

KIC 005290153

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})
005290153-01	OBS	No	335.026900	135.069224	34892.4	3.562	242.8	52.9	0.68	5103	12.37	0.41
005290153-02	OBS	No	0.539872	131.632869	16608.3	1.500	264.8	-1.0	0.68	5103	8.58	2184.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005290153-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
005290153-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

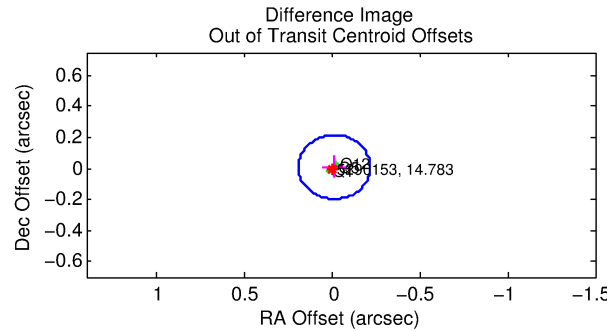
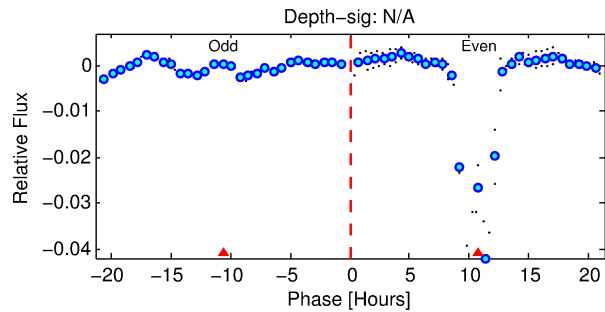
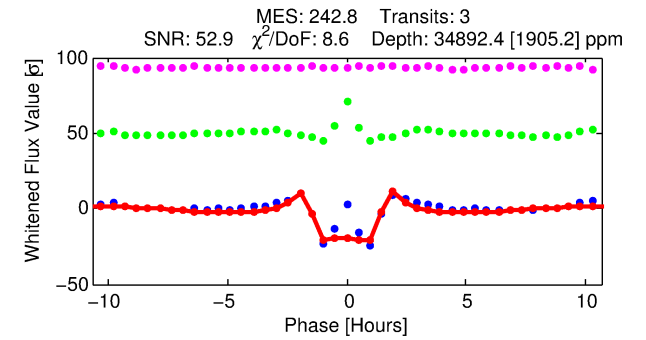
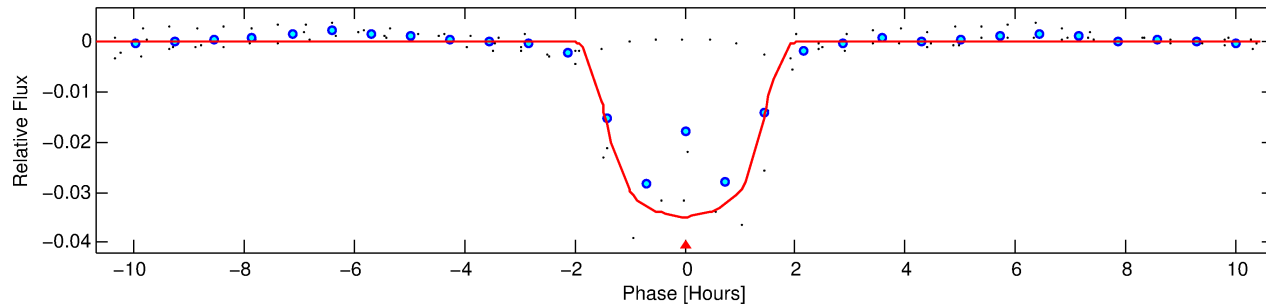
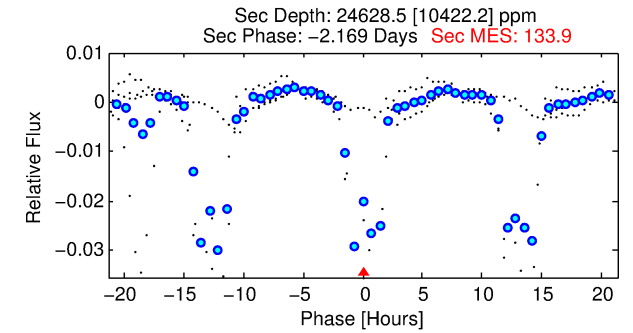
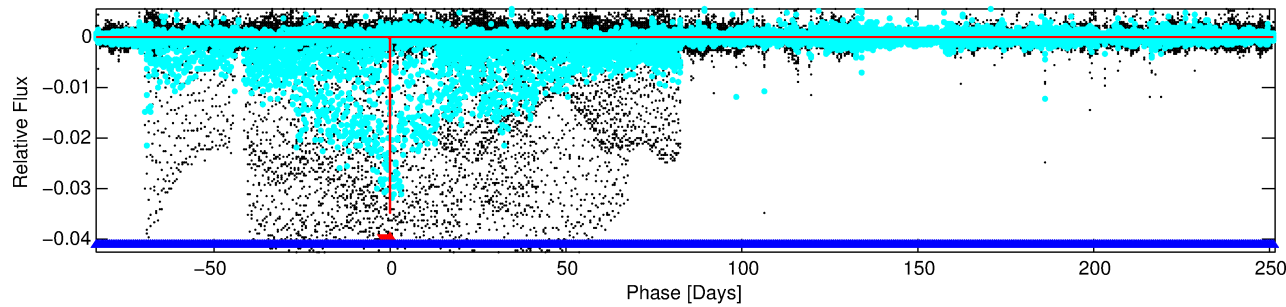
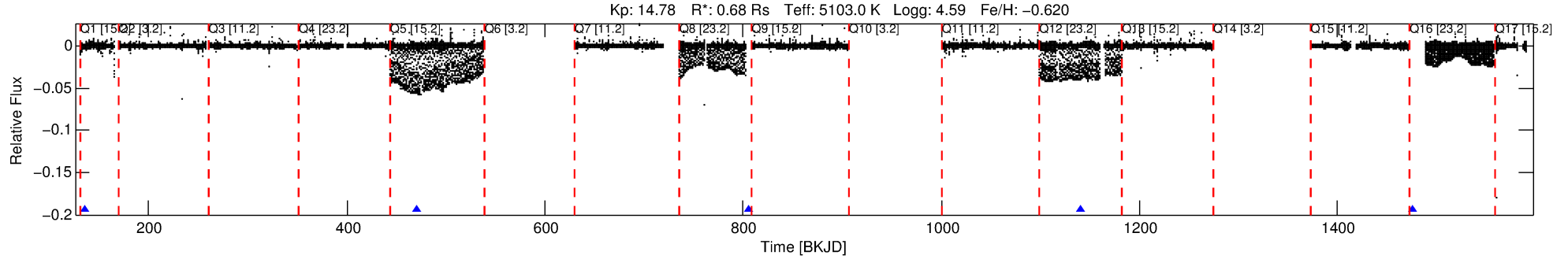
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005290153-01

No Significant Match Found

DV One-Page Summary

KIC: 5290153 Candidate: 1 of 2 Period: 335.027 d



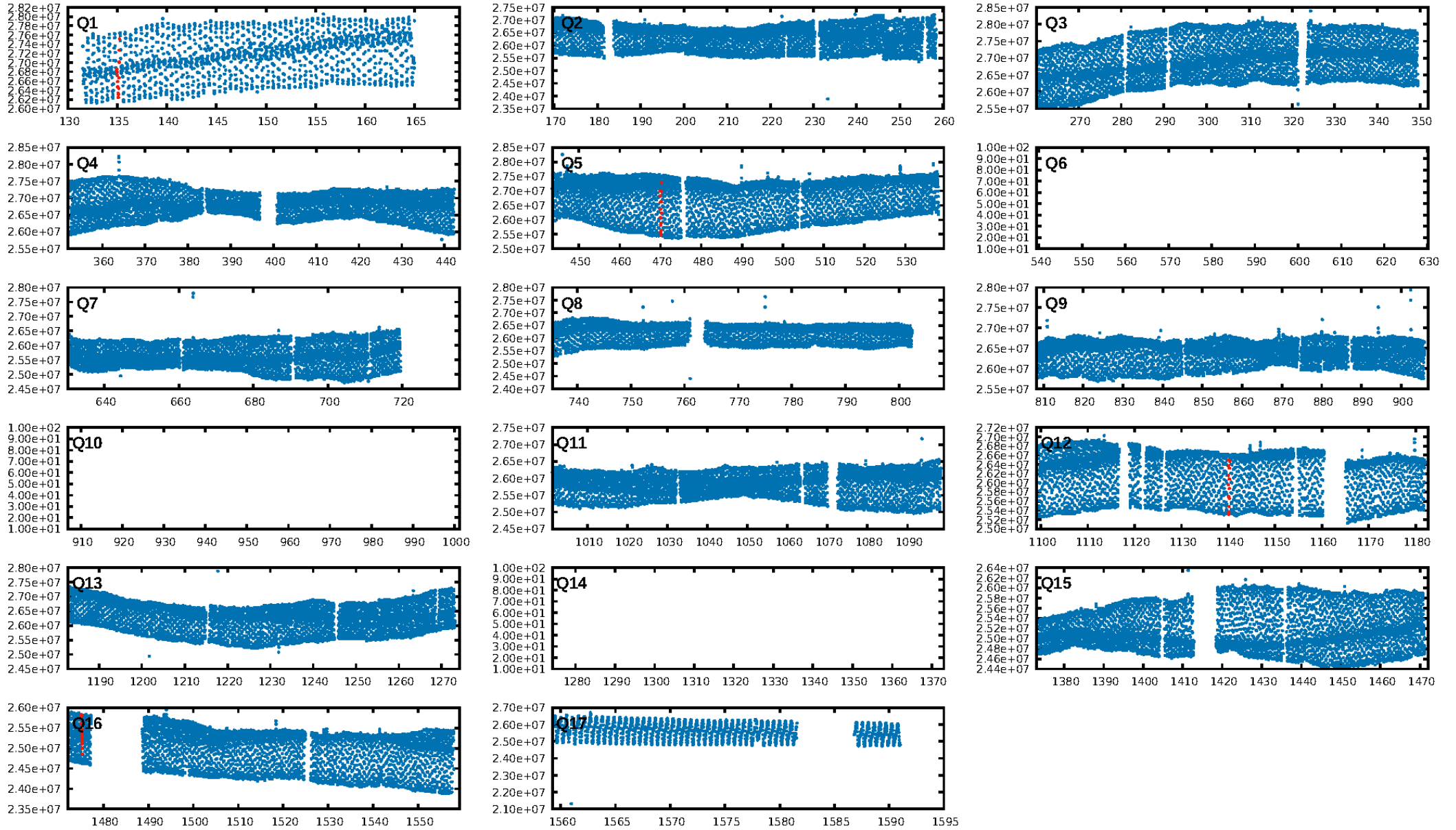
DV Fit Results:

Period = 335.02690 [0.00104] d
Epoch = 135.0692 [0.0018] BKJD
Rp/R* = 0.1679 [0.0297]
a/R* = 839.25 [519.80]
b = 0.00 [129.32]
Seff = 0.41 [0.07]
Teq = 204 [9] K
Rp = 12.37 [2.51] Re
a = 0.8190 [0.0706] AU
Ag = 59388.02 [33621.10] [1.77σ]
Teffp = 4933 [696] K [6.79σ]

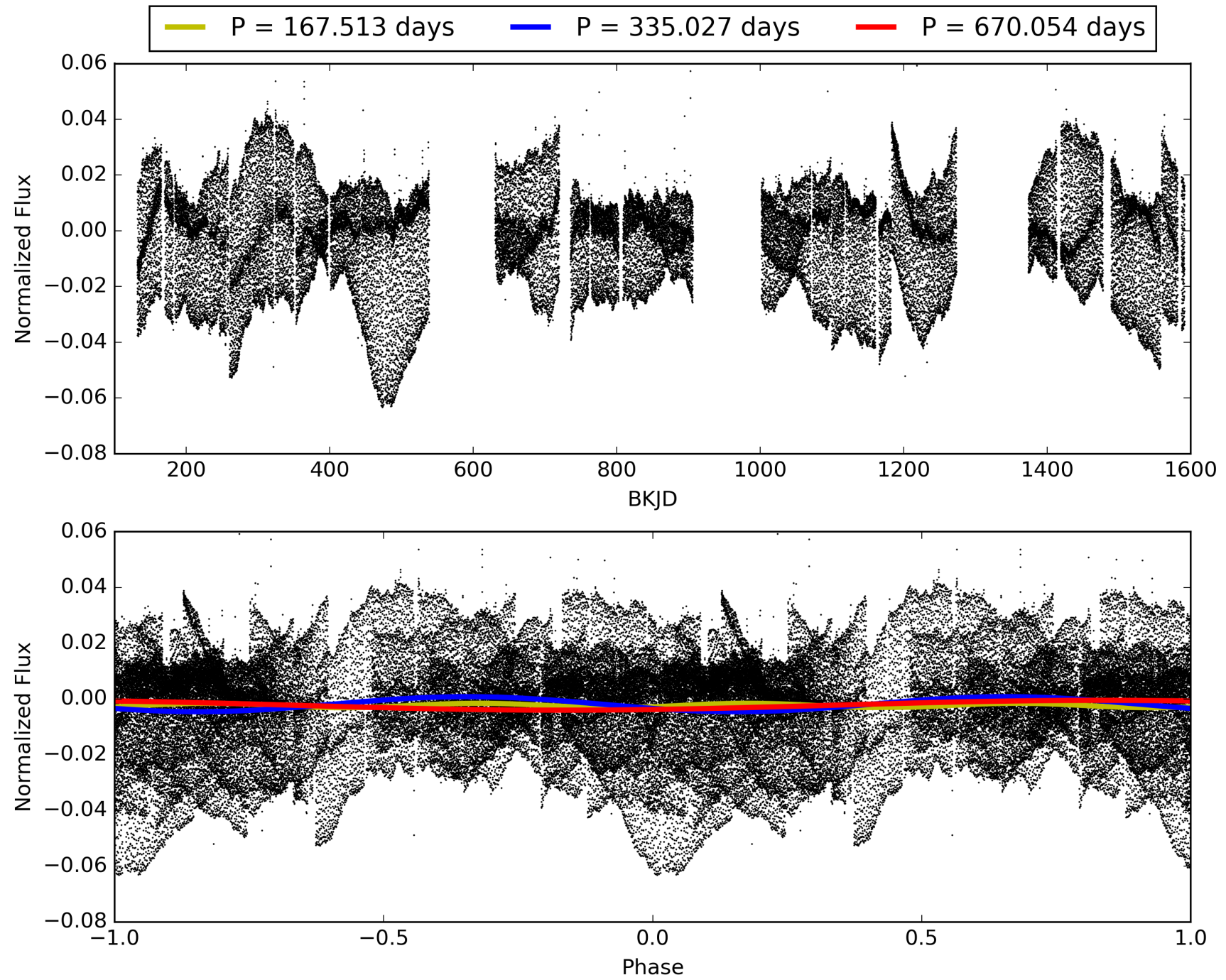
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [2077.16σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGoF-sig: 0.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 5.936
Centroid-sig: 42.3%
Centroid-so: 0.039 arcsec [0.94σ]
OotOffset-rm: 0.015 arcsec [0.22σ]
KicOffset-rm: 0.192 arcsec [2.69σ]
OotOffset-st: 0/0/1/2 [3]
KicOffset-st: 0/0/1/2 [3]
DiffImageQuality-fgm: 1.00 [3/3]
DiffImageOverlap-fno: 0.00 [0/3]

