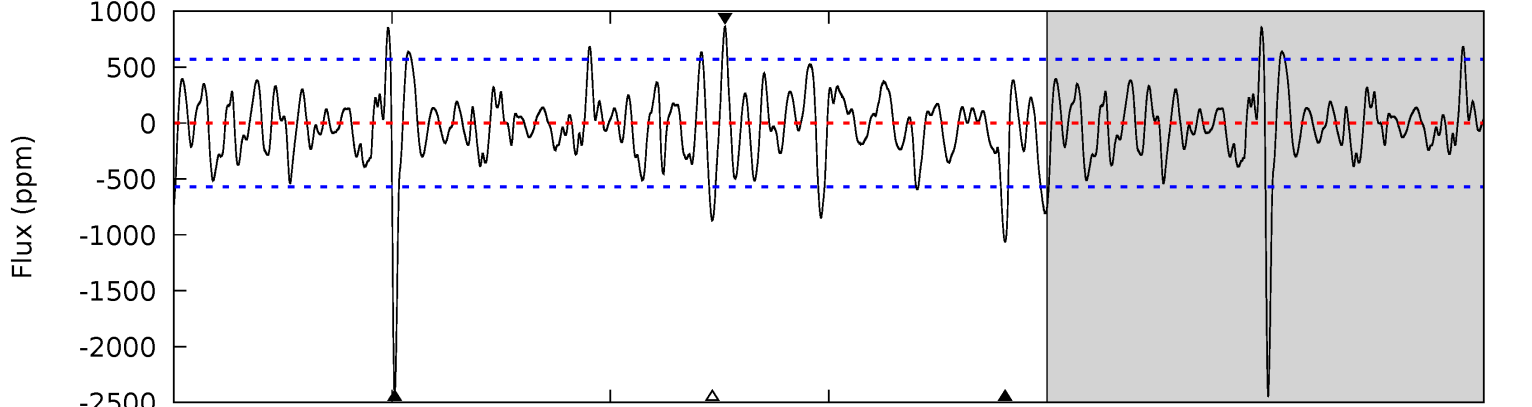
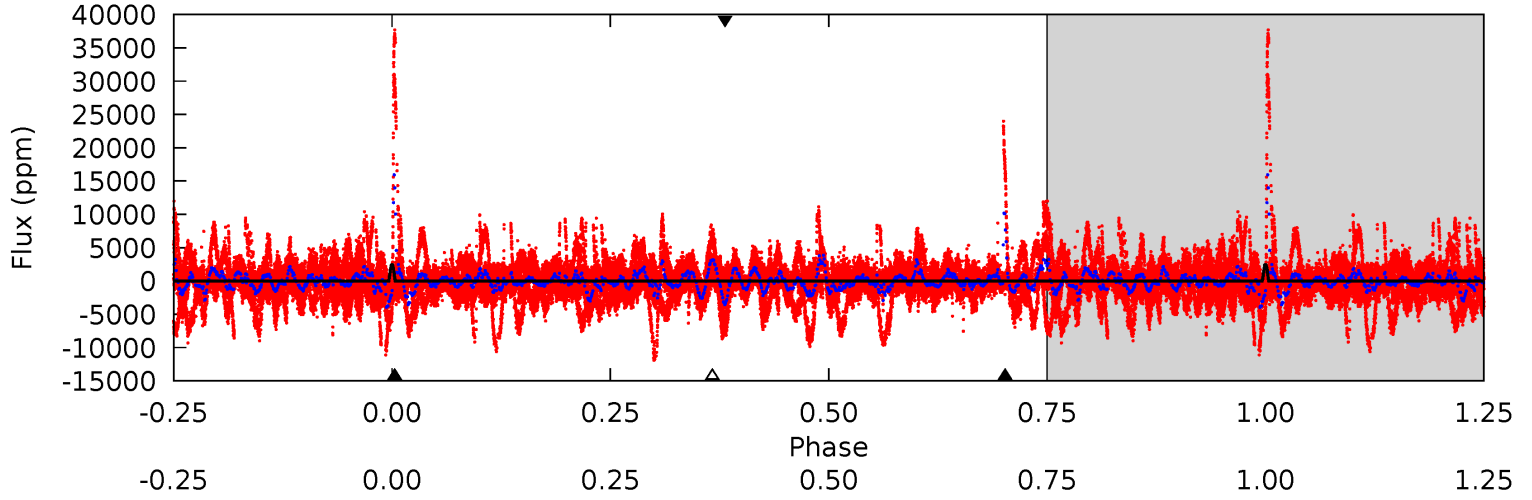
TCE 005565606-03 $P=318.681802$ Days $T_0=192.358139$ (BKJD)



DV Model-Shift Uniqueness Test

005565606-03, P = 318.652188 Days, E = 192.364998 Days

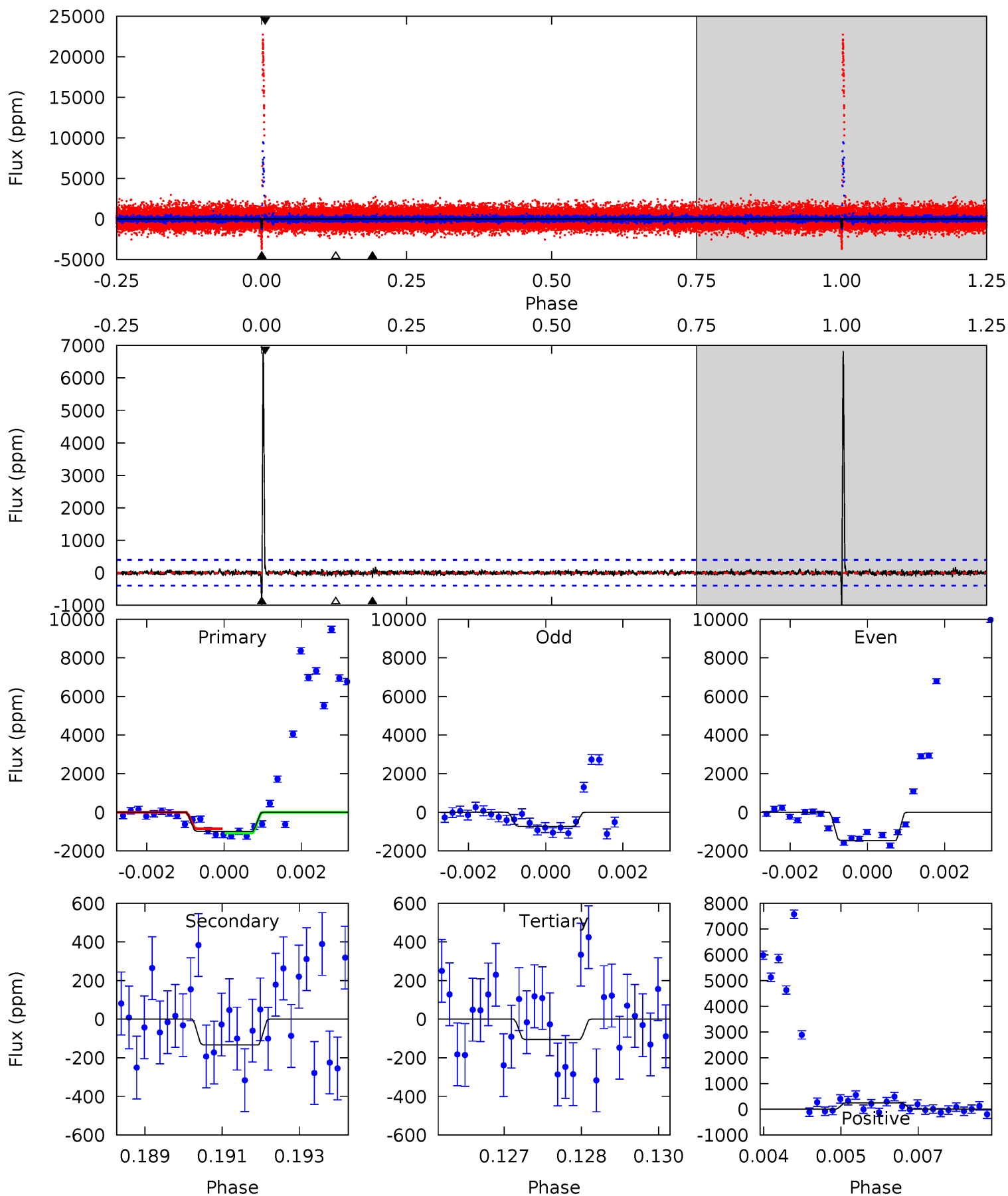
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.7	9.44	7.73	7.65	5.07	2.65	2.34	14.0	14.1	1.71	1.79	1.98	1.04	0.26	21.4



Alt Model-Shift Uniqueness Test

005565606-03, P = 318.681802 Days, E = 192.358139 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.4	1.80	1.42	3.39	5.35	3.12	3.34	12.0	10.00	0.38	-1.60	3.61	1.36	0.87	1.44



Stellar Parameters For KIC 005565606

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4773^{+143}_{-143}	$4.588^{+0.045}_{-0.036}$	$-0.040^{+0.300}_{-0.300}$	$0.719^{+0.057}_{-0.063}$	$0.731^{+0.073}_{-0.060}$	$2.769^{+0.577}_{-0.397}$
	+3%/-3%	+1%/-1%	+750%/-750%	+8%/-9%	+10%/-8%	+21%/-14%
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 005565606-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1063 ± 113	$12.43^{+9.43}_{-7.08}$	275^{+9}_{-9}	2817^{+836}_{-354}	2441^{+11761}_{-1607}
Alt.	-133 ± 74	$7.71^{+7.86}_{-5.05}$	275^{+10}_{-9}	2427^{+864}_{-397}	753^{+6129}_{-607}

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

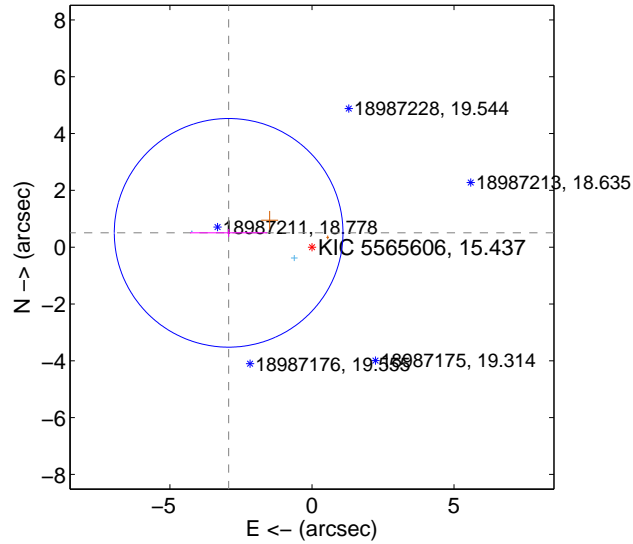
Supplemental centroid analysis for 005565606-03. Kepler magnitude: 15.44. Transit SNR 14.60

There are 2 quarters with good PRF difference image offsets

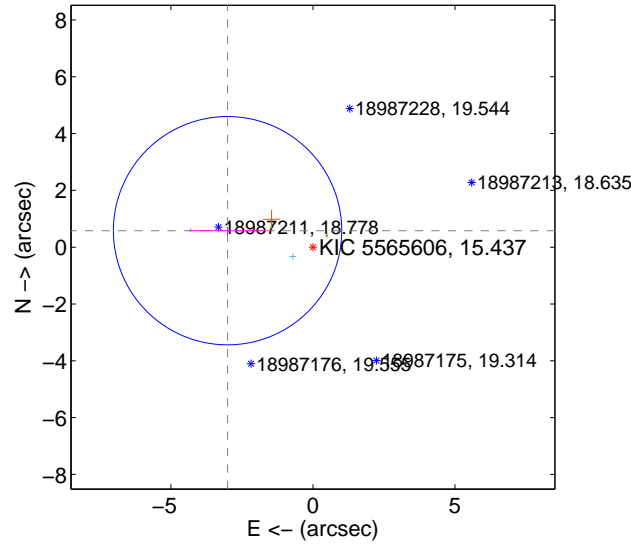
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.977 ± 1.342	2.22	2.934 ± 1.361	0.504 ± 0.138
PRF-fit source offset from KIC position	3.062 ± 1.340	2.28	3.006 ± 1.364	0.580 ± 0.141
photometric centroid source offset	3.90 ± 1.07	3.66	3.90 ± 1.07	-0.22 ± 0.15

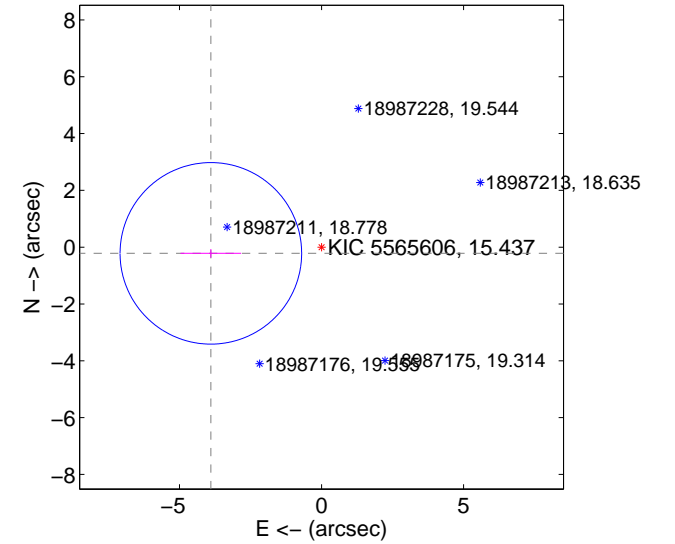
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

