

KIC 007691547

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})
007691547-02	OBS	No	505.208481	487.955312	6807.7	4.561	25.1	11.5	0.94	6110	13.91	0.75
007691547-03	OBS	No	271.715151	403.428617	5.2	0.660	17.1	0.0	0.94	6110	0.26	1.71
007691547-04	OBS	No	362.014571	402.977650	1379.1	7.500	20.2	-1.0	0.94	6110	3.49	1.16
007691547-05	OBS	No	542.355802	412.936210	5088.7	4.121	17.6	14.5	0.94	6110	11.03	0.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007691547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007691547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
007691547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
007691547-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

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

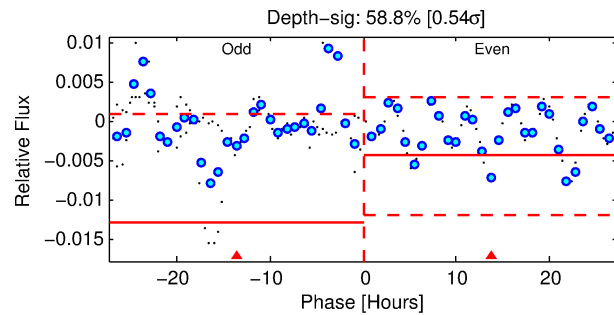
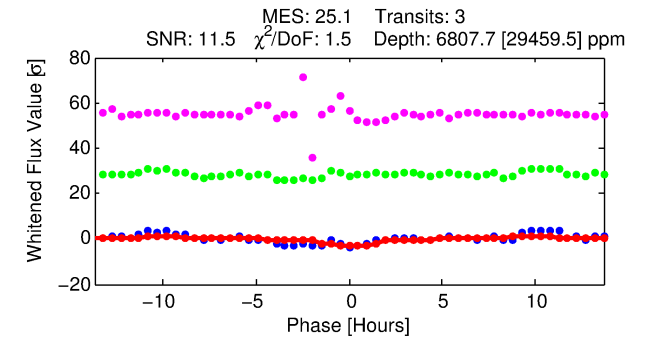
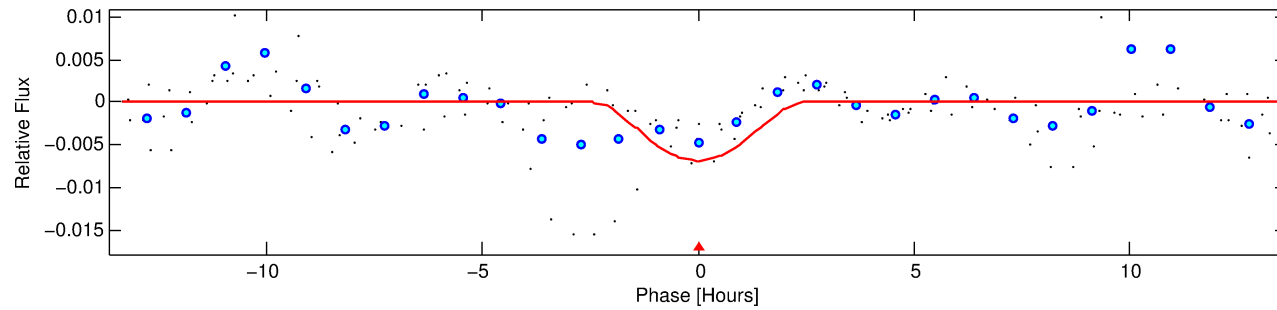
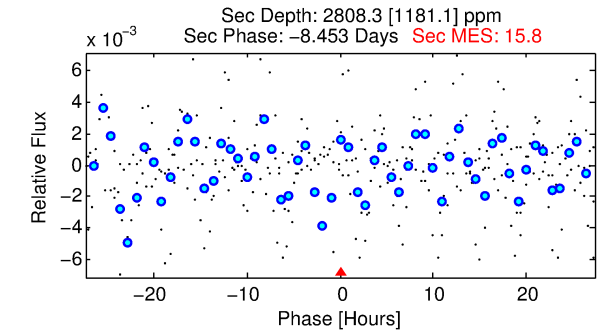
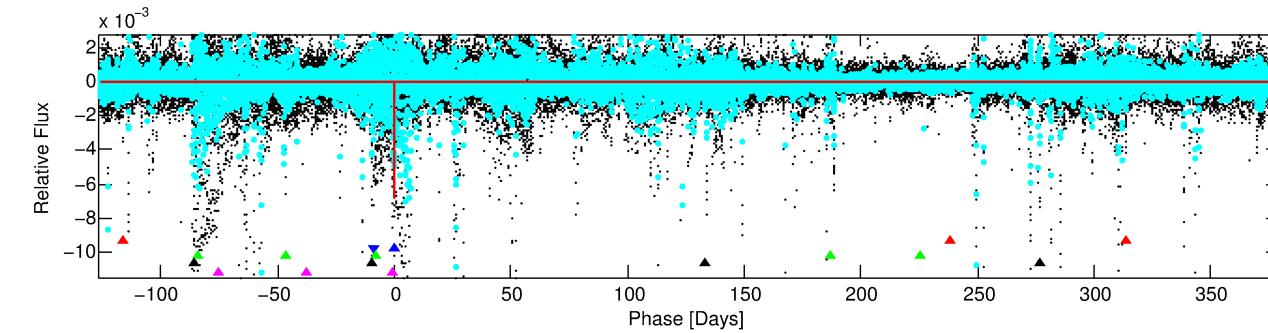
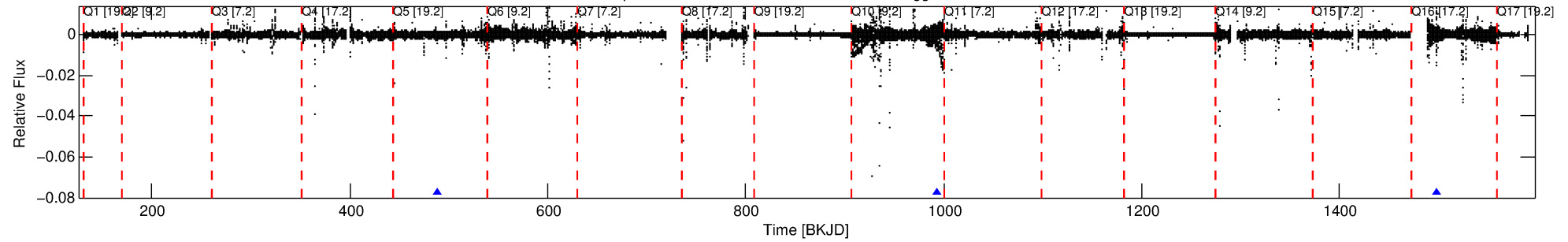
Ephemeris Match Information For 007691547-02

No Significant Match Found

DV One-Page Summary

KIC: 7691547 Candidate: 2 of 5 Period: 505.208 d

Kp: 14.46 R*: 0.94 Rs Teff: 6110.0 K Logg: 4.46 Fe/H: -0.440



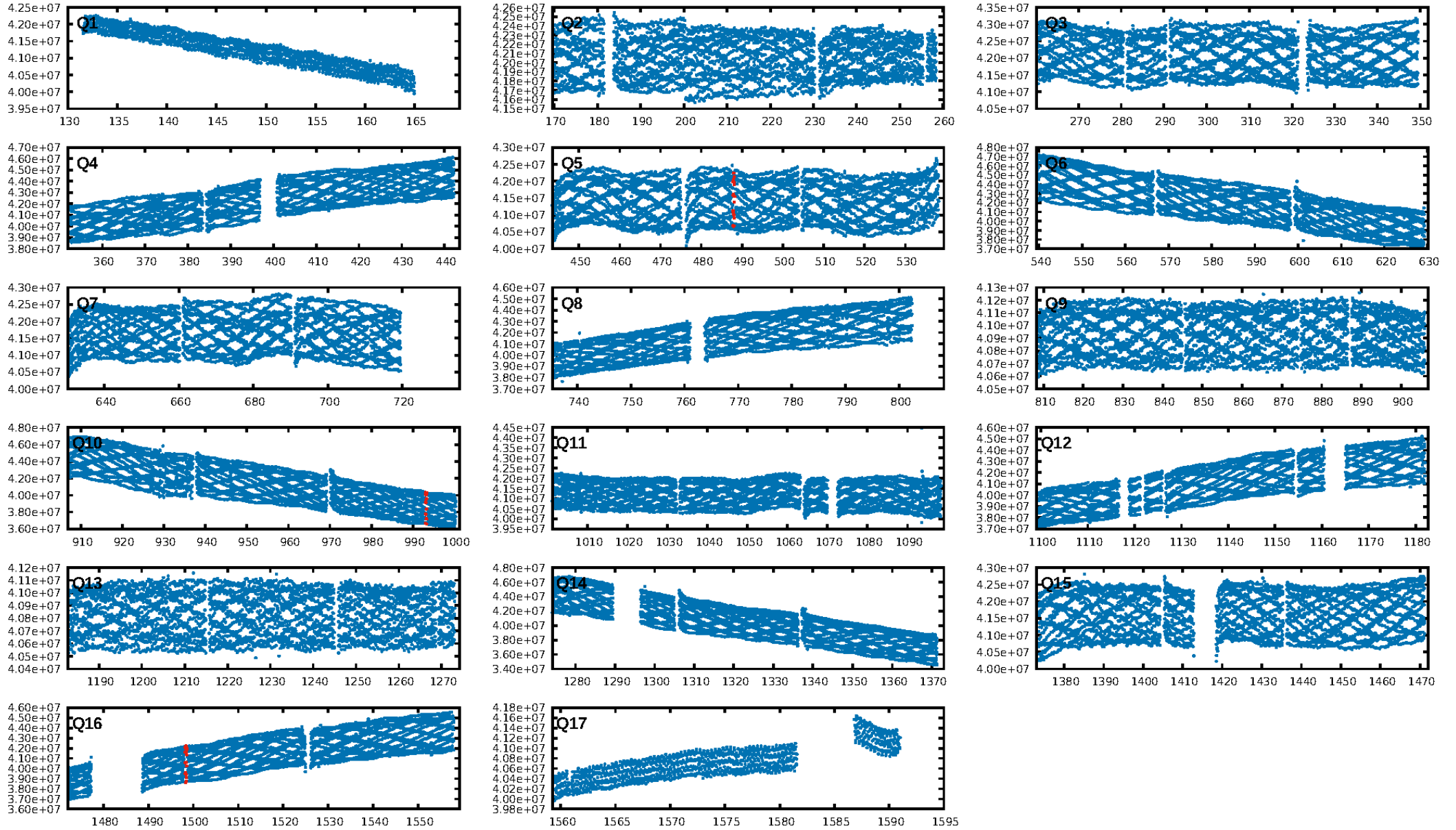
DV Fit Results:

Period = 505.20848 [0.00863] d
Epoch = 487.9553 [0.0099] BKJD
Rp/R* = 0.1360 [0.4527]
a/R* = 456.17 [245.00]
b = 1.00 [1.03]
Seff = 0.75 [0.29]
Teq = 237 [23] K
Rp = 13.91 [46.46] Re
a = 1.2120 [0.2965] AU
Ag = 11732.38 [78363.54] [0.15σ]
Teff = 3814 [6360] K [0.56σ]

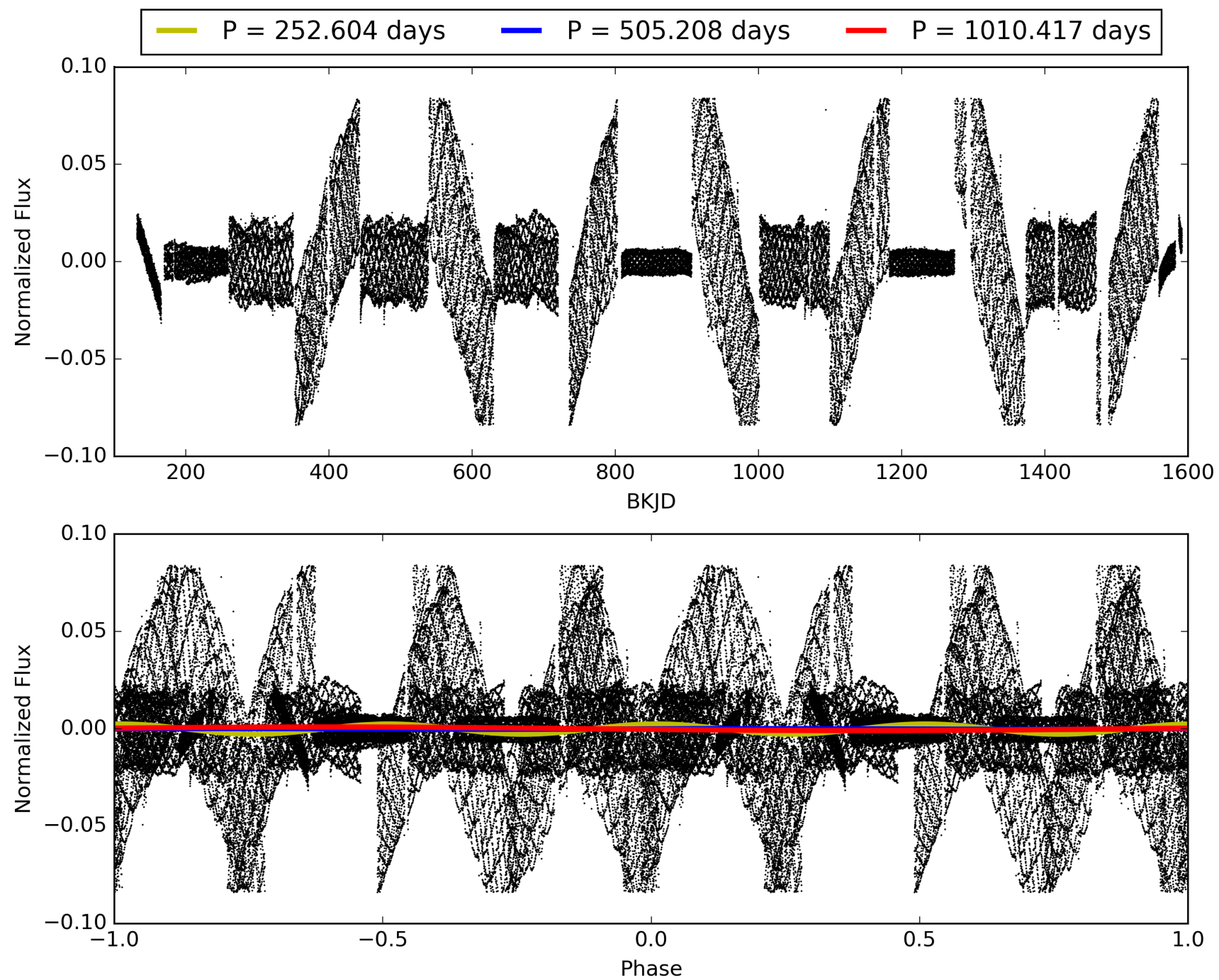
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [268.05σ]
LongPeriod-sig: 100.0% [145.05σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 38.4%
Bootstrap-pfa: 6.83e-09
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -1.191
Centroid-sig: 29.8%
Centroid-so: 0.761 arcsec [1.59σ]
OotOffset-rm: N/A
KicOffset-rm: N/A
OotOffset-st: 0/0/0 [0]
KicOffset-st: 0/0/0 [0]
DiffImageQuality-fgm: N/A
DiffImageOverlap-fno: 1.00 [2/2]

TCE 007691547-02, PDC Light Curves

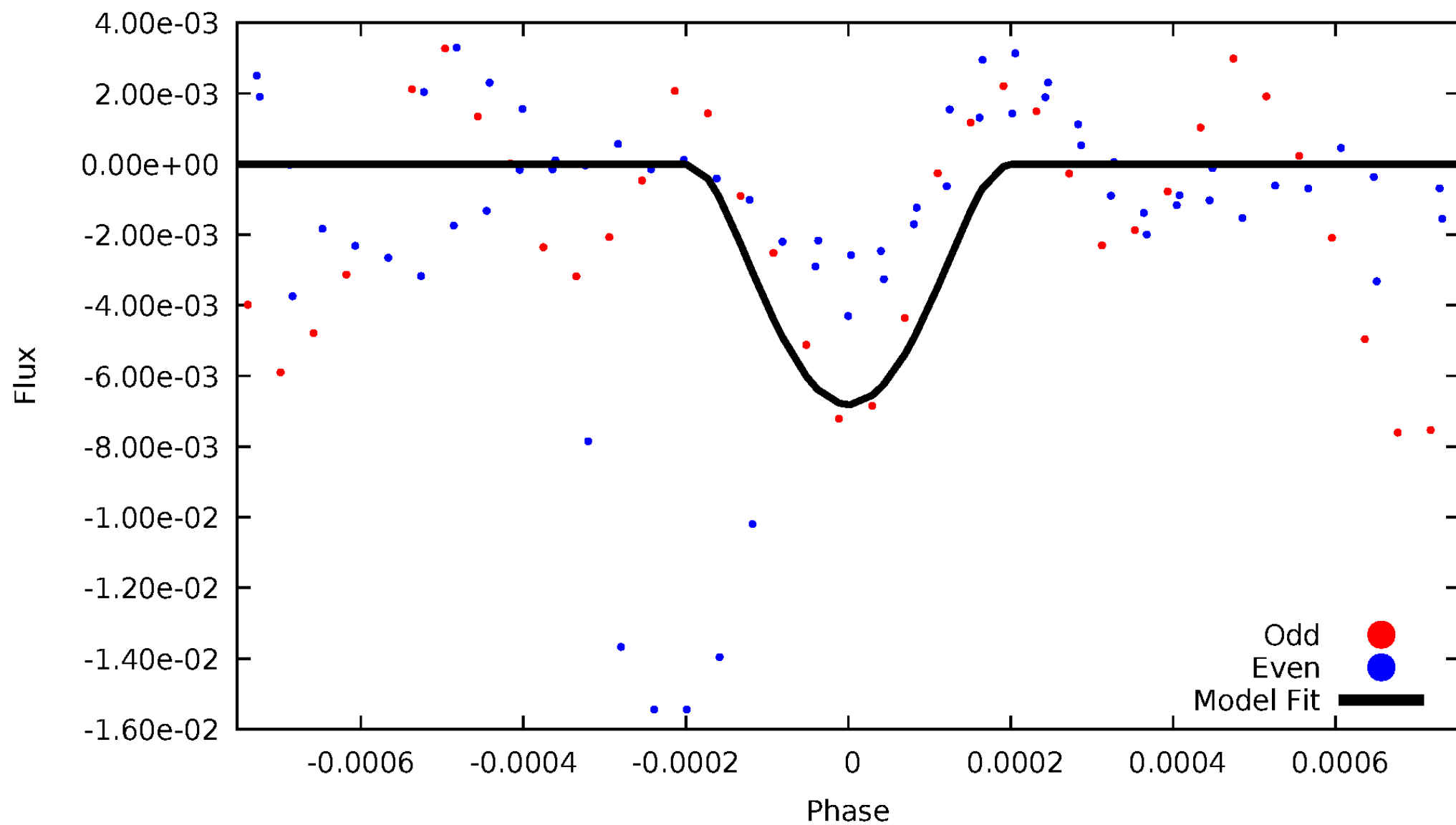


TCE 007691547-02



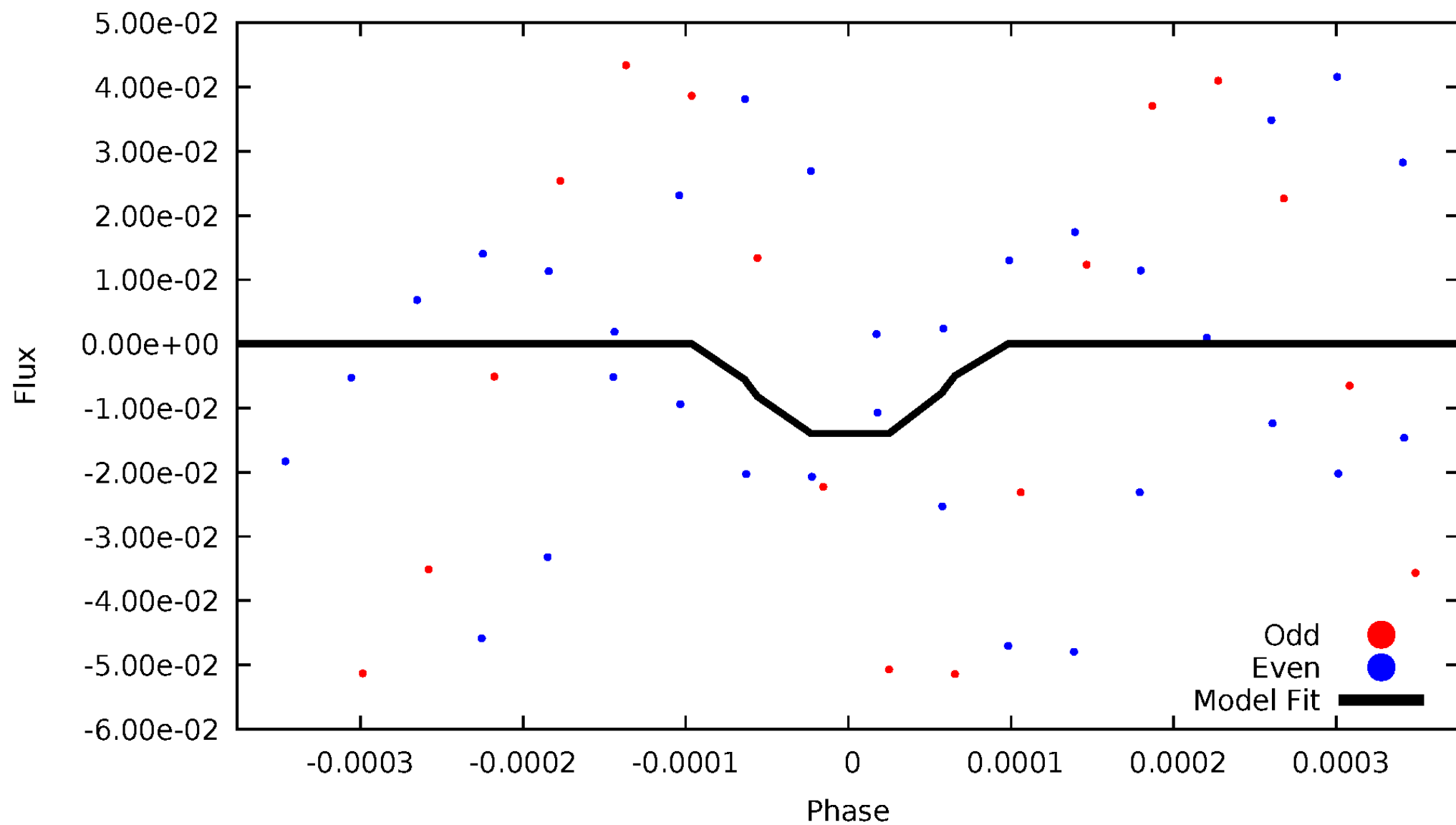
DV Odd/Even

TCE 007691547-02



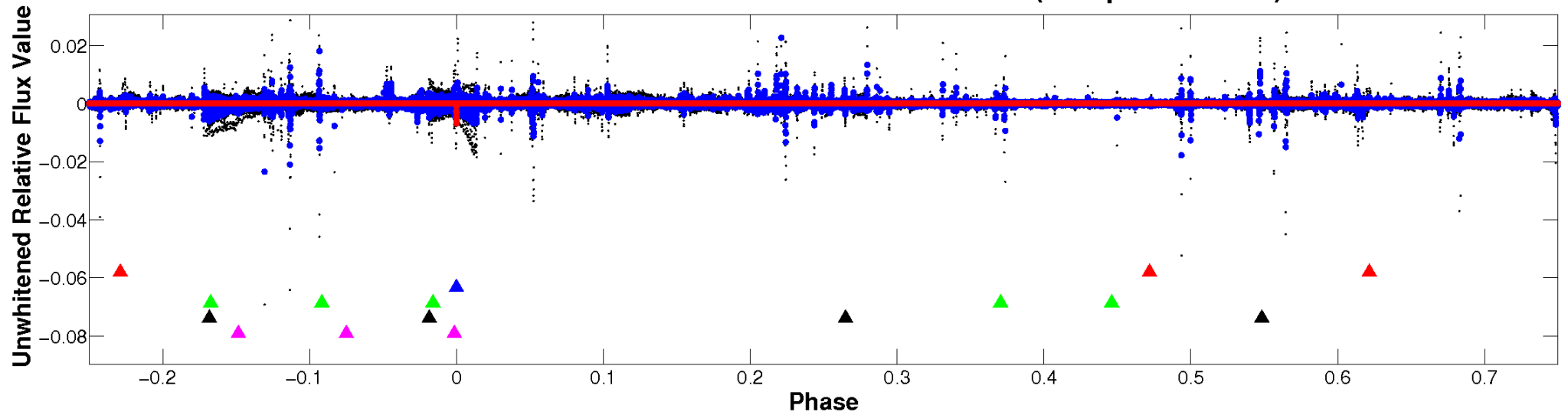
ALT Odd/Even

TCE 007691547-02

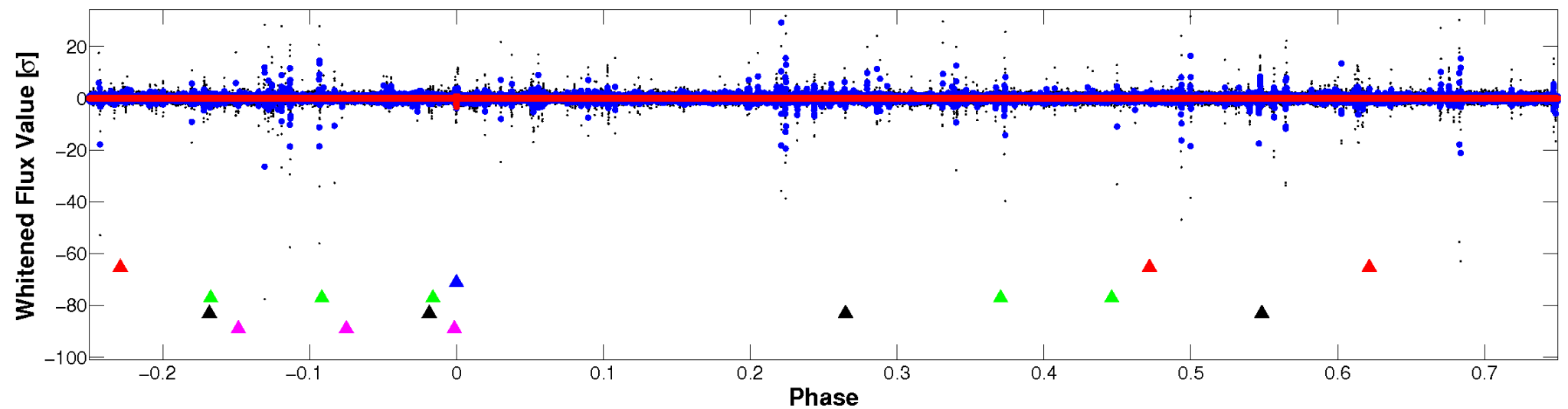


Non-Whitened Vs. Whitened Light Curve

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

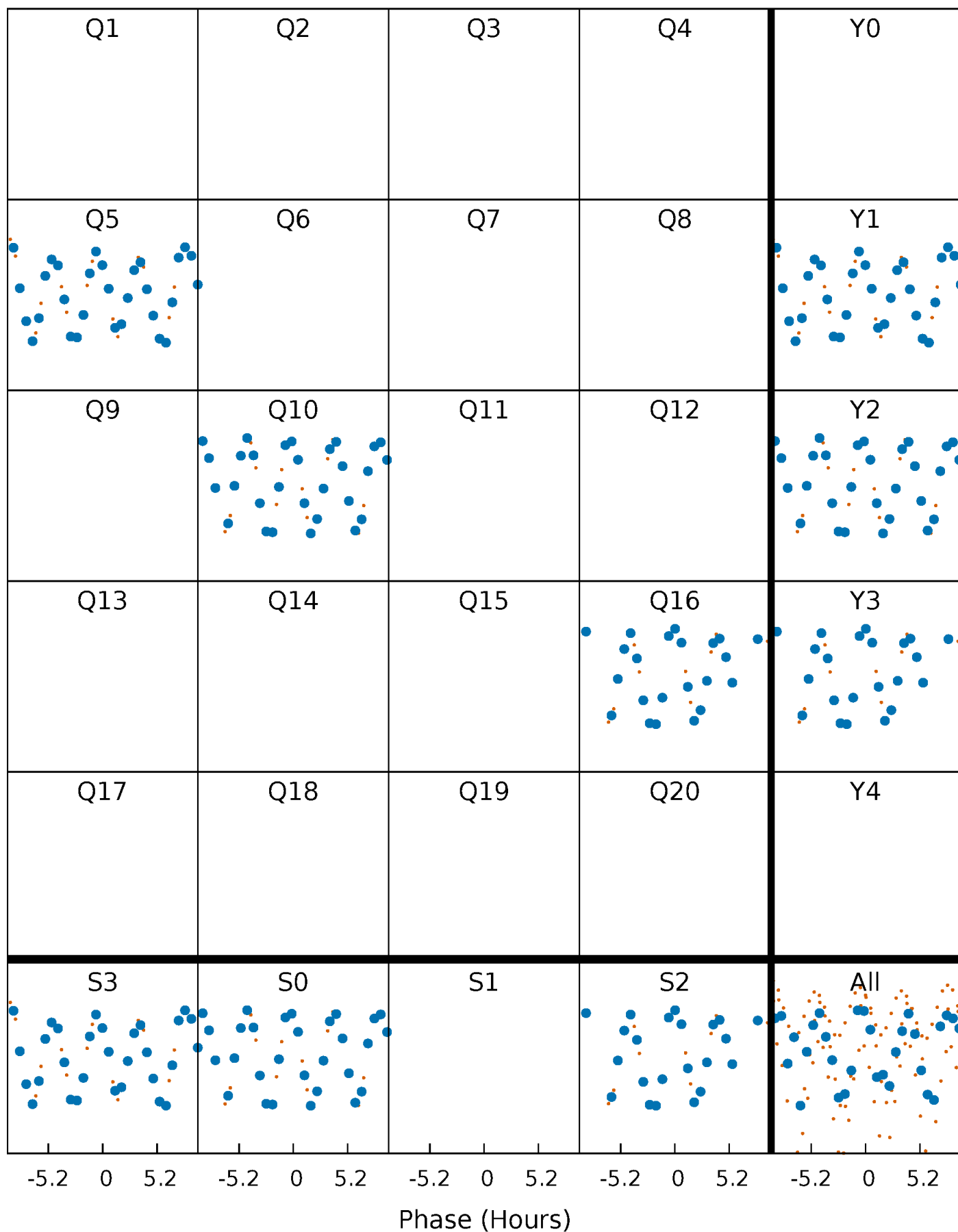


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



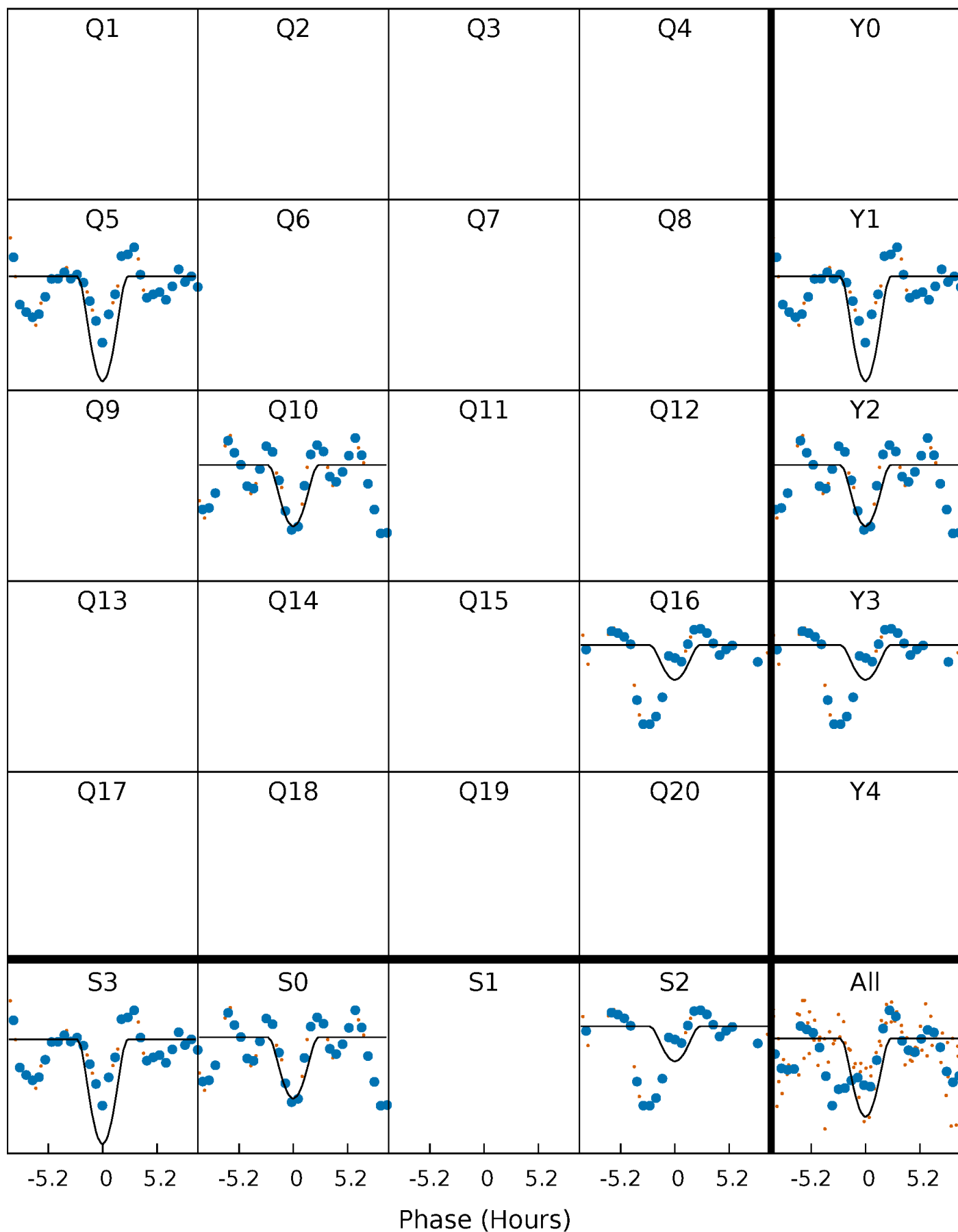
PDC Quarter-Phased Transit Curves

TCE 007691547-02 P=505.208481 Days $T_0=487.955312$ (BKJD)



