

KIC 005721628

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})
005721628-01	OBS	No	1.210461	132.733338	38.6	3.341	9.3	9.4	2.01	7758	1.55	18890.08
005721628-02	OBS	No	1.210410	131.944824	30.3	4.704	9.5	8.5	2.01	7758	1.29	18891.14
005721628-03	OBS	No	361.870530	311.680070	442.3	6.540	8.0	7.2	2.01	7758	4.73	9.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005721628-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_RESOLVED_OFFSET
005721628-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
005721628-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

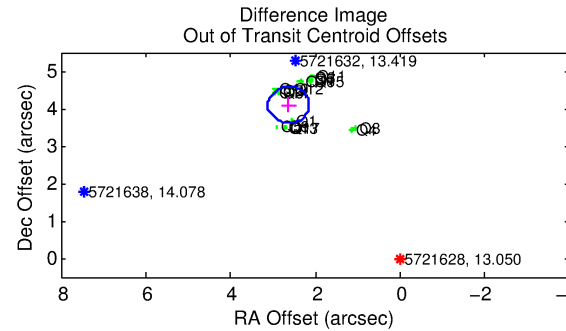
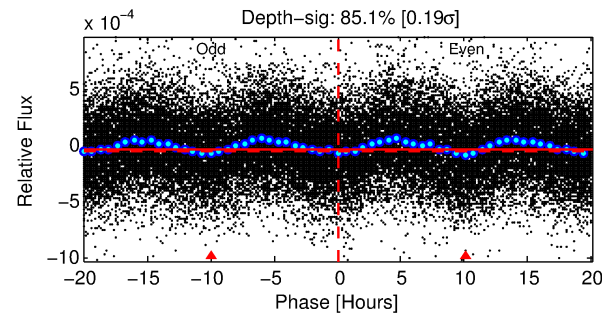
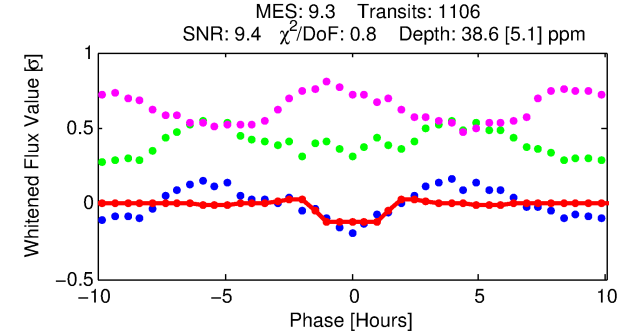
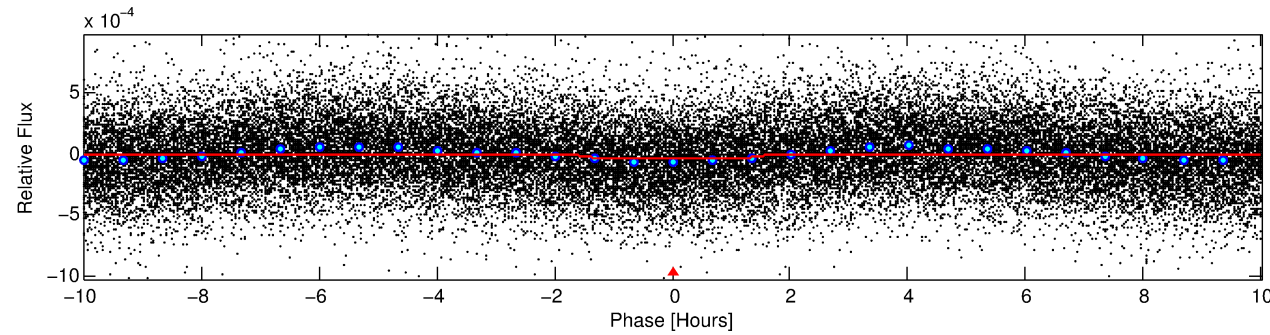
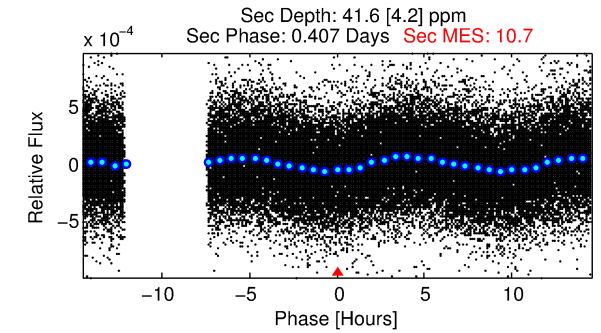
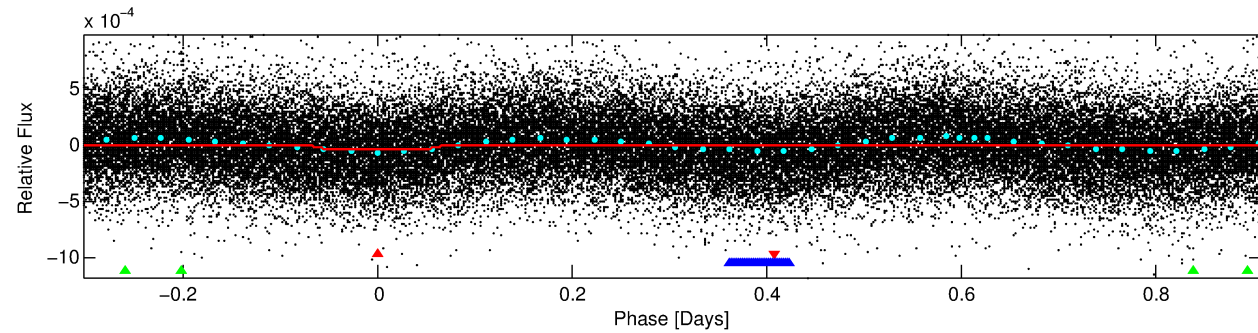
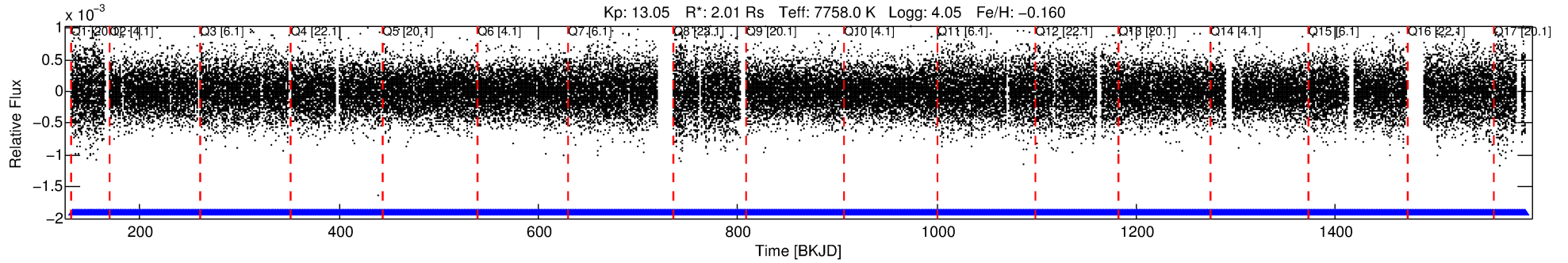
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005721628-01

No Significant Match Found

DV One-Page Summary

KIC: 5721628 Candidate: 1 of 3 Period: 1.210 d



DV Fit Results:

Period = 1.21046 [0.00001] d
Epoch = 132.7333 [0.0035] BKJD
Rp/R* = 0.0071 [0.0016]
a/R* = 1.30 [0.78]
b = 0.96 [0.13]
Seff = 18890.08 [4003.90]
Teq = 2989 [158] K
Rp = 1.55 [0.44] Re
a = 0.0264 [0.0037] AU
Ag = 6.59 [3.41] [1.64σ]
Teffp = 7405 [882] K [4.93σ]

