

KIC 010621302

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})
010621302-01	OBS	No	4.352912	134.880768	65.9	17.761	8.1	7.2	0.58	4593	0.51	71.73
010621302-02	OBS	No	265.755898	307.572227	1448.9	20.776	22.6	12.4	0.58	4593	4.43	0.30

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010621302-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
010621302-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—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.

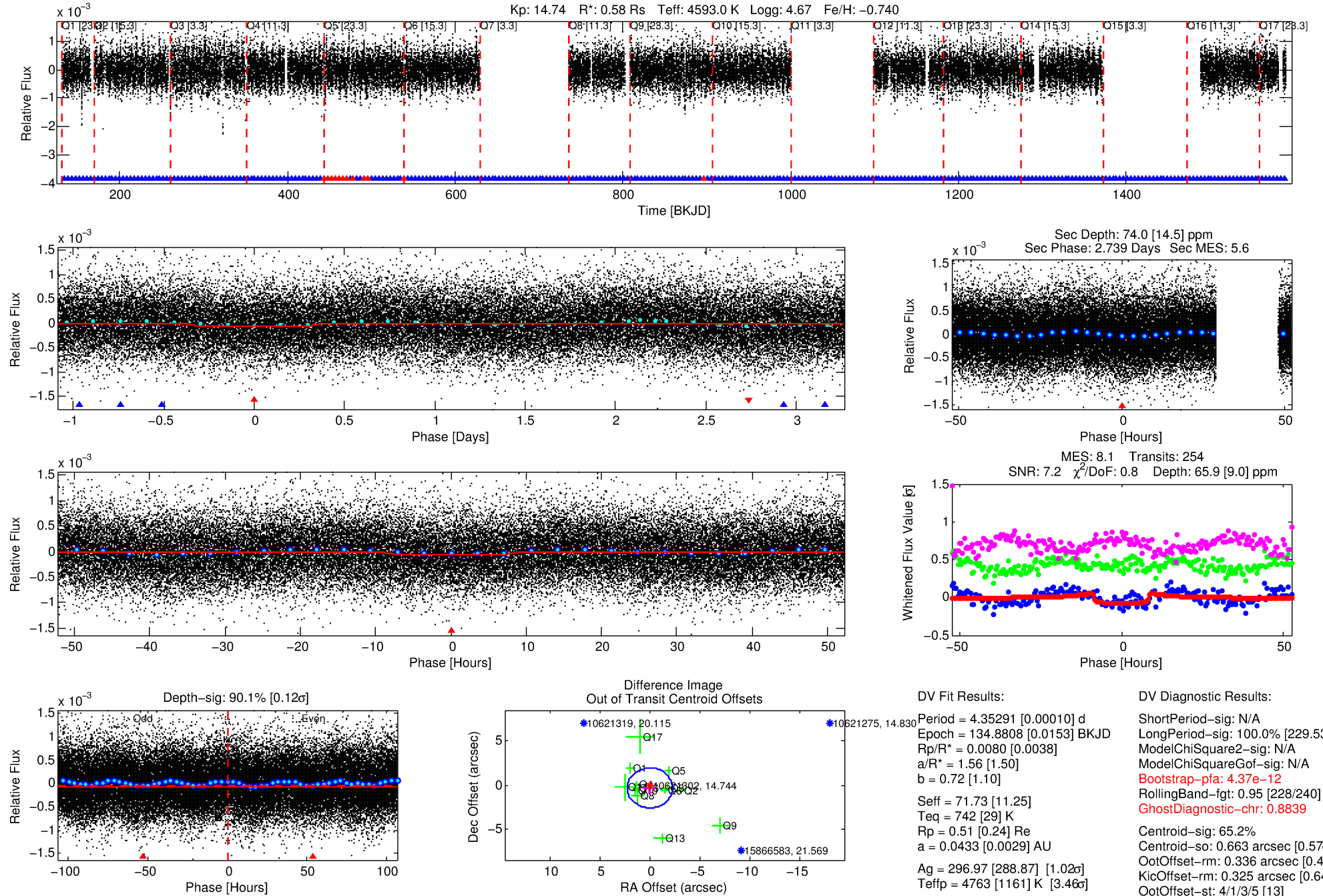
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010621302-01

No Significant Match Found

DV One-Page Summary

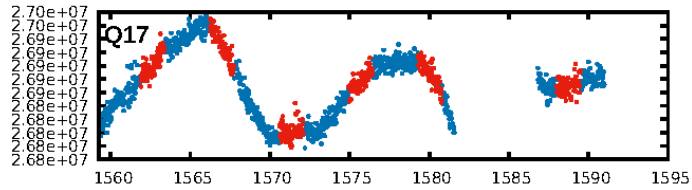
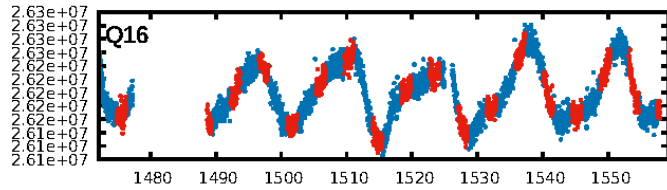
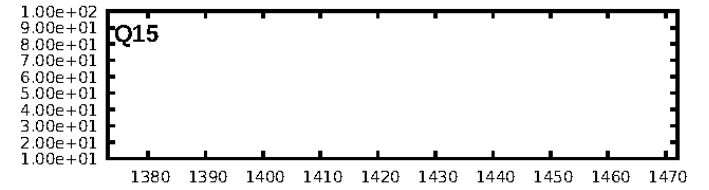
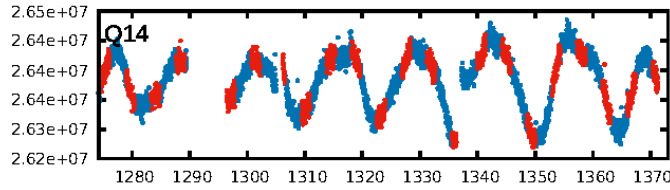
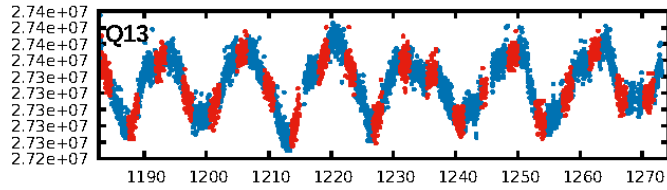
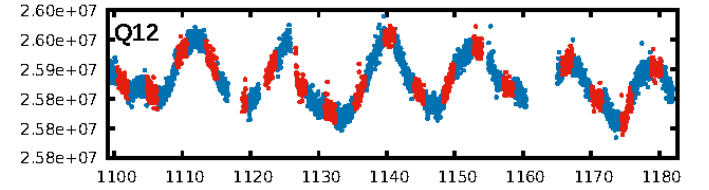
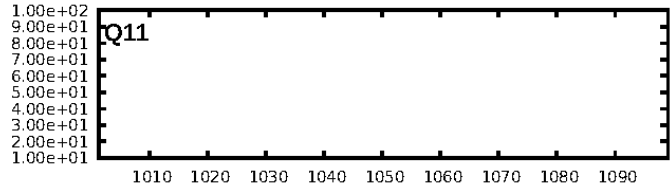
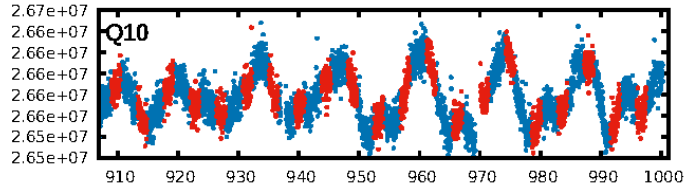
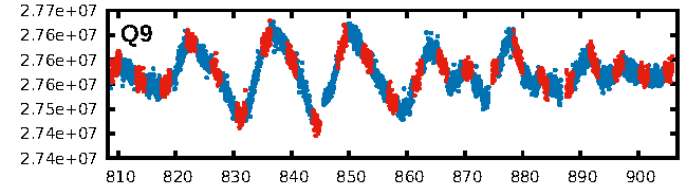
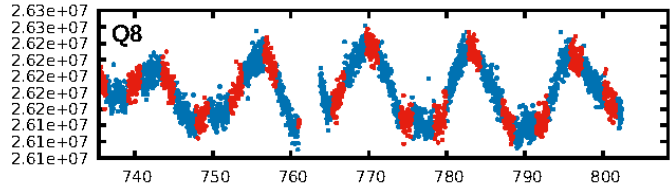
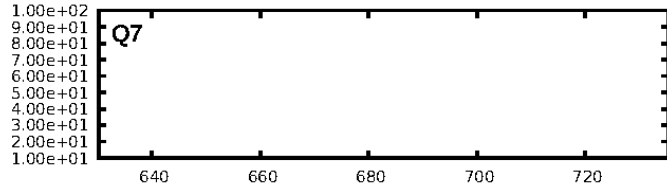
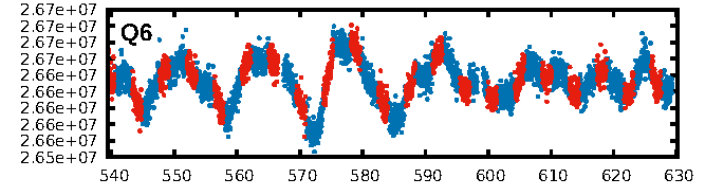
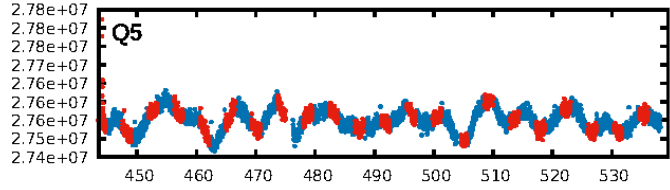
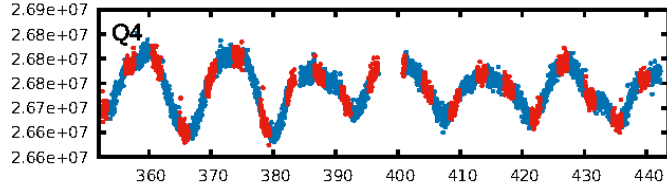
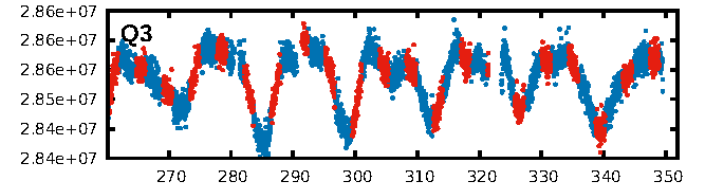
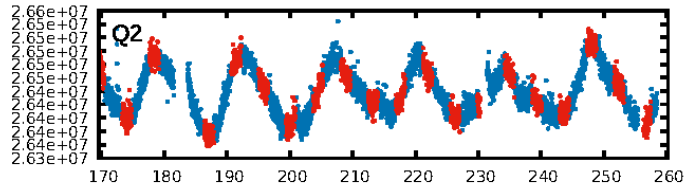
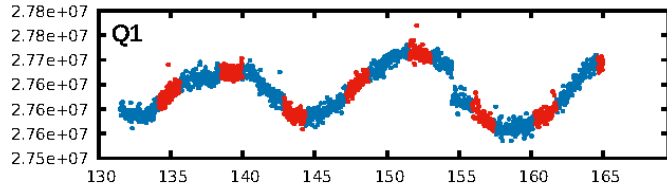
KIC: 10621302 Candidate: 1 of 2 Period: 4.353 d



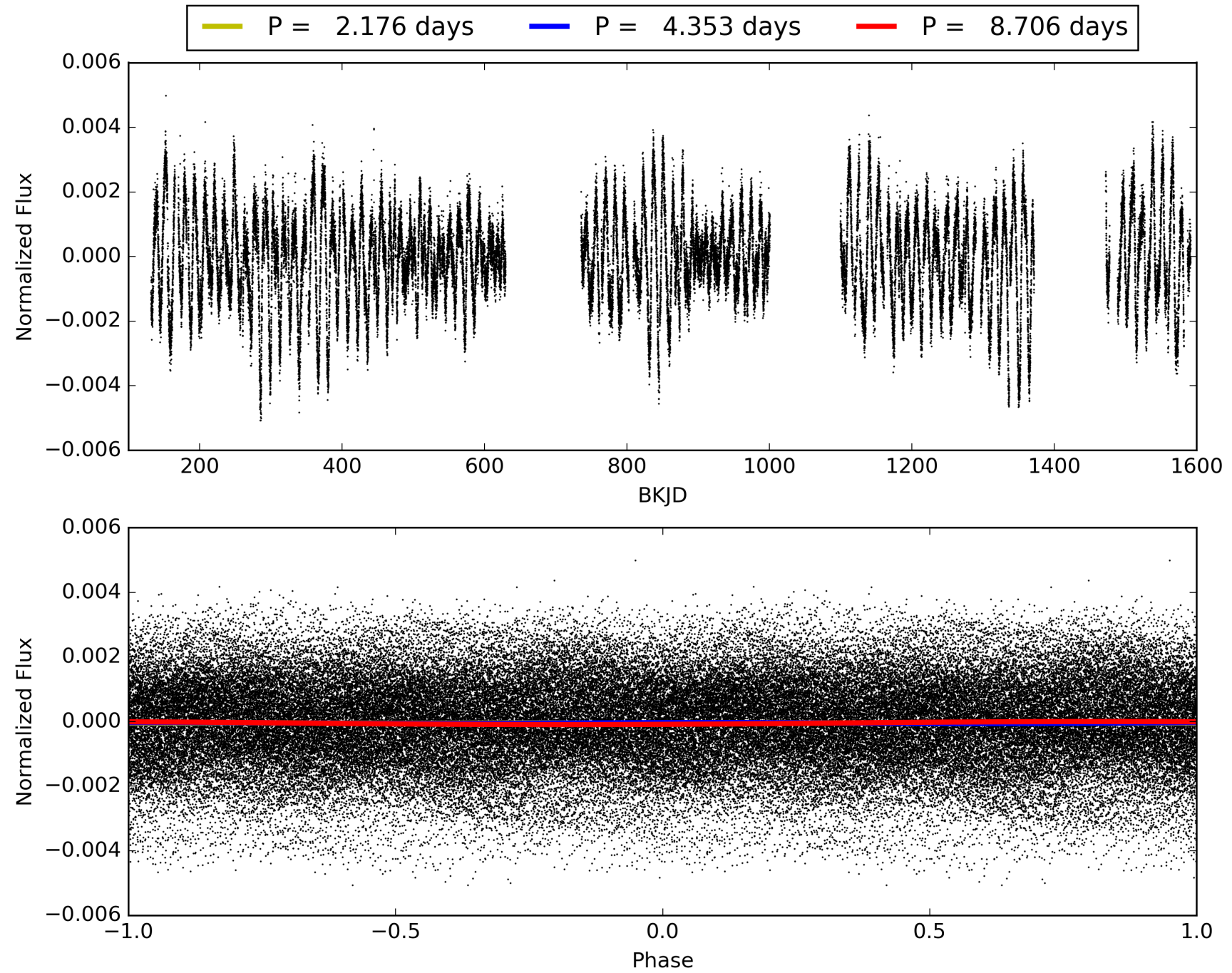
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:02:54 Z