TCE 005290153-01, PDC Light Curves

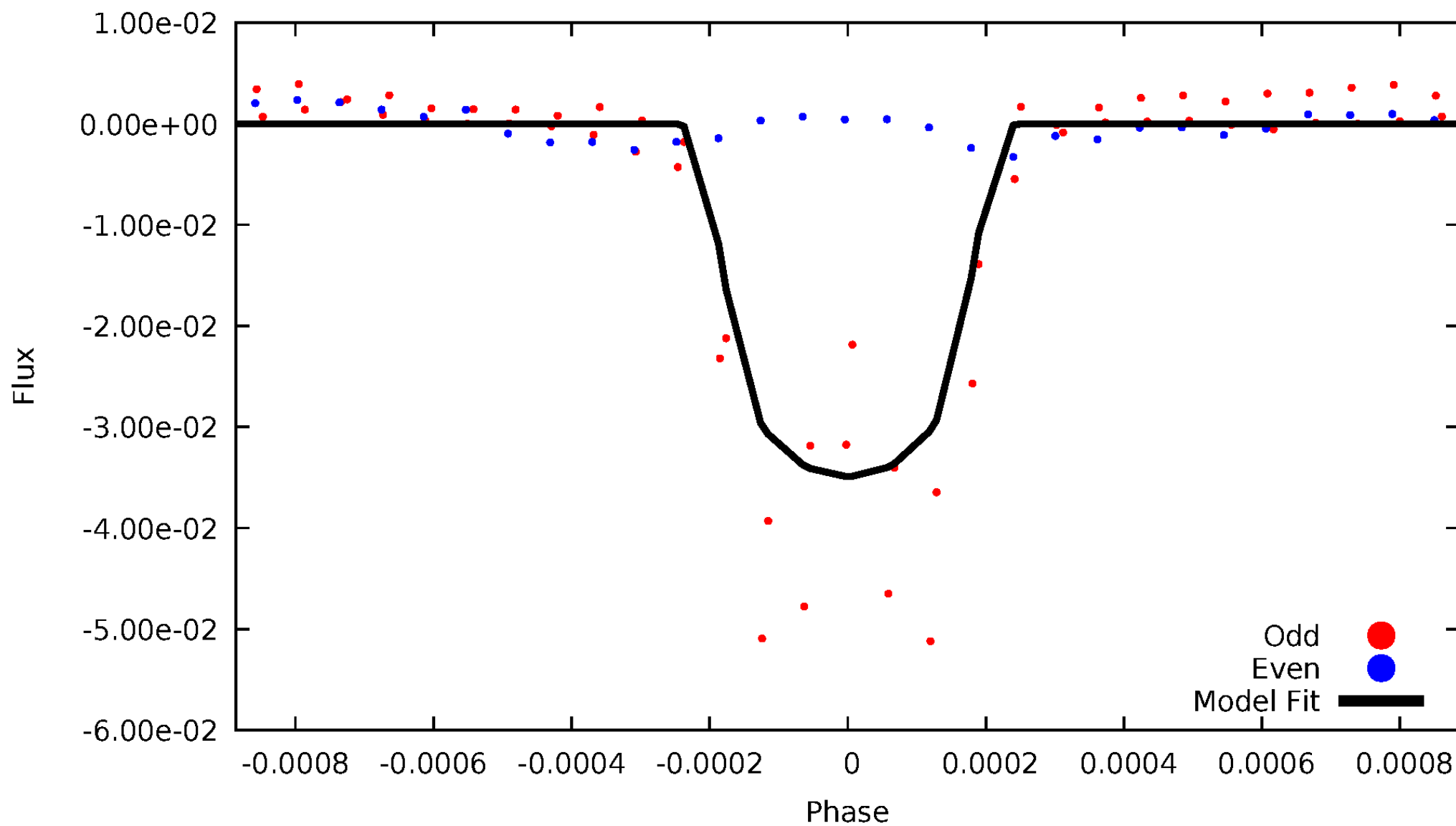


TCE 005290153-01



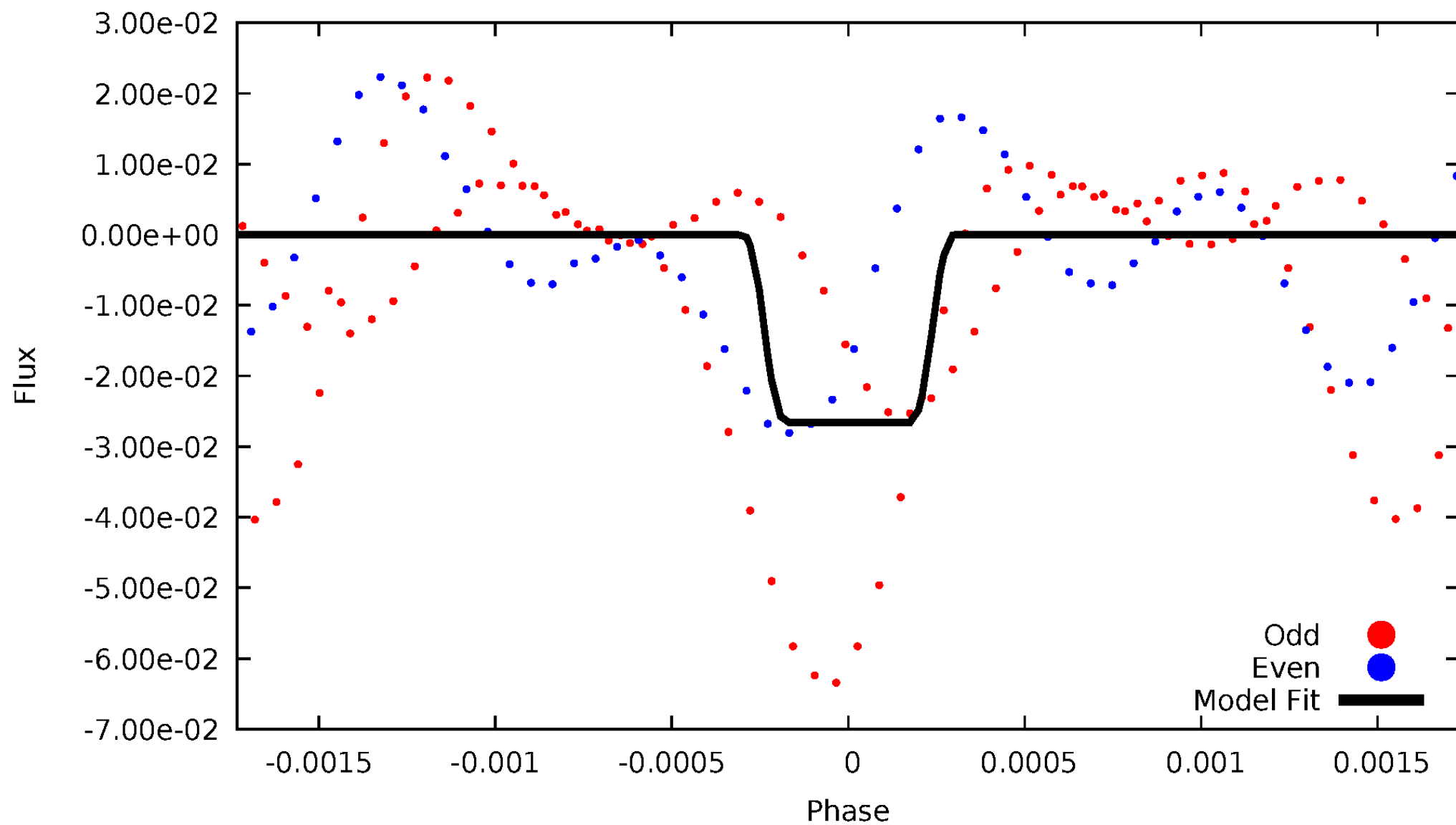
DV Odd/Even

TCE 005290153-01



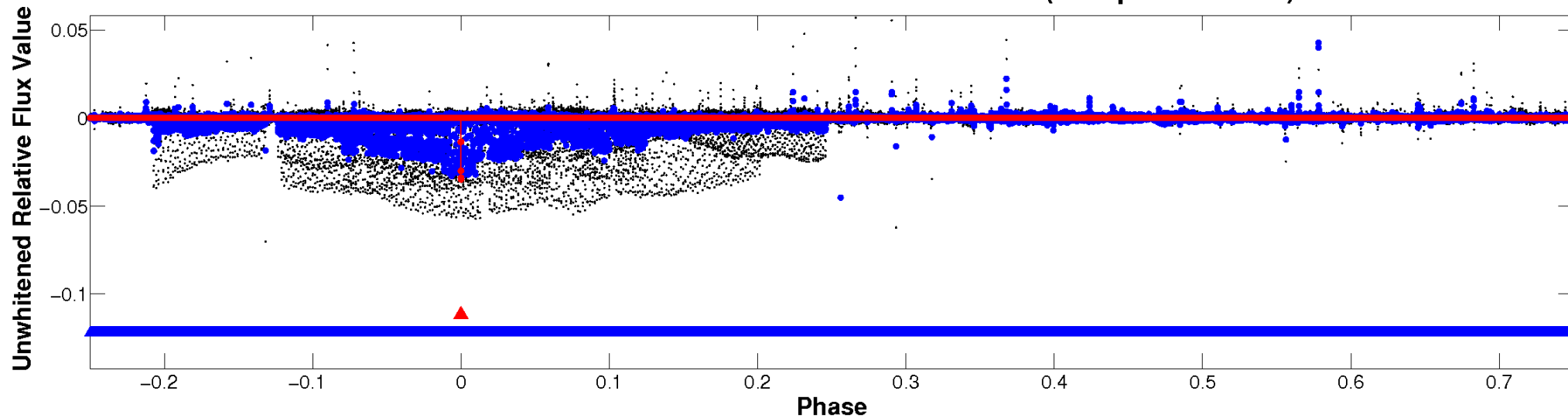
ALT Odd/Even

TCE 005290153-01

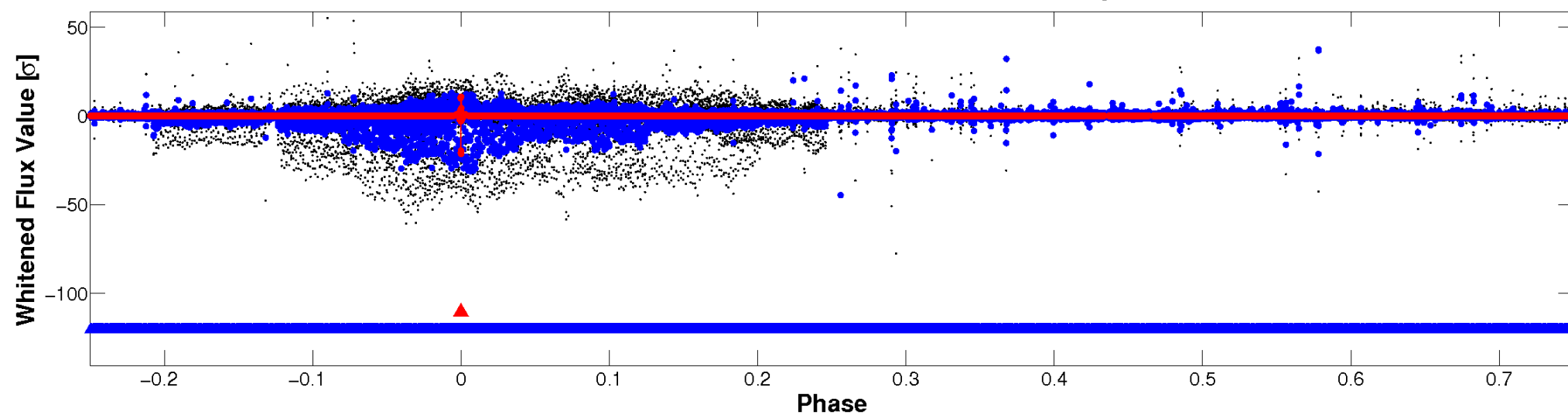


Non-Whitened Vs. Whitened Light Curve

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

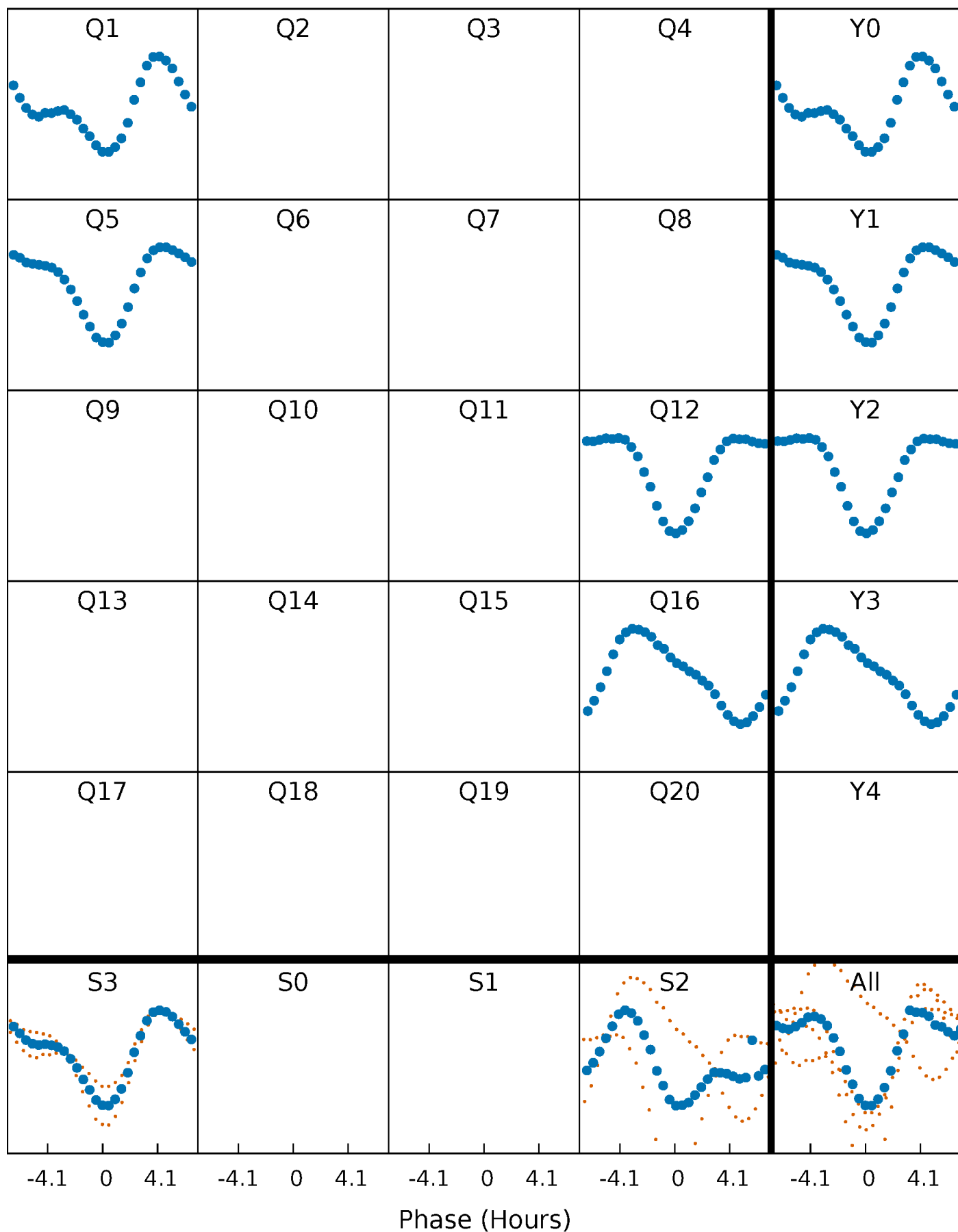


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



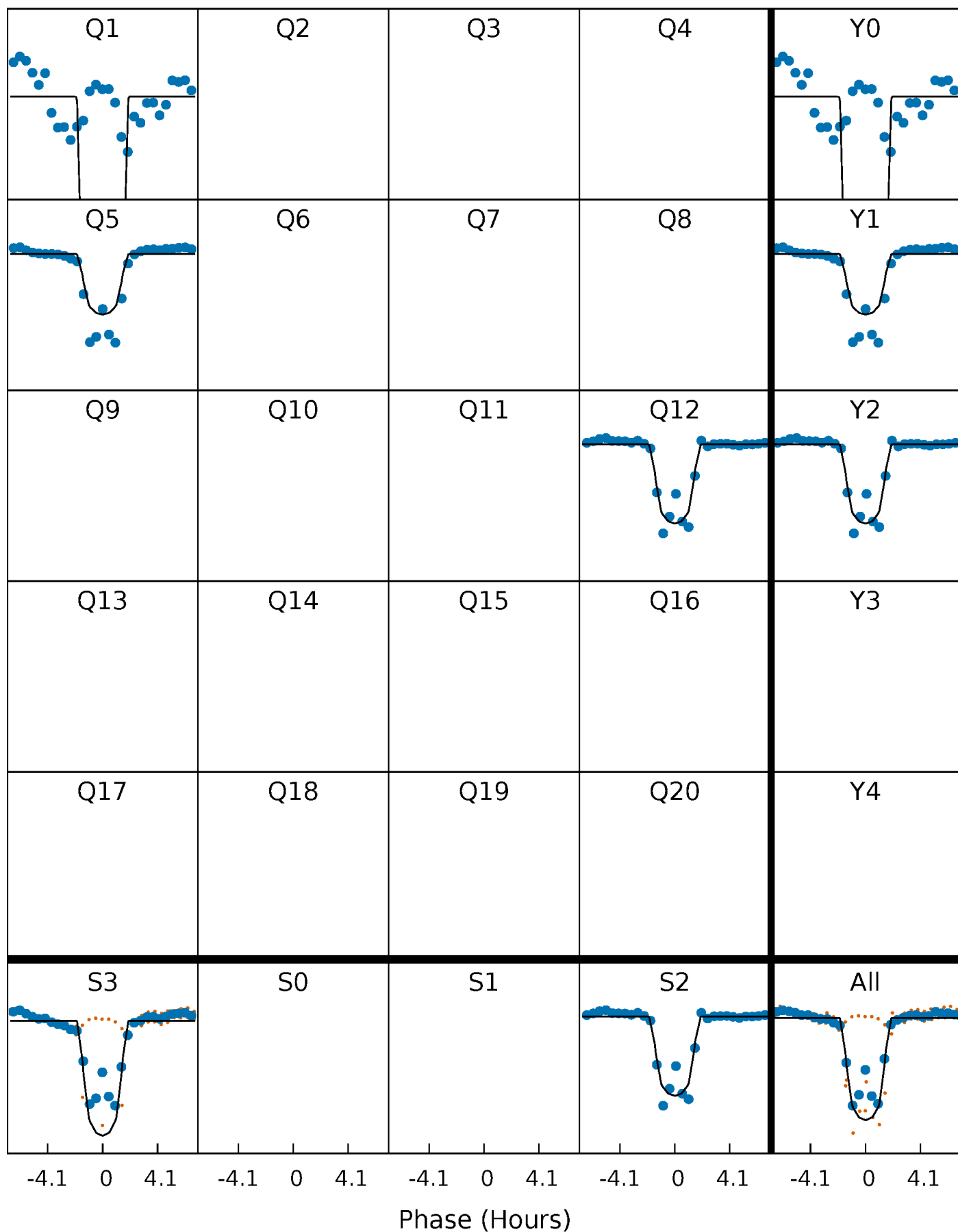
PDC Quarter-Phased Transit Curves

TCE 005290153-01 P=335.026900 Days $T_0=135.069224$ (BKJD)



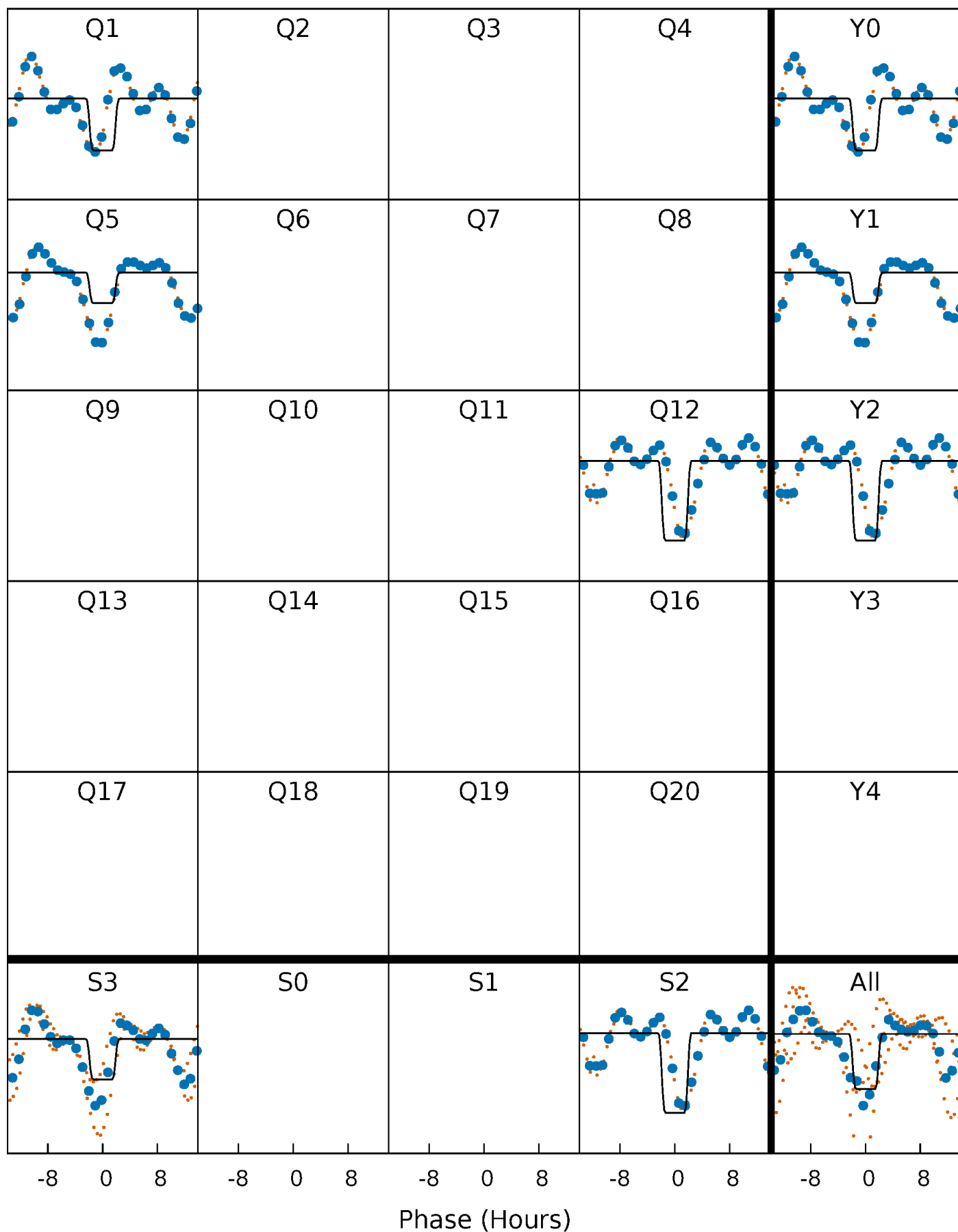
DV Quarter-Phased Transit Curves

TCE 005290153-01 P=335.026900 Days $T_0=135.069224$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