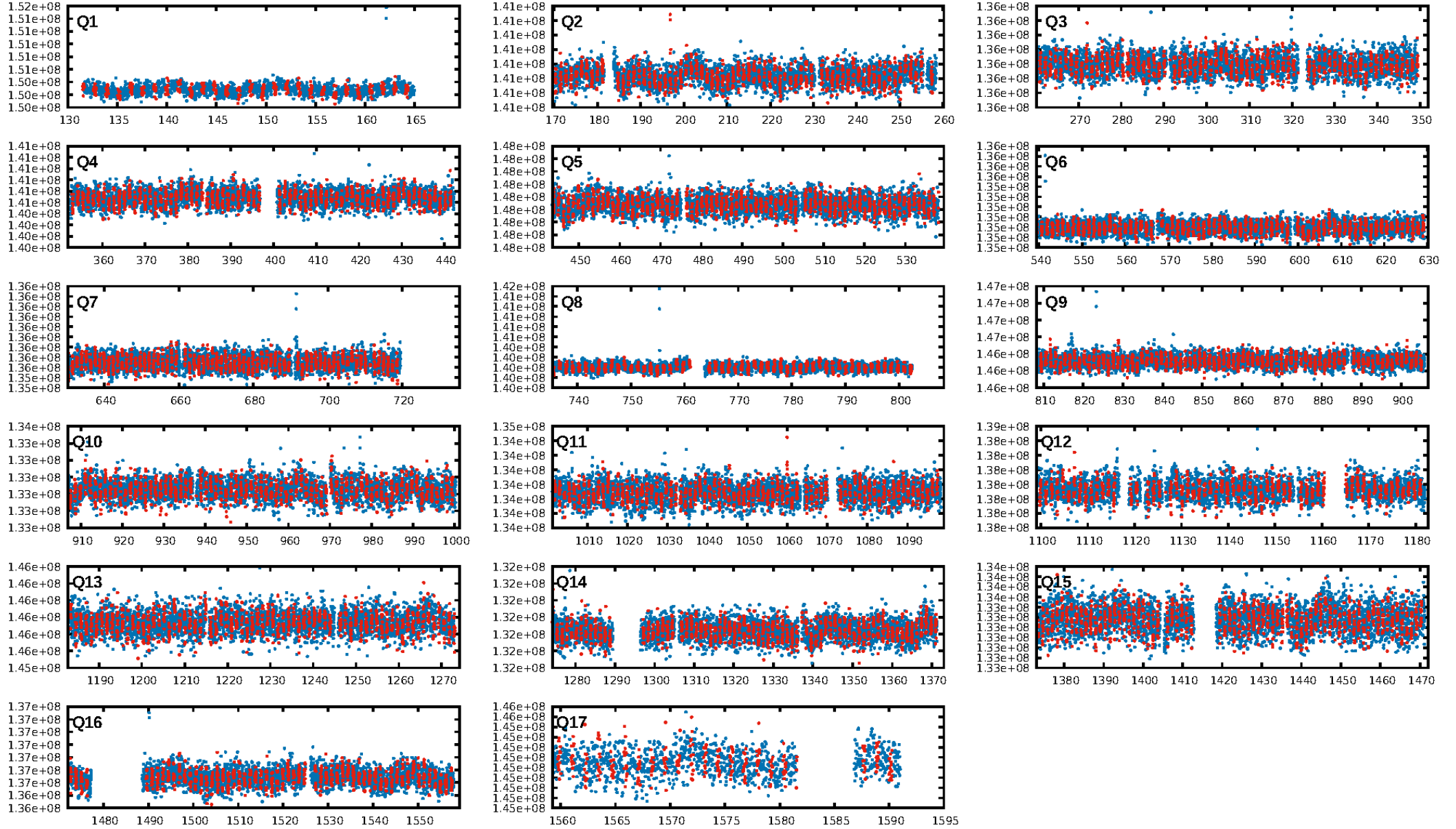
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: 100.0% [1178.67σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.08e-13
RollingBand-fgt: 1.00 [1056/1056]
GhostDiagnostic-chr: -6.045
Centroid-sig: 1.8%
Centroid-so: 3.191 arcsec [2.86σ]
OotOffset-rm: 4.868 arcsec [30.18σ]
KicOffset-rm: 5.790 arcsec [83.12σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

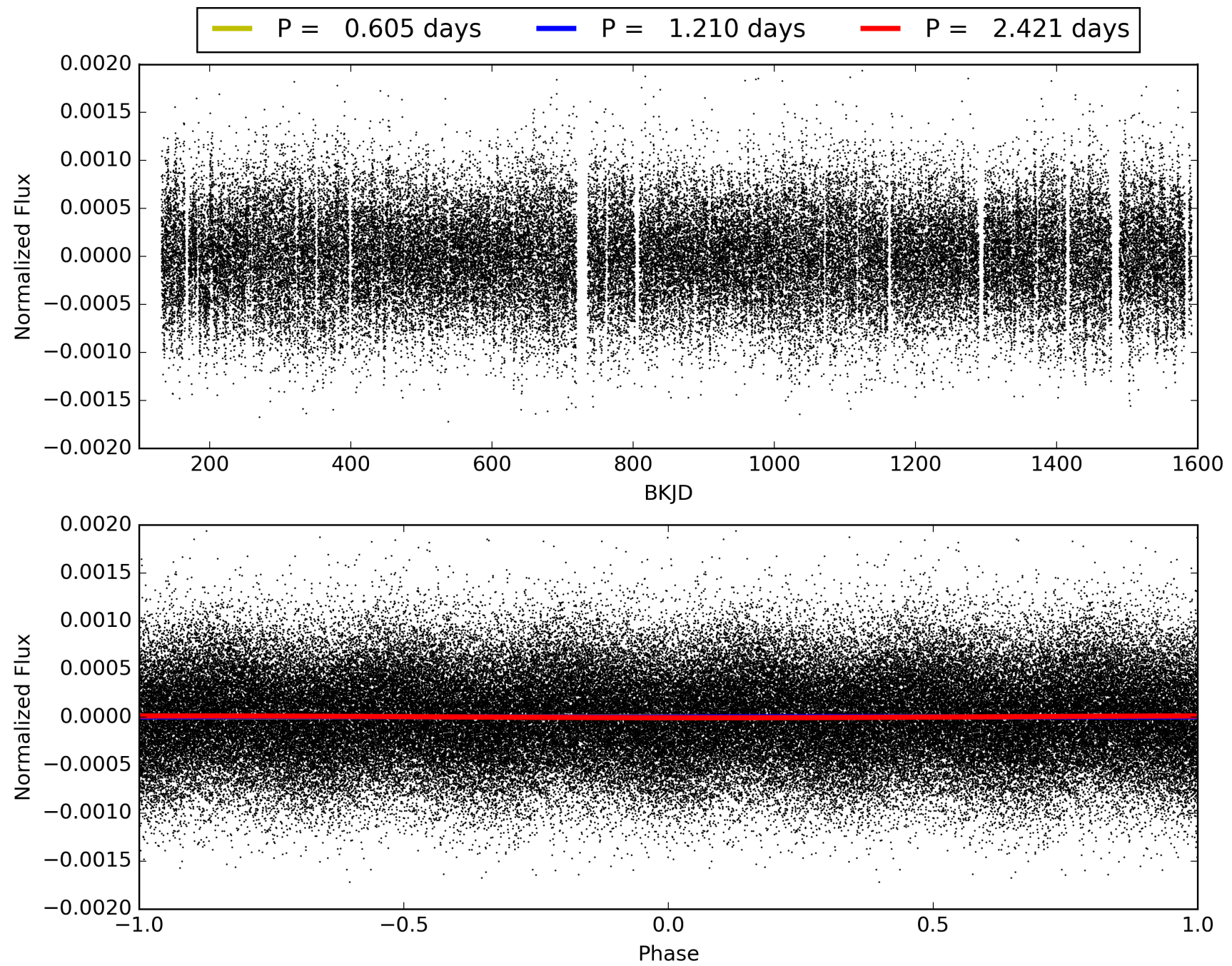
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005721628-01, PDC Light Curves

