

KIC 007292582

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})
007292582-02	OBS	No	252.892839	179.611265	879.8	11.313	45.0	5.1	0.89	5912	2.73	1.43
007292582-04	OBS	No	90.429693	206.124138	11278.2	9.000	29.7	-1.0	0.89	5912	9.40	5.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007292582-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007292582-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

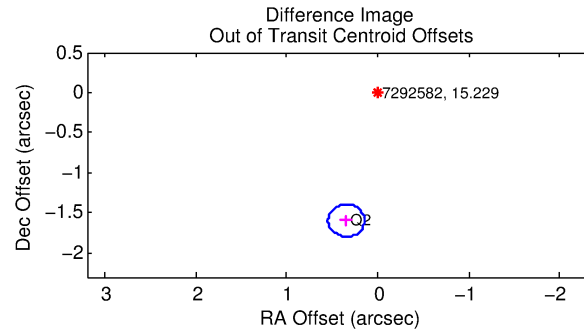
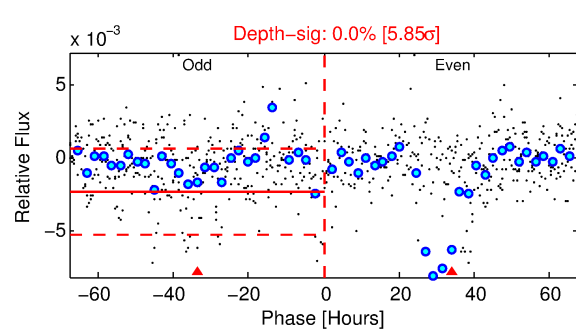
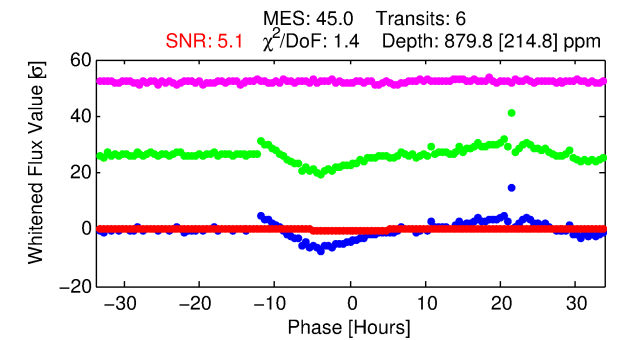
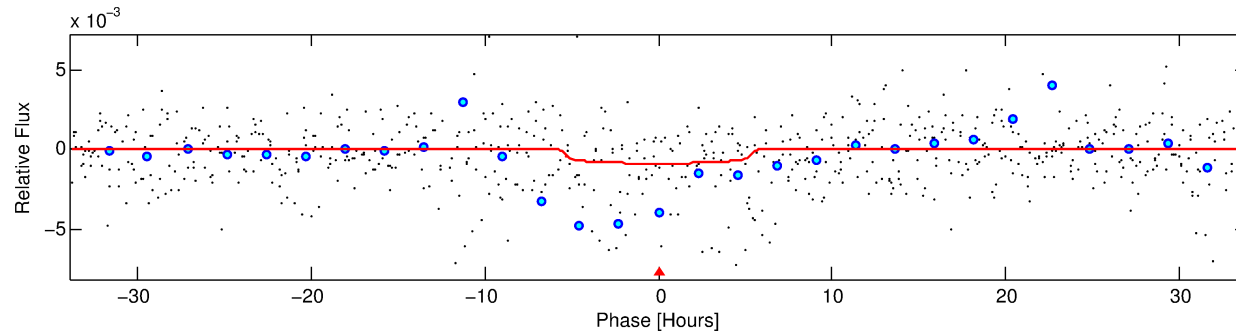
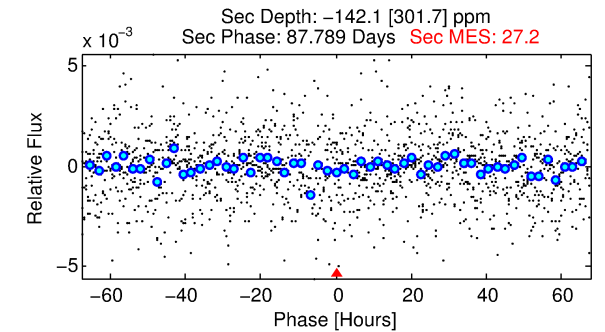
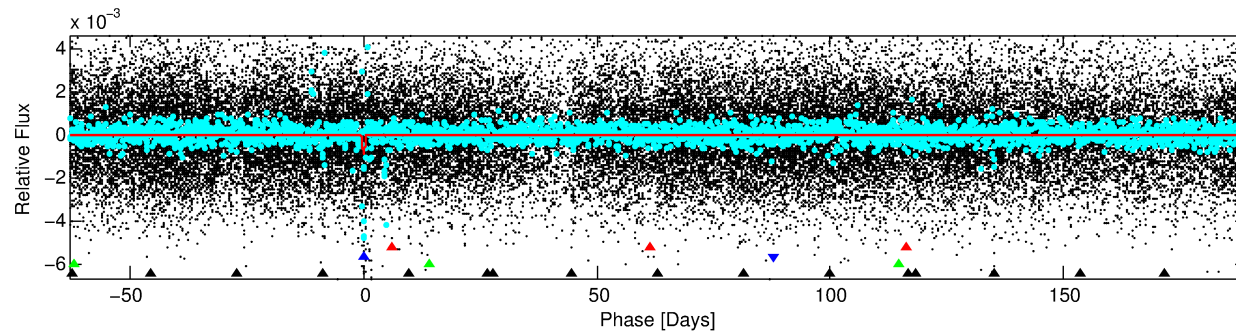
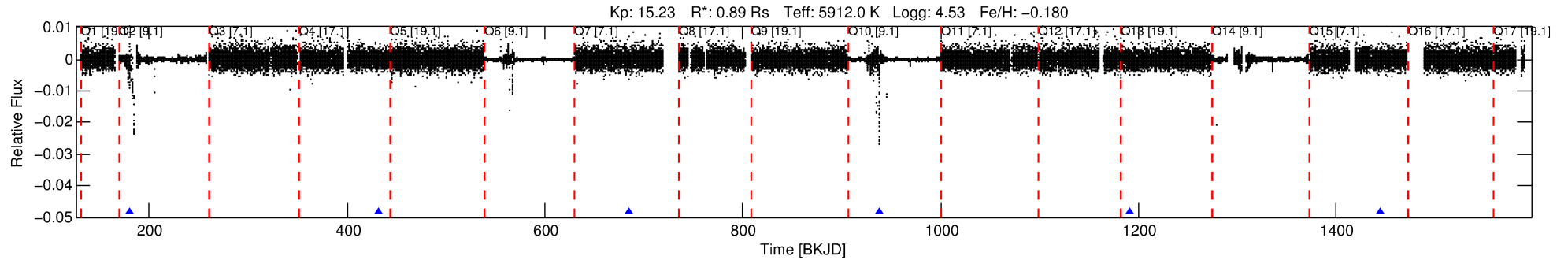
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007292582-02

No Significant Match Found

DV One-Page Summary

KIC: 7292582 Candidate: 2 of 4 Period: 252.893 d



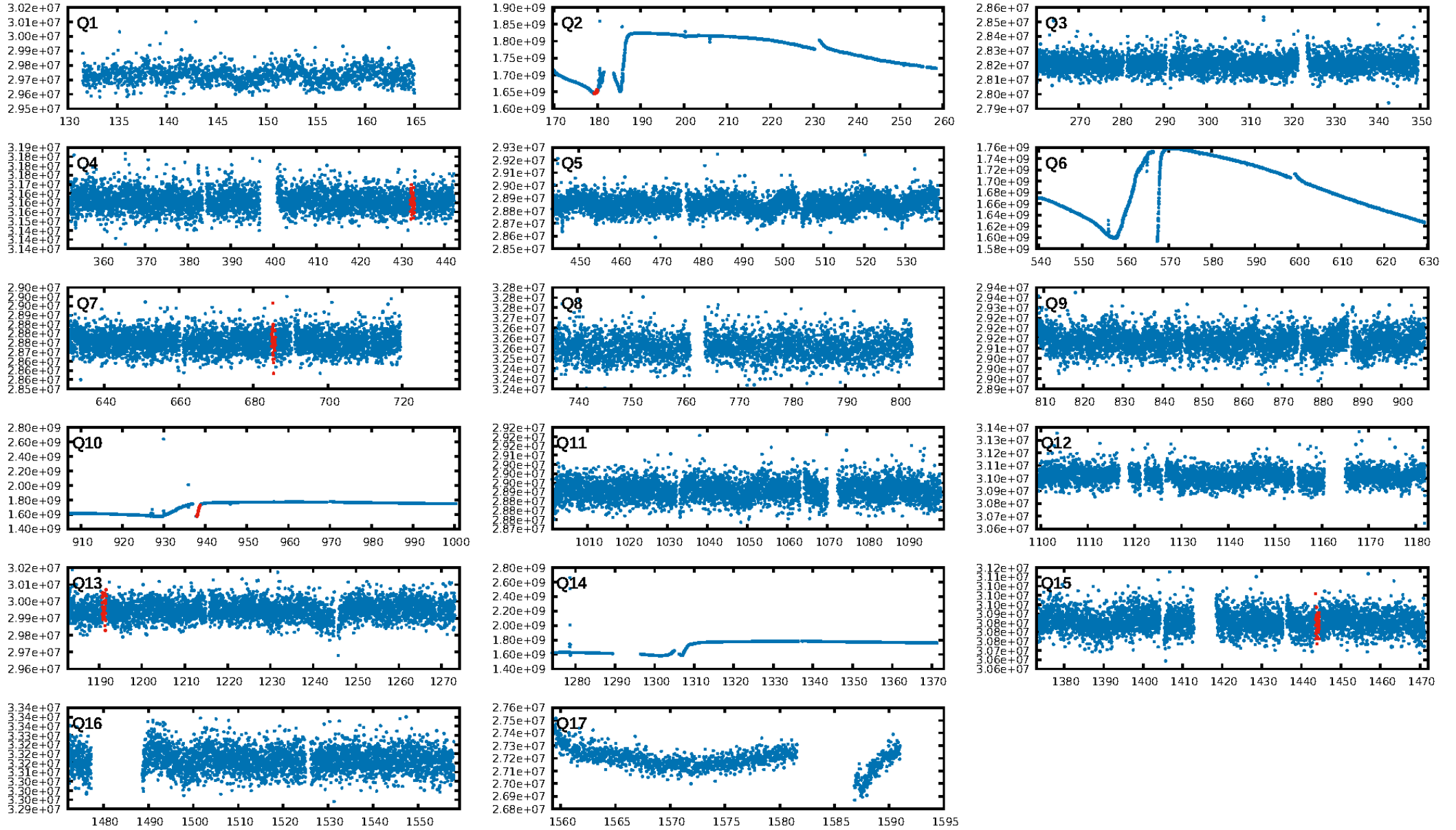
DV Fit Results:

Period = 252.89284 [0.01734] d
Epoch = 179.6113 [0.0496] BKJD
Rp/R* = 0.0281 [0.0413]
a/R* = 147.44 [1006.05]
b = 0.56 [8.48]
Seff = 1.43 [0.56]
Teq = 279 [27] K
Rp = 2.73 [4.09] Re
a = 0.7779 [0.1954] AU
Ag = N/A
Teffp = N/A

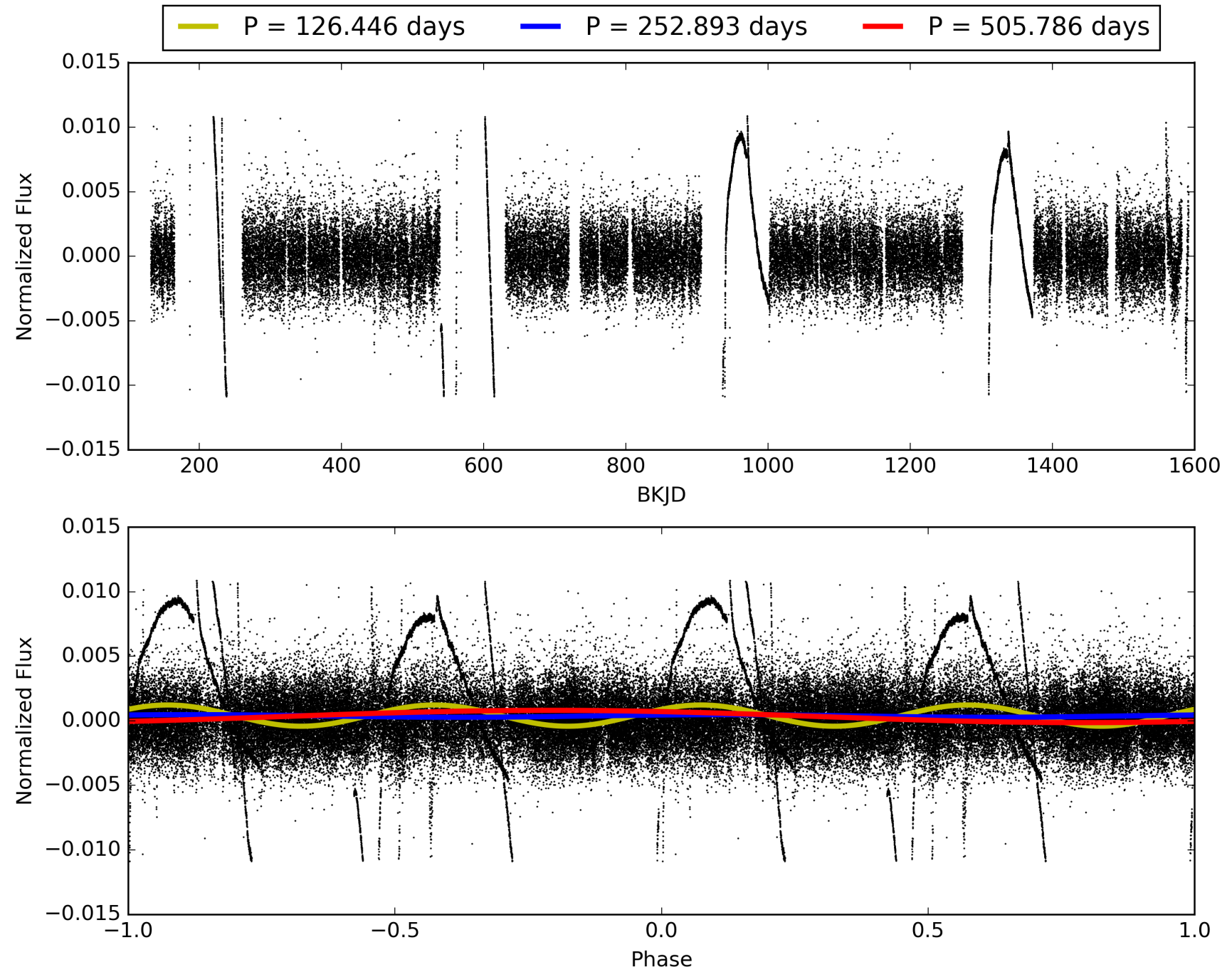
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [269.72σ]
LongPeriod-sig: 100.0% [42.05σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 98.6%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -8.954
Centroid-sig: 2.5%
Centroid-so: 0.877 arcsec [20.53σ]
OotOffset-rm: 1.635 arcsec [24.51σ]
KicOffset-rm: 2.882 arcsec [2.51σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 0.00 [0/2]
DiffImageOverlap-fno: 1.00 [5/5]