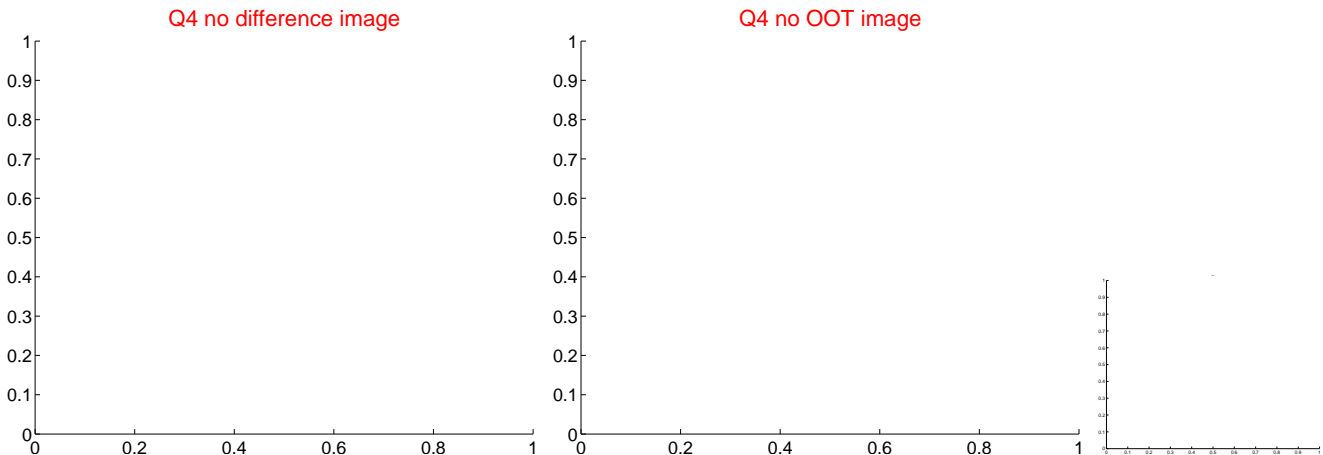
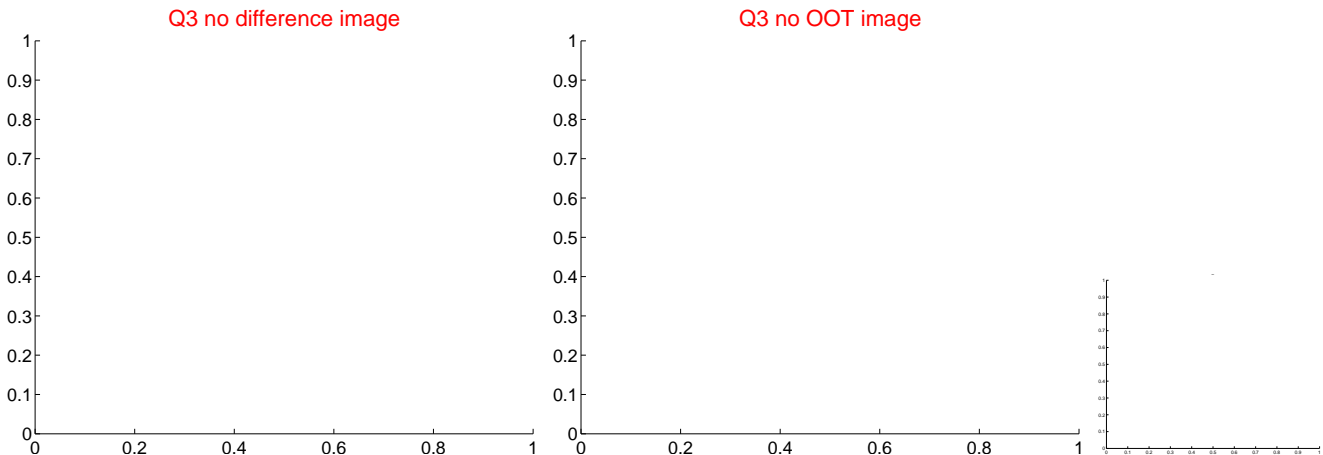
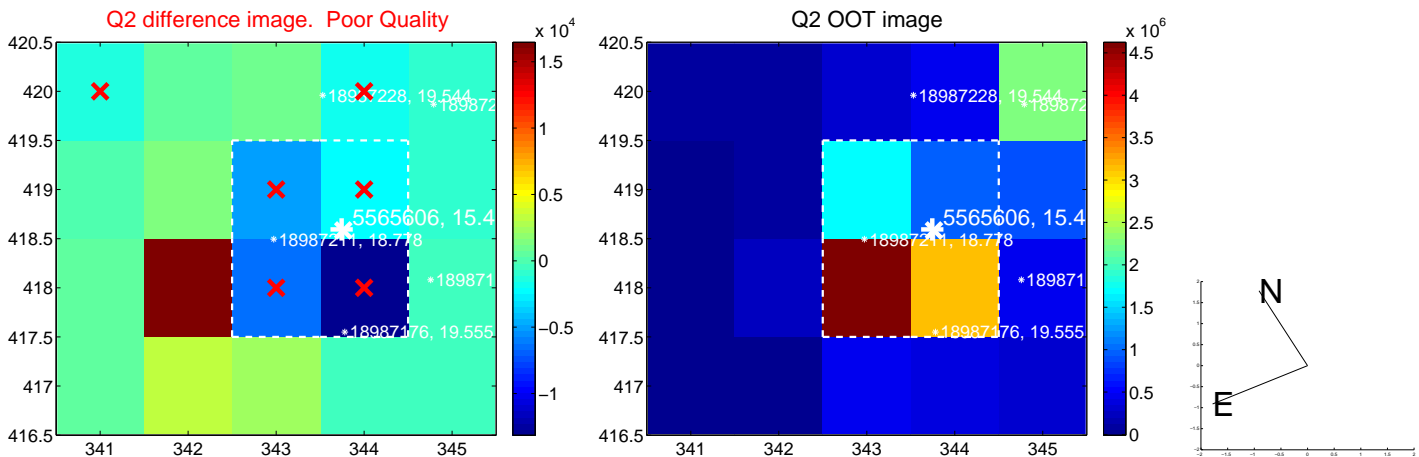


offset from photometric centroids

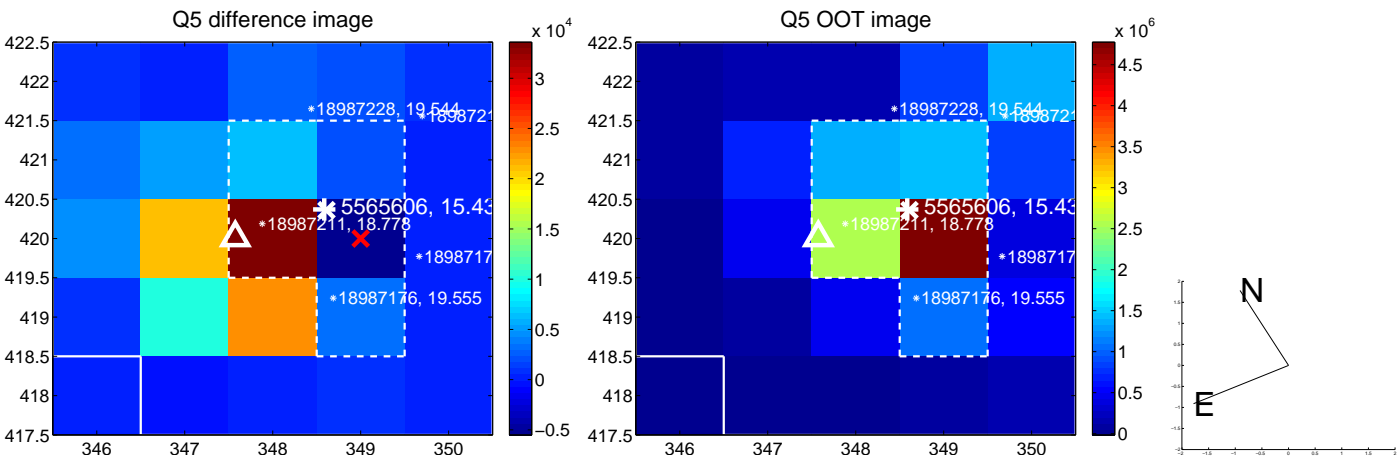


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

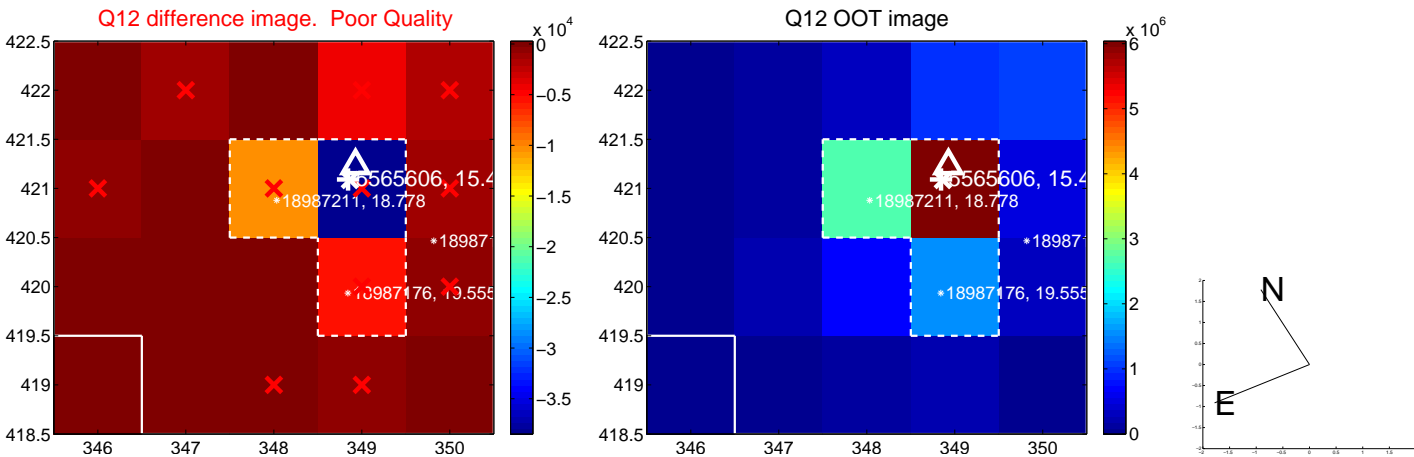
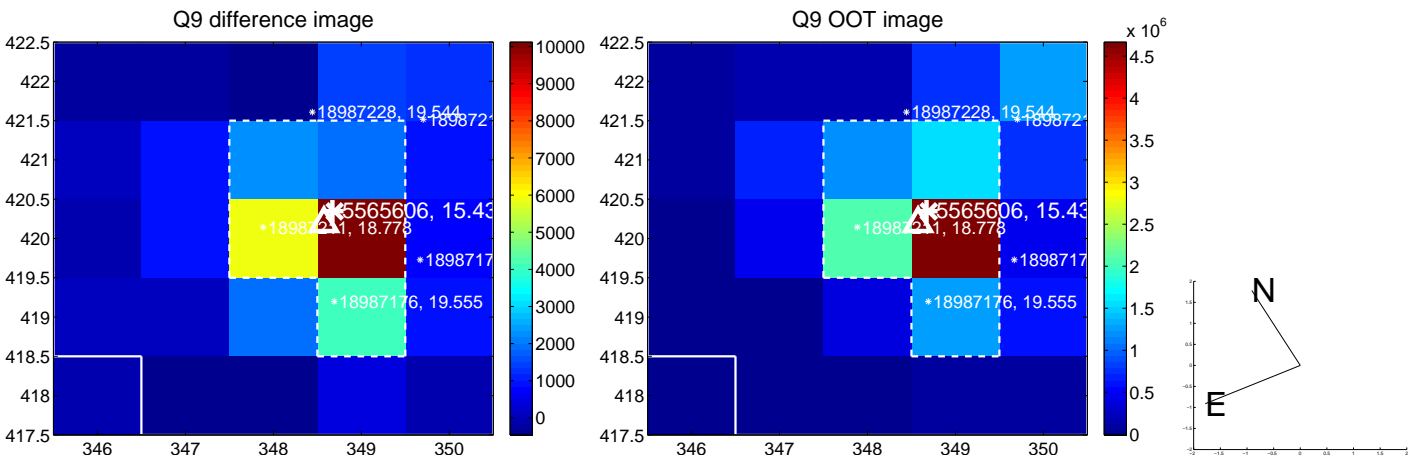
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