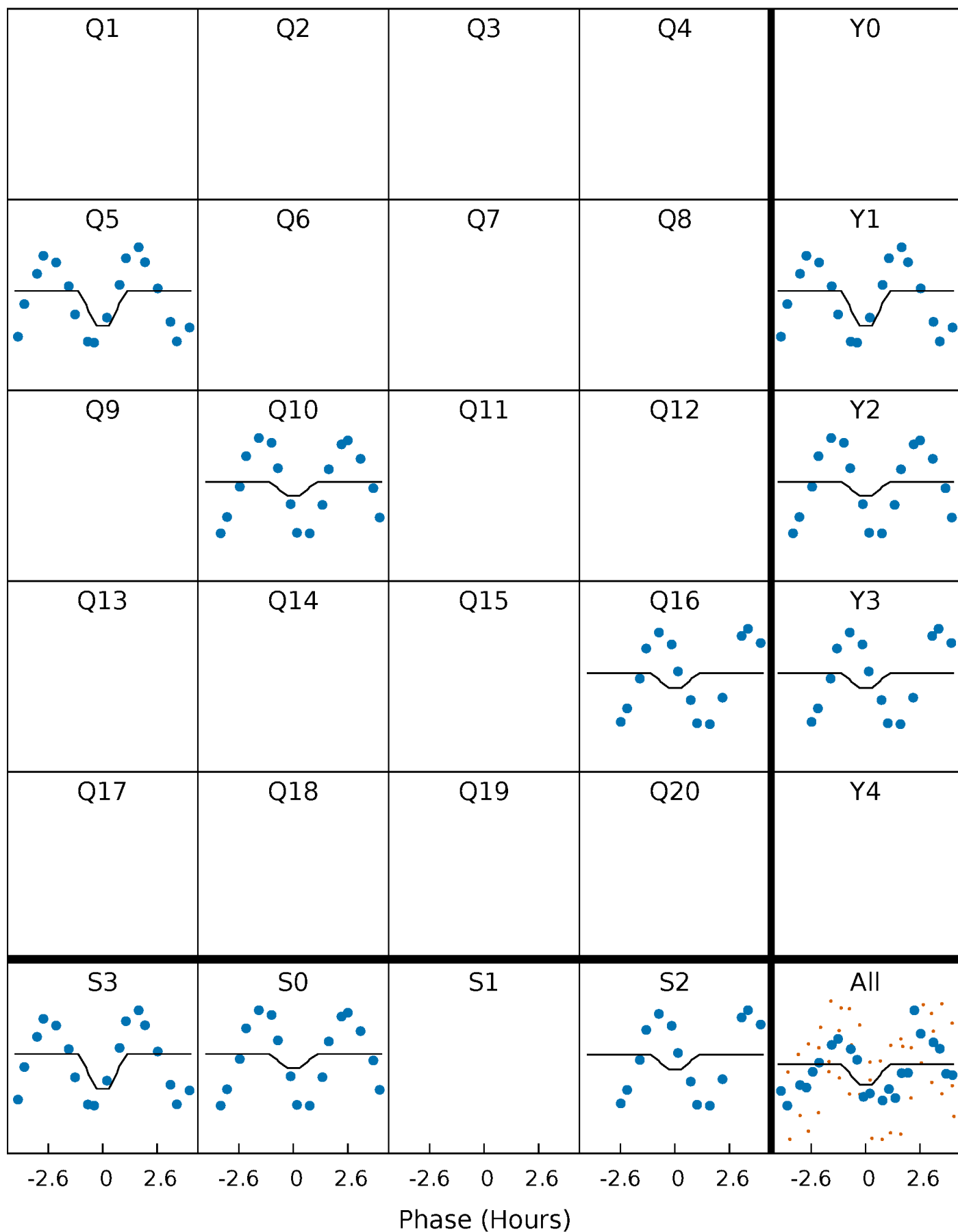
DV Quarter-Phased Transit Curves

TCE 007691547-02 $P=505.208481$ Days $T_0=487.955312$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

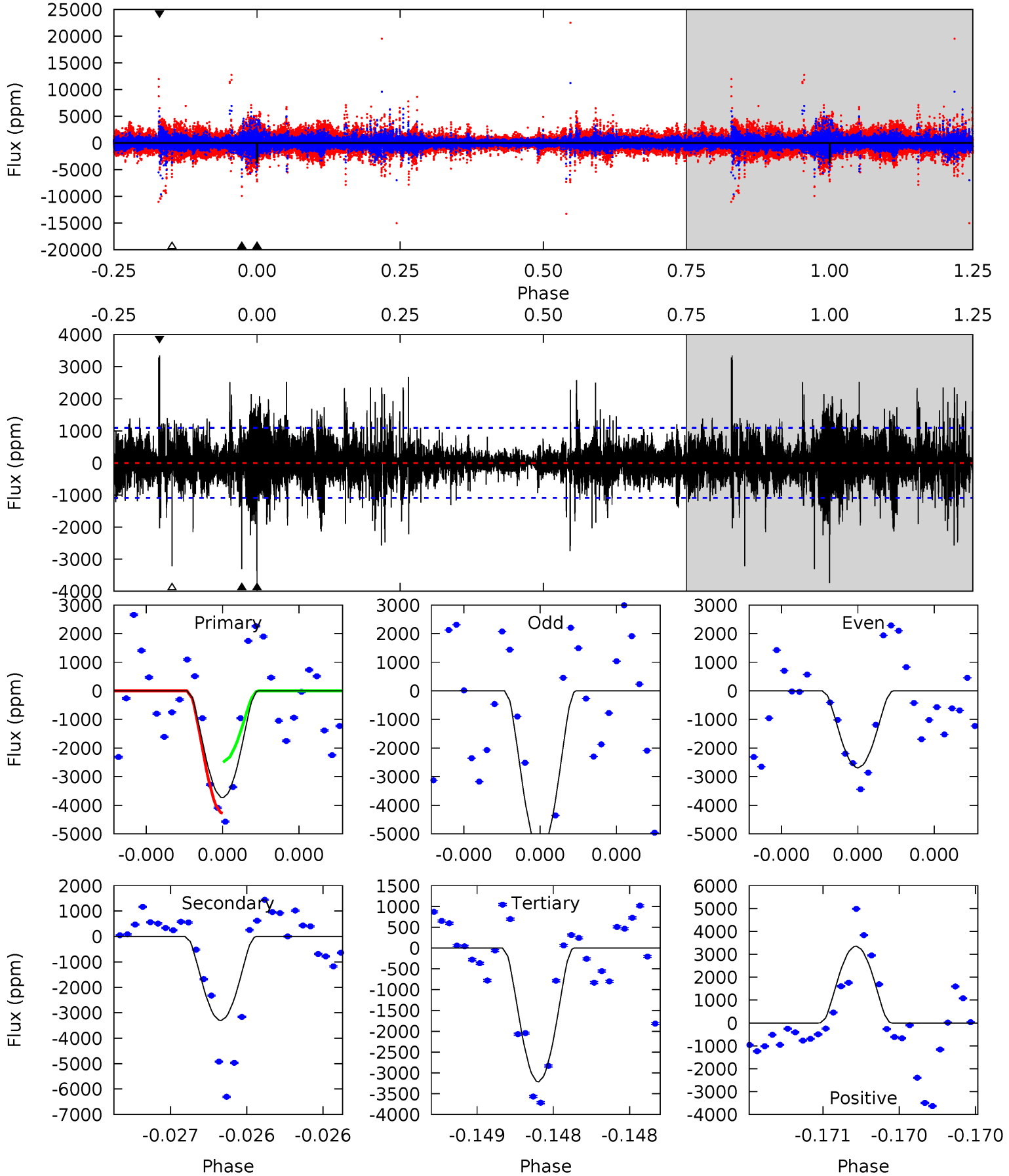
TCE 007691547-02 P=505.178904 Days $T_0=487.864353$ (BKJD)



DV Model-Shift Uniqueness Test

007691547-02, P = 505.208481 Days, E = 487.955312 Days

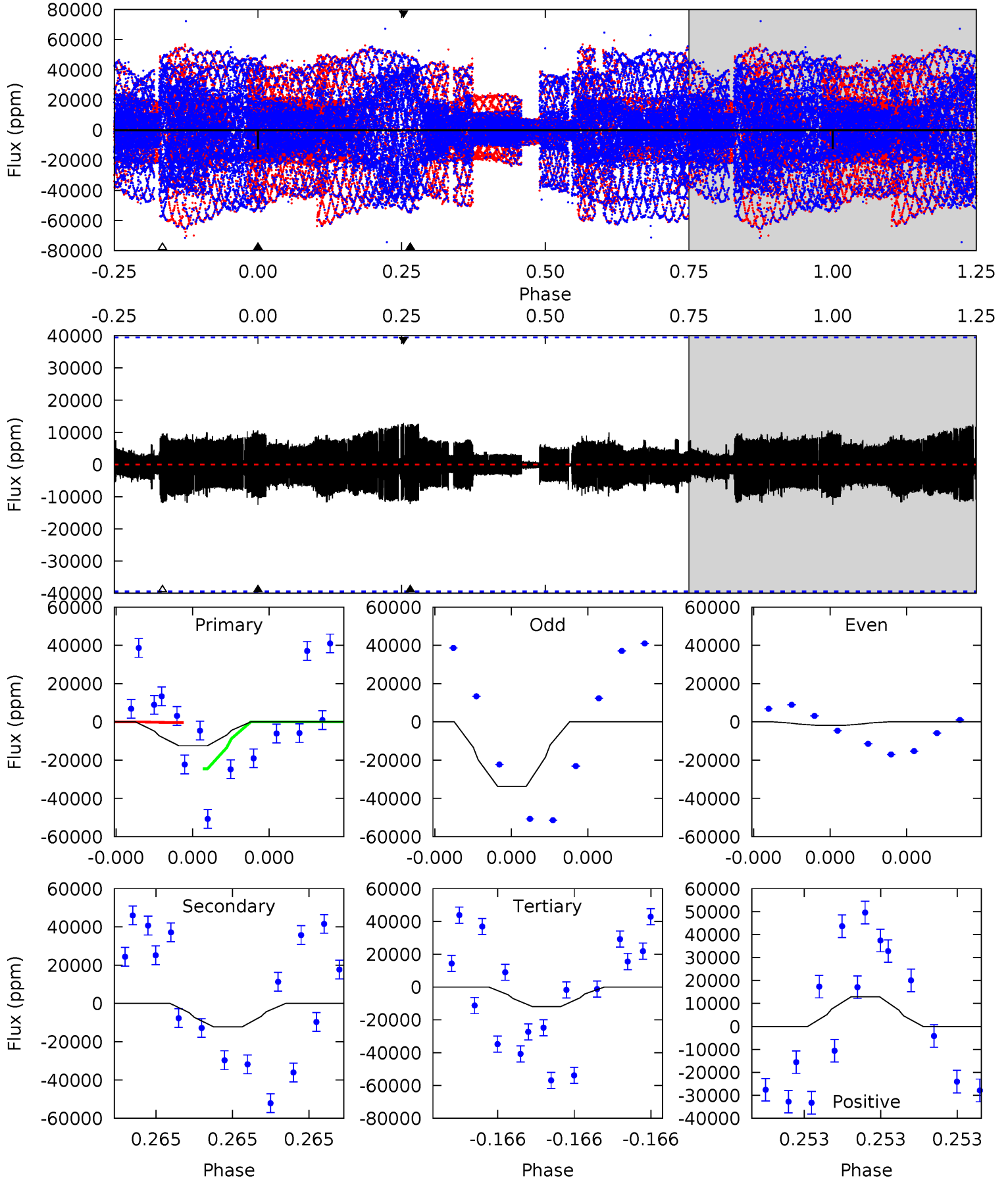
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.1	16.9	16.4	17.2	5.60	3.52	2.44	2.68	1.96	0.45	-0.26	5.16	1.07	0.47	4.43



Alt Model-Shift Uniqueness Test

007691547-02, P = 505.178904 Days, E = 487.864353 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.83	1.80	1.74	1.90	5.80	3.83	0.61	0.09	-0.06	0.05	-0.10	2.22	0.79	0.51	1.78



Stellar Parameters For KIC 007691547

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6110^{+165}_{-202}	$4.463^{+0.081}_{-0.202}$	$-0.440^{+0.300}_{-0.300}$	$0.937^{+0.266}_{-0.114}$	$0.930^{+0.117}_{-0.105}$	$1.593^{+0.544}_{-0.786}$
	+3%/-3%	+2%/-5%	+68%/-68%	+28%/-12%	+13%/-11%	+34%/-49%
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 007691547-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3304 ± 196	$37.83^{+39.13}_{-26.20}$	335^{+24}_{-18}	3094^{+1567}_{-526}	1898^{+17545}_{-1439}
Alt.	-12231 ± 6801	$35.64^{+41.46}_{-25.46}$	336^{+25}_{-17}	3751^{+2642}_{-848}	6465^{+74136}_{-5403}

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

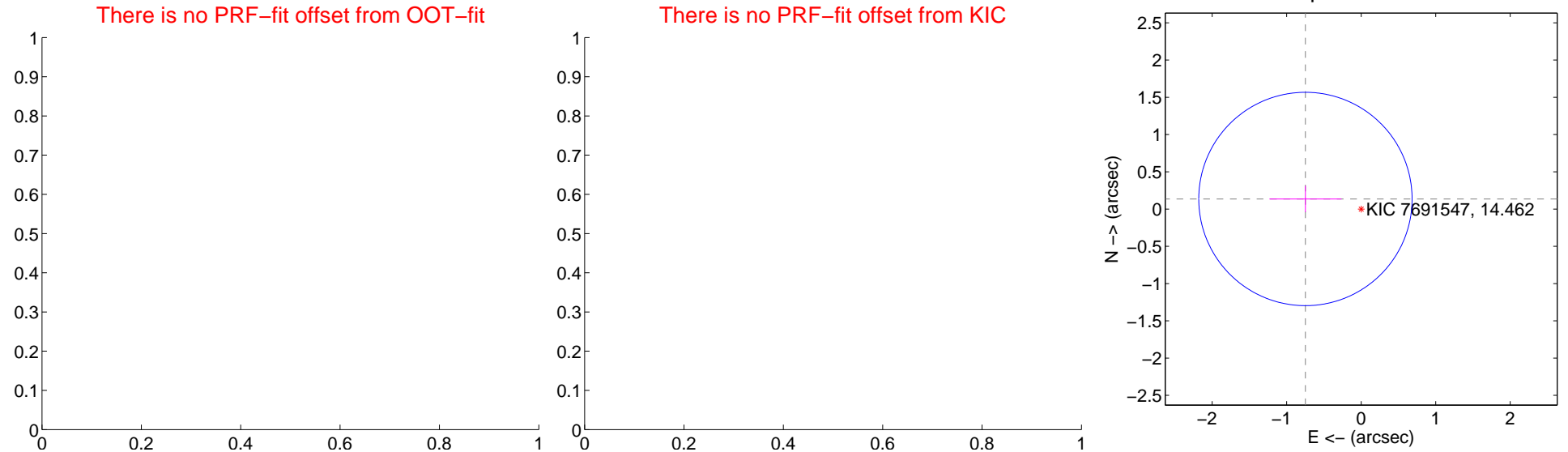
DV Centroid Data

Supplemental centroid analysis for 007691547-02. Kepler magnitude: 14.46. Transit SNR 11.46

There are 0 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	—	—	—	—
PRF-fit source offset from KIC position	—	—	—	—
photometric centroid source offset	0.76 ± 0.48	1.59	0.75 ± 0.48	0.14 ± 0.18

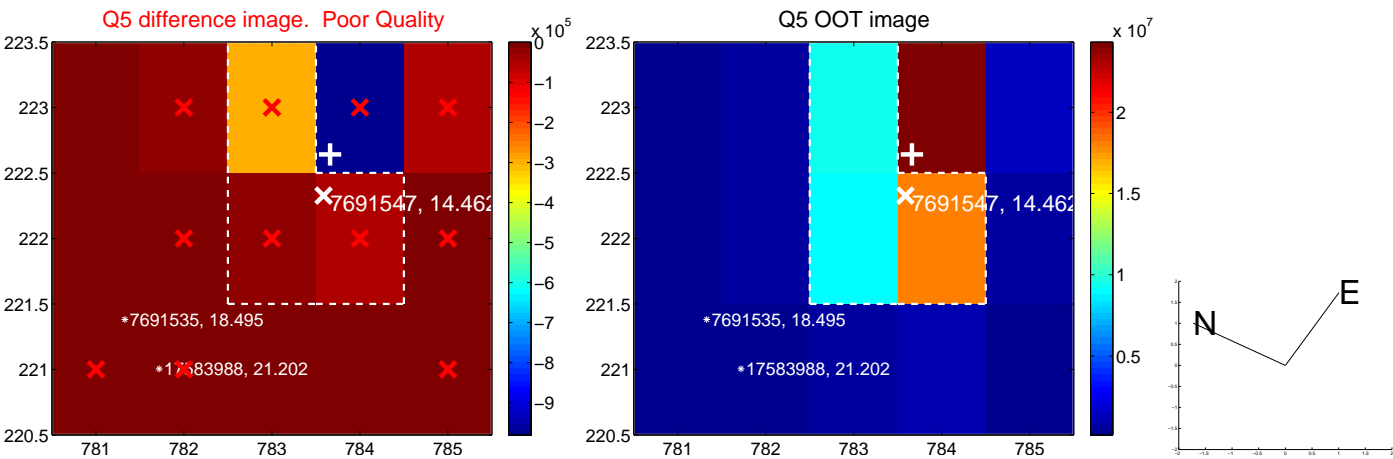


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

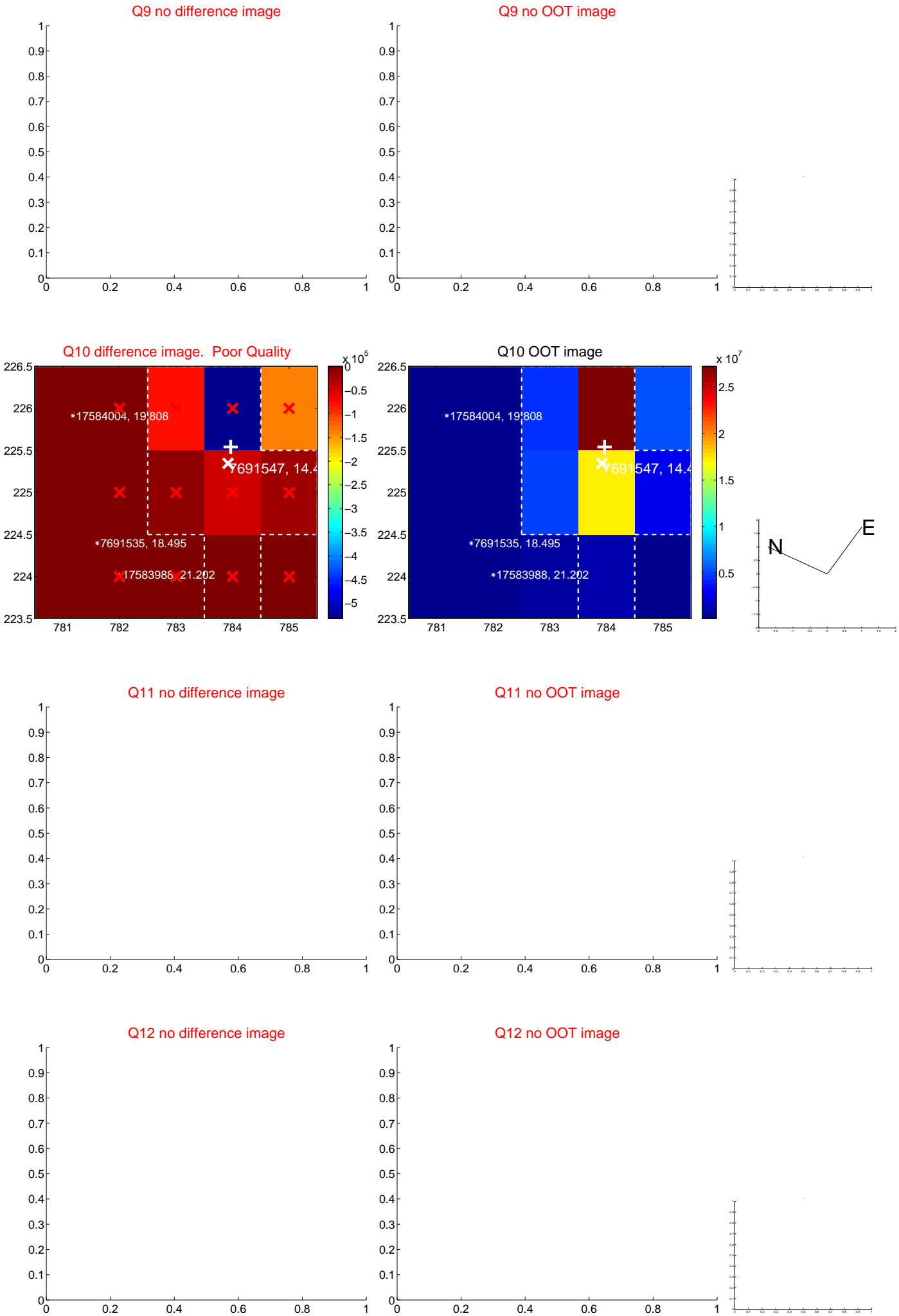
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

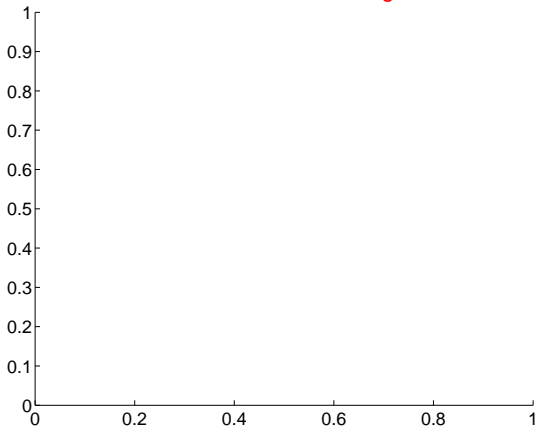


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

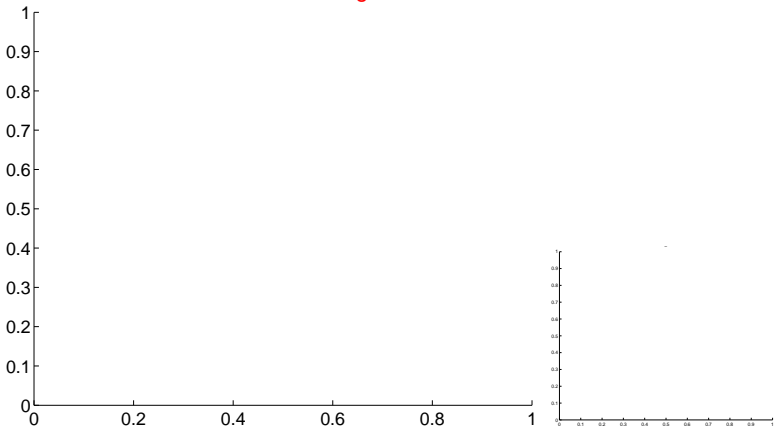


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

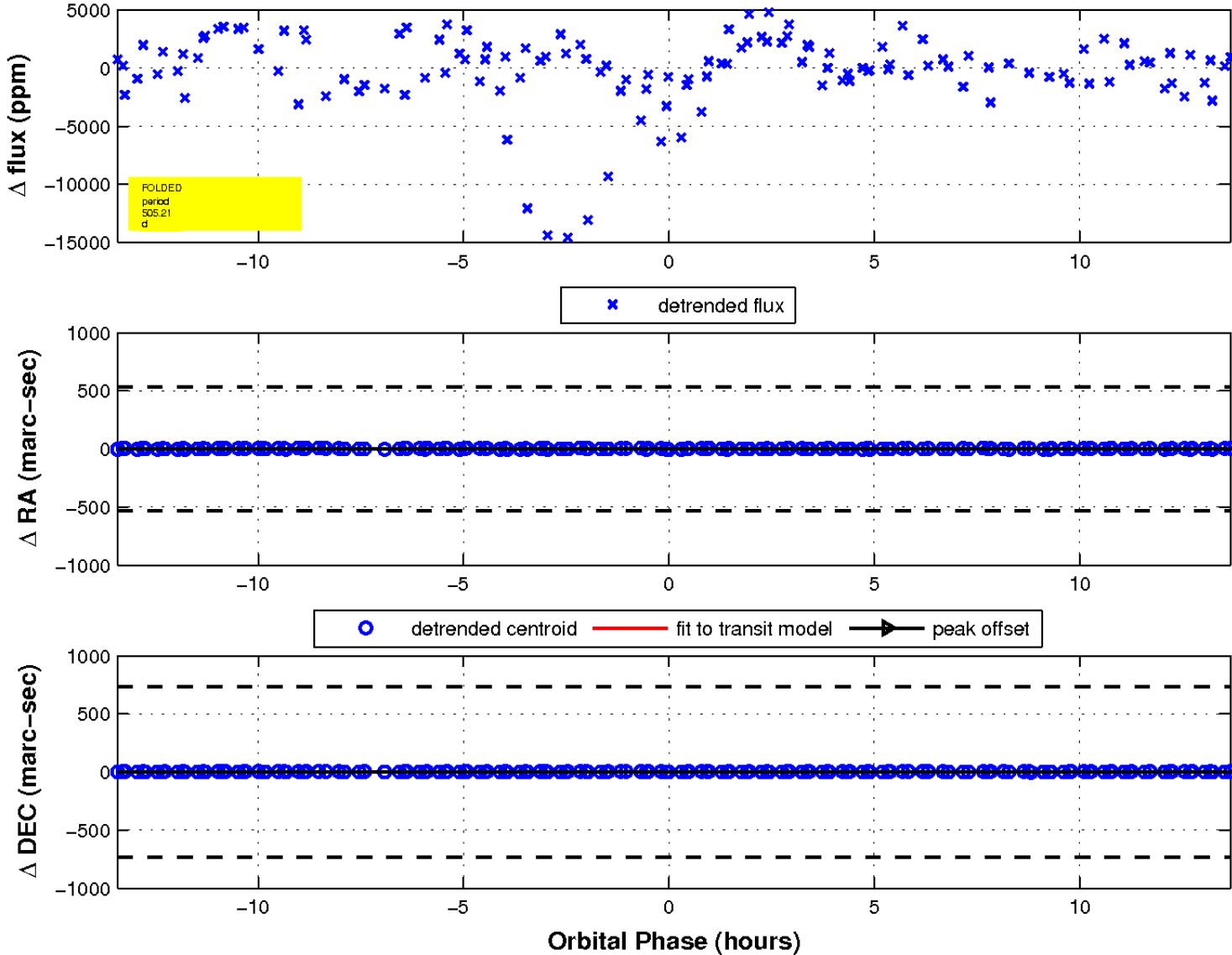
Q17 no difference image



Q17 no OOT image

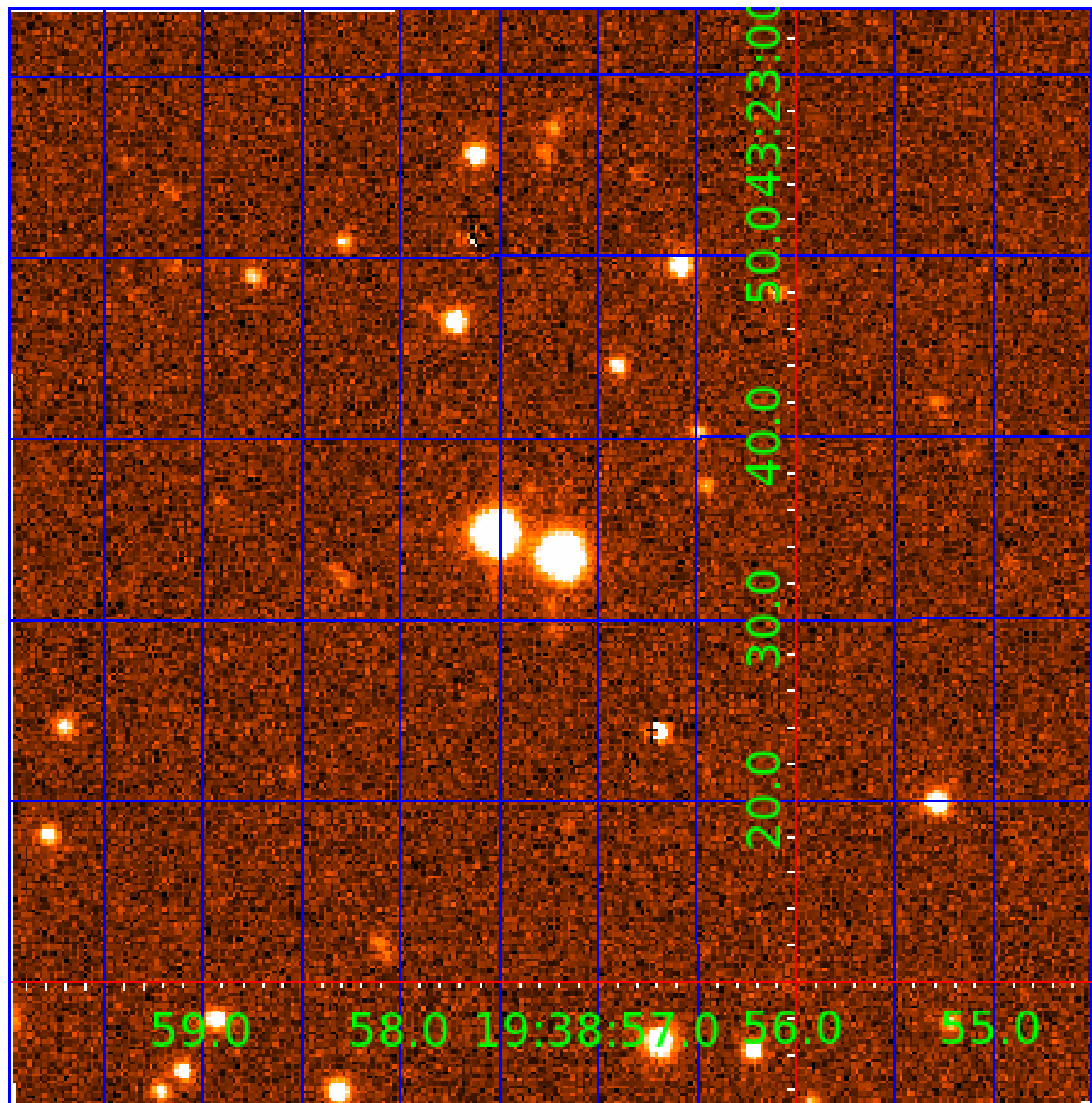


fluxWeightedCentroids, Planet 2 of 5



UKIRT Image

Declination



KIC 007691547

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})
007691547-02	OBS	No	505.208481	487.955312	6807.7	4.561	25.1	11.5	0.94	6110	13.91	0.75
007691547-03	OBS	No	271.715151	403.428617	5.2	0.660	17.1	0.0	0.94	6110	0.26	1.71
007691547-04	OBS	No	362.014571	402.977650	1379.1	7.500	20.2	-1.0	0.94	6110	3.49	1.16
007691547-05	OBS	No	542.355802	412.936210	5088.7	4.121	17.6	14.5	0.94	6110	11.03	0.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007691547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007691547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
007691547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
007691547-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