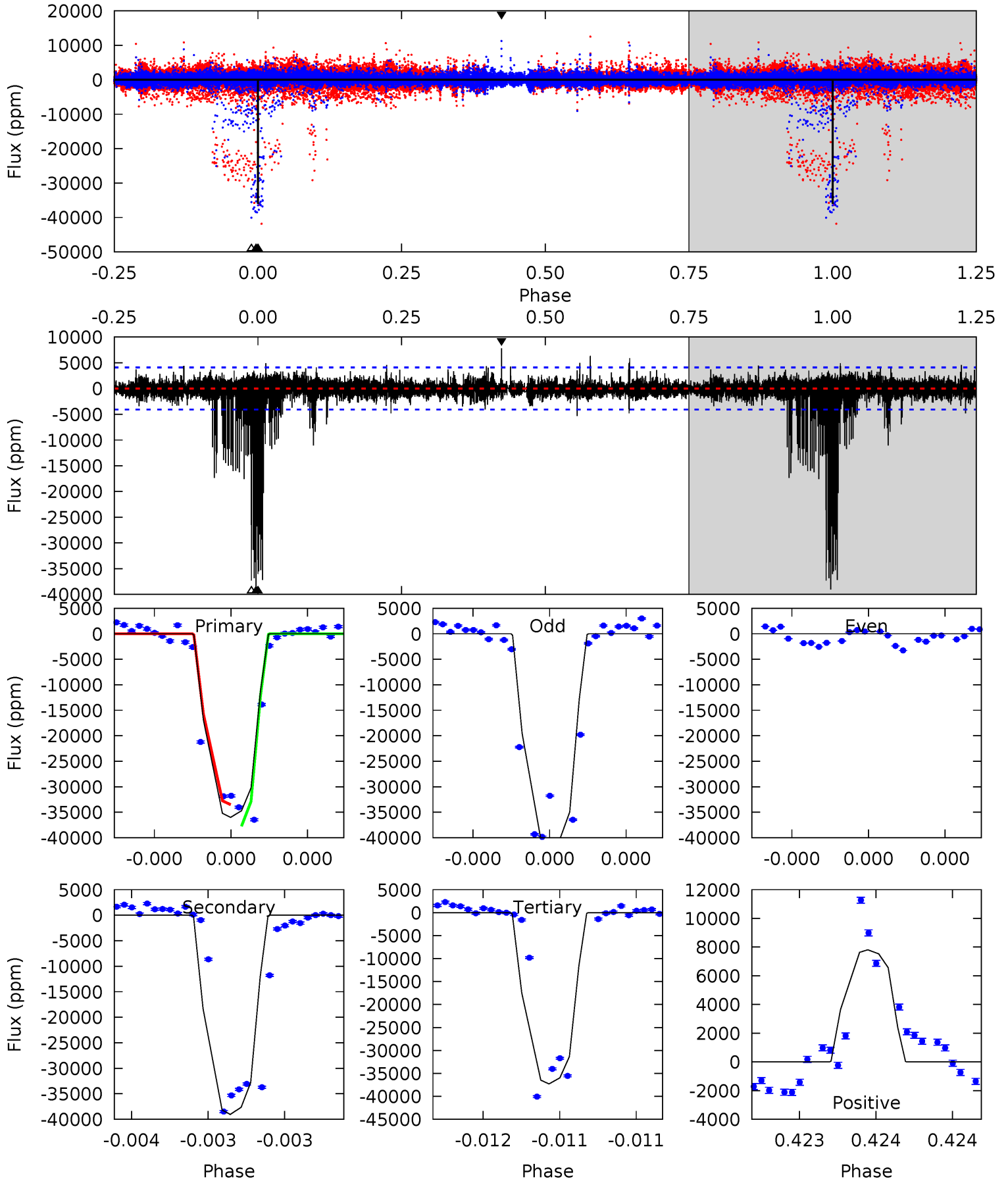
TCE 005290153-01 P=334.983180 Days $T_0=135.144238$ (BKJD)



DV Model-Shift Uniqueness Test

005290153-01, P = 335.026900 Days, E = 135.069224 Days

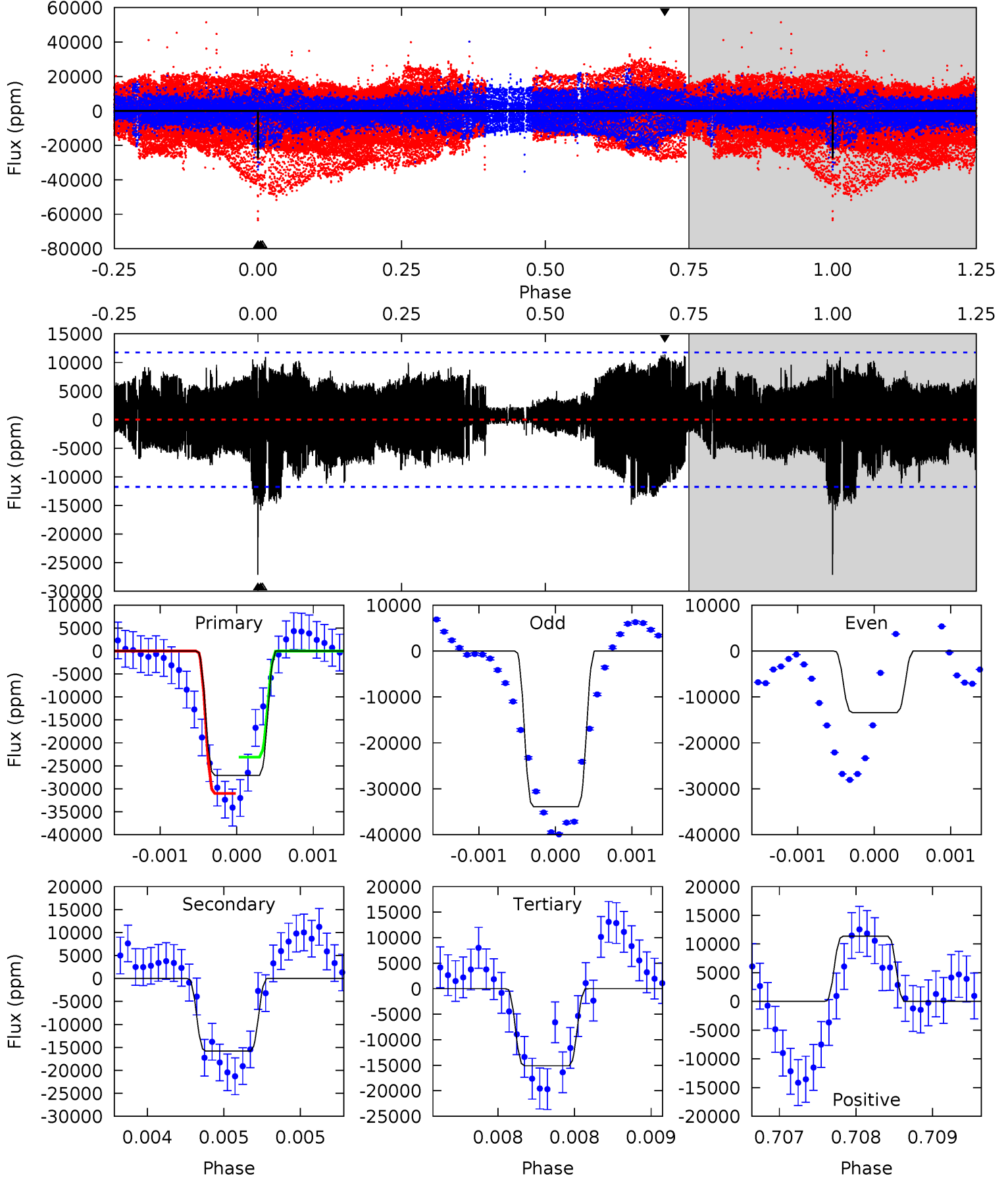
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
49.1	53.3	50.9	10.7	5.58	3.49	2.17	-1.78	38.5	2.37	42.6	19.4	0.80	0.17	2.94



Alt Model-Shift Uniqueness Test

005290153-01, P = 334.983180 Days, E = 135.144238 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.8	7.47	7.13	5.38	5.55	3.44	2.11	5.66	7.41	0.34	2.09	4.69	1.85	0.30	1.88



Stellar Parameters For KIC 005290153

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5103^{+154}_{-154}	$4.594^{+0.072}_{-0.048}$	$-0.620^{+0.350}_{-0.300}$	$0.675^{+0.067}_{-0.067}$	$0.653^{+0.083}_{-0.033}$	$2.984^{+0.904}_{-0.522}$
	+3%/-3%	+2%/-1%	+56%/-48%	+10%/-10%	+13%/-5%	+30%/-17%
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 005290153-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-39044 ± 733	$12.45^{+2.26}_{-2.38}$	284^{+12}_{-11}	5538^{+619}_{-430}	99303^{+53240}_{-28514}
Alt.	-15817 ± 2119	$12.05^{+2.50}_{-2.26}$	285^{+11}_{-11}	4590^{+423}_{-321}	41530^{+21927}_{-13271}

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 $A_{obs} \gg 1.0$

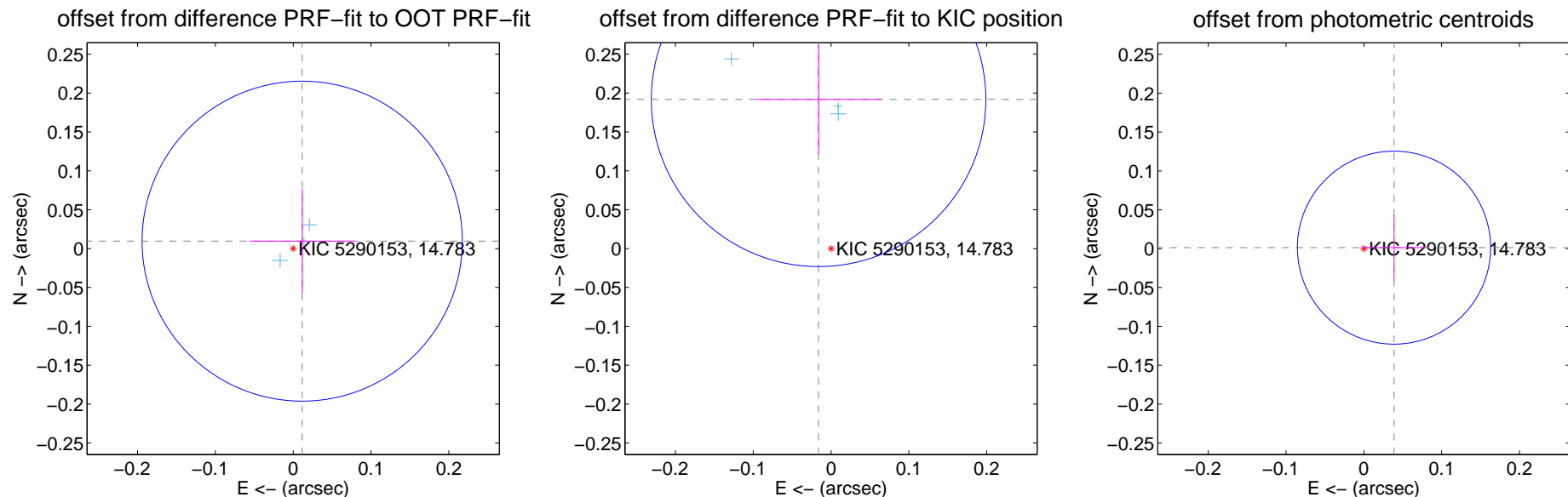
DV Centroid Data

Supplemental centroid analysis for 005290153-01. Kepler magnitude: 14.78. Transit SNR 52.88

There are 3 quarters with good PRF difference image offsets

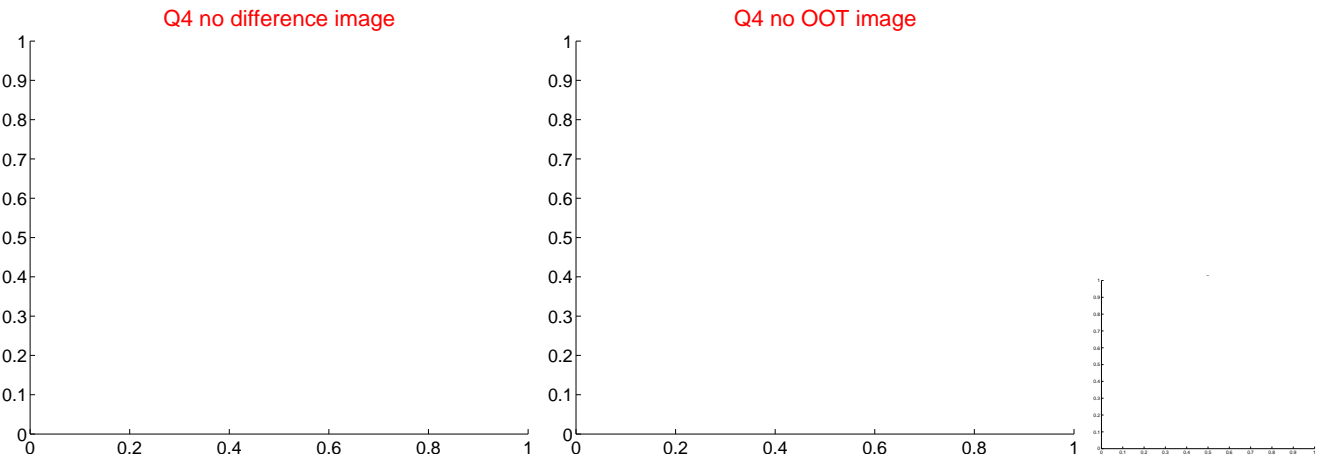
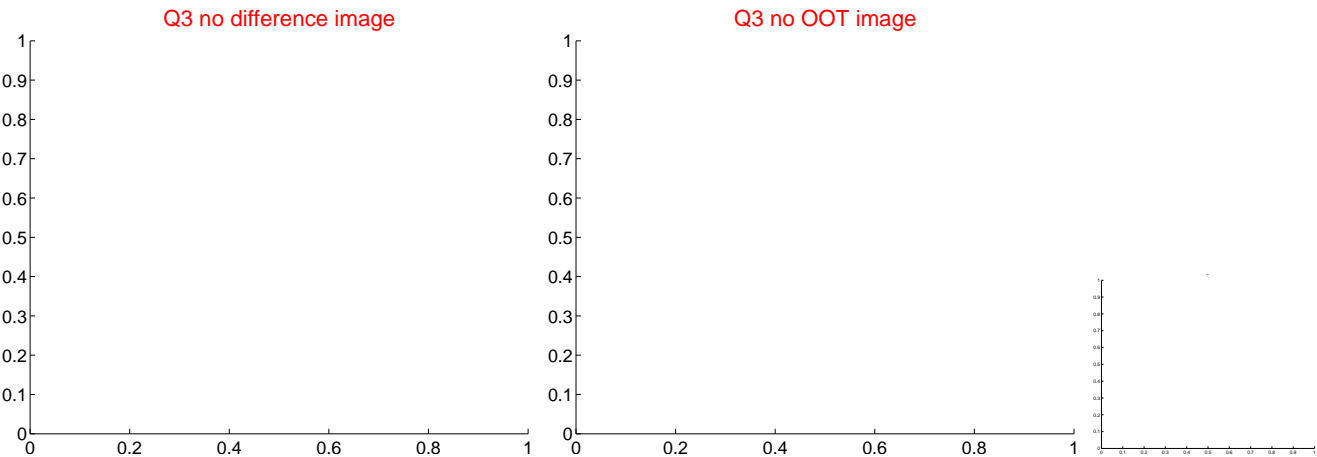
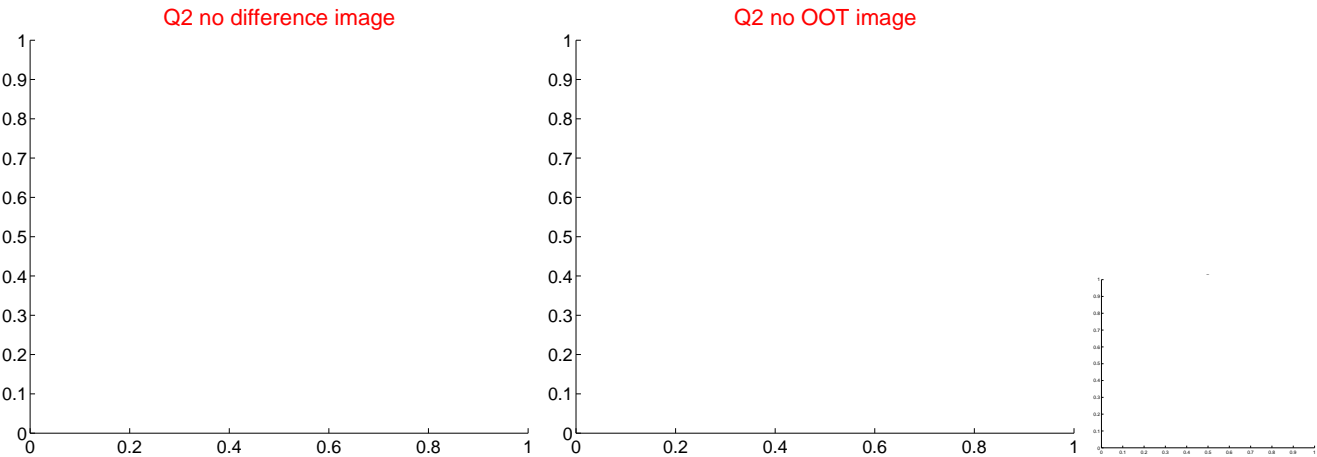
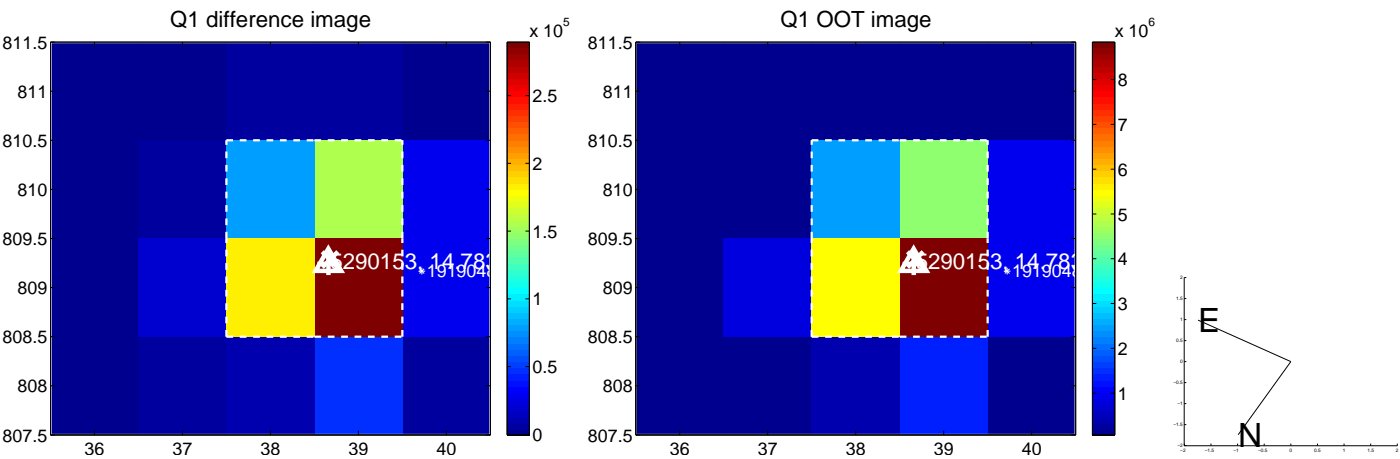
The direct PRF centroid is offset from the target star catalog position by about 0.26 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.015 ± 0.069	0.22	-0.012 ± 0.068	0.010 ± 0.068
PRF-fit source offset from KIC position	0.192 ± 0.072	2.69	0.016 ± 0.081	0.192 ± 0.070
photometric centroid source offset	0.04 ± 0.04	0.94	-0.04 ± 0.04	0.00 ± 0.04