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

TCE 010621302-01, PDC Light Curves

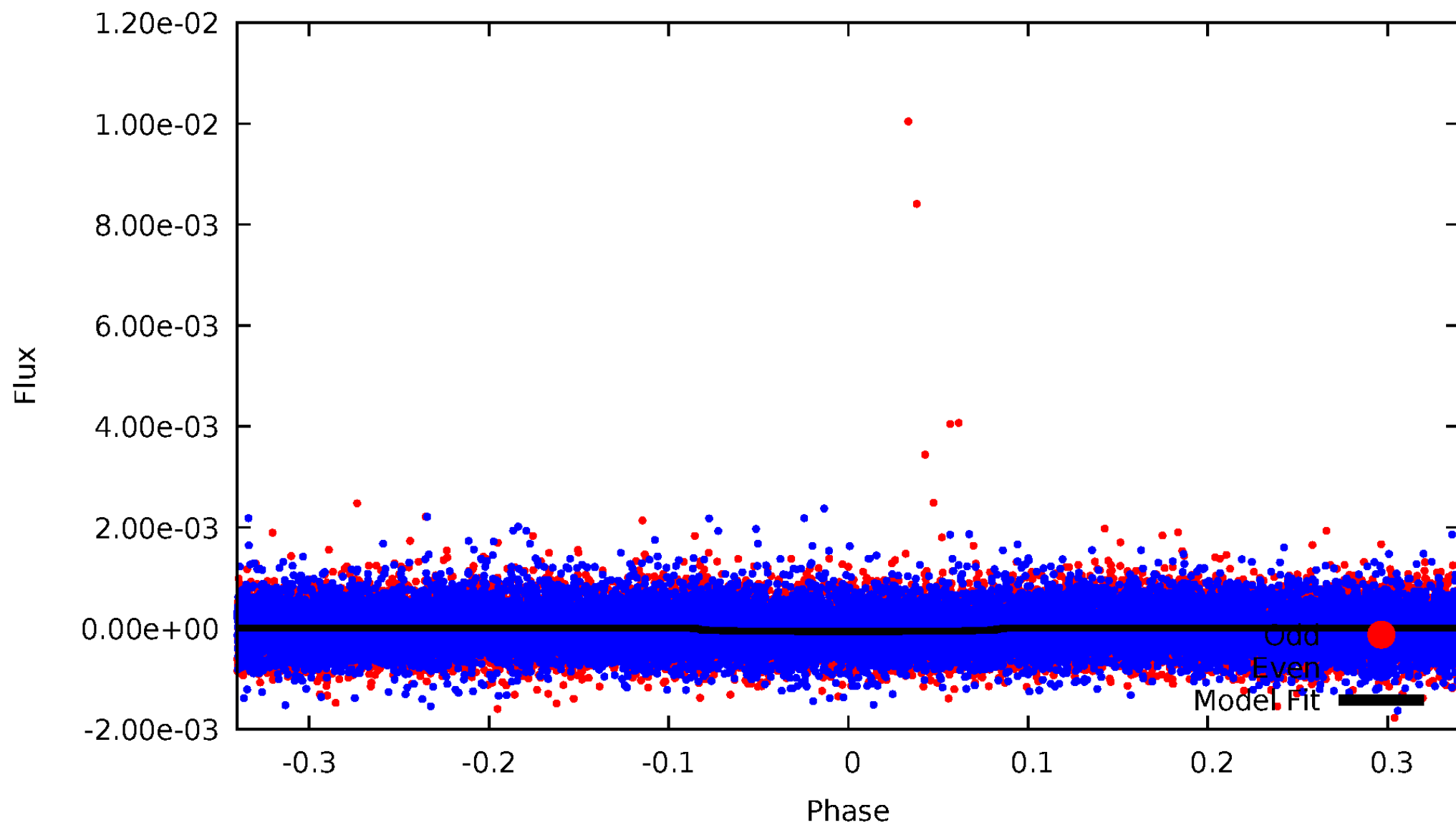


TCE 010621302-01



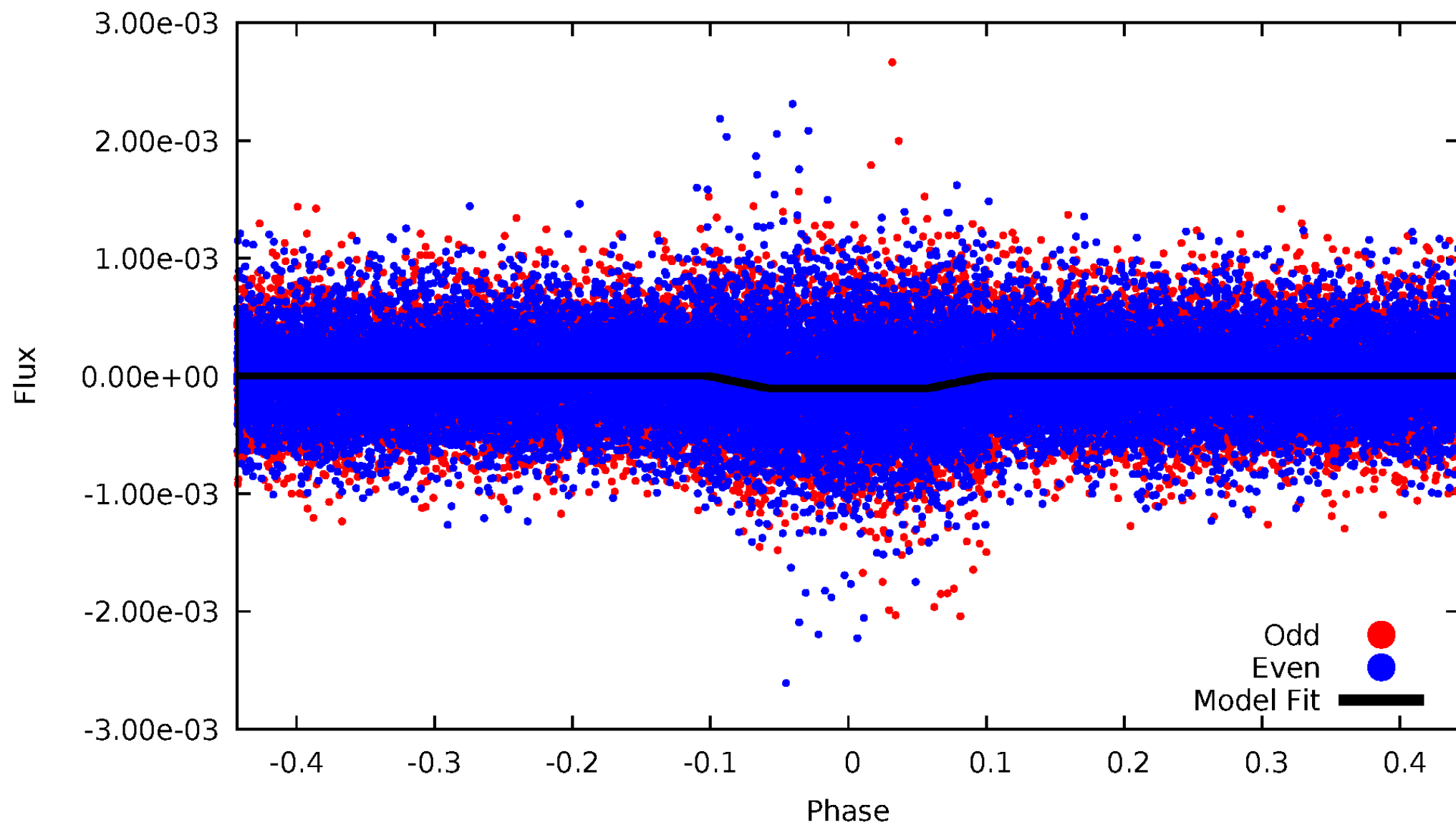
DV Odd/Even

TCE 010621302-01



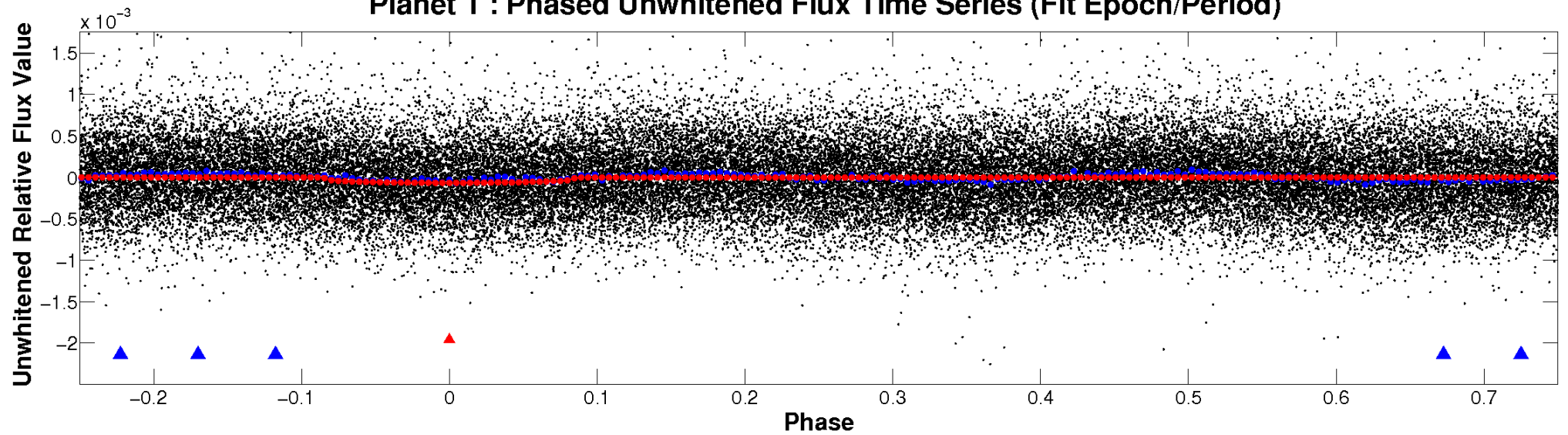
ALT Odd/Even

TCE 010621302-01

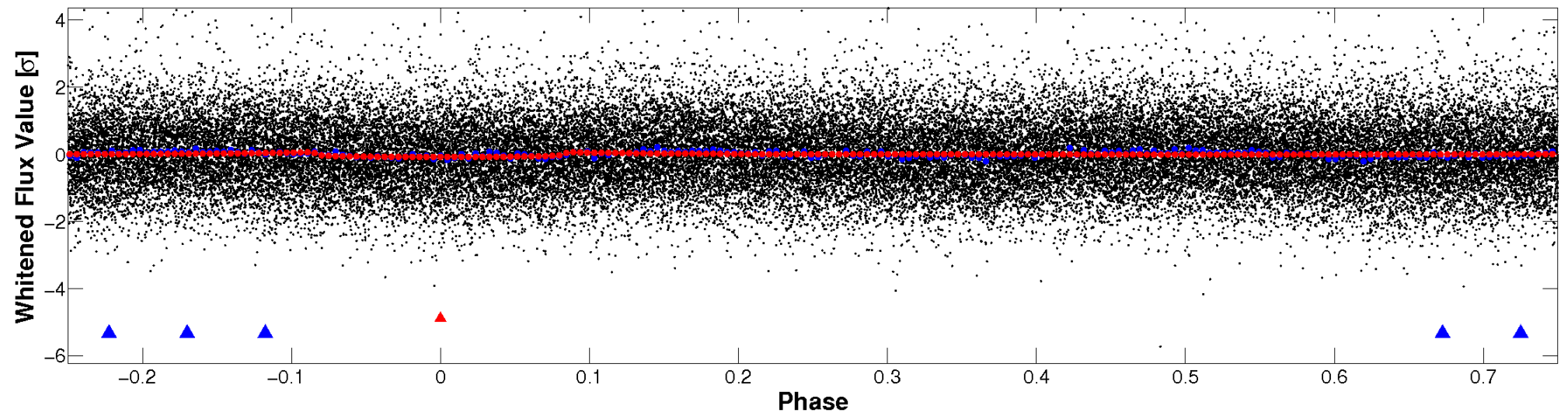


Non-Whitened Vs. Whitened Light Curve

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

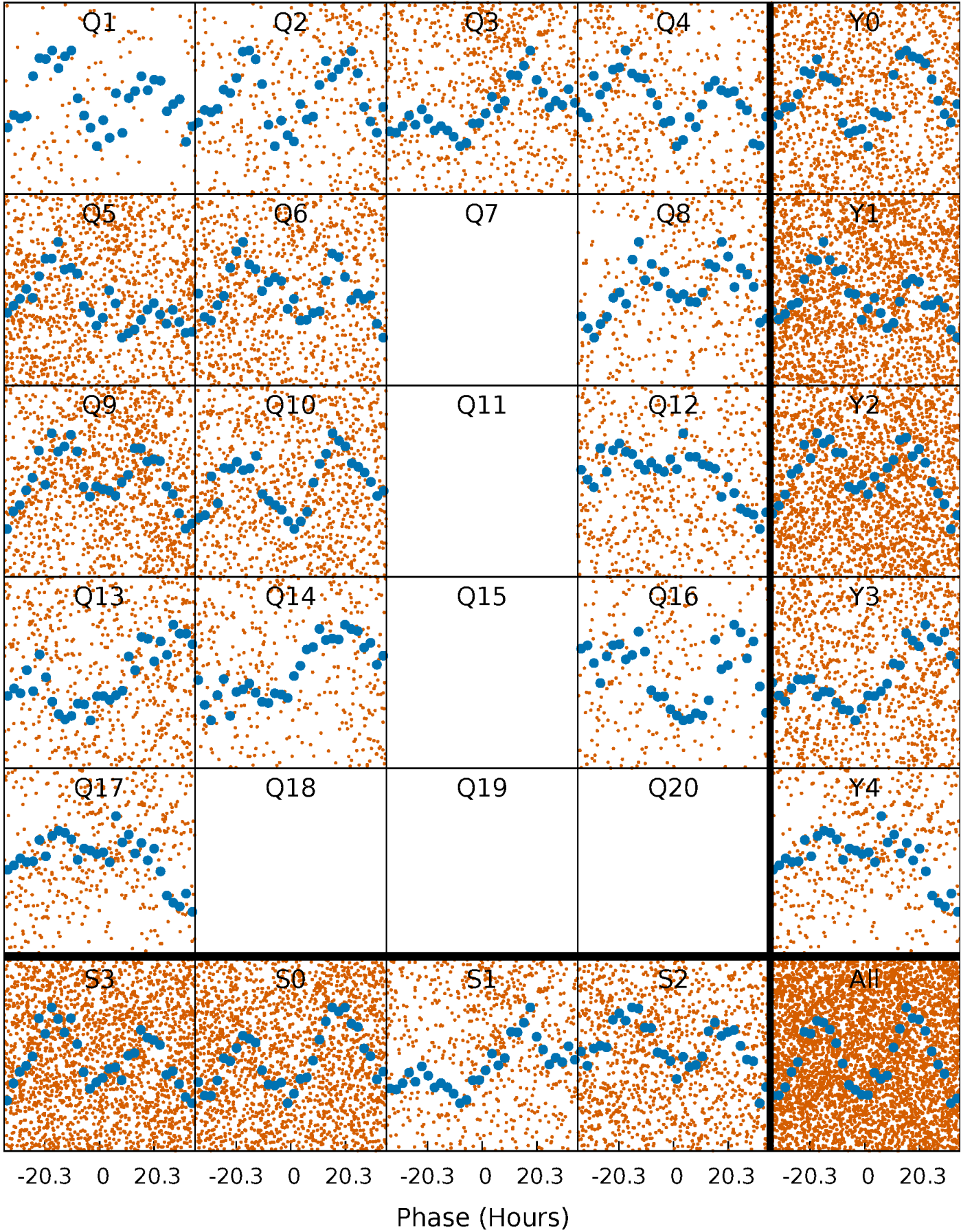


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



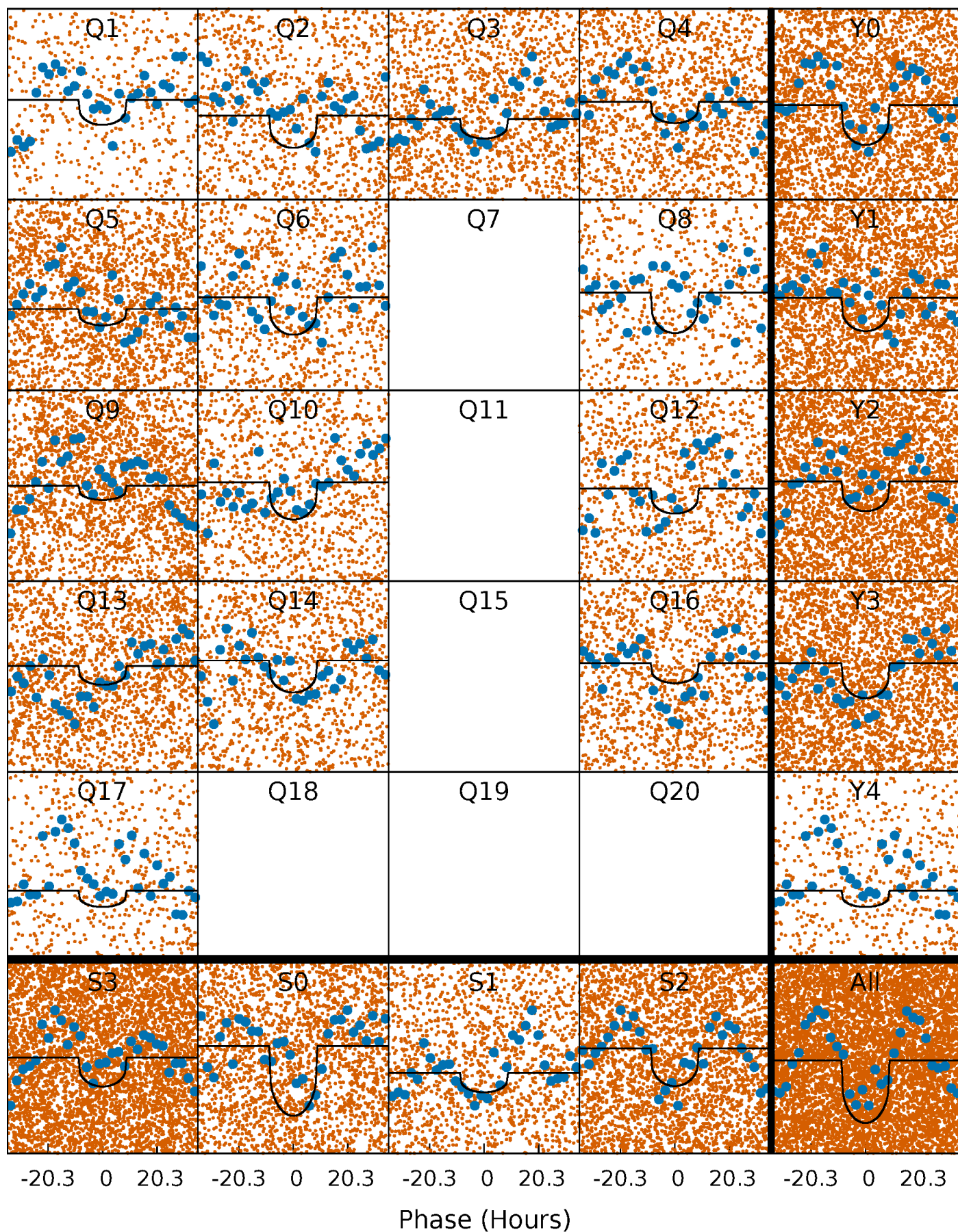
PDC Quarter-Phased Transit Curves

TCE 010621302-01 P= 4.352912 Days $T_0=134.880768$ (BKJD)



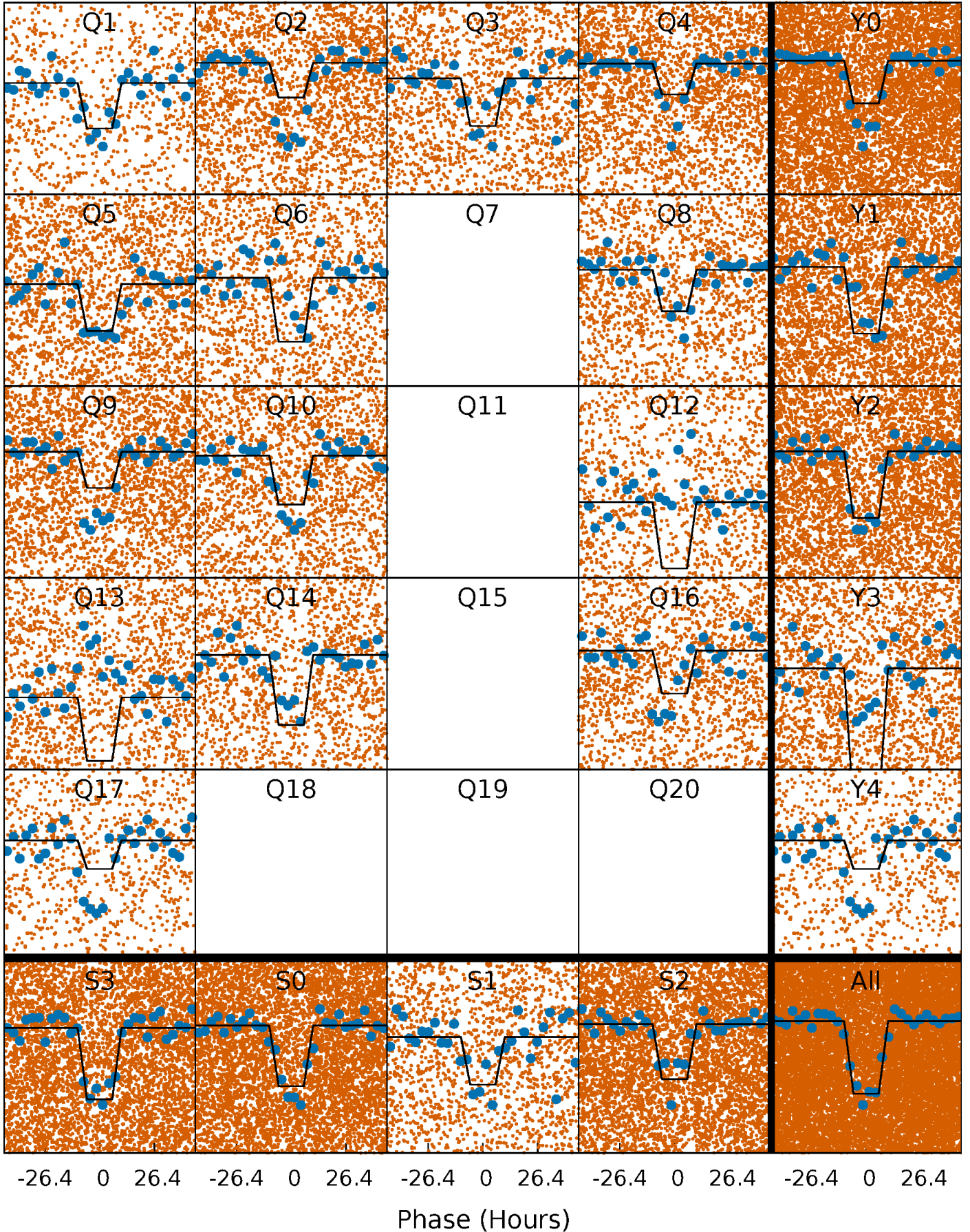
DV Quarter-Phased Transit Curves

TCE 010621302-01 P= 4.352912 Days $T_0=134.880768$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