TCE 007292582-02, PDC Light Curves

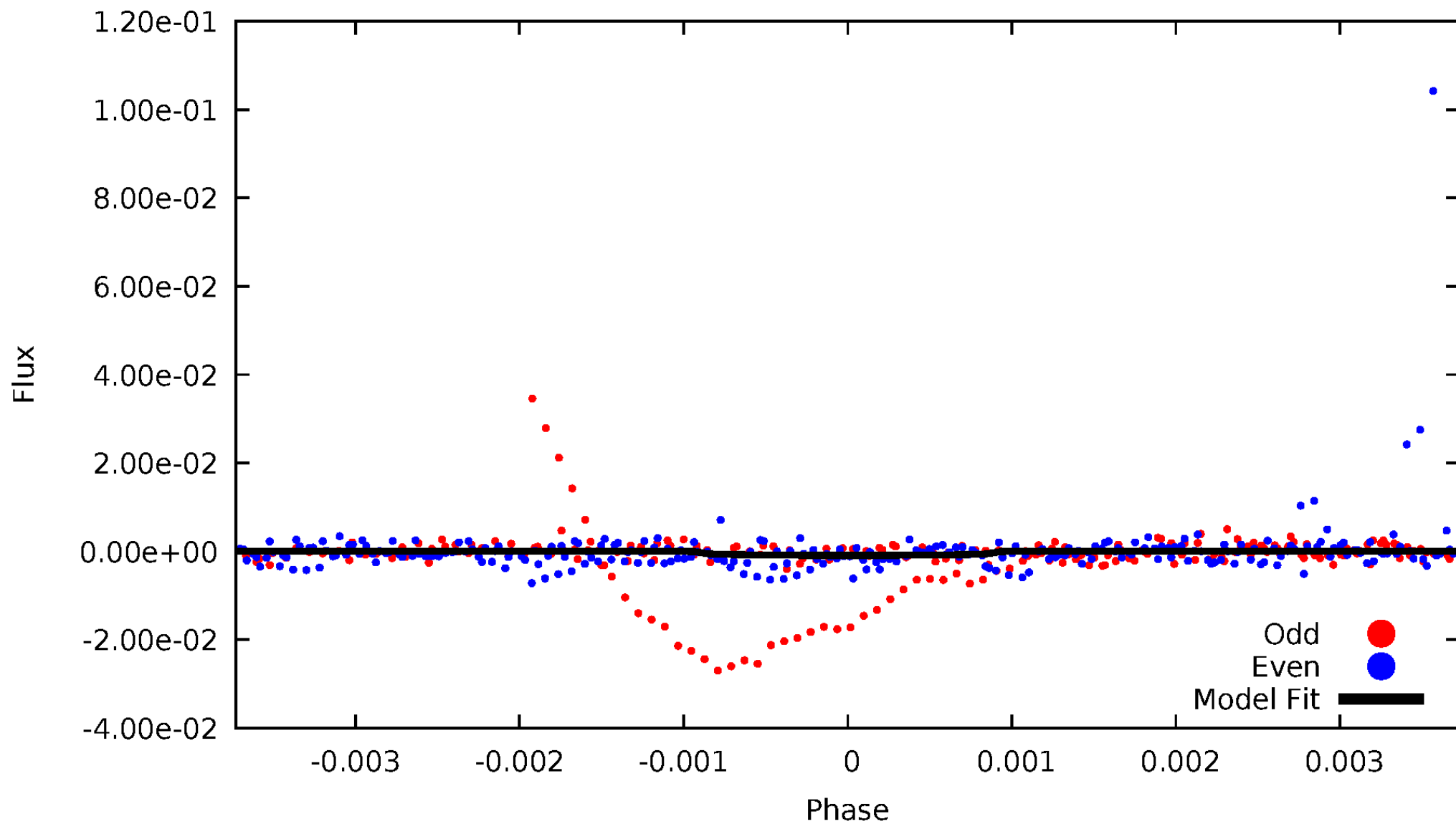


TCE 007292582-02



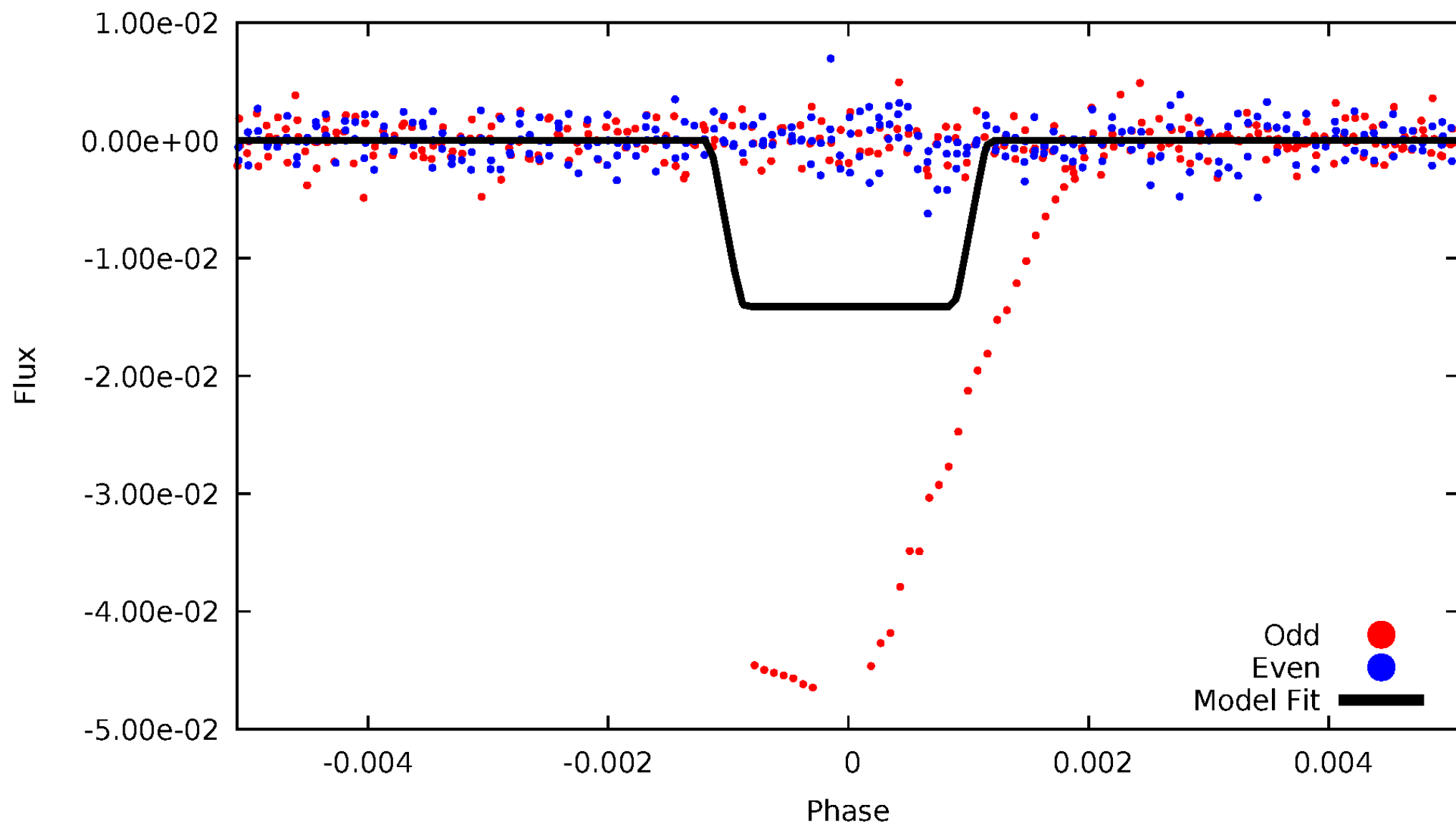
DV Odd/Even

TCE 007292582-02



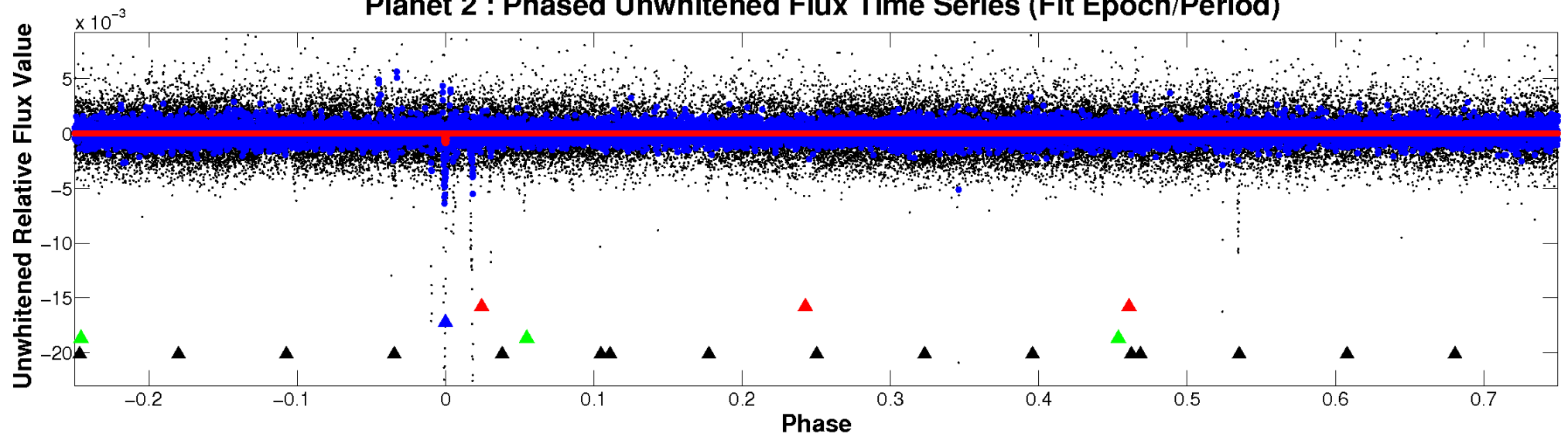
ALT Odd/Even

TCE 007292582-02

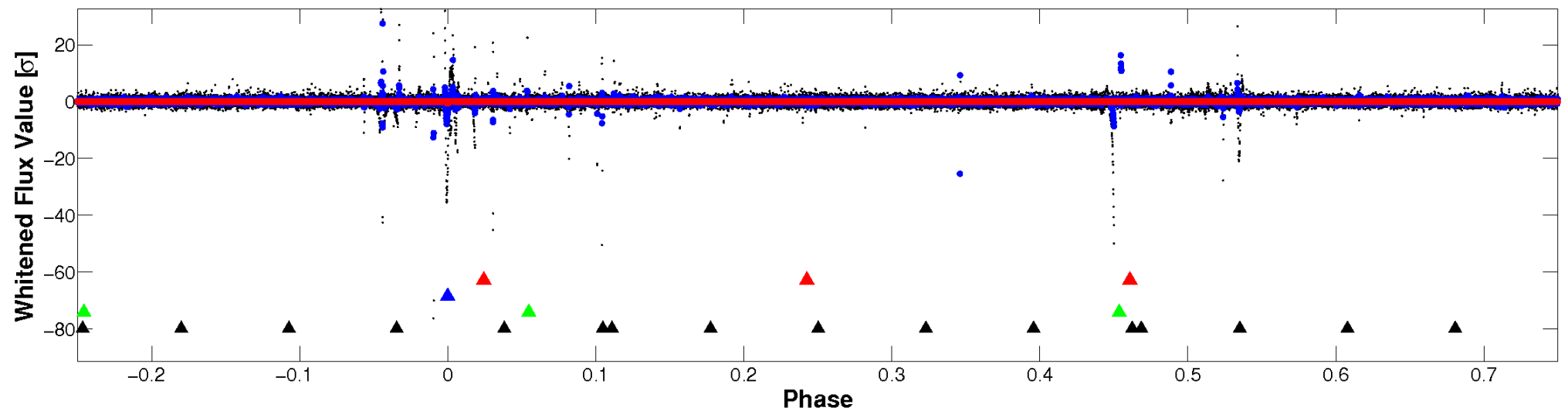


Non-Whitened Vs. Whitened Light Curve

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

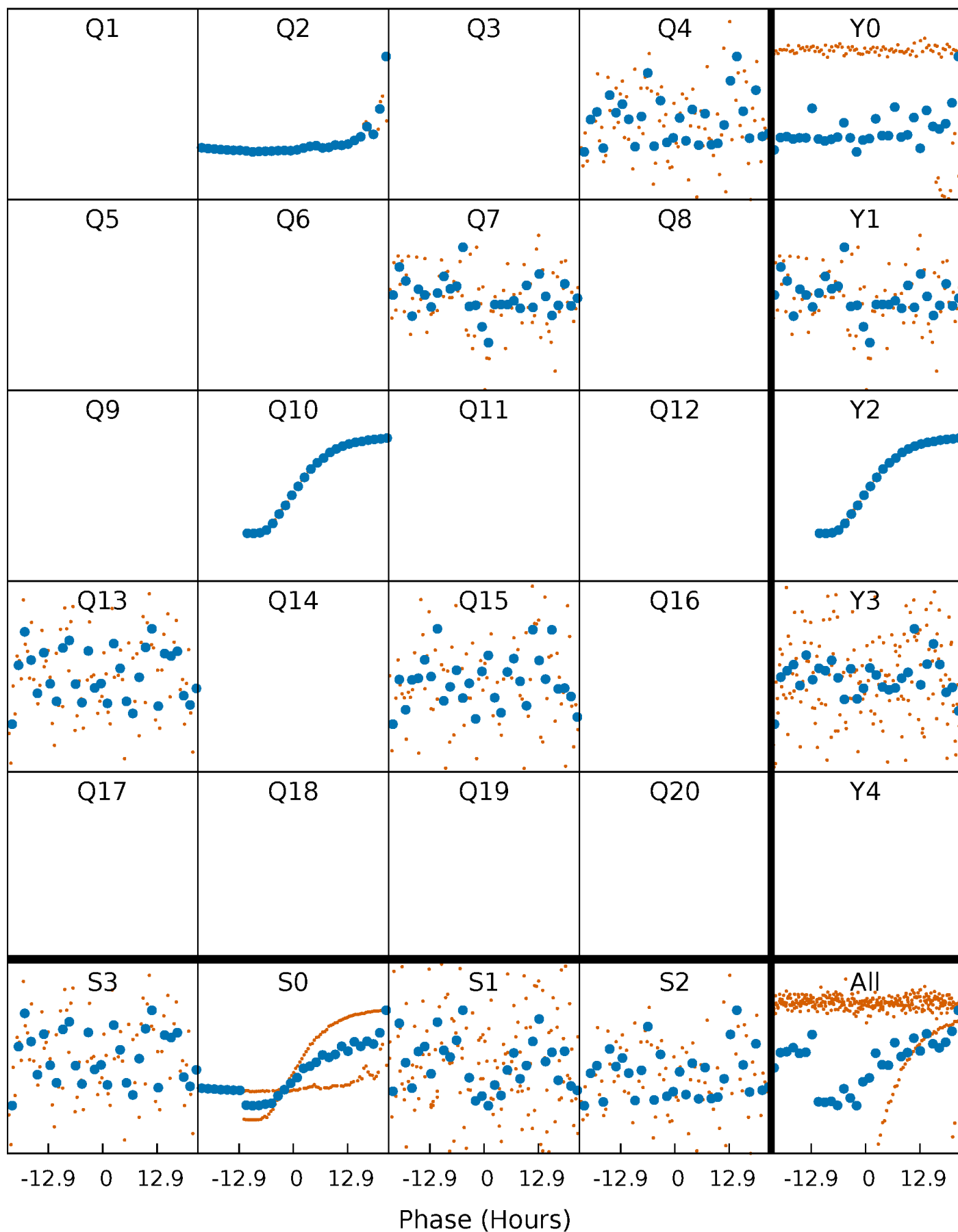


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



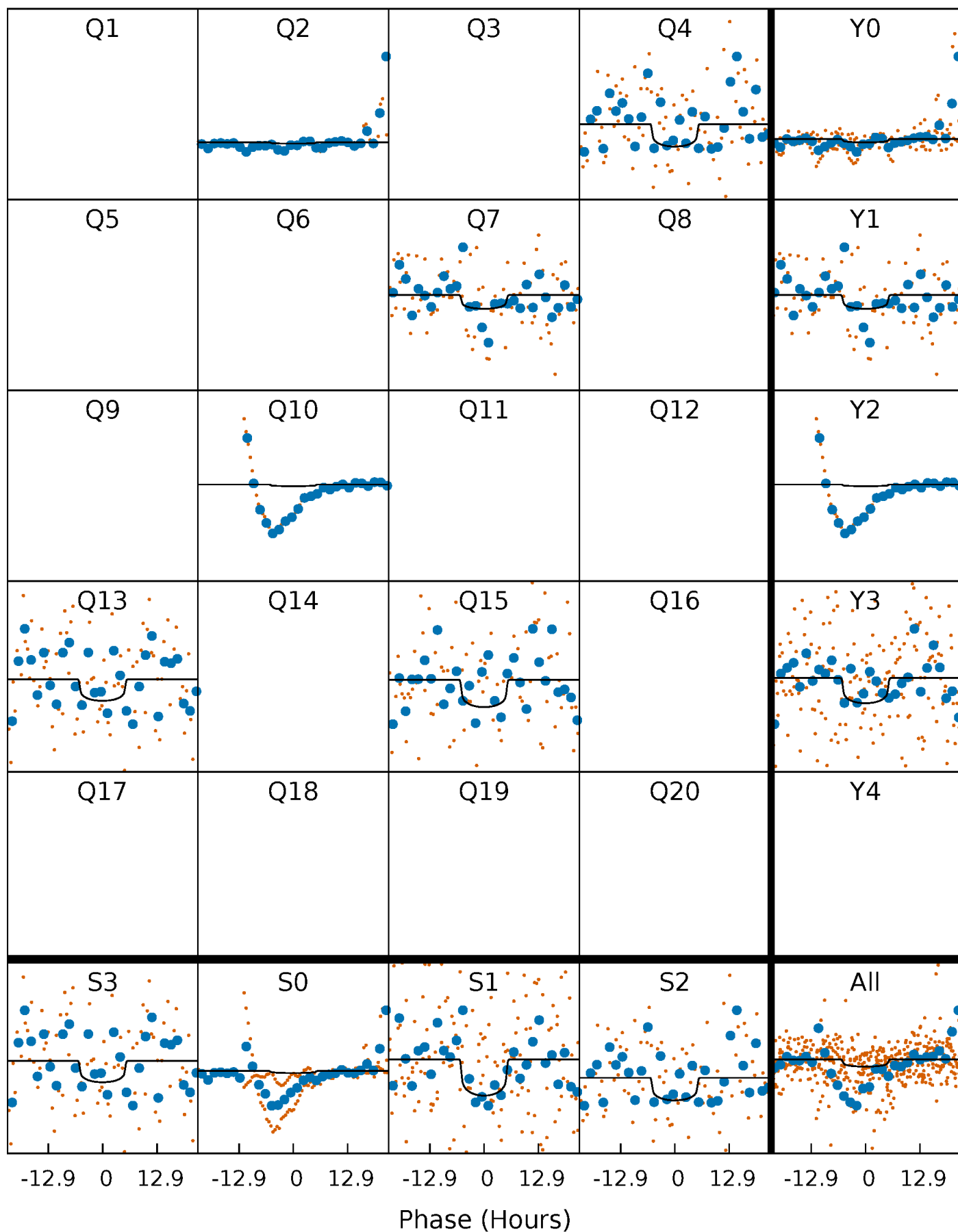
PDC Quarter-Phased Transit Curves

TCE 007292582-02 $P=252.892839$ Days $T_0=179.611265$ (BKJD)