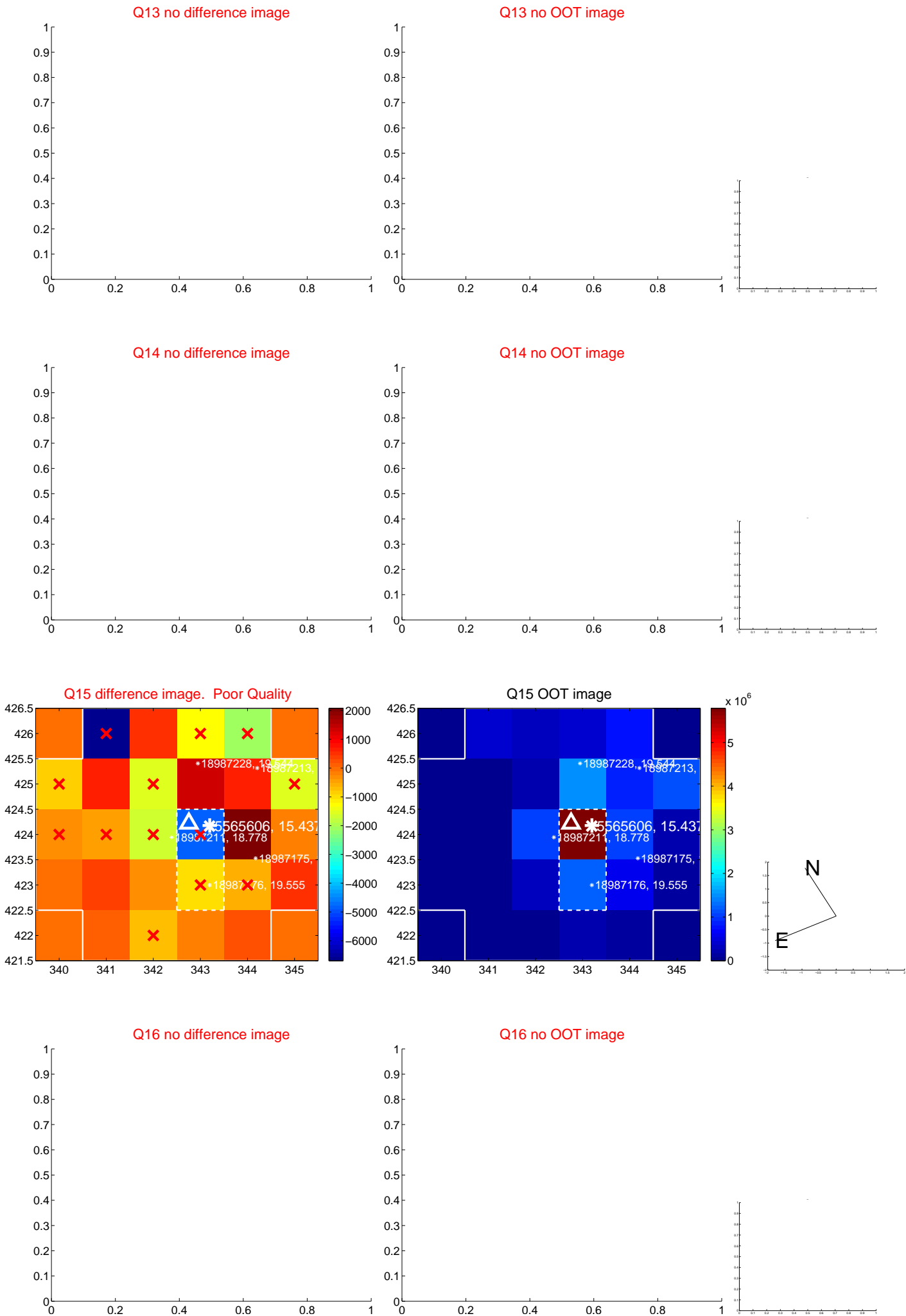
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



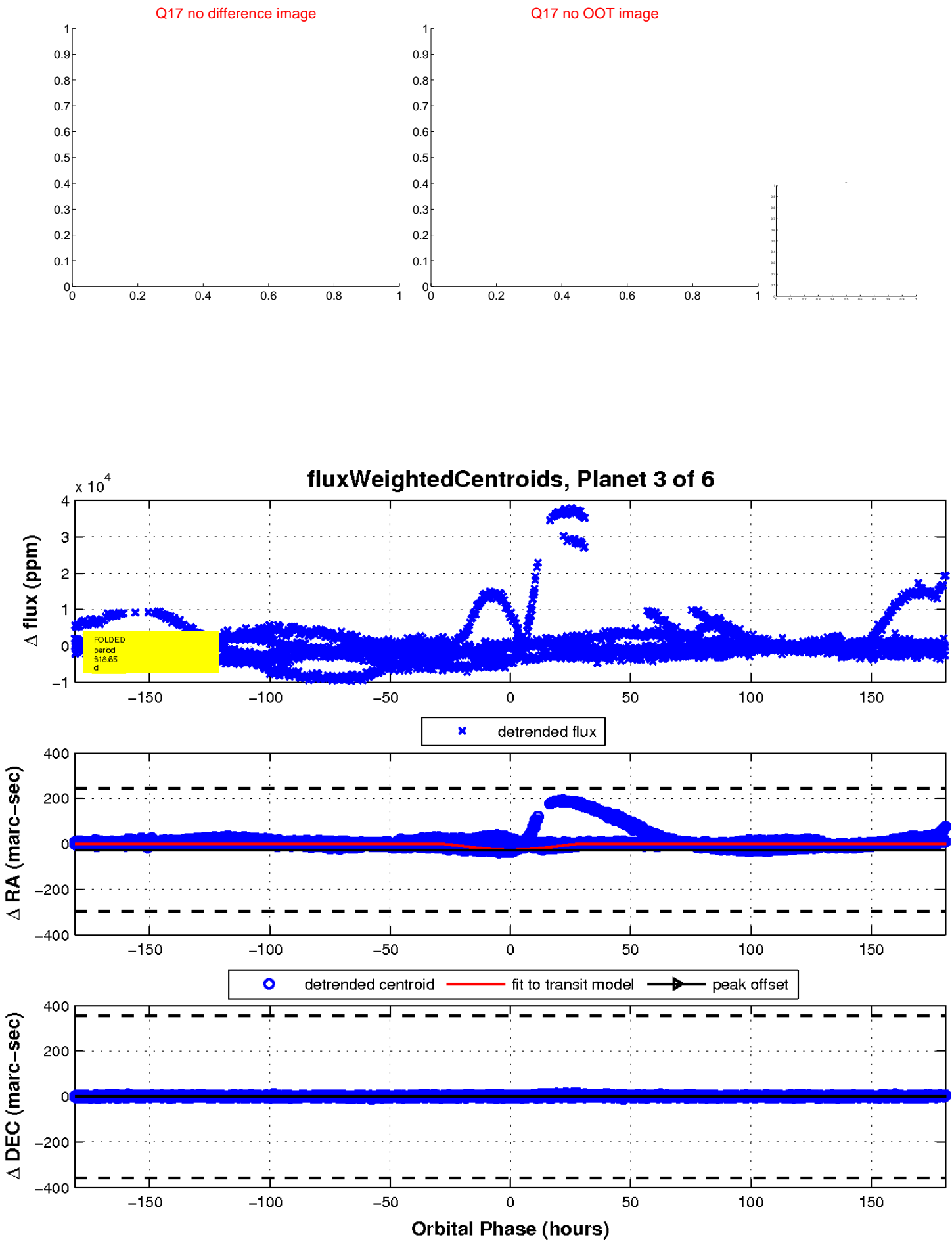
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



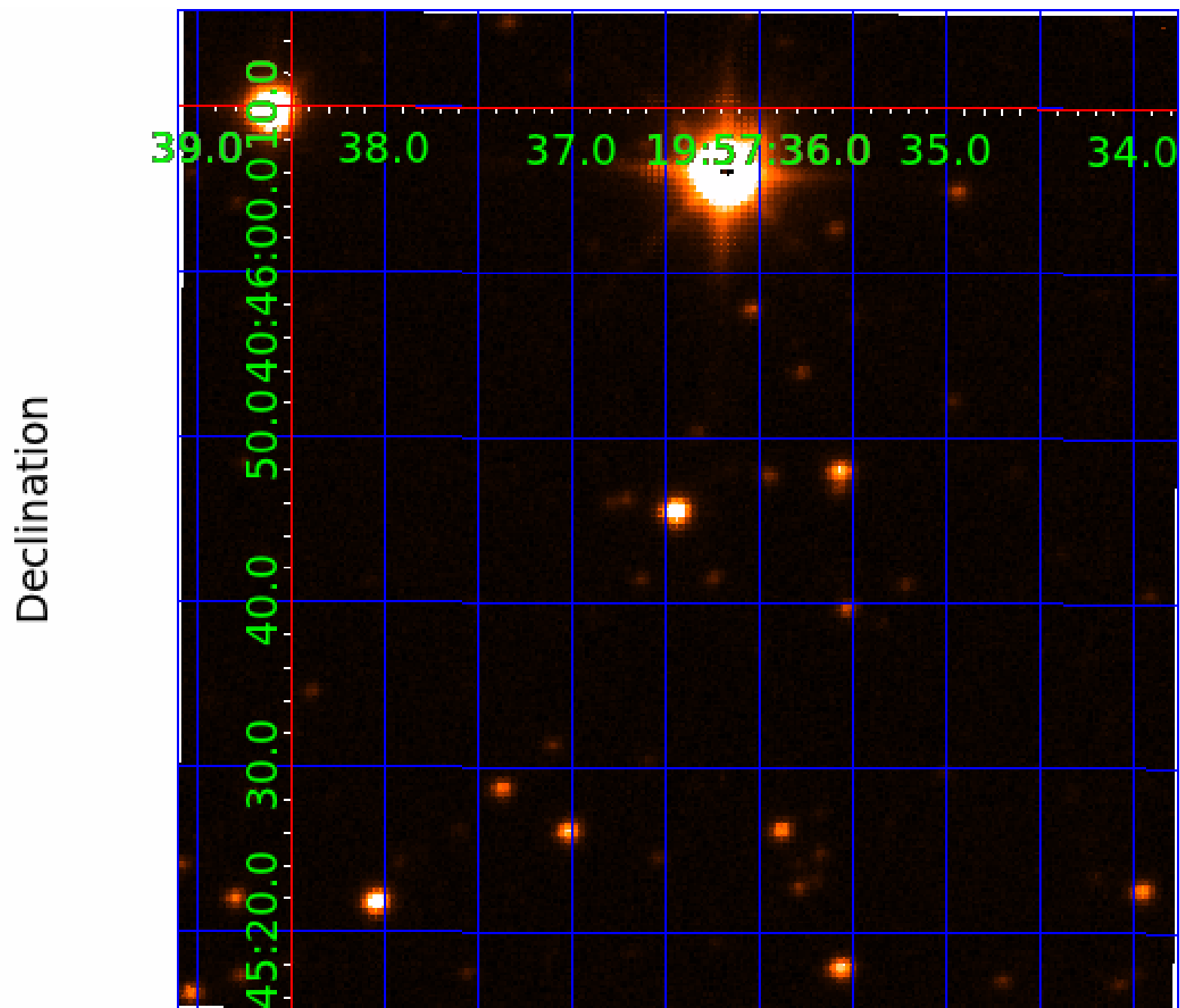
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005565606

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})
005565606-02	OBS	No	346.240163	427.948764	13807.4	29.477	44.5	39.7	0.72	4773	15.59	0.32
005565606-03	OBS	No	318.652188	192.364998	7087.6	60.343	42.7	14.6	0.72	4773	11.48	0.35
005565606-06	OBS	No	438.485500	551.537684	7284.4	53.909	20.9	13.3	0.72	4773	11.63	0.23

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005565606-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005565606-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_ZUMA—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005565606-06	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