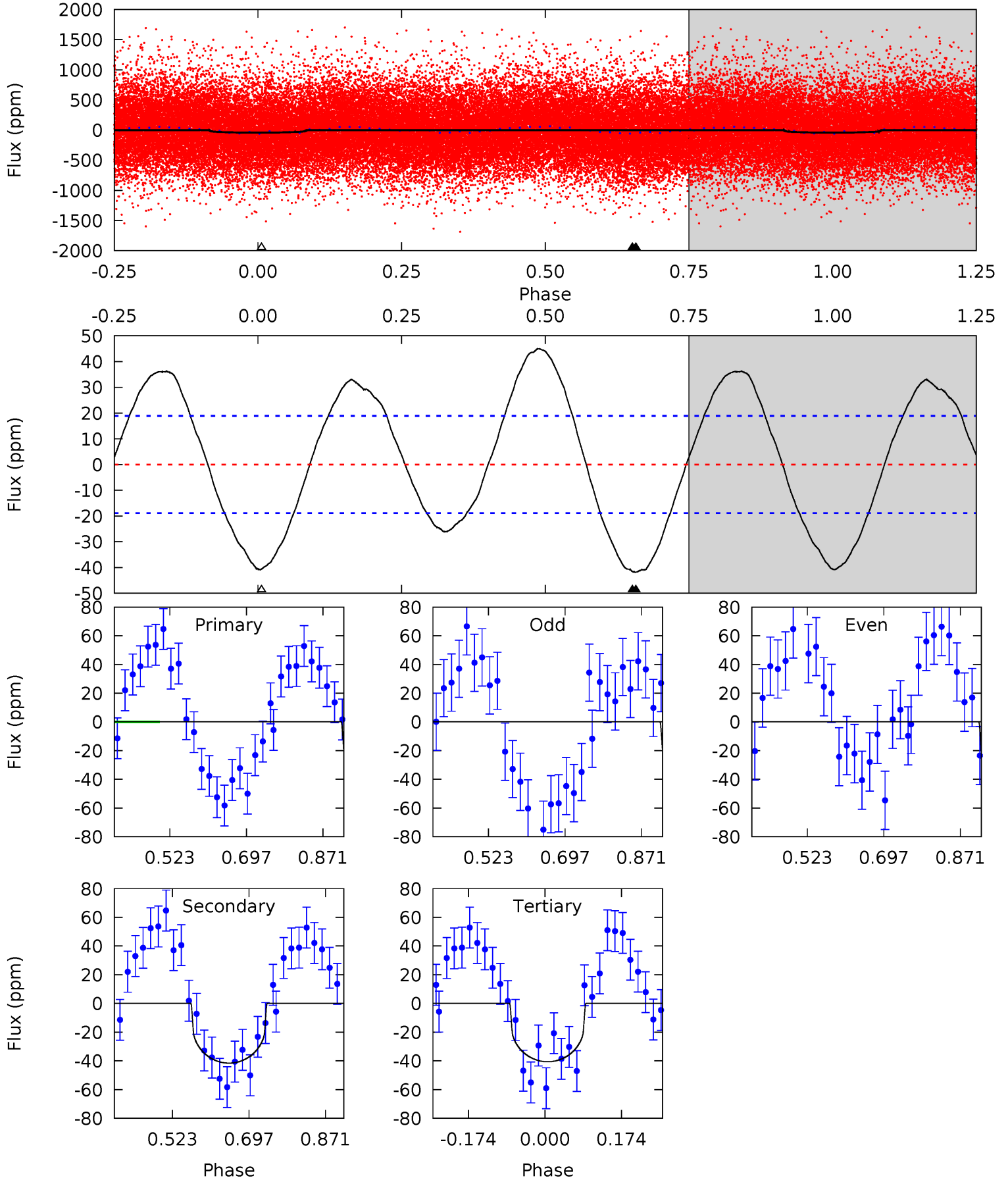
TCE 010621302-01 $P = 4.352919$ Days $T_0 = 134.947964$ (BKJD)



DV Model-Shift Uniqueness Test

010621302-01, P = 4.352912 Days, E = 130.527856 Days

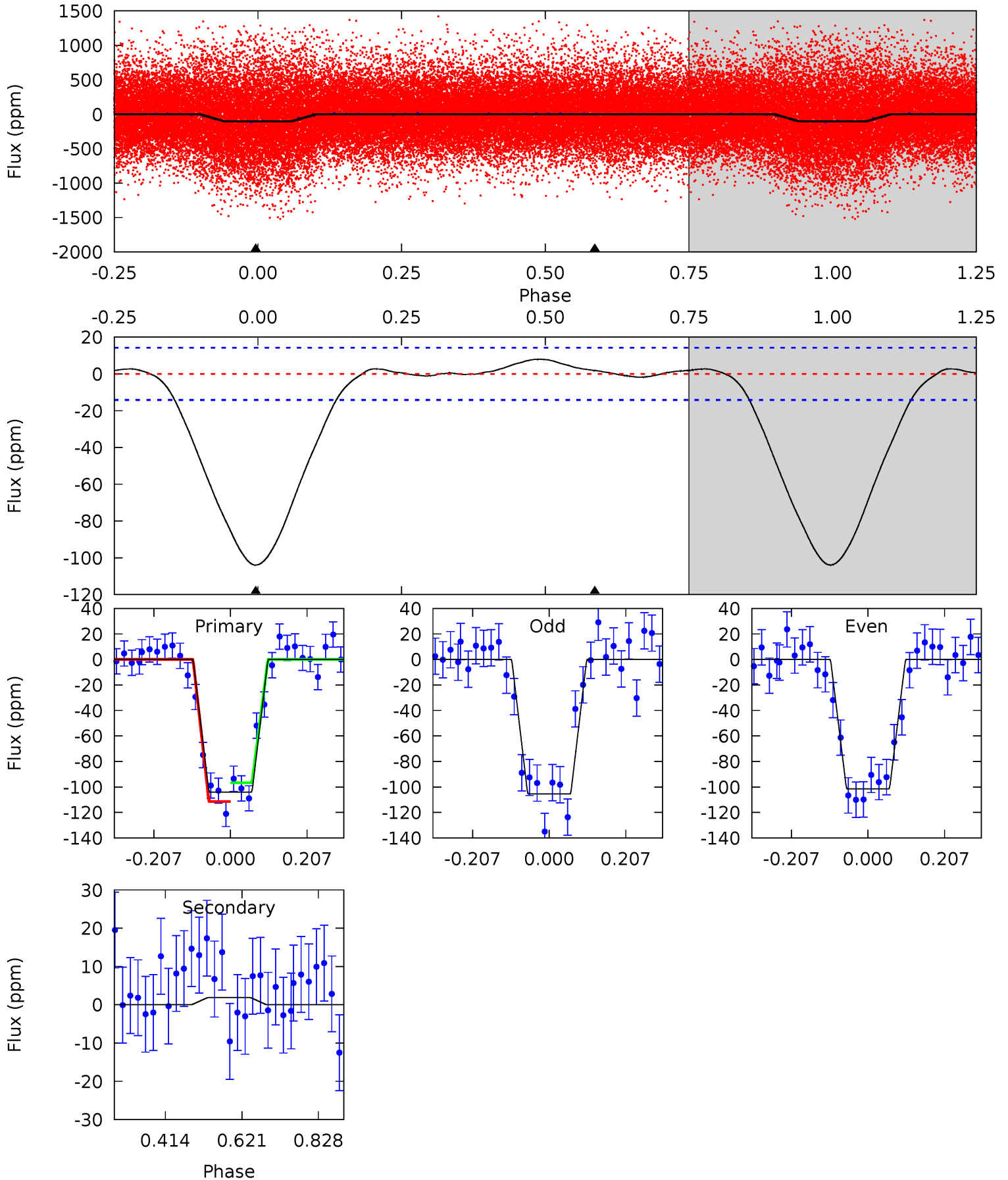
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.85	9.79	9.57	0	4.45	1.36	5.76	0.28	9.85	0.23	9.79	0.29	0.78	0.52	0.28



Alt Model-Shift Uniqueness Test

010621302-01, P = 4.352919 Days, E = 130.595045 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.3	-0.58	0	0	4.41	1.26	0.33	32.3	32.3	-0.58	-0.58	0.62	0.94	0.07	2.24



Stellar Parameters For KIC 010621302

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	4593^{+138}_{-138}	$4.667^{+0.056}_{-0.028}$	$-0.740^{+0.300}_{-0.300}$	$0.581^{+0.046}_{-0.046}$	$0.571^{+0.055}_{-0.028}$	$4.102^{+0.943}_{-0.528}$
	+3%/-3%	+1%/-1%	+41%/-41%	+8%/-8%	+10%/-5%	+23%/-13%
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 010621302-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-42 ± 4	$0.51^{+0.25}_{-0.24}$	1031^{+38}_{-35}	4243^{+1247}_{-584}	174^{+445}_{-98}
Alt.	2 ± 3	$0.65^{+0.25}_{-0.23}$	1030^{+36}_{-35}	-2455^{+4784}_{-490}	$-4.127^{+7.335}_{-13.018}$

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

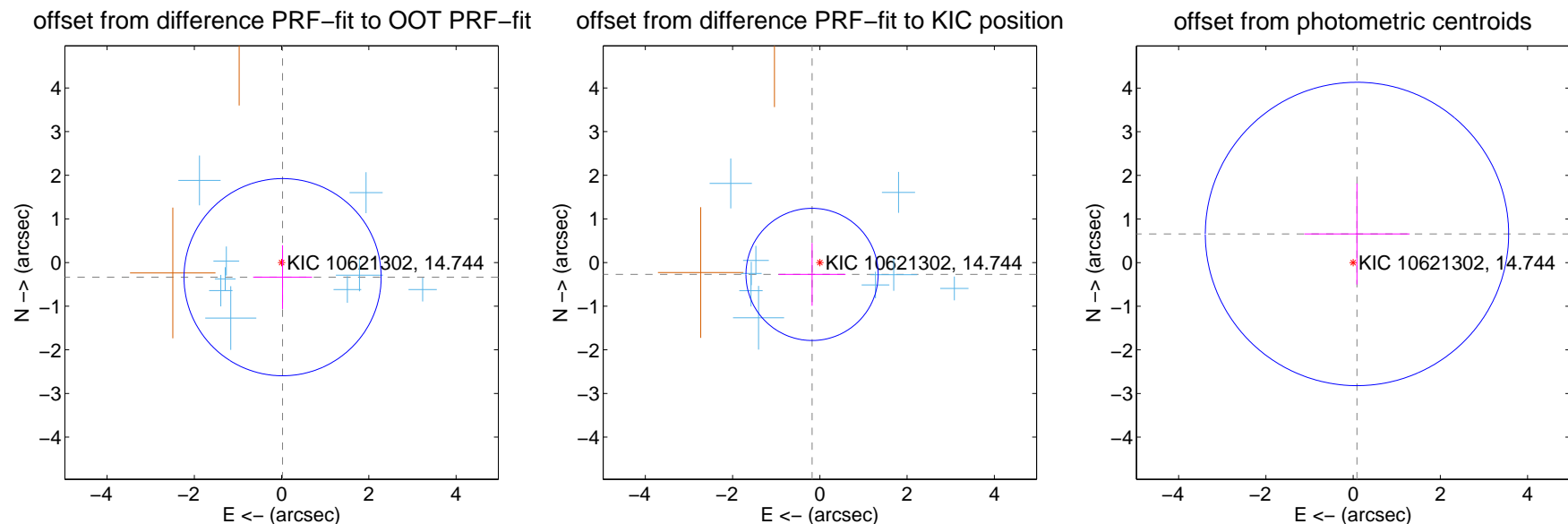
DV Centroid Data

Supplemental centroid analysis for 010621302-01. Kepler magnitude: 14.74. Transit SNR 7.20

There are 9 quarters with good PRF difference image offsets

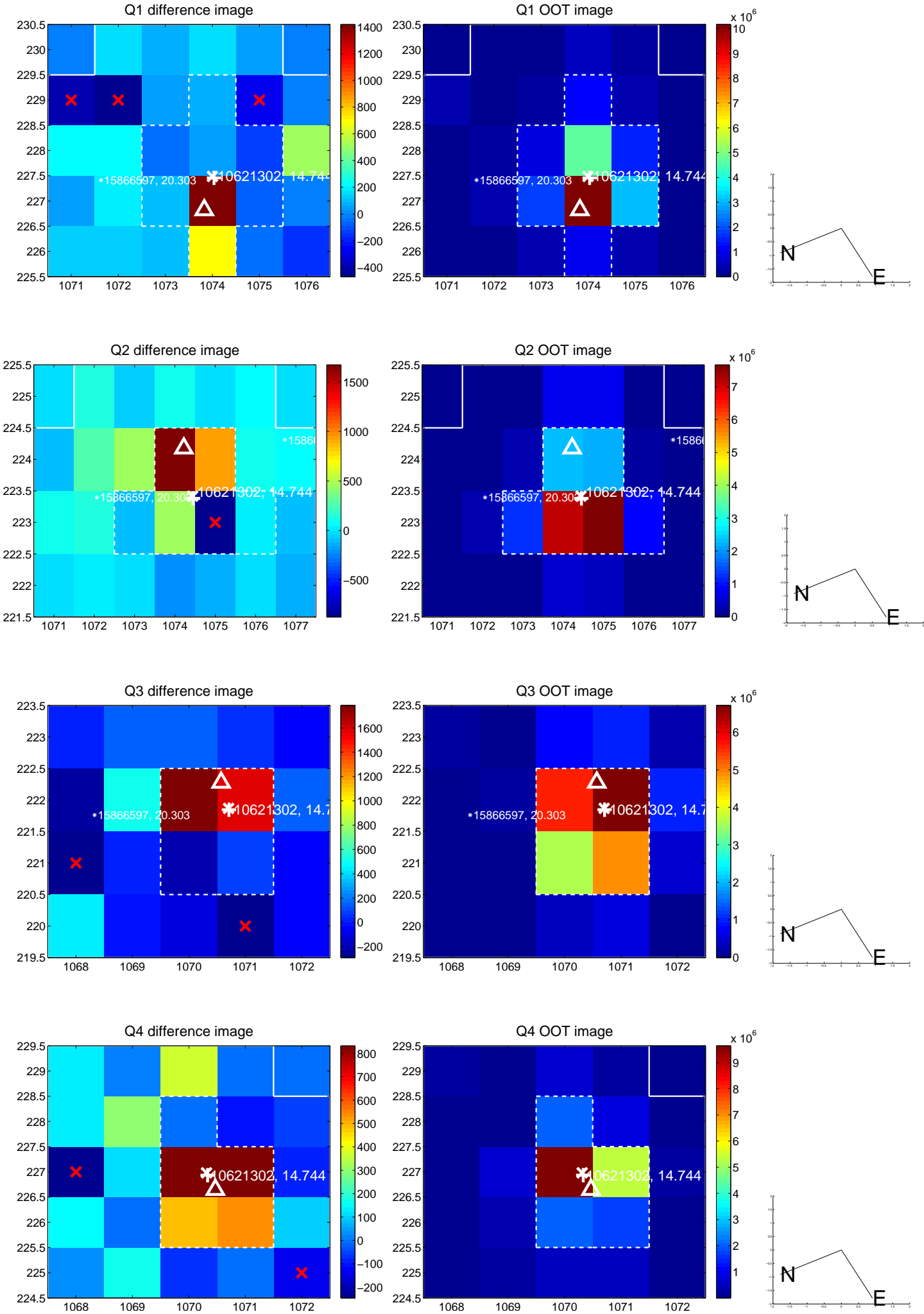
The direct PRF centroid is offset from the target star catalog position by about 0.08 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.336 ± 0.753	0.45	-0.023 ± 0.676	-0.336 ± 0.731
PRF-fit source offset from KIC position	0.325 ± 0.505	0.64	0.178 ± 0.766	-0.272 ± 0.718
photometric centroid source offset	0.66 ± 1.16	0.57	-0.09 ± 1.21	0.66 ± 1.16