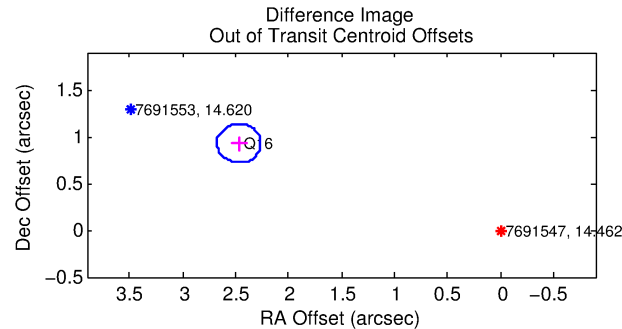
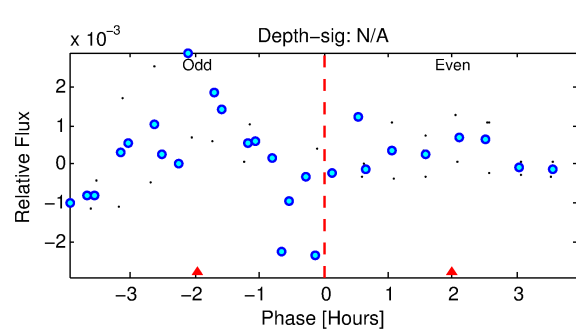
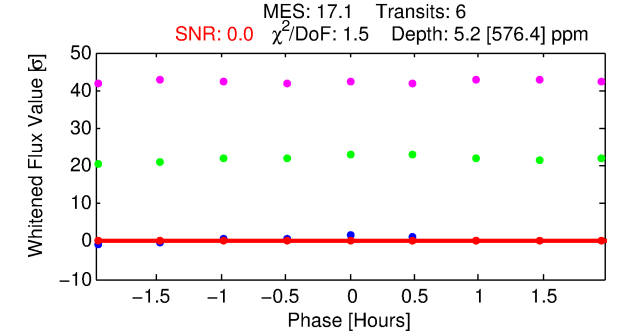
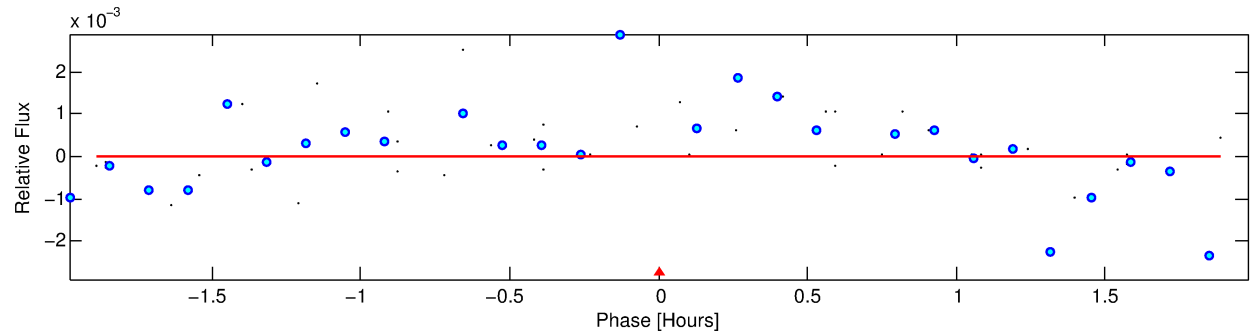
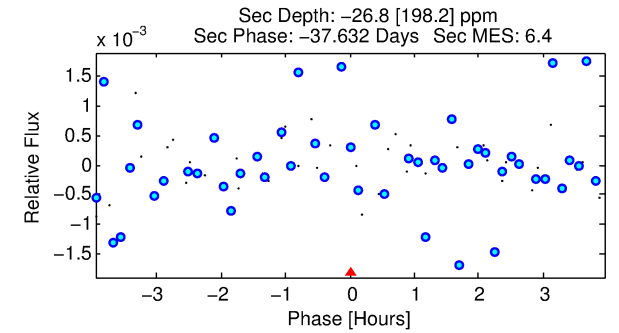
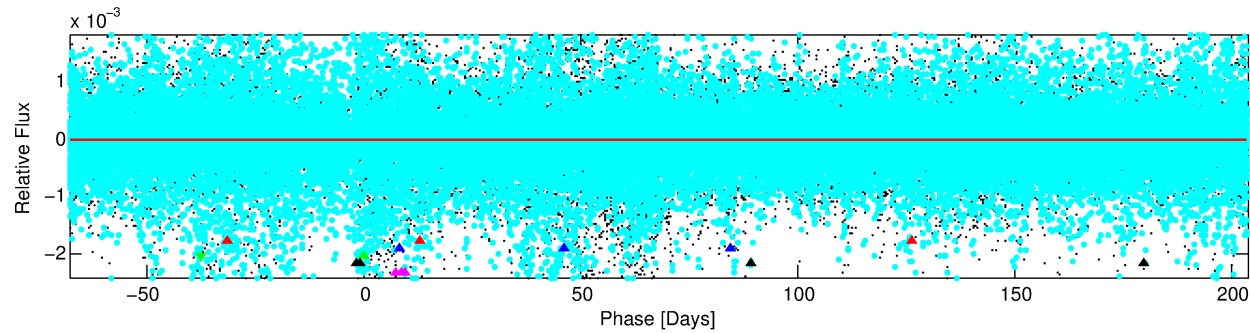
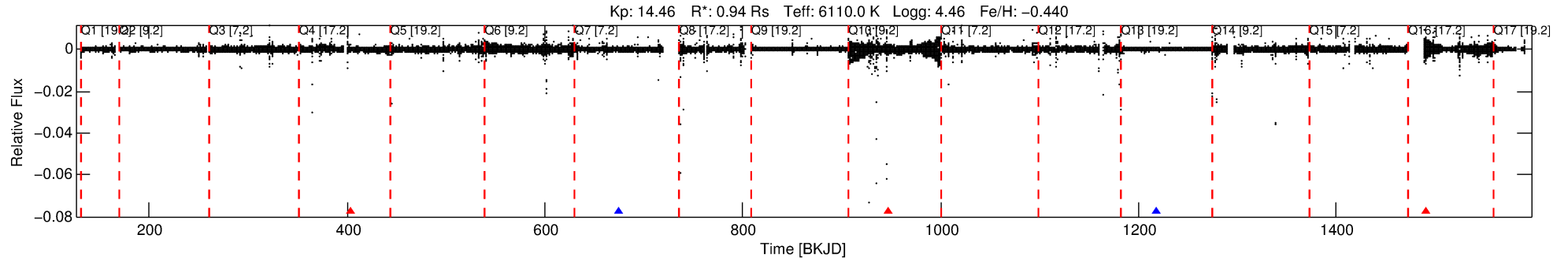
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007691547-03

No Significant Match Found

DV One-Page Summary

KIC: 7691547 Candidate: 3 of 5 Period: 271.715 d



DV Fit Results:

Period = 271.71515 [1.33647] d
Epoch = 403.4286 [1.1684] BKJD
Rp/R* = 0.0025 [0.3027]
a/R* = 1377.39 [464040.19]
b = 0.90 [82.25]
Seff = 1.71 [0.66]
Teff = 291 [28] K
Rp = 0.26 [30.95] Re
a = 0.8016 [0.1961] AU
Ag = N/A
Teffp = N/A

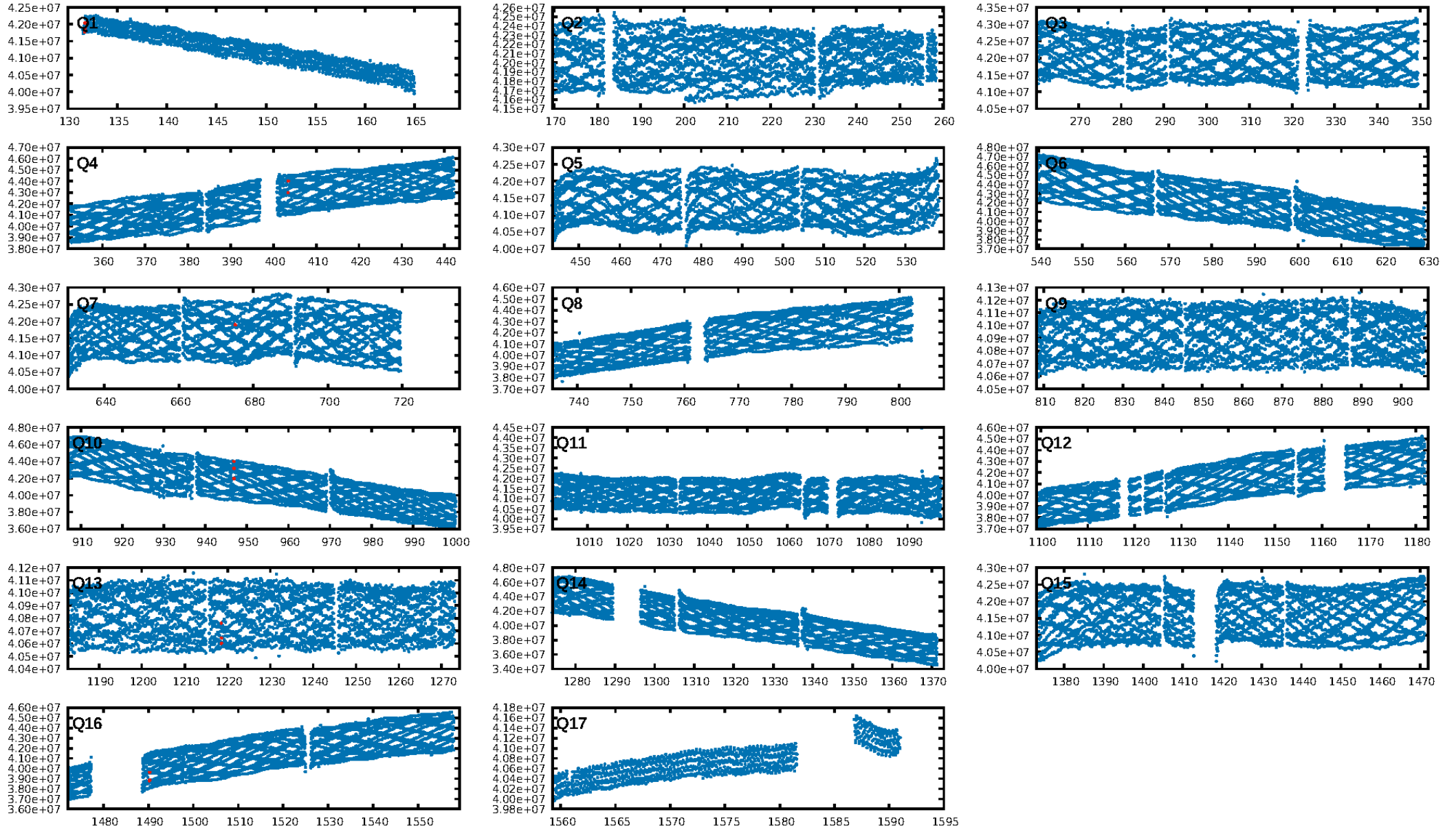
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [287.85σ]
ModelChiSquare2-sig: 4.1%
ModelChiSquareGof-sig: 50.9%
Bootstrap-pfa: 8.48e-08
RollingBand-fgt: 0.40 [2/5]
GhostDiagnostic-chr: -21.69
Centroid-sig: 77.3%
Centroid-so: 293.685 arcsec [0.34σ]
OotOffset-rm: 2.636 arcsec [38.22σ]
KicOffset-rm: 3.727 arcsec [54.02σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
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DiffImageOverlap-fno: 1.00 [4/4]

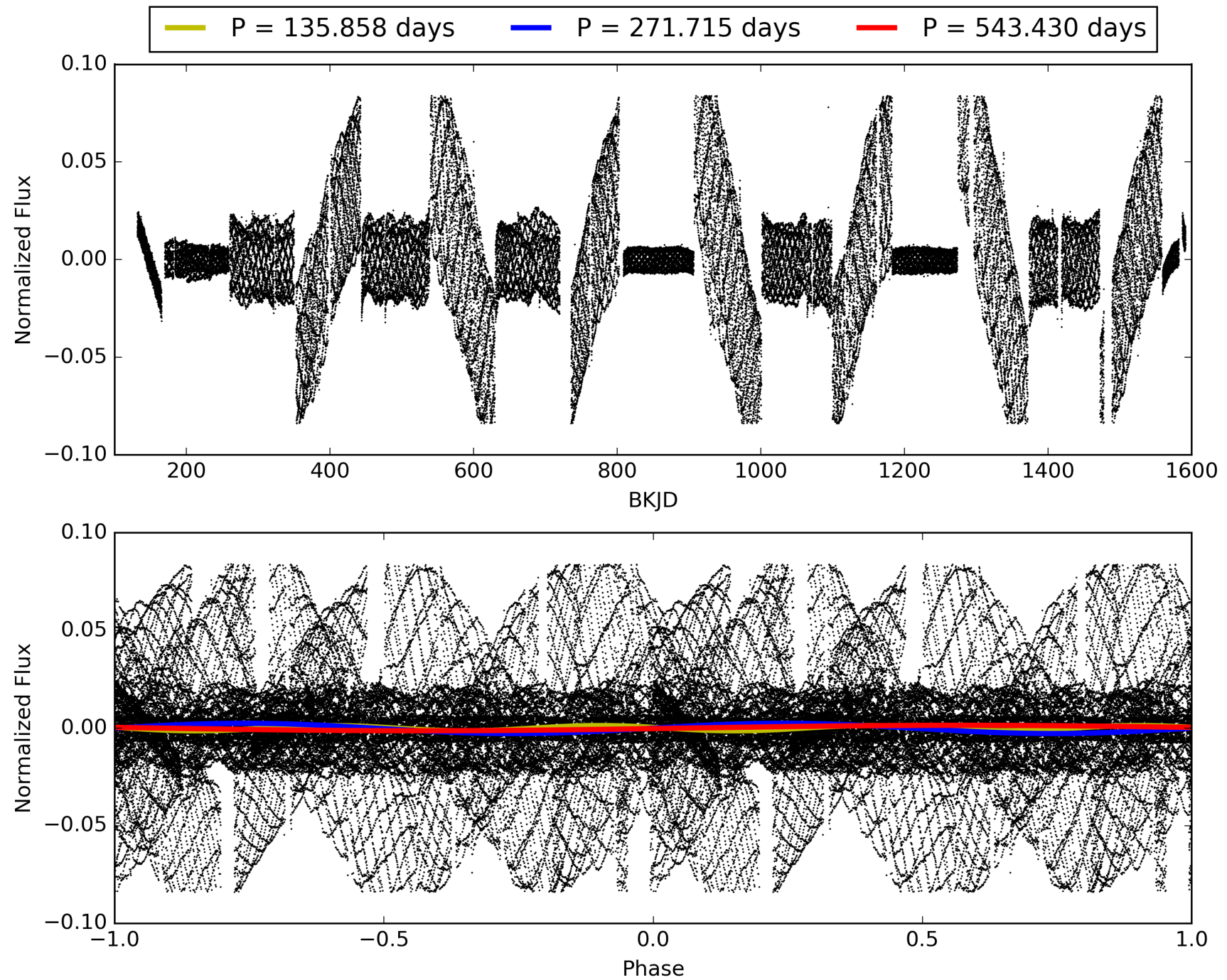
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:49:15 Z