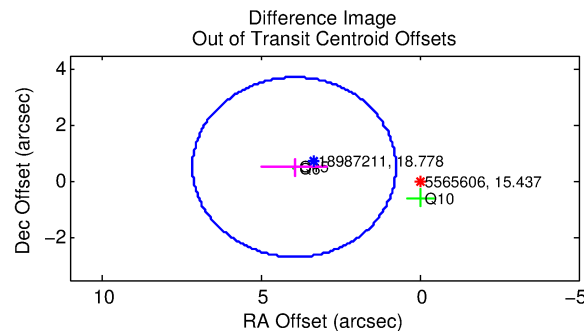
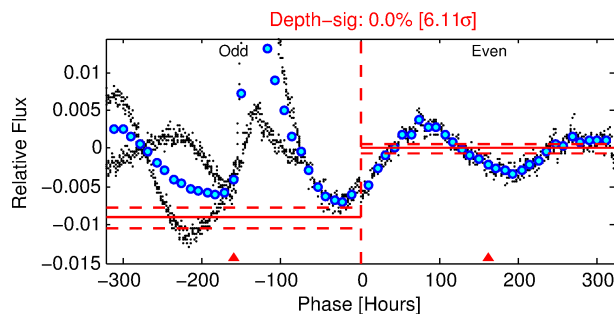
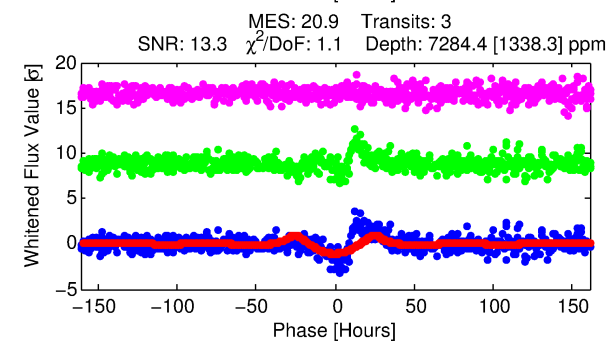
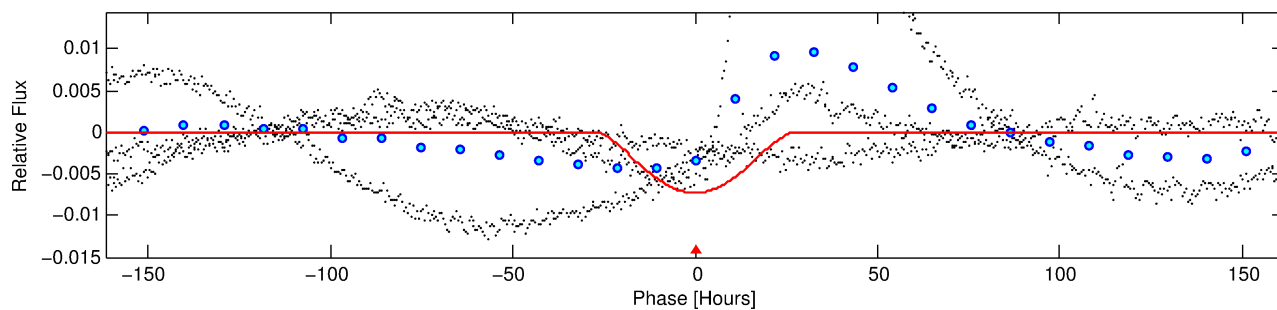
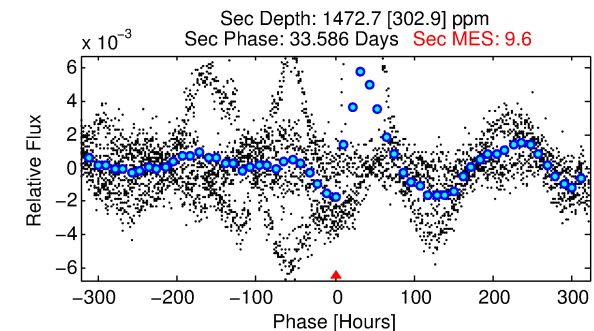
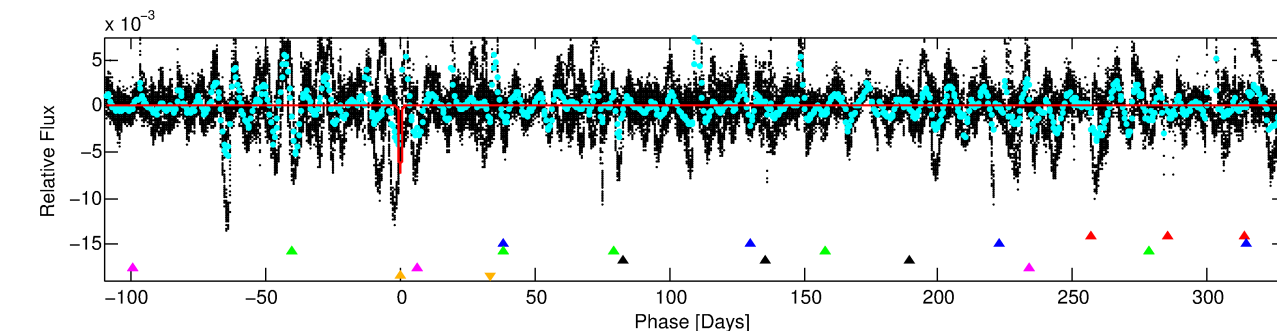
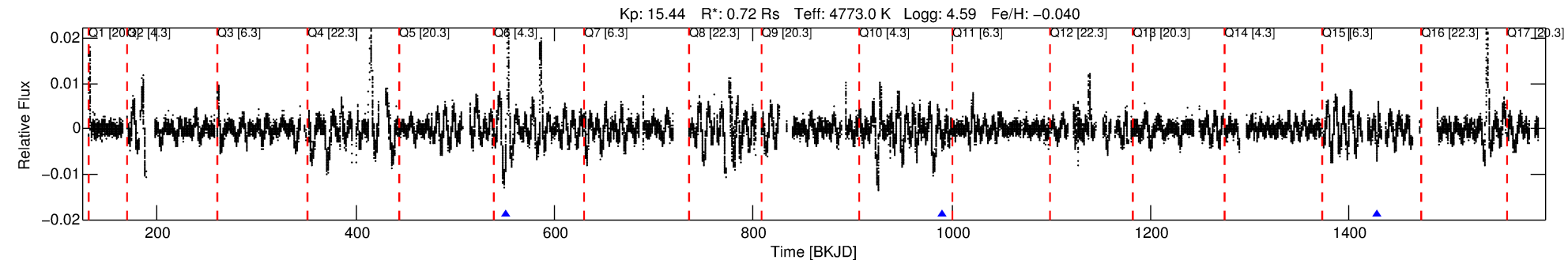
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005565606-06

No Significant Match Found

DV One-Page Summary

KIC: 5565606 Candidate: 6 of 6 Period: 438.486 d



DV Fit Results:

Period = 438.48550 [0.02970] d
Epoch = 551.5377 [0.0384] BKJD
Rp/R* = 0.1482 [0.1677]
a/R* = 35.08 [5.78]
b = 1.00 [0.22]
Seff = 0.23 [0.03]
Teq = 177 [7] K
Rp = 11.63 [13.20] Re
a = 1.0174 [0.0690] AU
Ag = 6204.02 [14111.71] [0.44σ]
Teffp = 2429 [1382] K [1.63σ]

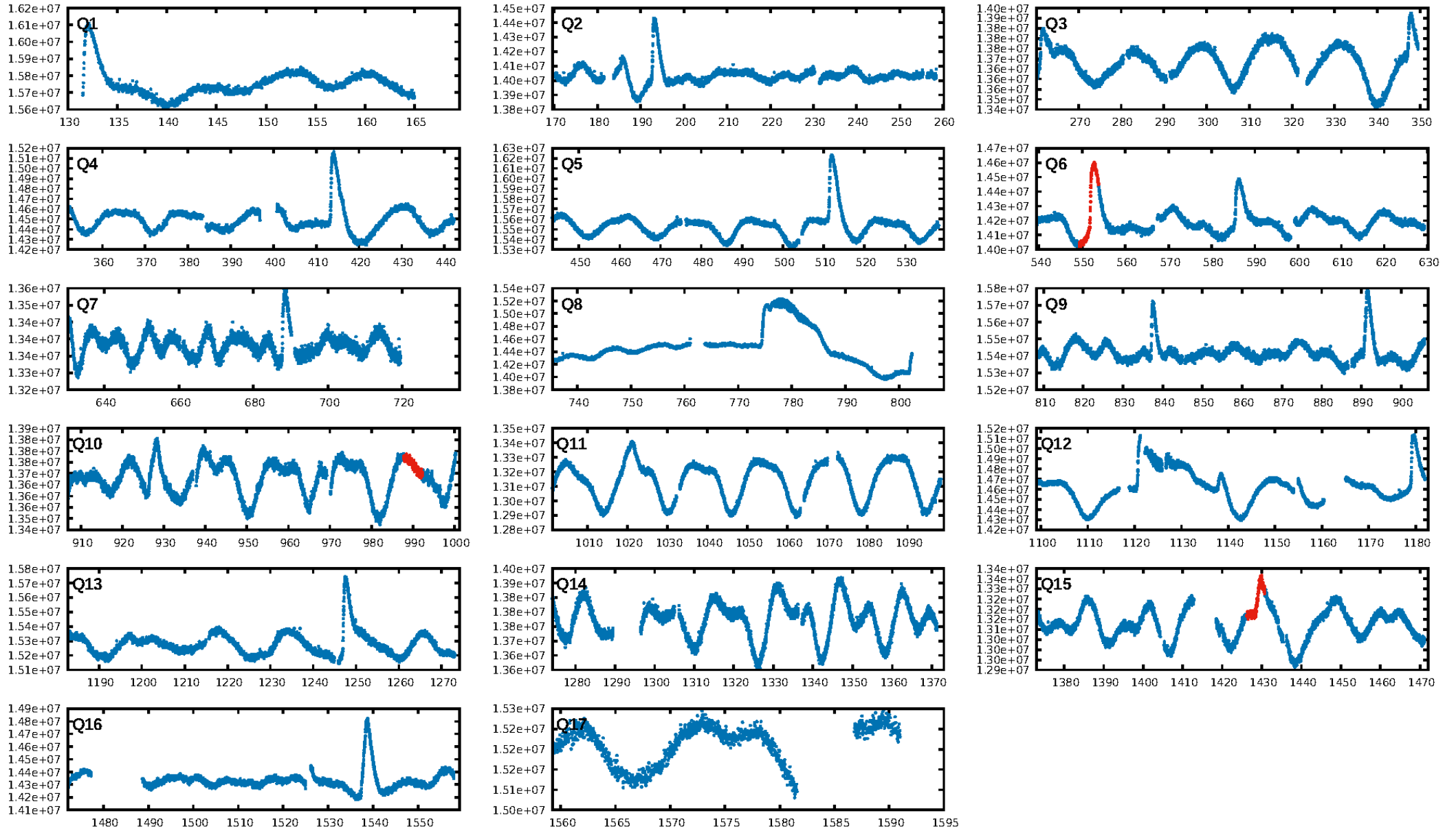
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.41σ]
LongPeriod-sig: 100.0% [20.91σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 99.7%
Bootstrap-pfa: 9.91e-17
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.1139
Centroid-sig: 0.0%
Centroid-so: 1.190 arcsec [0.94σ]
OotOffset-rm: 3.972 arcsec [3.73σ]
KicOffset-rm: 3.939 arcsec [6.76σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [3/3]

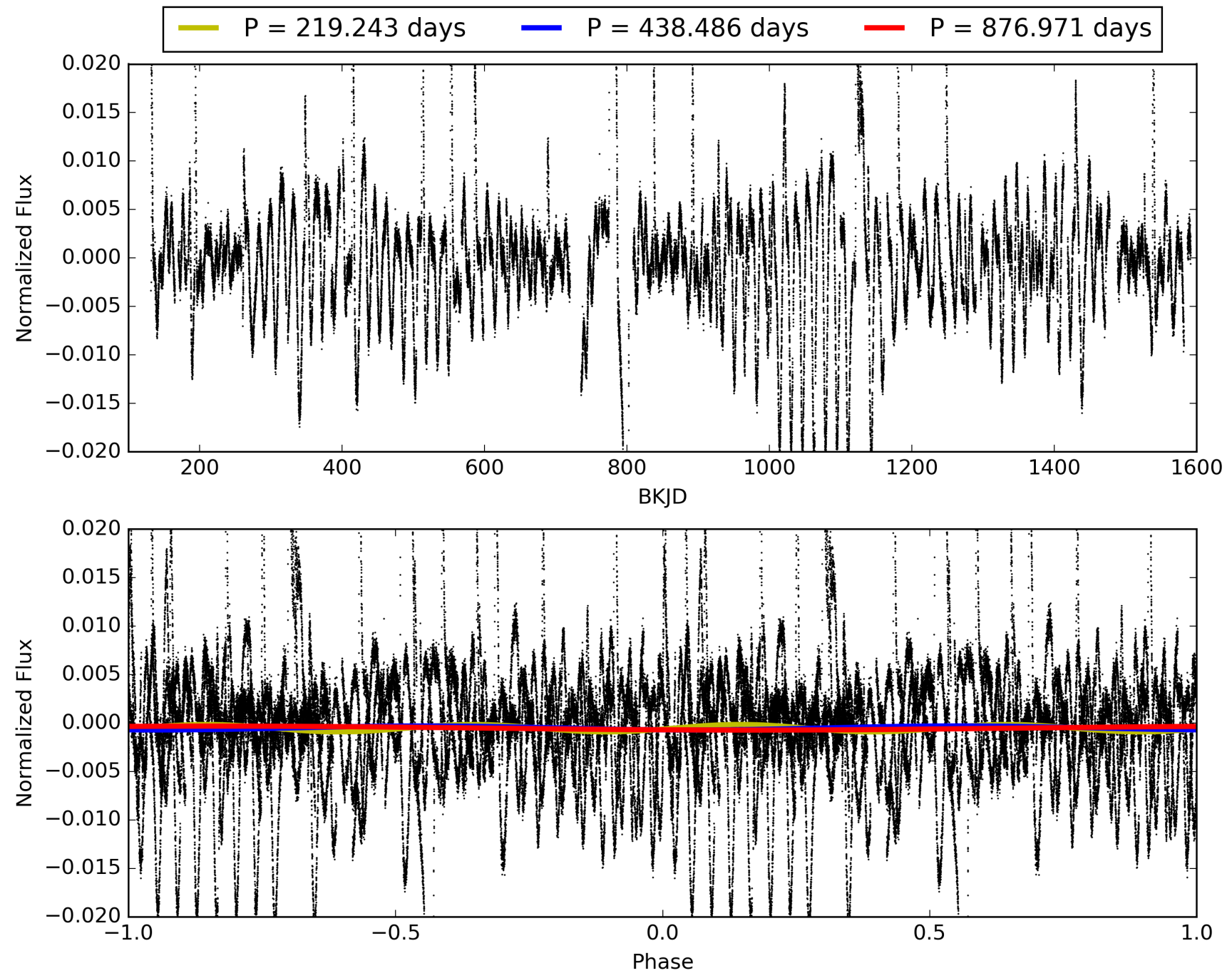
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 13:44:36 Z