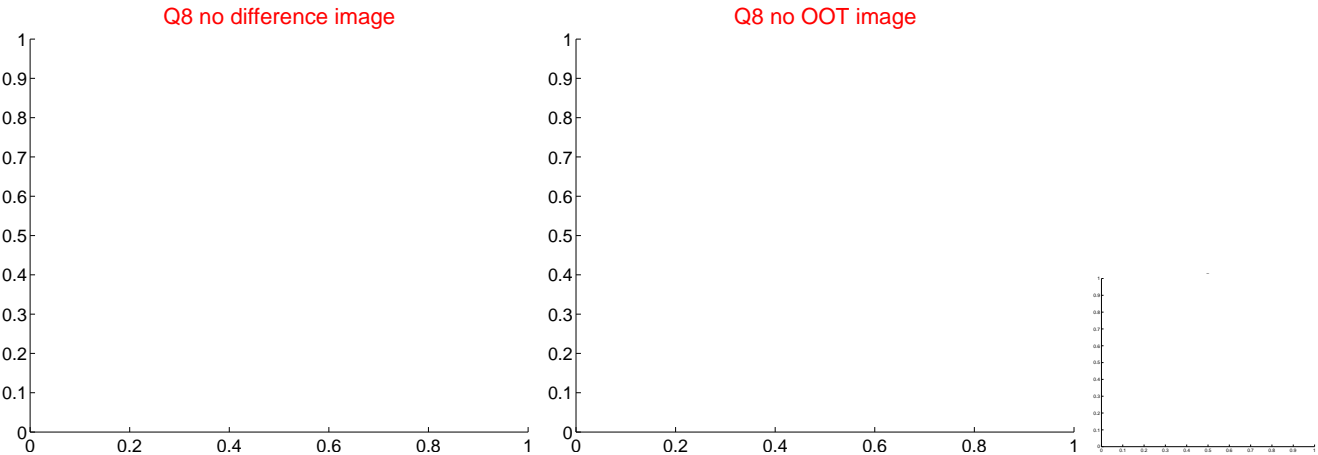
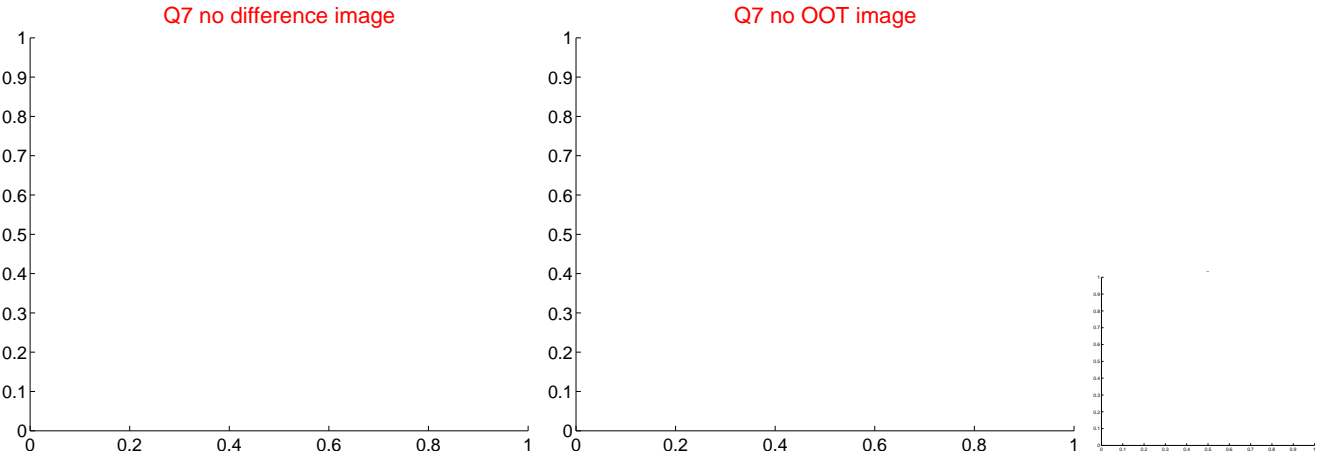
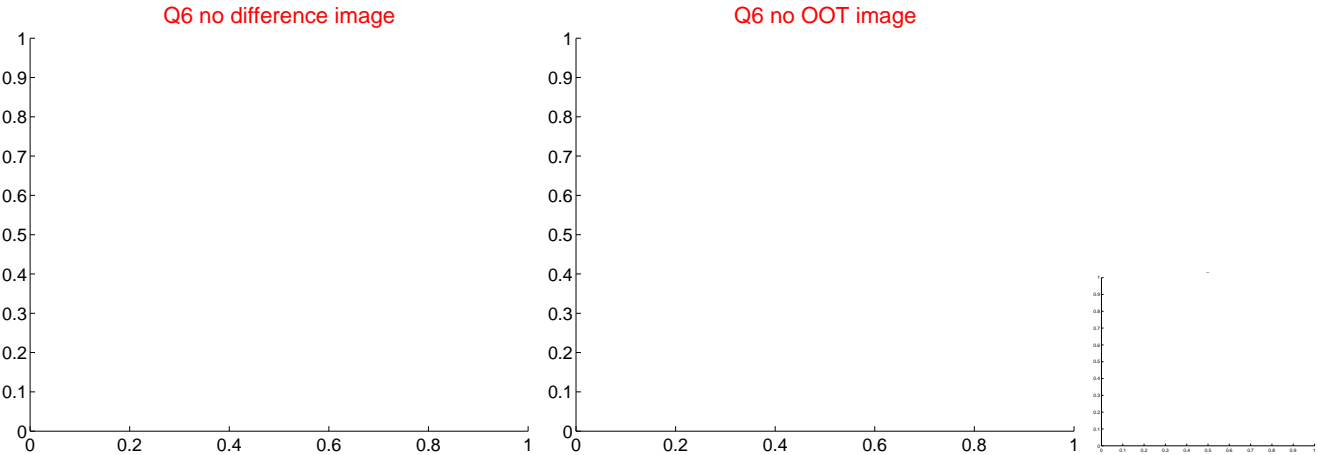
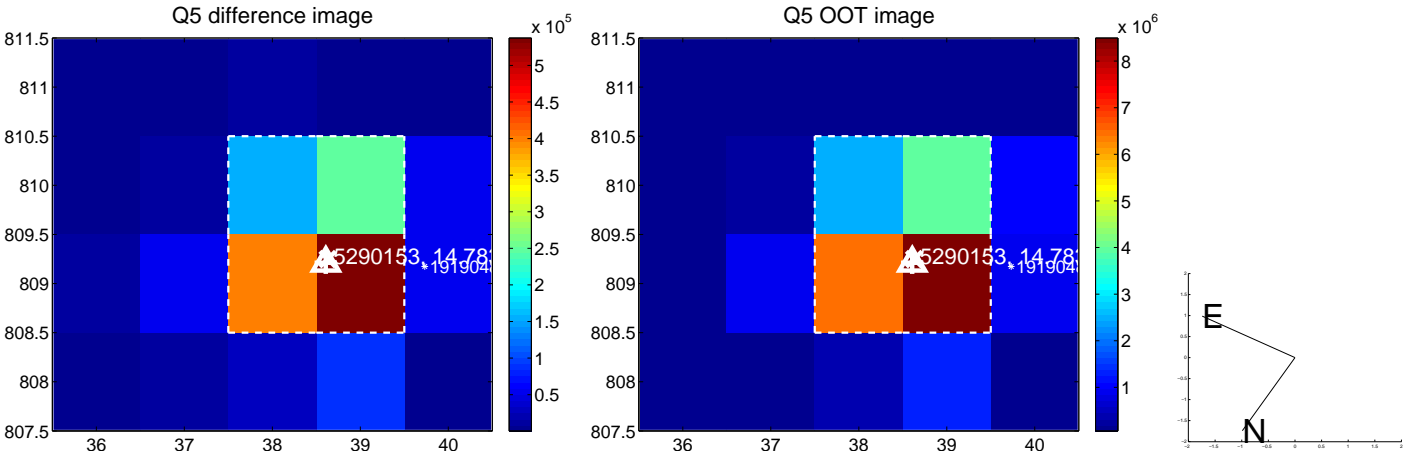


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

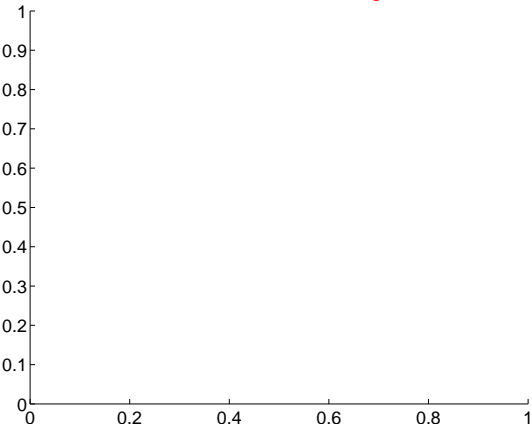


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

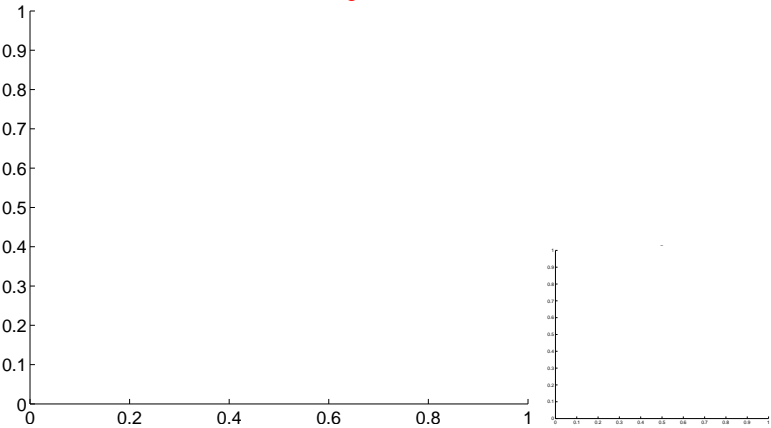


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

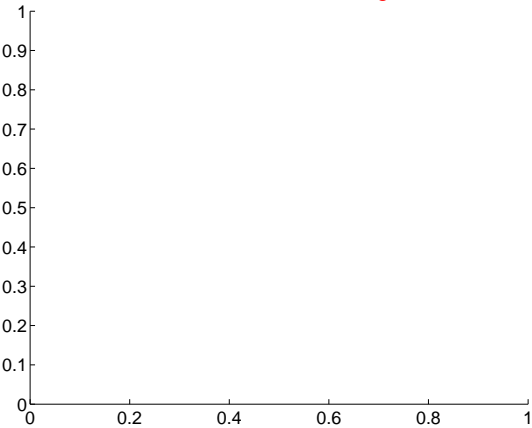
Q9 no difference image



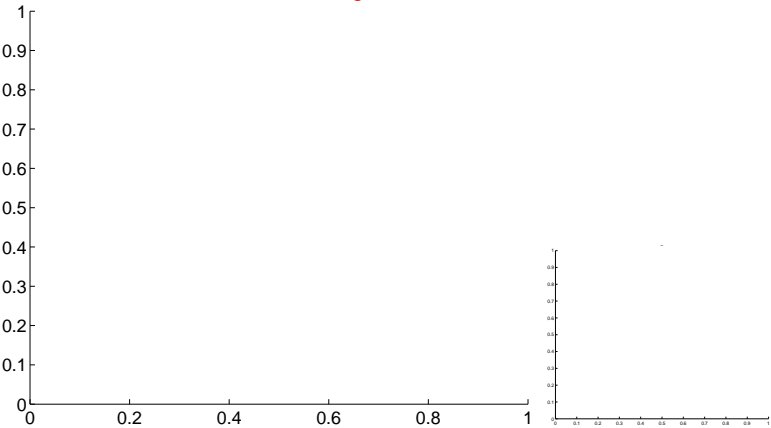
Q9 no OOT image



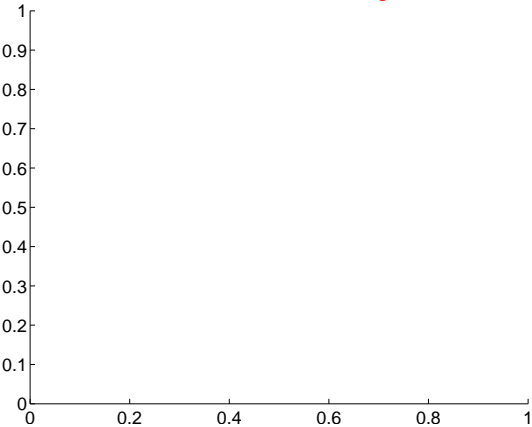
Q10 no difference image



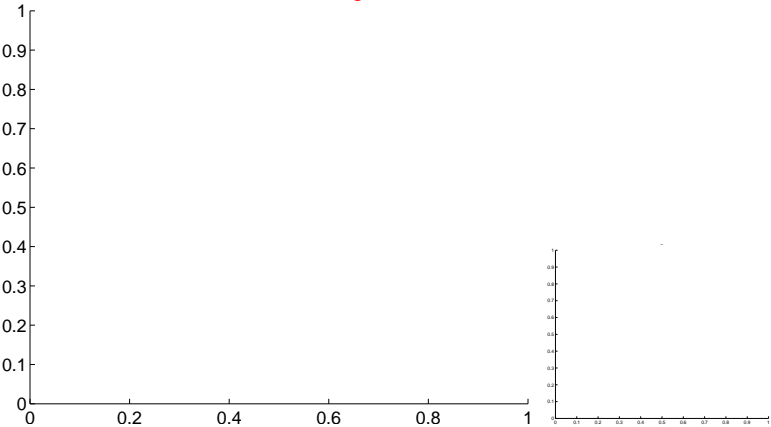
Q10 no OOT image



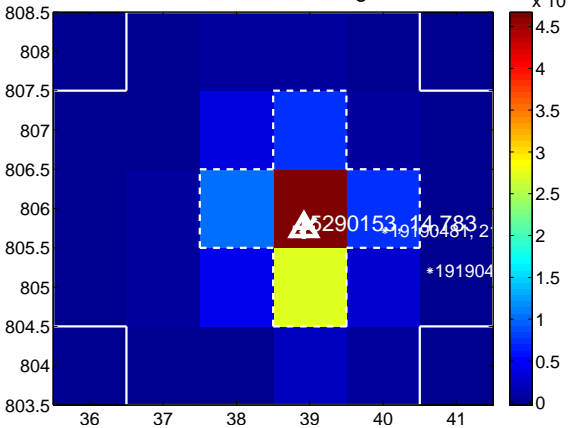
Q11 no difference image



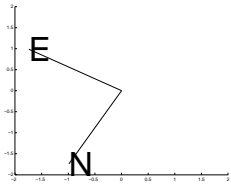
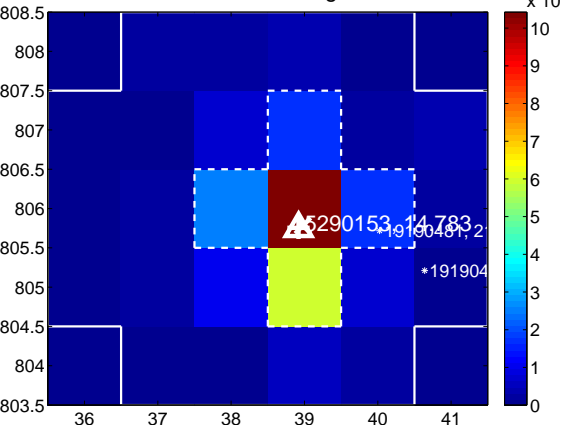
Q11 no OOT image