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

TCE 007691547-03, PDC Light Curves

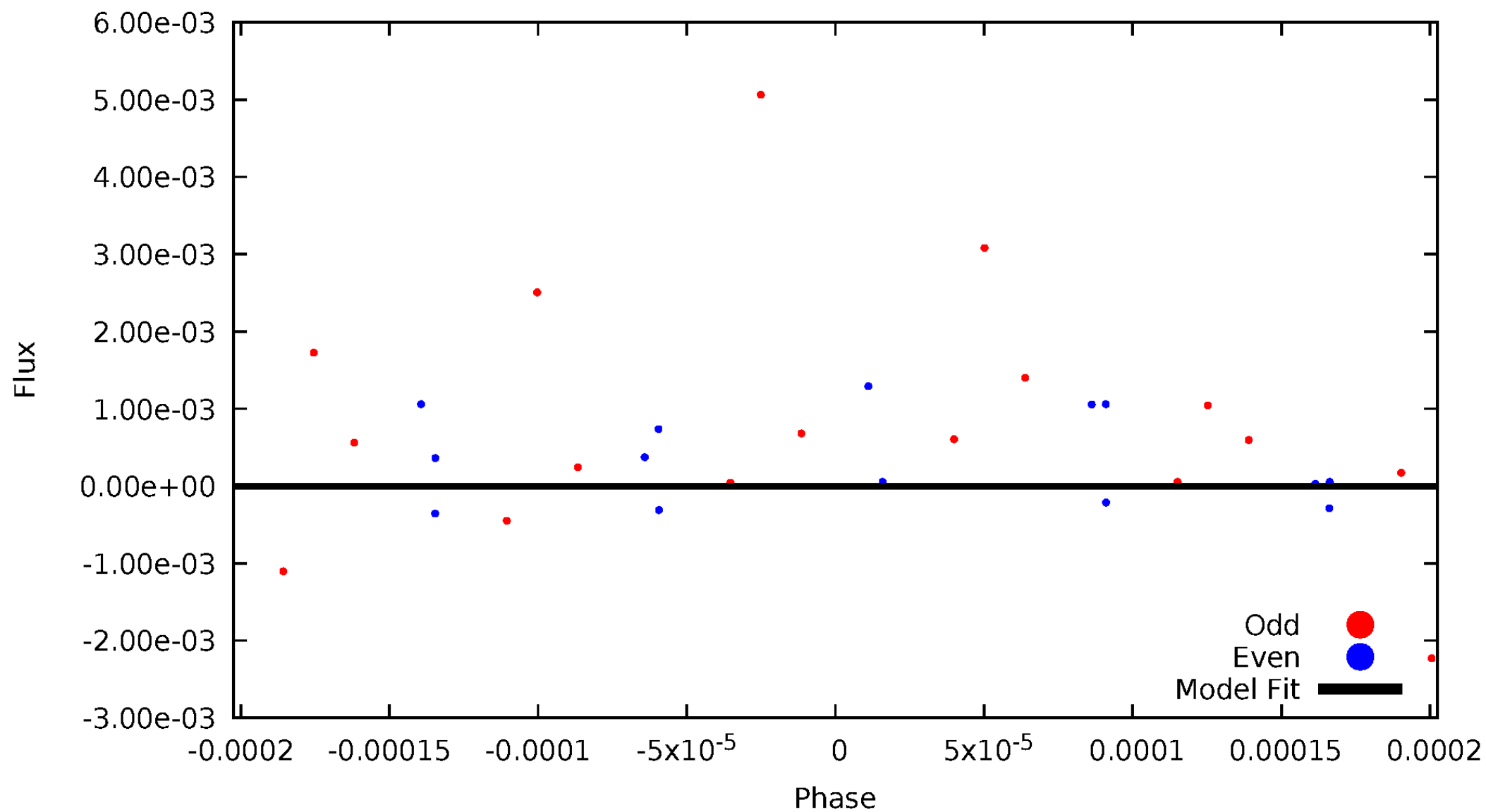


TCE 007691547-03



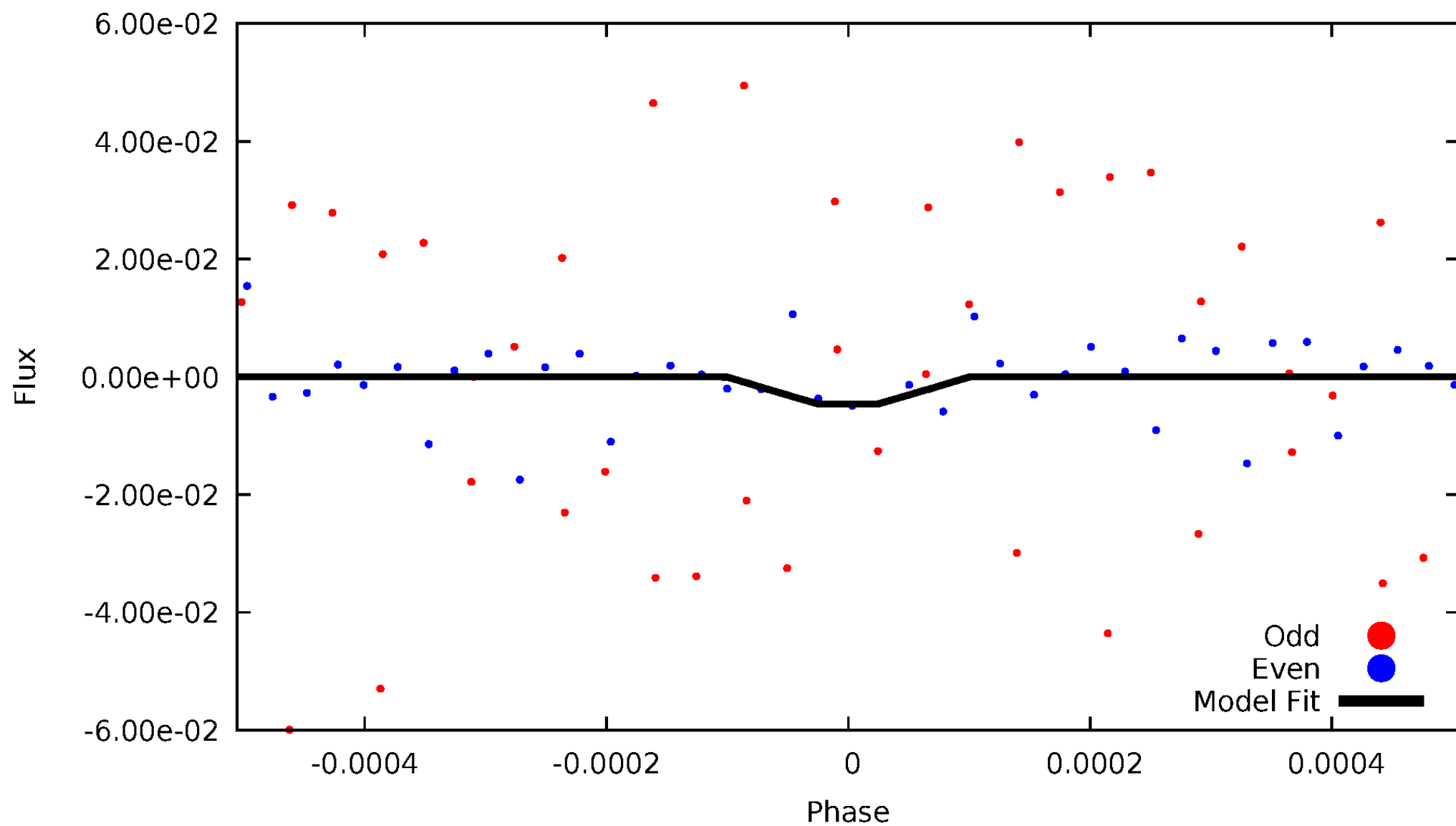
DV Odd/Even

TCE 007691547-03



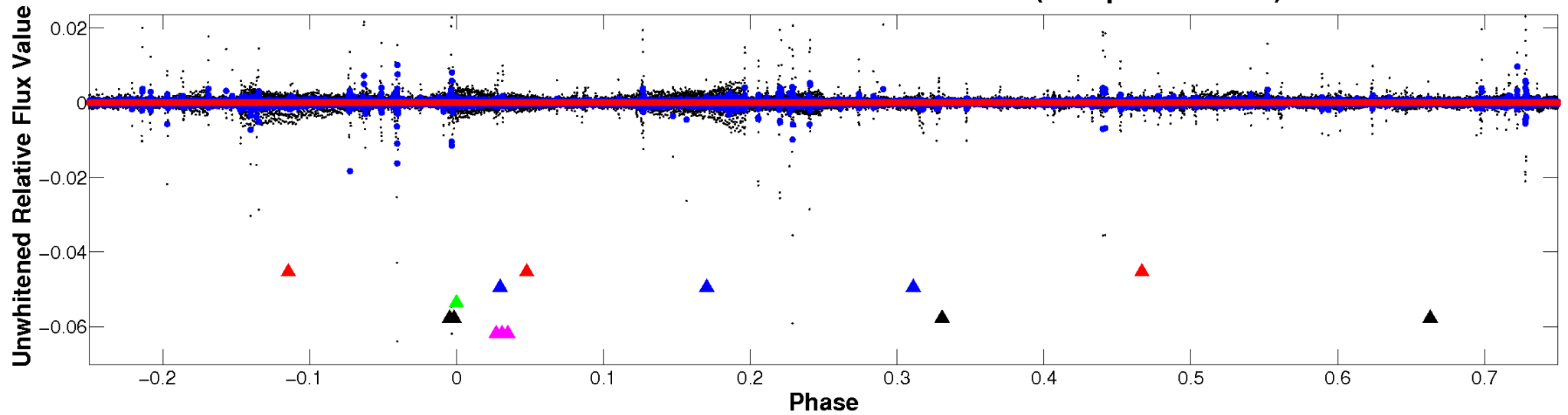
ALT Odd/Even

TCE 007691547-03

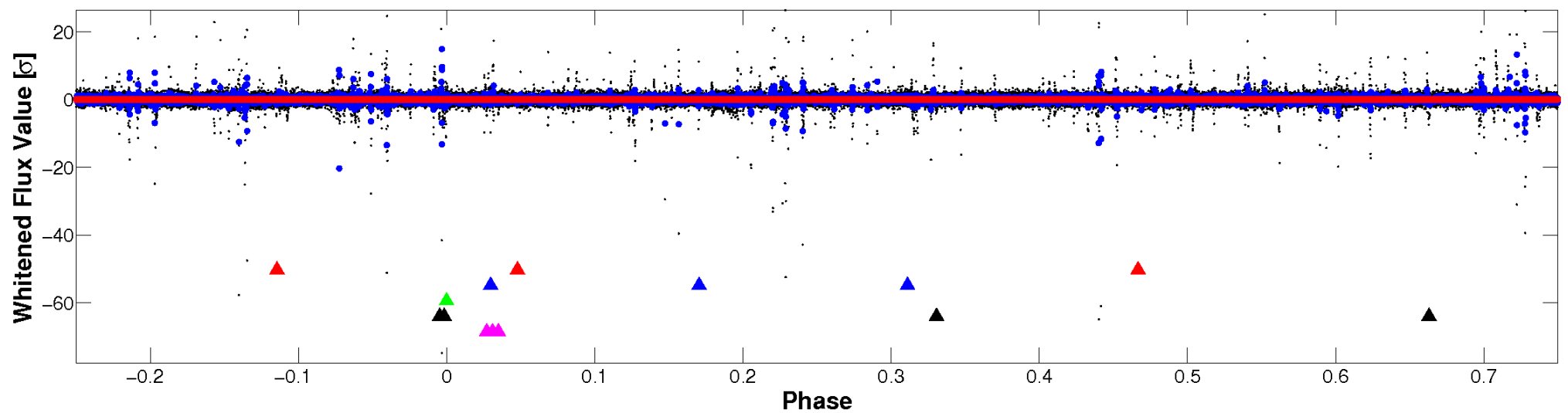


Non-Whitened Vs. Whitened Light Curve

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

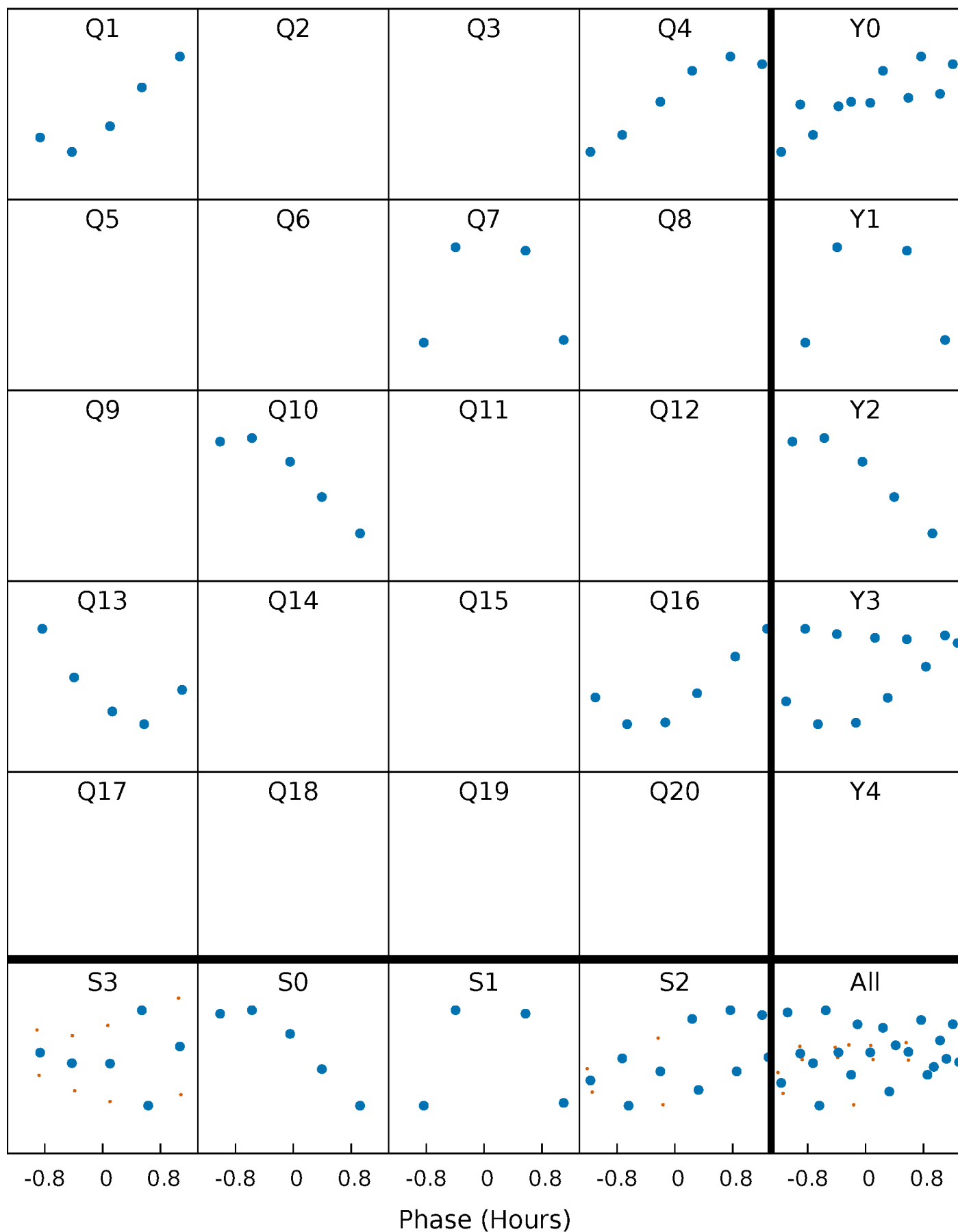


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



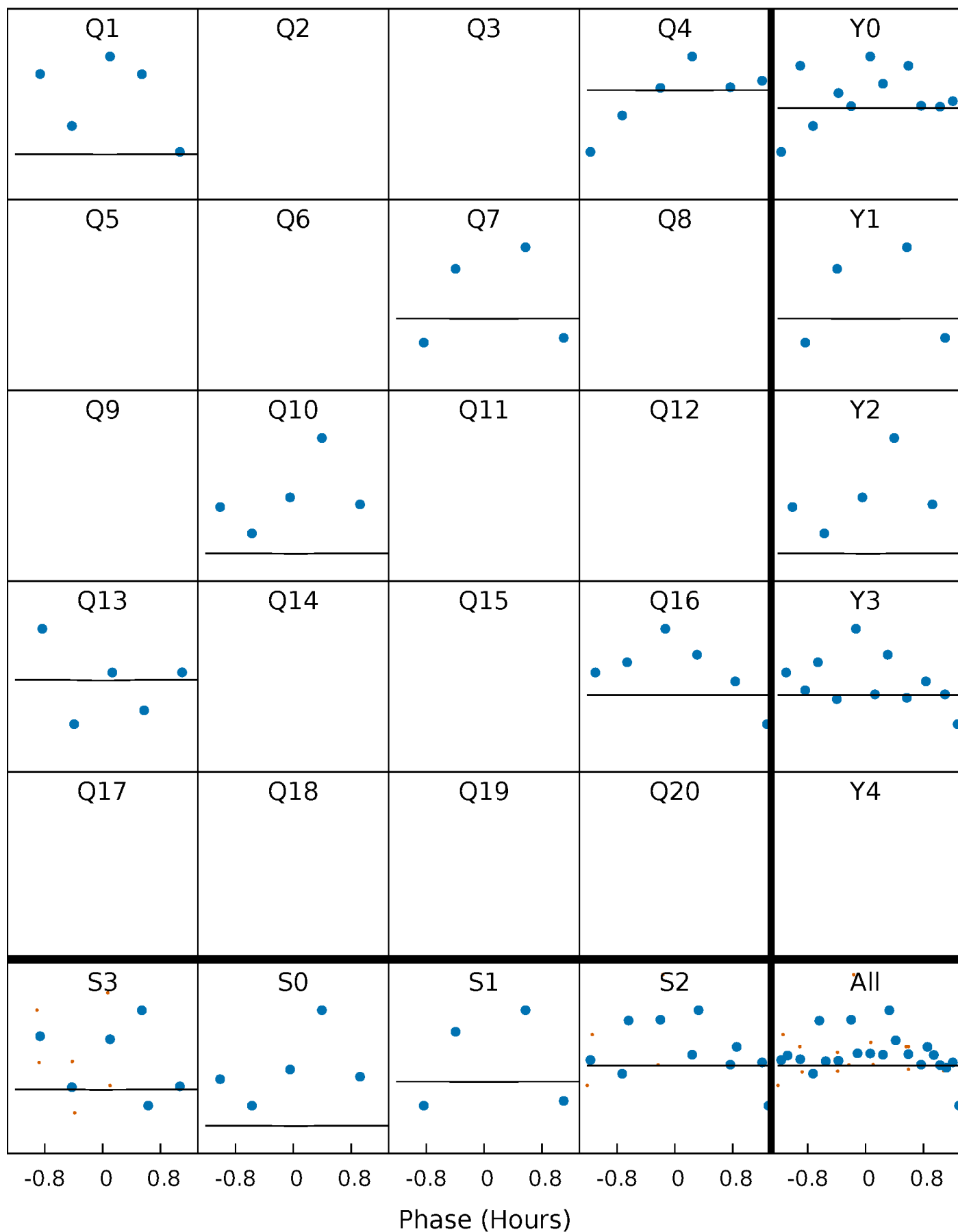
PDC Quarter-Phased Transit Curves

TCE 007691547-03 P=271.715151 Days $T_0=403.428617$ (BKJD)



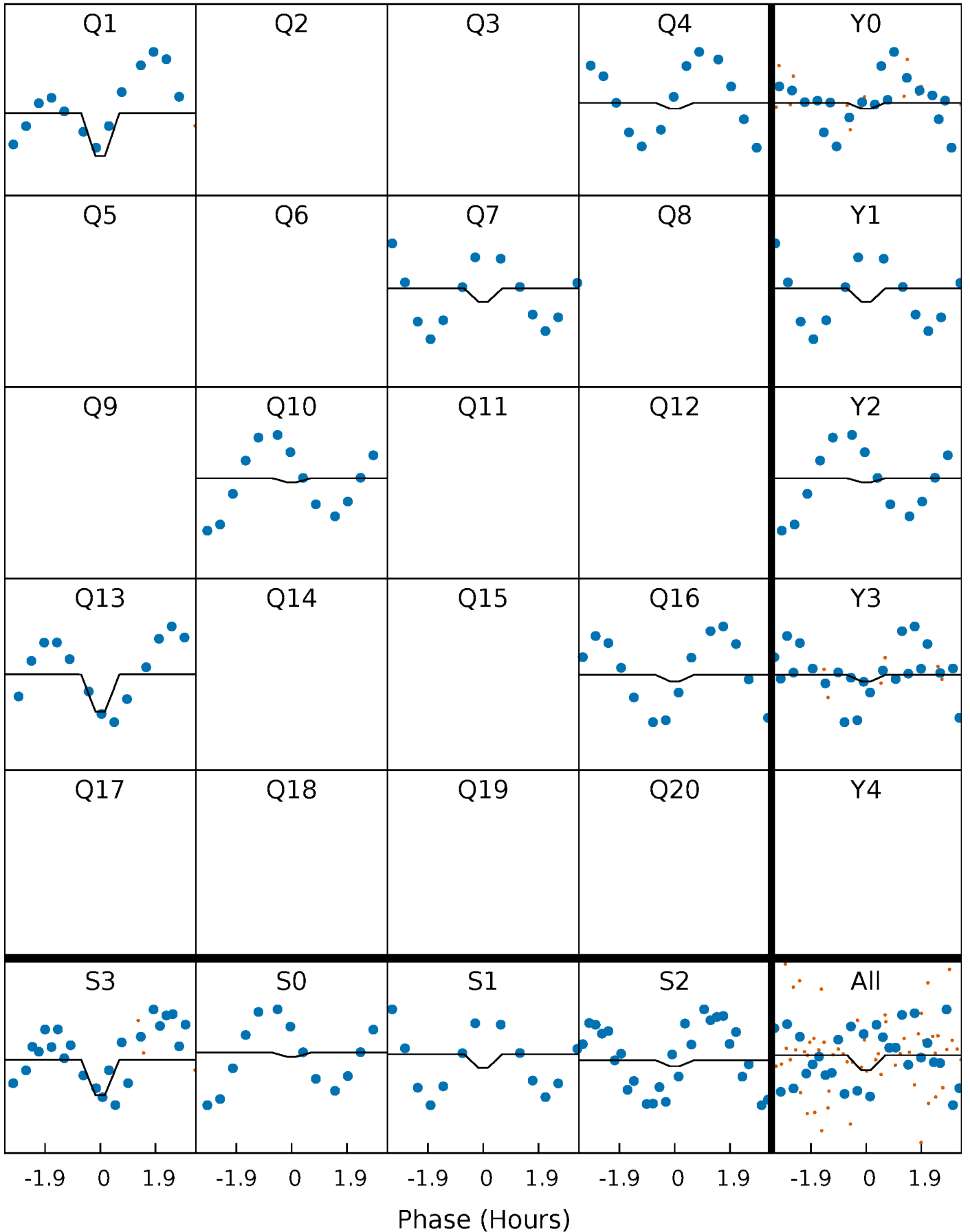
DV Quarter-Phased Transit Curves

TCE 007691547-03 $P=271.715151$ Days $T_0=403.428617$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

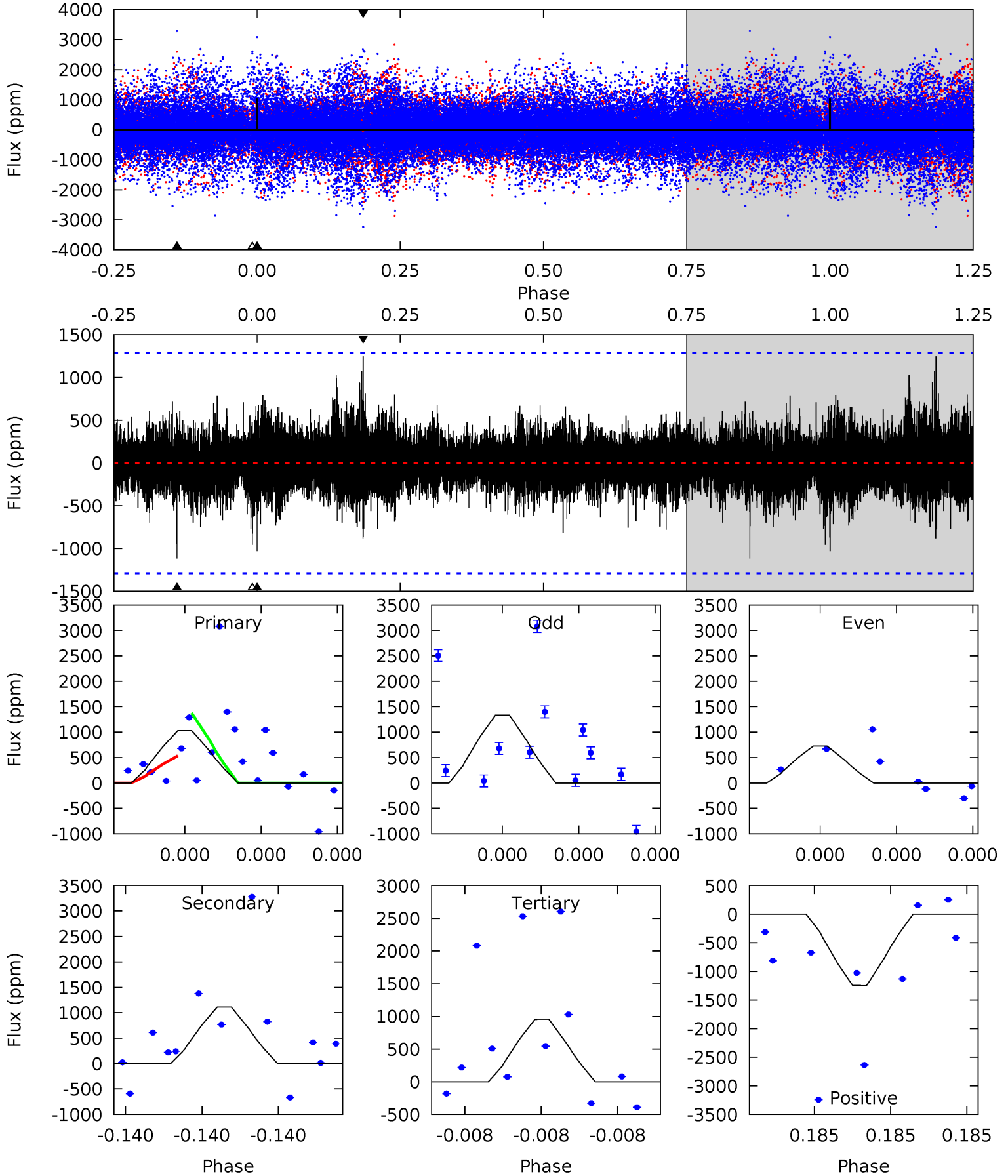
TCE 007691547-03 $P=271.718670$ Days $T_0=403.421484$ (BKJD)



DV Model-Shift Uniqueness Test

007691547-03, P = 271.715151 Days, E = 131.713466 Days

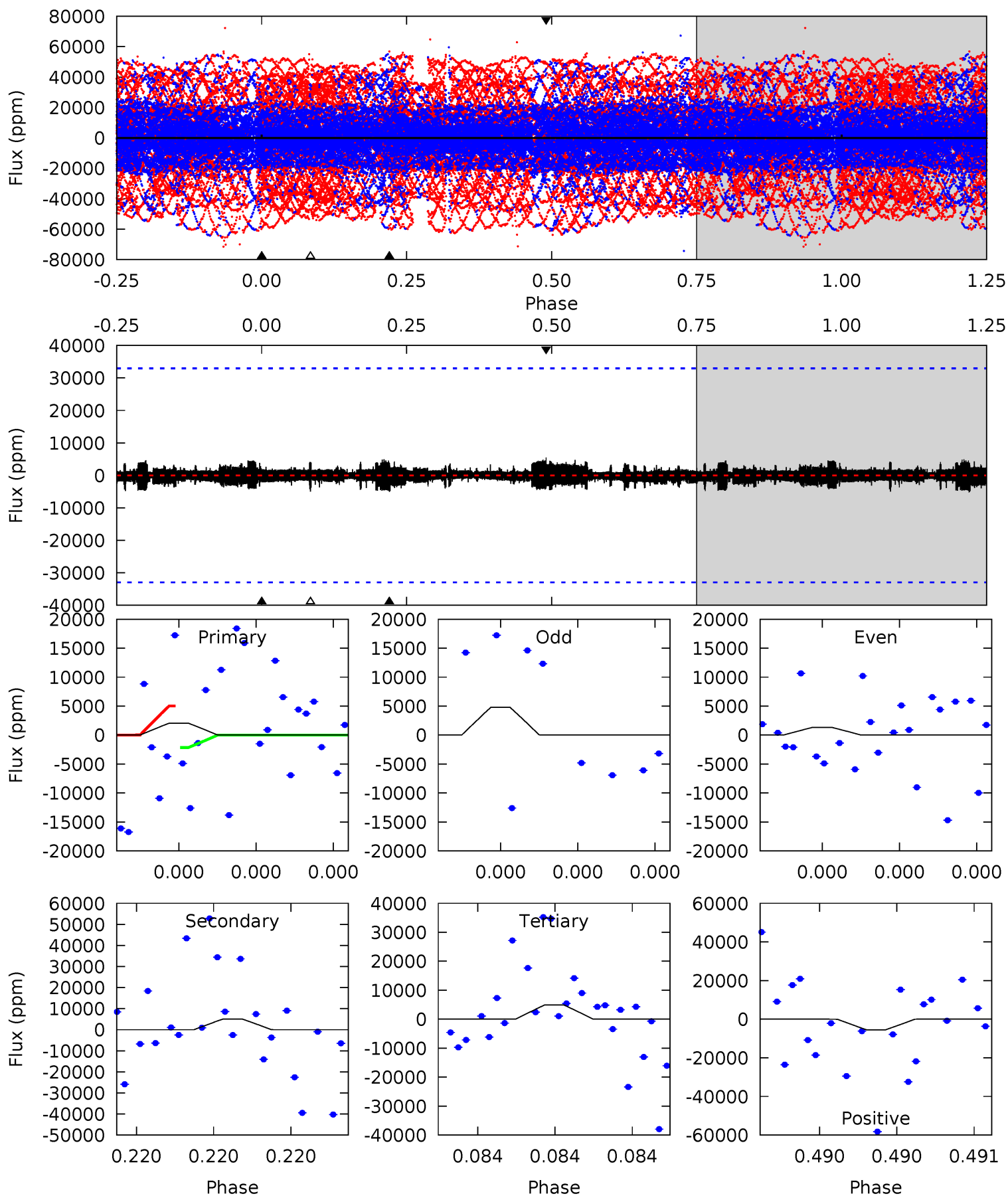
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.65	5.02	4.31	5.62	5.81	3.84	0.89	0.34	-0.98	0.72	-0.60	1.28	1.84	0.53	1.90



Alt Model-Shift Uniqueness Test

007691547-03, P = 271.718670 Days, E = 131.702814 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.36	0.89	0.86	0.95	5.73	3.72	0.22	-0.50	-0.60	0.03	-0.07	0.29	-0.56	0.52	0.25



Stellar Parameters For KIC 007691547

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6110^{+165}_{-202}	$4.463^{+0.081}_{-0.202}$	$-0.440^{+0.300}_{-0.300}$	$0.937^{+0.266}_{-0.114}$	$0.930^{+0.117}_{-0.105}$	$1.593^{+0.544}_{-0.786}$
	+3%/-3%	+2%/-5%	+68%/-68%	+28%/-12%	+13%/-11%	+34%/-49%
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 007691547-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1114 ± 222	$21.64^{+24.38}_{-14.79}$	412^{+32}_{-22}	3107^{+1442}_{-578}	790^{+7492}_{-614}
Alt.	-5091 ± 5747	$25.18^{+23.58}_{-18.33}$	414^{+27}_{-23}	3591^{+2701}_{-6111}	2243^{+32326}_{-2403}

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

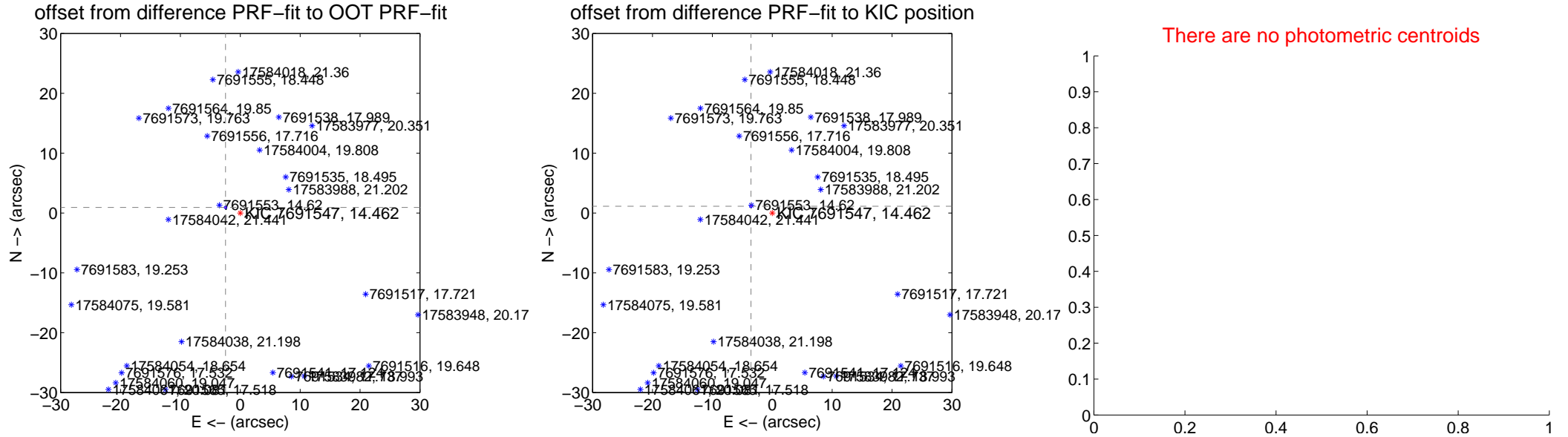
DV Centroid Data

Supplemental centroid analysis for 007691547-03. Kepler magnitude: 14.46. Transit SNR 0.02

There are 1 quarters with good PRF difference image offsets

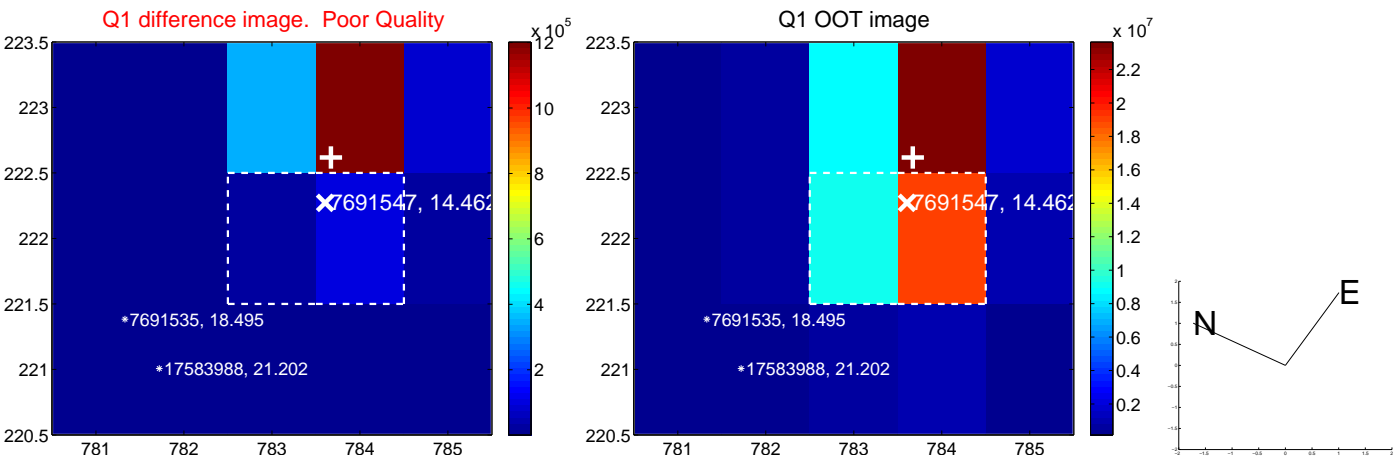
The direct PRF centroid is offset from the target star catalog position by about 1.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.636 \pm 0.069	38.22	2.468 \pm 0.069	0.927 \pm 0.069
PRF-fit source offset from KIC position	3.727 \pm 0.069	54.02	3.550 \pm 0.069	1.135 \pm 0.069
photometric centroid source offset	—	—	—	—



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.

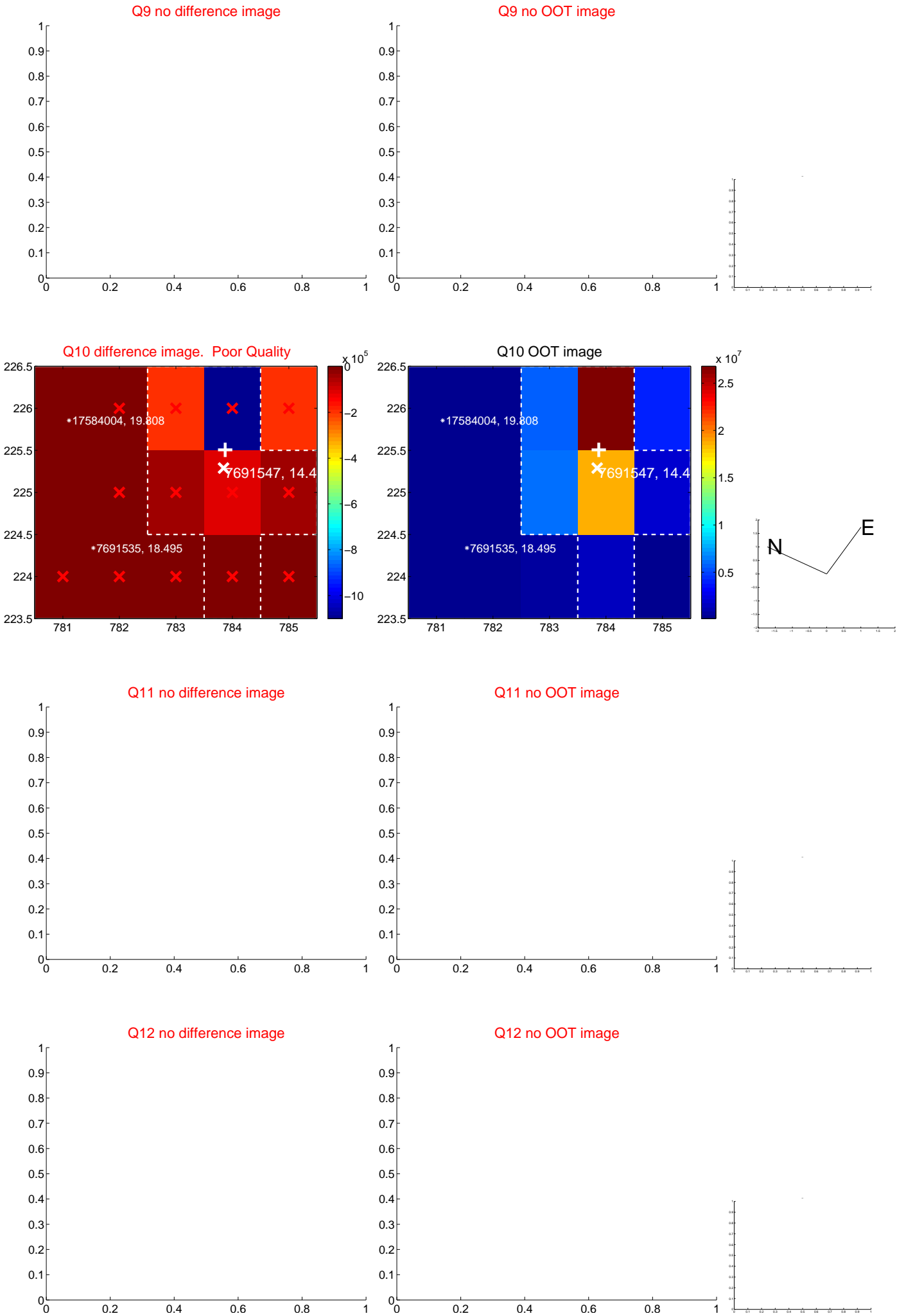
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



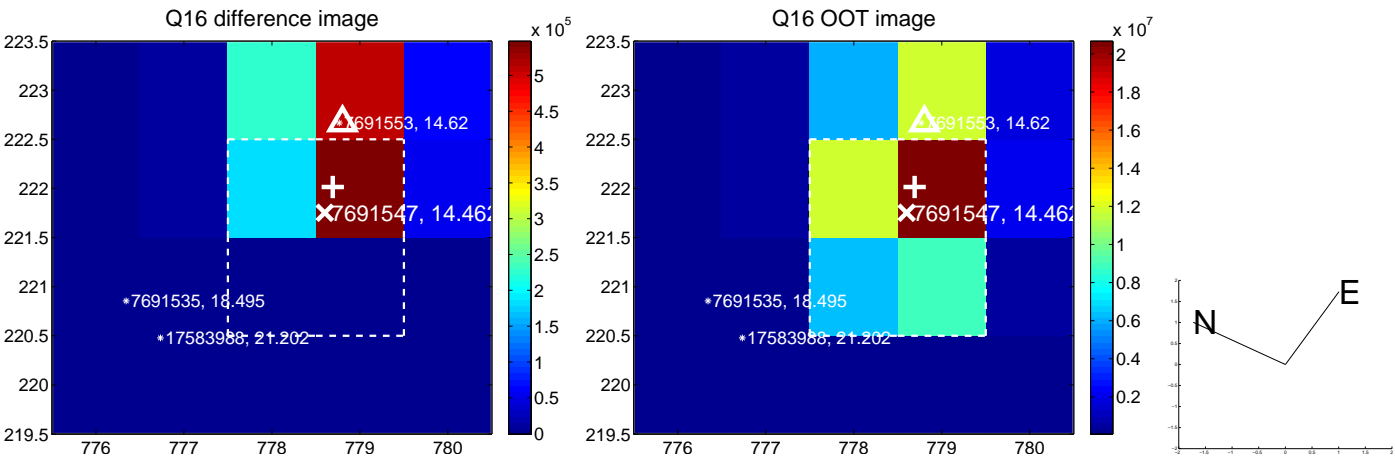
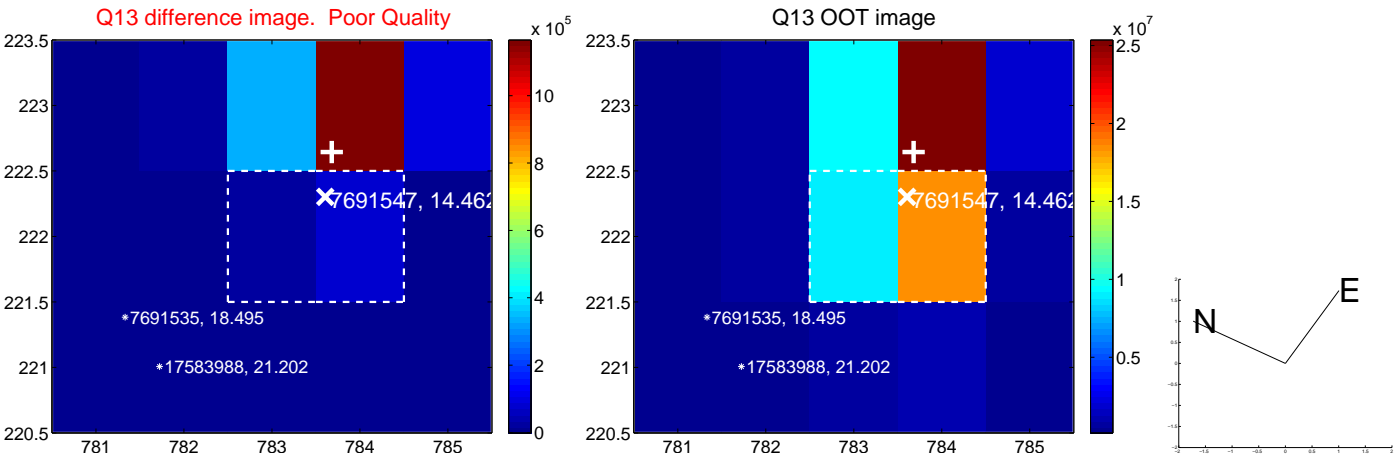
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