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

TCE 005565606-06, PDC Light Curves

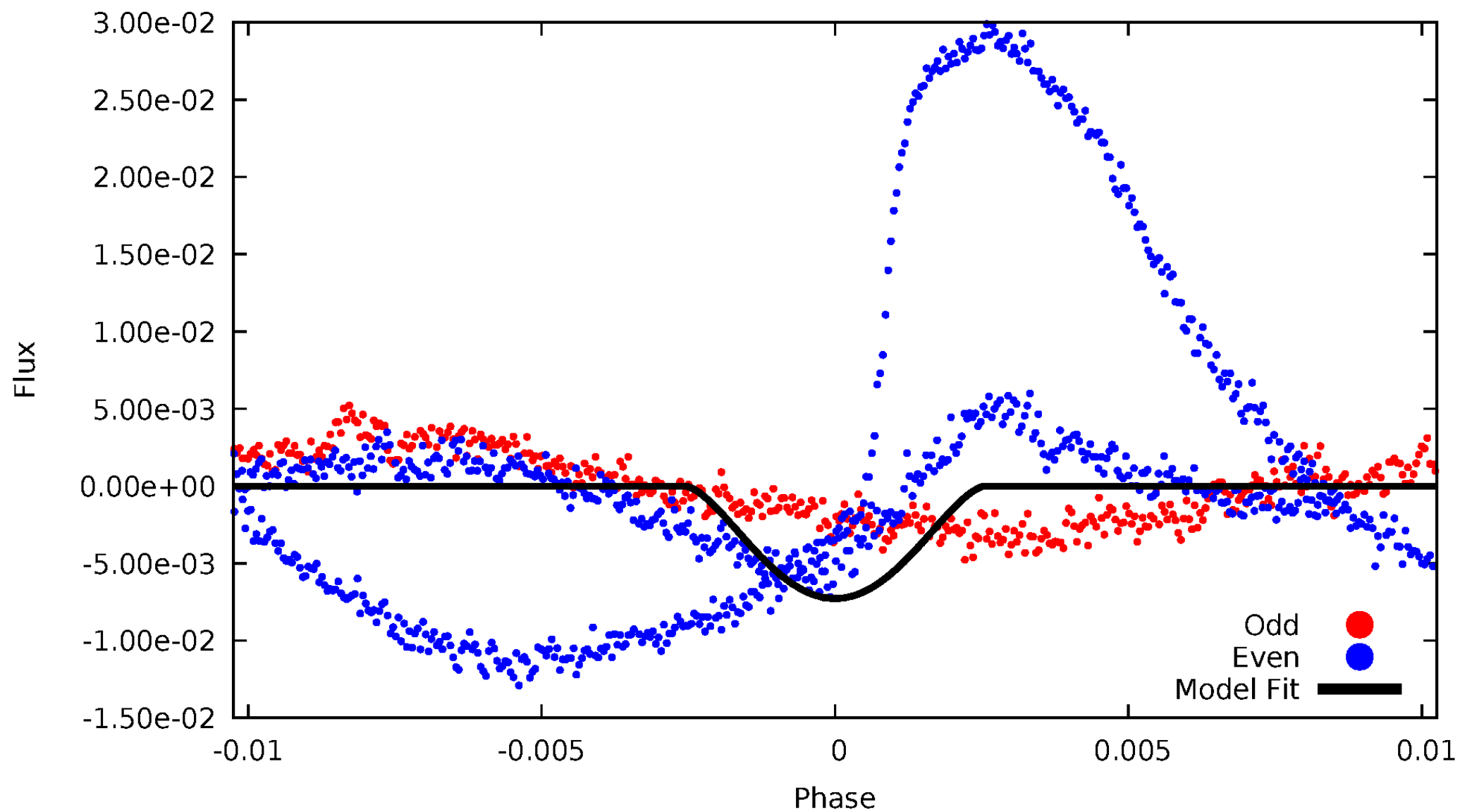


TCE 005565606-06



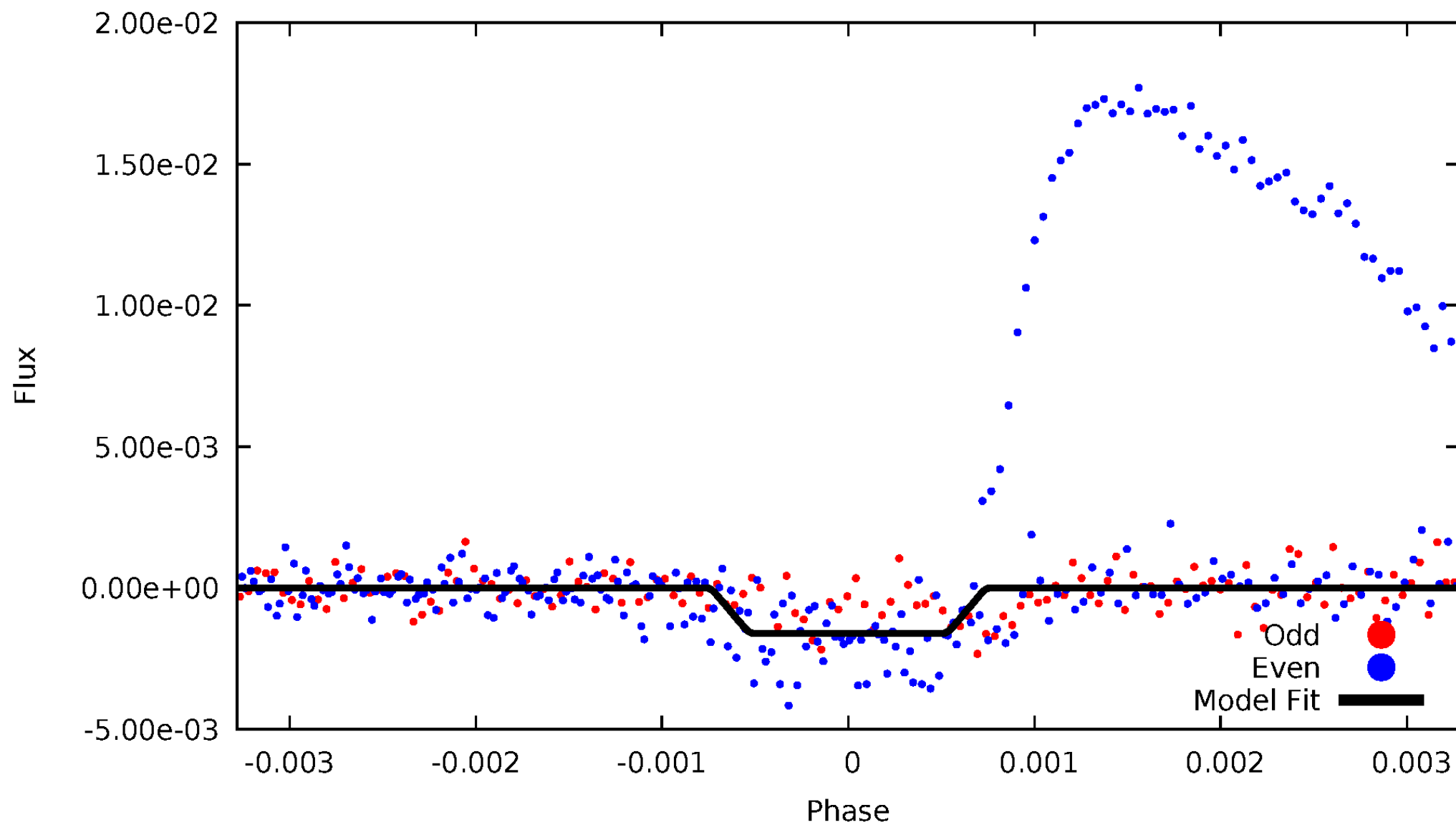
DV Odd/Even

TCE 005565606-06



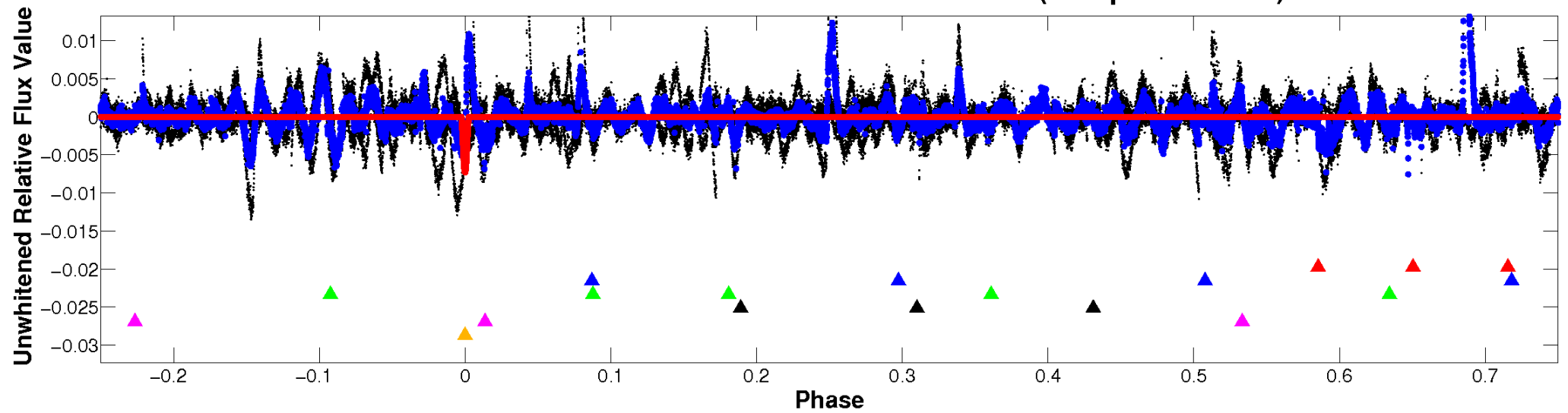
ALT Odd/Even

TCE 005565606-06

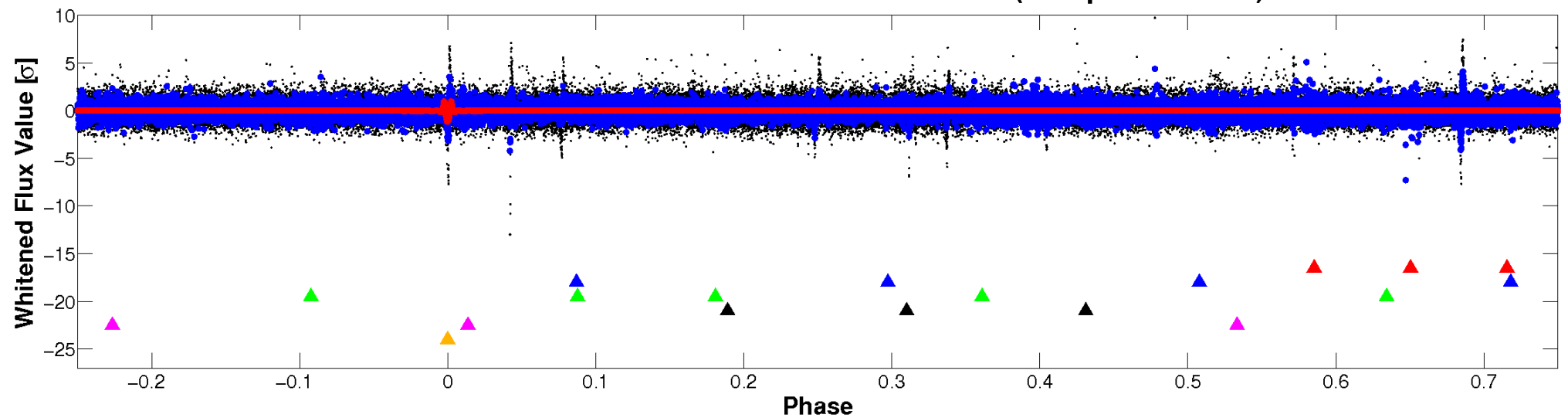


Non-Whitened Vs. Whitened Light Curve

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