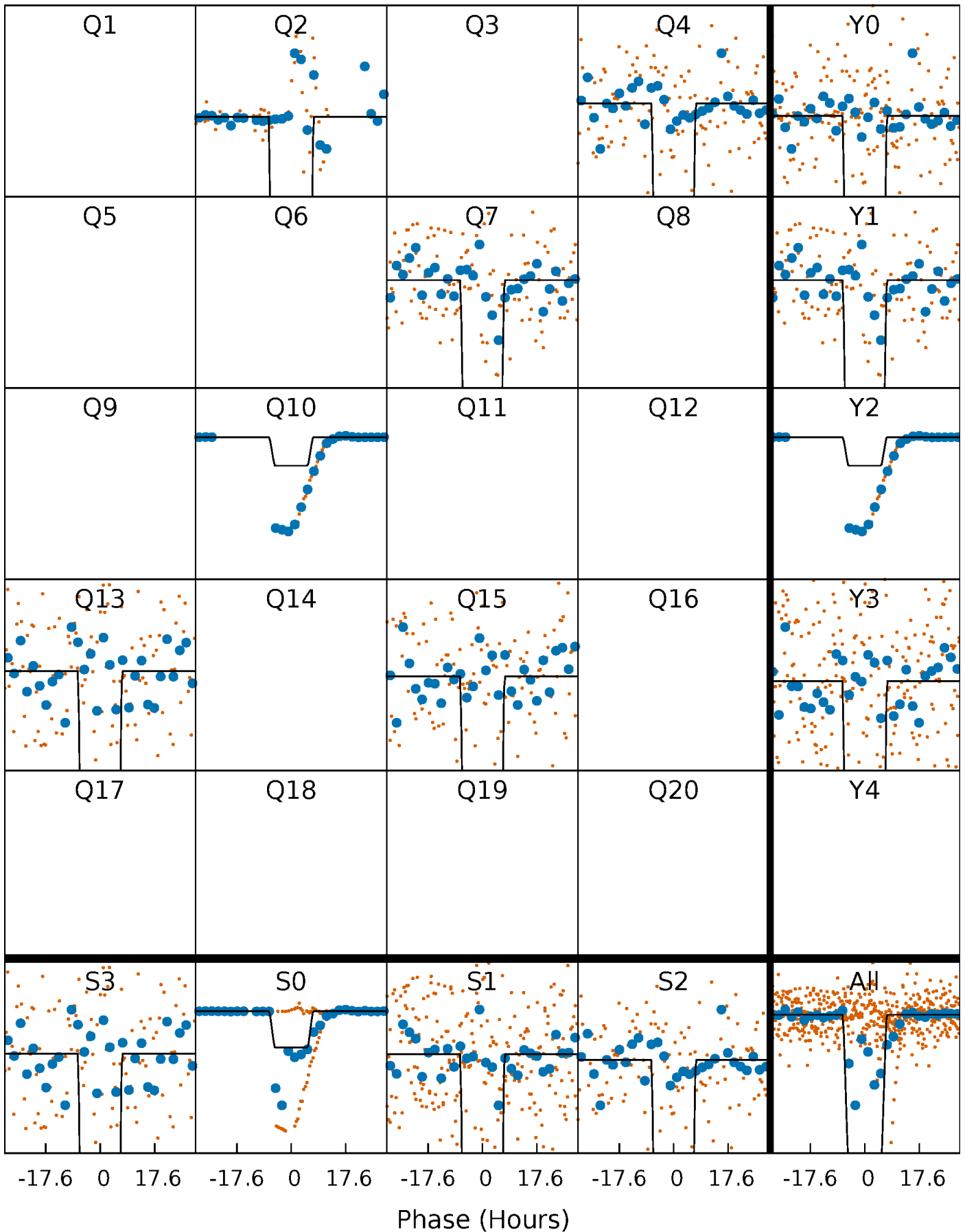
DV Quarter-Phased Transit Curves

TCE 007292582-02 P=252.892839 Days $T_0=179.611265$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

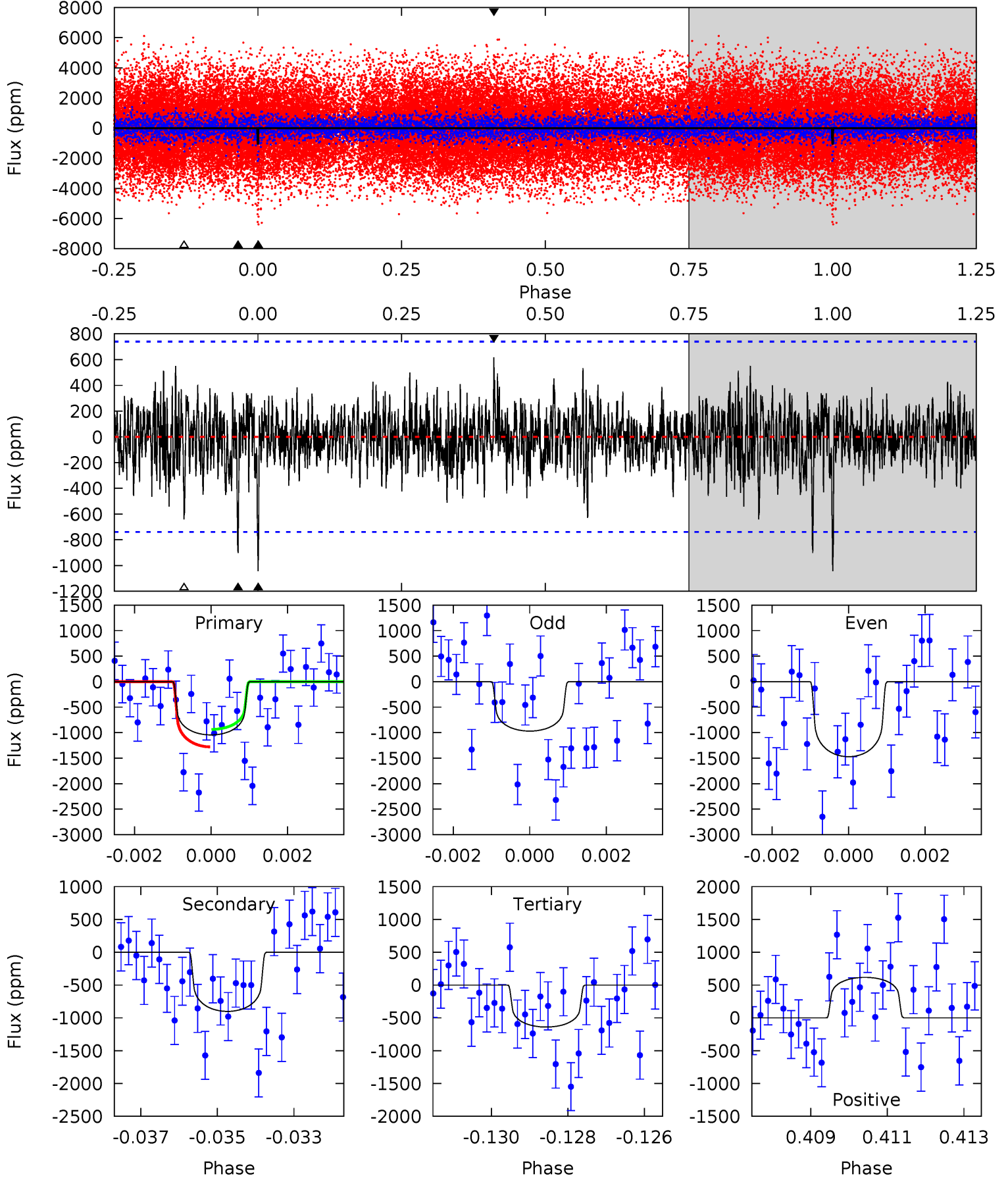
TCE 007292582-02 P=252.763137 Days $T_0=179.711776$ (BKJD)



DV Model-Shift Uniqueness Test

007292582-02, P = 252.892839 Days, E = 179.611265 Days

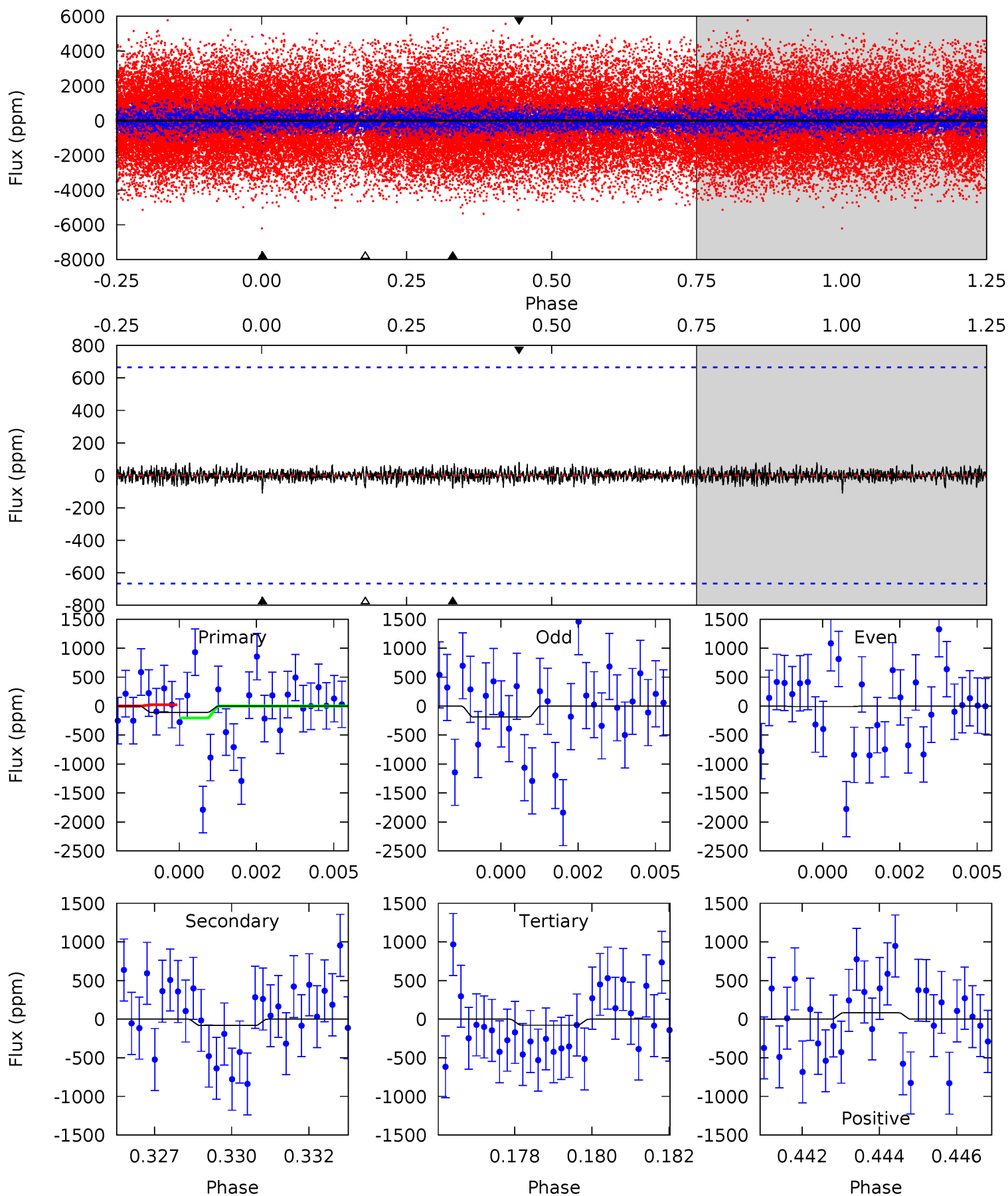
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.53	6.50	4.62	4.45	5.33	3.10	1.19	2.91	3.08	1.89	2.05	1.81	4.72	0.37	1.25



Alt Model-Shift Uniqueness Test

007292582-02, $P = 252.763137$ Days, $E = 179.711776$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.87	0.64	0.62	0.65	5.30	3.04	0.19	0.25	0.22	0.02	-0.01	0.70	51.8	0.43	0.73



Stellar Parameters For KIC 007292582

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5912^{+159}_{-177}	$4.532^{+0.048}_{-0.204}$	$-0.180^{+0.300}_{-0.300}$	$0.889^{+0.262}_{-0.082}$	$0.980^{+0.119}_{-0.119}$	$1.966^{+0.394}_{-1.026}$
	+3%/-3%	+1%/-5%	+167%/-167%	+29%/-9%	+12%/-12%	+20%/-52%
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 007292582-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-901±139	$3.96^{+3.71}_{-2.71}$	398^{+27}_{-19}	5227^{+4723}_{-1207}	$18436^{+164184}_{-13376}$
Alt.	-81±126	$12.39^{+4.25}_{-4.28}$	398^{+27}_{-18}	2453^{+435}_{-4783}	160^{+430}_{-260}

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

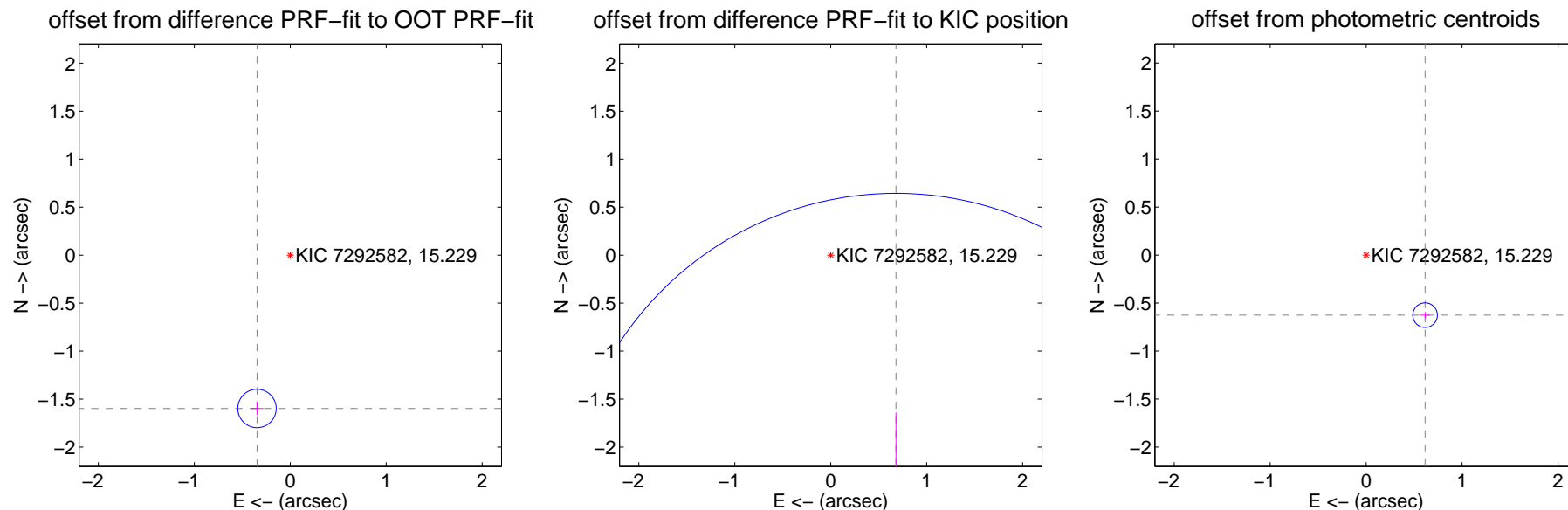
DV Centroid Data

Supplemental centroid analysis for 007292582-02. Kepler magnitude: 15.23. Transit SNR 5.14

There are 0 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.58 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.635 ± 0.067	24.51	0.347 ± 0.067	-1.597 ± 0.067
PRF-fit source offset from KIC position	2.882 ± 1.148	2.51	-0.680 ± 0.899	-2.800 ± 1.161
photometric centroid source offset	0.88 ± 0.04	20.53	-0.61 ± 0.05	-0.63 ± 0.03



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.

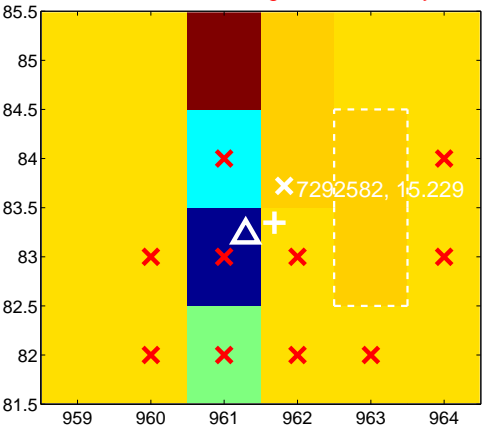
Q1 no difference image



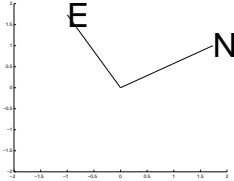
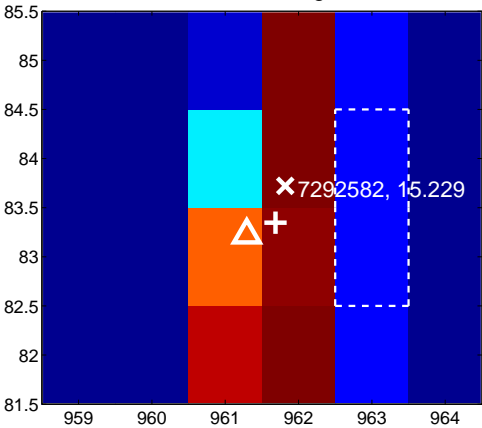
Q1 no OOT image



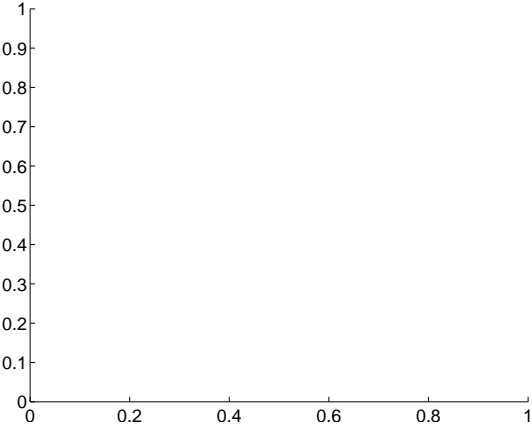
Q2 difference image. Poor Quality



Q2 OOT image



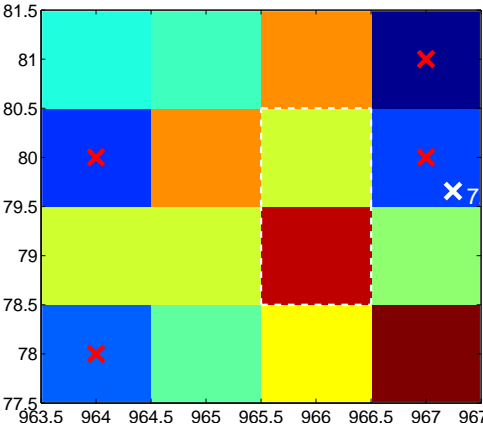
Q3 no difference image



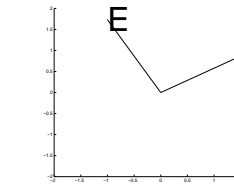
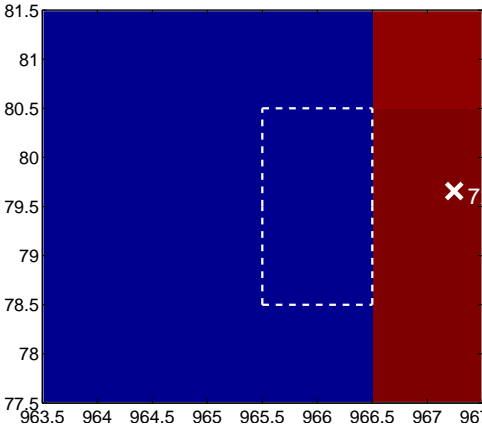
Q3 no OOT image



Q4 difference image. Poor Quality

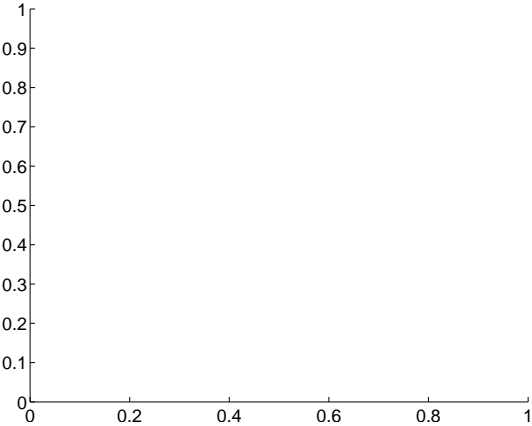


Q4 OOT image

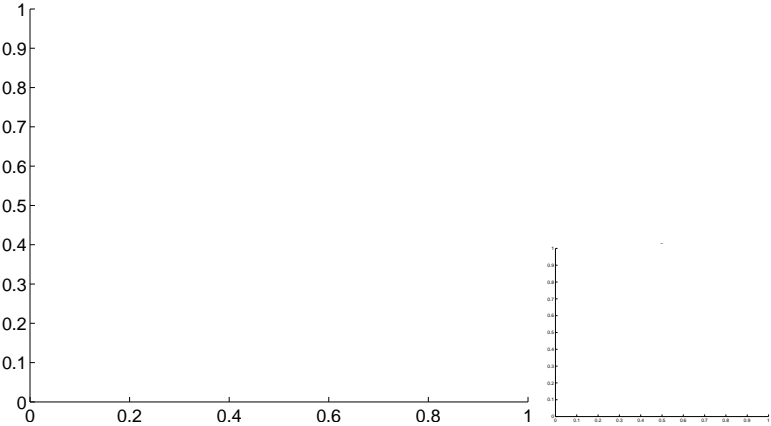


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.