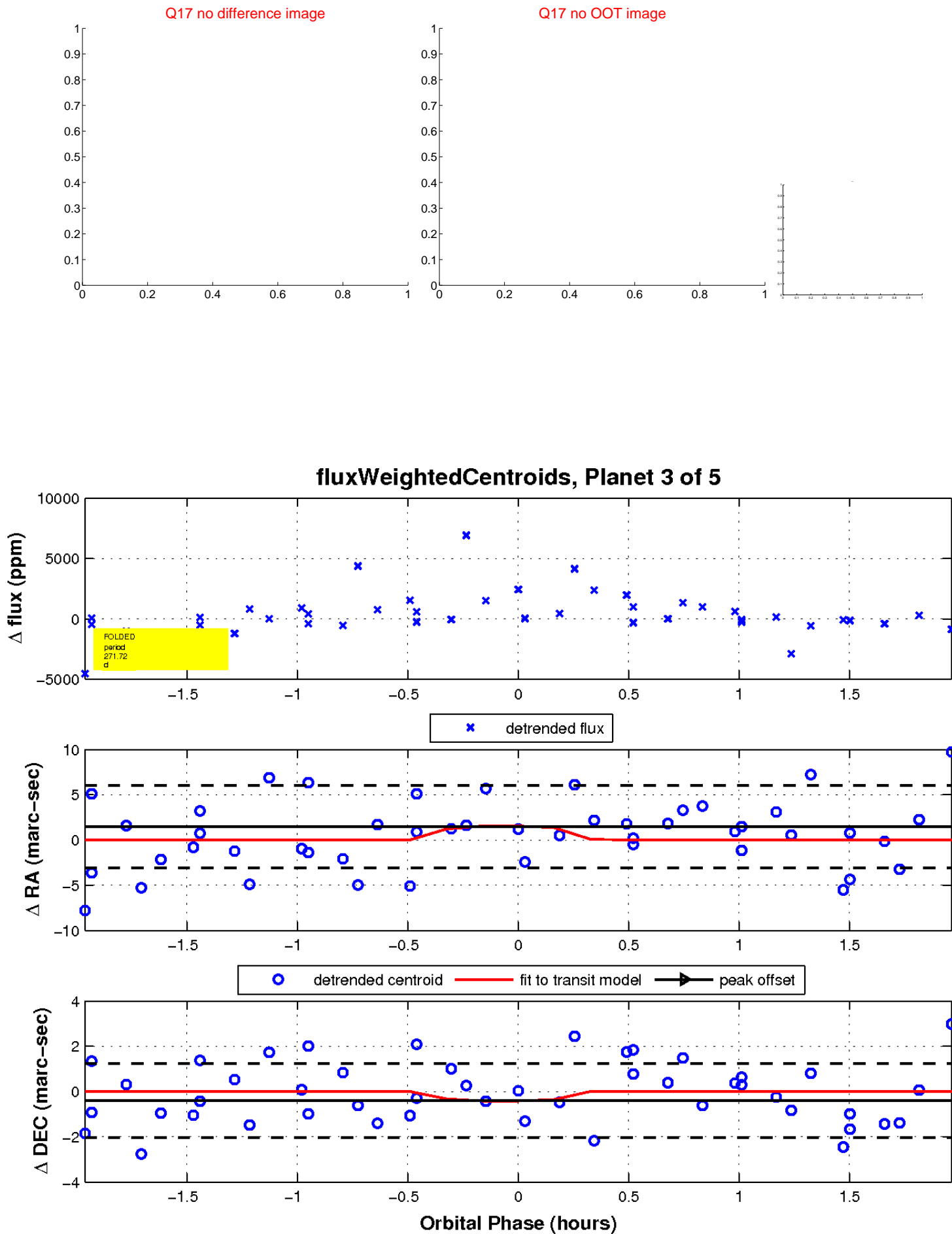
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

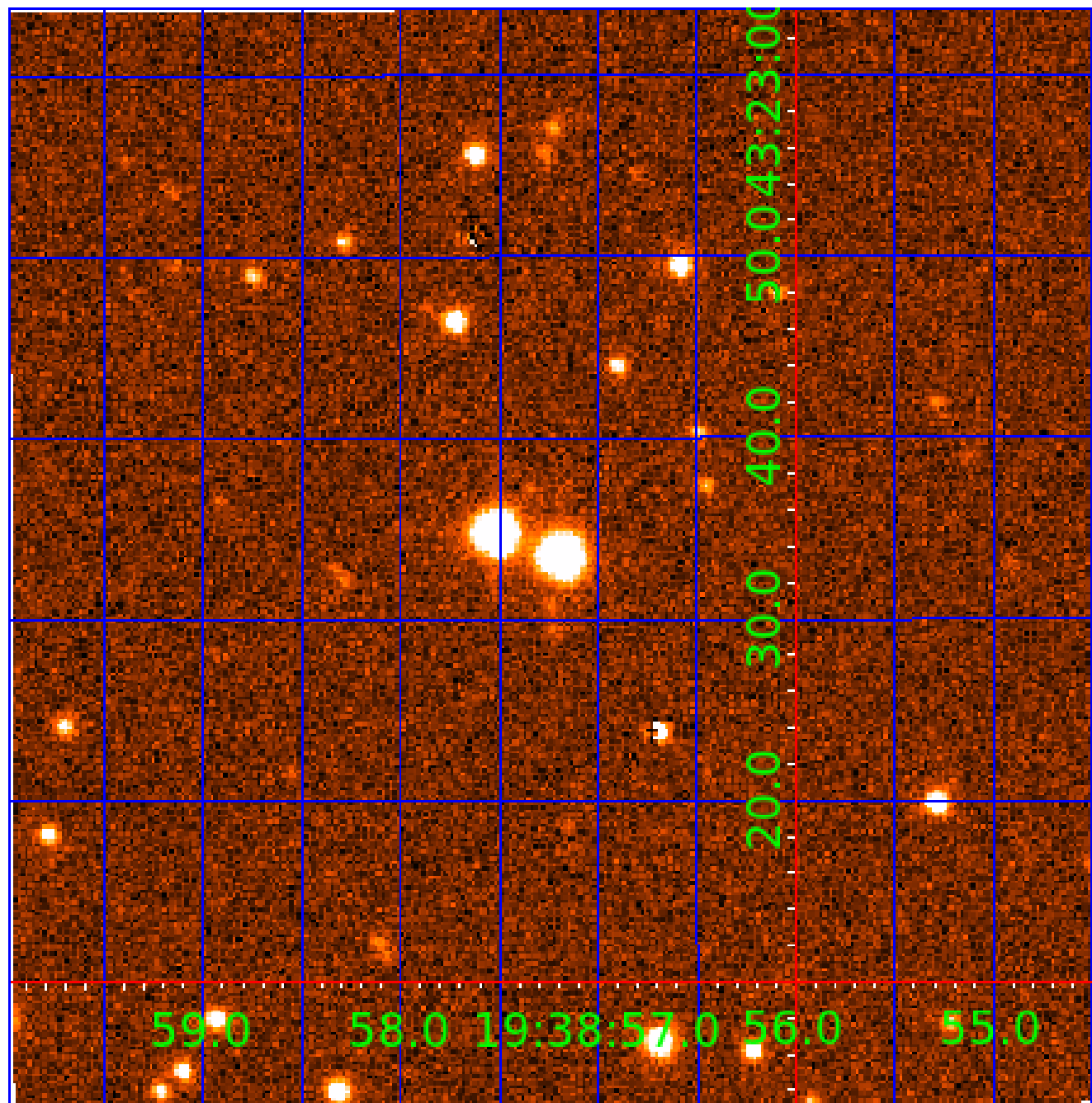


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007691547

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})
007691547-02	OBS	No	505.208481	487.955312	6807.7	4.561	25.1	11.5	0.94	6110	13.91	0.75
007691547-03	OBS	No	271.715151	403.428617	5.2	0.660	17.1	0.0	0.94	6110	0.26	1.71
007691547-04	OBS	No	362.014571	402.977650	1379.1	7.500	20.2	-1.0	0.94	6110	3.49	1.16
007691547-05	OBS	No	542.355802	412.936210	5088.7	4.121	17.6	14.5	0.94	6110	11.03	0.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007691547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007691547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
007691547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
007691547-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

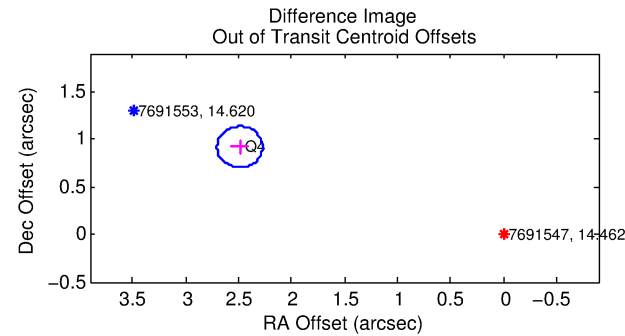
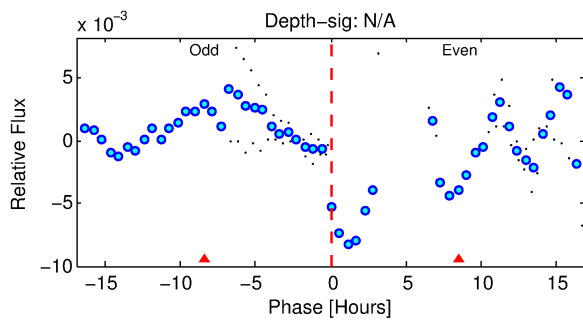
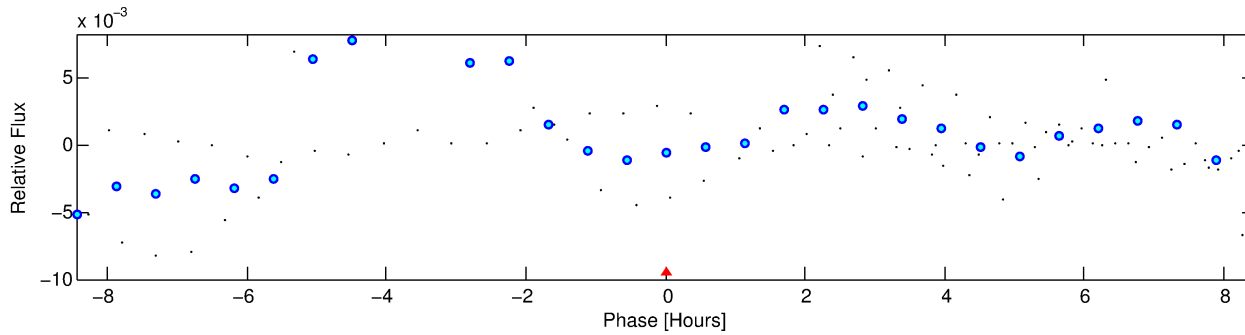
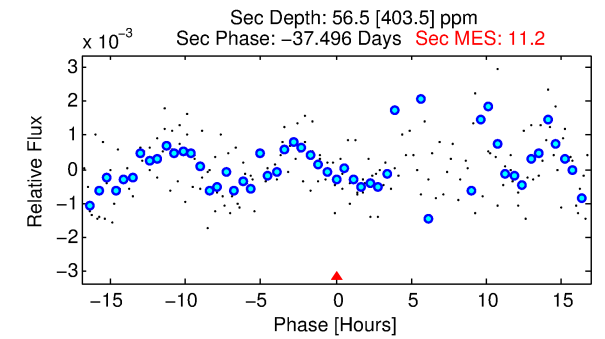
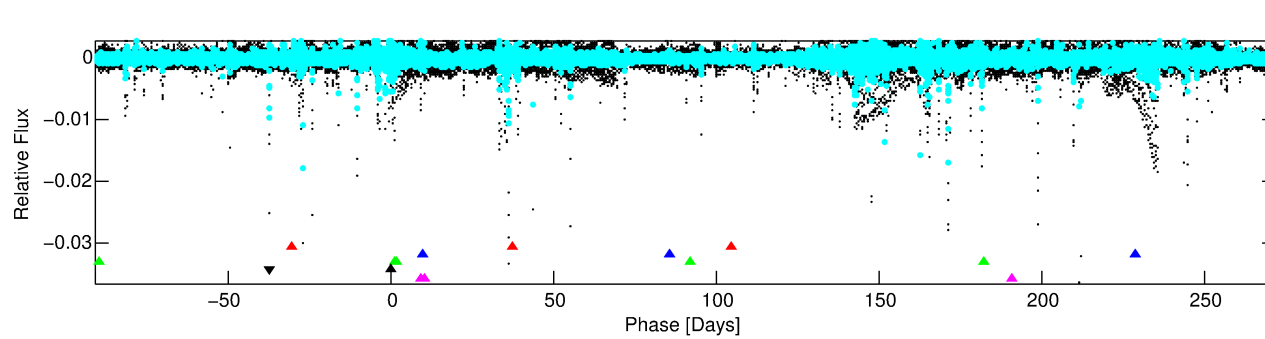
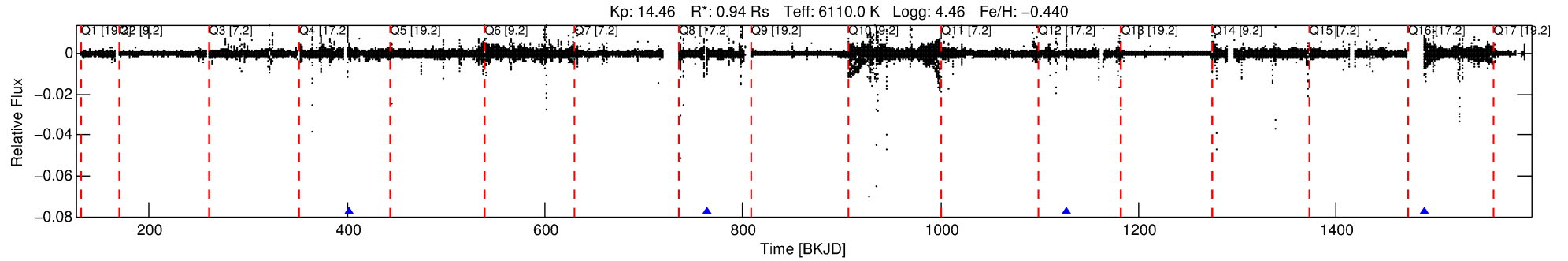
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007691547-04

No Significant Match Found

DV One-Page Summary

KIC: 7691547 Candidate: 4 of 5 Period: 362.015 d



TPS TCE Results:

Period = 362.01457 d
Epoch = 402.9776 BKJD

DV fit results are unavailable

DV Diagnostic Results:

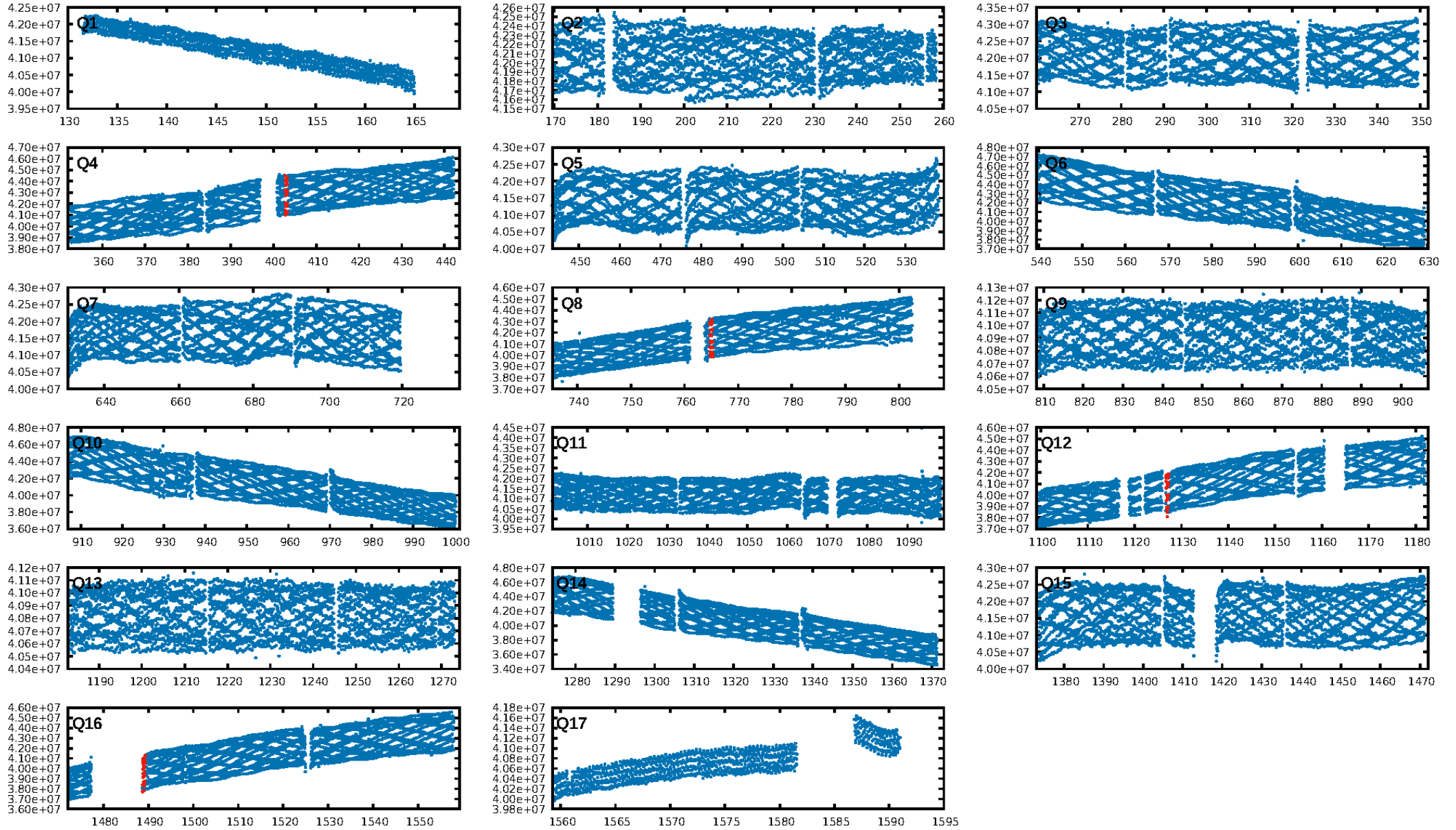
ShortPeriod-sig: 100.0% [287.85σ]
LongPeriod-sig: 100.0% [180.01σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.69e-08
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.3453

Centroid-sig: 69.6%
Centroid-so: 1.044 arcsec [5.40σ]
OotOffset-rm: 2.653 arcsec [37.08σ]
KicOffset-rm: 3.715 arcsec [51.91σ]
OotOffset-st: 0/0/1/0 [1]
KicOffset-st: 0/0/1/0 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 1.00 [1/1]

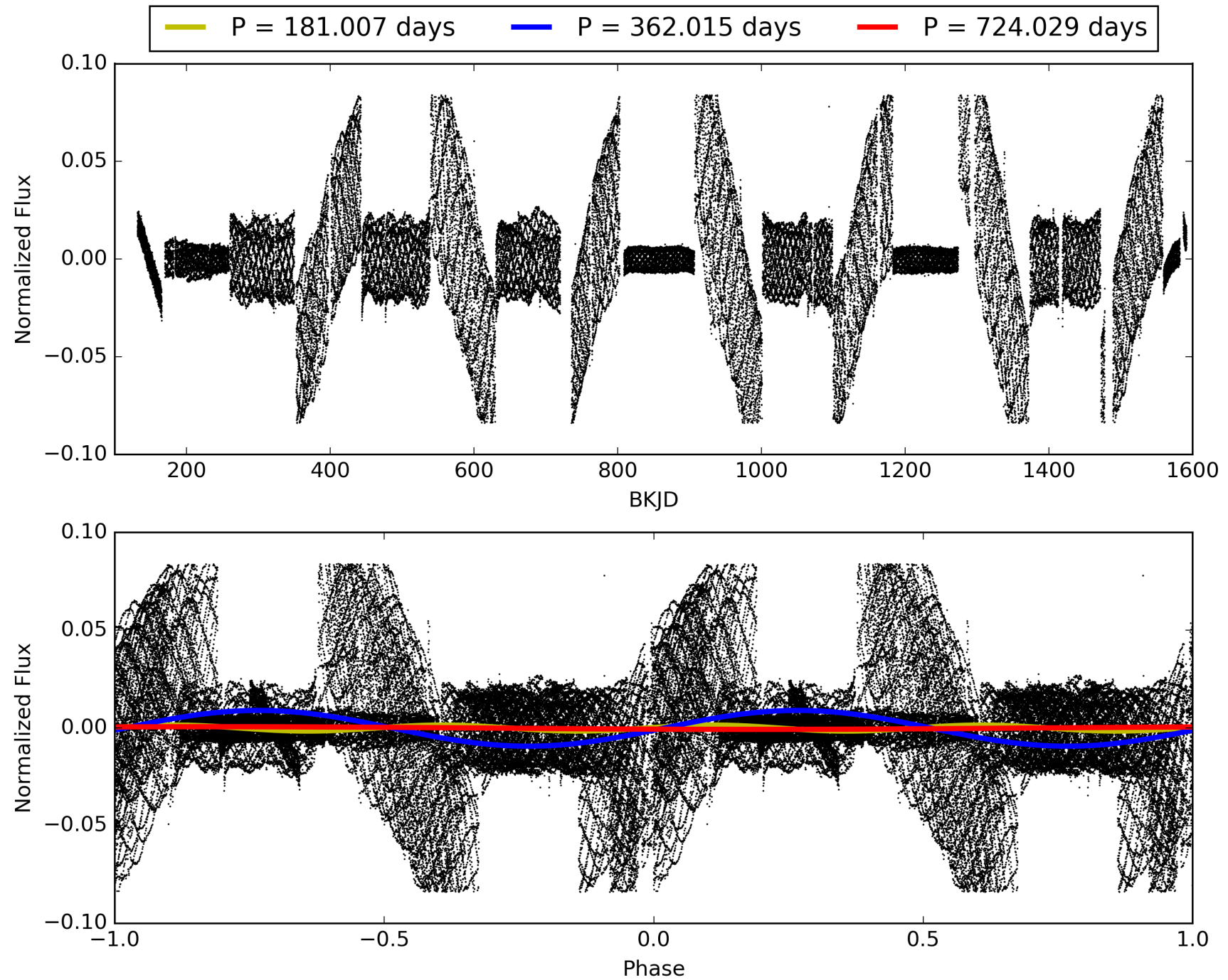
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 08:49:34 Z