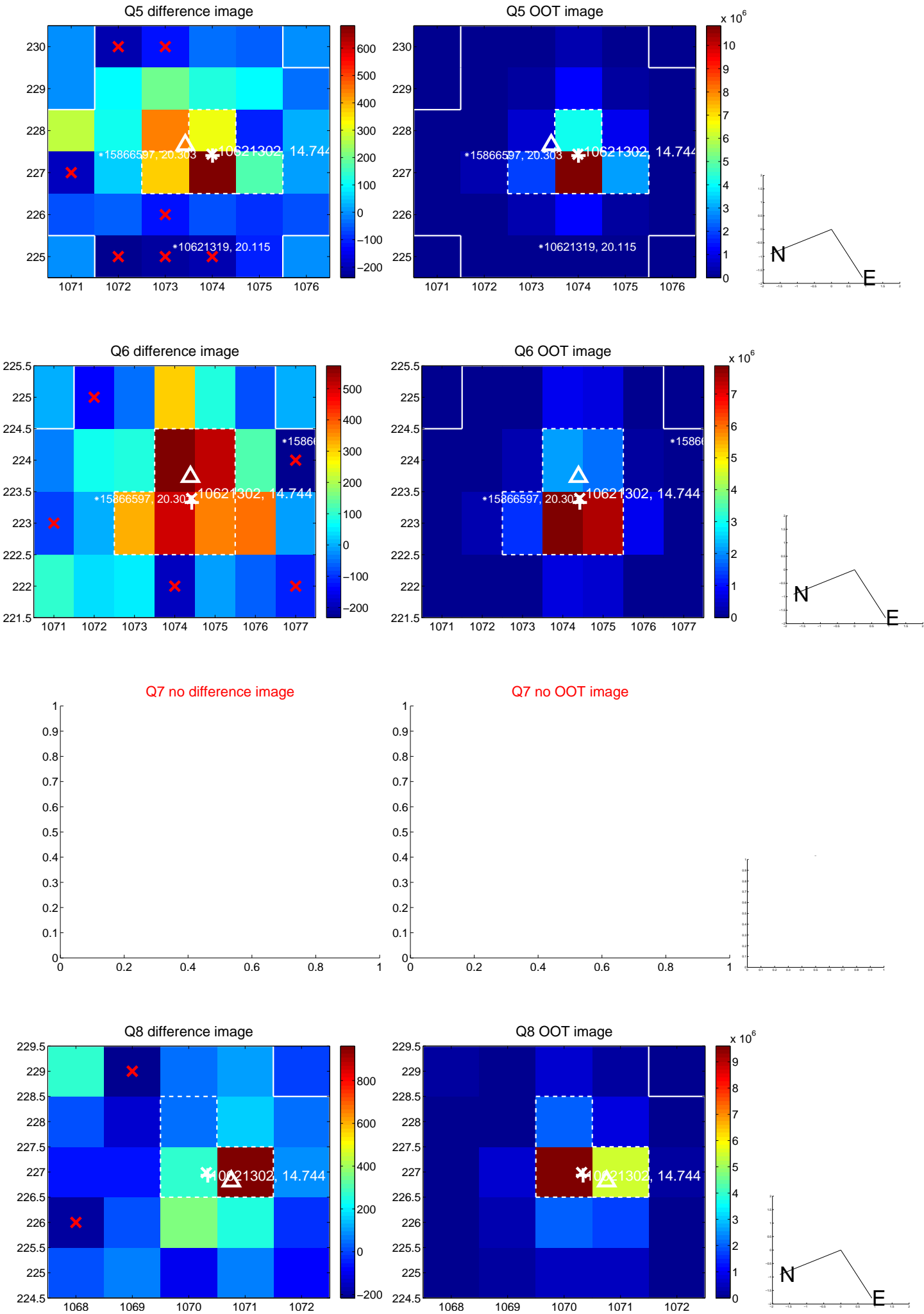


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

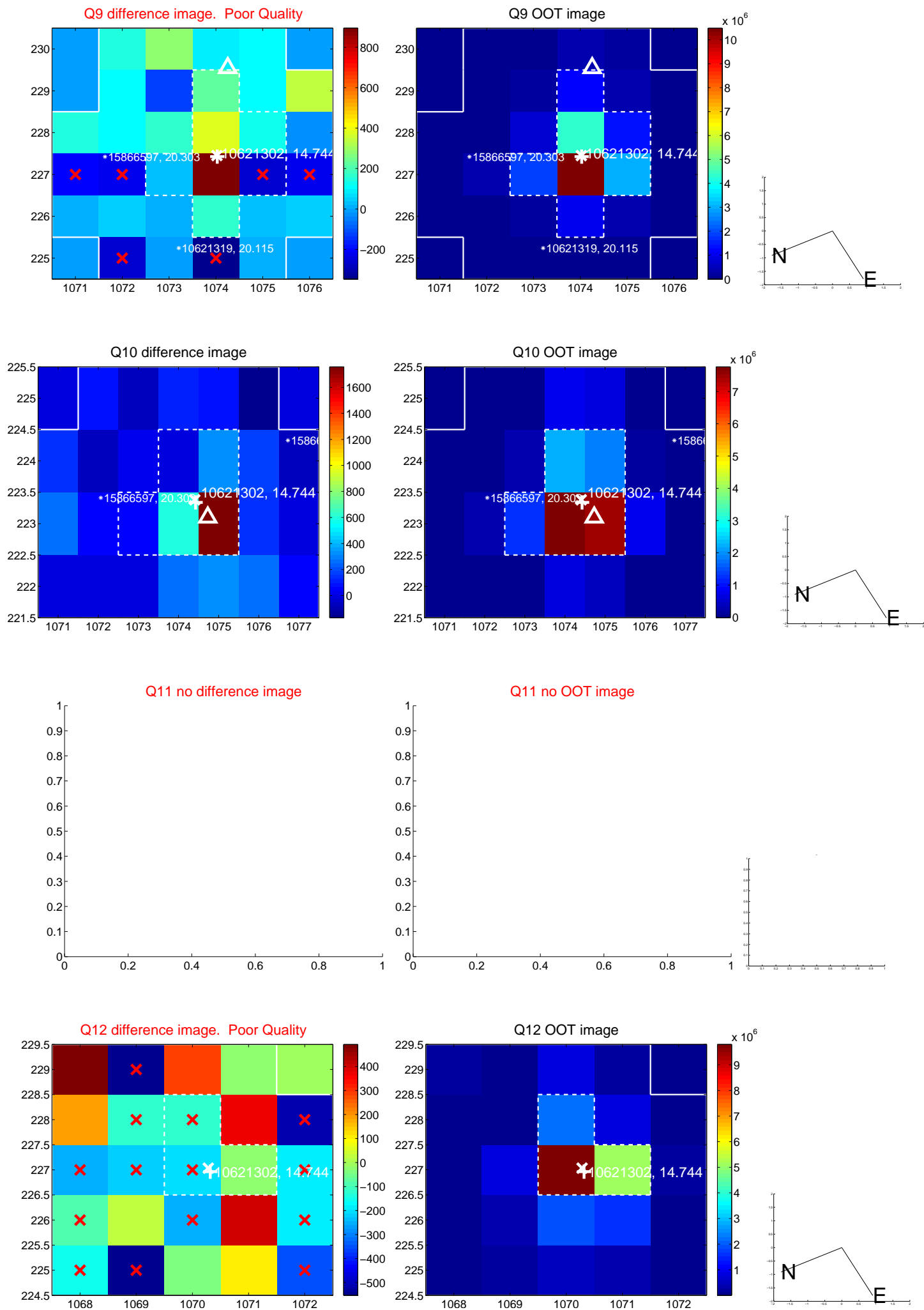
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



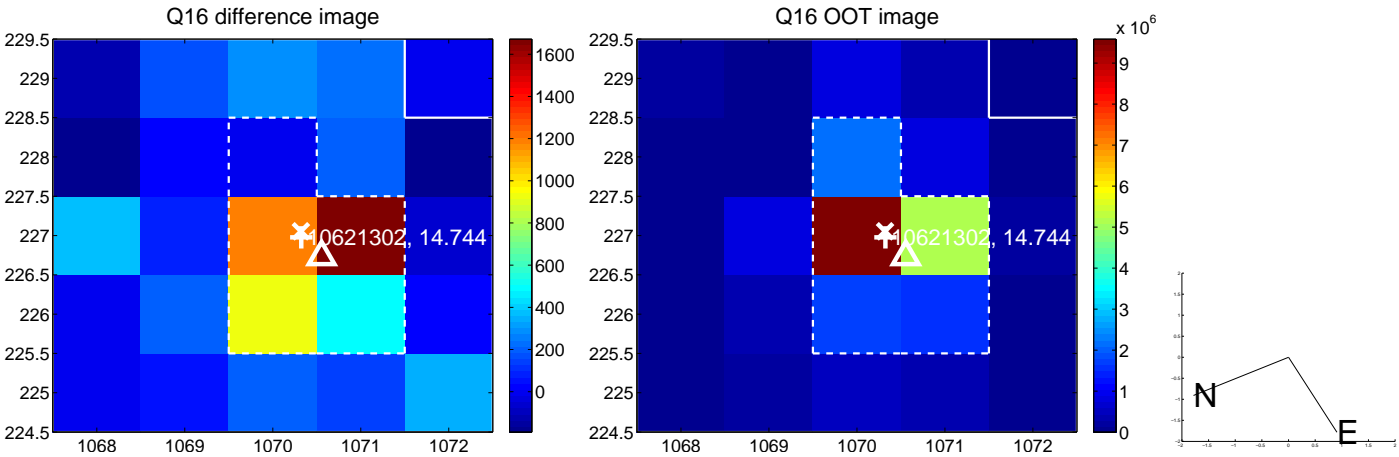
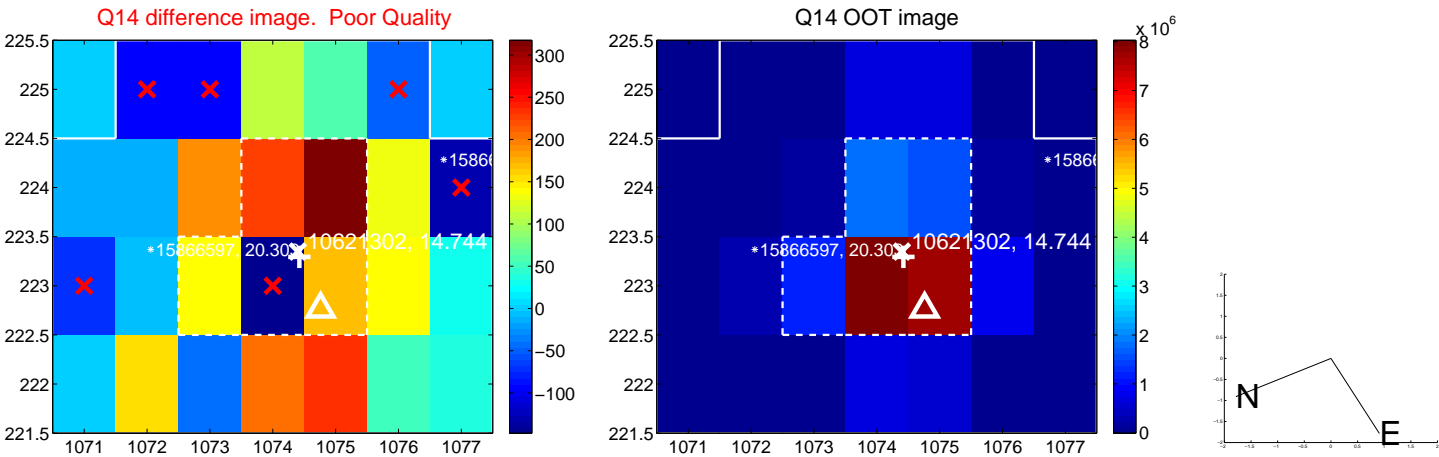
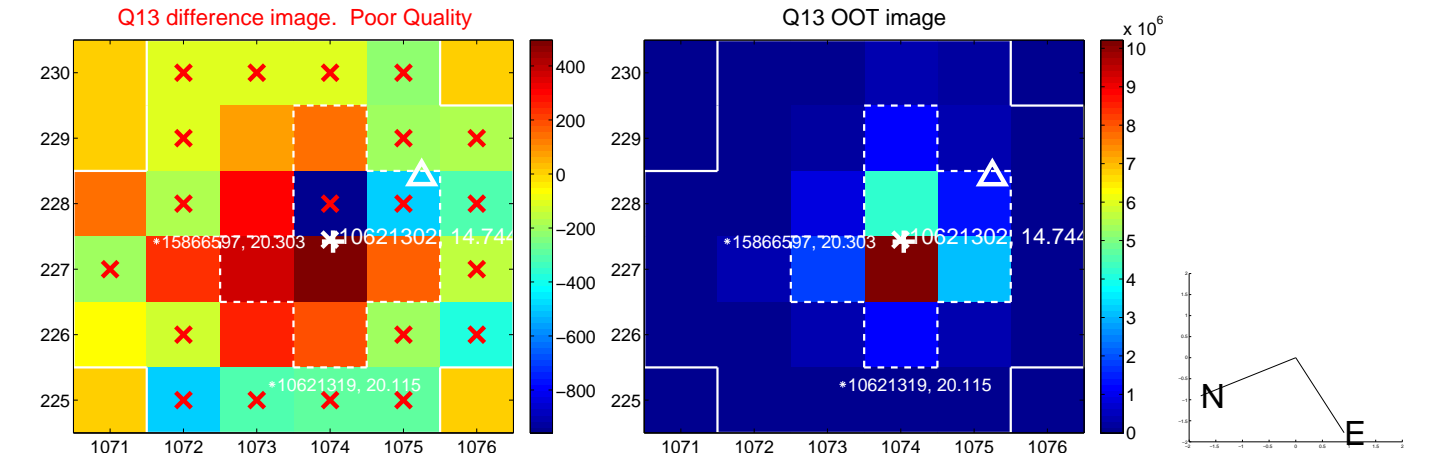
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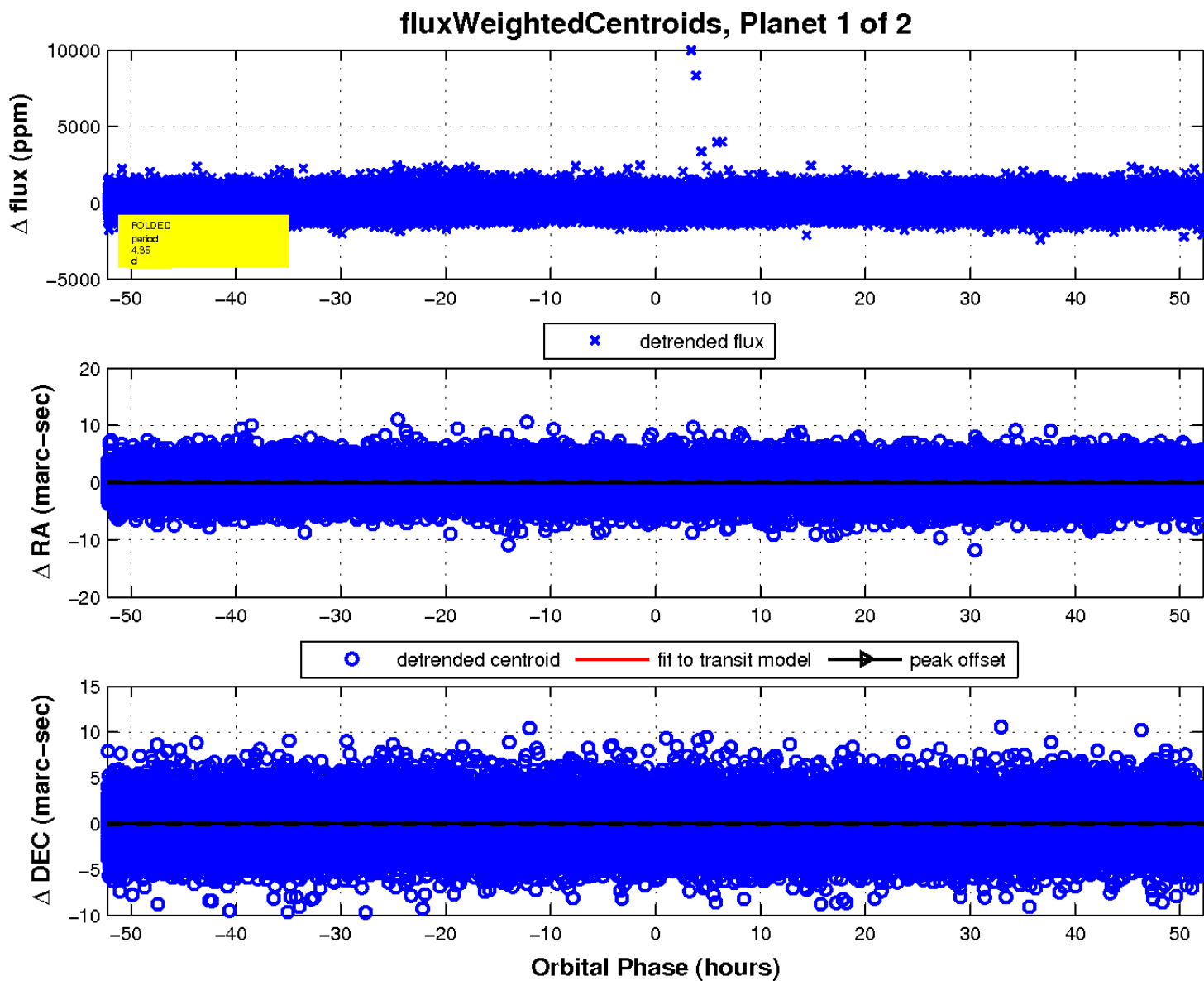
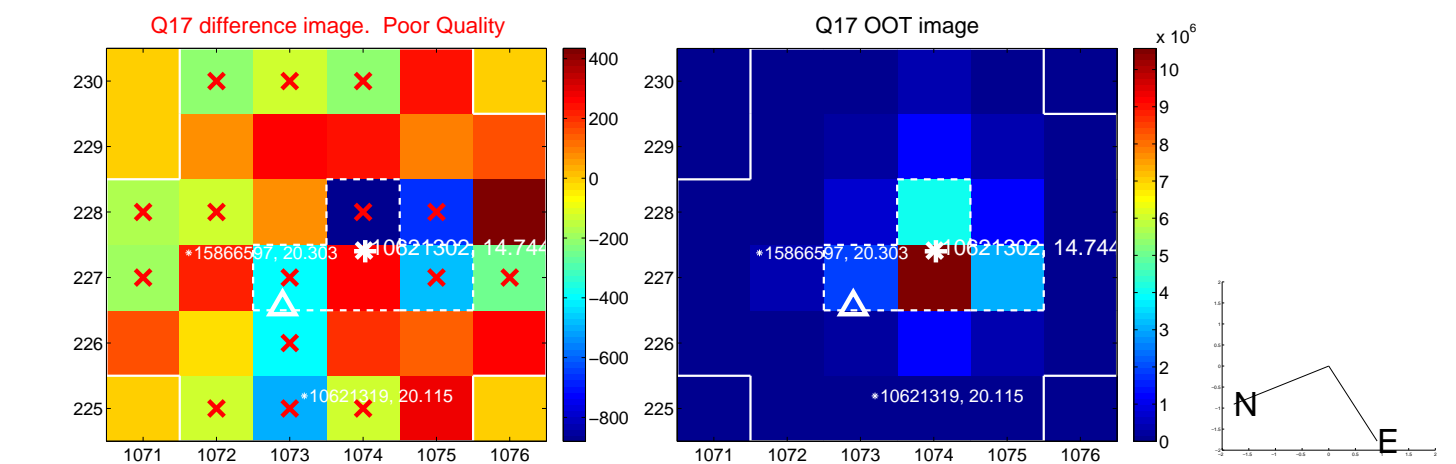
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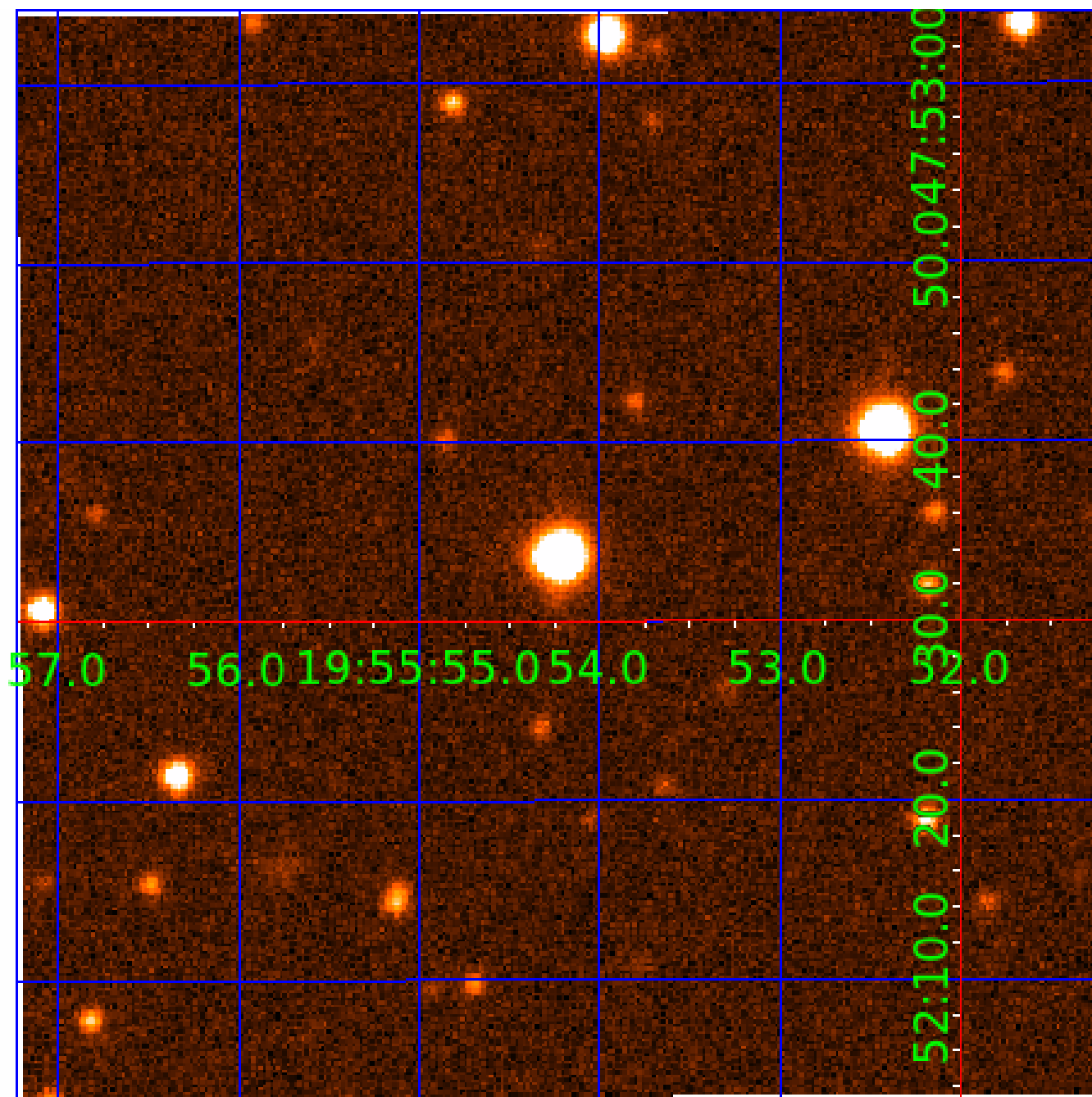