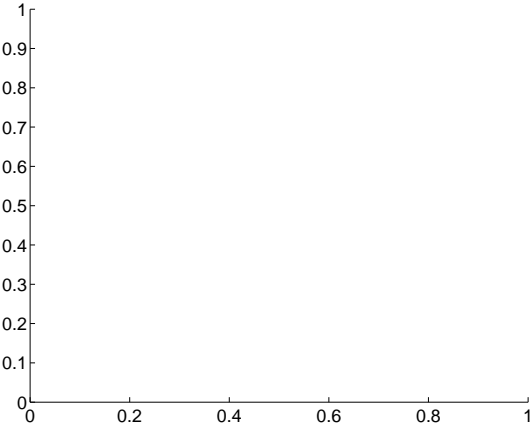
Q5 no difference image



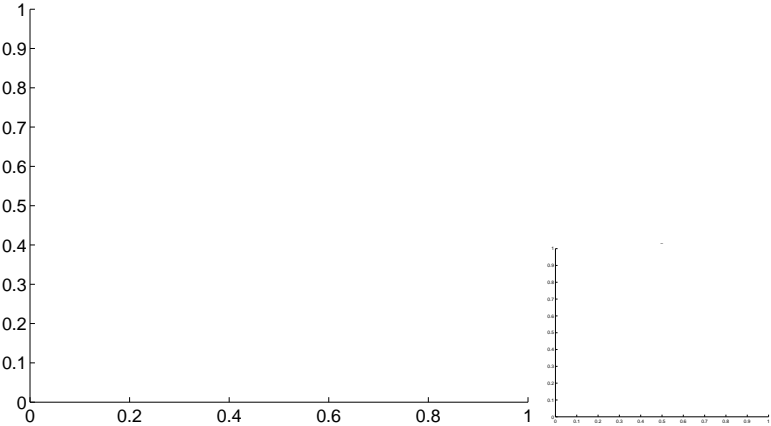
Q5 no OOT image



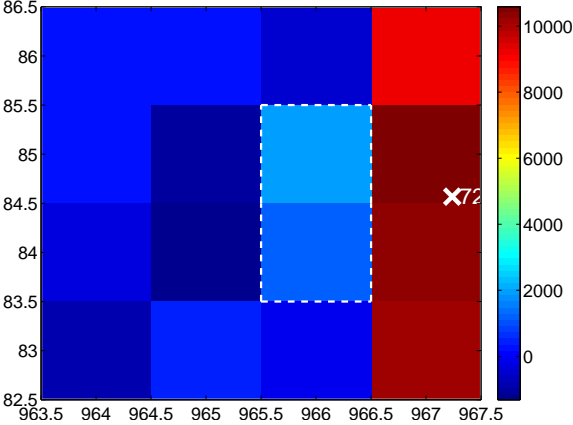
Q6 no difference image



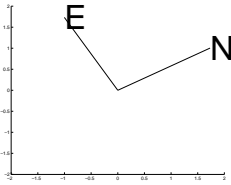
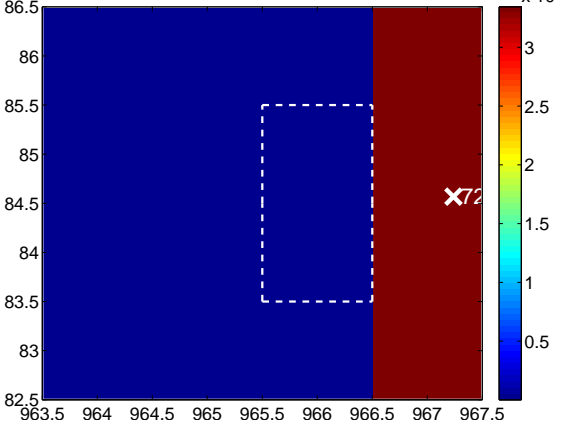
Q6 no OOT image



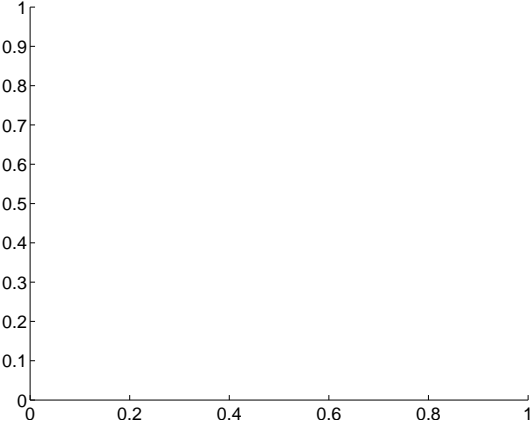
Q7 difference image. Poor Quality



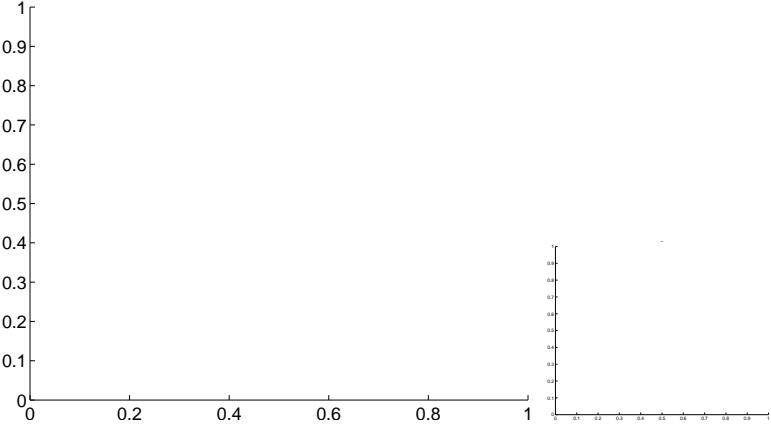
Q7 OOT image



Q8 no difference image



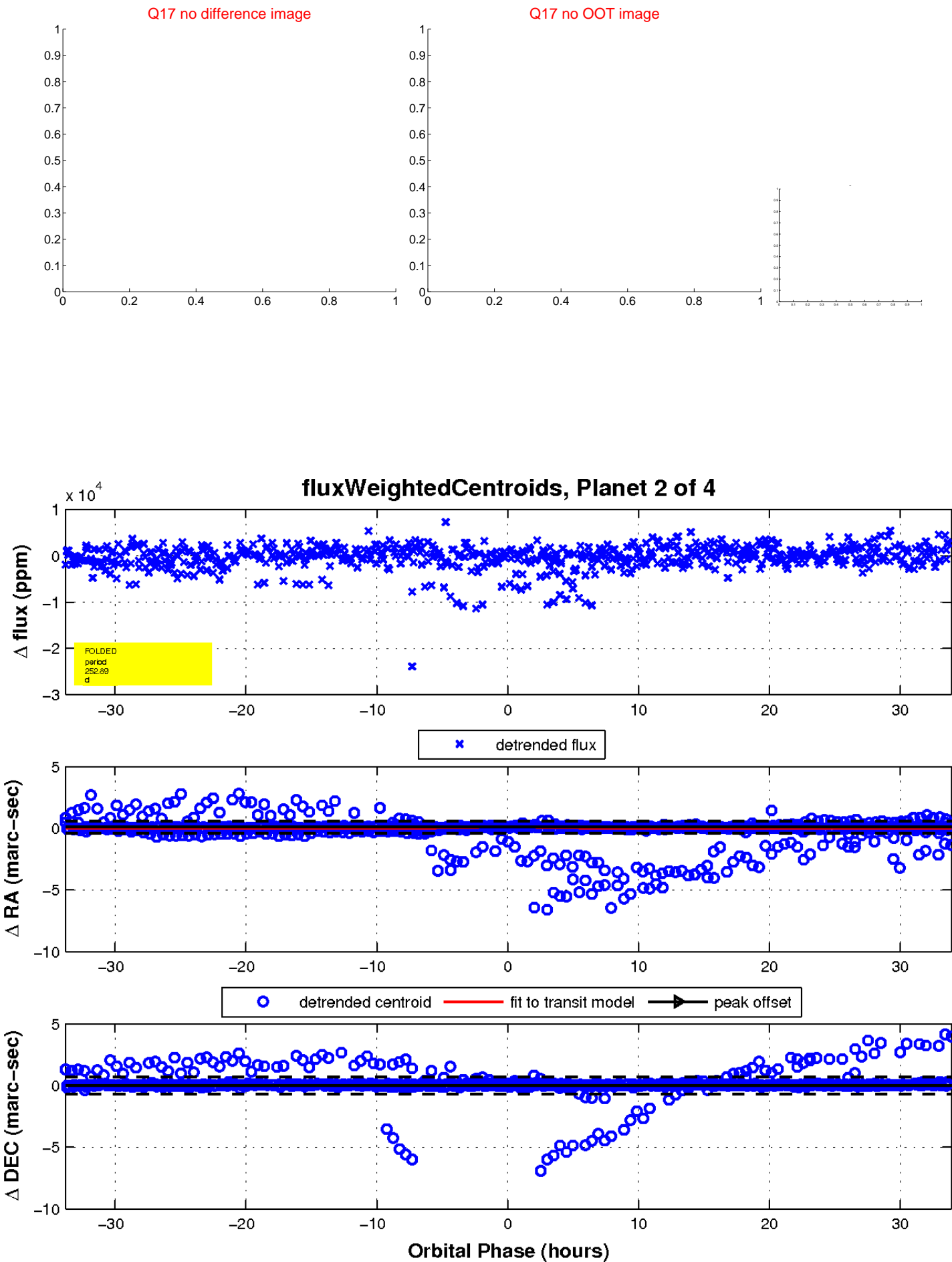
Q8 no OOT image



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

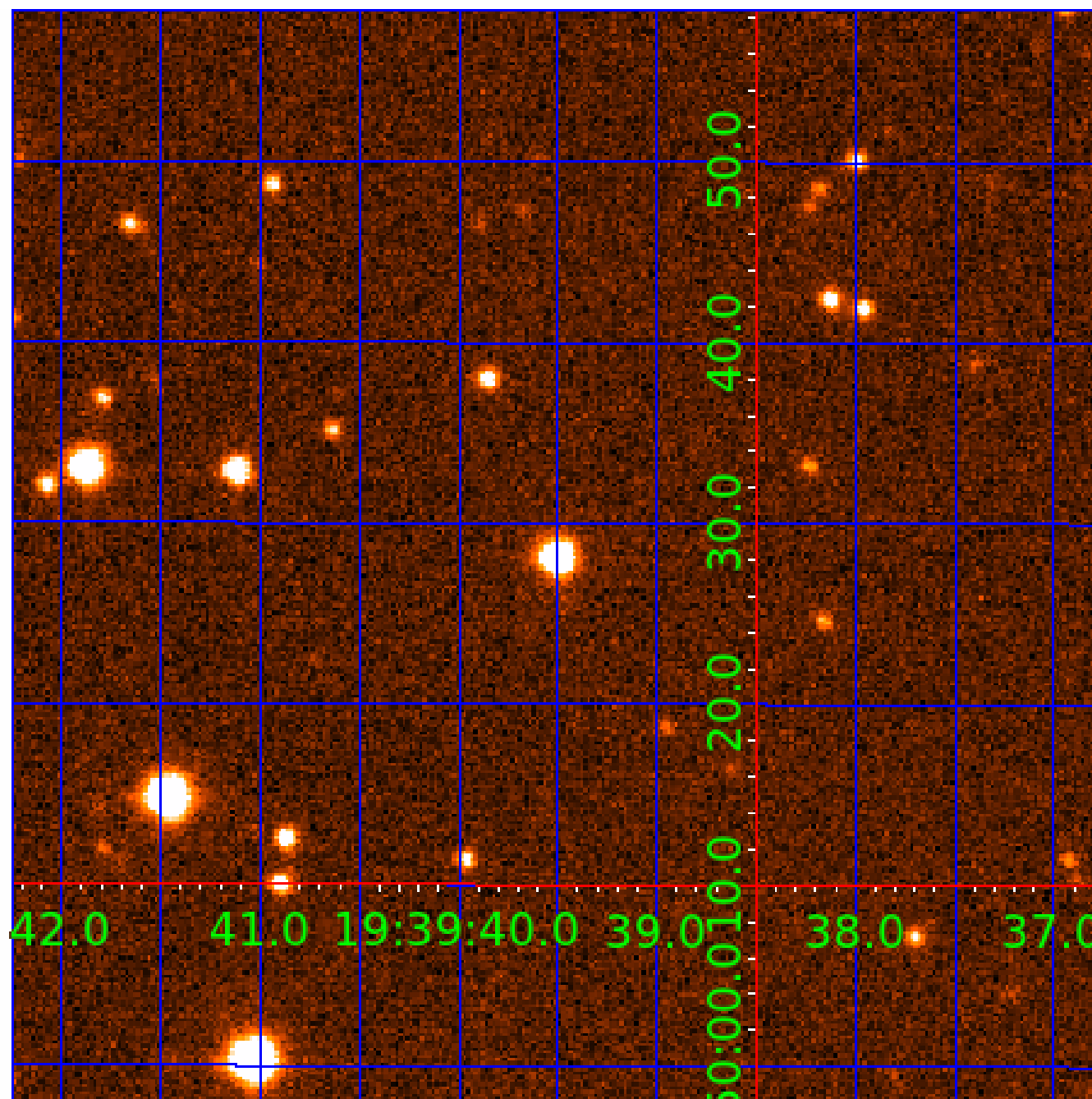


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007292582

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})
007292582-02	OBS	No	252.892839	179.611265	879.8	11.313	45.0	5.1	0.89	5912	2.73	1.43
007292582-04	OBS	No	90.429693	206.124138	11278.2	9.000	29.7	-1.0	0.89	5912	9.40	5.63

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007292582-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL_SKYE_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
007292582-04	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_NOFITS