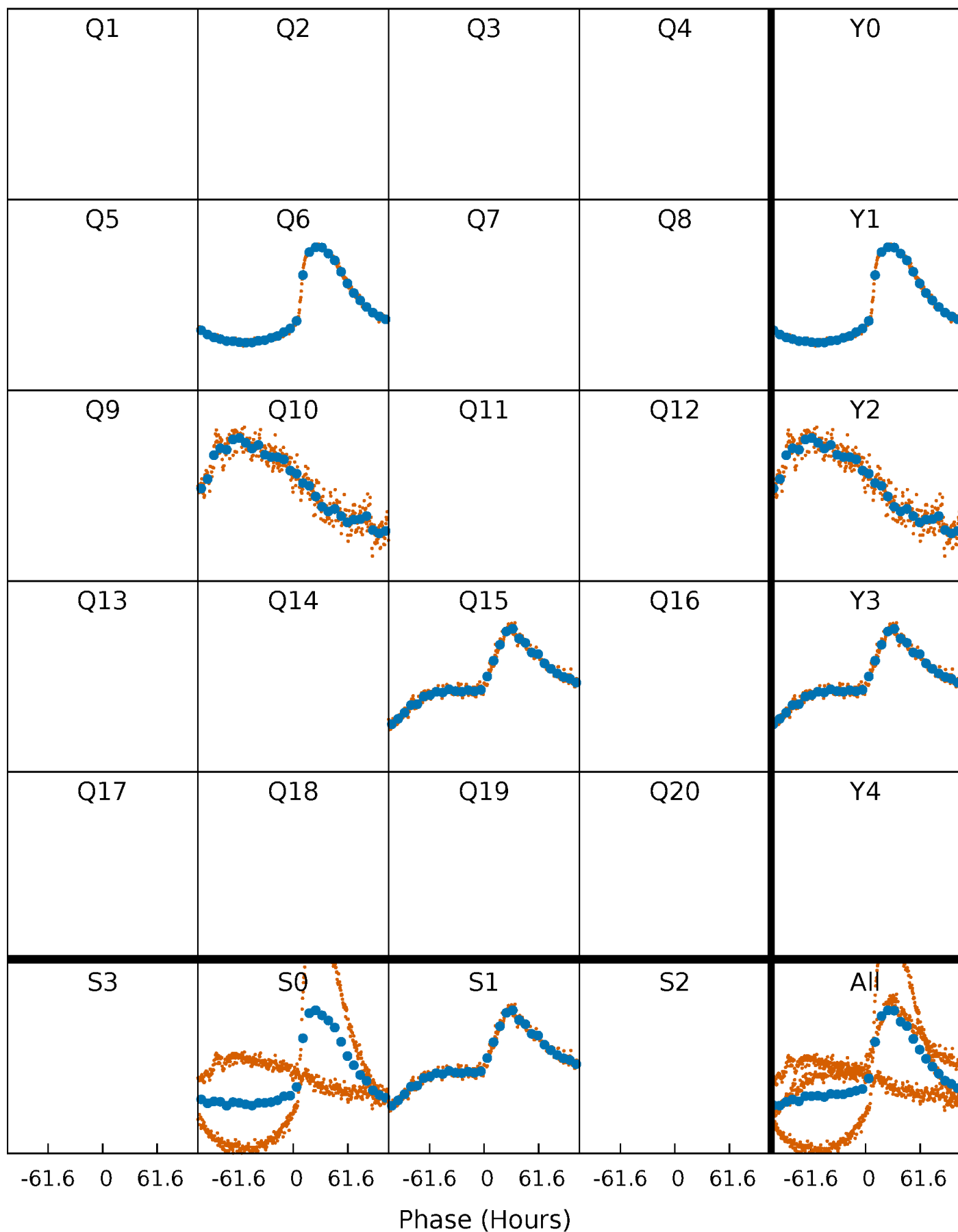


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



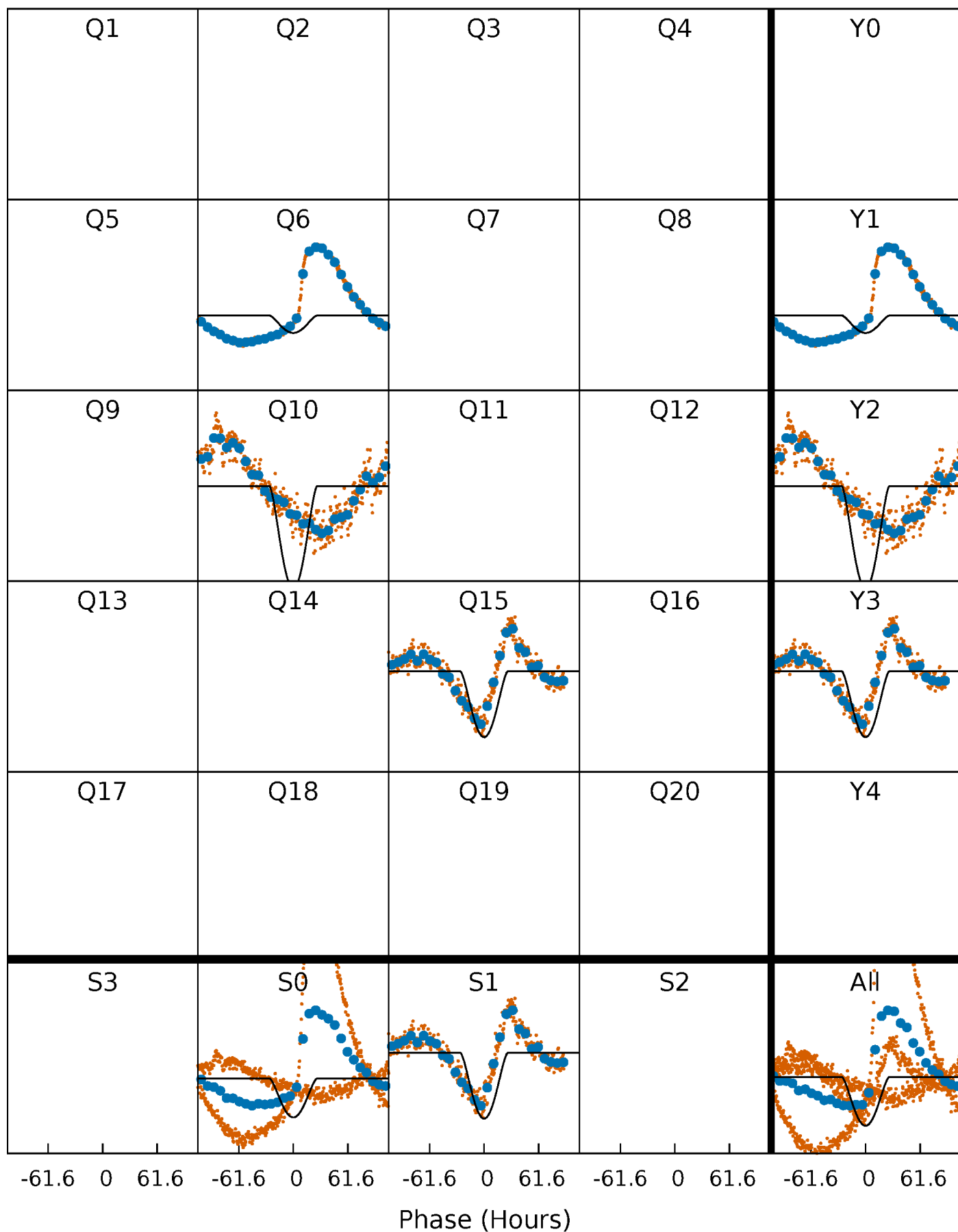
PDC Quarter-Phased Transit Curves

TCE 005565606-06 $P=438.485500$ Days $T_0=551.537684$ (BKJD)



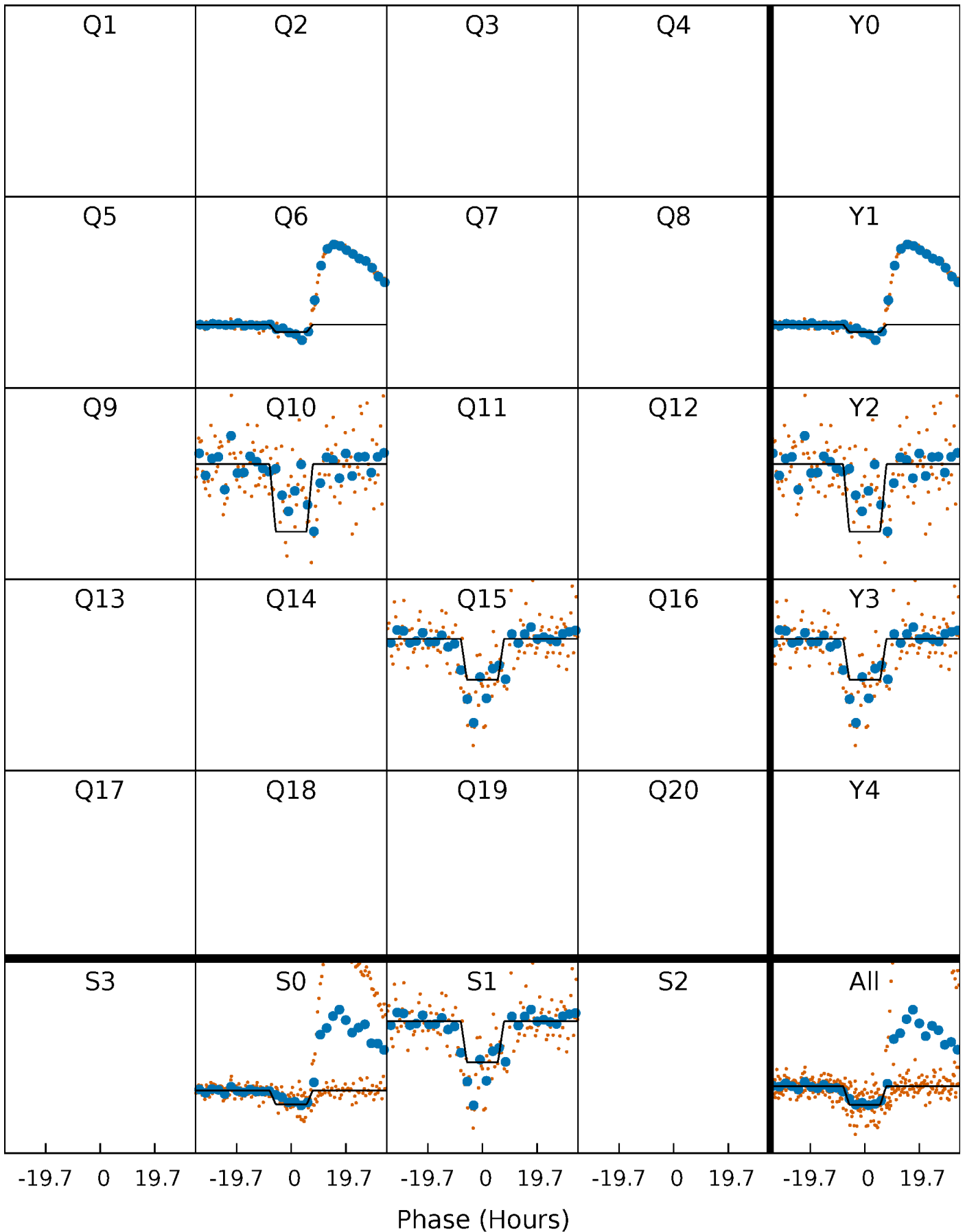
DV Quarter-Phased Transit Curves

TCE 005565606-06 P=438.485500 Days $T_0=551.537684$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