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010621302

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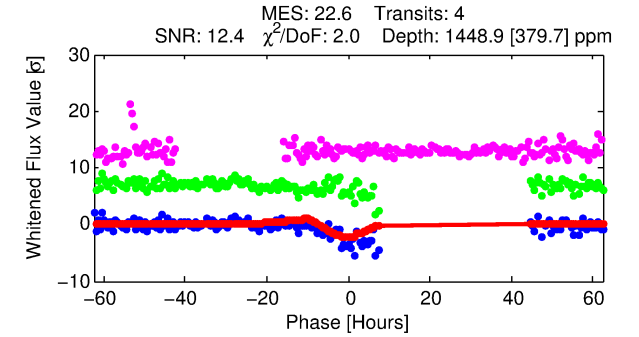
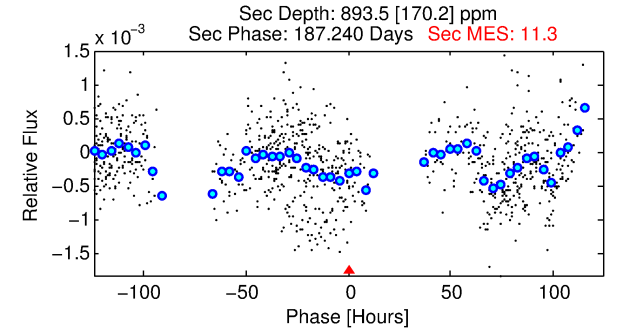
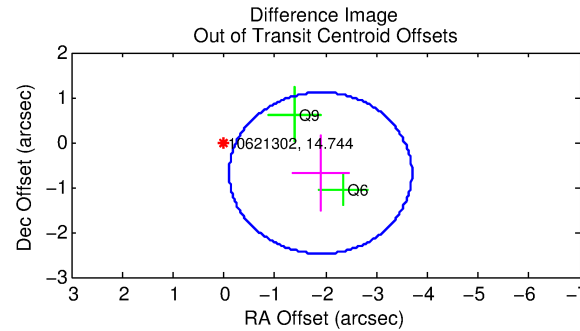
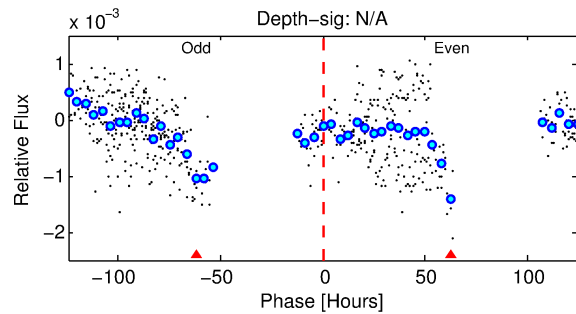
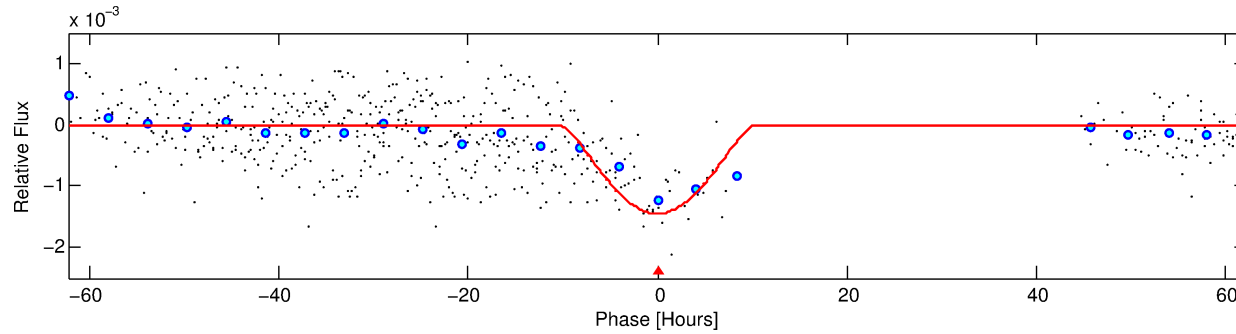
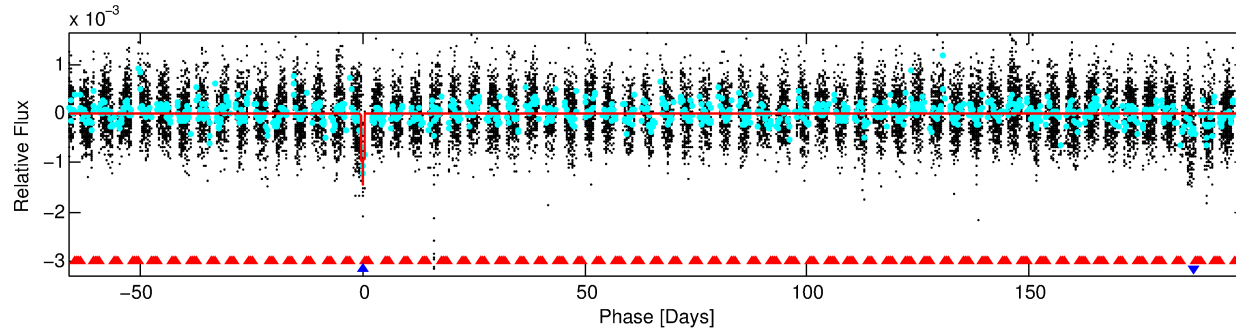
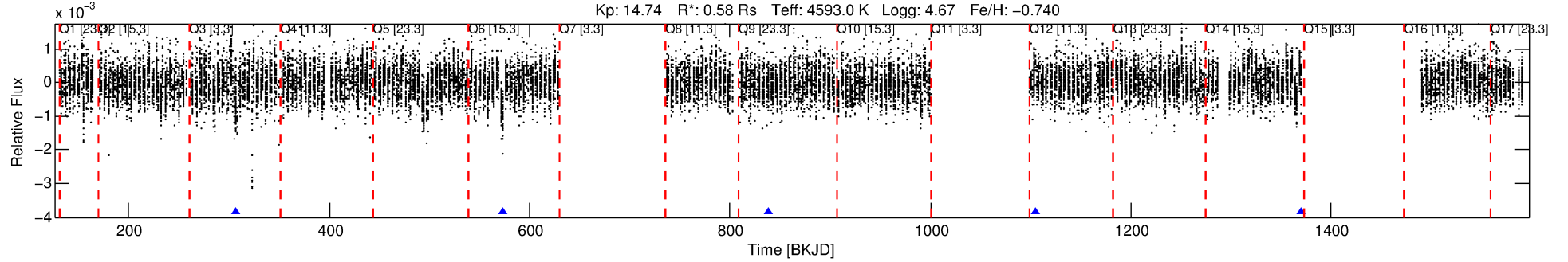
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010621302-02

No Significant Match Found

DV One-Page Summary

KIC: 10621302 Candidate: 2 of 2 Period: 265.756 d



DV Fit Results:

Period = 265.75590 [0.03030] d
Epoch = 307.5722 [0.0355] BKJD
Rp/R* = 0.0699 [0.1941]
a/R* = 37.37 [23.03]
b = 1.00 [0.29]
Seff = 0.30 [0.05]
Teq = 188 [7] K
Rp = 4.43 [12.31] Re
a = 0.6716 [0.0457] AU
Ag = 11280.85 [62666.97] [0.18σ]
Teffp = 3003 [4171] K [0.67σ]

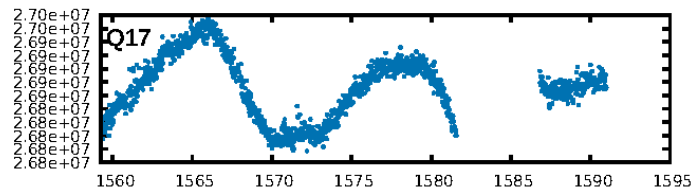
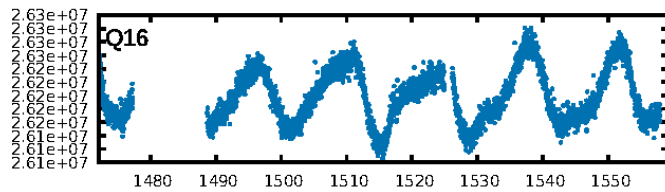
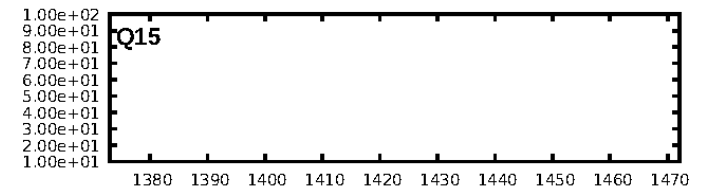
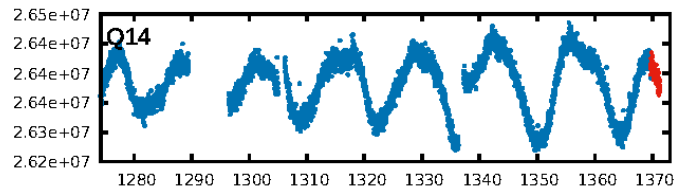
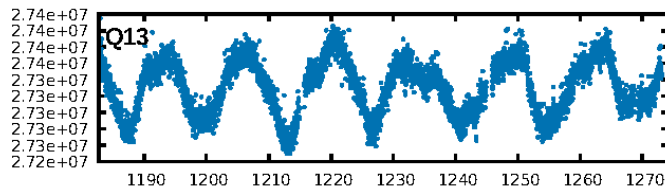
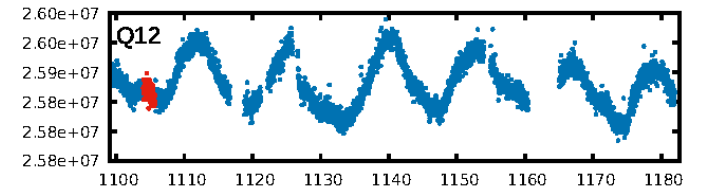
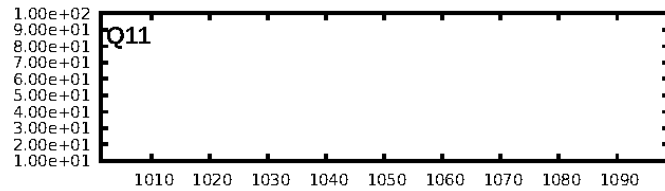
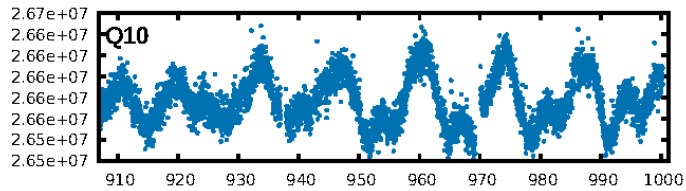
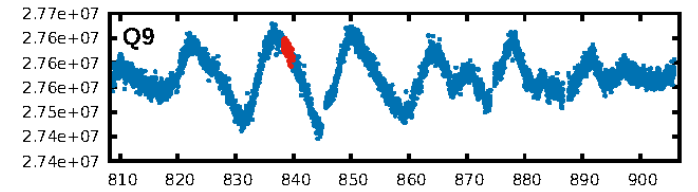
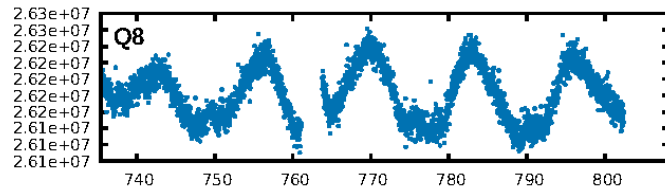
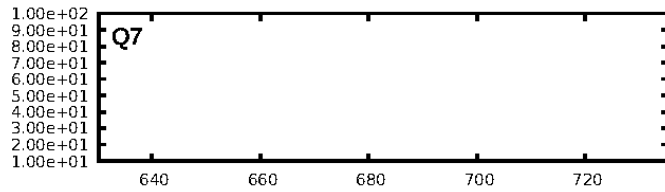
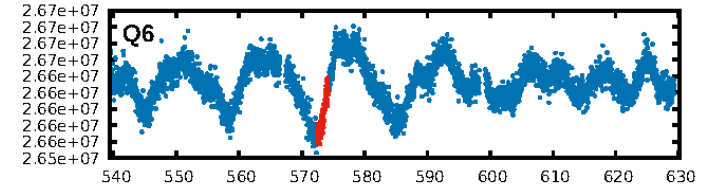
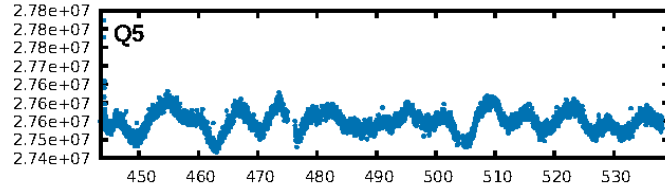
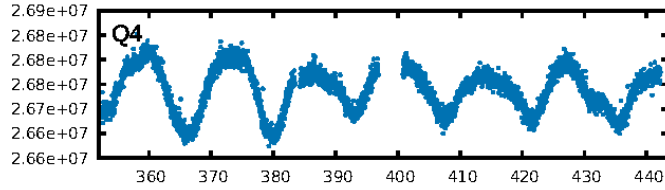
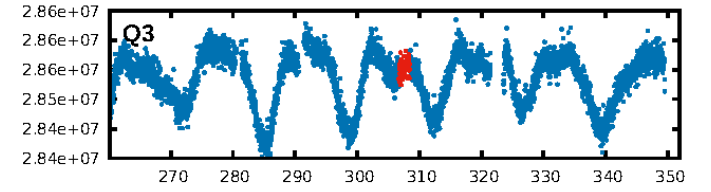
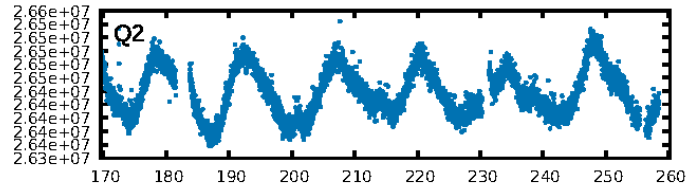
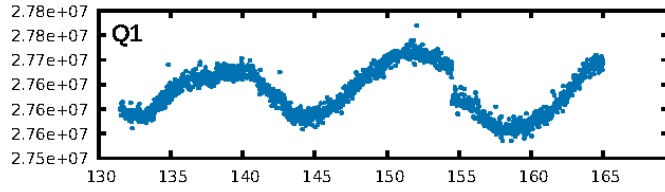
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [229.53σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 86.1%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.65e-46
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.9357
Centroid-sig: 39.4%
Centroid-so: 0.868 arcsec [1.85σ]
OotOffset-rm: 2.023 arcsec [3.38σ]
KicOffset-rm: 1.811 arcsec [3.72σ]
OotOffset-st: 1/0/0/1 [2]
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DiffImageOverlap-fno: 0.00 [0/3]

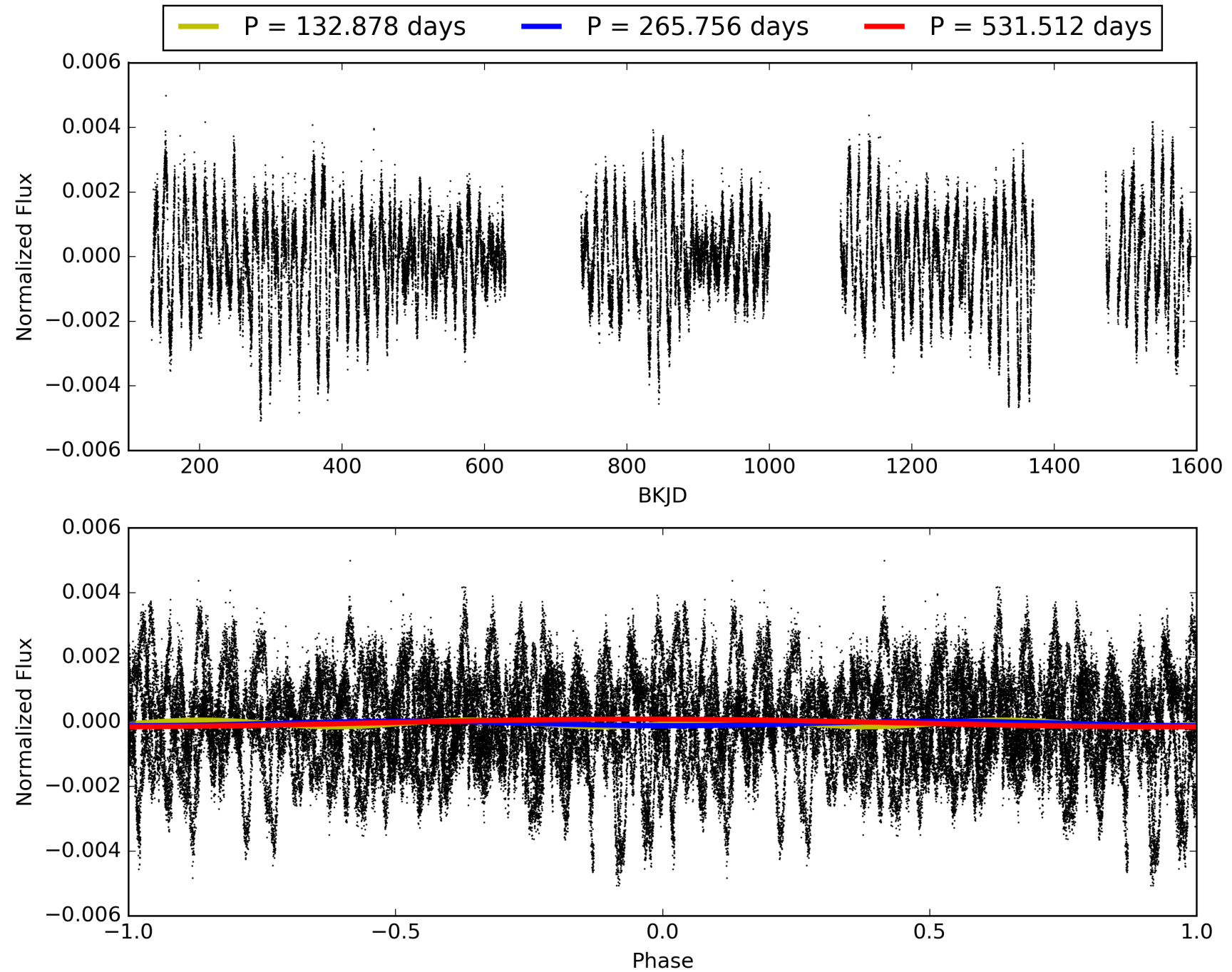
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 06:03:24 Z