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

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

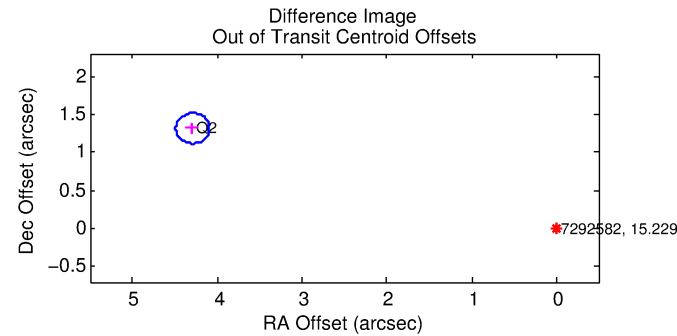
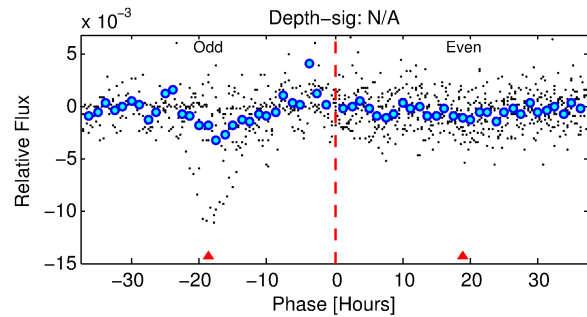
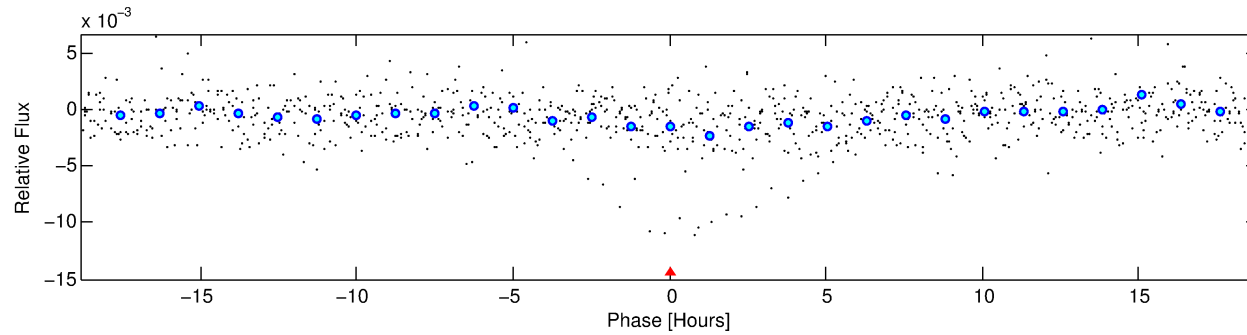
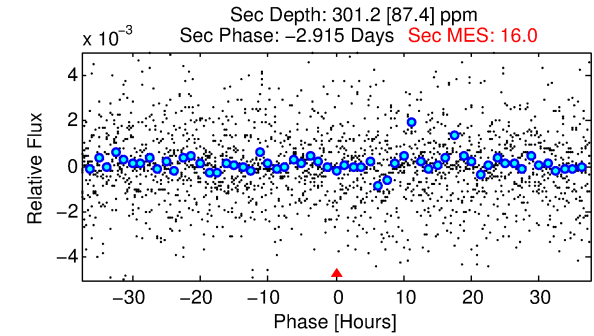
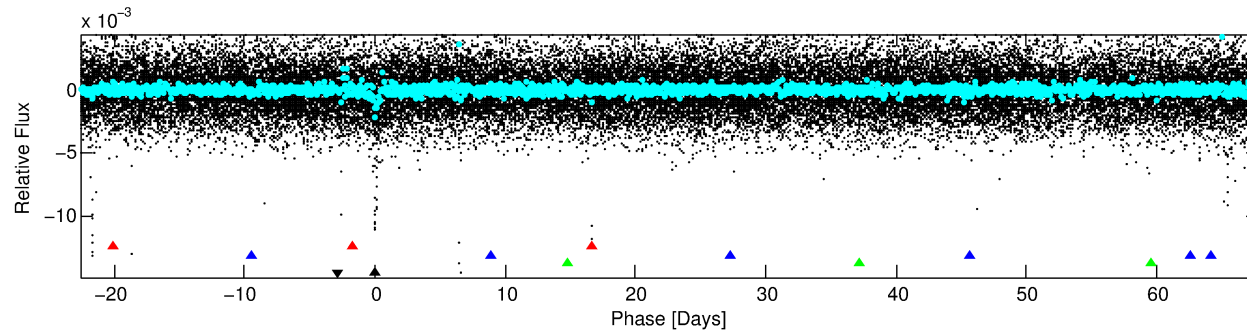
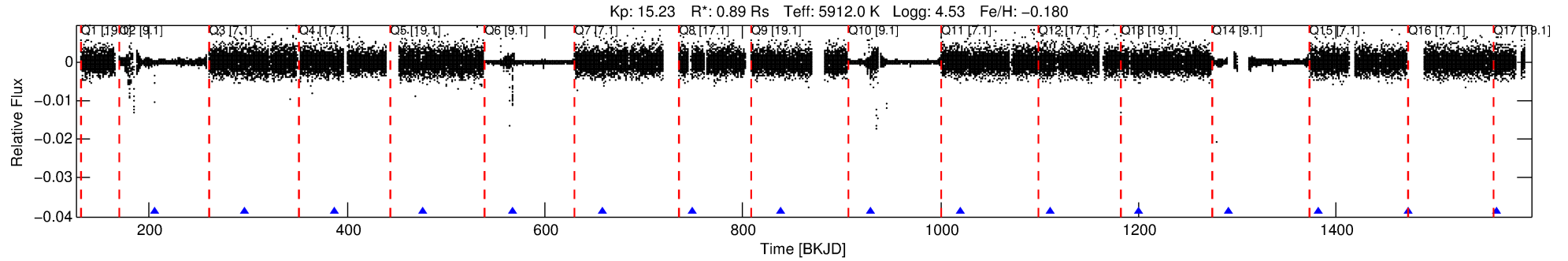
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007292582-04

No Significant Match Found

DV One-Page Summary

KIC: 7292582 Candidate: 4 of 4 Period: 90.430 d



TPS TCE Results:

Period = 90.42969 d
Epoch = 206.1241 BKJD

DV fit results are unavailable

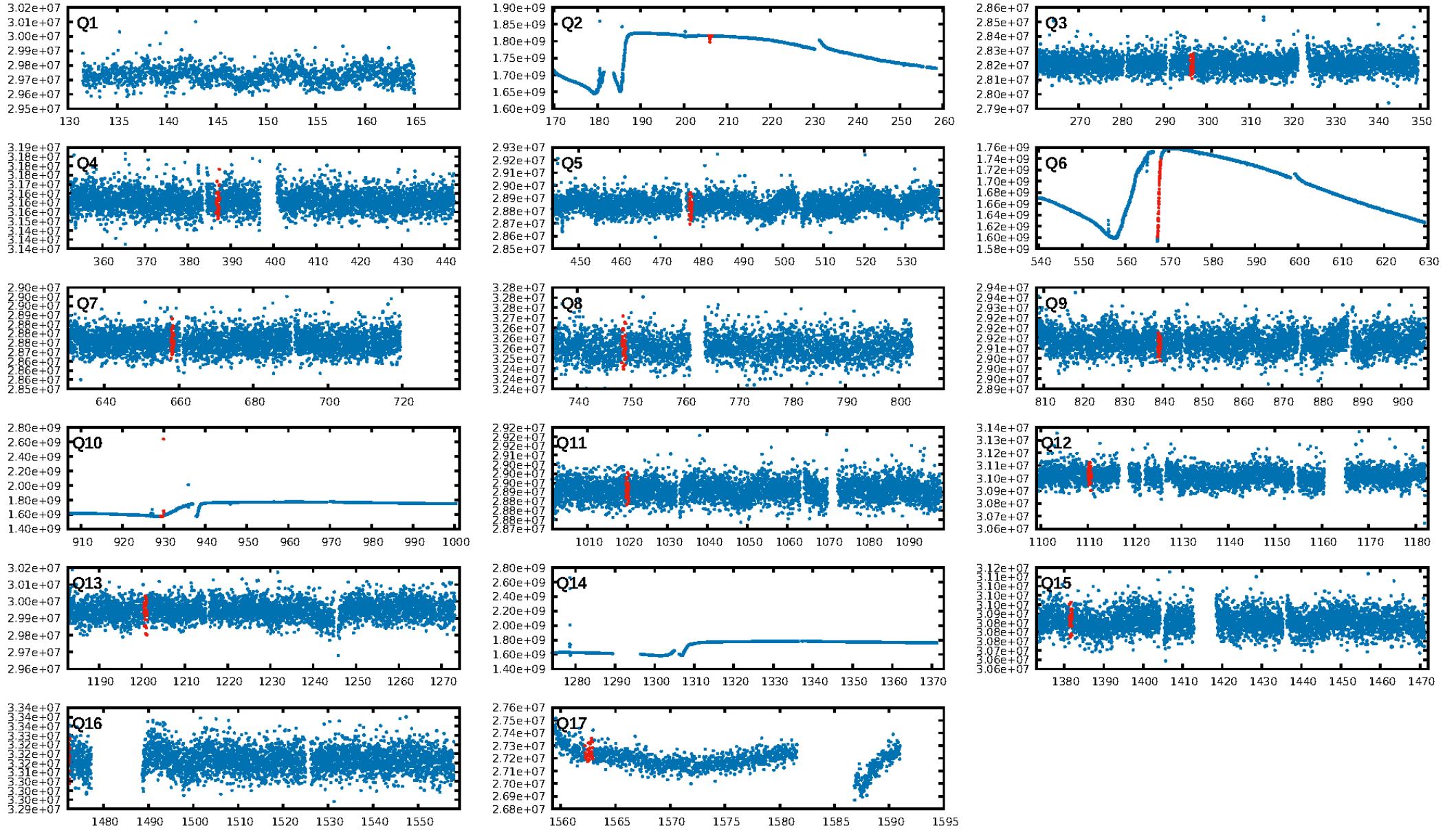
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [269.72σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: -0.2733
Centroid-sig: 88.2%
Centroid-so: 0.810 arcsec [332.32σ]
OotOffset-rm: 4.489 arcsec [67.22σ]
KicOffset-rm: 3.623 arcsec [2.40σ]
OotOffset-st: 1/0/0/0 [1]
KicOffset-st: 1/1/1/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 1.00 [9/9]

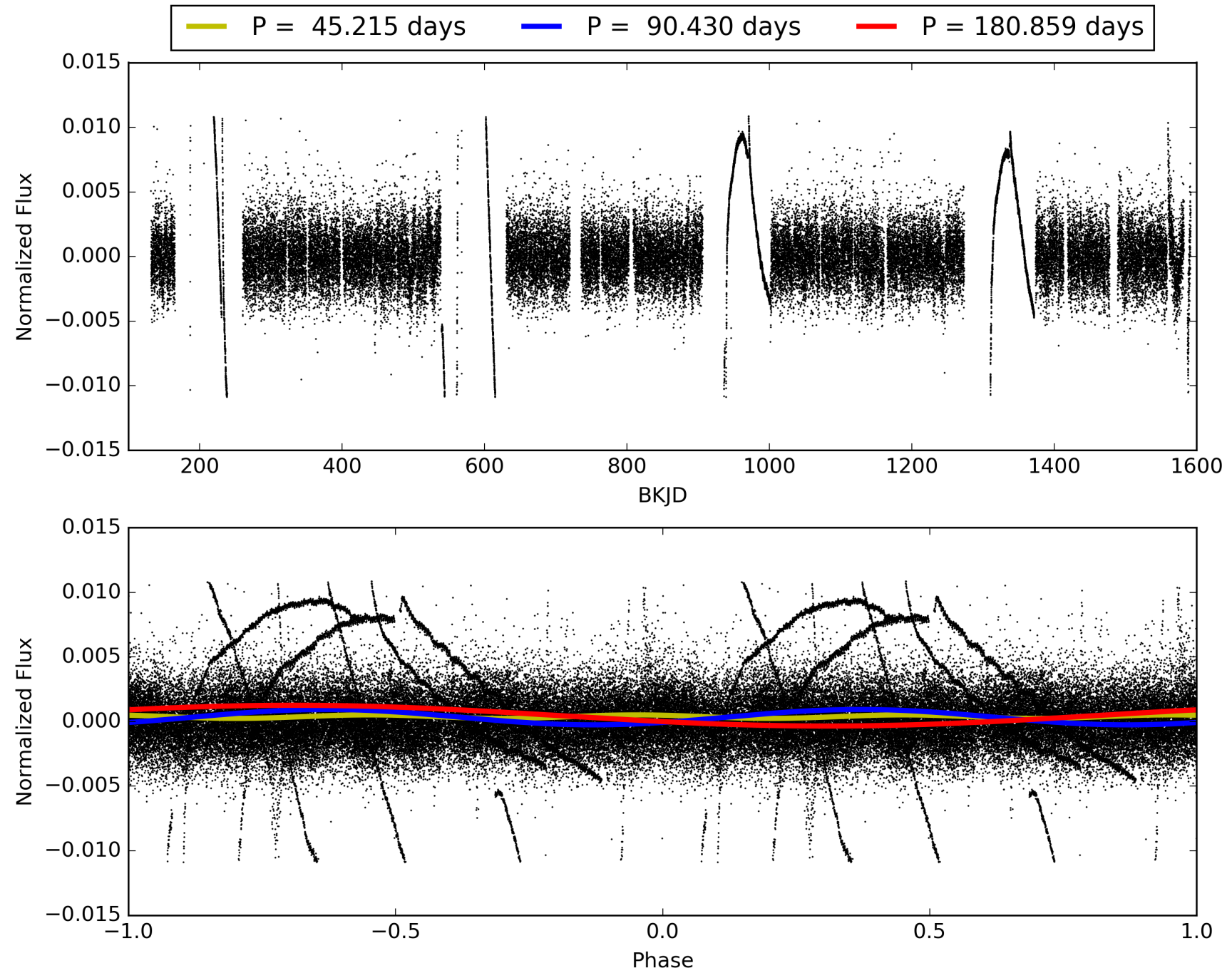
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 03-Feb-2016 08:30:47 Z