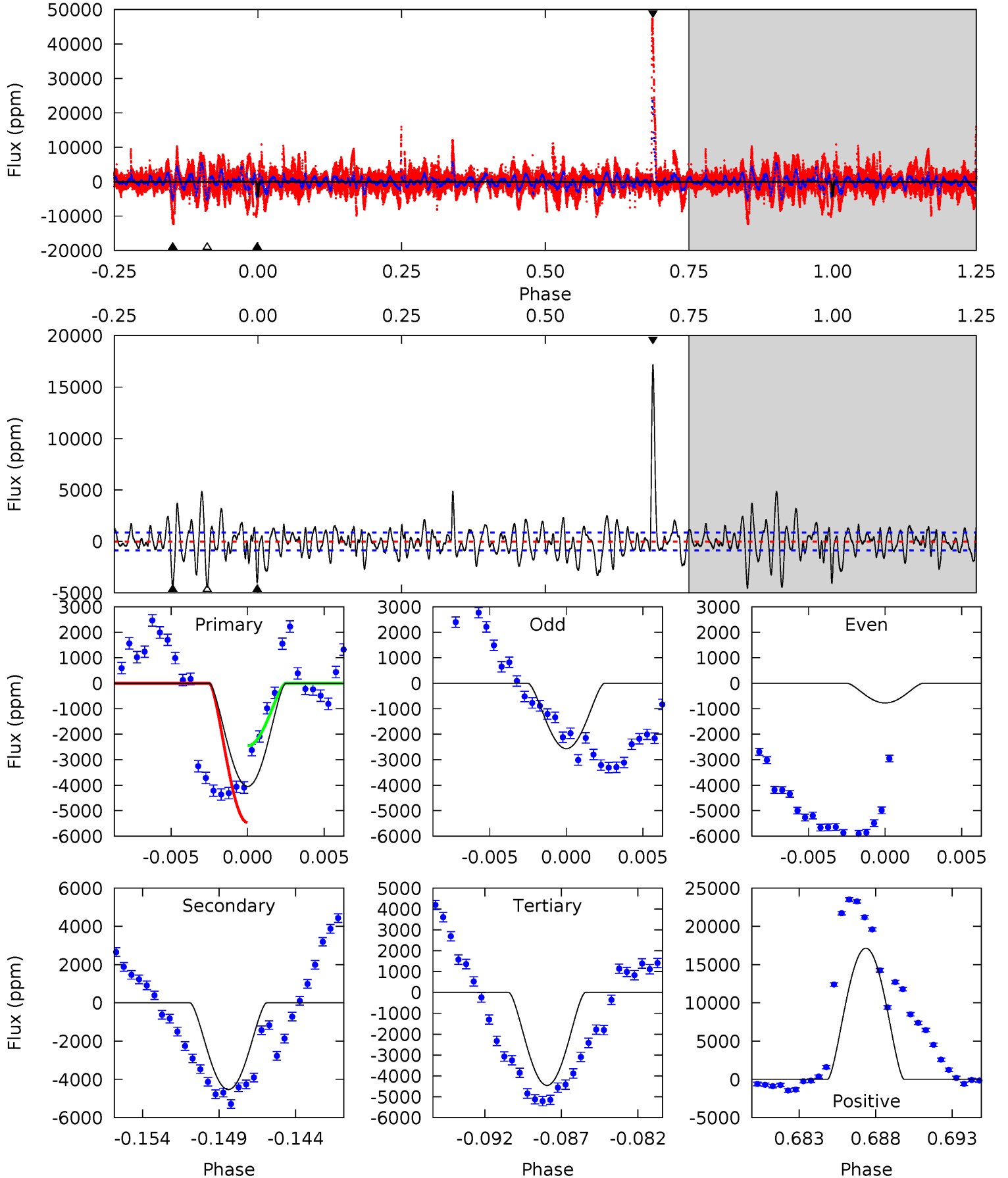
TCE 005565606-06 $P=438.538253$ Days $T_0=551.537436$ (BKJD)



DV Model-Shift Uniqueness Test

005565606-06, P = 438.485500 Days, E = 113.052184 Days

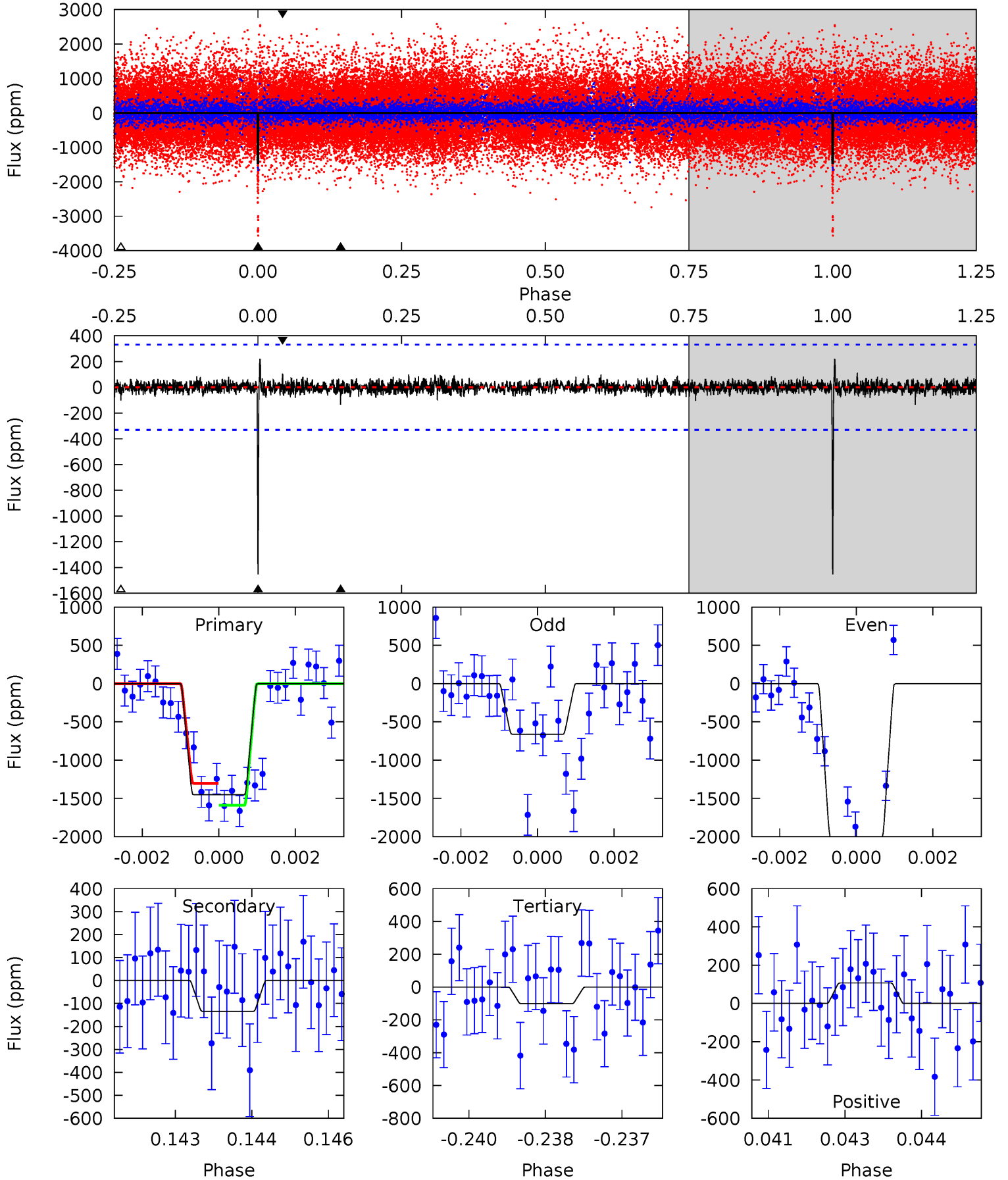
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	26.9	26.4	101.7	5.15	2.80	8.97	-2.40	-77.7	0.46	-74.8	5.17	0.54	0.79	8.96



Alt Model-Shift Uniqueness Test

005565606-06, P = 438.538253 Days, E = 112.999183 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
23.6	2.18	1.65	1.74	5.38	3.17	0.44	21.9	21.8	0.54	0.44	9.36	0.84	0.13	2.32



Stellar Parameters For KIC 005565606

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	4773^{+143}_{-143}	$4.588^{+0.045}_{-0.036}$	$-0.040^{+0.300}_{-0.300}$	$0.719^{+0.057}_{-0.063}$	$0.731^{+0.073}_{-0.060}$	$2.769^{+0.577}_{-0.397}$
	+3%/-3%	+1%/-1%	+750%/-750%	+8%/-9%	+10%/-8%	+21%/-14%
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 005565606-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4532 ± 169	$15.41^{+11.64}_{-10.30}$	247^{+8}_{-9}	3302^{+1559}_{-513}	11200^{+88147}_{-7662}
Alt.	-135 ± 62	$10.66^{+9.53}_{-7.53}$	246^{+9}_{-8}	2249^{+857}_{-302}	587^{+7311}_{-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

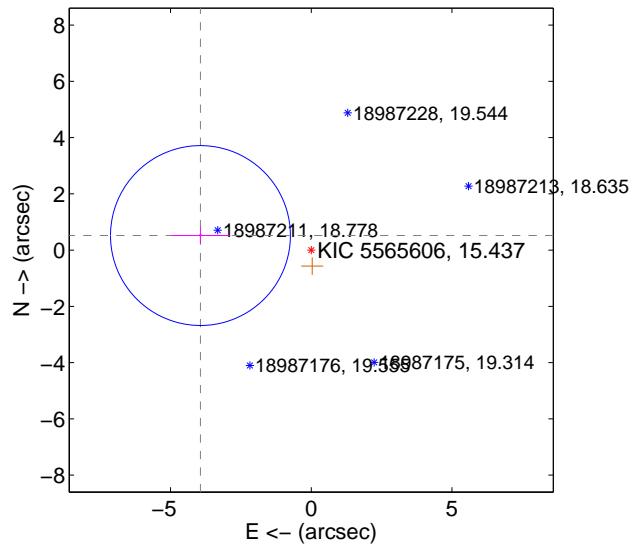
Supplemental centroid analysis for 005565606-06. Kepler magnitude: 15.44. Transit SNR 13.28

There are 2 quarters with good PRF difference image offsets

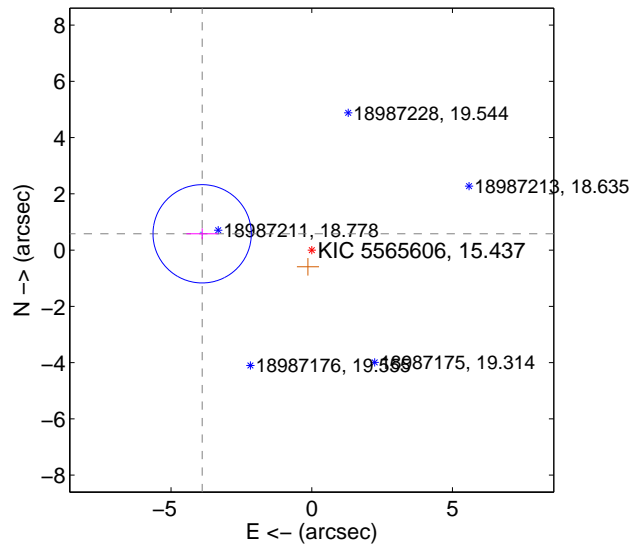
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.972 ± 1.066	3.73	3.938 ± 1.037	0.517 ± 0.296
PRF-fit source offset from KIC position	3.939 ± 0.582	6.76	3.896 ± 0.562	0.579 ± 0.193
photometric centroid source offset	1.19 ± 1.26	0.94	-1.13 ± 1.33	0.38 ± 0.30

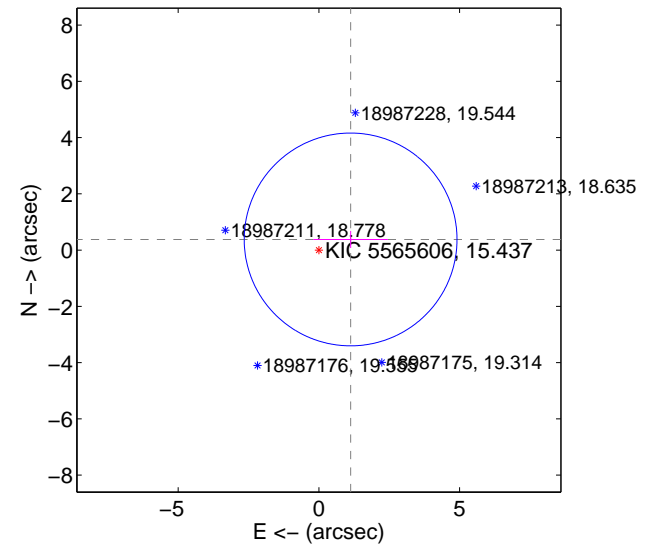
offset from difference PRF-fit to OOT PRF-fit



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.

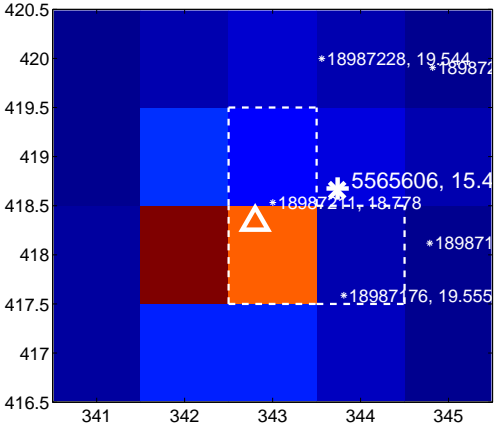
Q5 no difference image



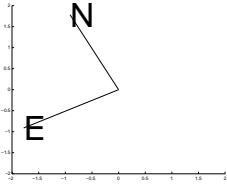
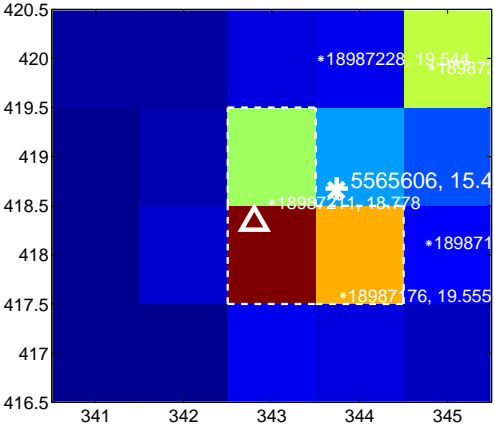
Q5 no OOT image