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

TCE 007691547-04, PDC Light Curves

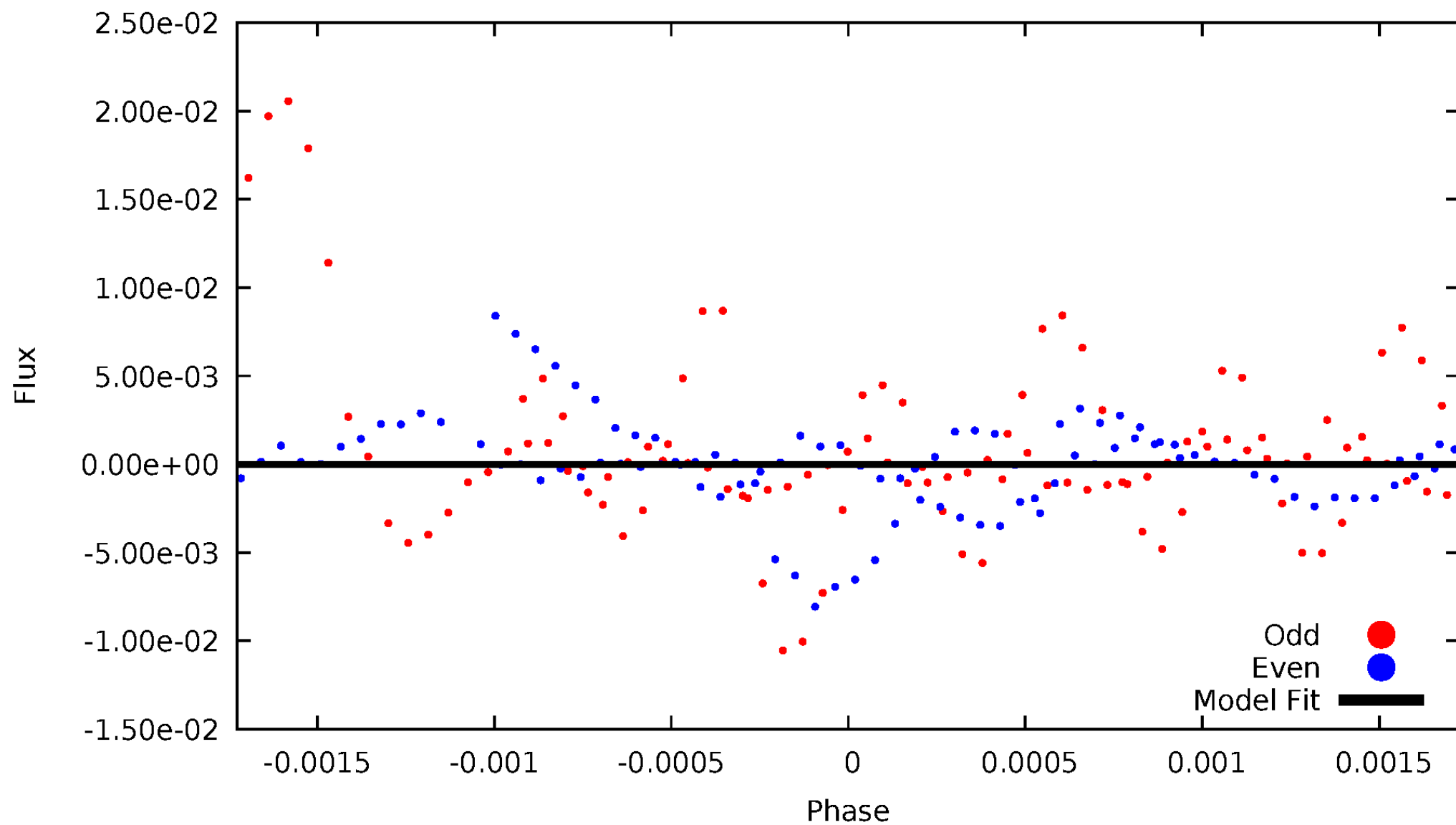


TCE 007691547-04



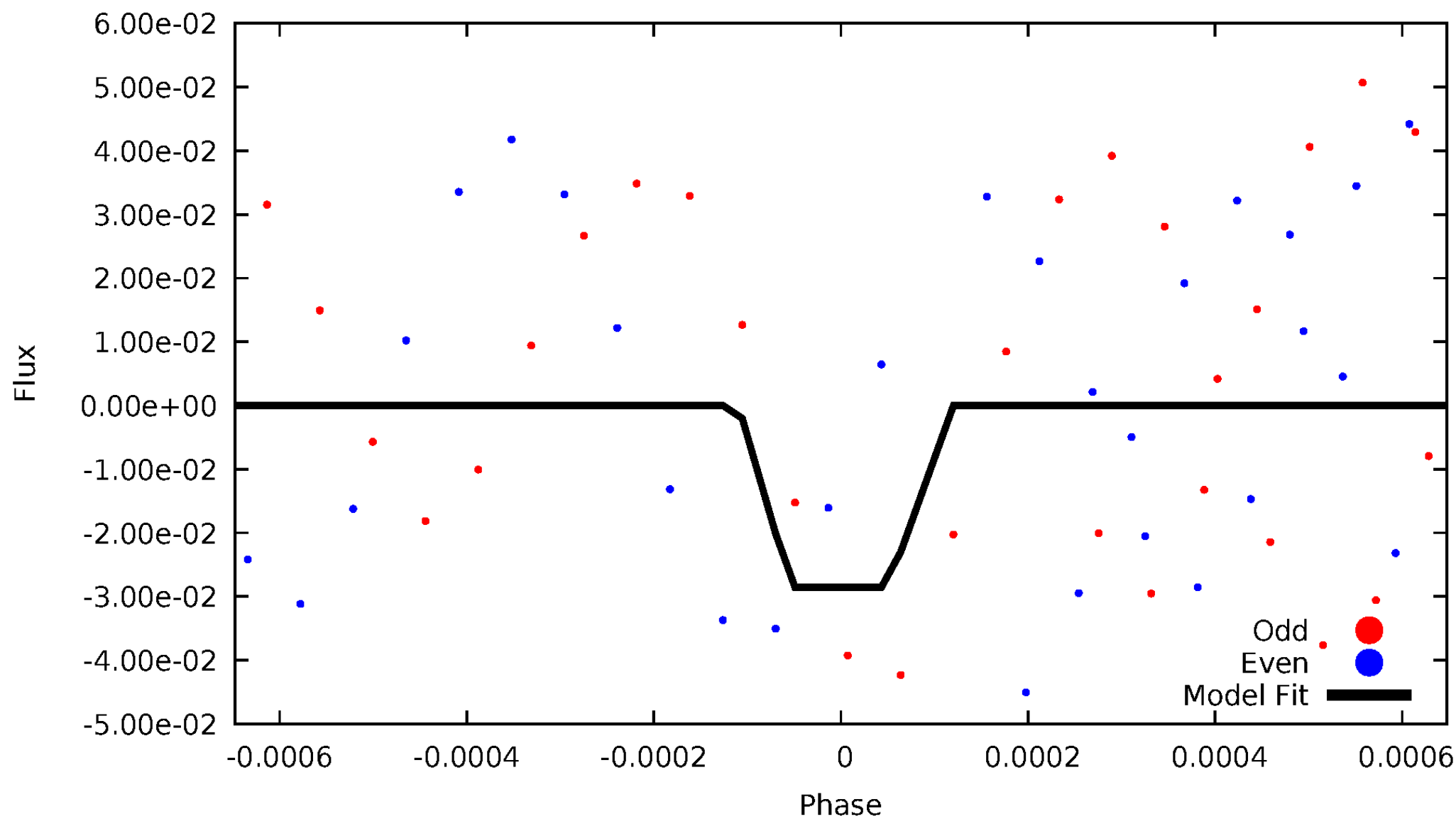
DV Odd/Even

TCE 007691547-04



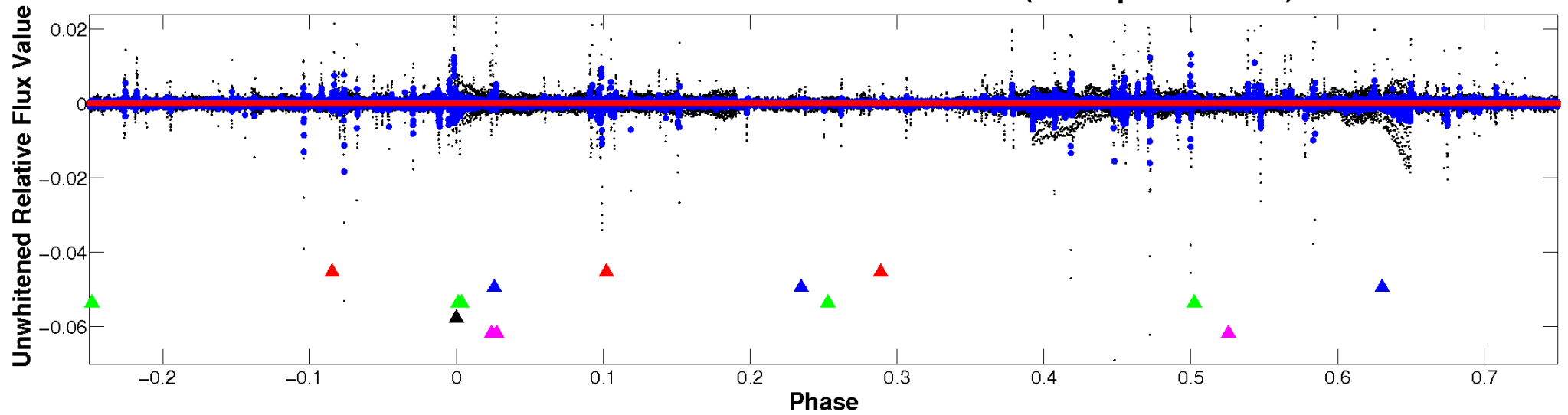
ALT Odd/Even

TCE 007691547-04



Non-Whitened Vs. Whitened Light Curve

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



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



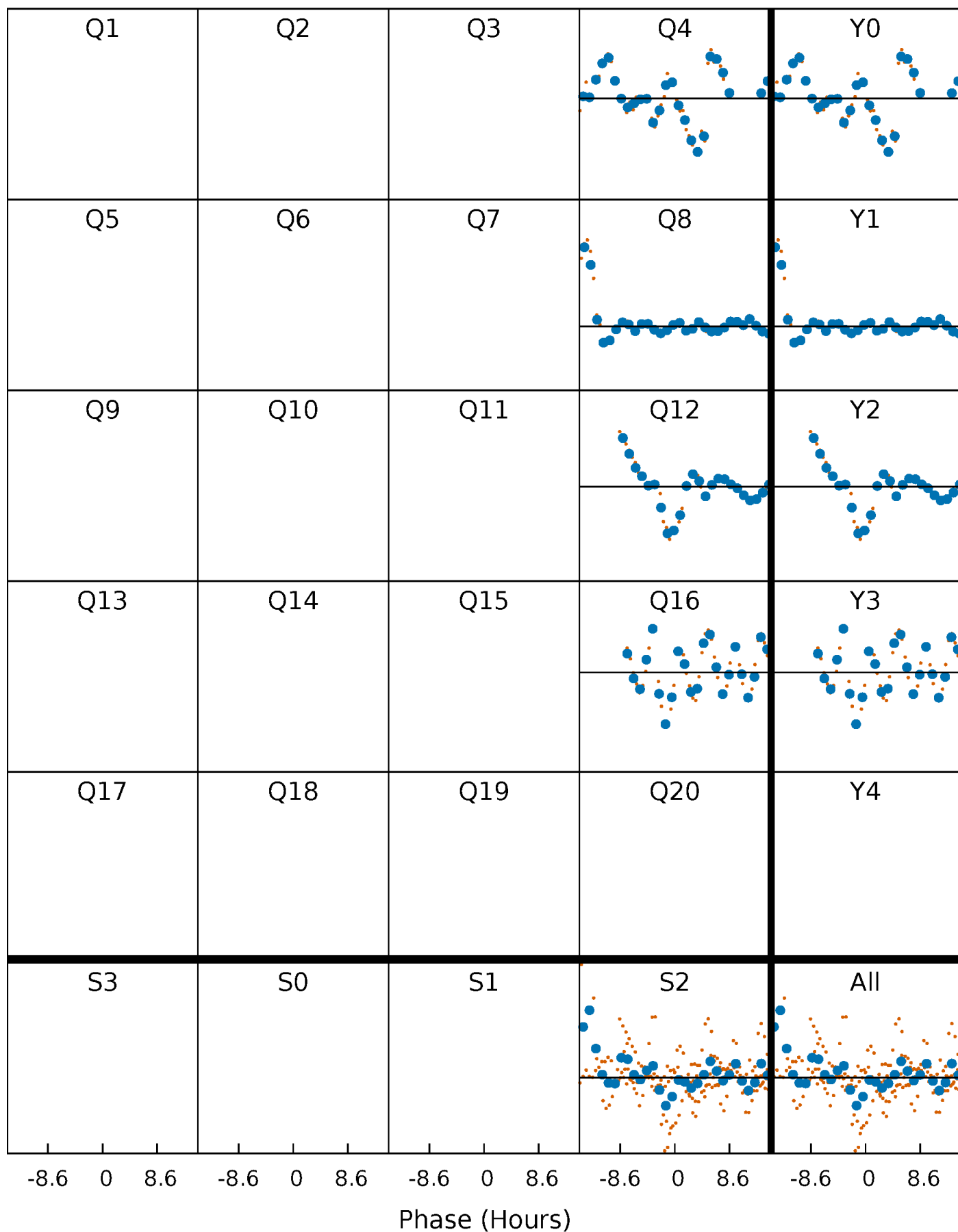
PDC Quarter-Phased Transit Curves

TCE 007691547-04 $P=362.014571$ Days $T_0=402.977650$ (BKJD)



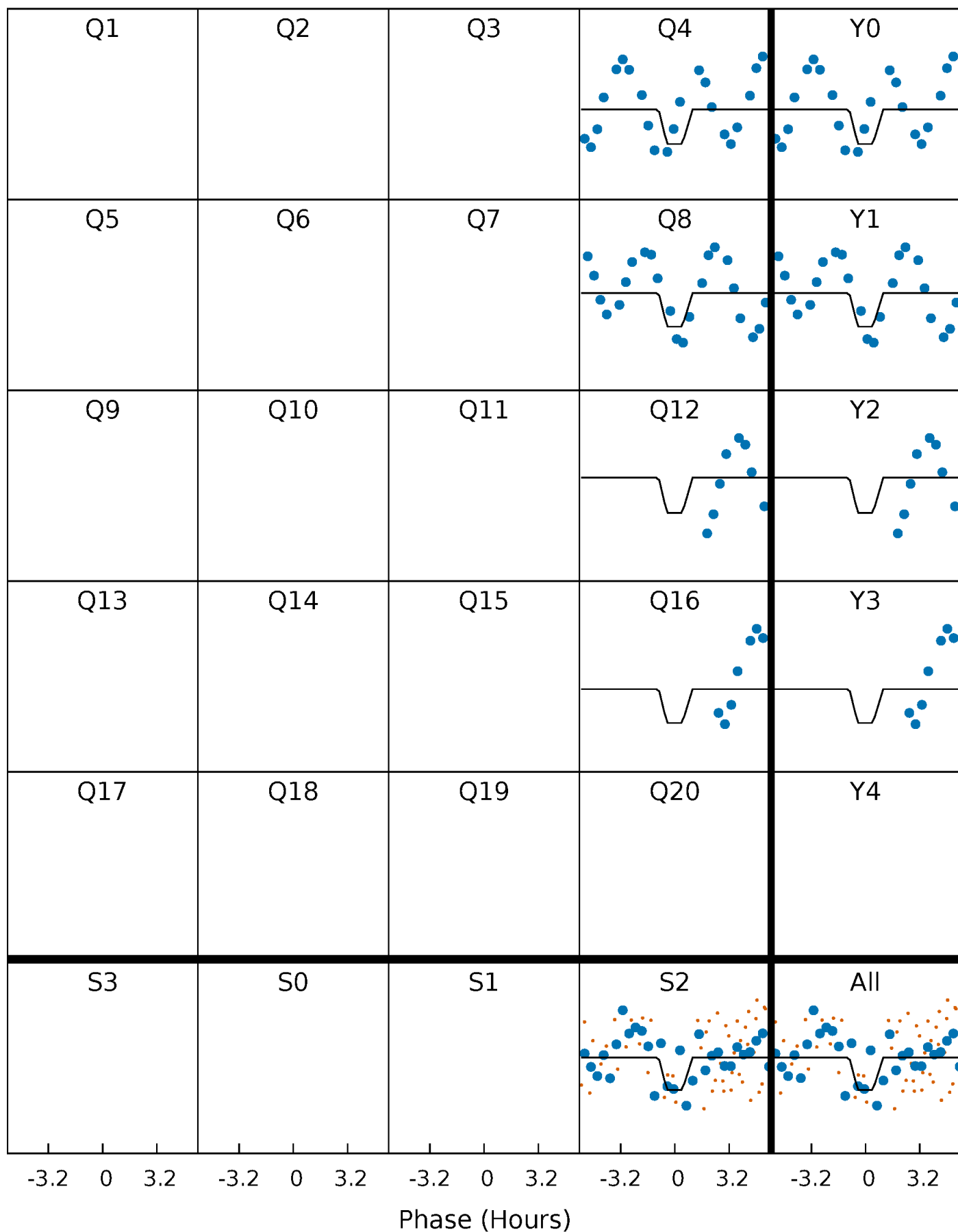
DV Quarter-Phased Transit Curves

TCE 007691547-04 $P=362.014571$ Days $T_0=402.977650$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

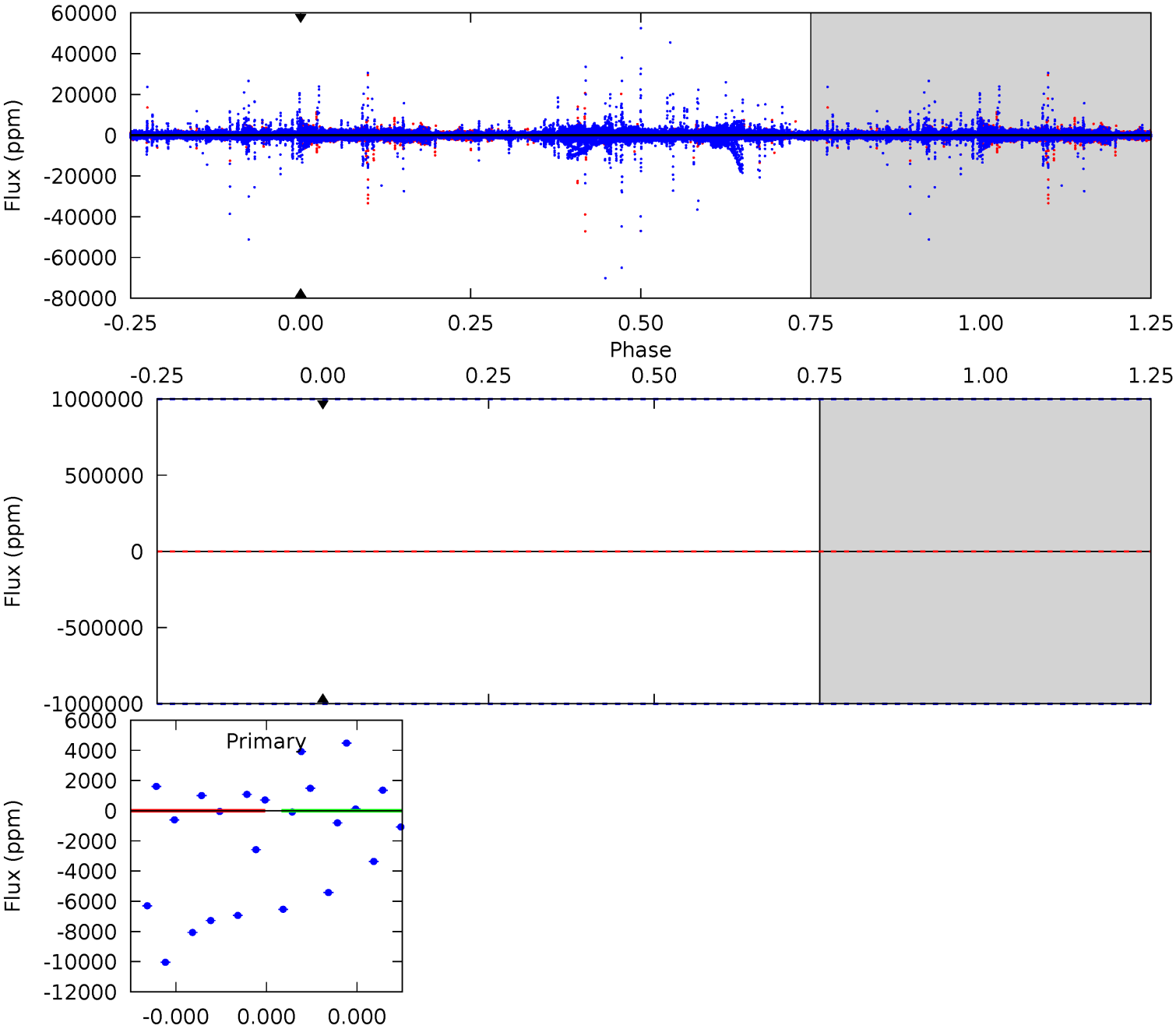
TCE 007691547-04 P=362.014571 Days $T_0=402.545200$ (BKJD)



DV Model-Shift Uniqueness Test

007691547-04, P = 362.014571 Days, E = 40.963079 Days

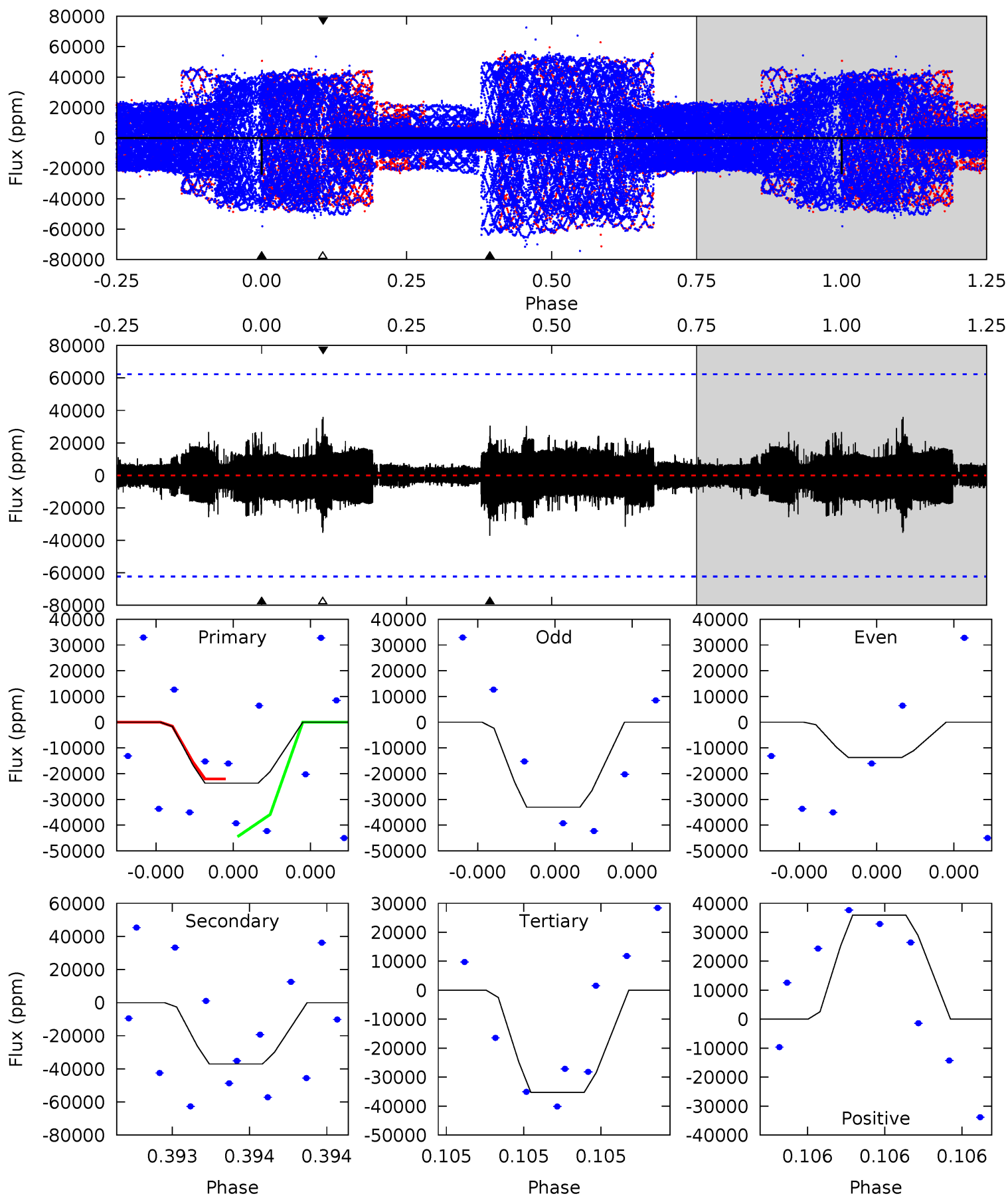
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007691547-04, P = 362.014571 Days, E = 40.530629 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.20	3.45	3.28	3.34	5.80	3.82	0.62	-1.08	-1.14	0.16	0.11	0.90	1.00	0.49	0.93



Stellar Parameters For KIC 007691547

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6110^{+165}_{-202}	$4.463^{+0.081}_{-0.202}$	$-0.440^{+0.300}_{-0.300}$	$0.937^{+0.266}_{-0.114}$	$0.930^{+0.117}_{-0.105}$	$1.593^{+0.544}_{-0.786}$
	+3%/-3%	+2%/-5%	+68%/-68%	+28%/-12%	+13%/-11%	+34%/-49%
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 007691547-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$8.61^{+8.62}_{-5.94}$	375^{+25}_{-18}	-4227^{+27022}_{-16253}	$-9703.857^{+1448426.723}_{-1123384.275}$
Alt.	-37064 ± 10747	$18.28^{+10.67}_{-9.15}$	375^{+29}_{-20}	6497^{+3236}_{-1388}	$58553^{+156093}_{-37644}$

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

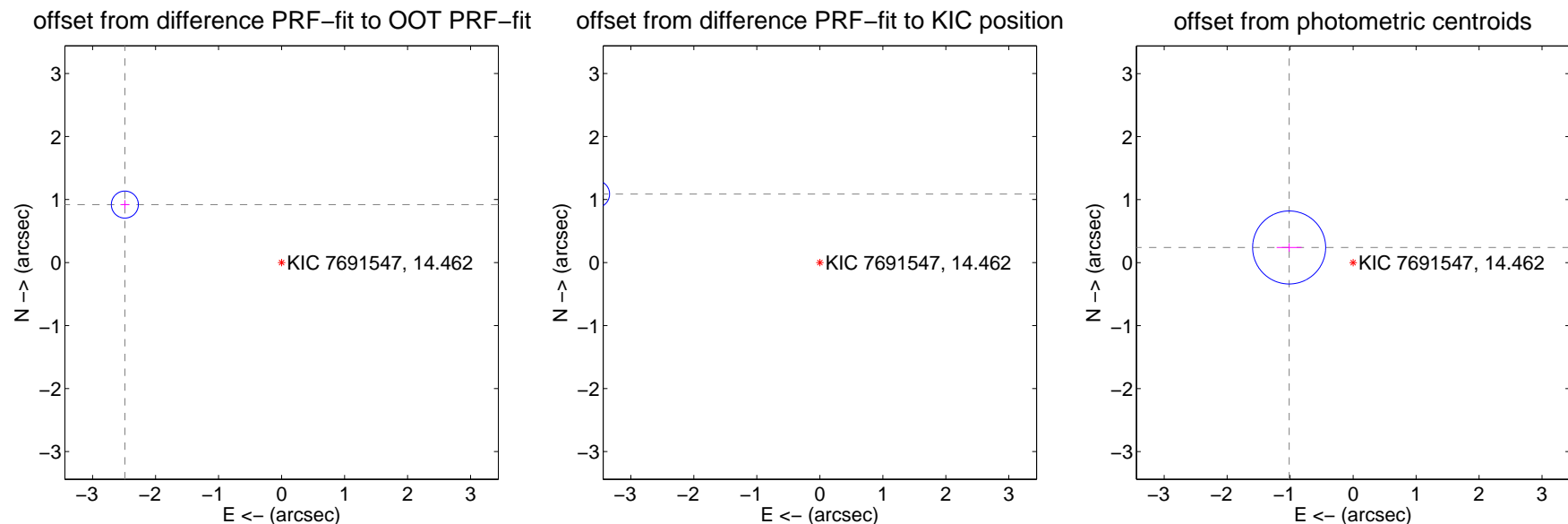
DV Centroid Data

Supplemental centroid analysis for 007691547-04. Kepler magnitude: 14.46. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

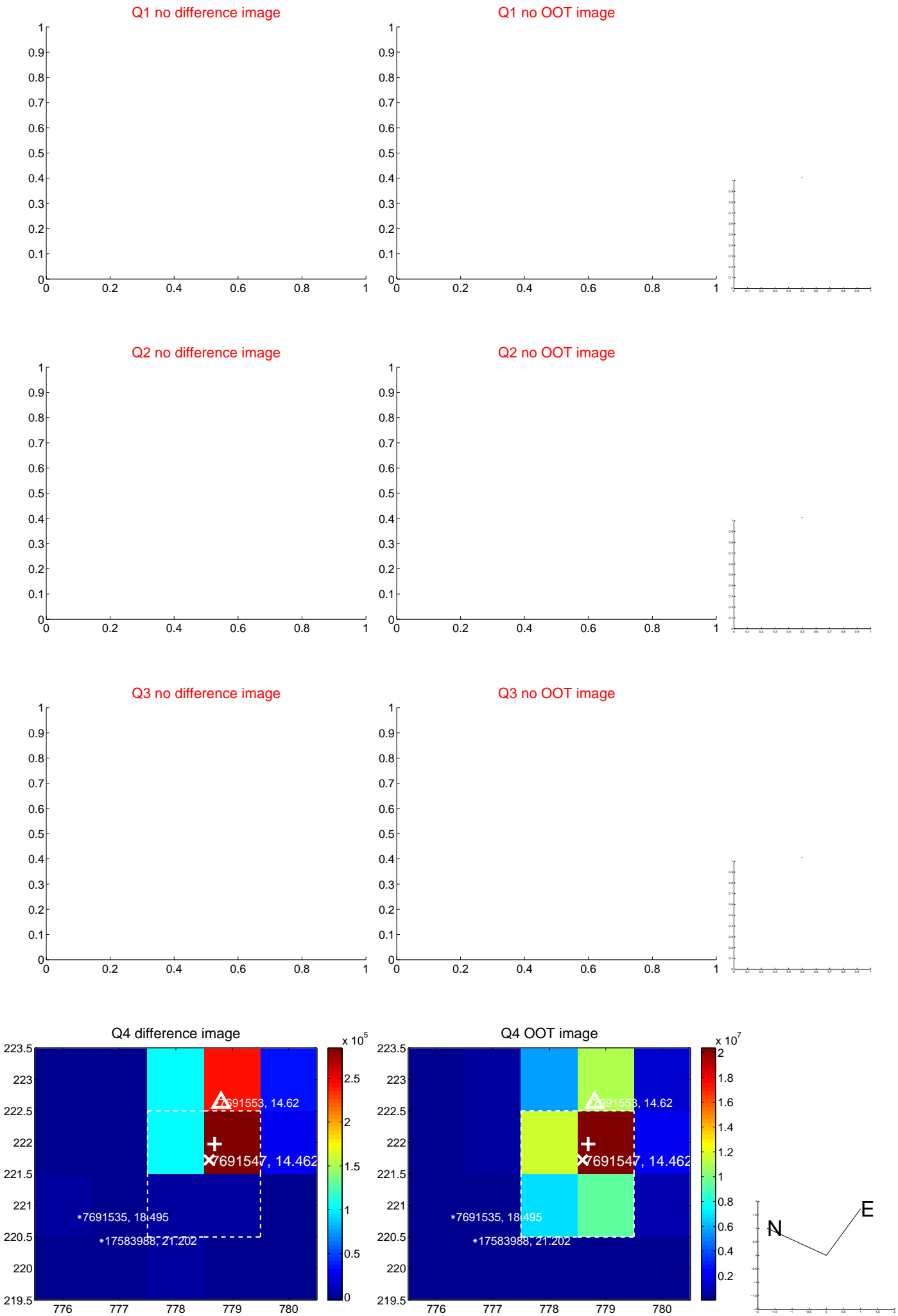
The direct PRF centroid is offset from the target star catalog position by about 1.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.653 ± 0.072	37.08	2.488 ± 0.072	0.920 ± 0.071
PRF-fit source offset from KIC position	3.715 ± 0.072	51.91	3.553 ± 0.072	1.087 ± 0.071
photometric centroid source offset	1.04 ± 0.19	5.40	1.02 ± 0.20	0.24 ± 0.07



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.



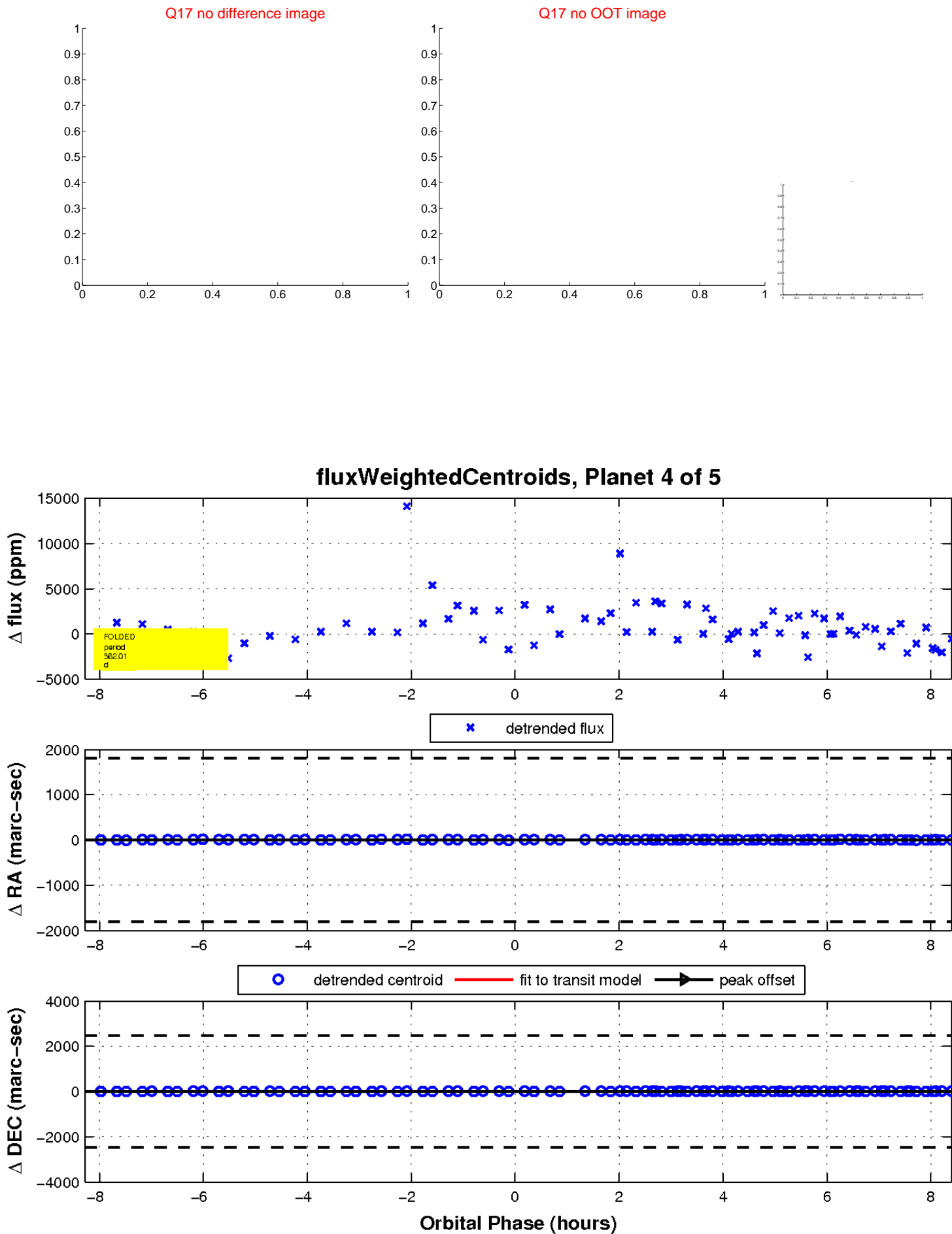
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

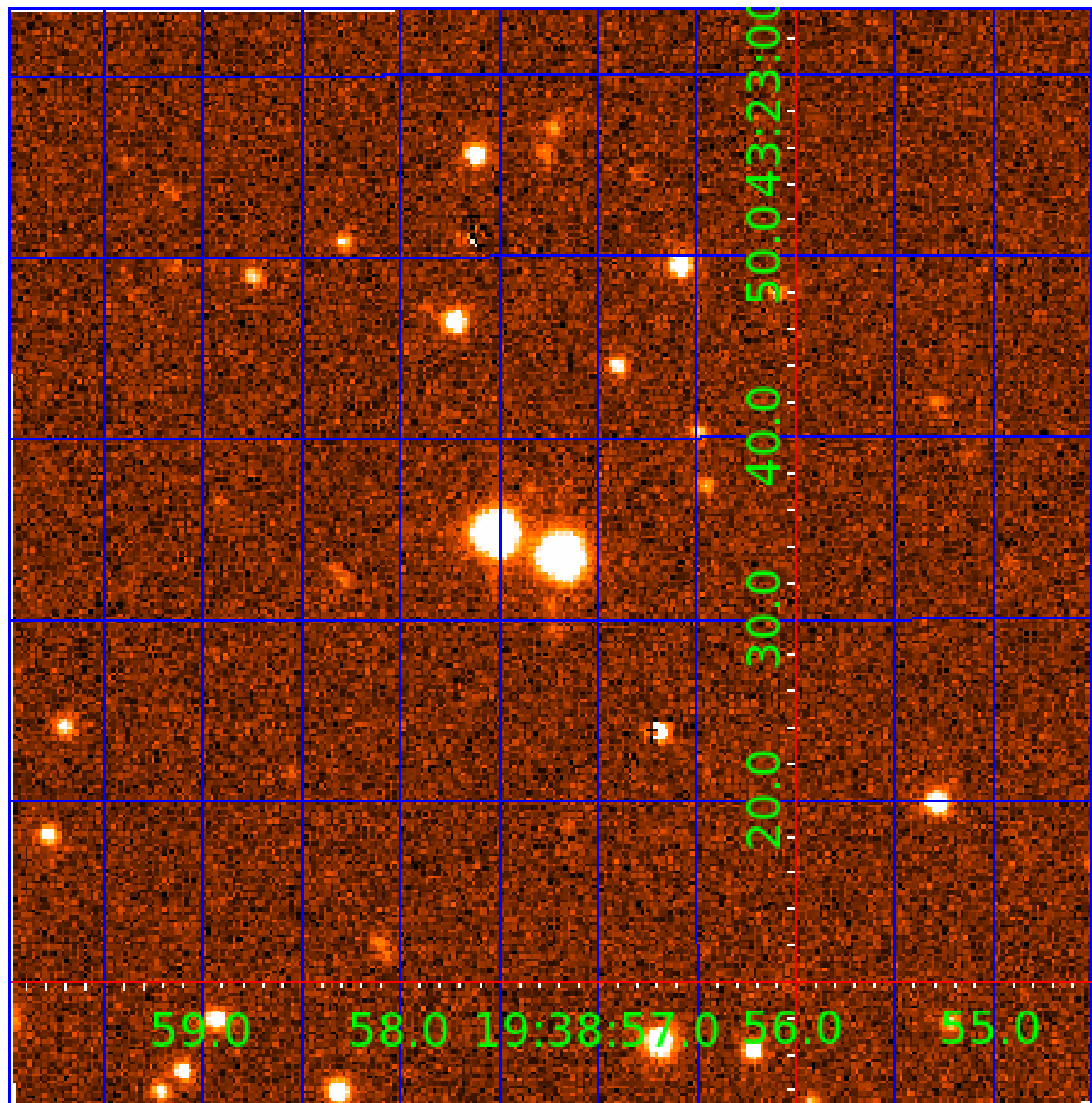


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007691547

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})
007691547-02	OBS	No	505.208481	487.955312	6807.7	4.561	25.1	11.5	0.94	6110	13.91	0.75
007691547-03	OBS	No	271.715151	403.428617	5.2	0.660	17.1	0.0	0.94	6110	0.26	1.71
007691547-04	OBS	No	362.014571	402.977650	1379.1	7.500	20.2	-1.0	0.94	6110	3.49	1.16
007691547-05	OBS	No	542.355802	412.936210	5088.7	4.121	17.6	14.5	0.94	6110	11.03	0.68