Q12 difference image



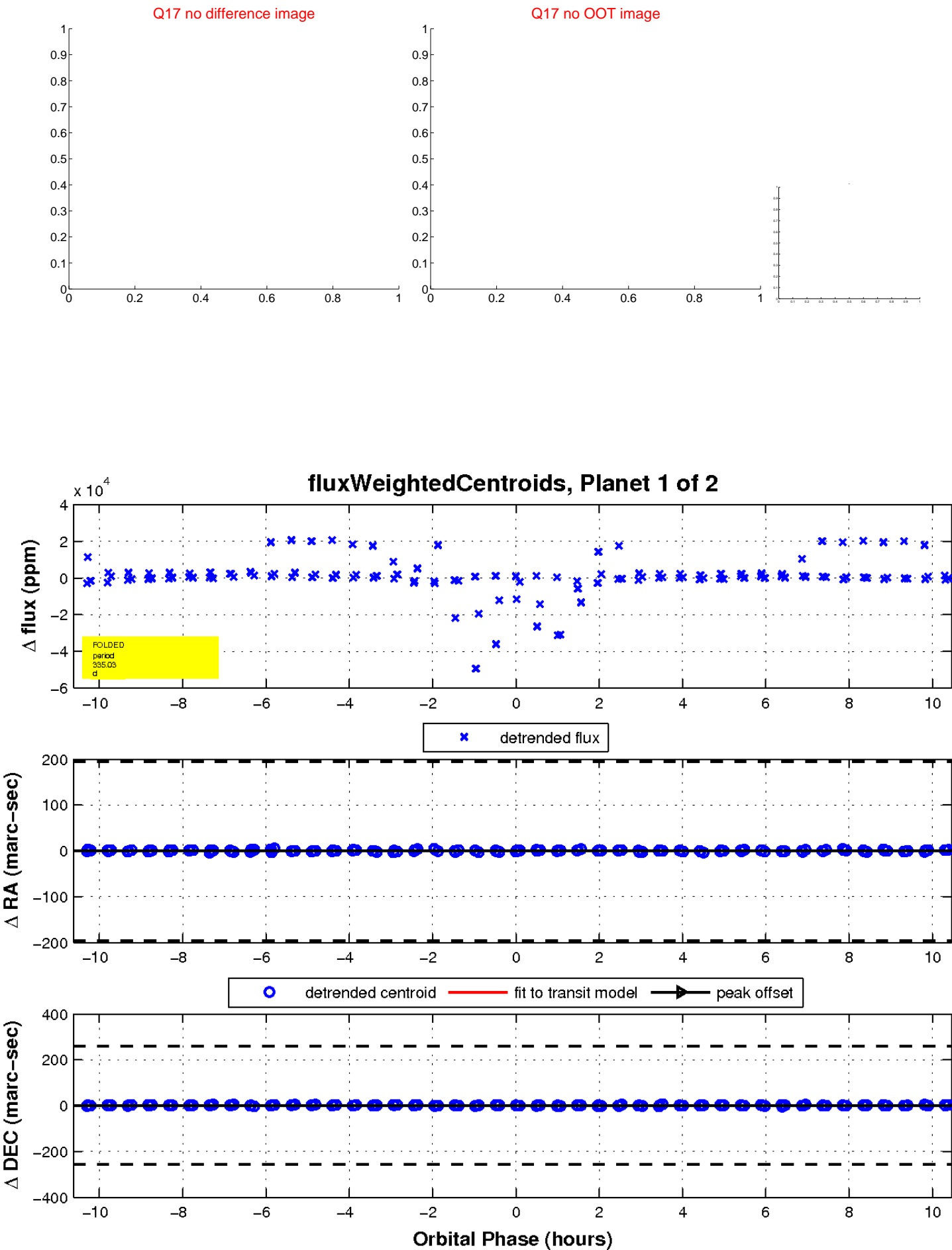
Q12 OOT image



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

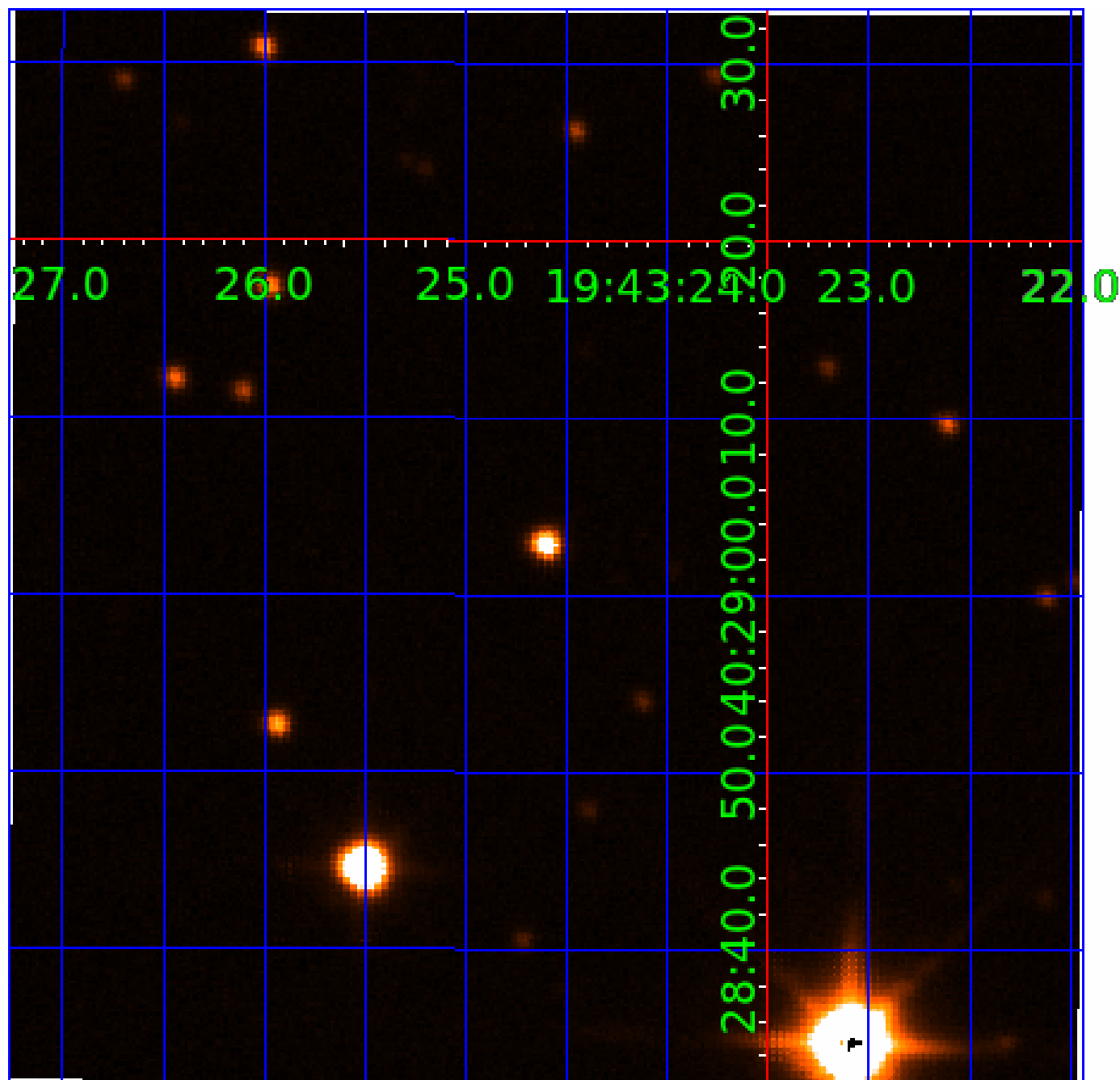


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005290153

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})
005290153-01	OBS	No	335.026900	135.069224	34892.4	3.562	242.8	52.9	0.68	5103	12.37	0.41
005290153-02	OBS	No	0.539872	131.632869	16608.3	1.500	264.8	-1.0	0.68	5103	8.58	2184.46

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005290153-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_TER_DV—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS
005290153-02	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_NOFITS

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

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

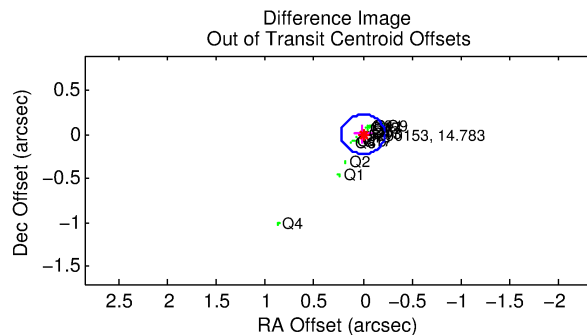
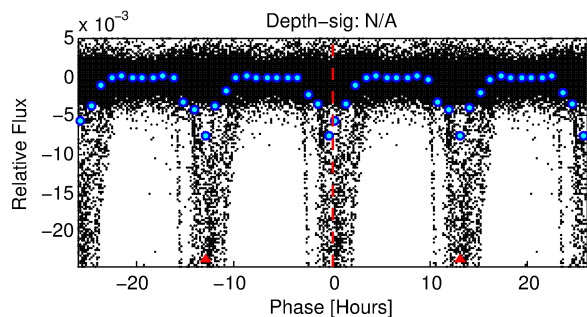
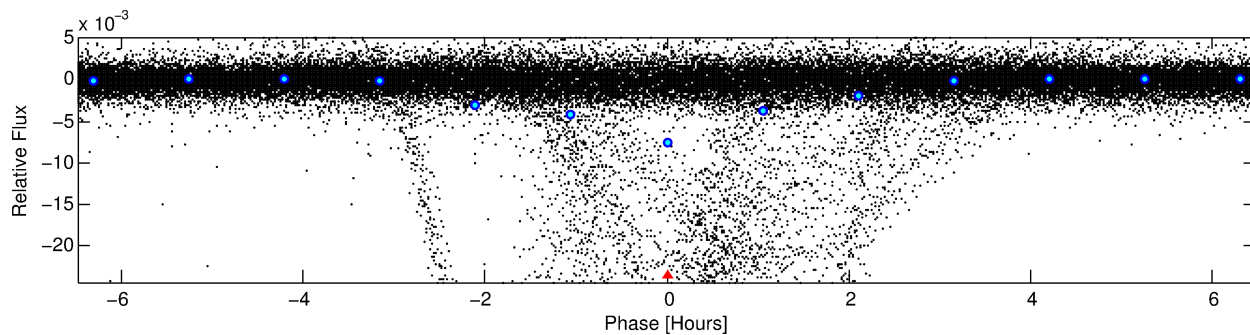
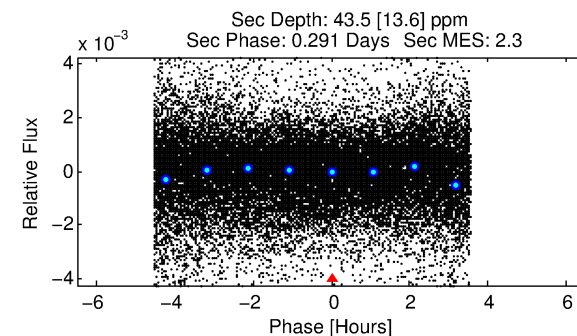
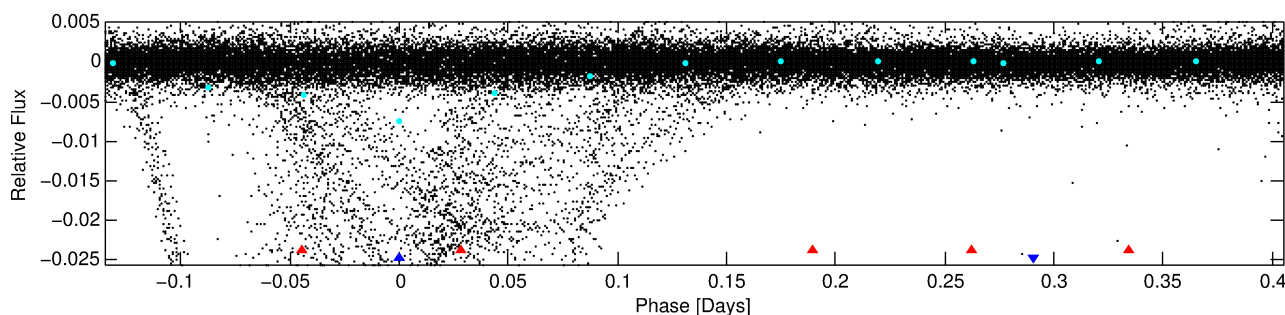
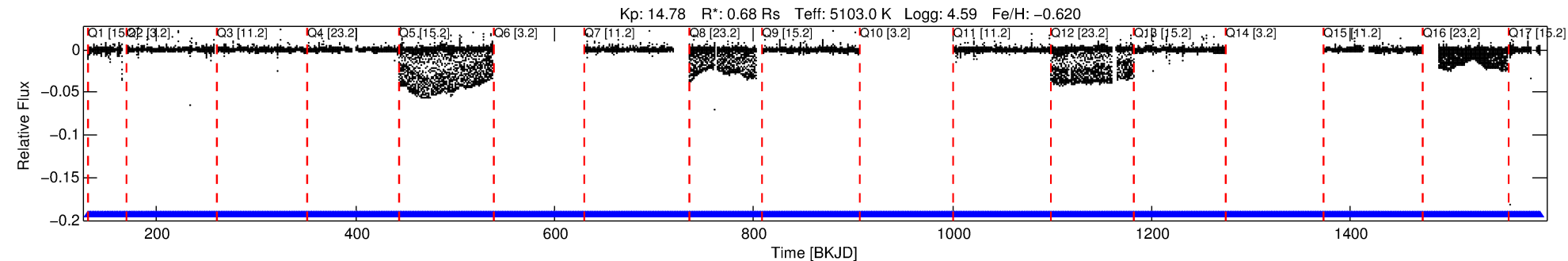
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005290153-02

No Significant Match Found

DV One-Page Summary

KIC: 5290153 Candidate: 2 of 2 Period: 0.540 d



TPS TCE Results:

Period = 0.53987 d
Epoch = 131.6329 BKJD

DV fit results are unavailable

DV Diagnostic Results:

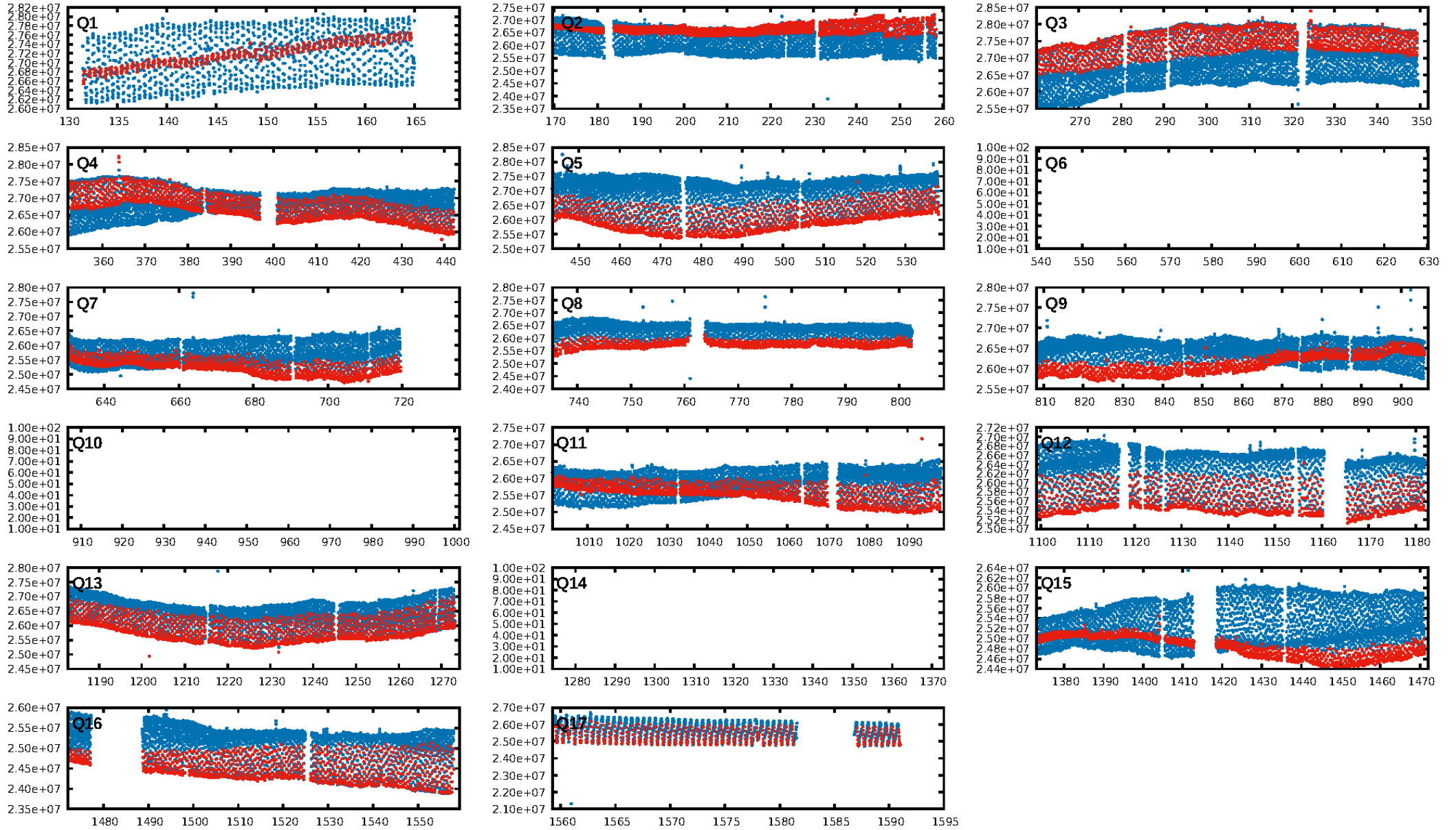
ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [2077.16σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1882/1882]
GhostDiagnostic-chr: 0.57

Centroid-sig: 0.8%
Centroid-so: 0.057 arcsec [21.92σ]
OotOffset-rm: 0.006 arcsec [0.08σ]
KicOffset-rm: 0.207 arcsec [1.83σ]
OotOffset-st: 1/4/4/5 [14]
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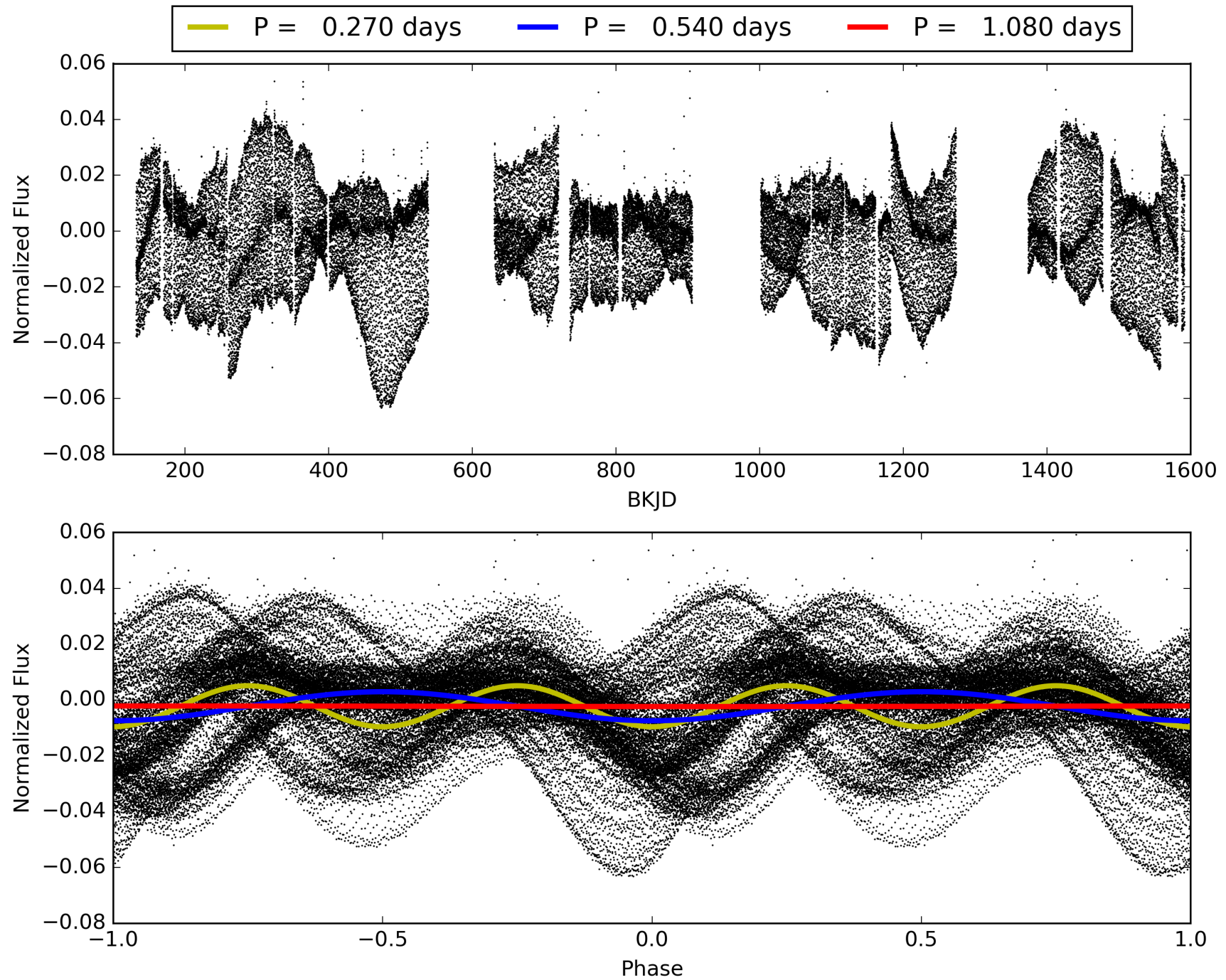
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:21:11 Z