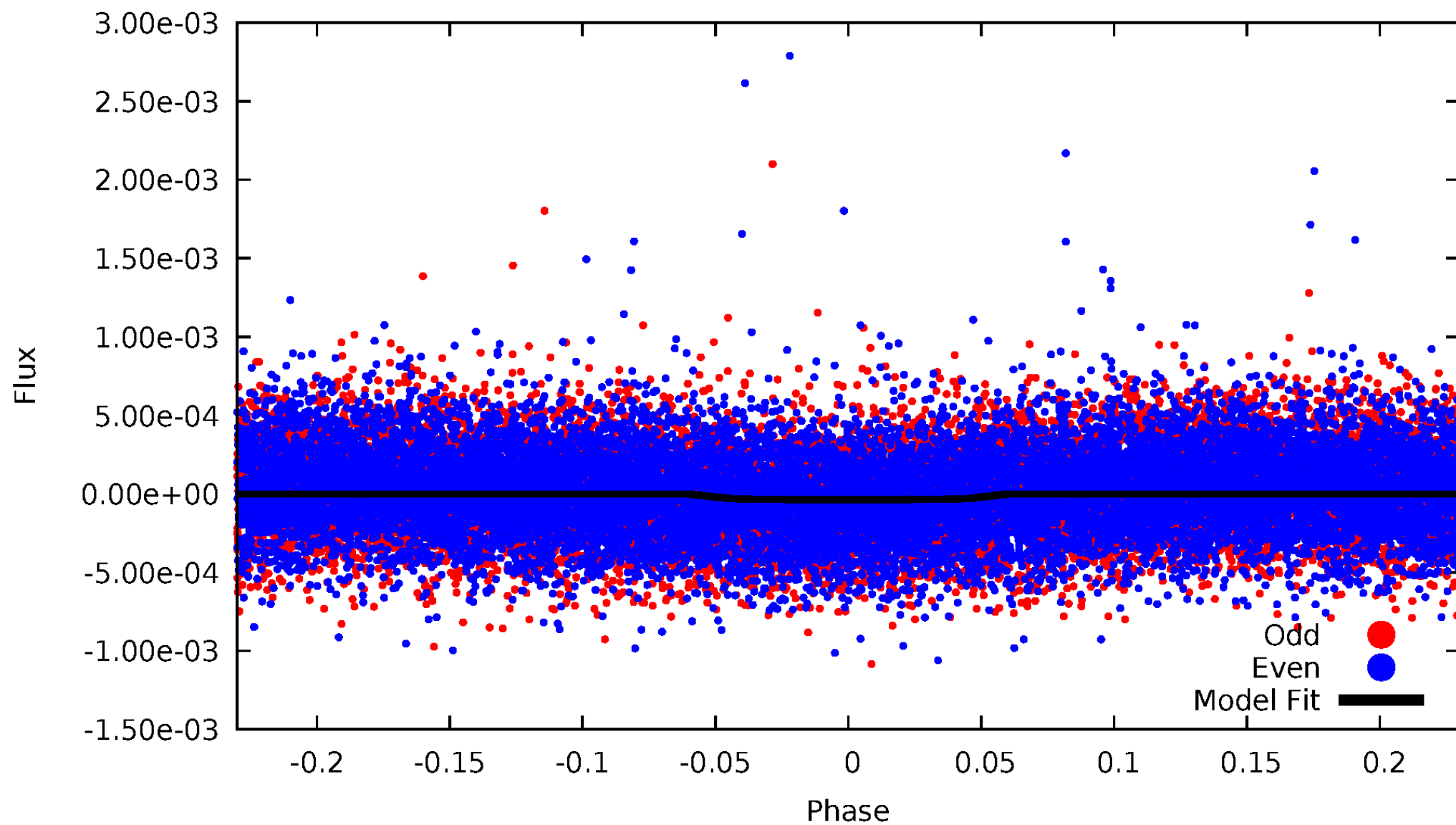


TCE 005721628-01



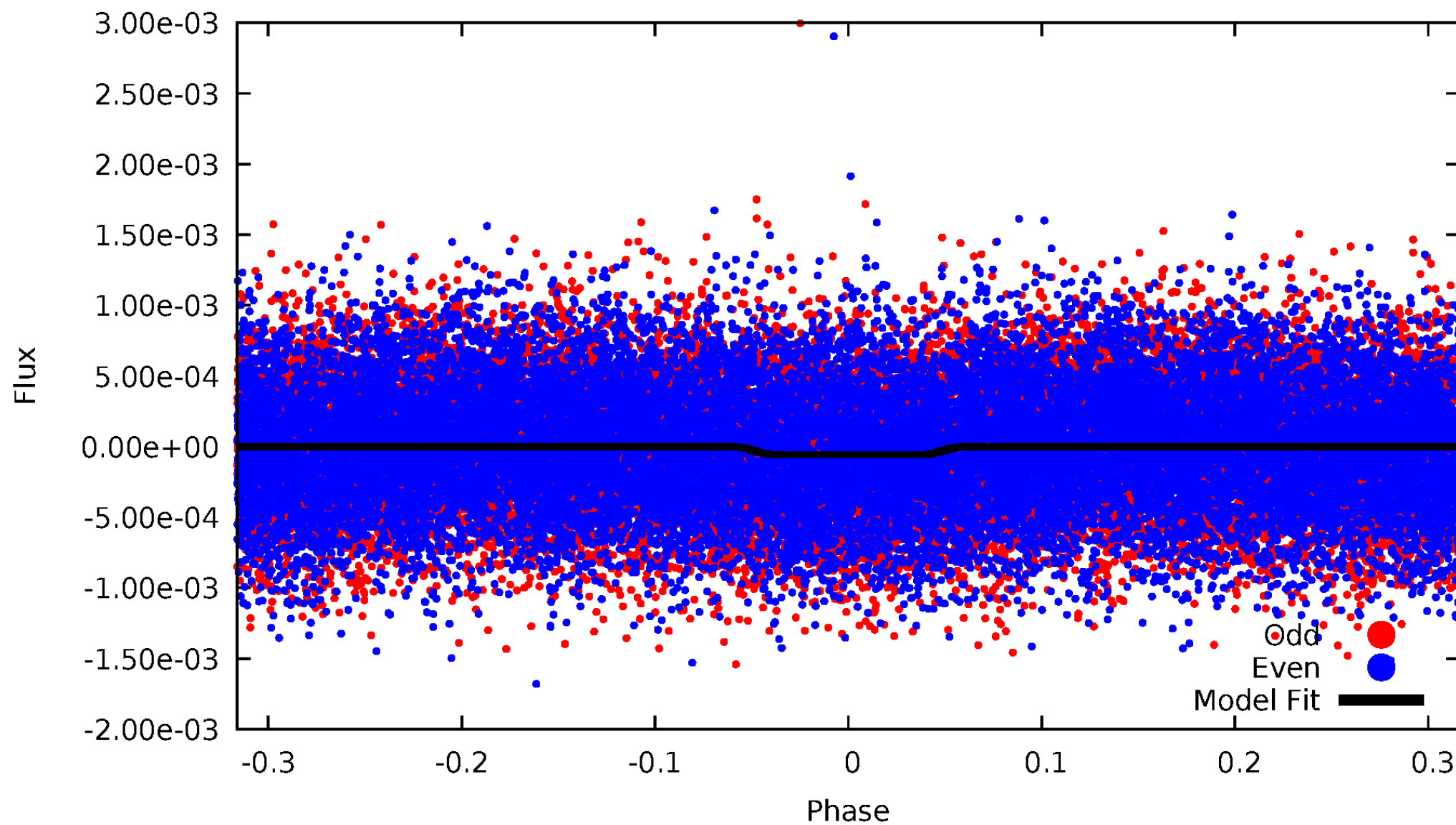
DV Odd/Even

TCE 005721628-01

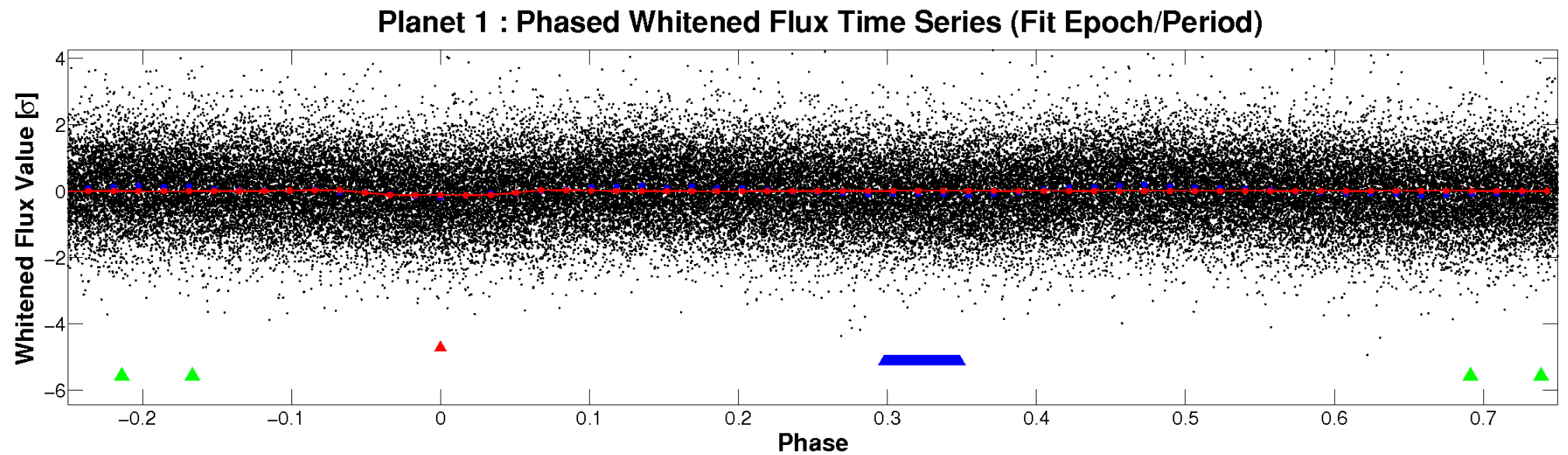
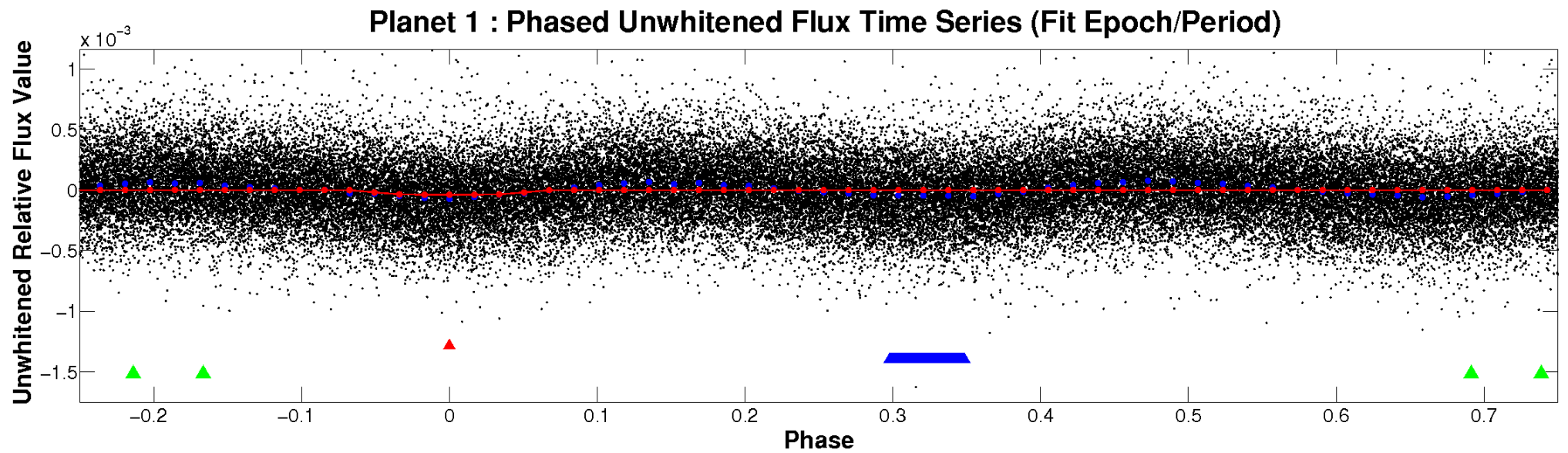