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

TCE 007292582-04, PDC Light Curves

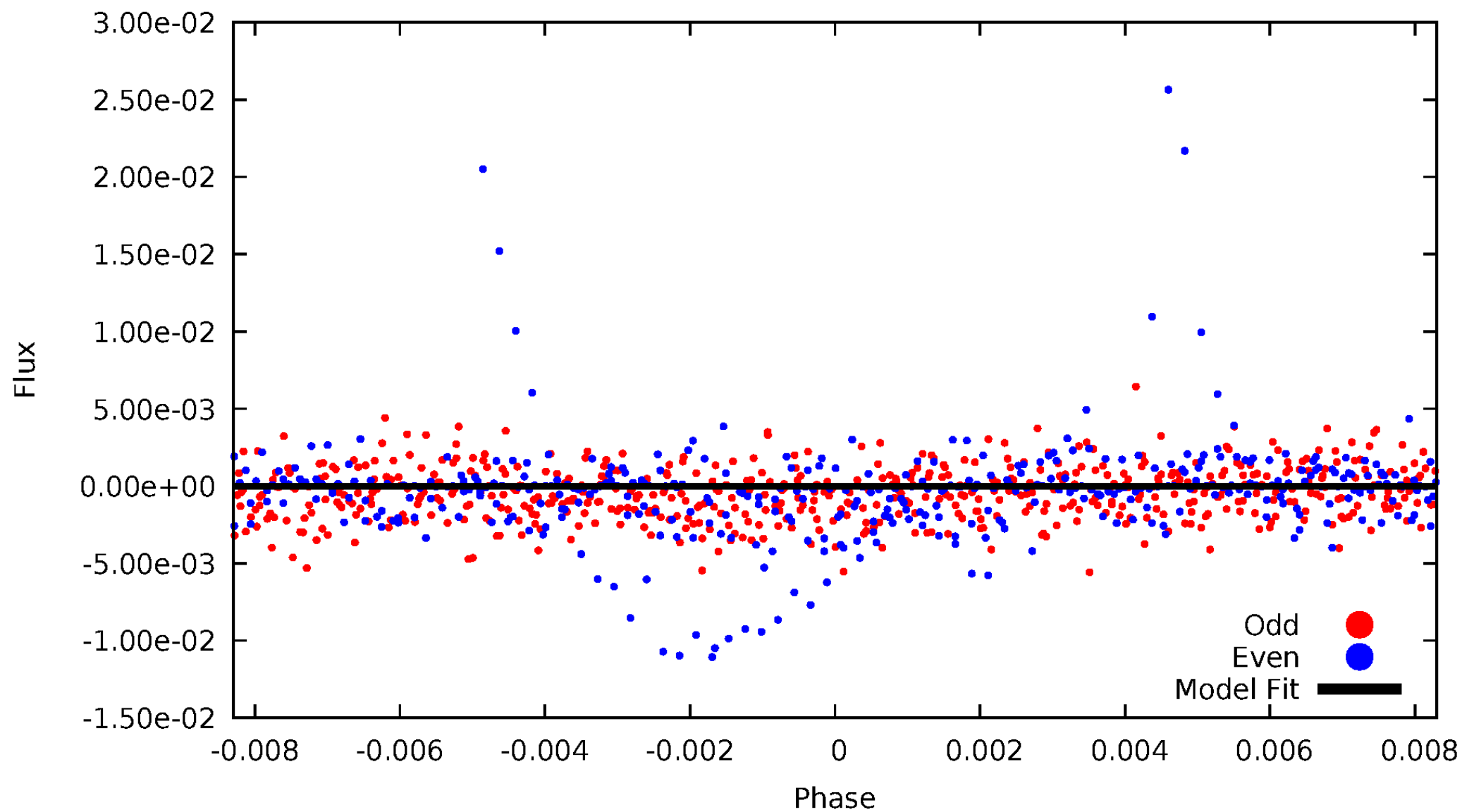


TCE 007292582-04



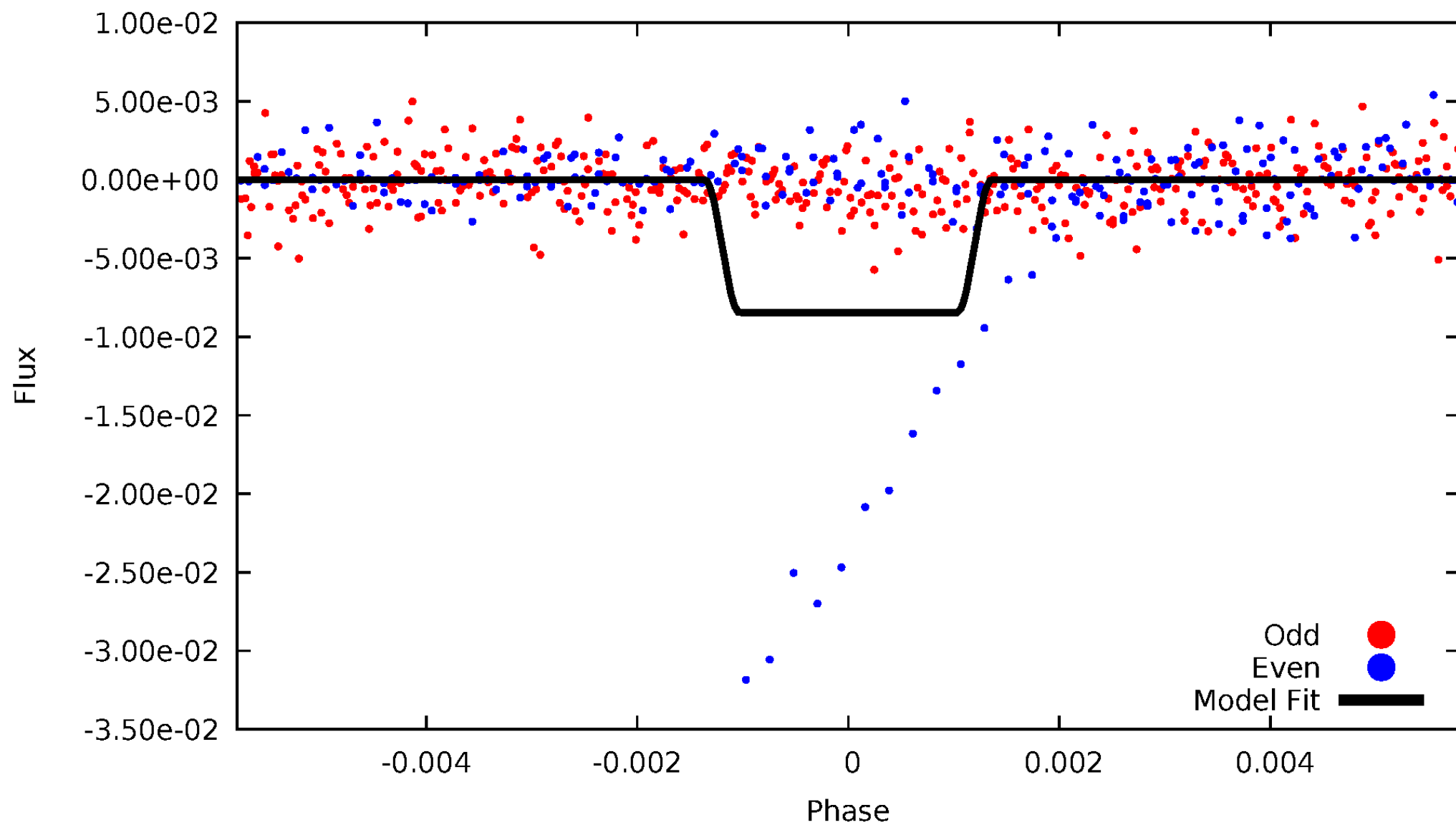
DV Odd/Even

TCE 007292582-04



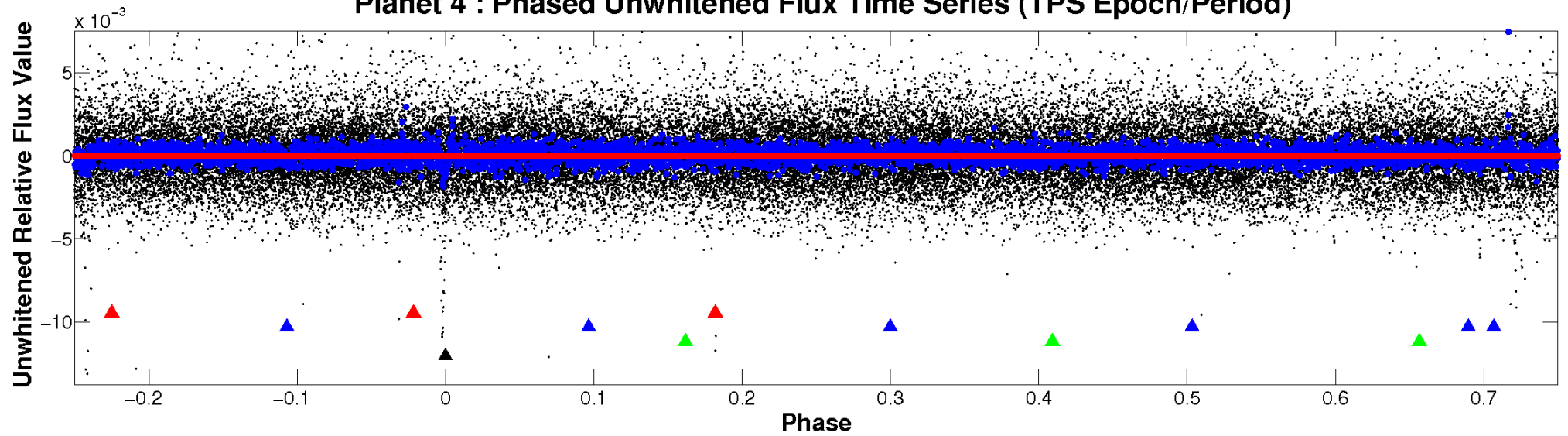
ALT Odd/Even

TCE 007292582-04



Non-Whitened Vs. Whitened Light Curve

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

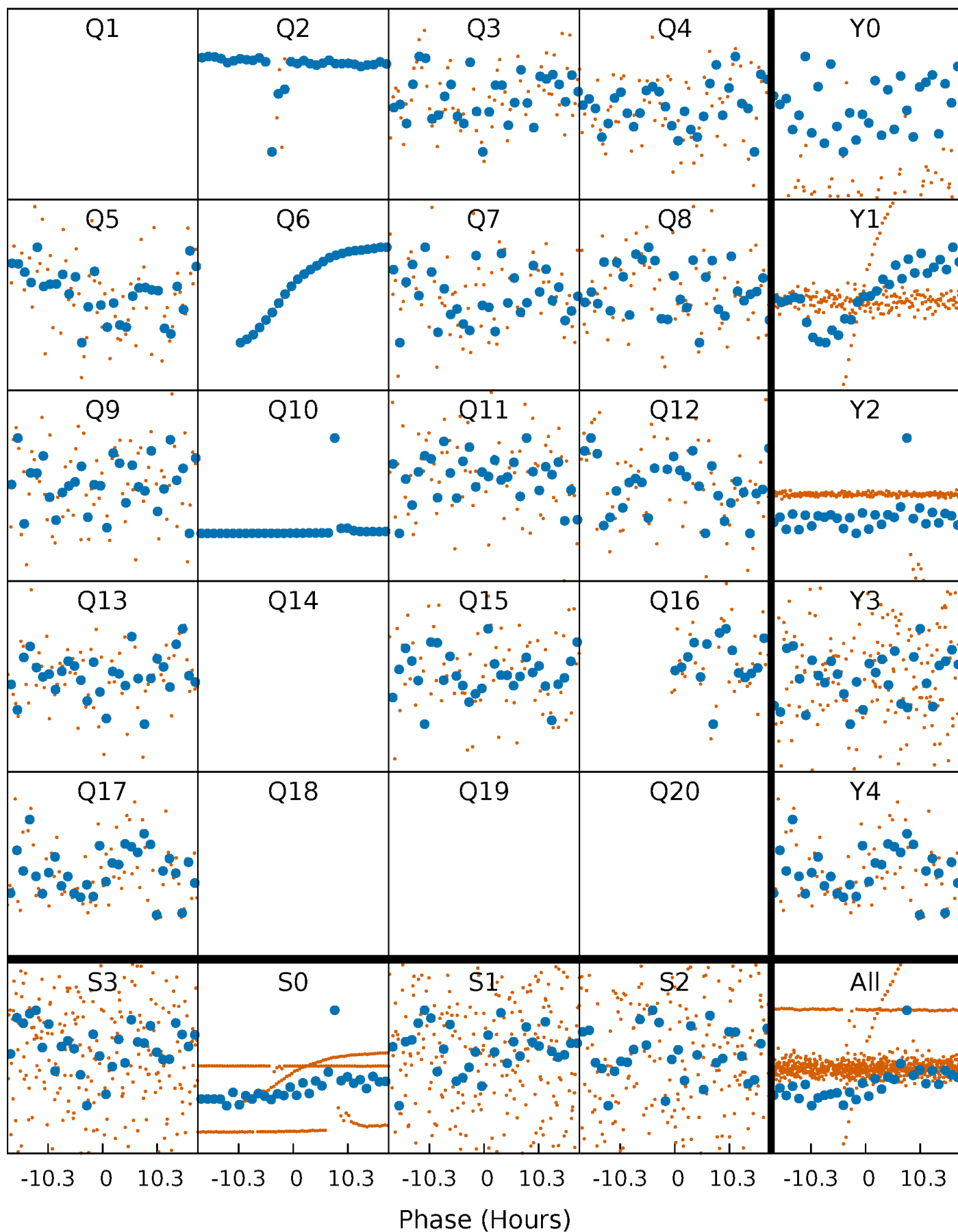


Planet 4 : Phased Whitened Flux Time Series (TPS Epoch/Period)



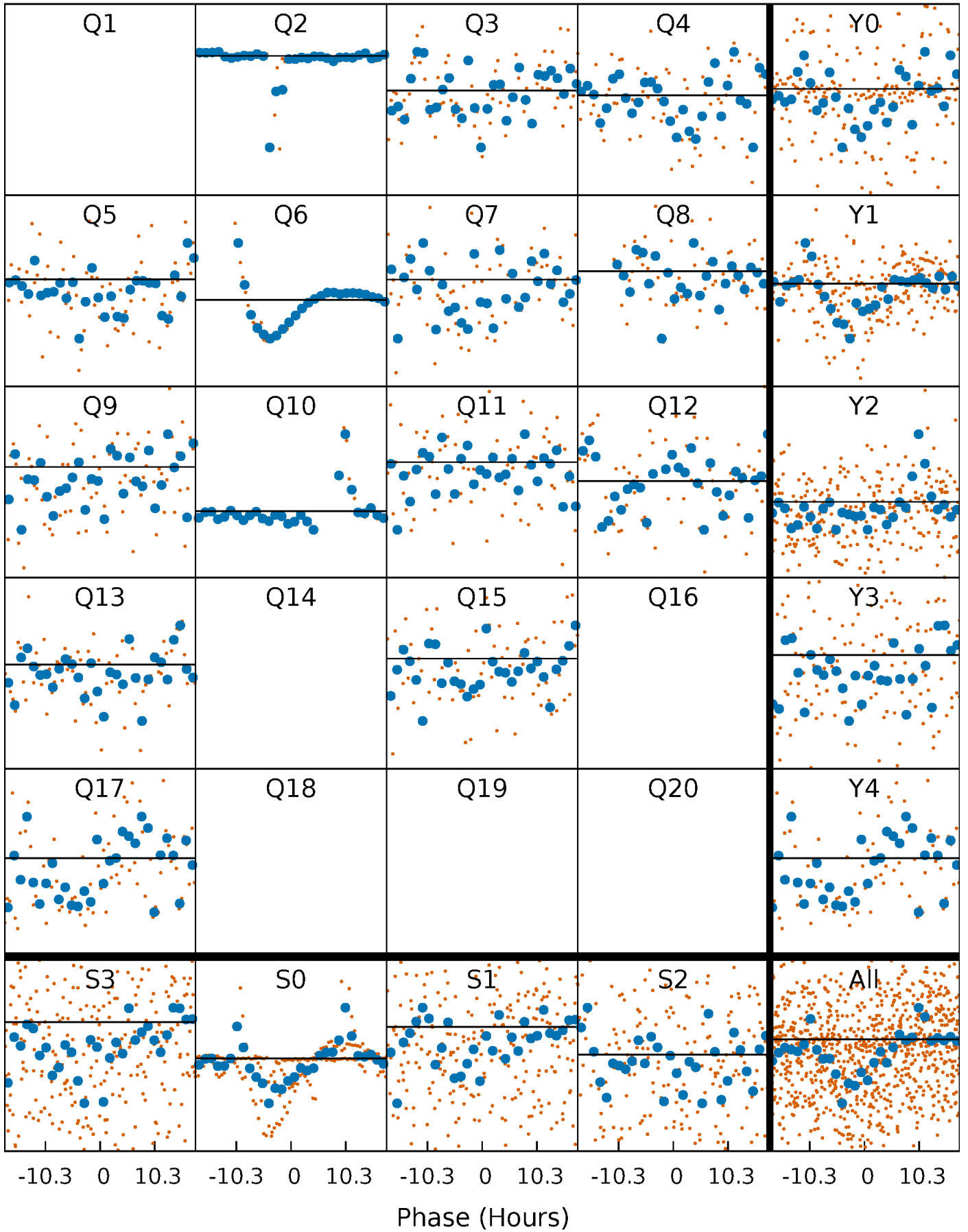
PDC Quarter-Phased Transit Curves

TCE 007292582-04 P= 90.429693 Days $T_0=206.124138$ (BKJD)



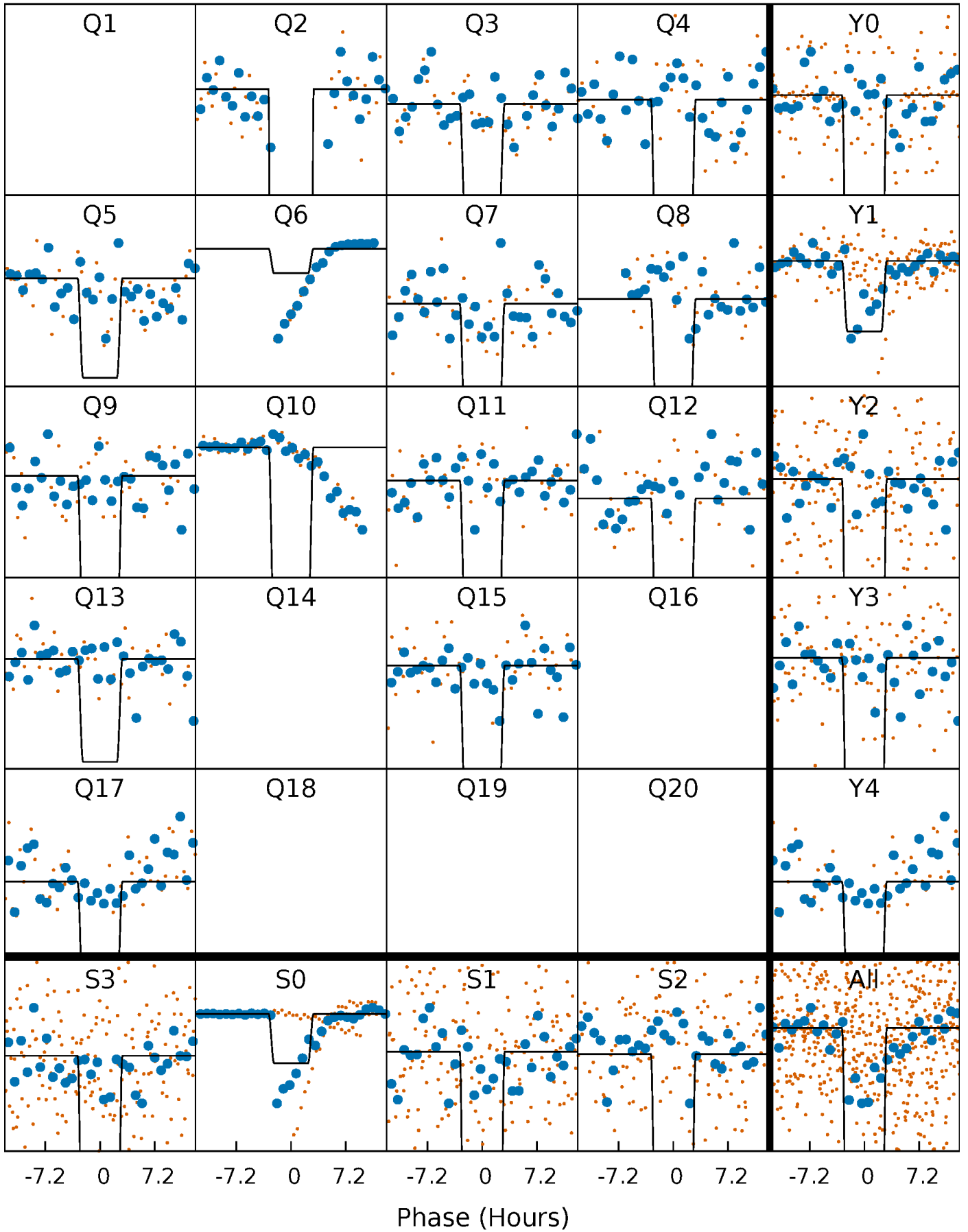
DV Quarter-Phased Transit Curves

TCE 007292582-04 P= 90.429693 Days $T_0=206.124138$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

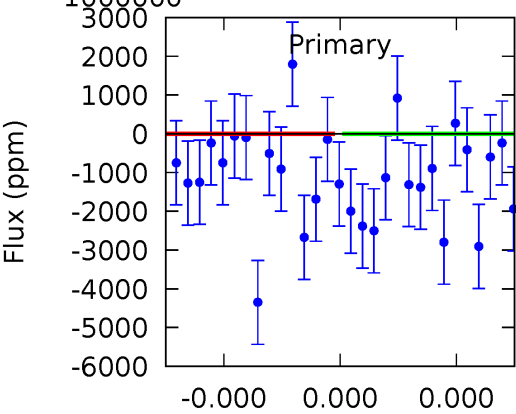
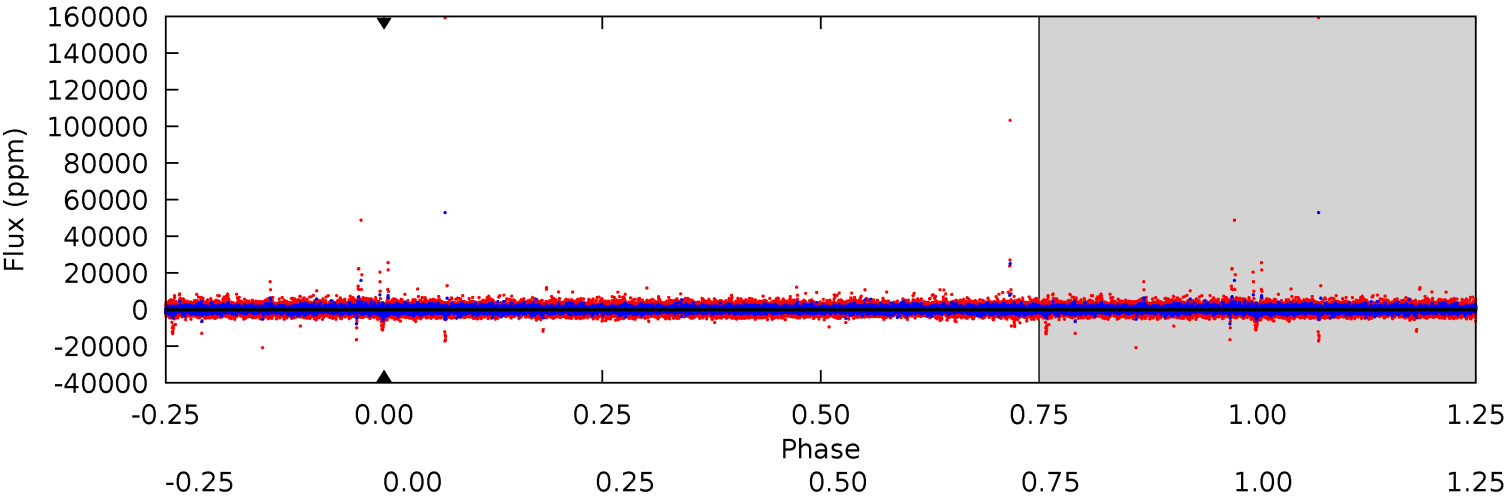
TCE 007292582-04 P= 90.429693 Days $T_0=205.936259$ (BKJD)