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

TCE 010621302-02, PDC Light Curves

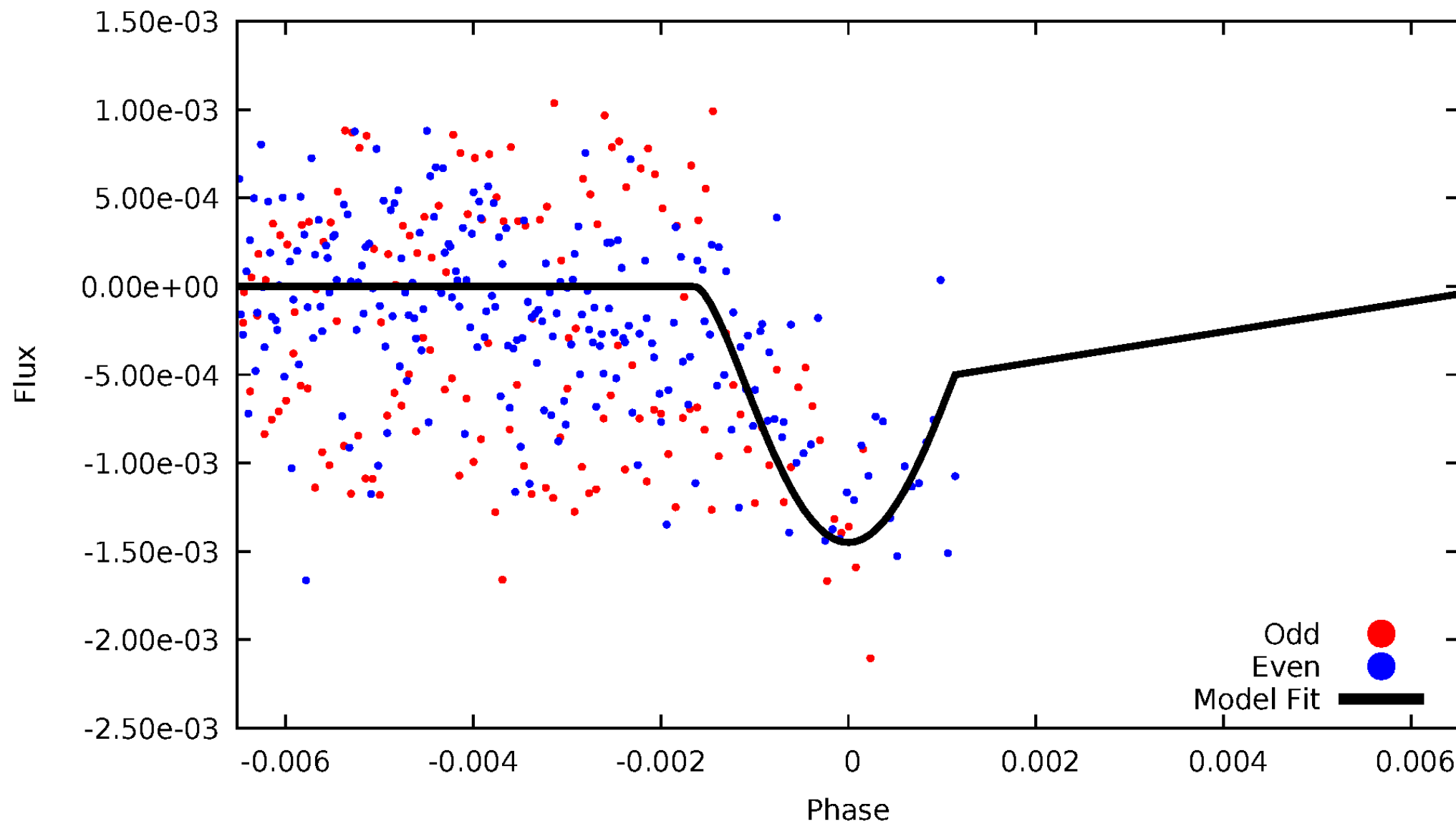


TCE 010621302-02



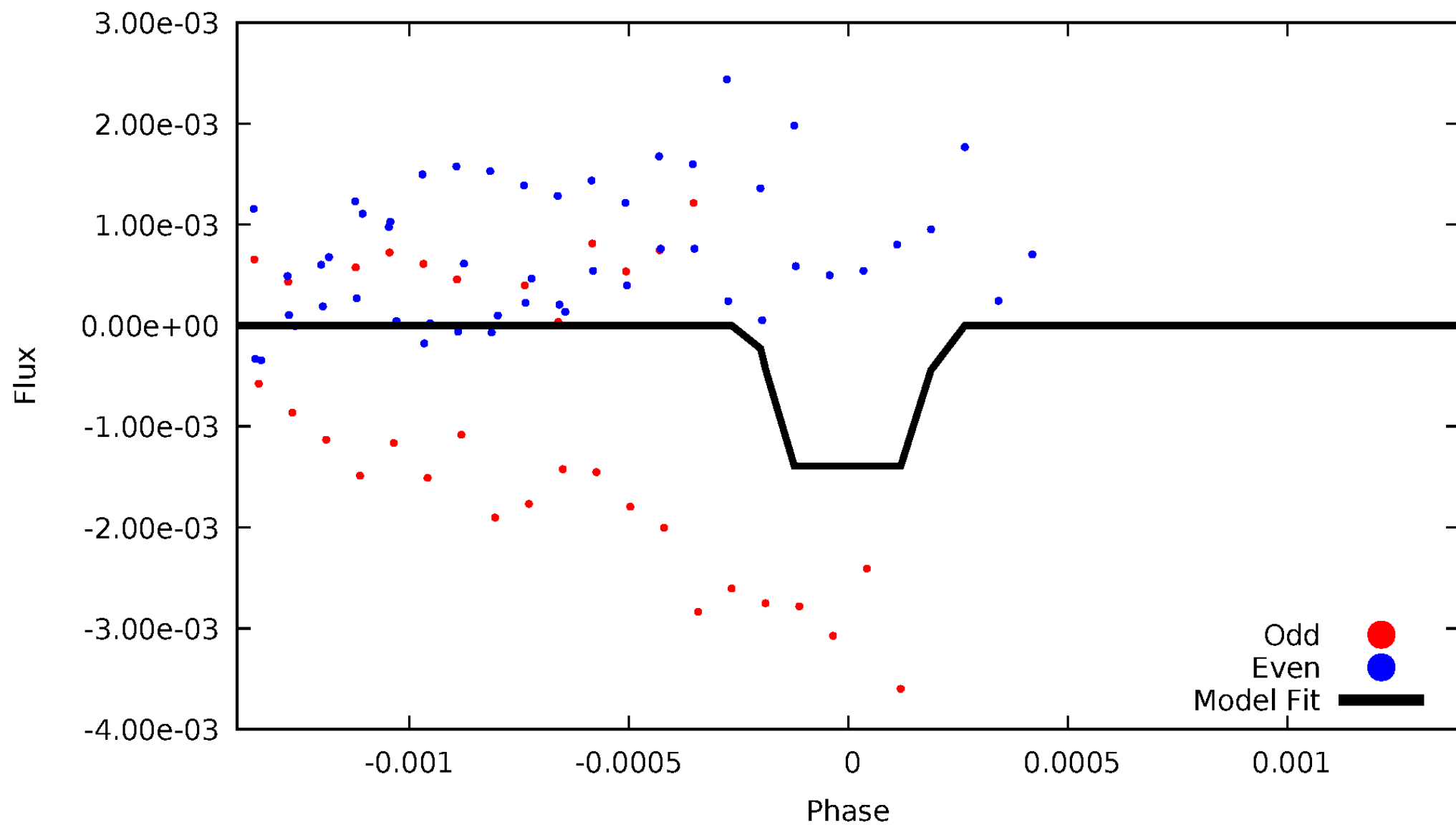
DV Odd/Even

TCE 010621302-02



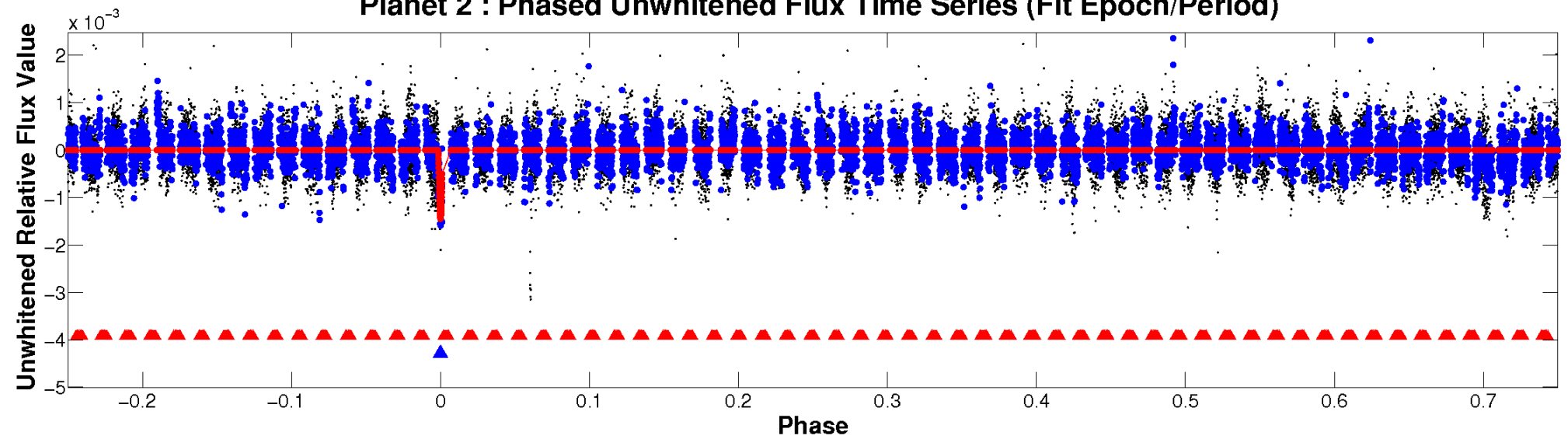
ALT Odd/Even

TCE 010621302-02

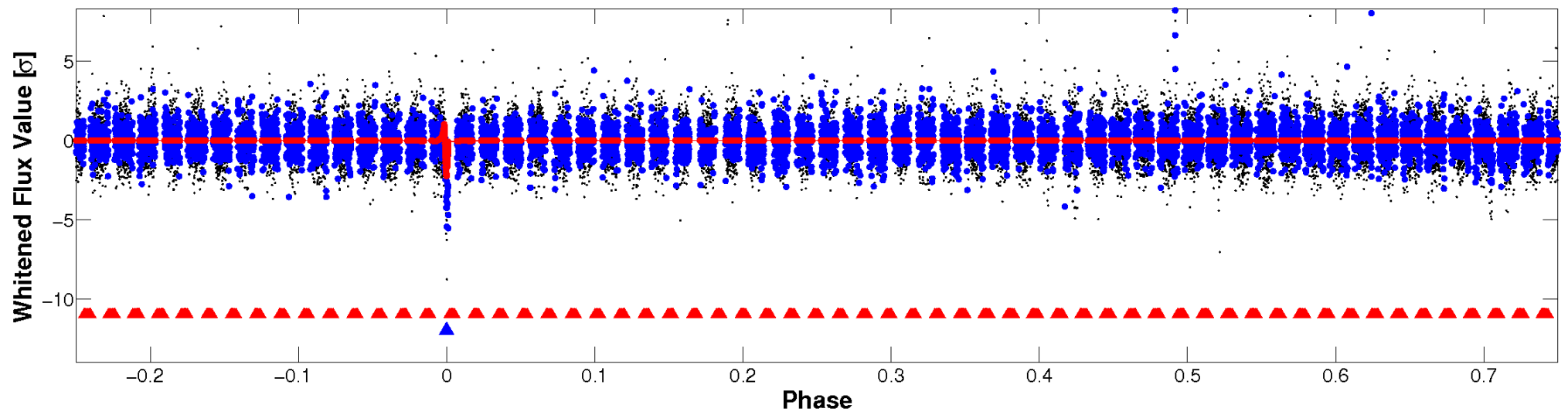


Non-Whitened Vs. Whitened Light Curve

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

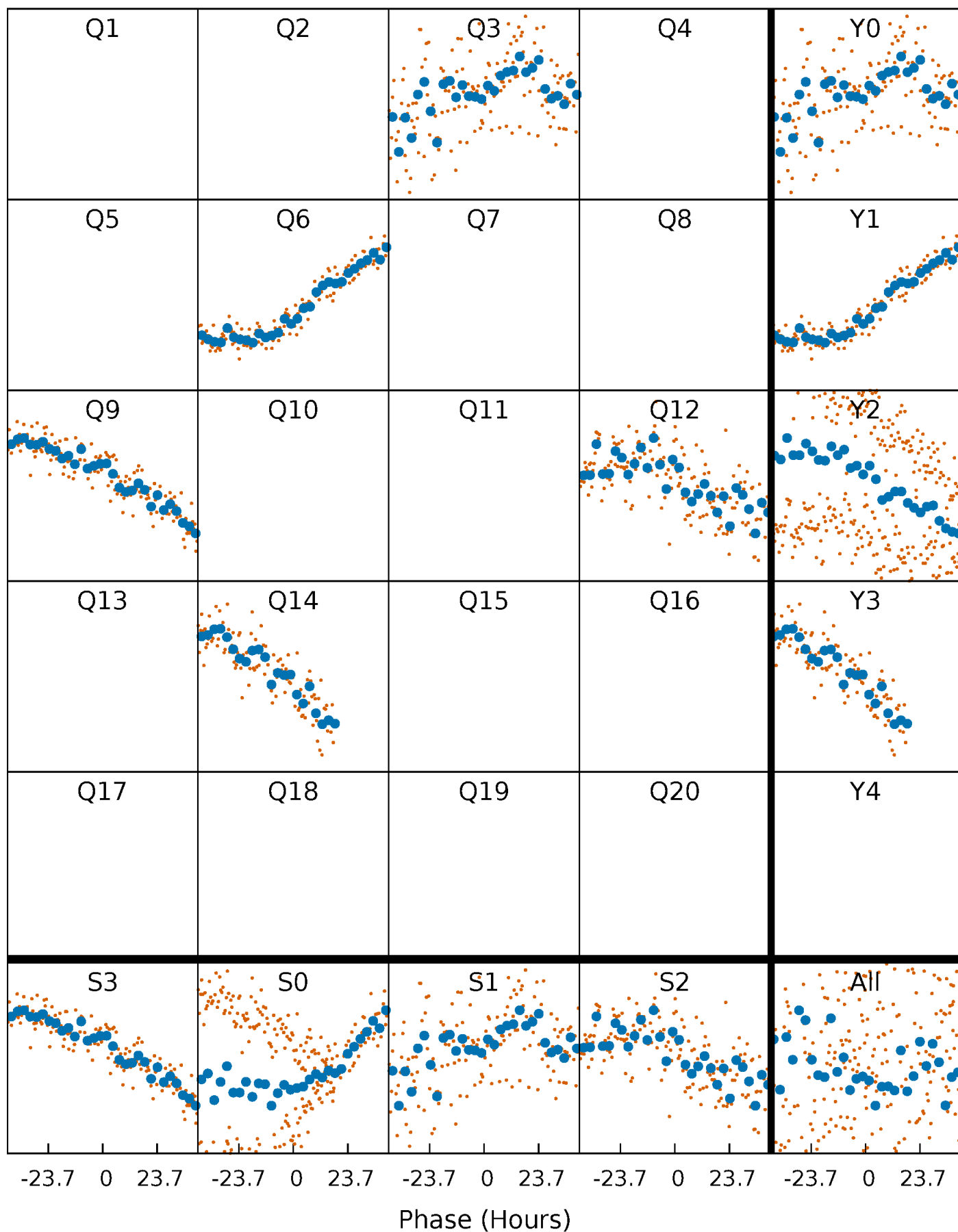


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



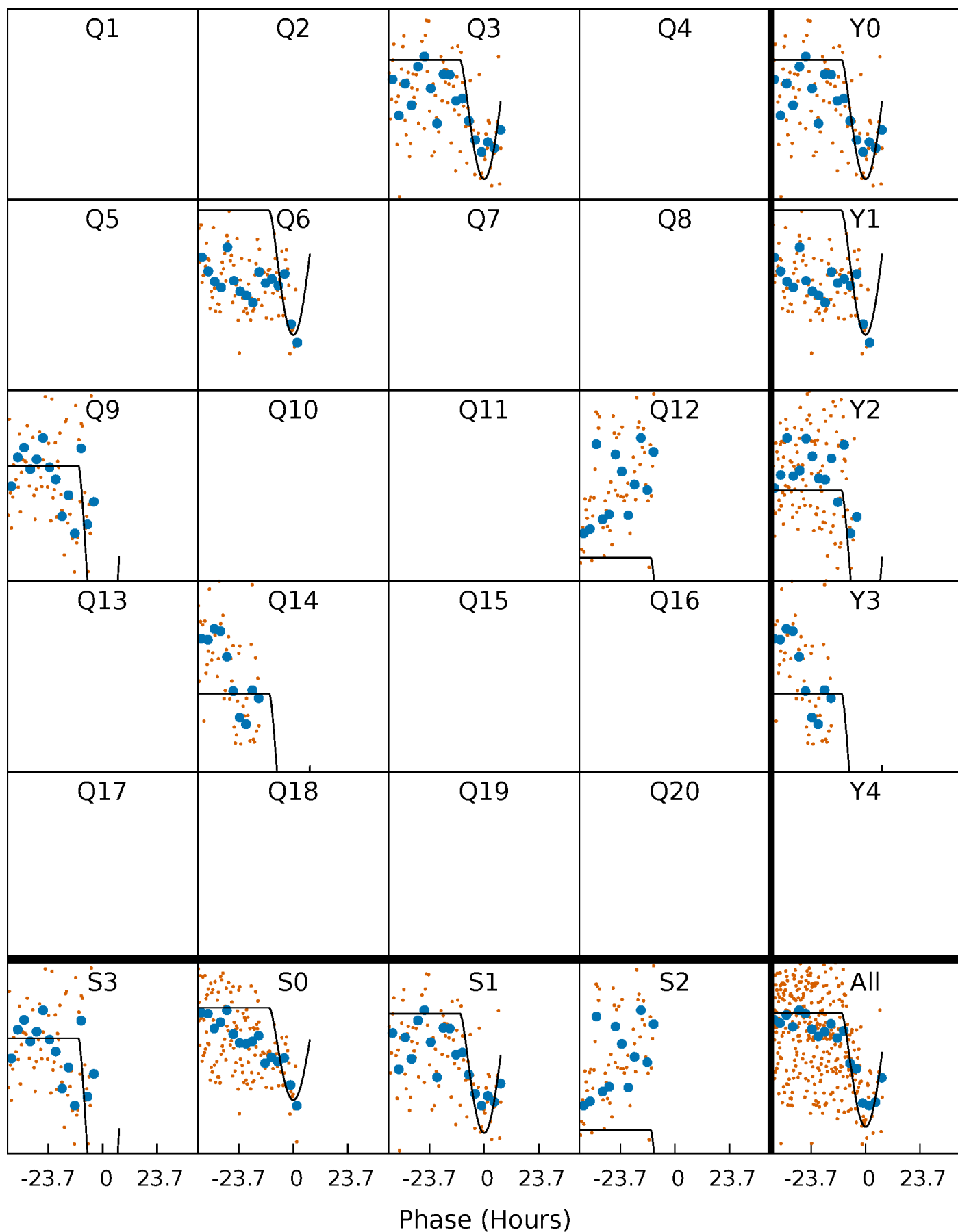
PDC Quarter-Phased Transit Curves

TCE 010621302-02 $P=265.755899$ Days $T_0=307.572227$ (BKJD)