ALT Odd/Even

TCE 005721628-01

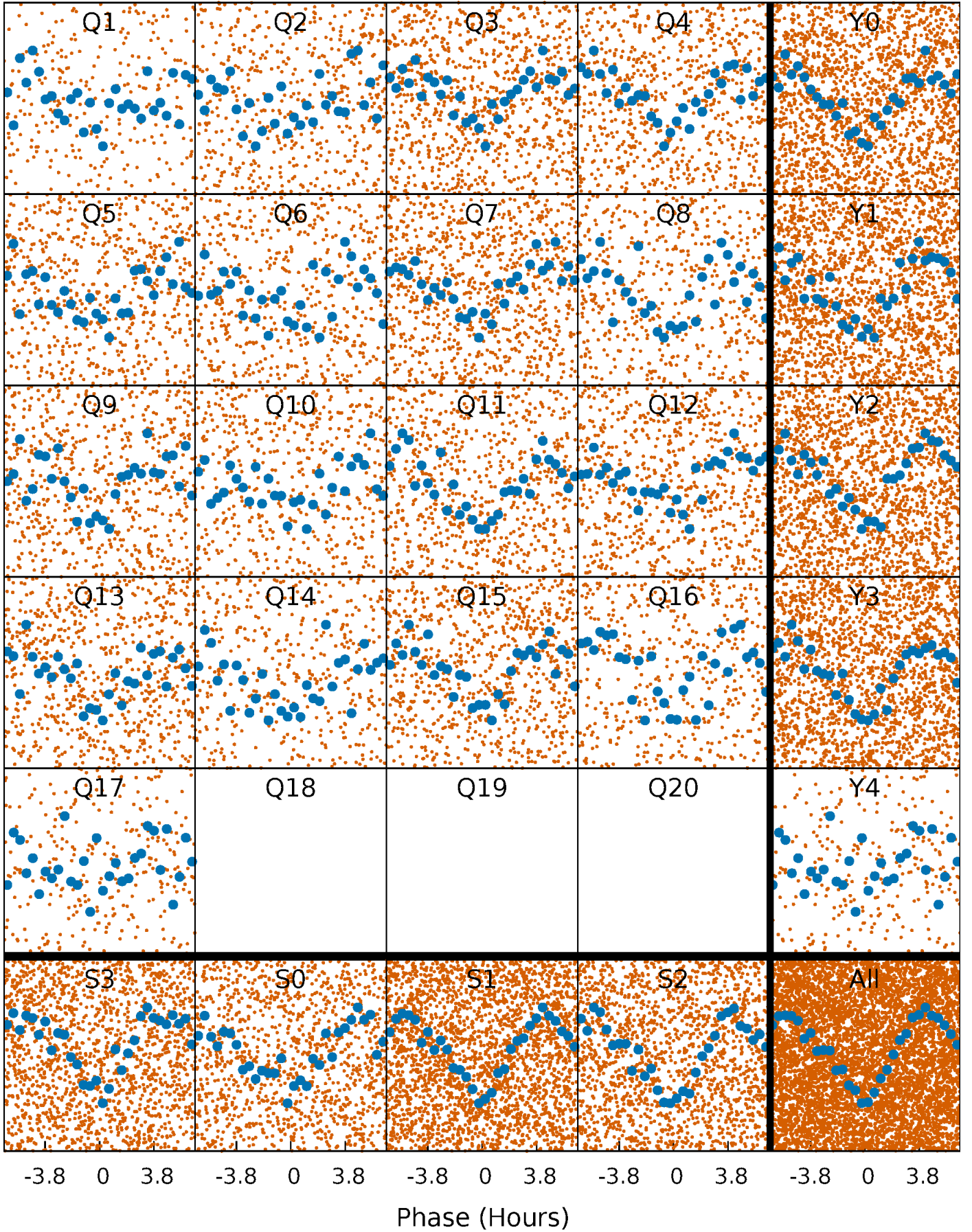


Non-Whitened Vs. Whitened Light Curve



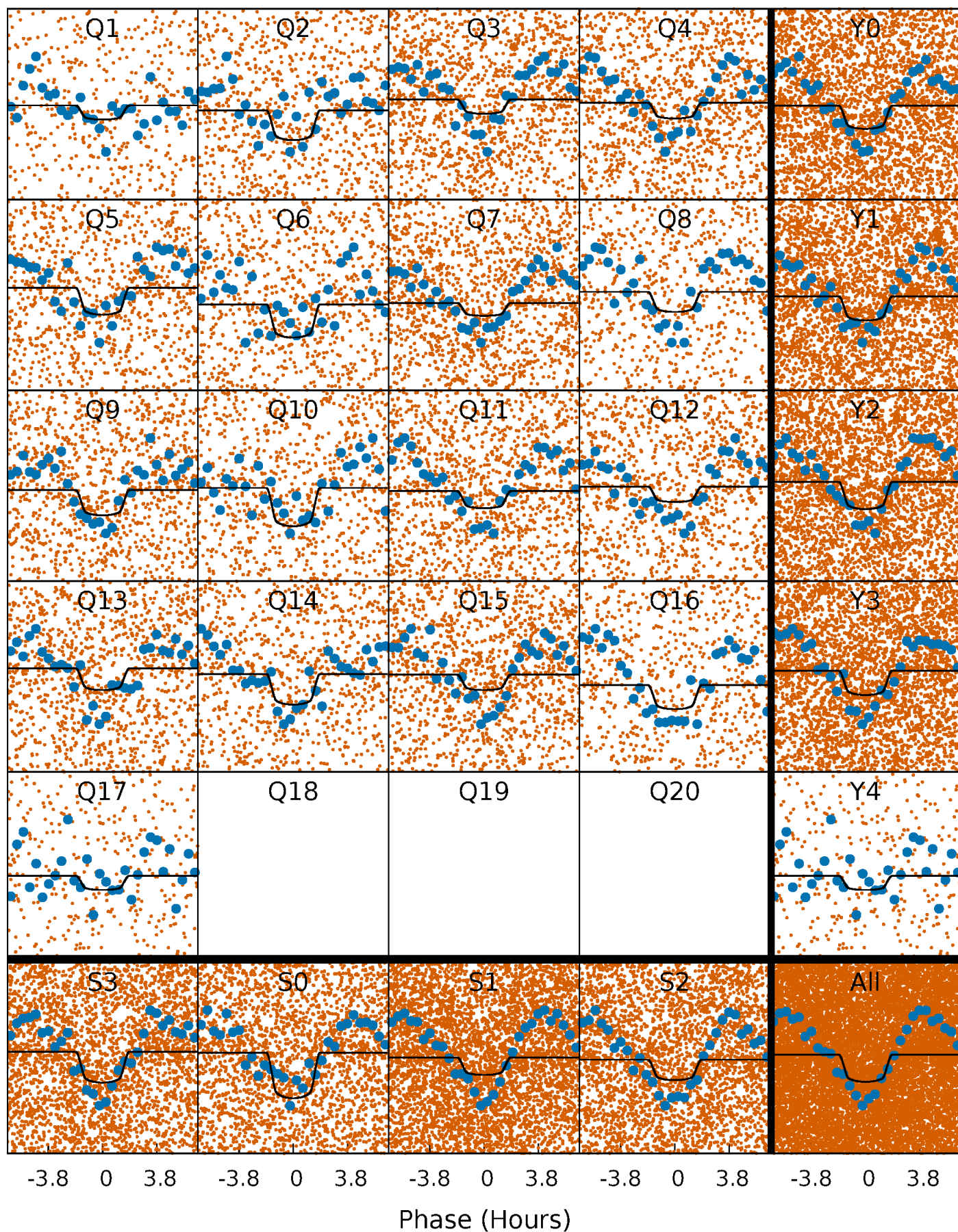
PDC Quarter-Phased Transit Curves

TCE 005721628-01 P= 1.210461 Days $T_0=132.733338$ (BKJD)