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007691547-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007691547-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_SKYE_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_MEAS
007691547-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS
007691547-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS

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

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

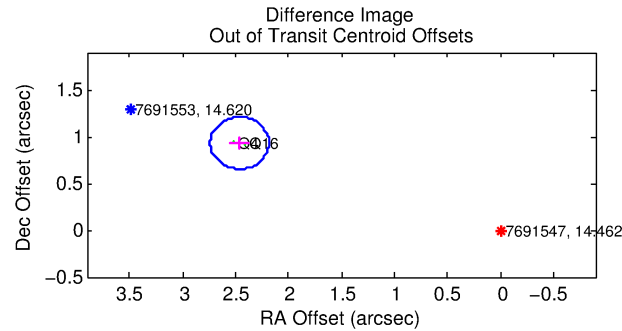
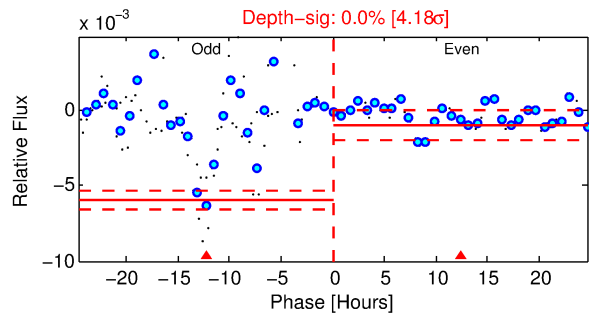
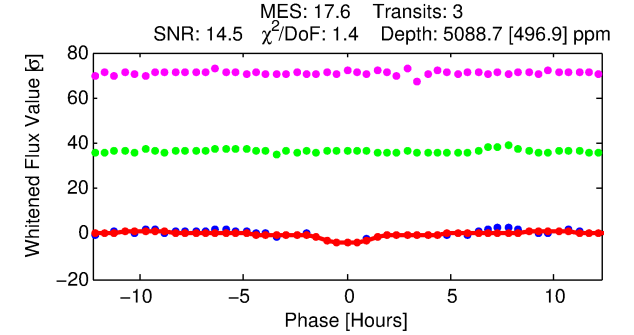
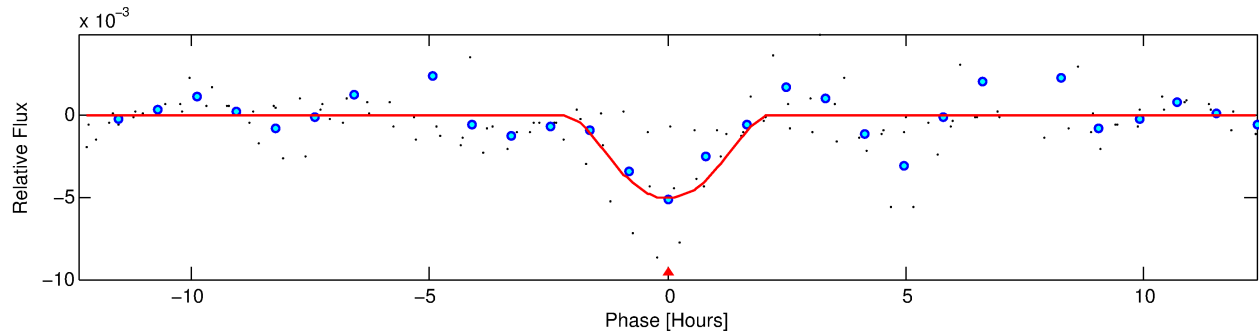
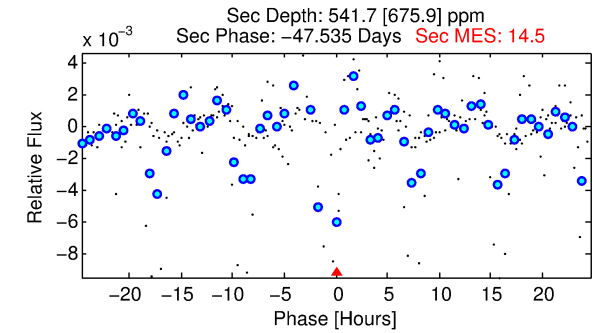
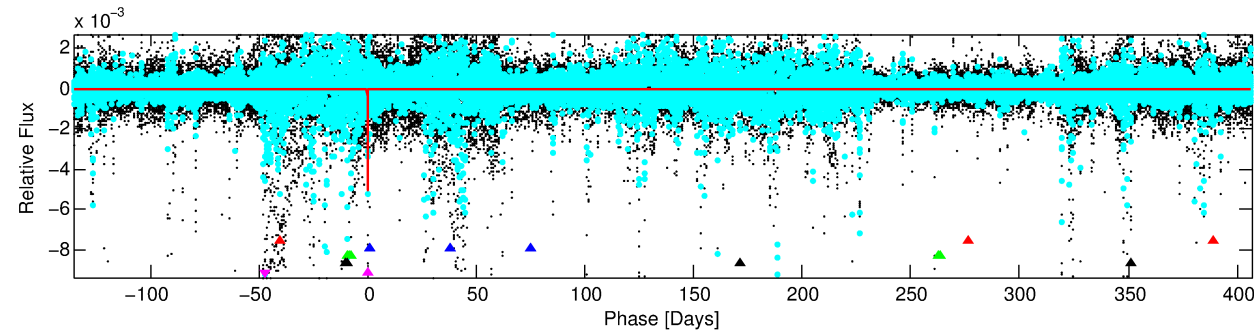
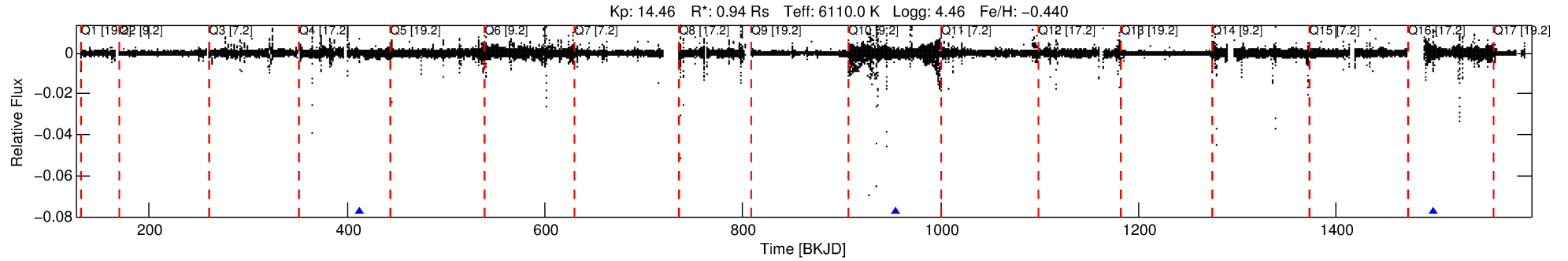
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007691547-05

No Significant Match Found

DV One-Page Summary

KIC: 7691547 Candidate: 5 of 5 Period: 542.356 d



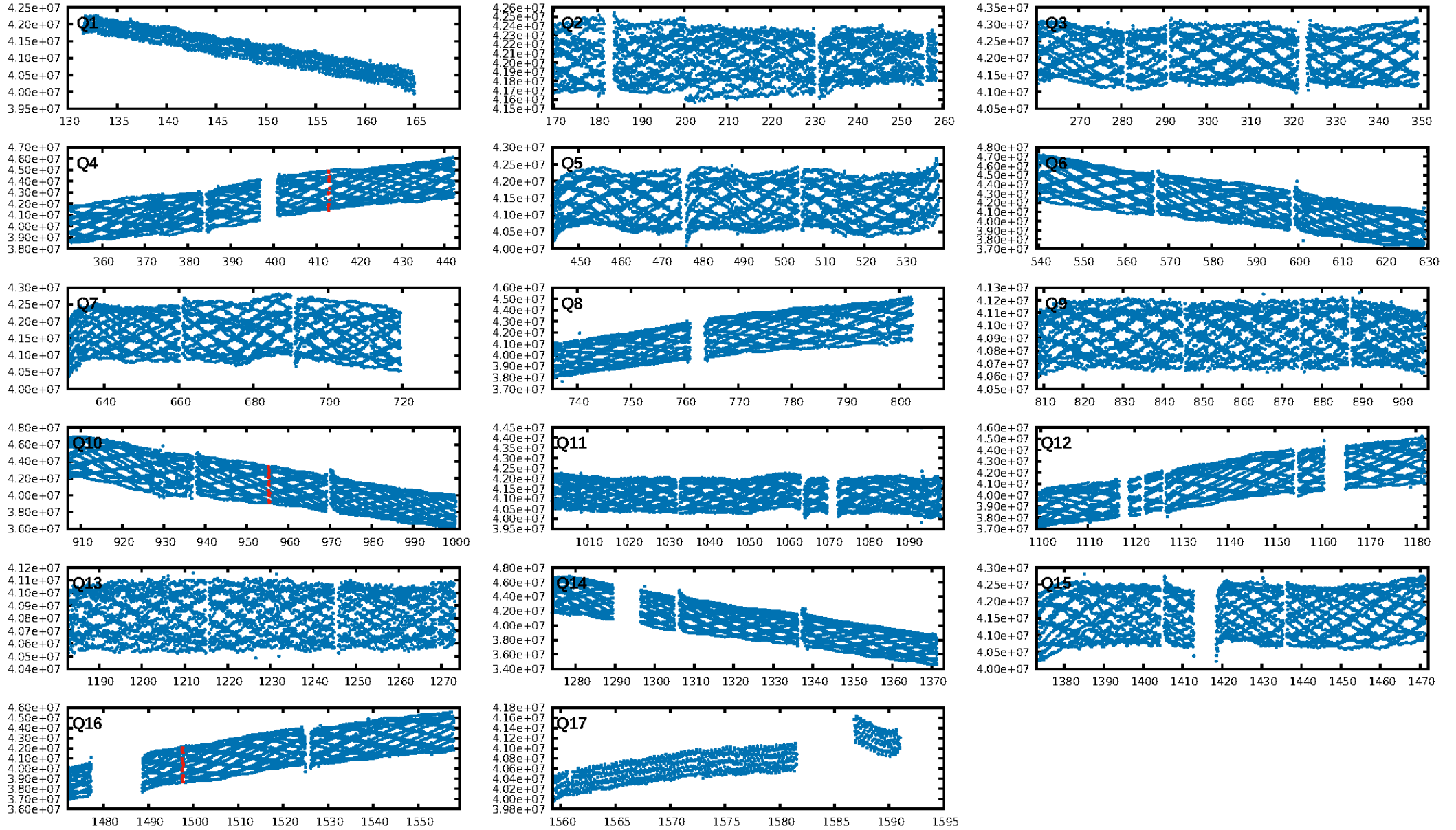
DV Fit Results:

Period = 542.35580 [0.00722] d
Epoch = 412.9362 [0.0053] BKJD
Rp/R* = 0.1079 [0.1808]
a/R* = 512.59 [191.42]
b = 0.98 [0.28]
Seff = 0.68 [0.26]
Teff = 231 [22] K
Rp = 11.03 [18.75] Re
a = 1.2707 [0.3109] AU
Ag = 3954.60 [14218.88] [0.28σ]
Teffp = 2838 [2540] K [1.03σ]

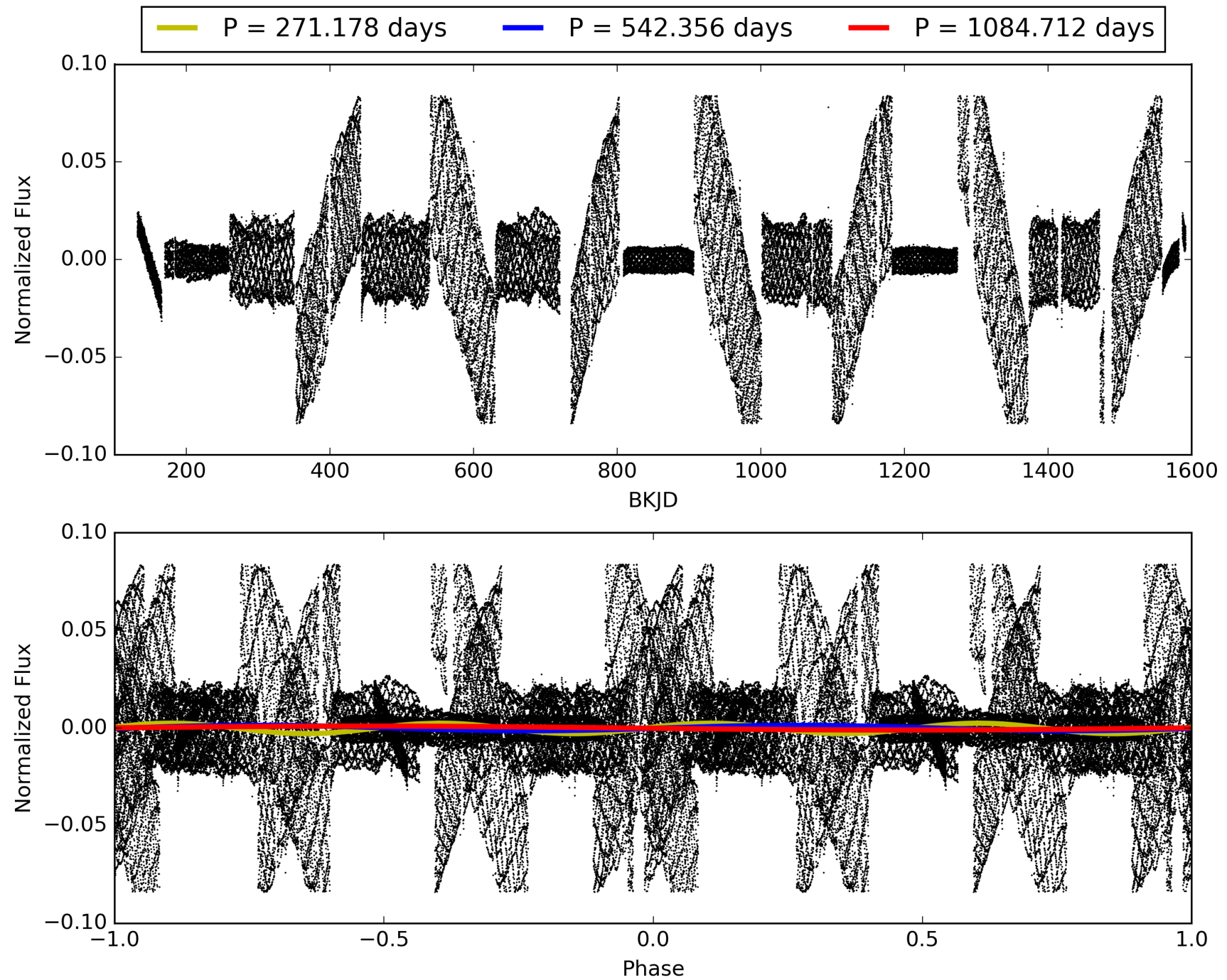
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [145.05σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 43.0%
Bootstrap-pfa: 1.59e-06
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.258
Centroid-sig: 10.7%
Centroid-so: 1.583 arcsec [2.50σ]
OotOffset-rm: 2.631 arcsec [28.49σ]
KicOffset-rm: 3.716 arcsec [43.51σ]
OotOffset-st: 0/0/2/0 [2]
KicOffset-st: 0/0/2/0 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 1.00 [3/3]

TCE 007691547-05, PDC Light Curves

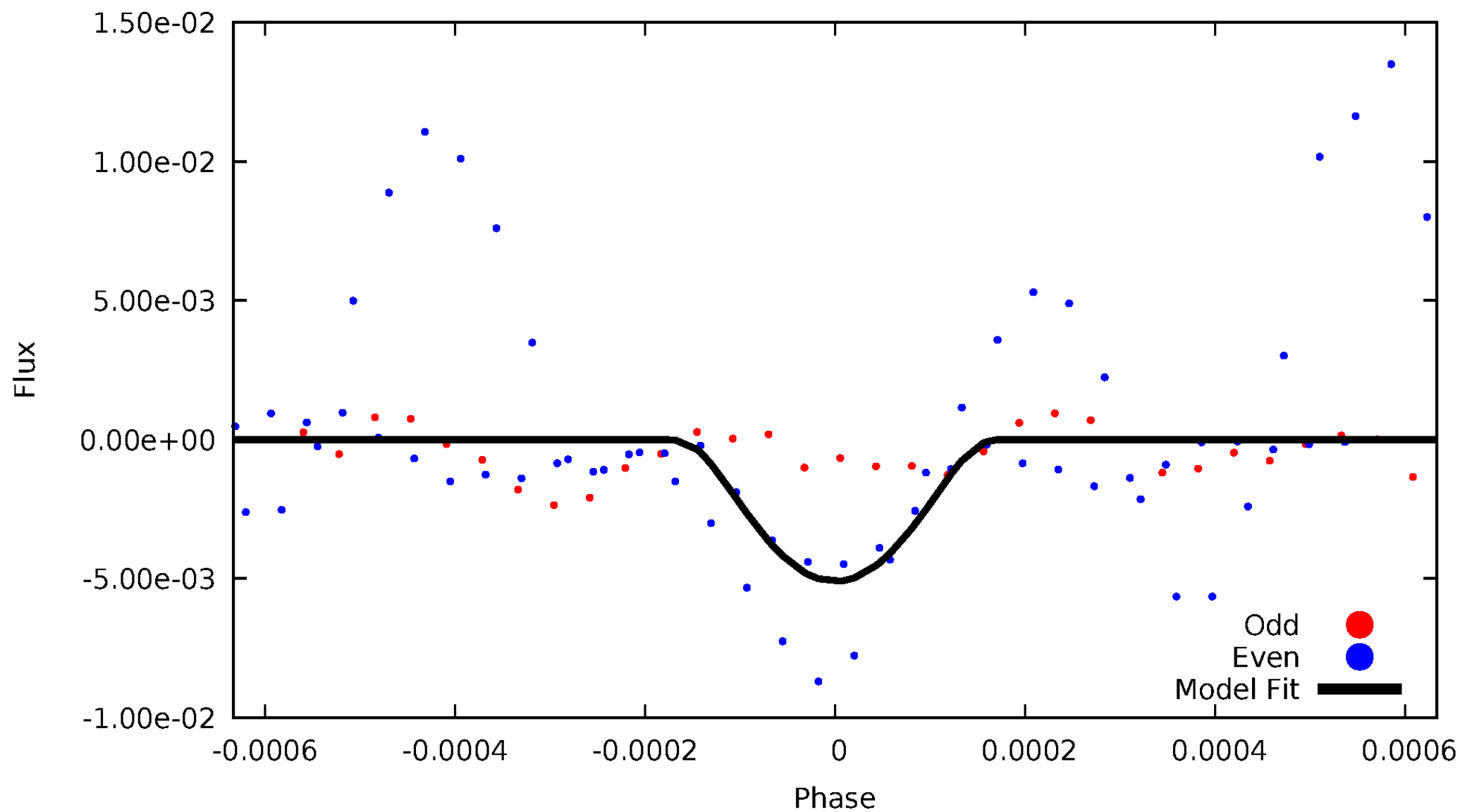


TCE 007691547-05



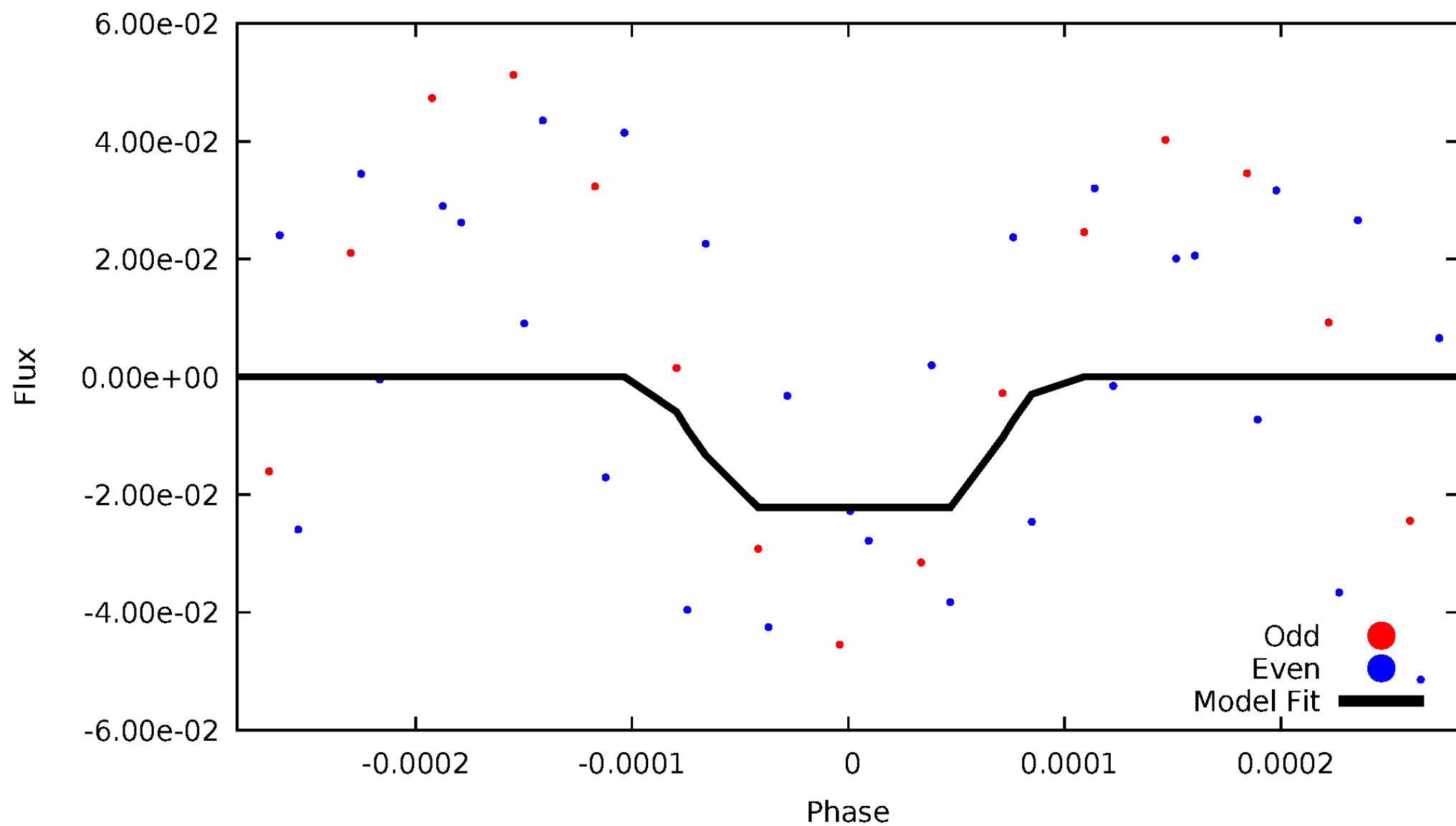
DV Odd/Even

TCE 007691547-05



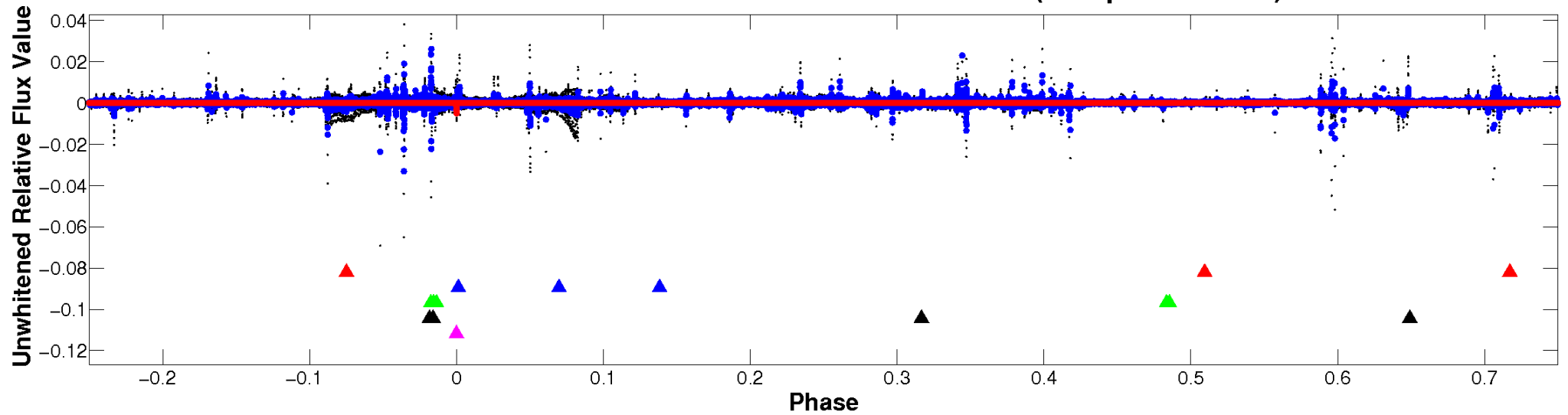
ALT Odd/Even

TCE 007691547-05

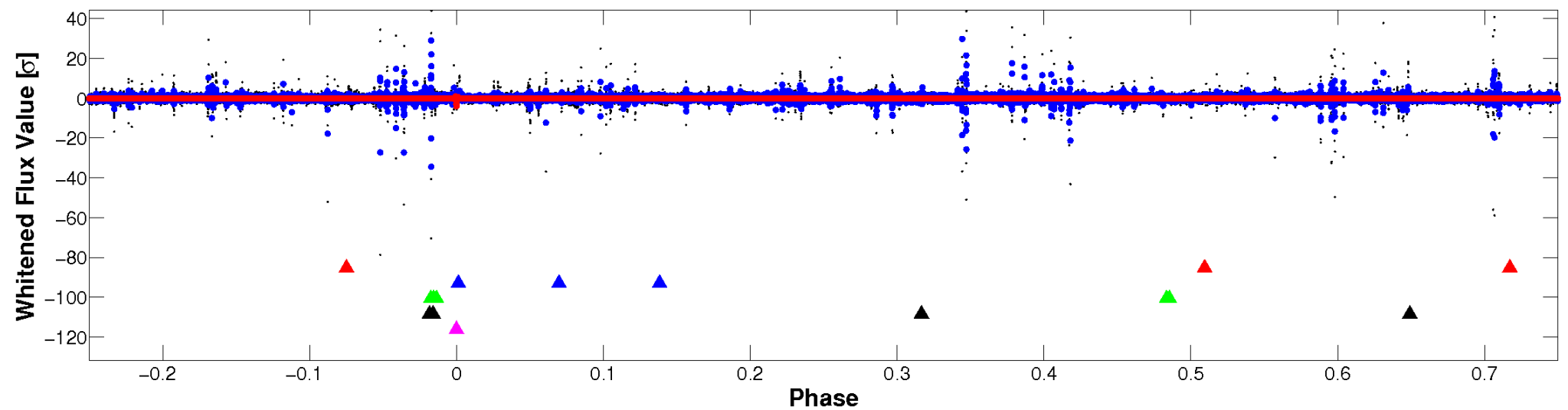


Non-Whitened Vs. Whitened Light Curve

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

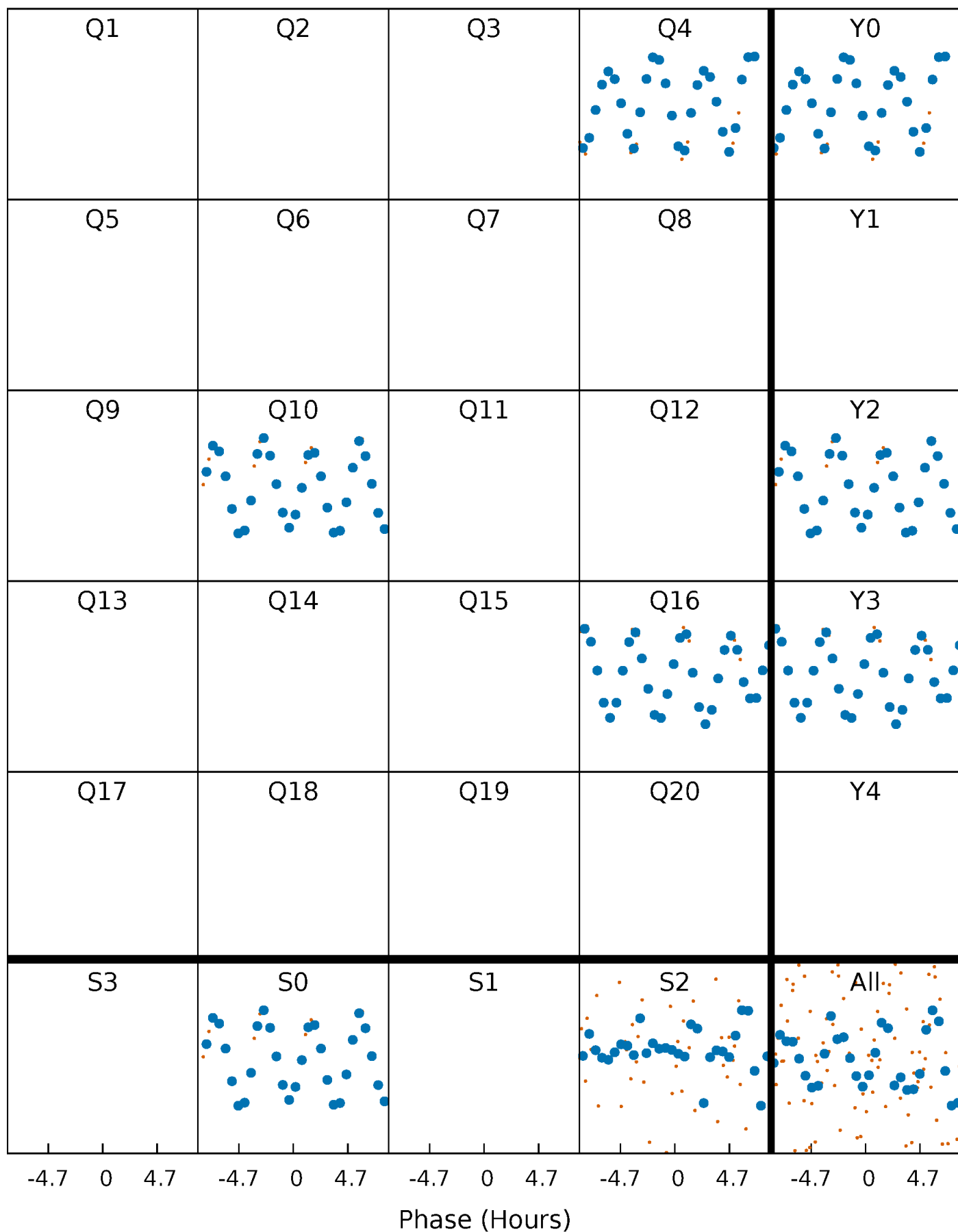


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



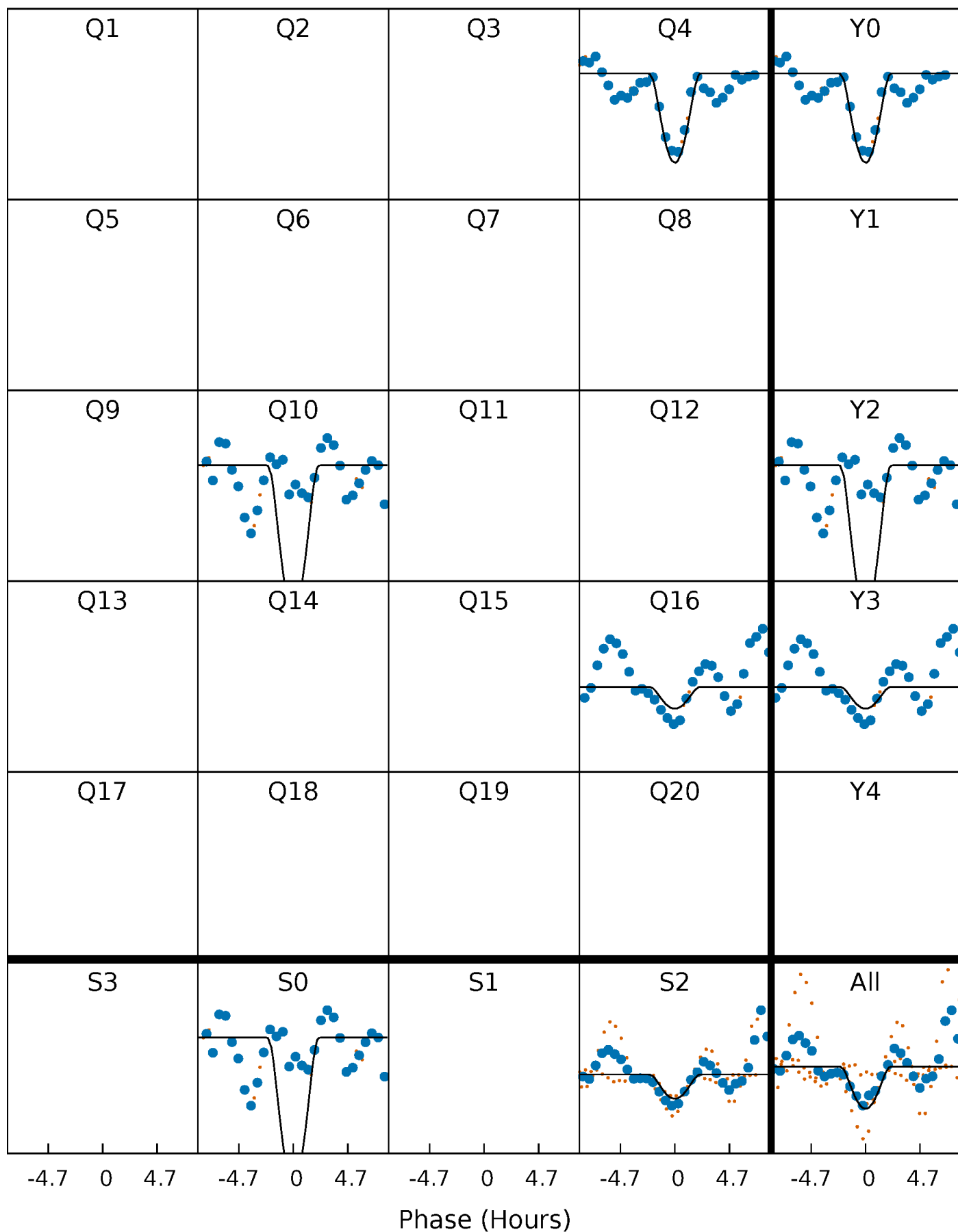
PDC Quarter-Phased Transit Curves

TCE 007691547-05 $P=542.355802$ Days $T_0=412.936210$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 007691547-05 P=542.355802 Days $T_0=412.936210$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