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

TCE 005290153-02, PDC Light Curves

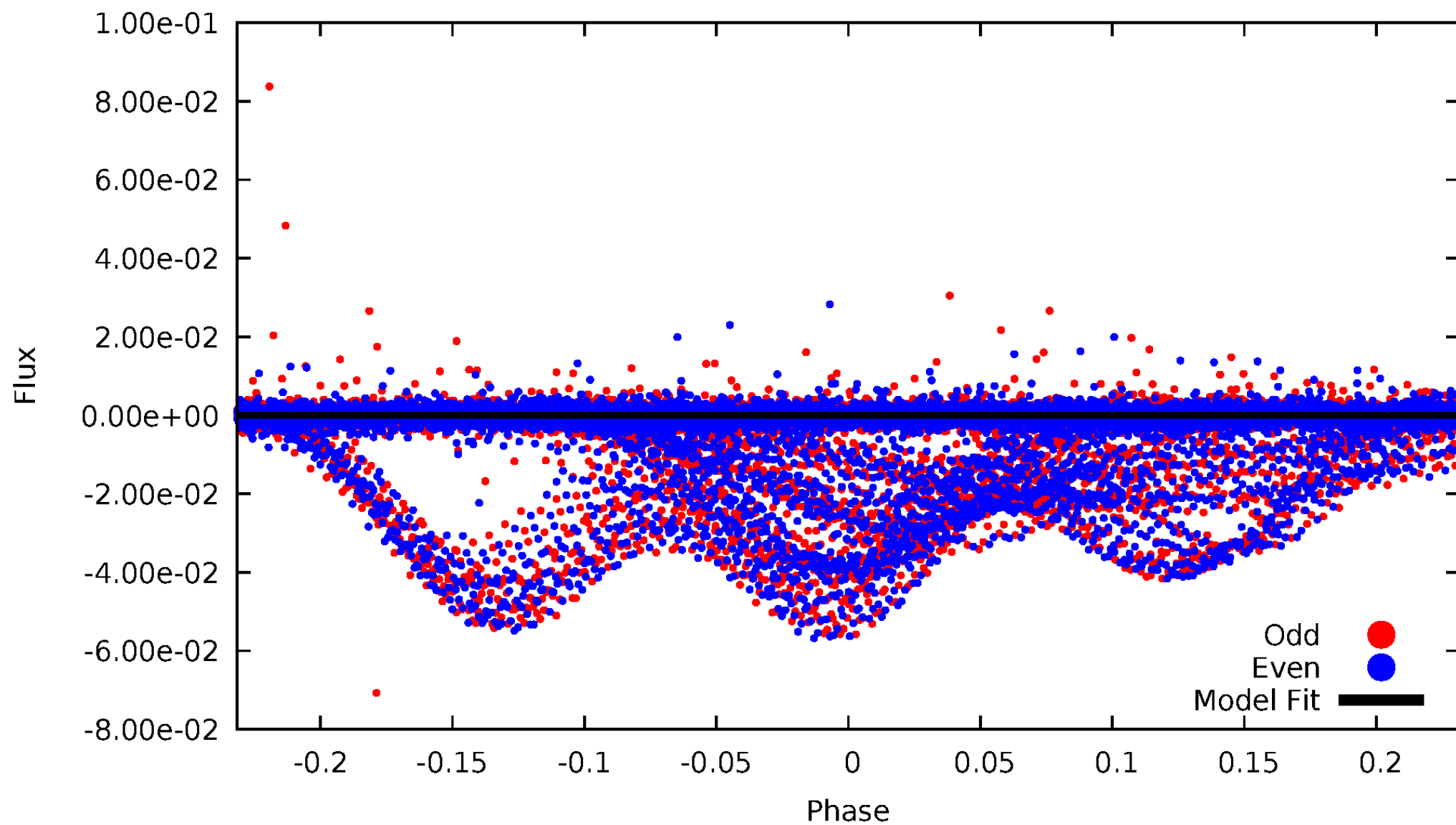


TCE 005290153-02



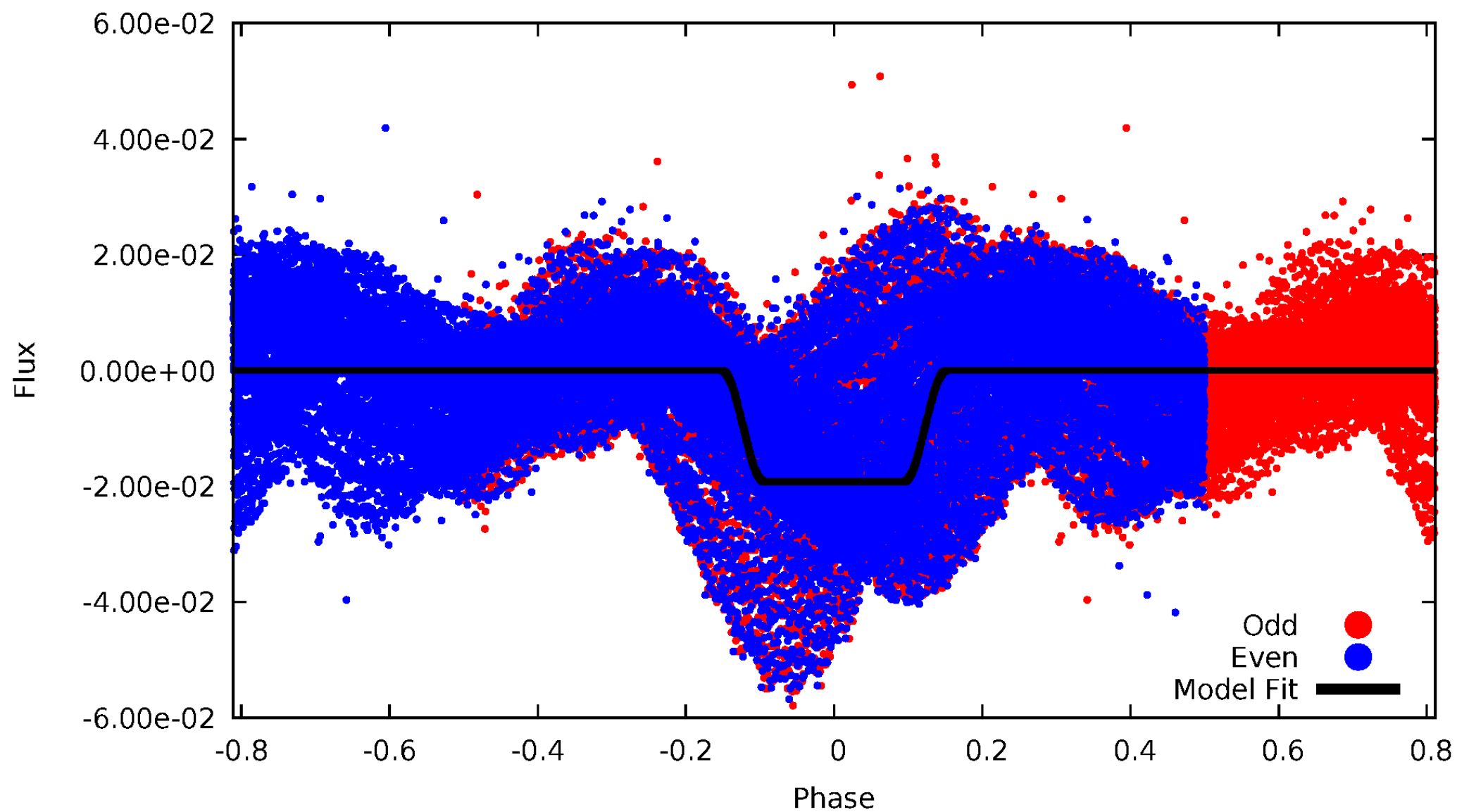
DV Odd/Even

TCE 005290153-02



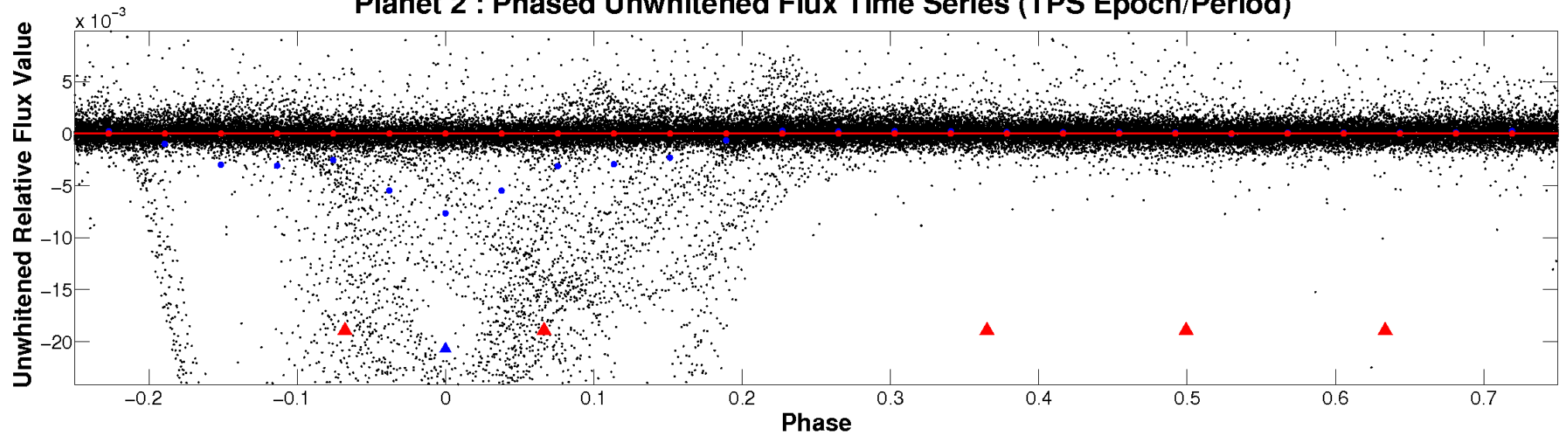
ALT Odd/Even

TCE 005290153-02

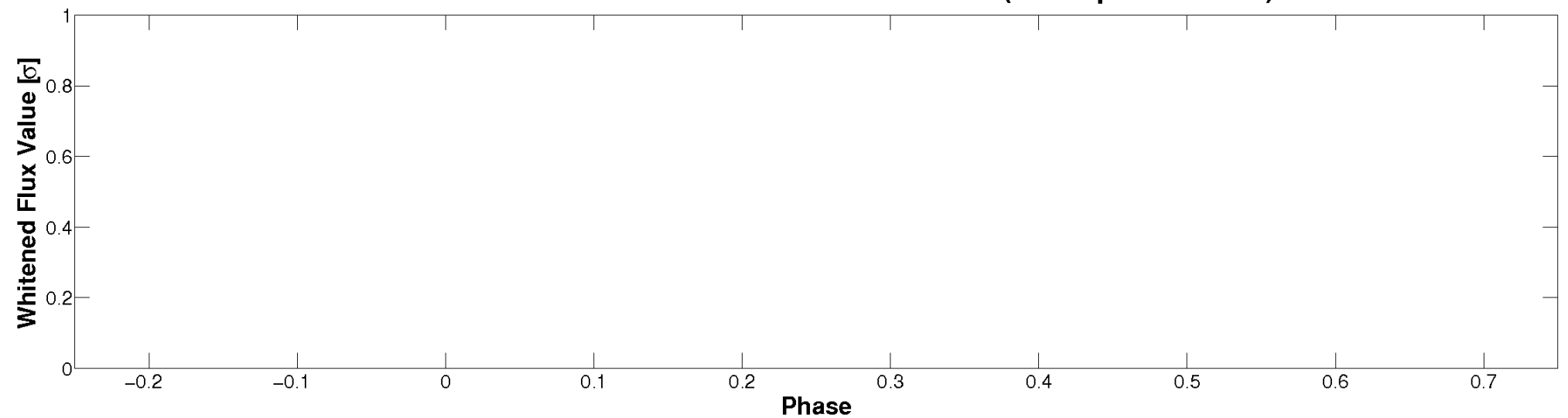


Non-Whitened Vs. Whitened Light Curve

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

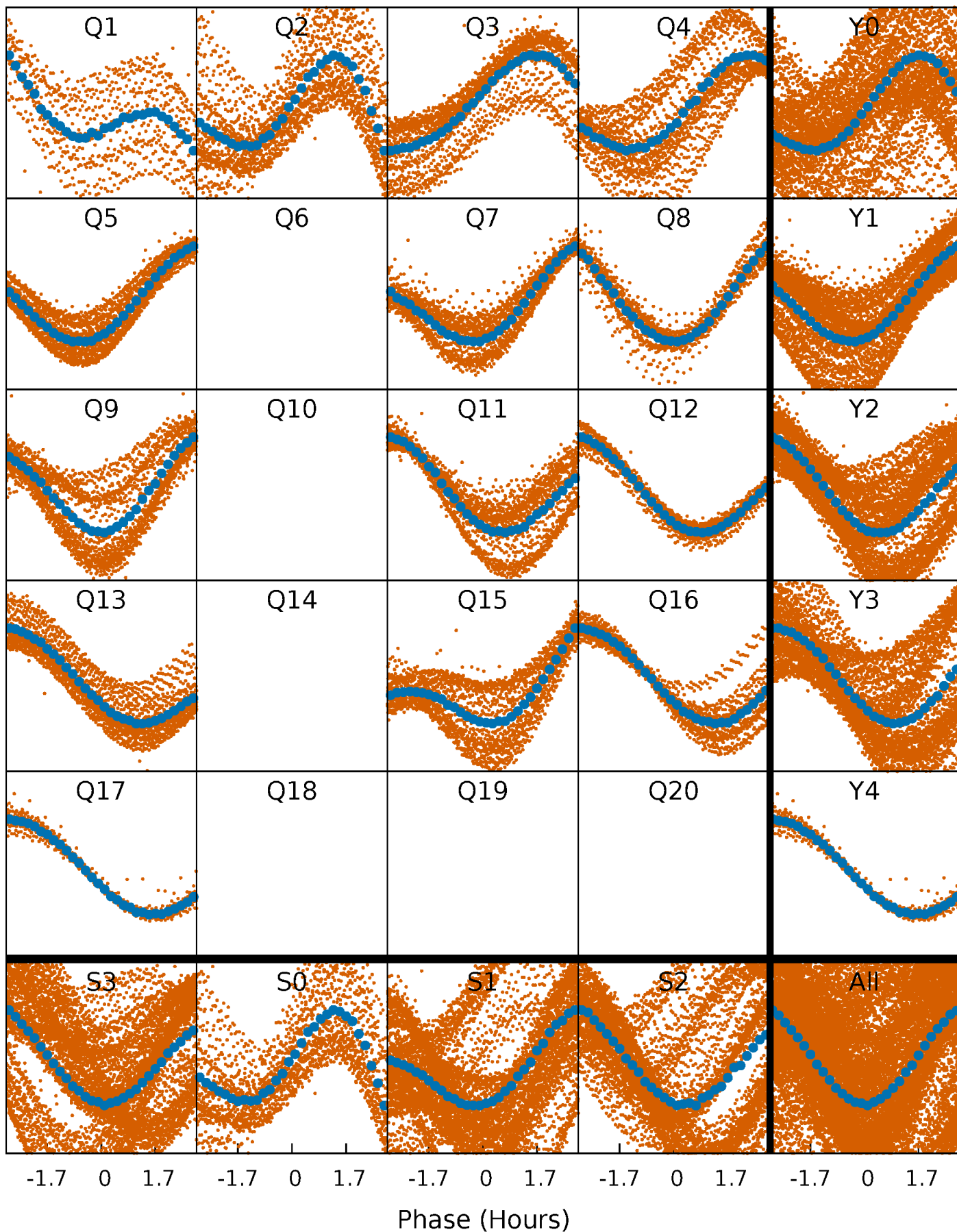


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



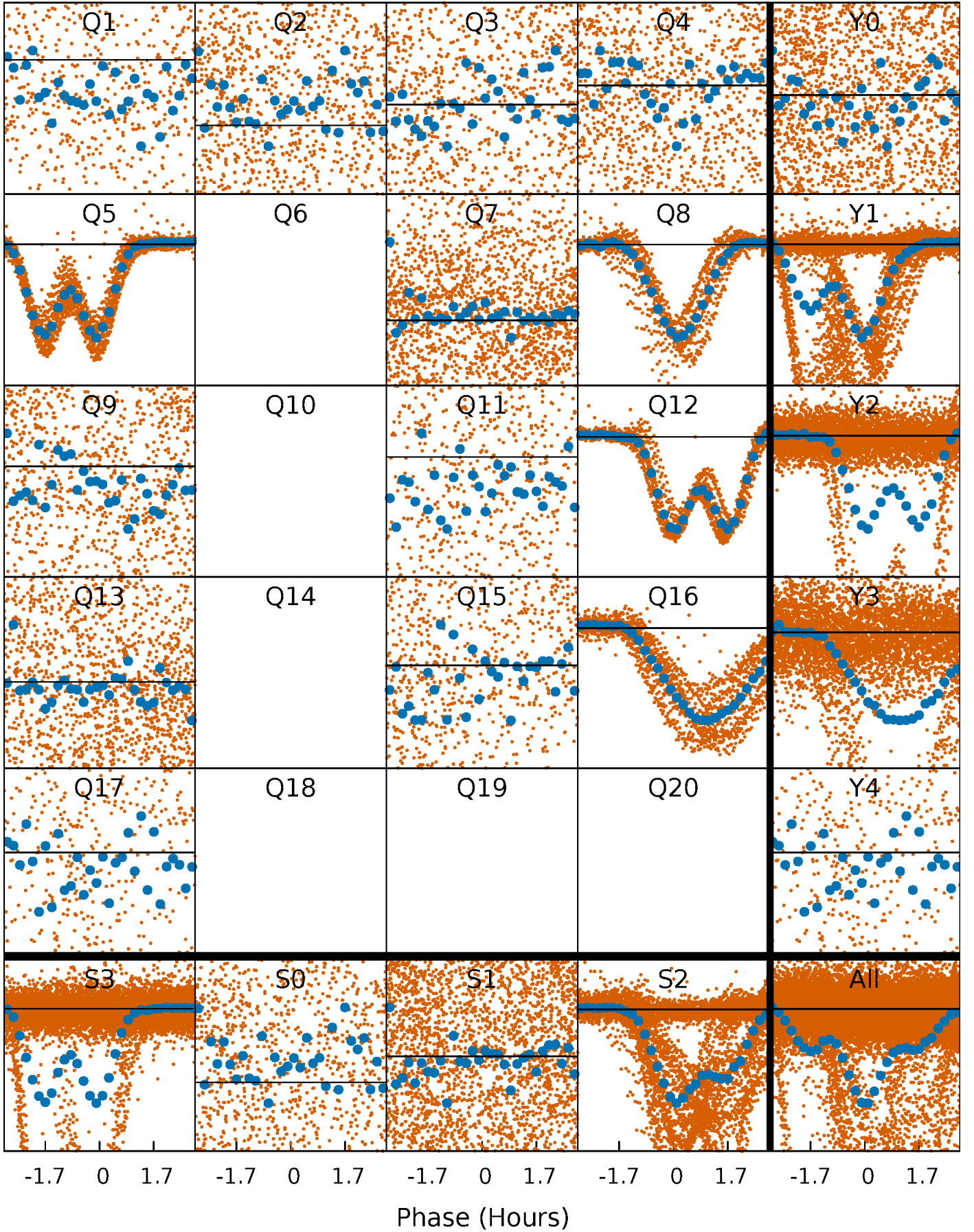
PDC Quarter-Phased Transit Curves

TCE 005290153-02 P= 0.539872 Days $T_0=131.632869$ (BKJD)