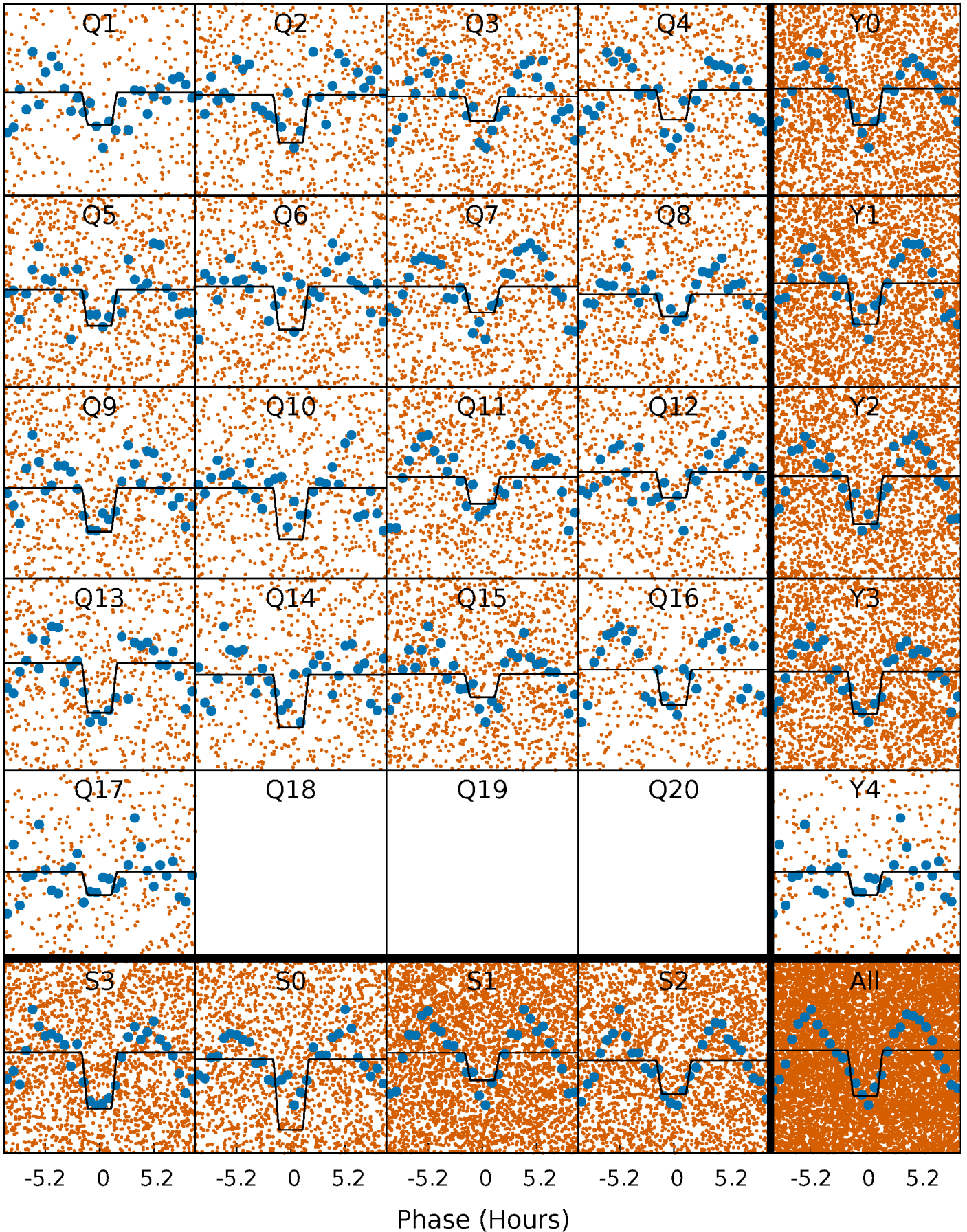
DV Quarter-Phased Transit Curves

TCE 005721628-01 P= 1.210461 Days $T_0=132.733338$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

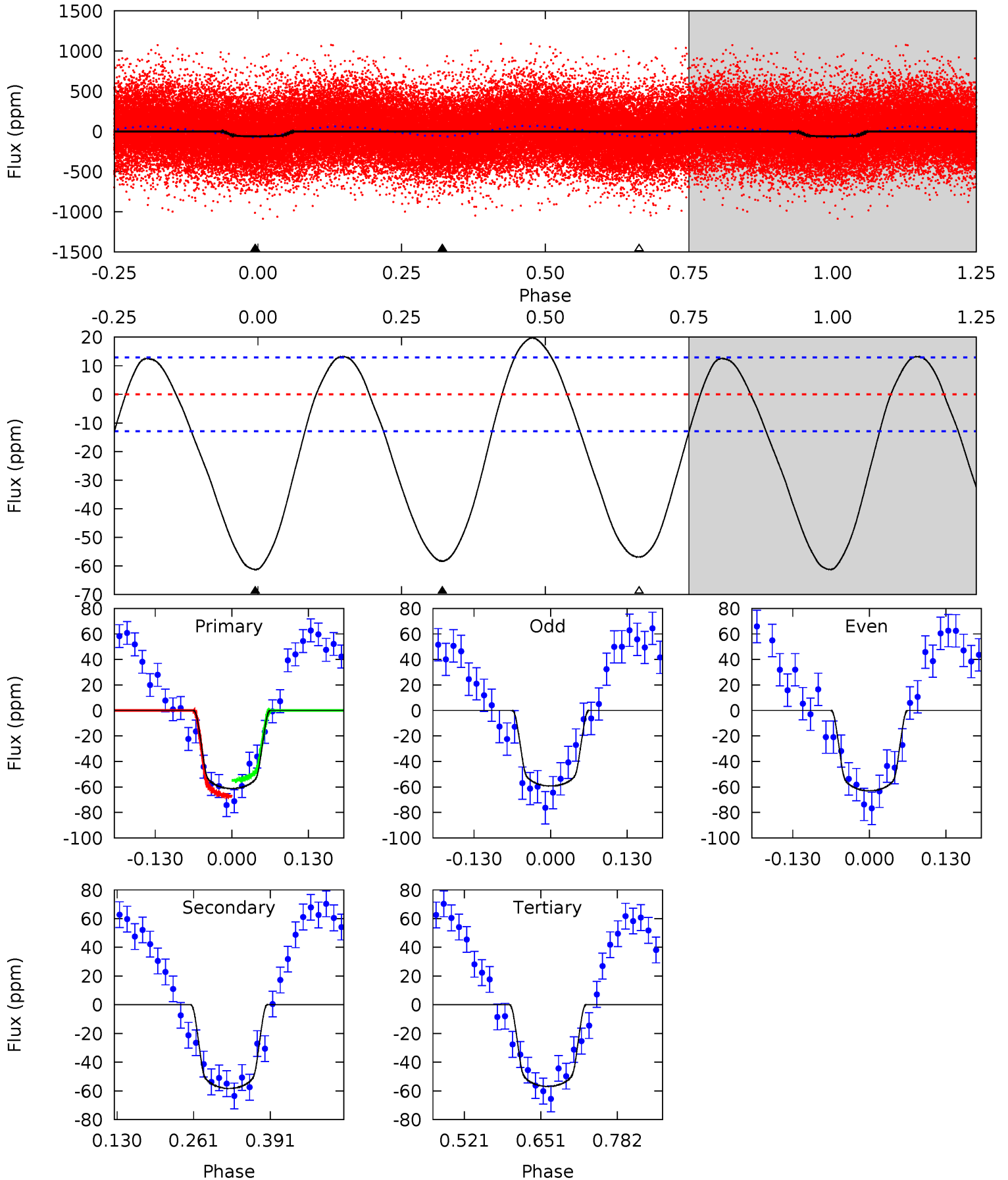
TCE 005721628-01 P= 1.210480 Days $T_0=132.714804$ (BKJD)