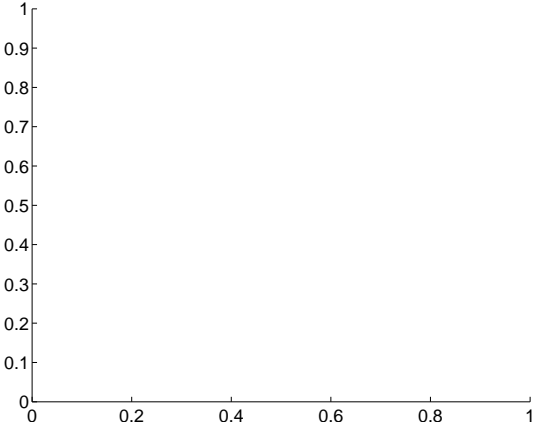
Q6 difference image



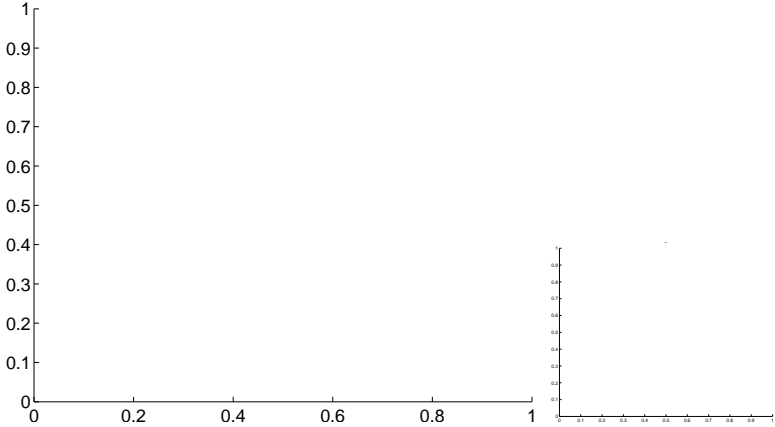
Q6 OOT image



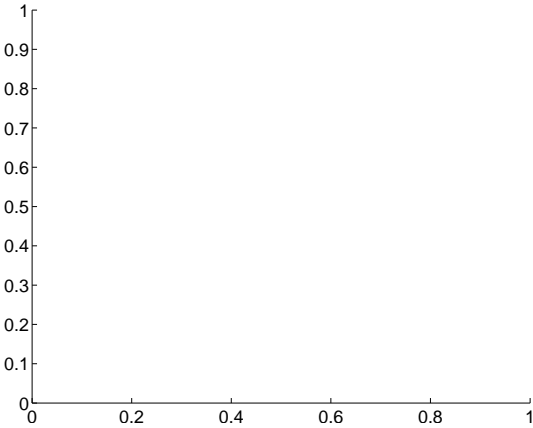
Q7 no difference image



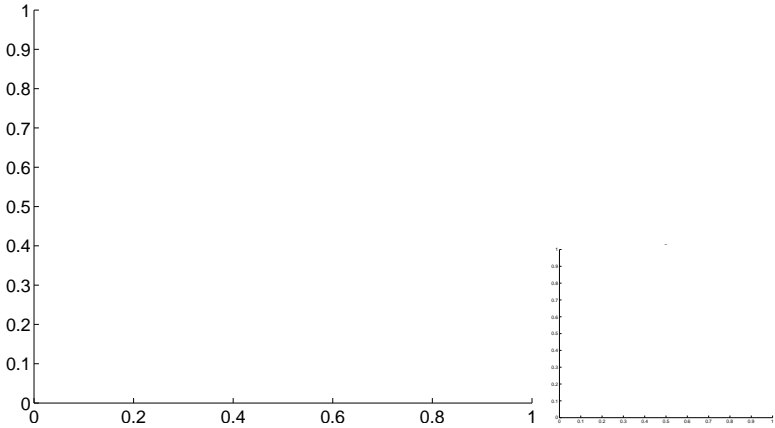
Q7 no OOT image



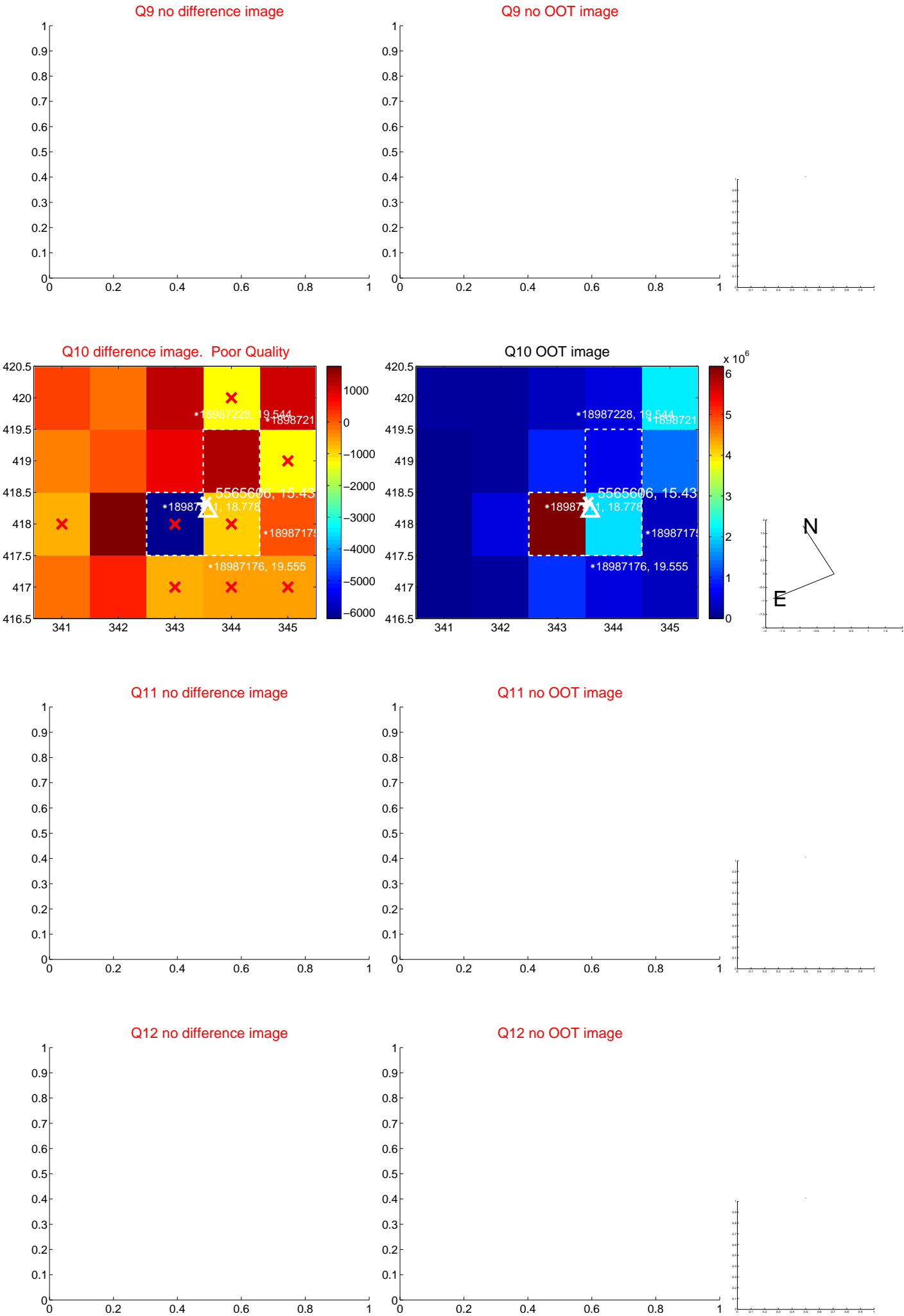
Q8 no difference image



Q8 no OOT image



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



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

Q13 no difference image



Q13 no OOT image



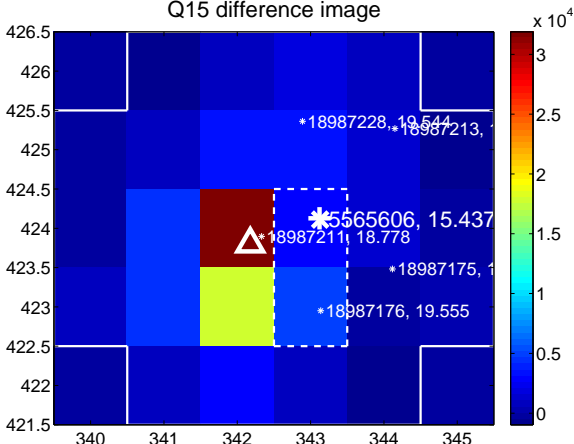
Q14 no difference image



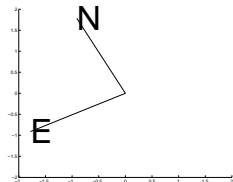
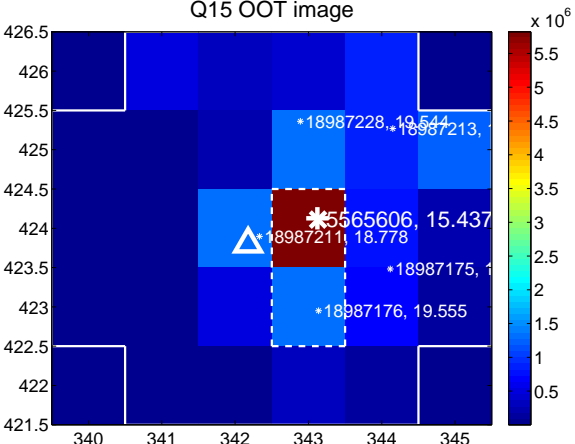
Q14 no OOT image



Q15 difference image



Q15 OOT image



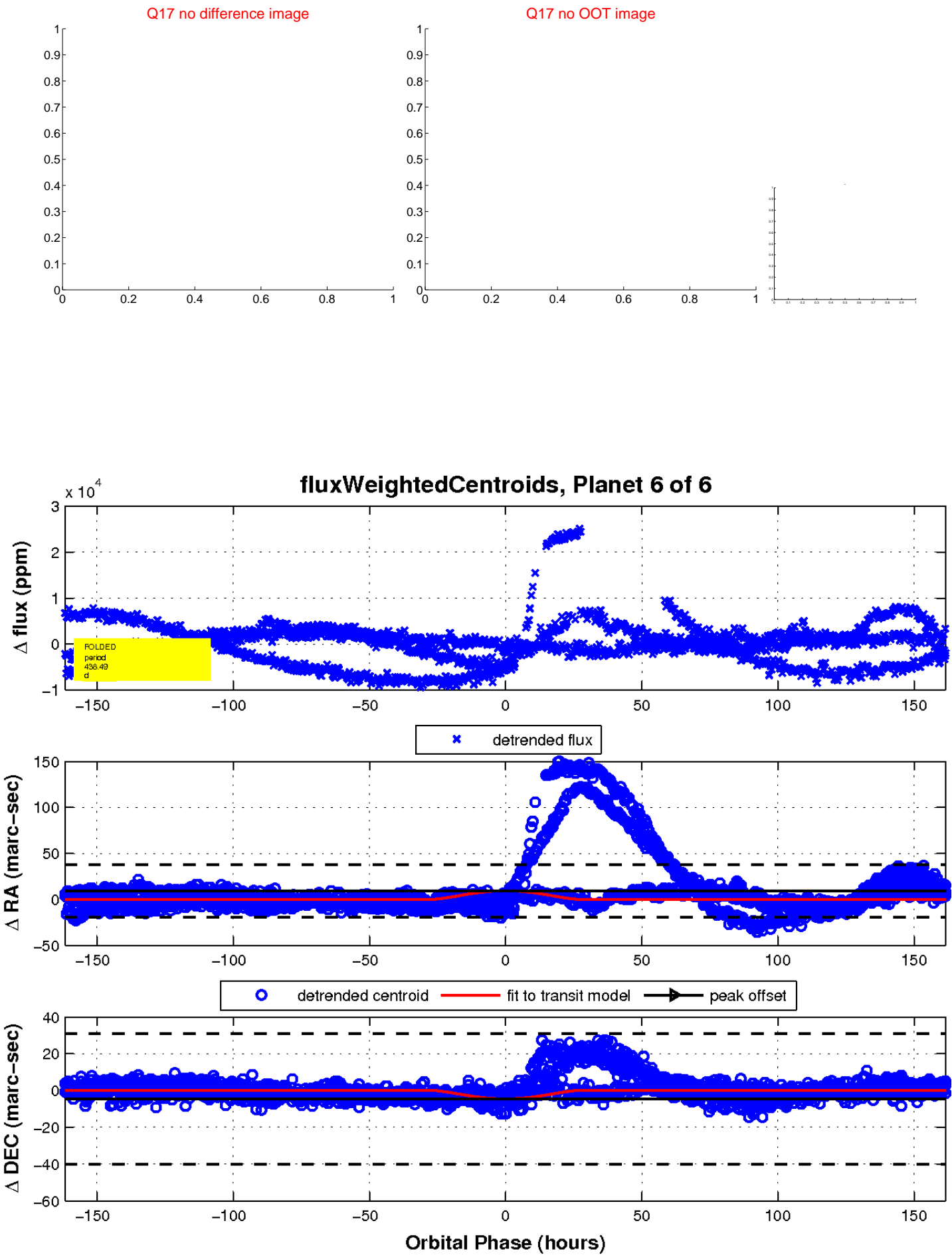
Q16 no difference image



Q16 no OOT image



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



UKIRT Image