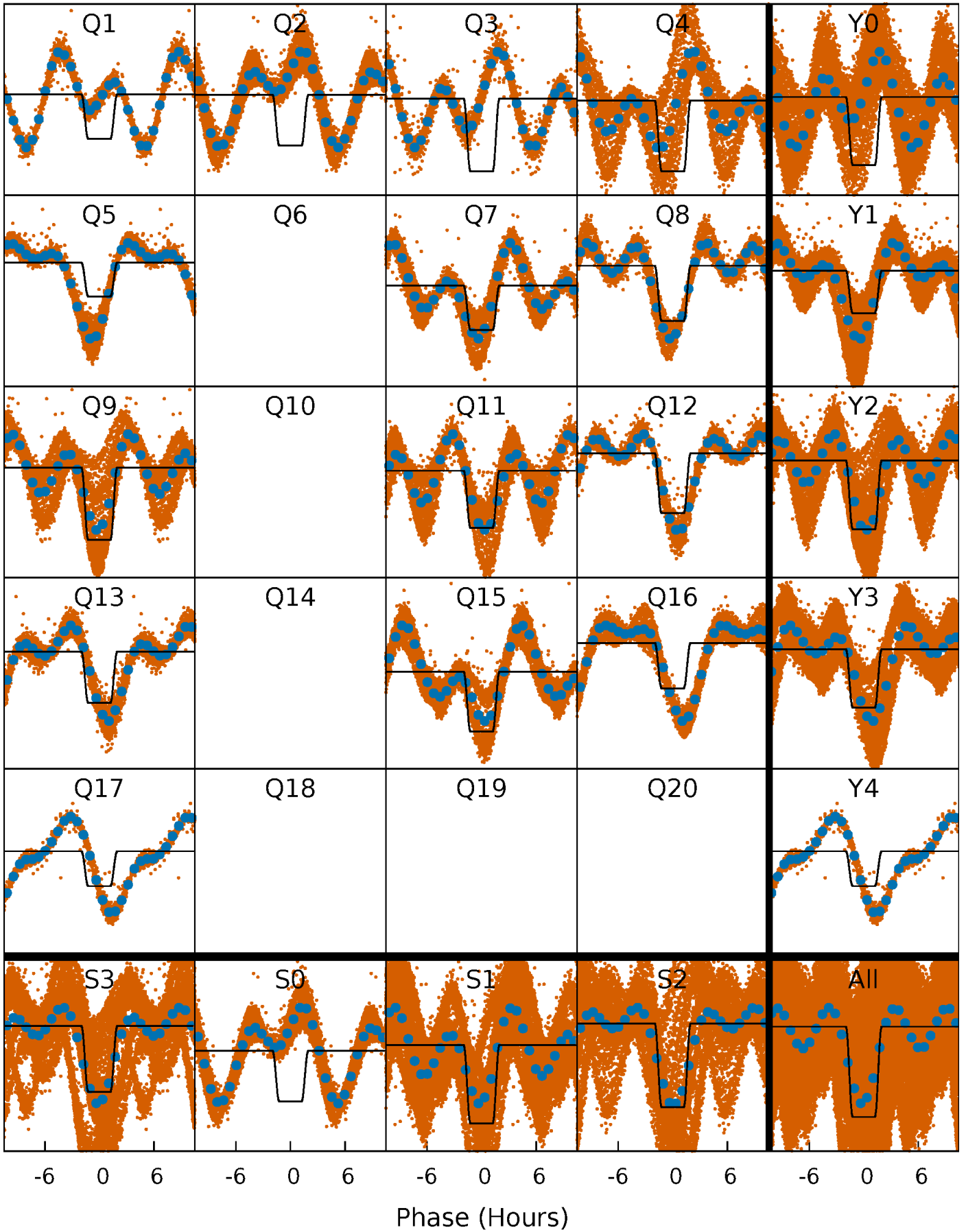
DV Quarter-Phased Transit Curves

TCE 005290153-02 P= 0.539872 Days $T_0=131.632869$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

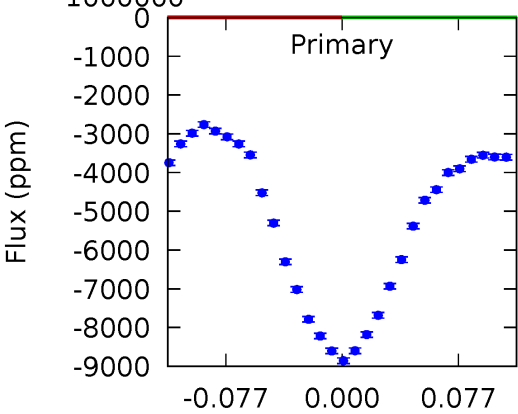
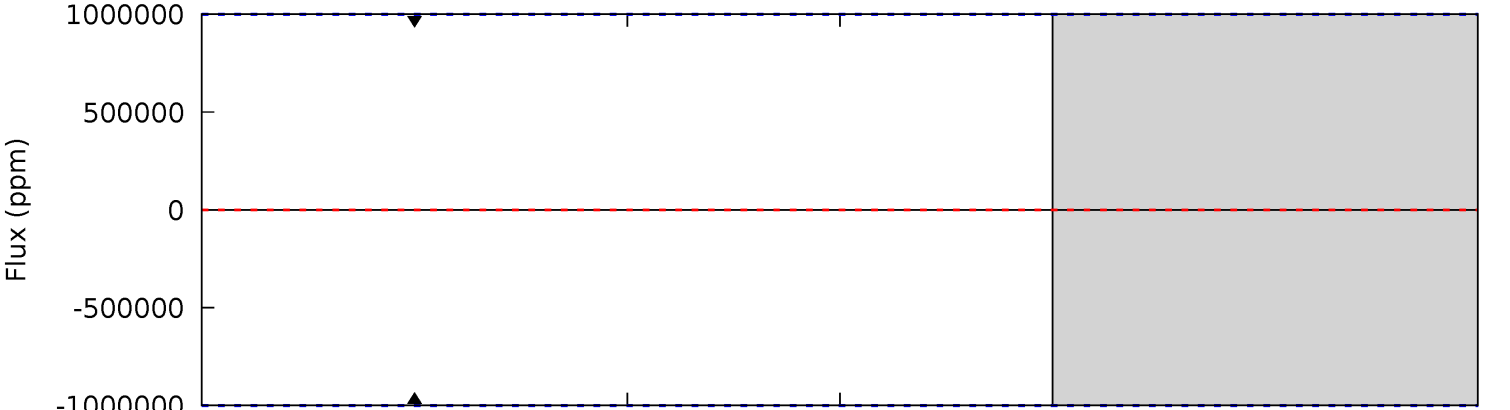
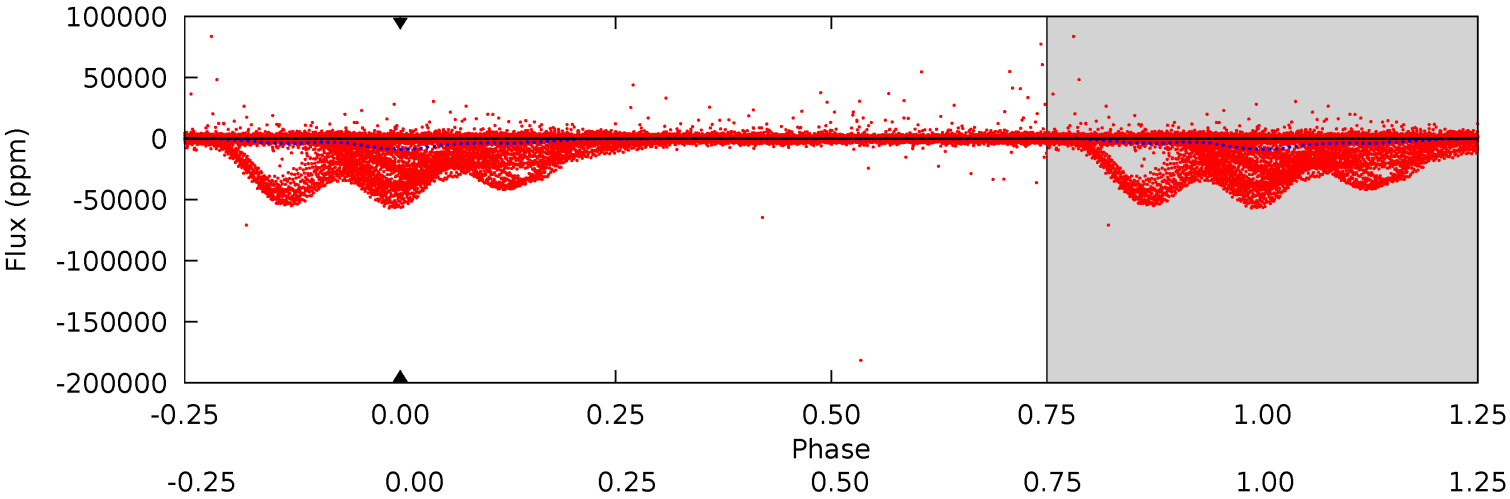
TCE 005290153-02 P= 0.539872 Days $T_0=131.640641$ (BKJD)



DV Model-Shift Uniqueness Test

005290153-02, P = 0.539872 Days, E = 131.092997 Days

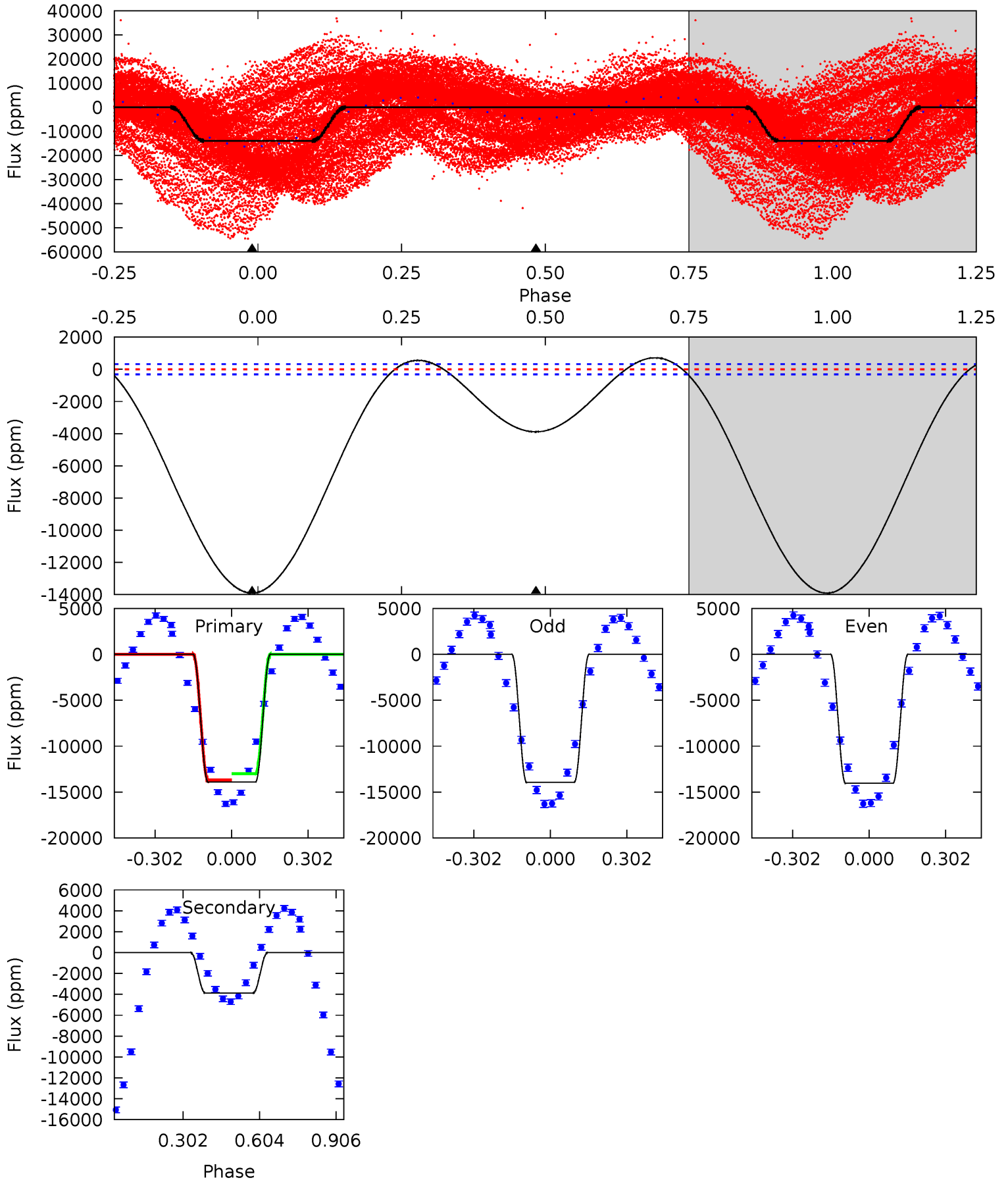
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

005290153-02, P = 0.539872 Days, E = 131.100769 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
189.2	52.9	0	0	4.33	1.03	5.99	189.2	189.2	52.9	52.9	0.67	0.79	0.05	4.65



Stellar Parameters For KIC 005290153

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5103^{+154}_{-154}	$4.594^{+0.072}_{-0.048}$	$-0.620^{+0.350}_{-0.300}$	$0.675^{+0.067}_{-0.067}$	$0.653^{+0.083}_{-0.033}$	$2.984^{+0.904}_{-0.522}$
	+3%/-3%	+2%/-1%	+56%/-48%	+10%/-10%	+13%/-5%	+30%/-17%
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 005290153-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$9.70^{+7.02}_{-6.06}$	2433^{+84}_{-93}	3312^{+6303}_{-12107}	$1.412^{+126.375}_{-97.630}$
Alt.	-3886 ± 74	$11.39^{+6.21}_{-6.79}$	2422^{+101}_{-97}	3560^{+1573}_{-563}	$2.168^{+10.609}_{-1.276}$

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

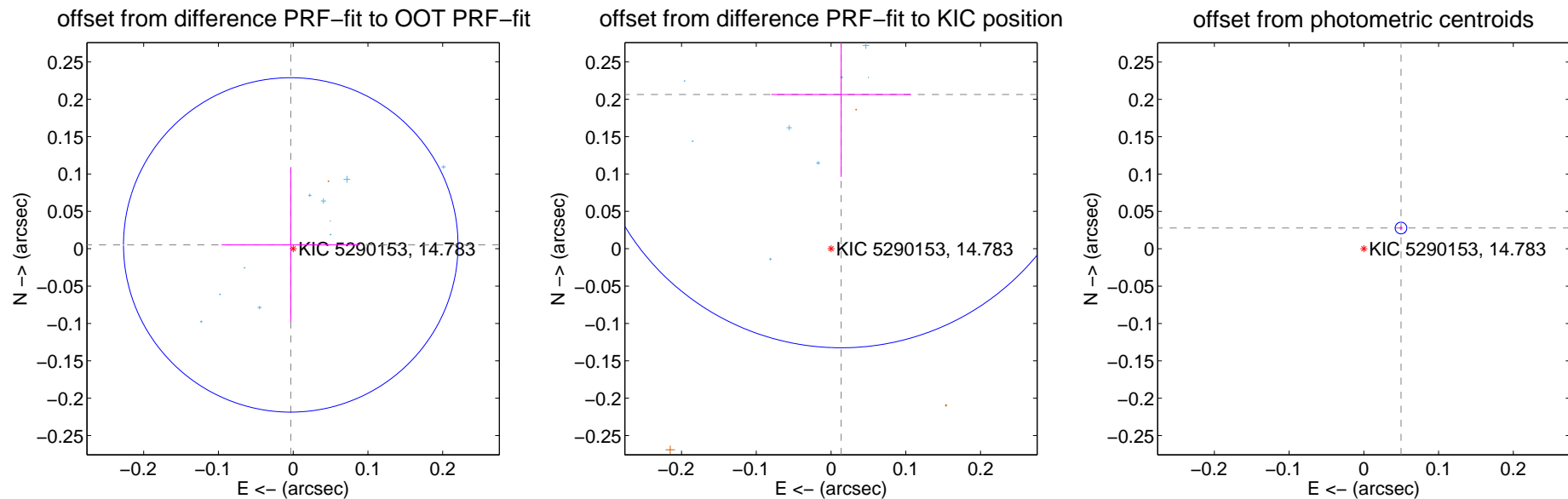
DV Centroid Data

Supplemental centroid analysis for 005290153-02. Kepler magnitude: 14.78. Transit SNR -1.00

There are 10 quarters with good PRF difference image offsets

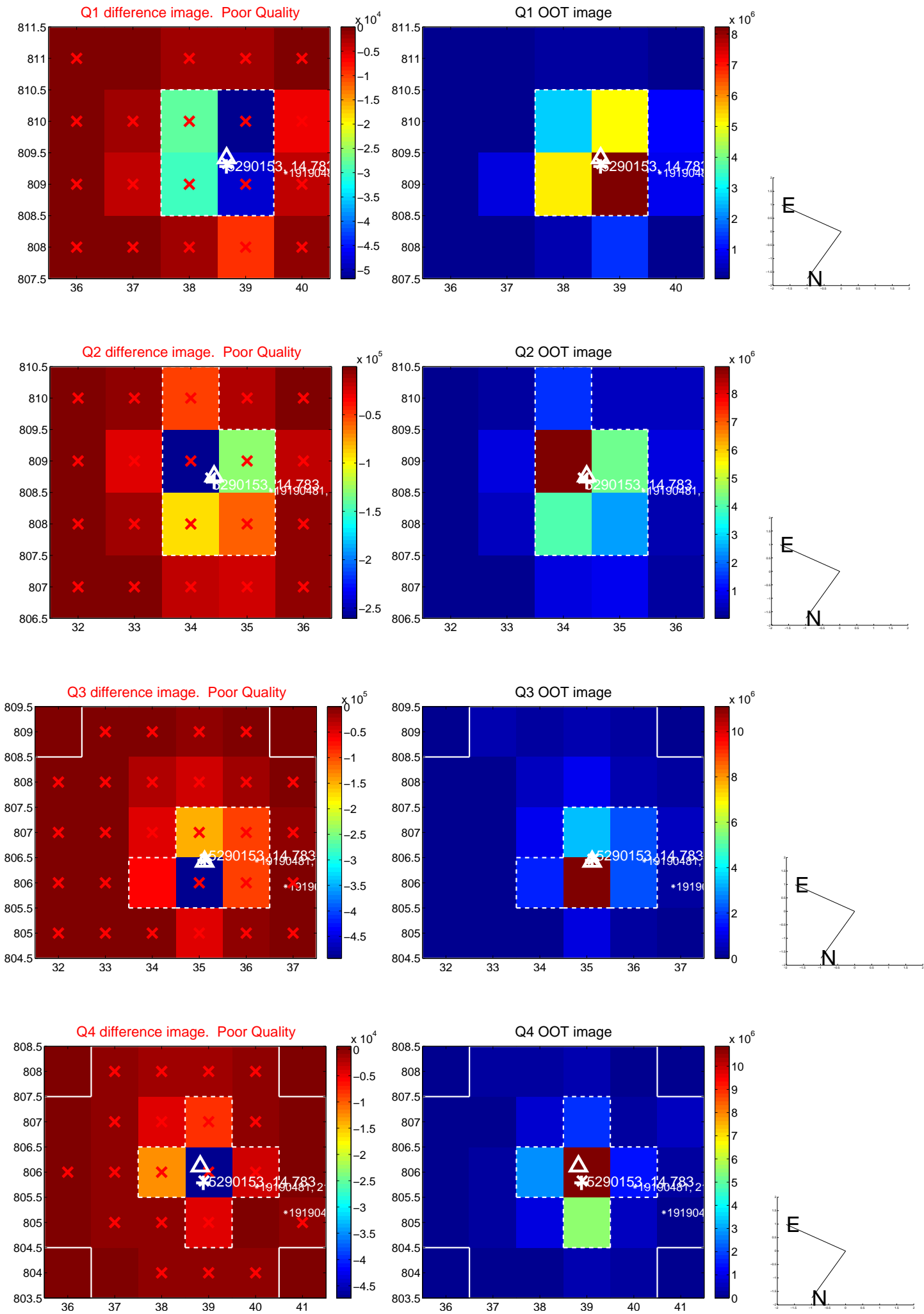
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.006 ± 0.075	0.08	0.003 ± 0.093	0.005 ± 0.103
PRF-fit source offset from KIC position	0.207 ± 0.113	1.83	-0.014 ± 0.093	0.206 ± 0.110
photometric centroid source offset	0.06 ± 0.00	21.92	-0.05 ± 0.00	0.03 ± 0.00