DV Model-Shift Uniqueness Test

005721628-01, P = 1.210461 Days, E = 130.312416 Days

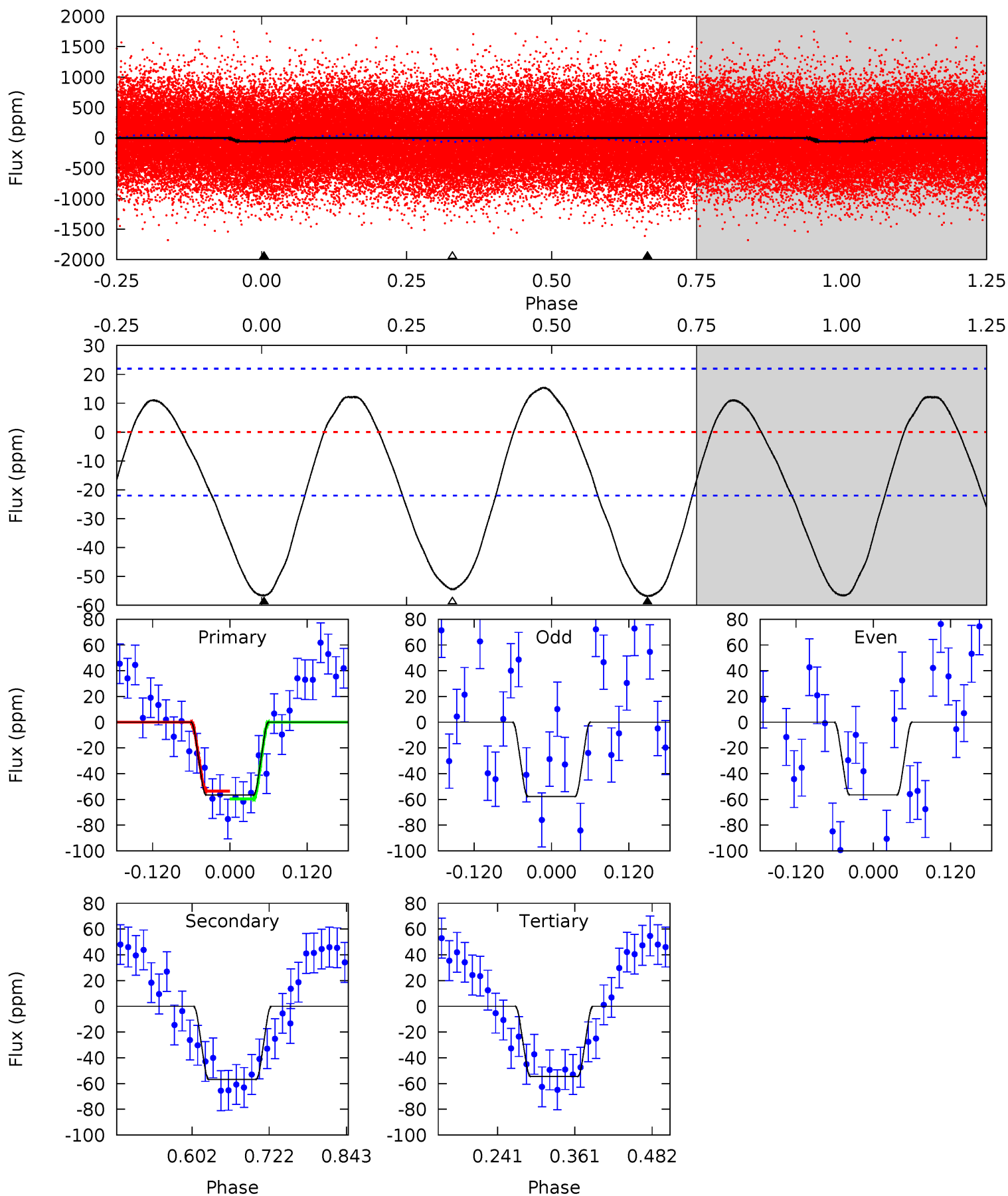
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.4	20.4	19.9	0	4.51	1.51	9.13	1.53	21.4	0.49	20.4	0.66	0.97	0.24	2.18



Alt Model-Shift Uniqueness Test

005721628-01, P = 1.210480 Days, E = 131.504324 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	11.7	11.2	0	4.53	1.55	4.86	0.44	11.6	0.48	11.7	0.13	1.04	0.21	0.63



Stellar Parameters For KIC 005721628

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7758^{+77}_{-77}	$4.053^{+0.115}_{-0.103}$	$-0.160^{+0.150}_{-0.150}$	$2.011^{+0.333}_{-0.300}$	$1.664^{+0.163}_{-0.133}$	$0.288^{+0.149}_{-0.099}$
	+1%/-1%	+3%/-3%	+94%/-94%	+17%/-15%	+10%/-8%	+52%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005721628-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-58 ± 3	$1.57^{+0.38}_{-0.41}$	4184^{+161}_{-172}	7989^{+1676}_{-937}	$9.088^{+7.911}_{-3.305}$
Alt.	-57 ± 5	$1.66^{+0.41}_{-0.38}$	4171^{+176}_{-172}	7651^{+1254}_{-917}	$7.850^{+5.095}_{-2.826}$

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

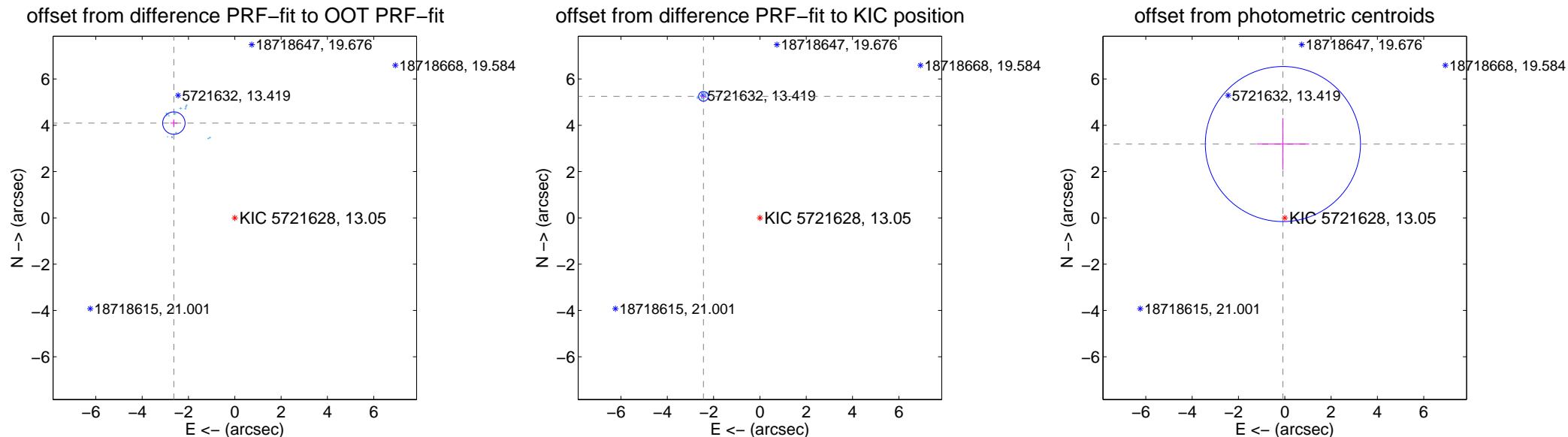
DV Centroid Data

Supplemental centroid analysis for 005721628-01. Kepler magnitude: 13.05. Transit SNR 9.45