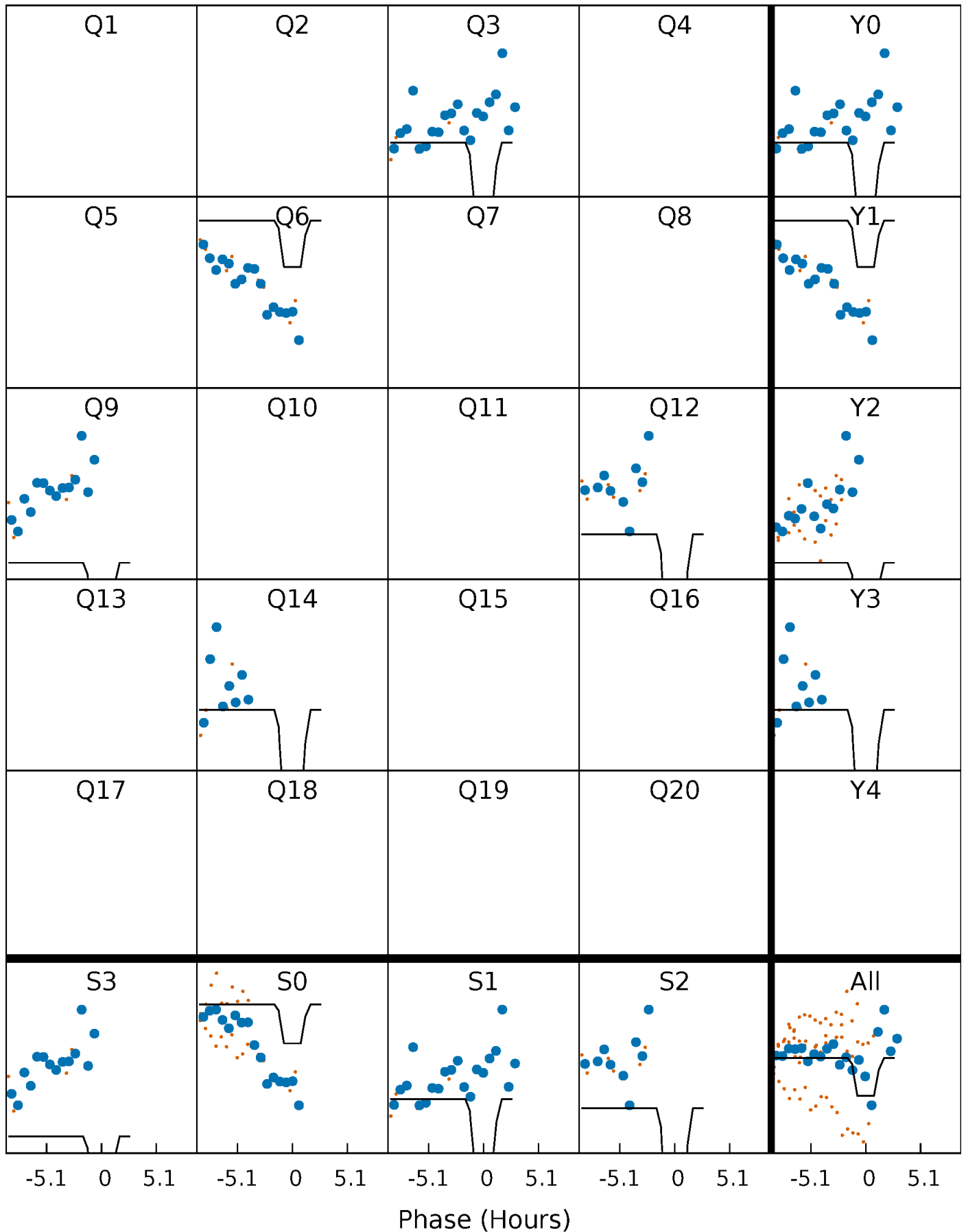
DV Quarter-Phased Transit Curves

TCE 010621302-02 $P=265.755899$ Days $T_0=307.572227$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

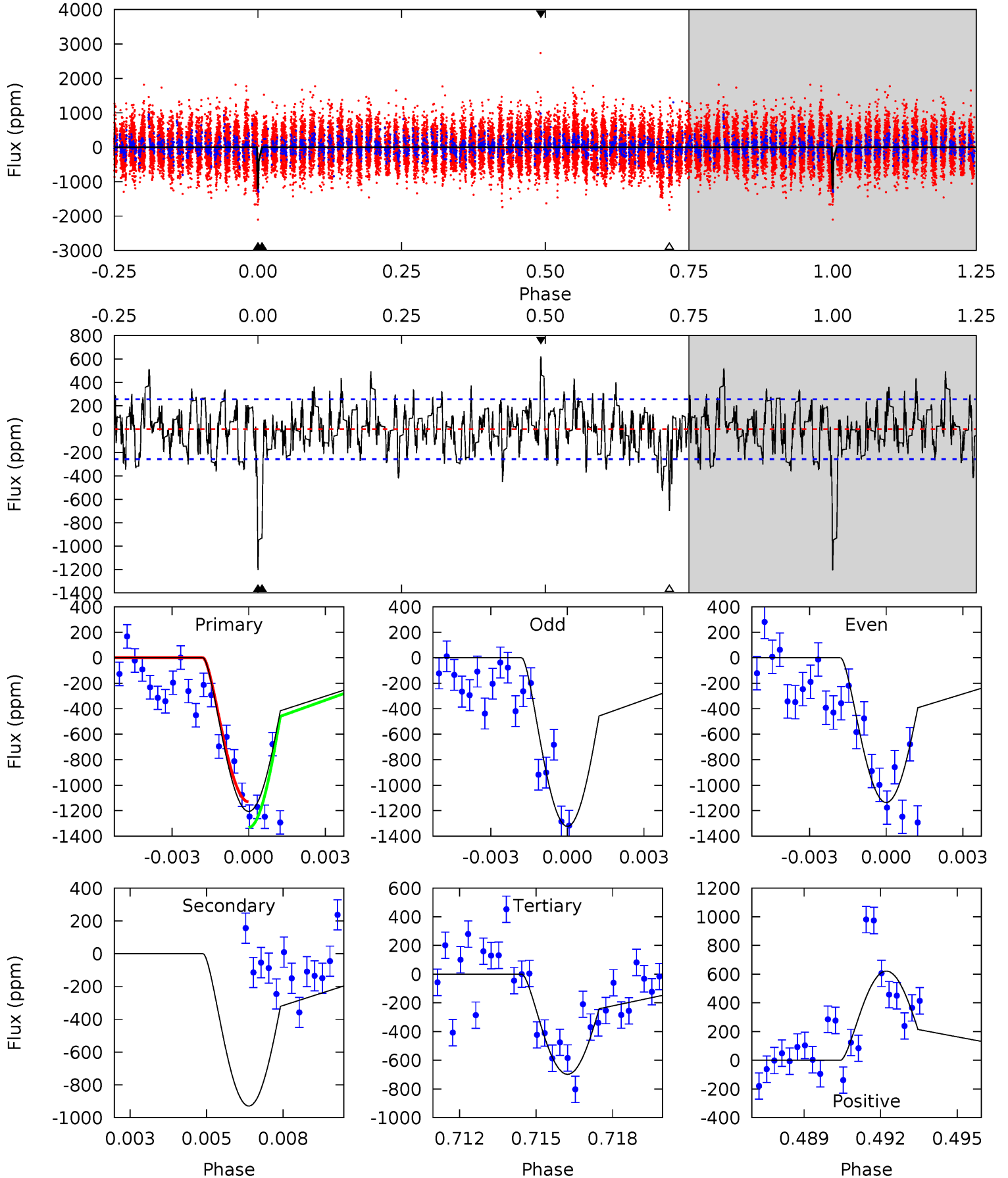
TCE 010621302-02 $P=265.595413$ Days $T_0=307.763441$ (BKJD)



DV Model-Shift Uniqueness Test

010621302-02, P = 265.755899 Days, E = 41.816328 Days

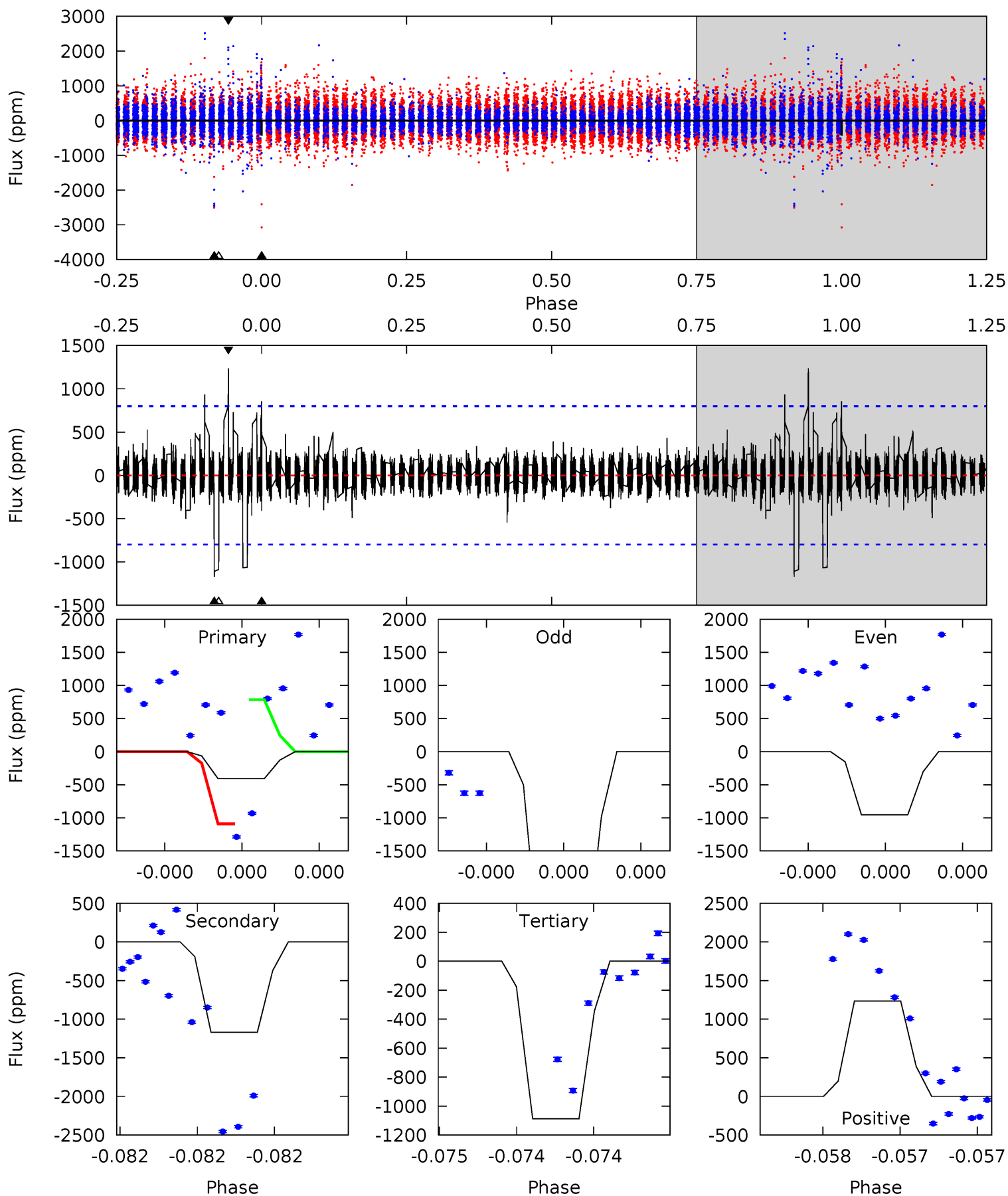
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.8	19.1	14.3	12.8	5.27	2.99	3.23	10.4	12.0	4.76	6.33	1.86	-2.78	0.34	1.77



Alt Model-Shift Uniqueness Test

010621302-02, P = 265.595413 Days, E = 42.168028 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.87	8.23	7.64	8.68	5.62	3.55	0.79	-4.77	-5.80	0.58	-0.45	9.79	-0.15	0.51	0.89



Stellar Parameters For KIC 010621302

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	4593^{+138}_{-138}	$4.667^{+0.056}_{-0.028}$	$-0.740^{+0.300}_{-0.300}$	$0.581^{+0.046}_{-0.046}$	$0.571^{+0.055}_{-0.028}$	$4.102^{+0.943}_{-0.528}$
	+3%/-3%	+1%/-1%	+41%/-41%	+8%/-8%	+10%/-5%	+23%/-13%
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 010621302-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-929 ± 49	$9.71^{+10.03}_{-6.62}$	262^{+9}_{-9}	2744^{+1046}_{-451}	2495^{+21606}_{-1880}
Alt.	-1170 ± 142	$9.22^{+9.39}_{-6.23}$	261^{+10}_{-9}	2857^{+1238}_{-476}	3474^{+28956}_{-2660}

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

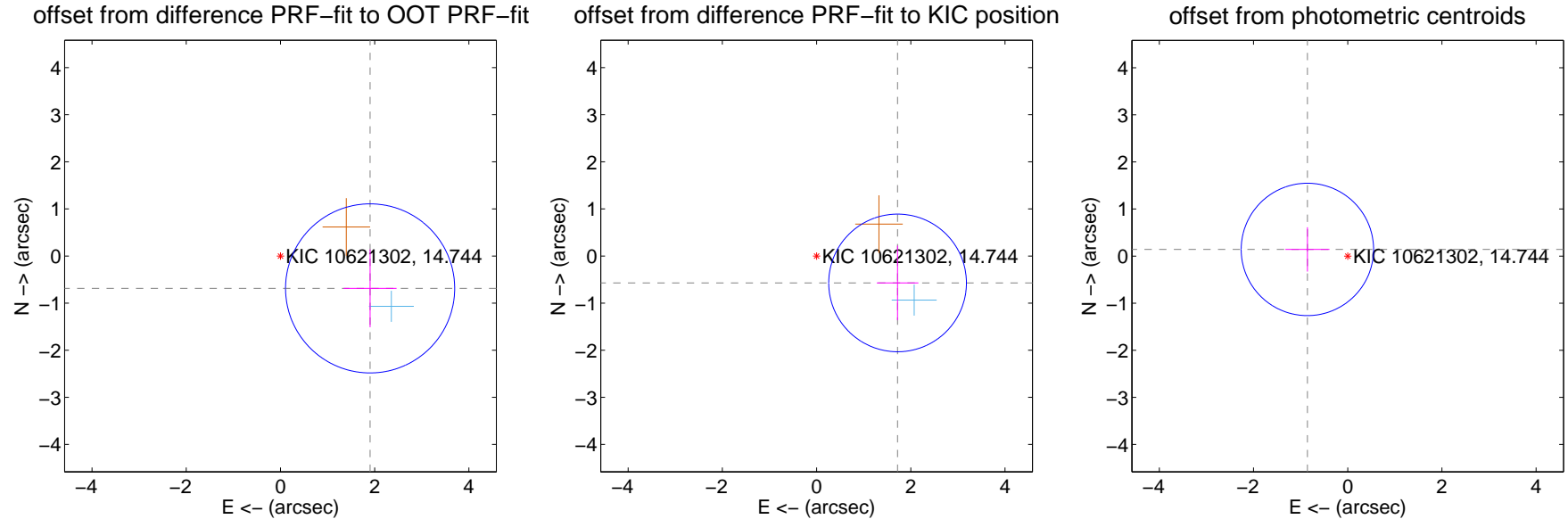
DV Centroid Data

Supplemental centroid analysis for 010621302-02. Kepler magnitude: 14.74. Transit SNR 12.37

There are 1 quarters with good PRF difference image offsets

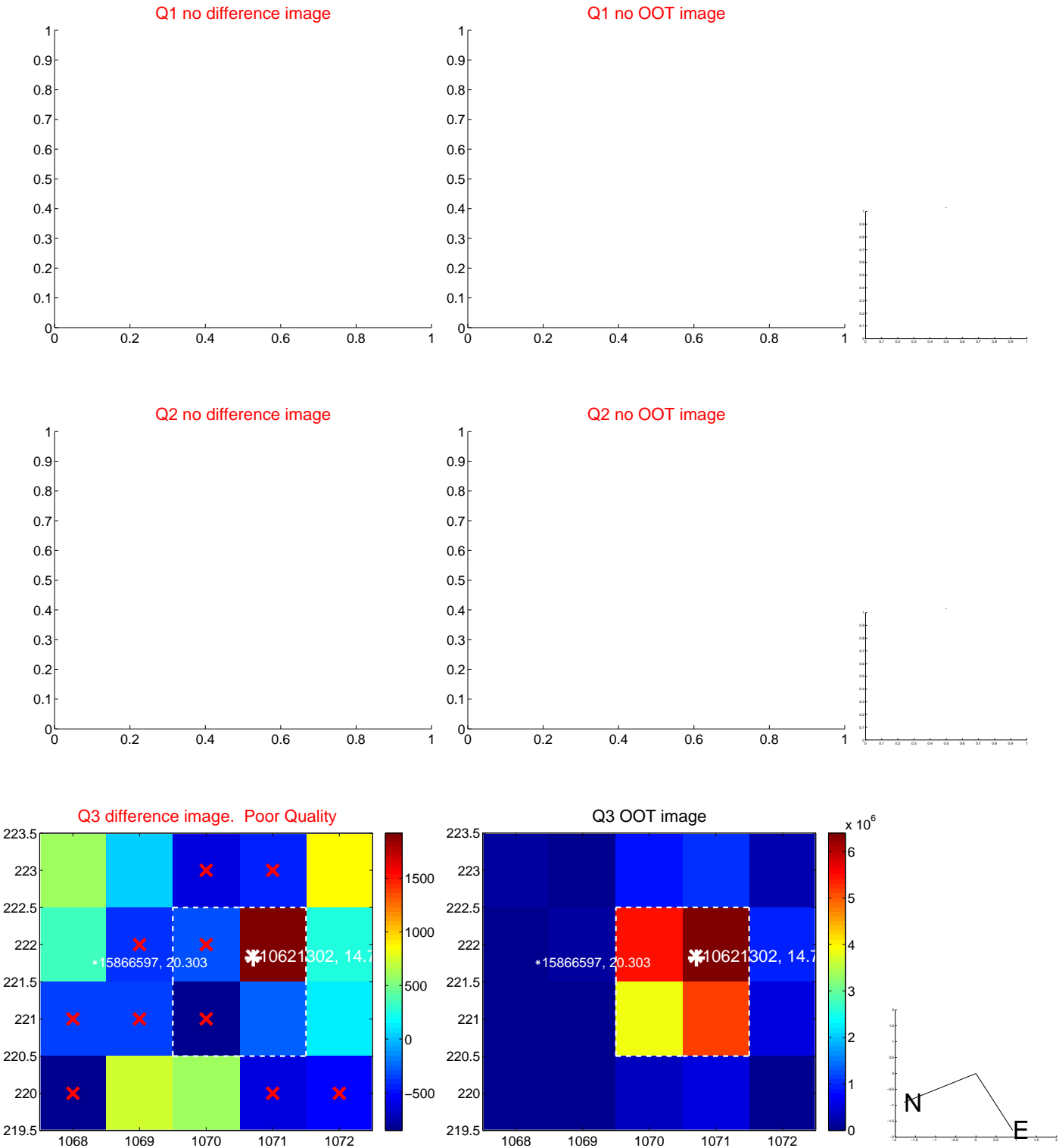
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.023 ± 0.598	3.38	-1.903 ± 0.562	-0.687 ± 0.826
PRF-fit source offset from KIC position	1.811 ± 0.487	3.72	-1.719 ± 0.441	-0.571 ± 0.791
photometric centroid source offset	0.87 ± 0.47	1.85	0.86 ± 0.47	0.14 ± 0.47