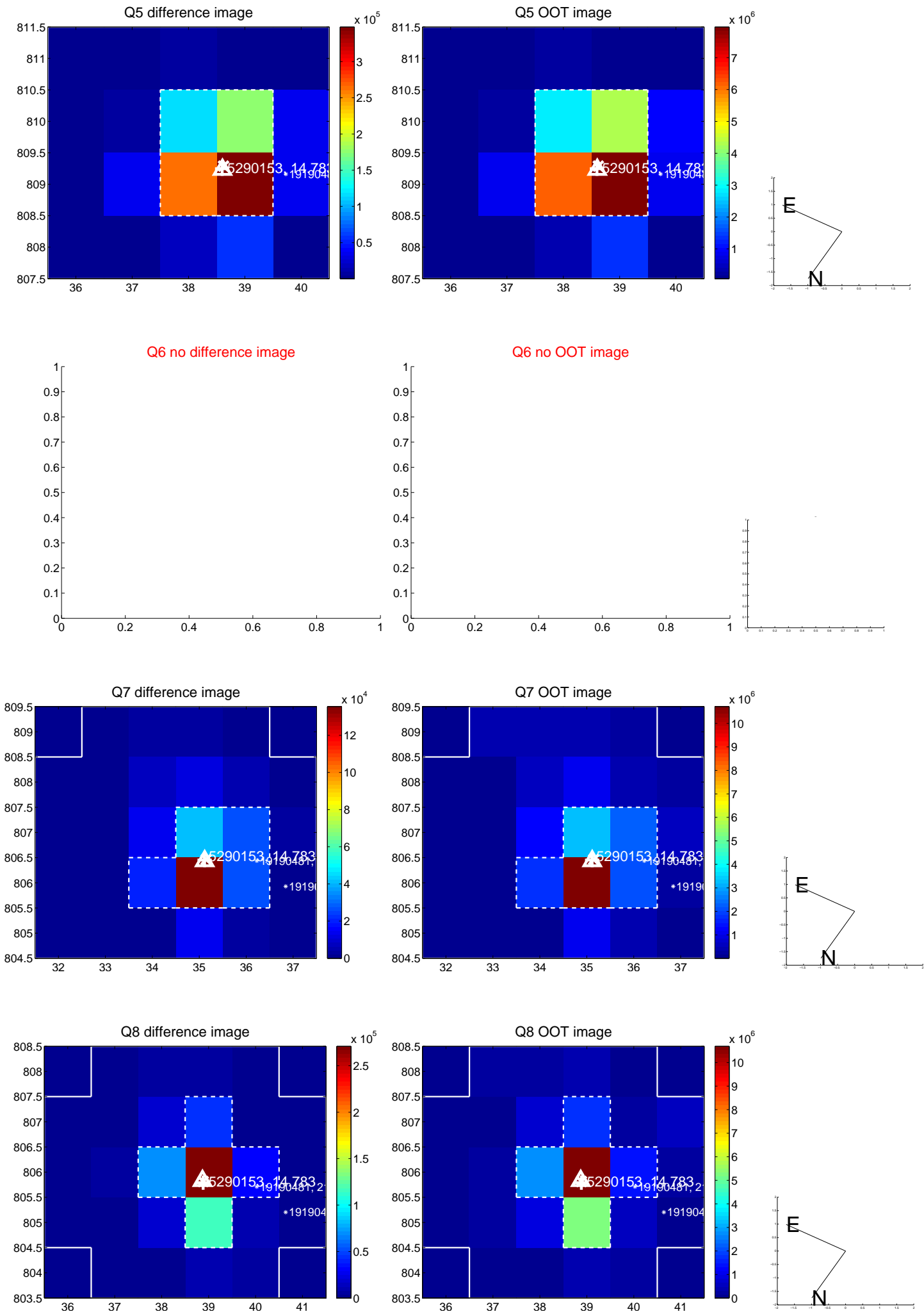


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

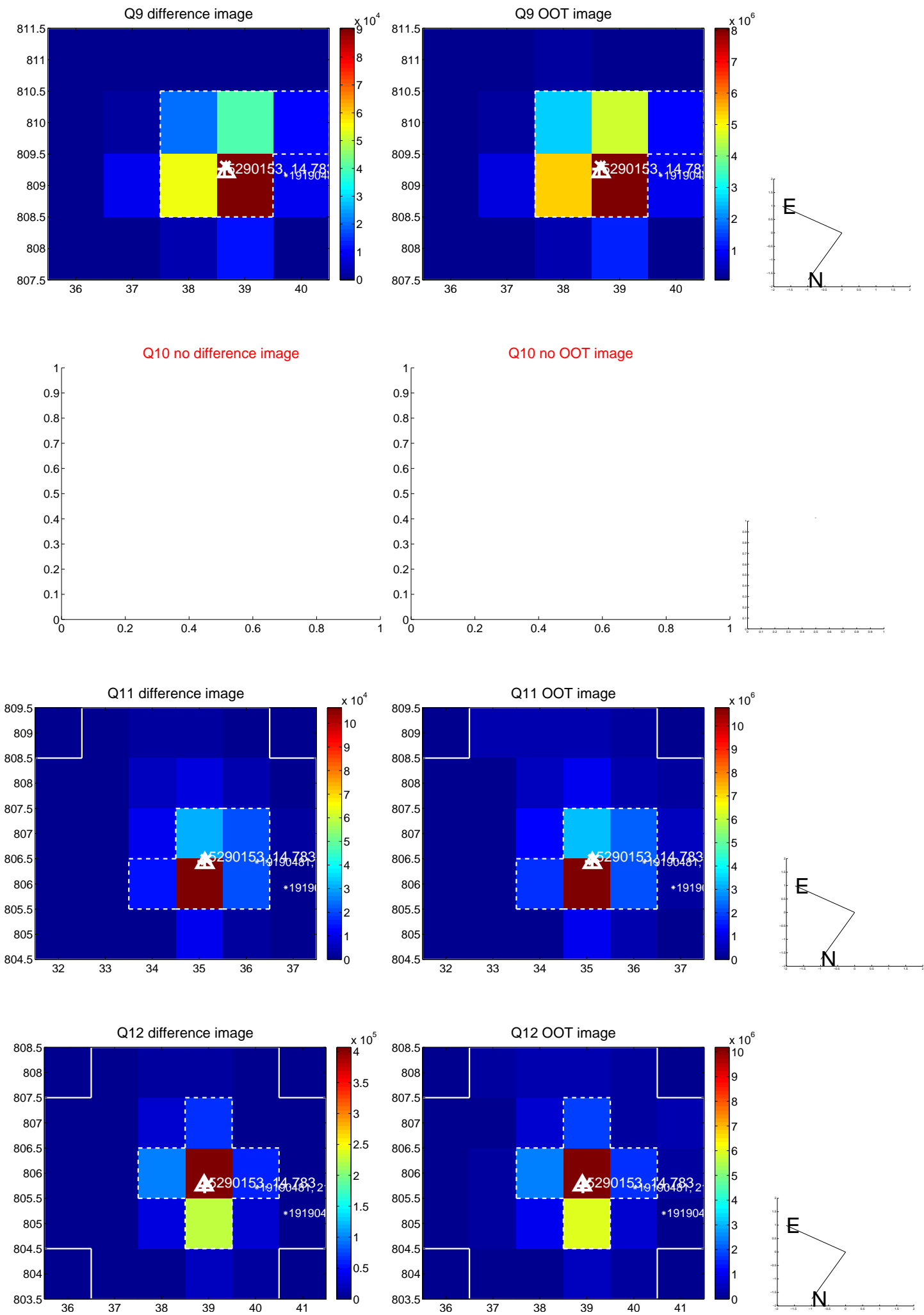
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



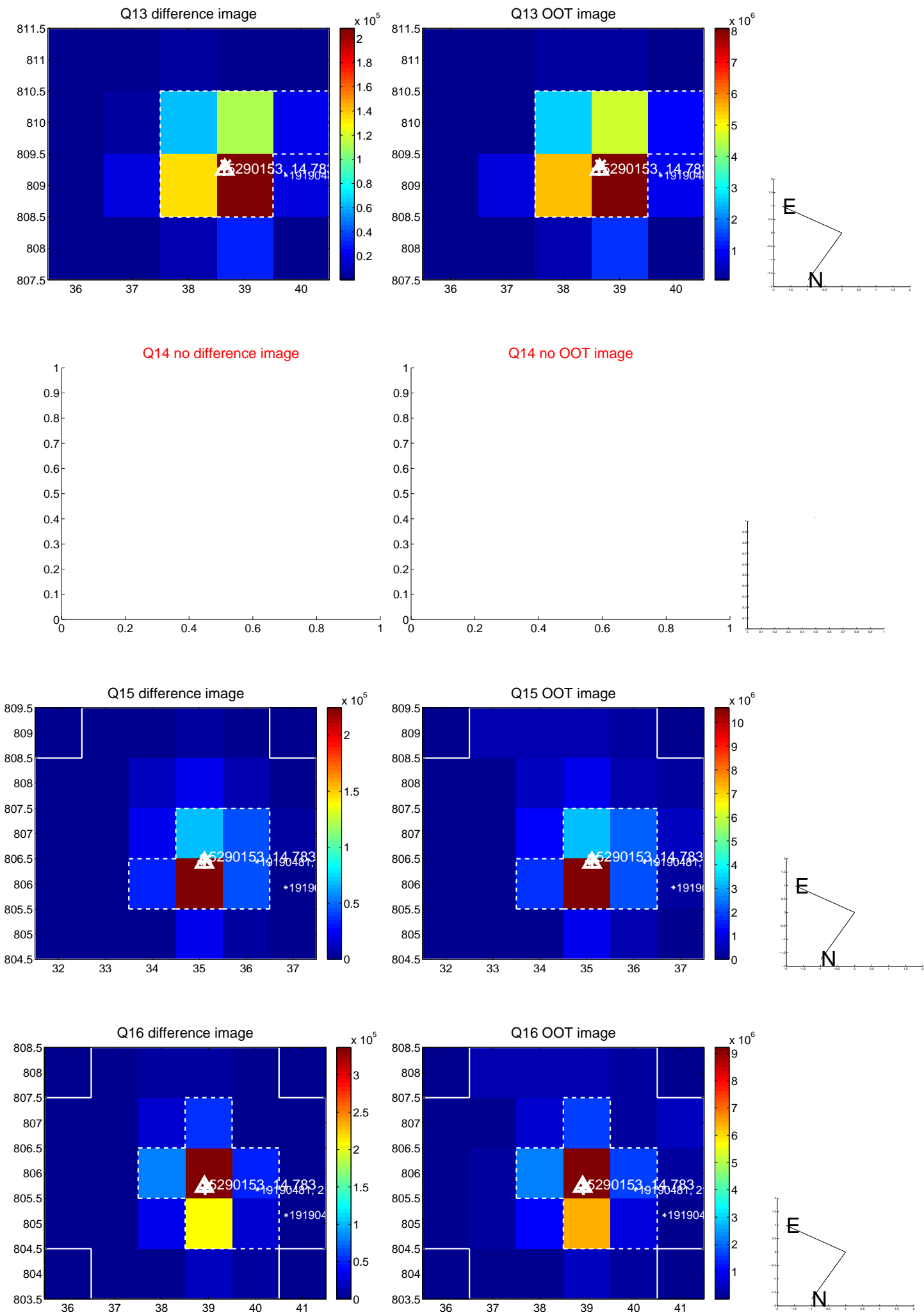
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



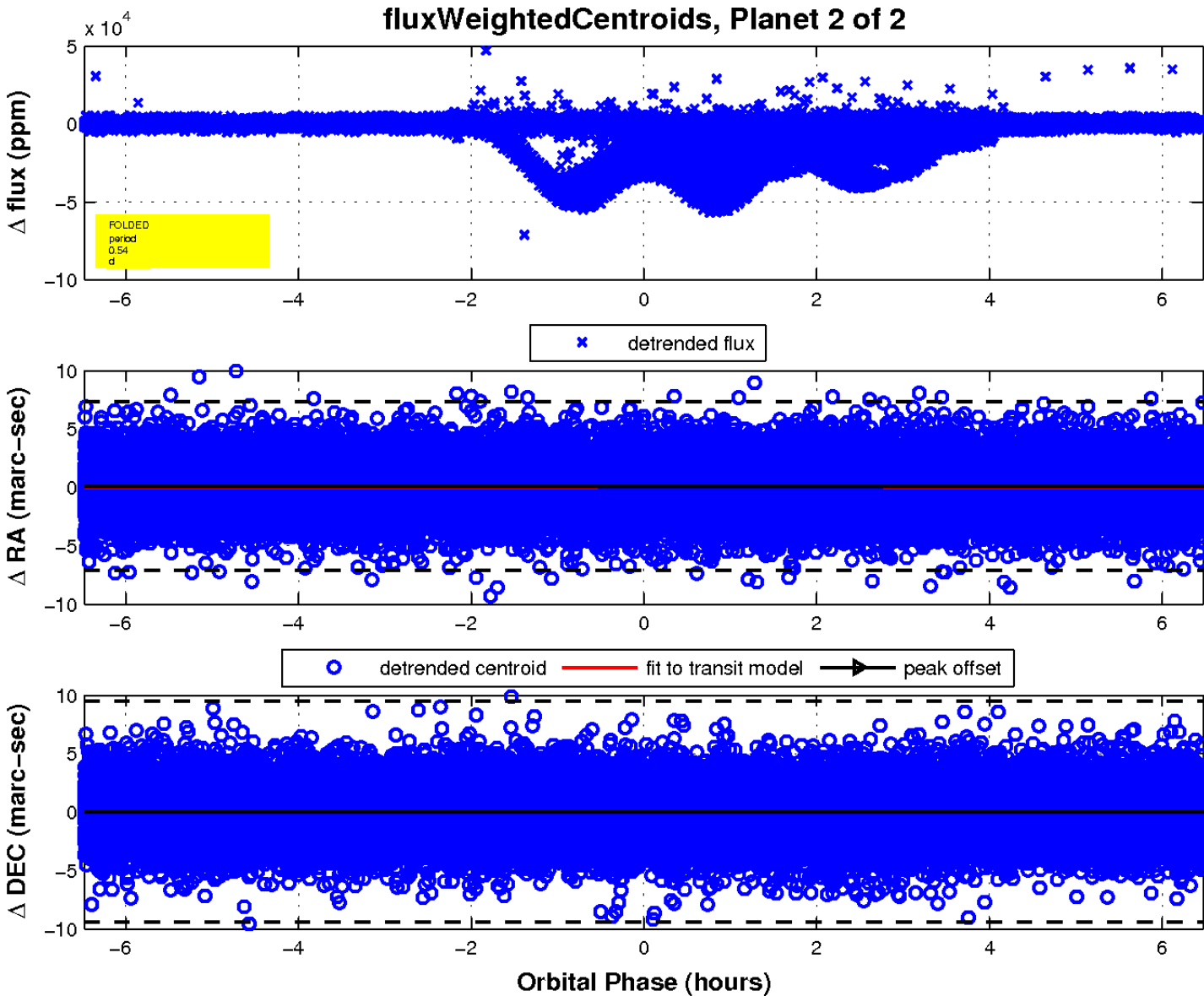
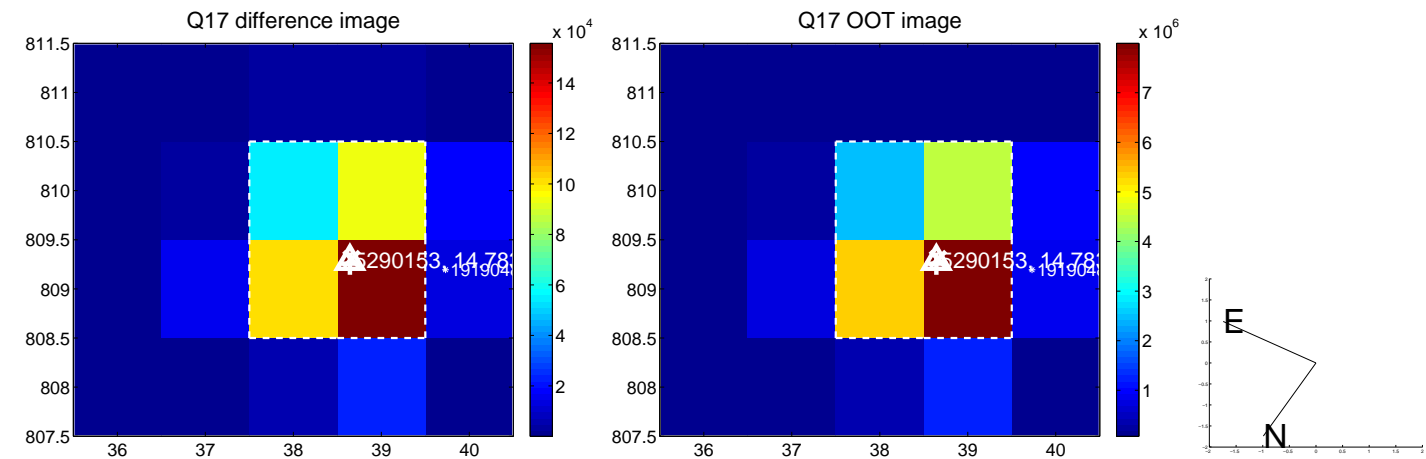
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