There are 17 quarters with good PRF difference image offsets

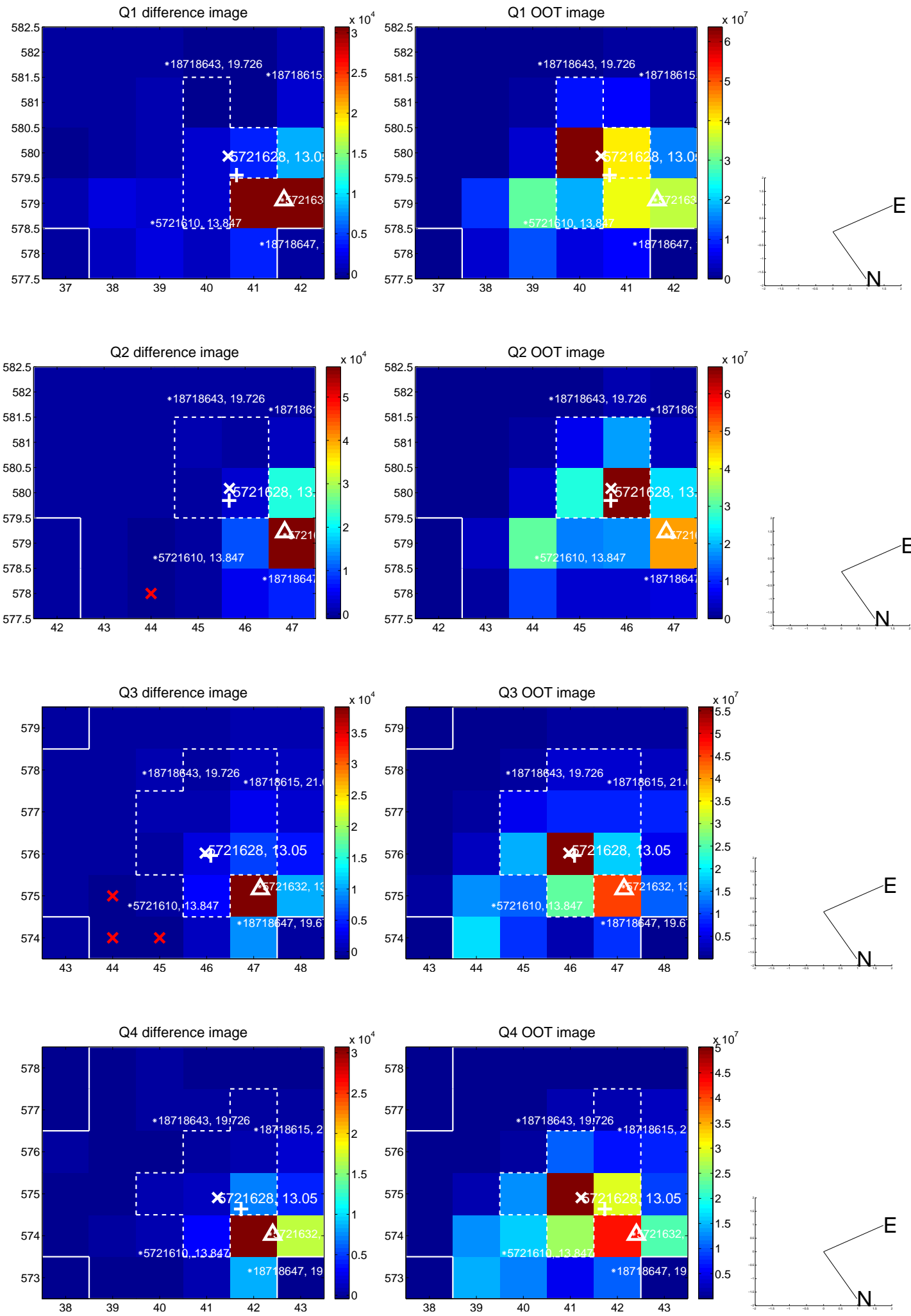
The direct PRF centroid is offset from the target star catalog position by about 1.66 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.868 ± 0.161	30.18	2.631 ± 0.151	4.096 ± 0.157
PRF-fit source offset from KIC position	5.790 ± 0.070	83.12	2.440 ± 0.070	5.251 ± 0.070
photometric centroid source offset	3.19 ± 1.12	2.86	0.08 ± 1.13	3.19 ± 1.12

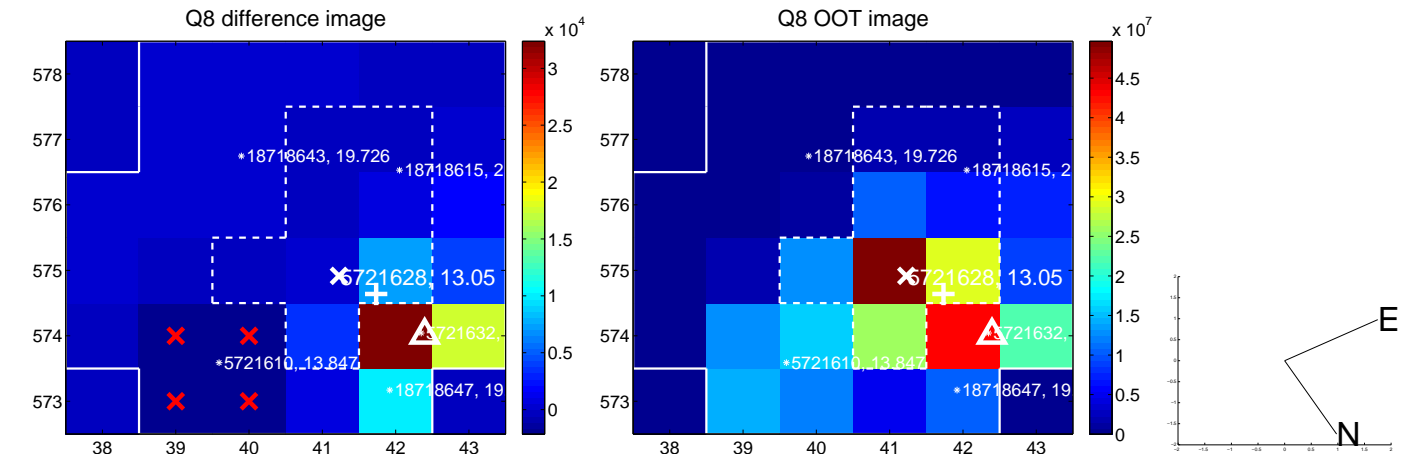
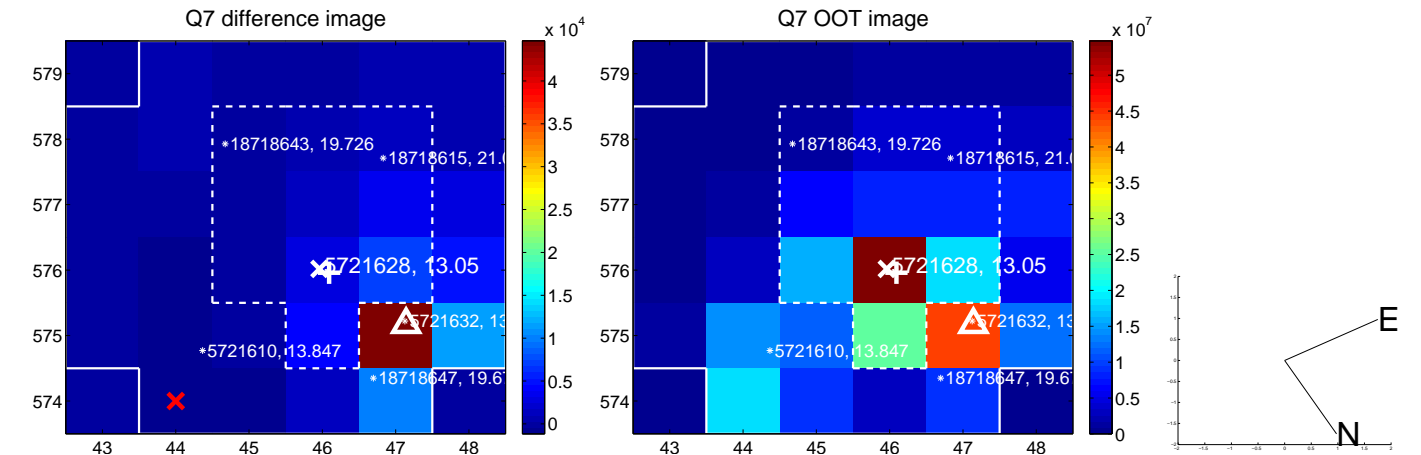
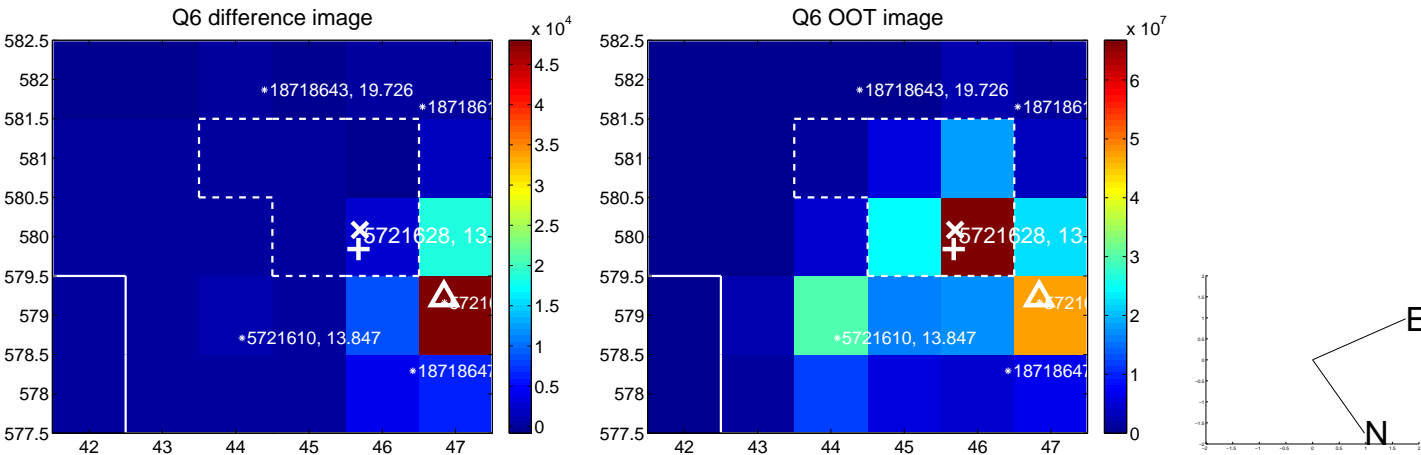
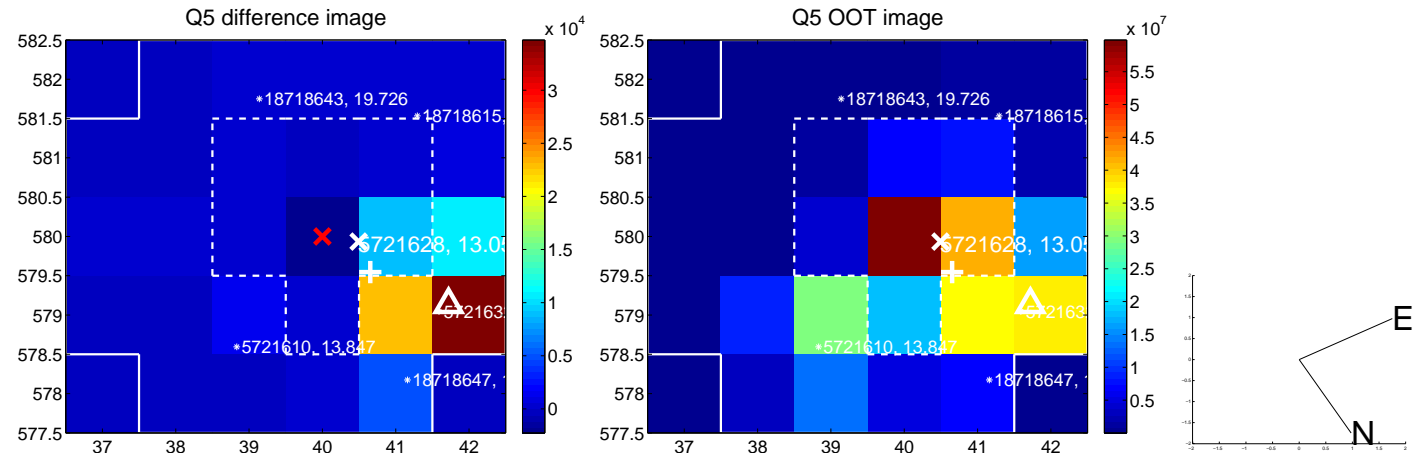