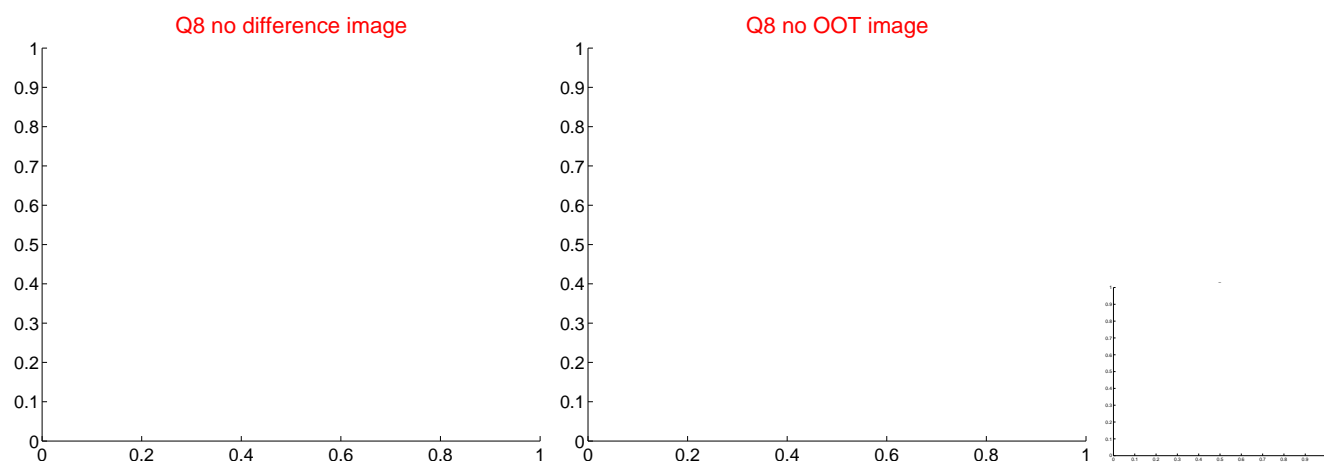
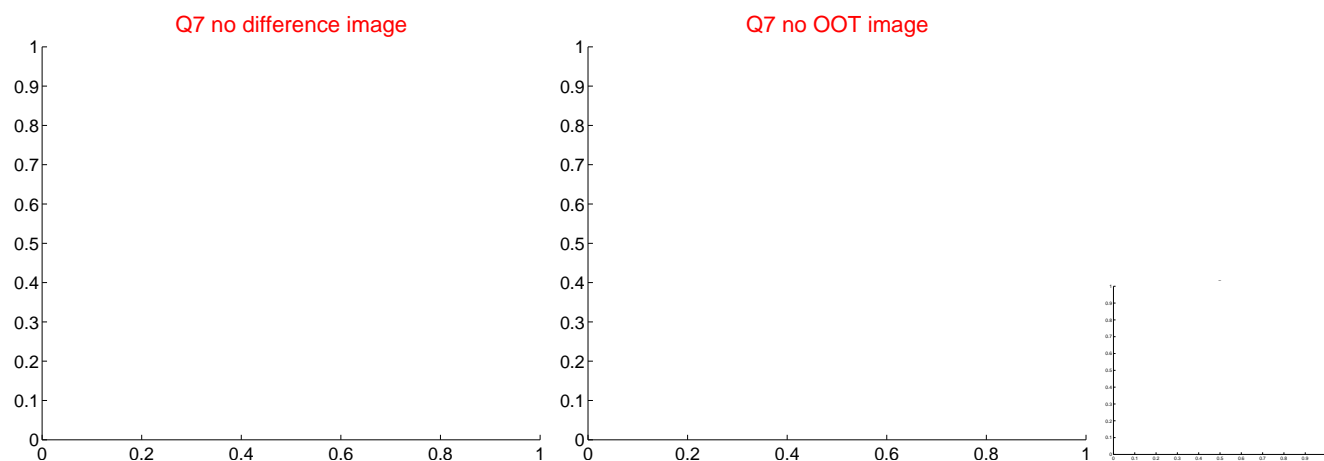
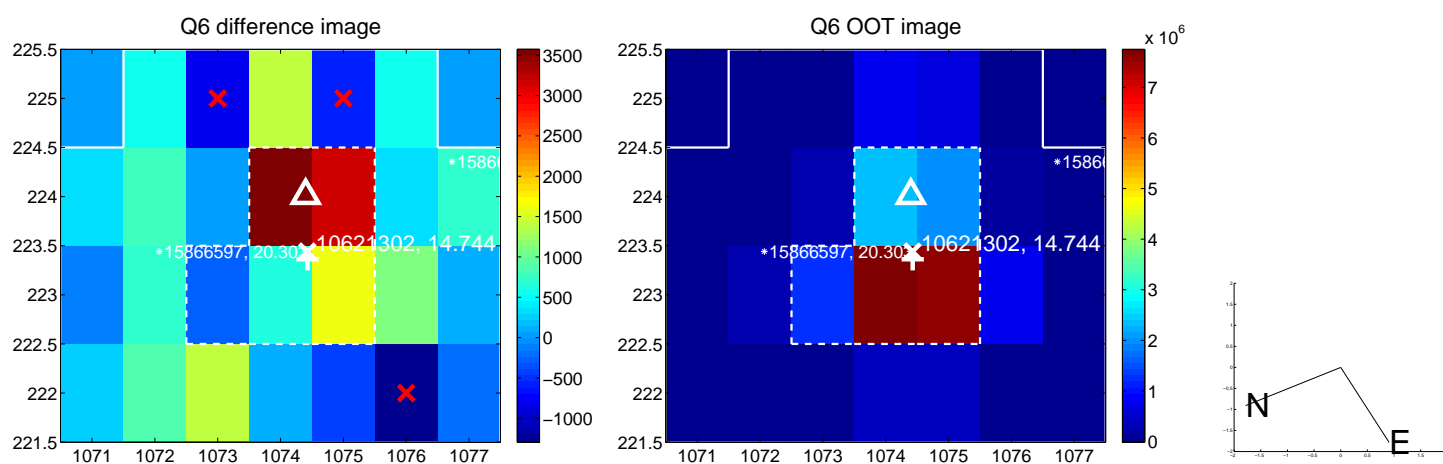
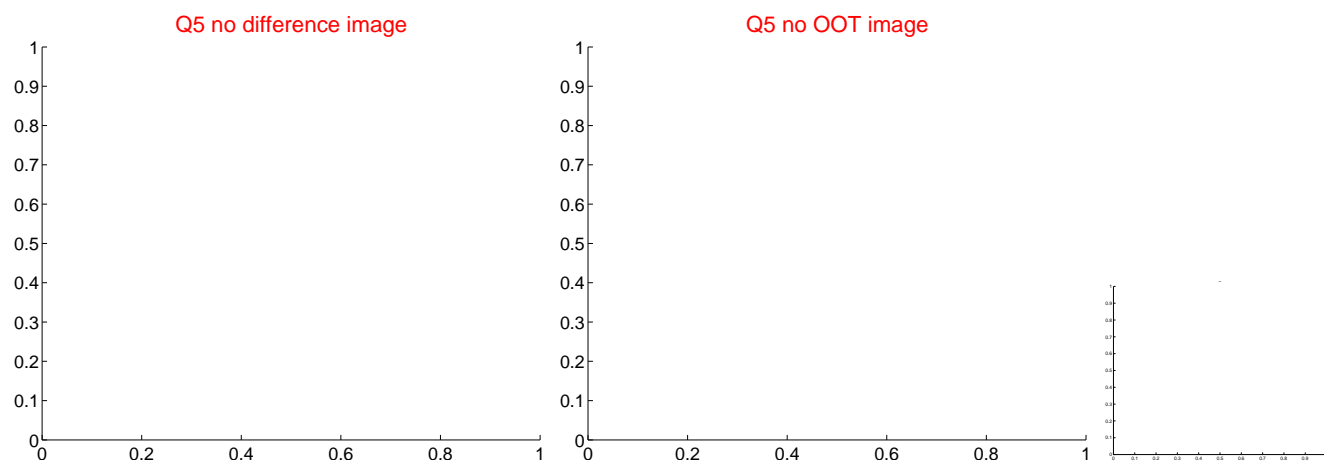


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

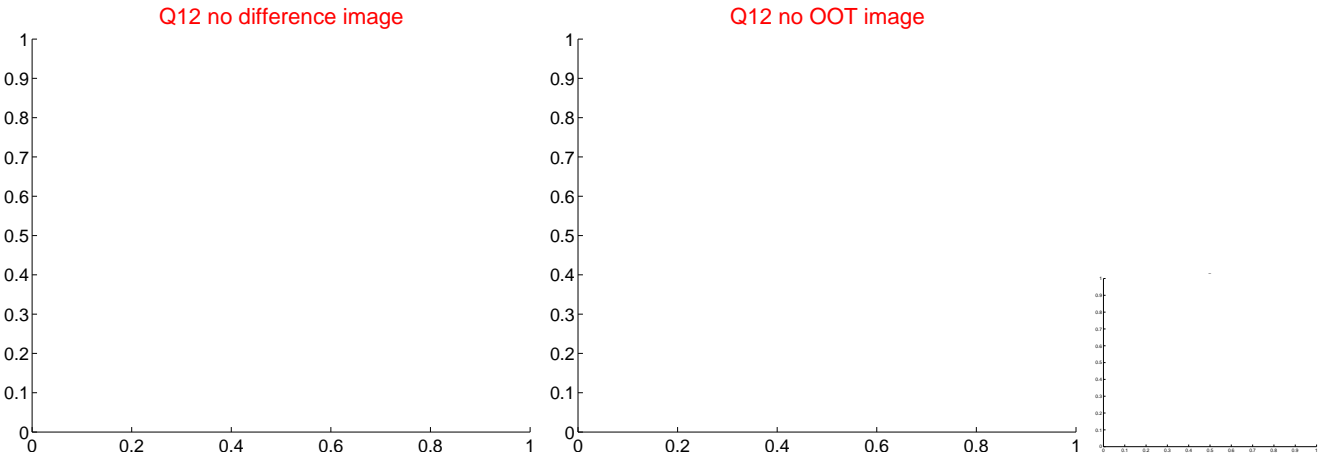
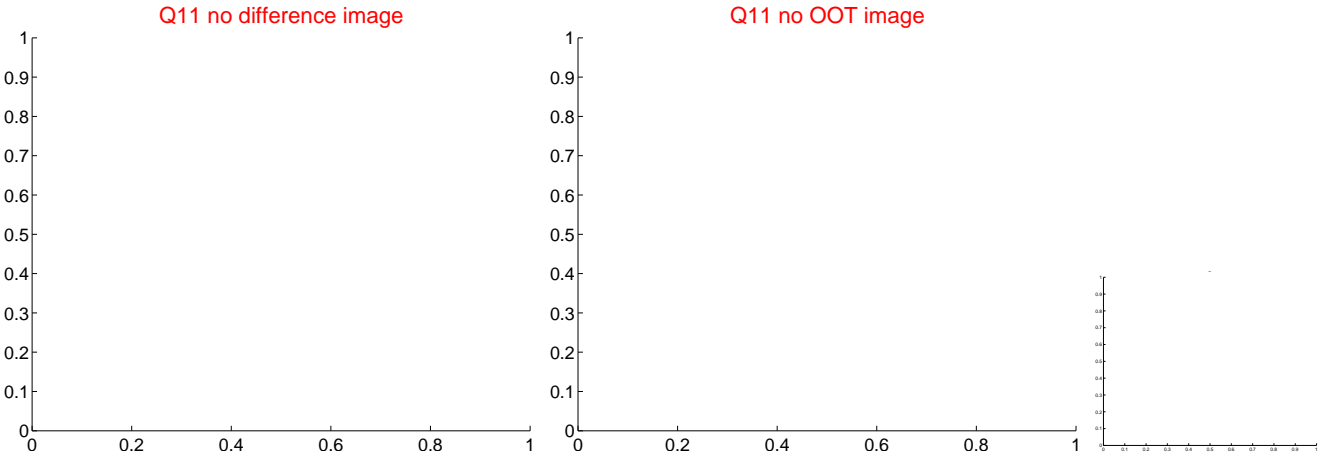
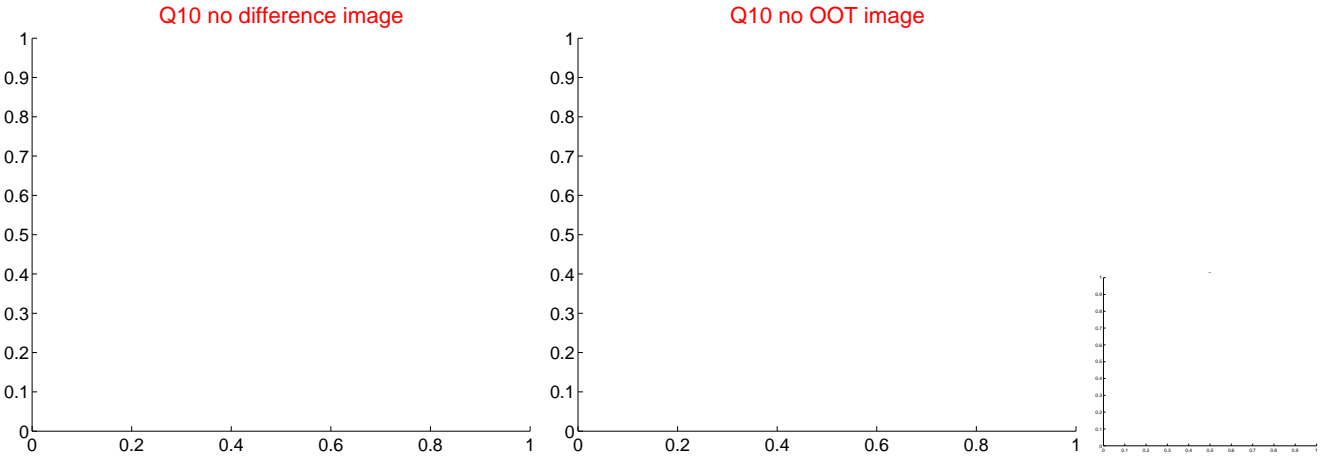
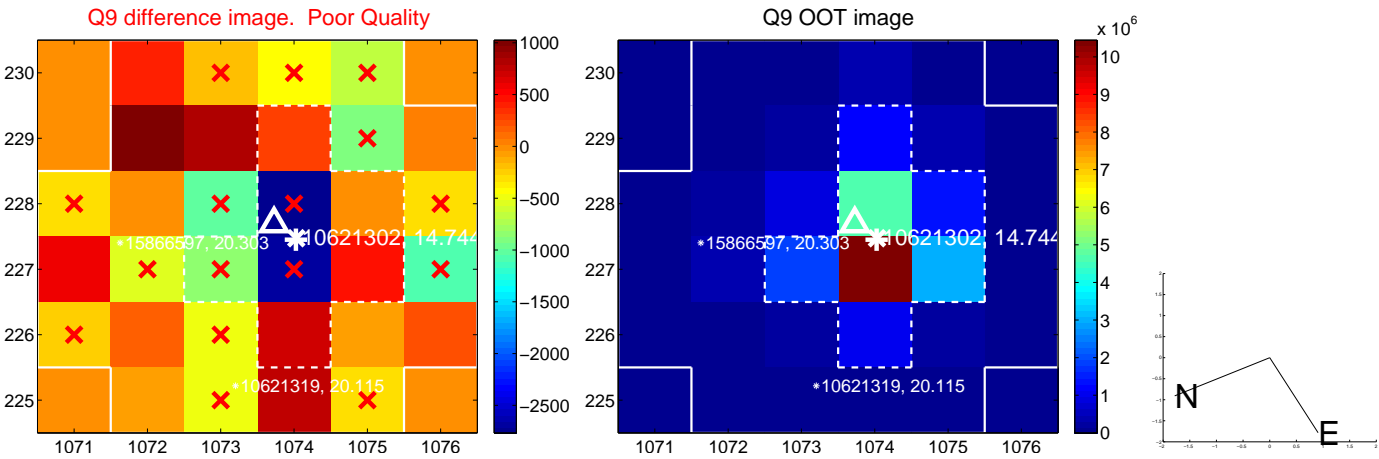
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



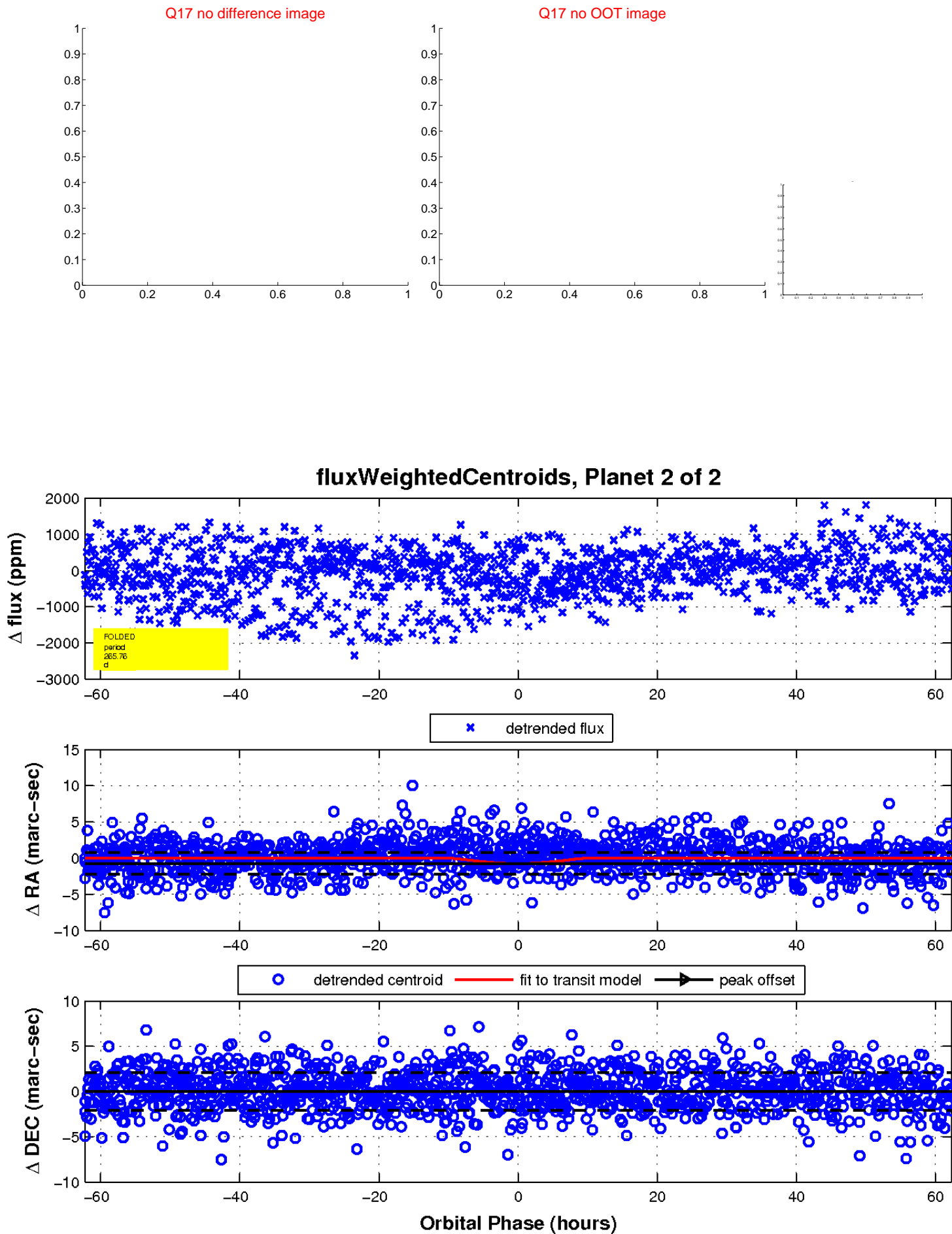
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