DV Model-Shift Uniqueness Test

007292582-04, P = 90.429693 Days, E = 115.694445 Days

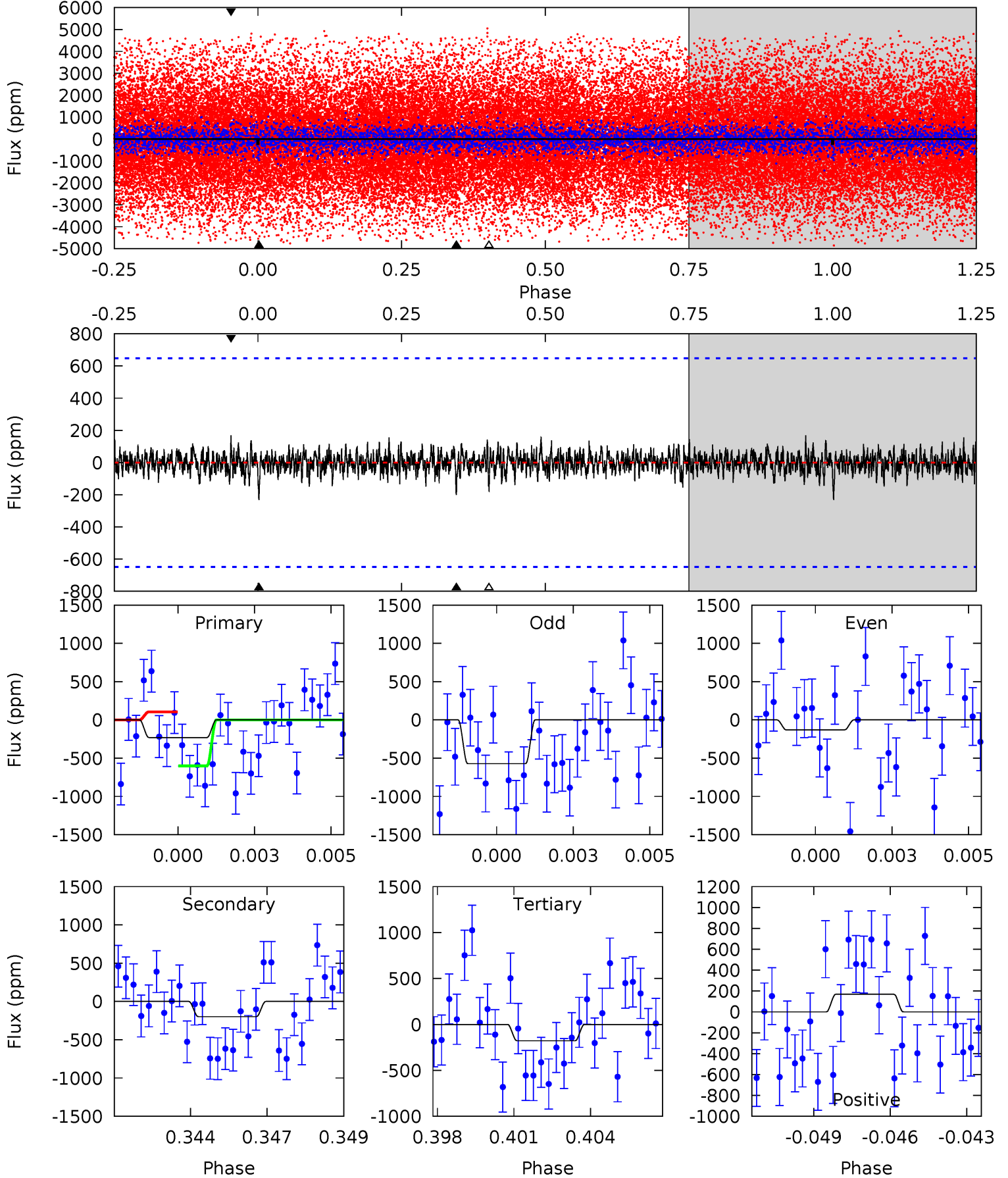
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007292582-04, P = 90.429693 Days, E = 115.506566 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.87	1.61	1.45	1.37	5.27	3.00	0.40	0.42	0.50	0.16	0.24	1.94	11.6	0.42	2.04



Stellar Parameters For KIC 007292582

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5912^{+159}_{-177}	$4.532^{+0.048}_{-0.204}$	$-0.180^{+0.300}_{-0.300}$	$0.889^{+0.262}_{-0.082}$	$0.980^{+0.119}_{-0.119}$	$1.966^{+0.394}_{-1.026}$
	+3%/-3%	+1%/-5%	+167%/-167%	+29%/-9%	+12%/-12%	+20%/-52%
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 007292582-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	0 ± 1000000	$11.65^{+9.98}_{-6.95}$	560^{+38}_{-26}	-3609^{+16055}_{-8906}	$-710.884^{+89827.870}_{-82811.511}$
Alt.	-198 ± 123	$11.65^{+10.20}_{-7.35}$	562^{+38}_{-25}	2751^{+1041}_{-464}	103^{+718}_{-80}

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

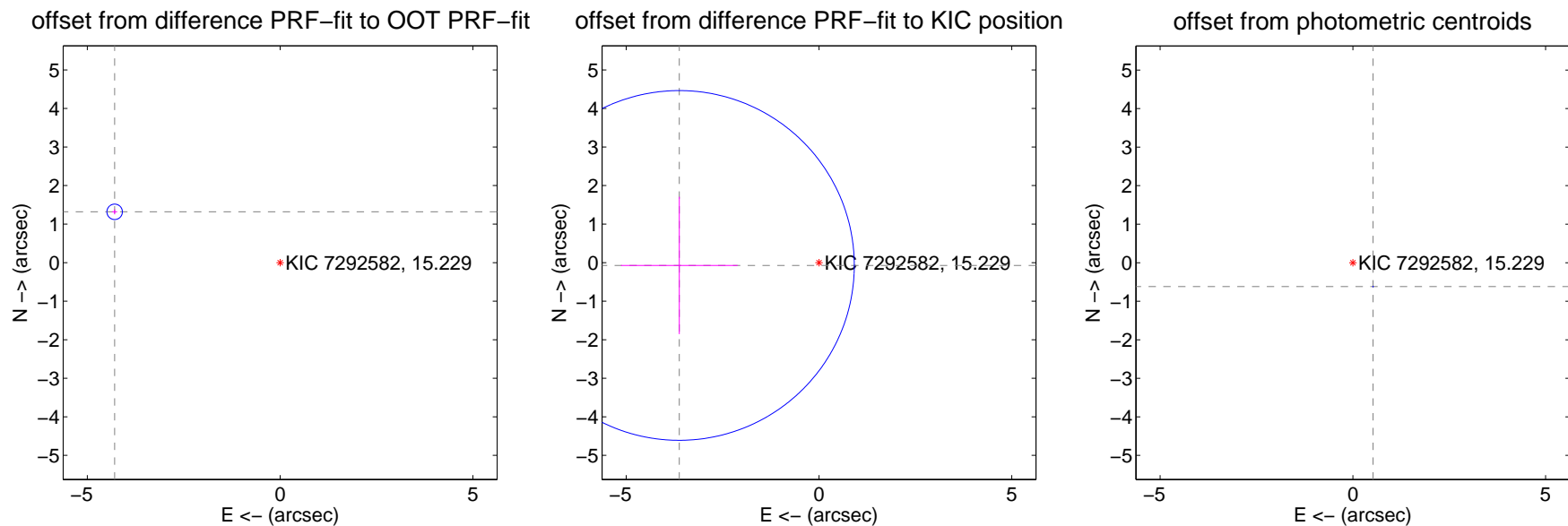
DV Centroid Data

Supplemental centroid analysis for 007292582-04. Kepler magnitude: 15.23. Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

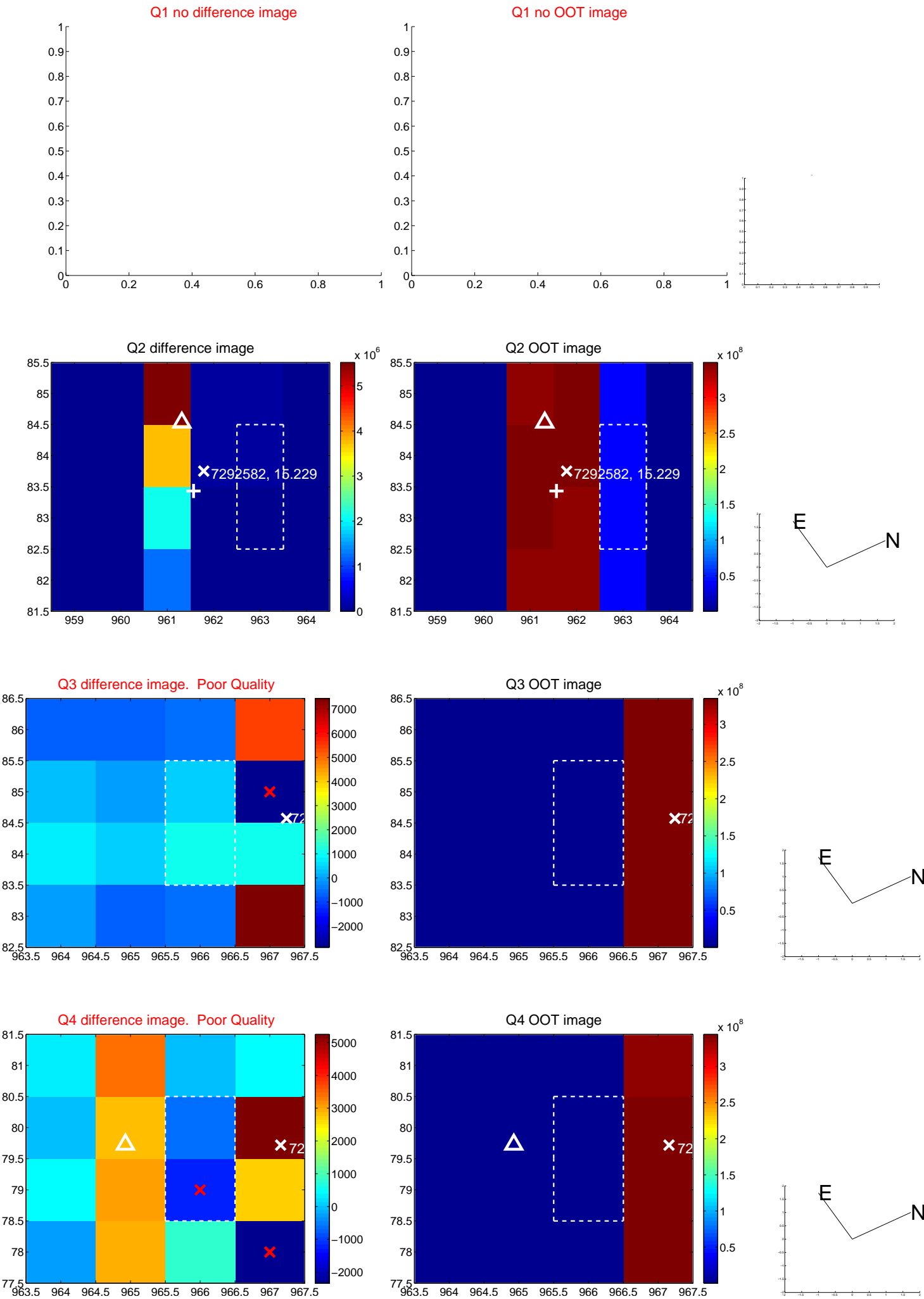
The direct PRF centroid is offset from the target star catalog position by about 1.54 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.489 \pm 0.067	67.22	4.291 \pm 0.067	1.318 \pm 0.067
PRF-fit source offset from KIC position	3.623 \pm 1.512	2.40	3.622 \pm 1.512	-0.073 \pm 1.781
photometric centroid source offset	0.81 \pm 0.00	332.32	-0.52 \pm 0.00	-0.62 \pm 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.

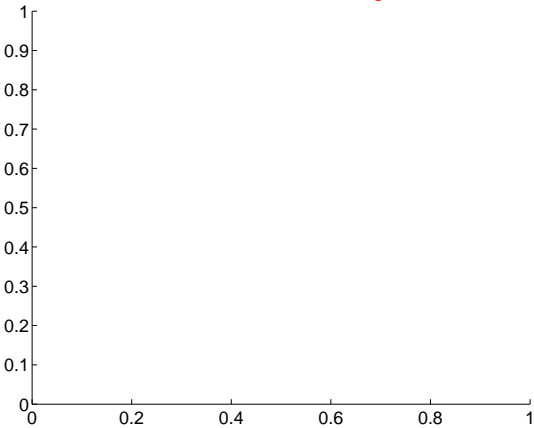
Q5 no difference image



Q5 no OOT image



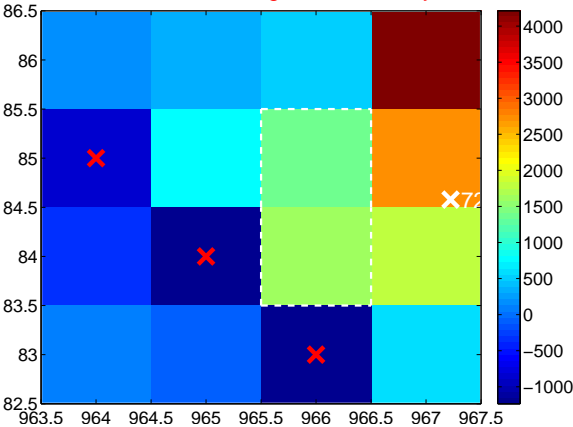
Q6 no difference image



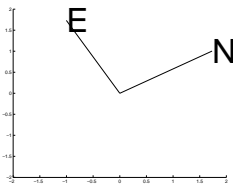
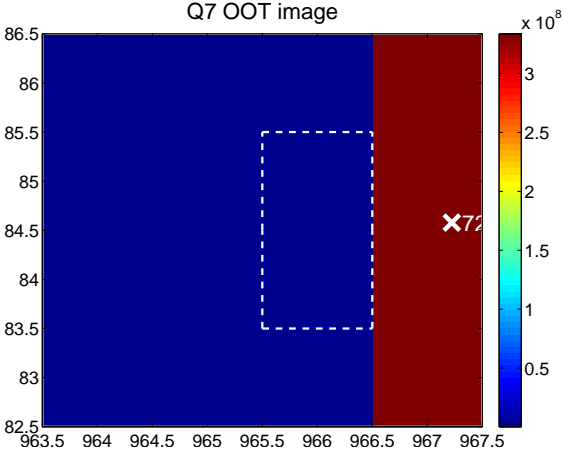
Q6 no OOT image



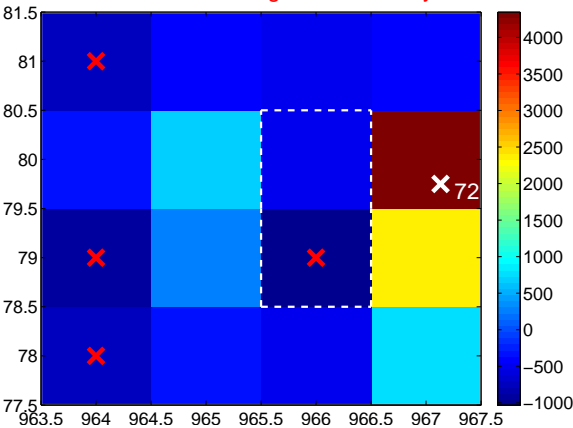
Q7 difference image. Poor Quality



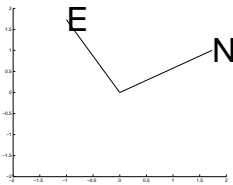
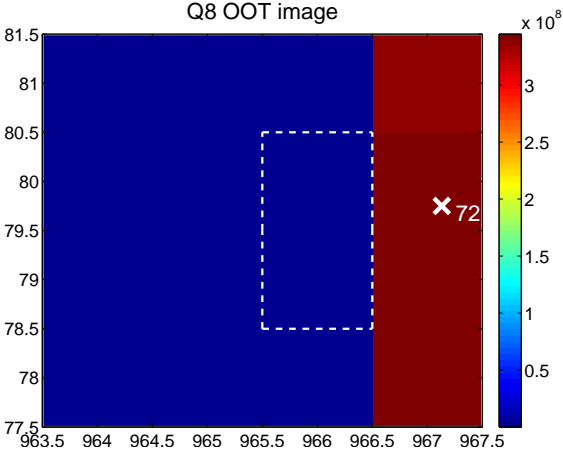
Q7 OOT image