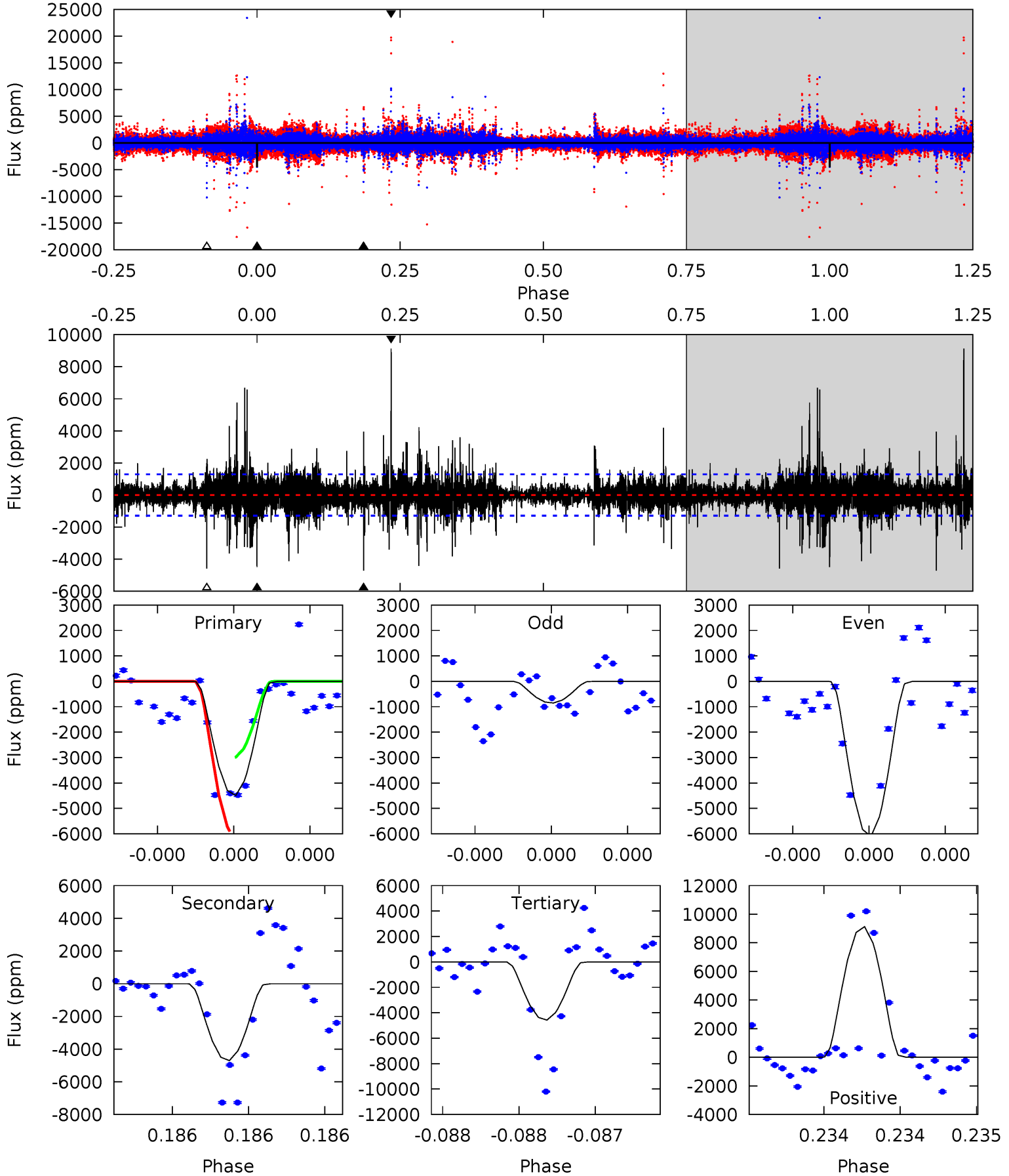
TCE 007691547-05 P=542.340738 Days $T_0=412.936000$ (BKJD)



DV Model-Shift Uniqueness Test

007691547-05, P = 542.355802 Days, E = 412.936210 Days

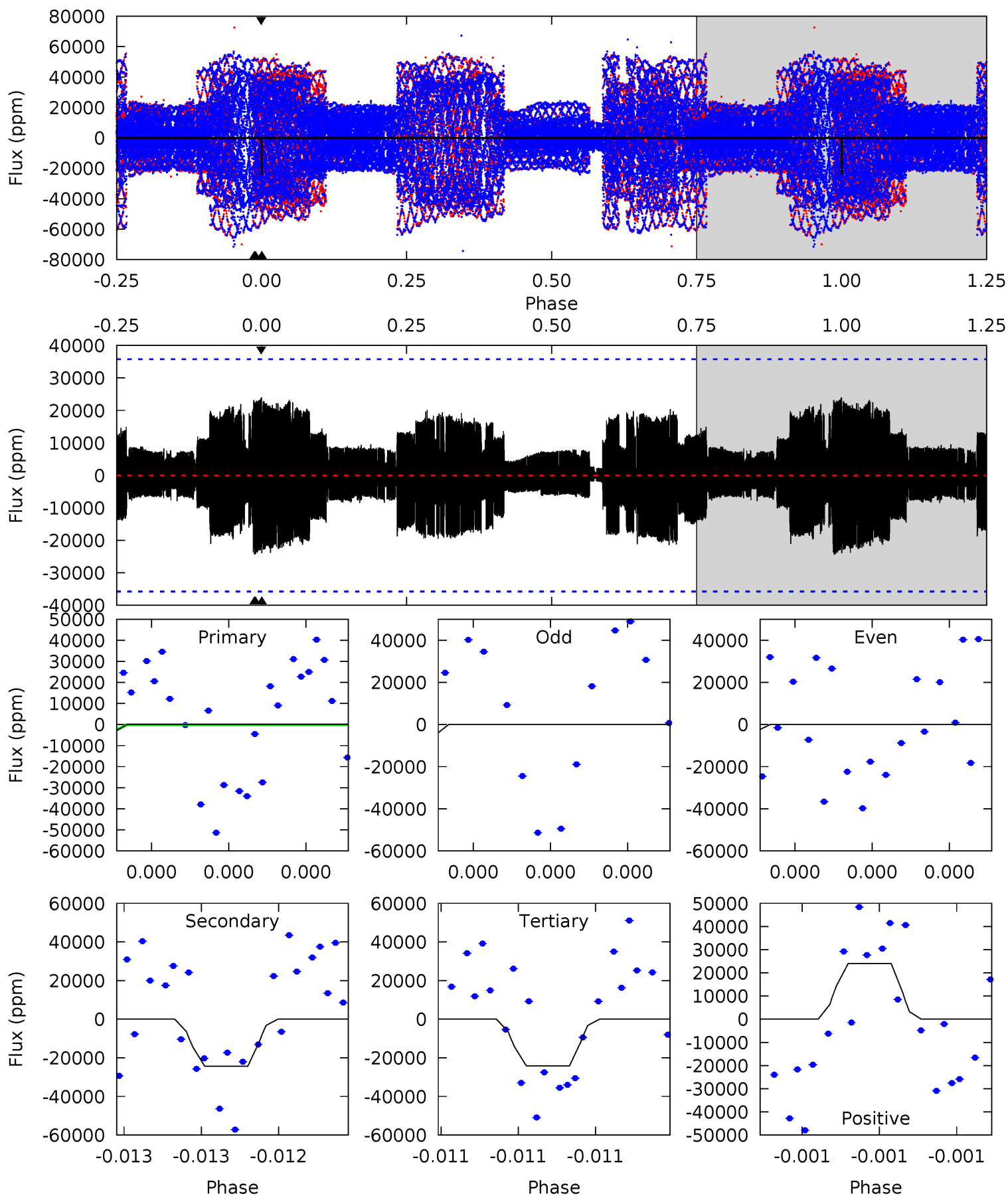
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.7	20.6	20.0	40.0	5.64	3.58	2.81	-0.35	-20.3	0.58	-19.4	8.62	0.96	0.66	6.70



Alt Model-Shift Uniqueness Test

007691547-05, P = 542.340738 Days, E = 412.936000 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.85	3.93	3.90	3.88	5.77	3.78	1.36	-0.05	-0.02	0.03	0.06	1.01	1.10	0.50	0.41



Stellar Parameters For KIC 007691547

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6110^{+165}_{-202}	$4.463^{+0.081}_{-0.202}$	$-0.440^{+0.300}_{-0.300}$	$0.937^{+0.266}_{-0.114}$	$0.930^{+0.117}_{-0.105}$	$1.593^{+0.544}_{-0.786}$
	+3%/-3%	+2%/-5%	+68%/-68%	+28%/-12%	+13%/-11%	+34%/-49%
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 007691547-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-4706 ± 229	$17.97^{+17.58}_{-11.26}$	329^{+22}_{-18}	4148^{+2213}_{-833}	12716^{+81775}_{-9431}
Alt.	-24374 ± 6199	$20.71^{+17.68}_{-12.99}$	327^{+24}_{-16}	5457^{+4206}_{-1180}	$49311^{+296242}_{-33848}$

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

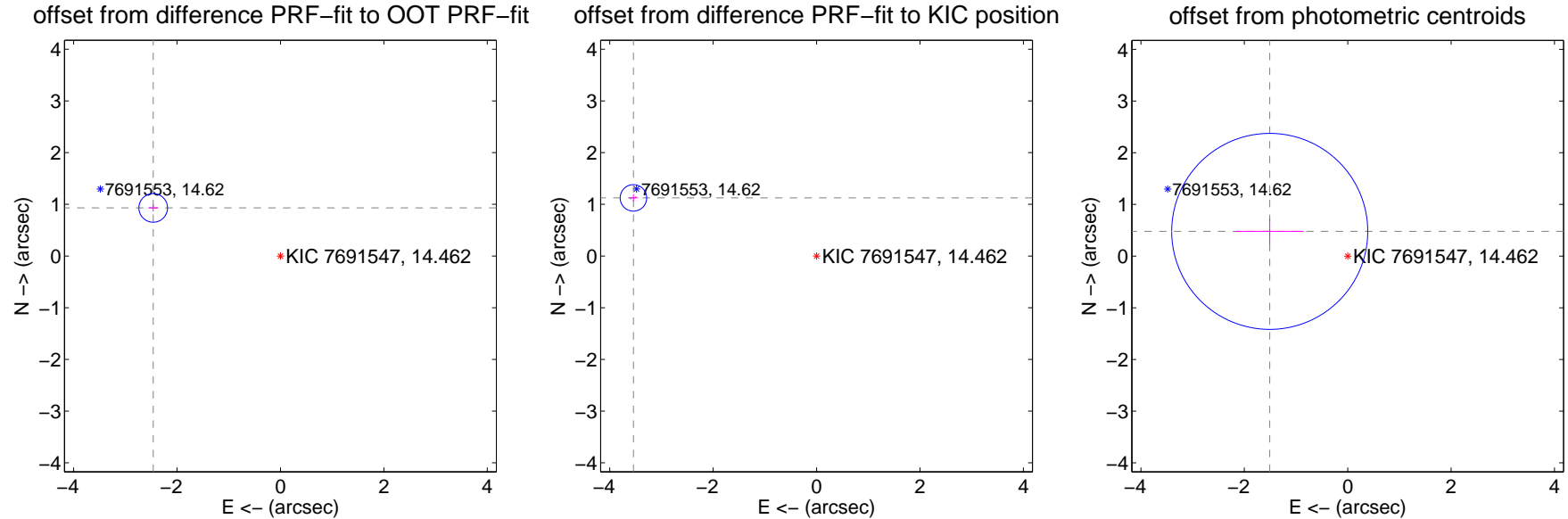
DV Centroid Data

Supplemental centroid analysis for 007691547-05. Kepler magnitude: 14.46. Transit SNR 14.52

There are 1 quarters with good PRF difference image offsets

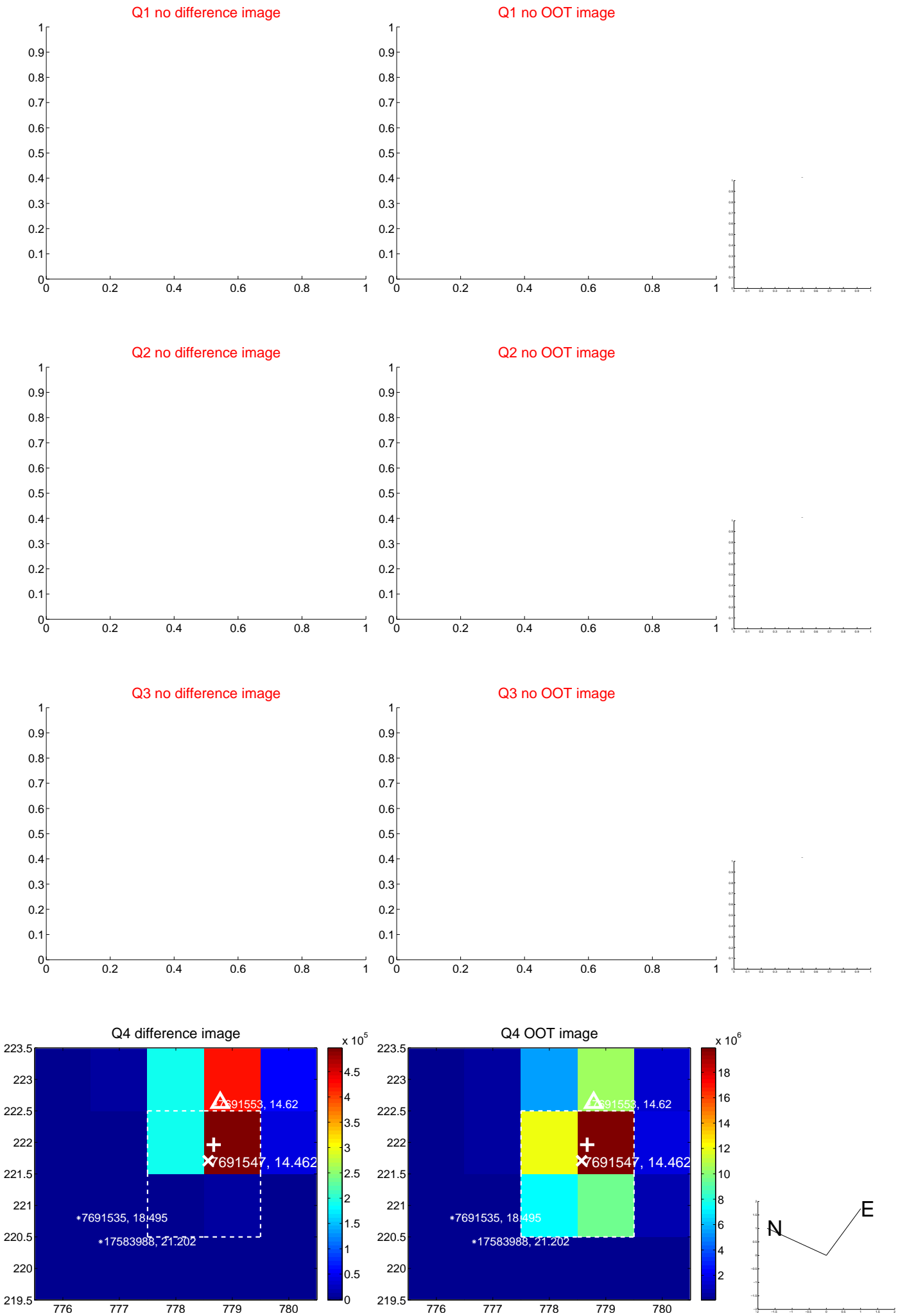
The direct PRF centroid is offset from the target star catalog position by about 1.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.631 ± 0.092	28.49	2.460 ± 0.095	0.931 ± 0.067
PRF-fit source offset from KIC position	3.716 ± 0.085	43.51	3.542 ± 0.087	1.124 ± 0.069
photometric centroid source offset	1.58 ± 0.63	2.50	1.51 ± 0.66	0.48 ± 0.25



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

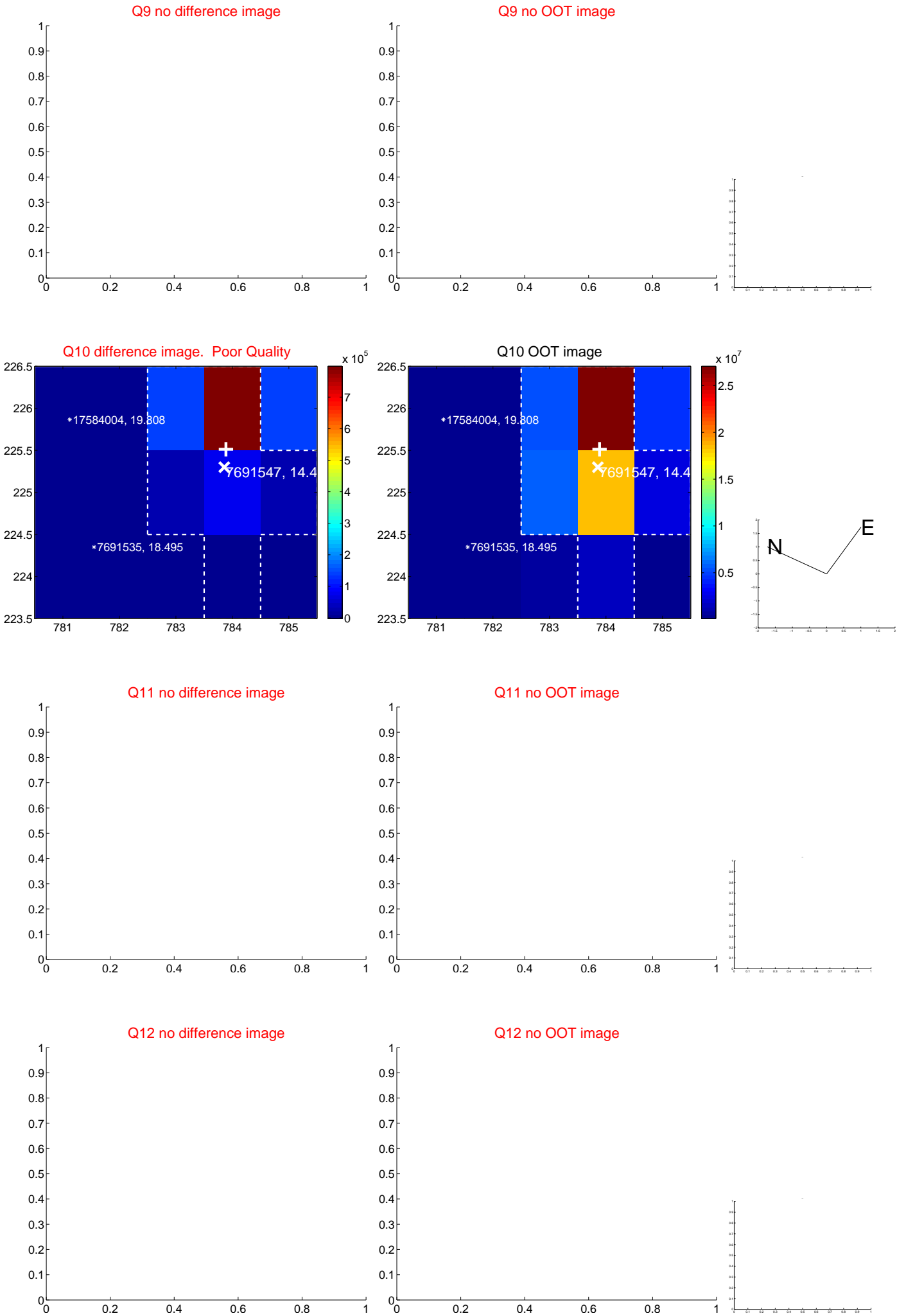
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



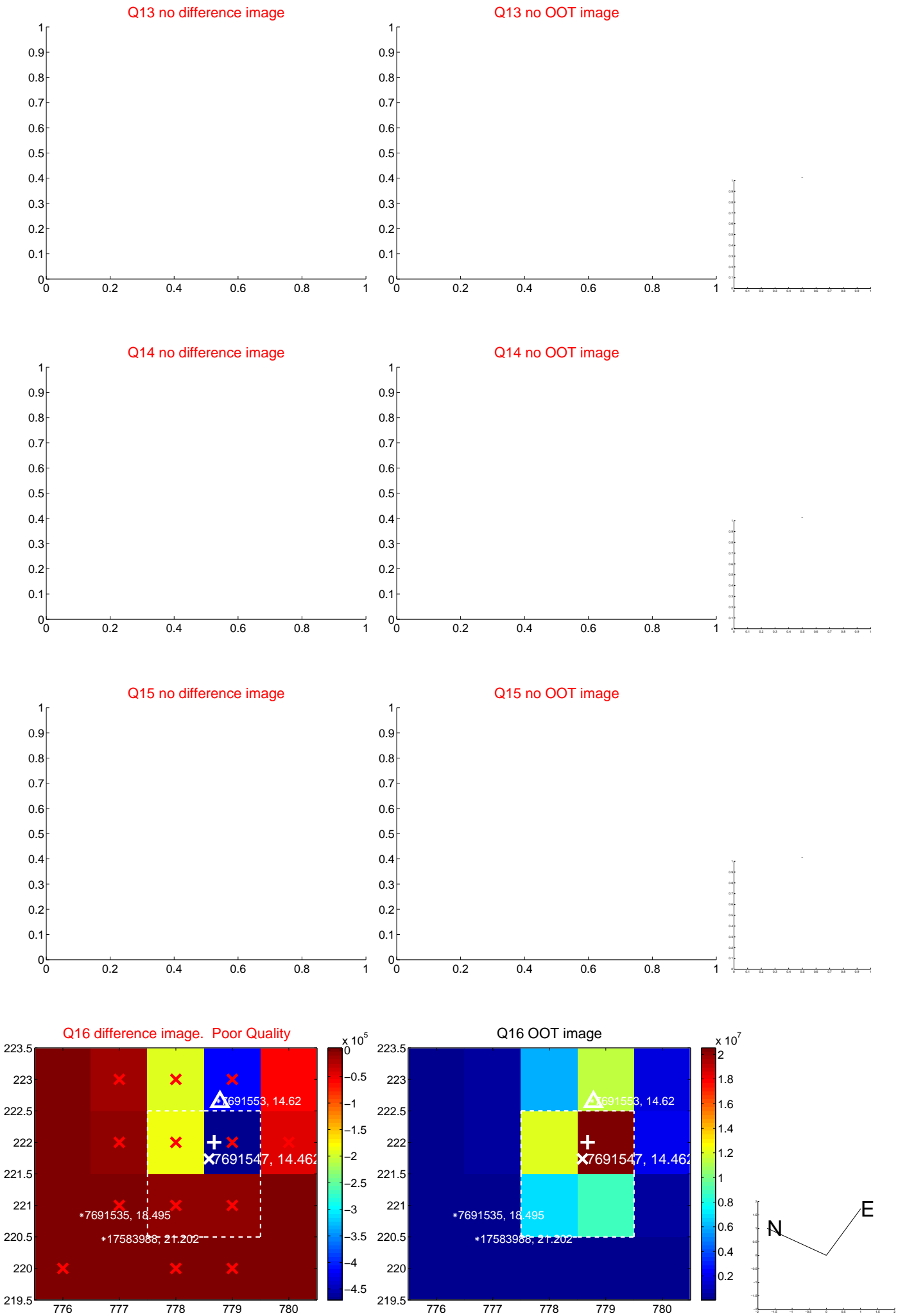
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



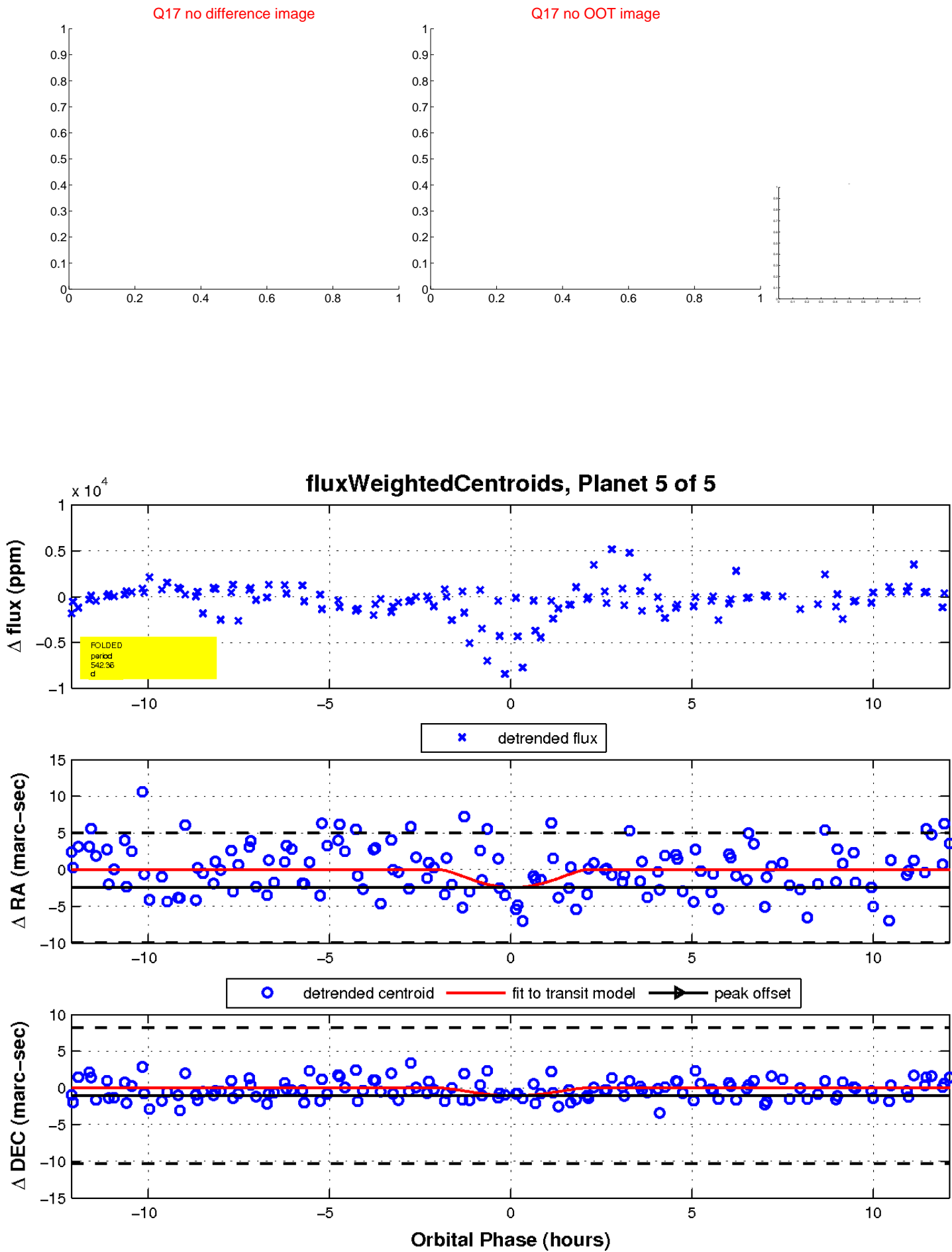
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



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



UKIRT Image

Declination