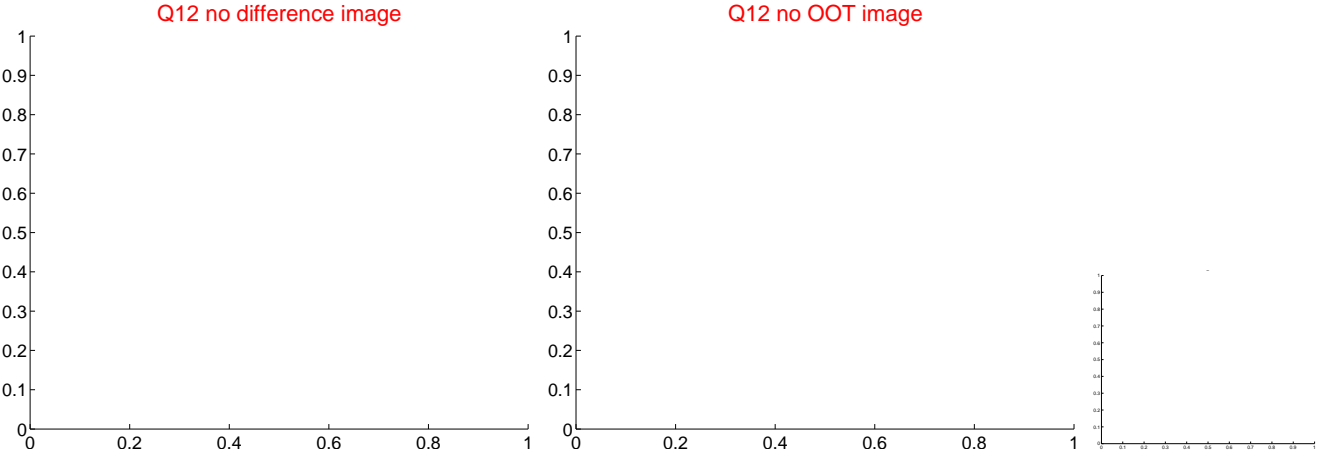
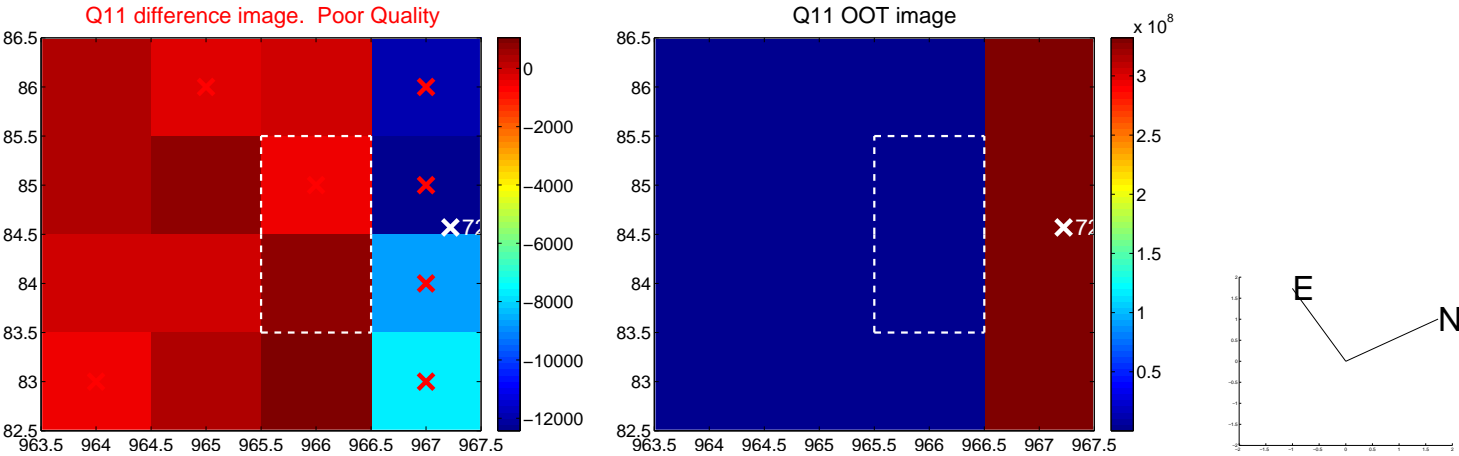
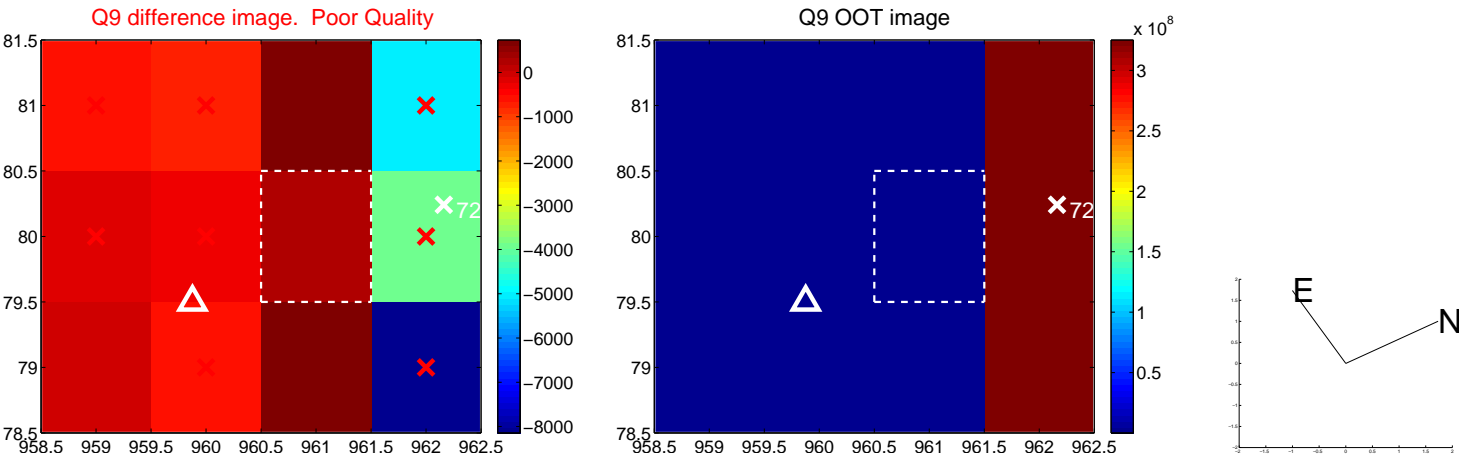
Q8 difference image. Poor Quality



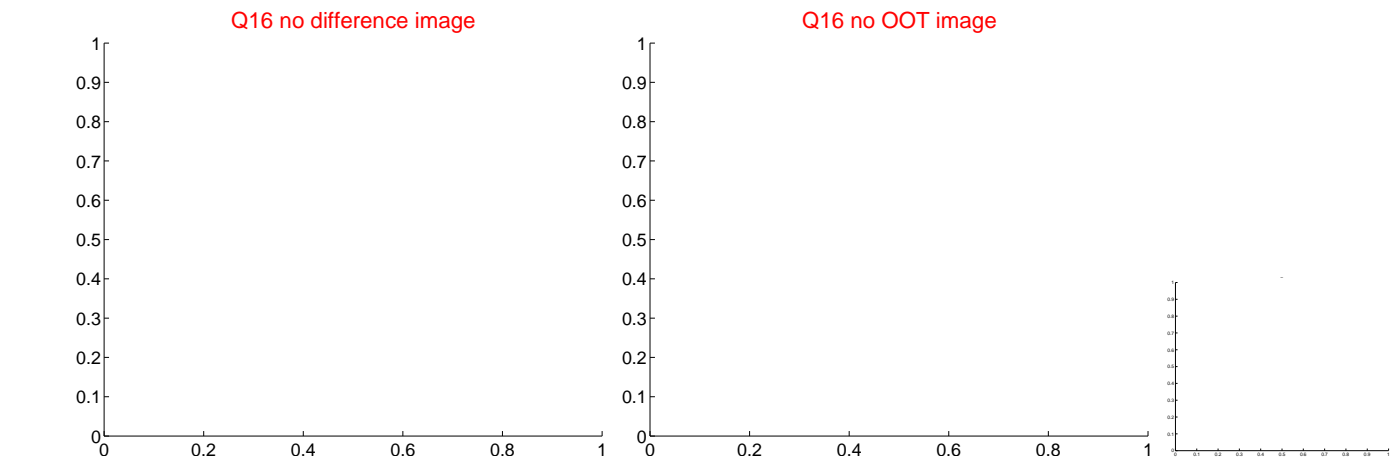
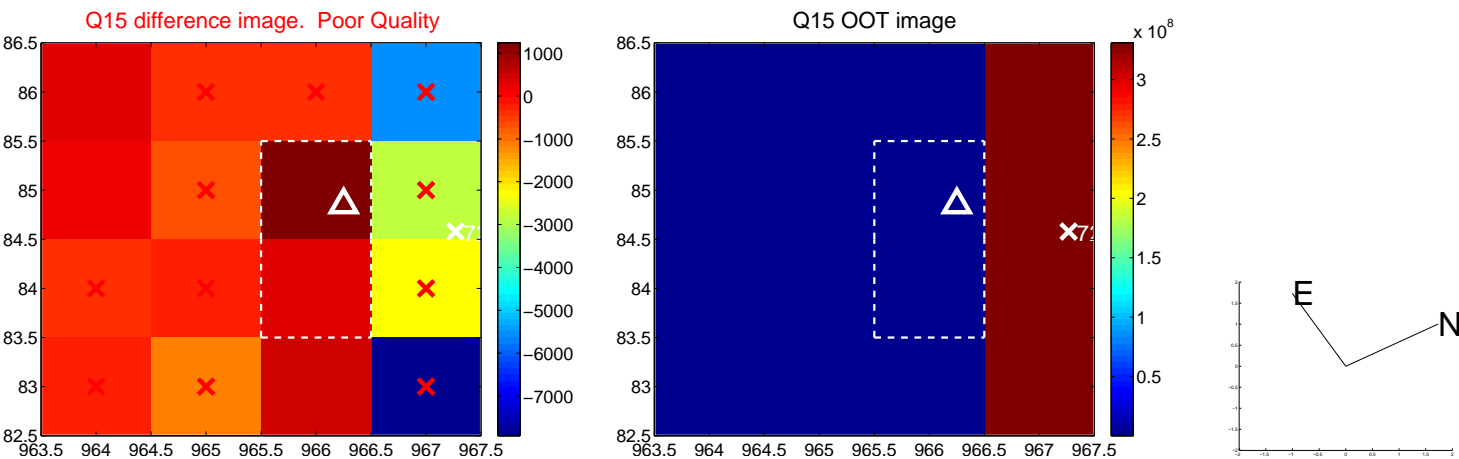
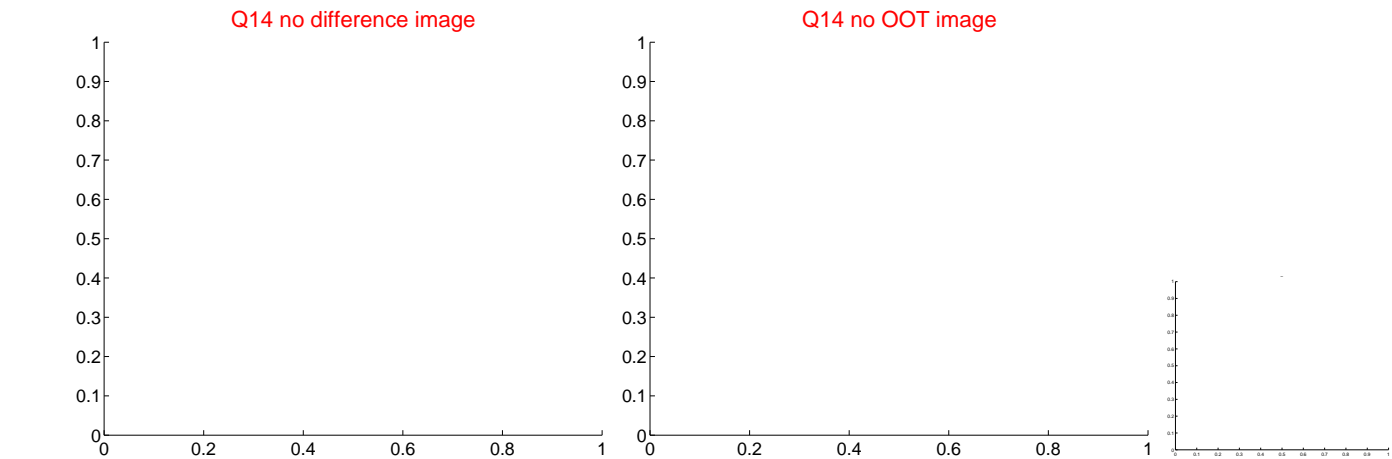
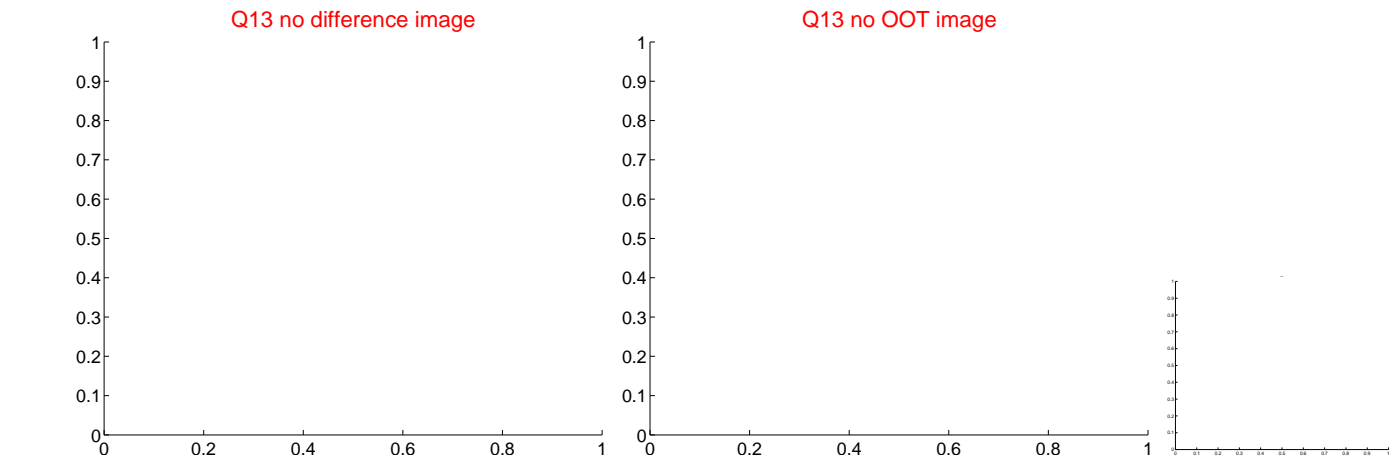
Q8 OOT image



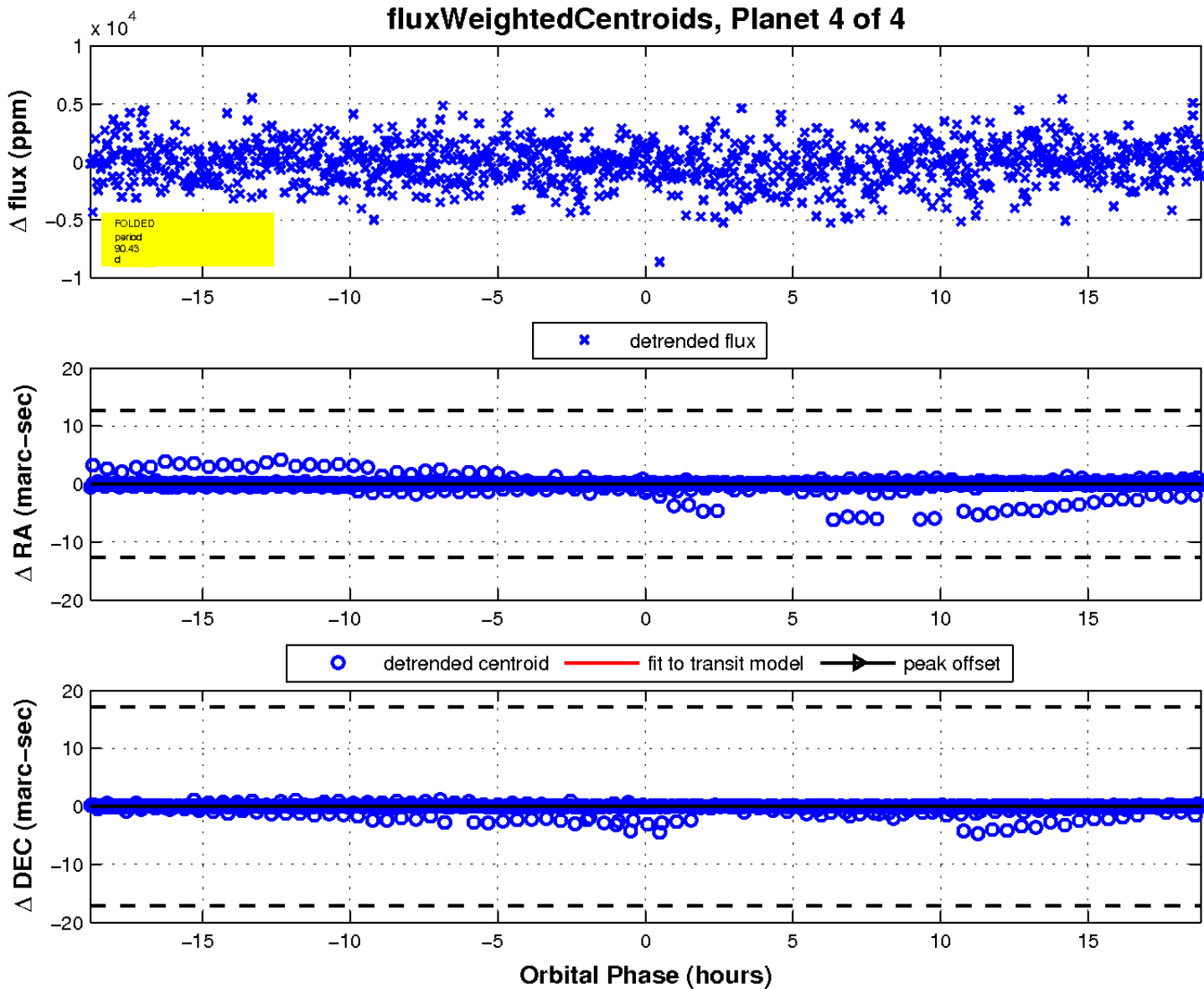
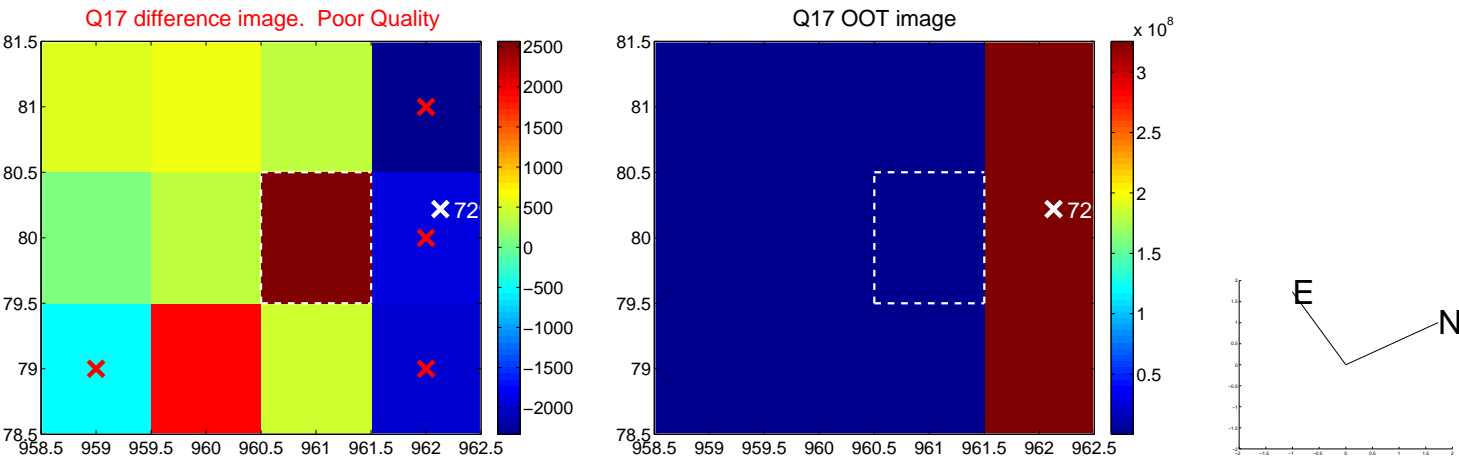
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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UKIRT Image

Declination