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

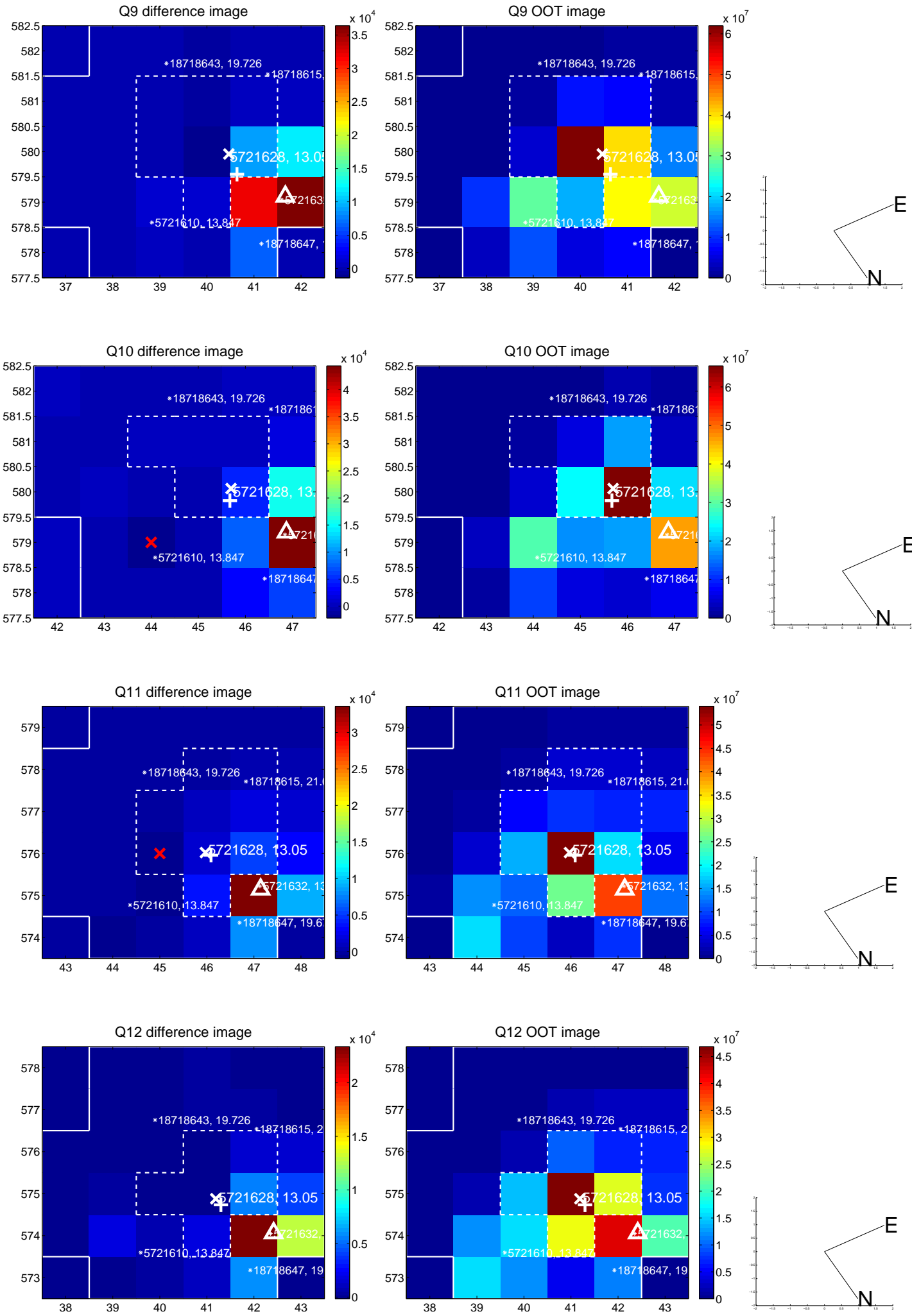
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



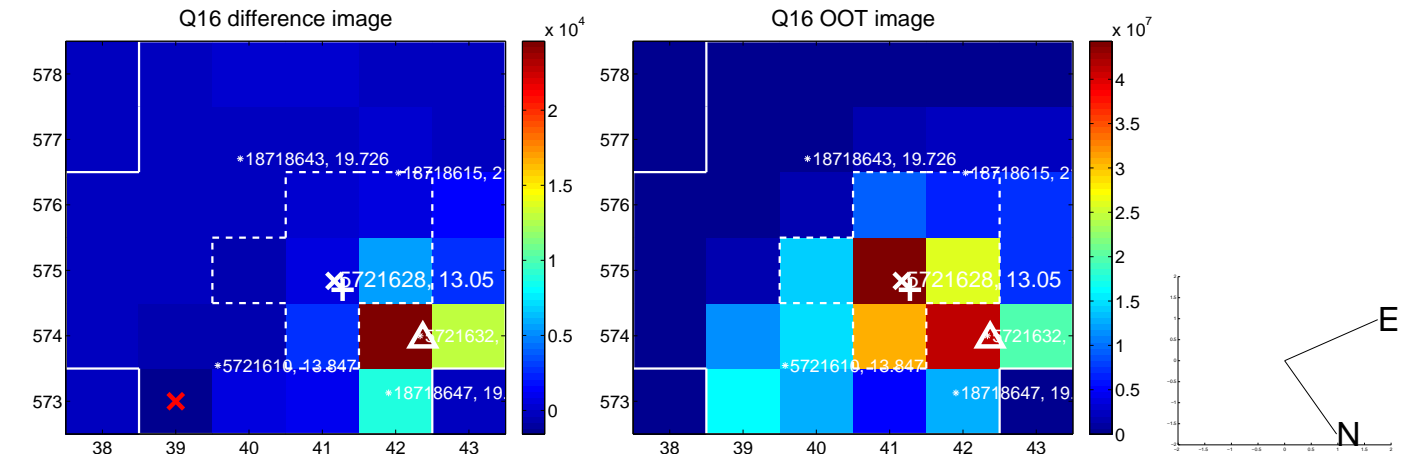
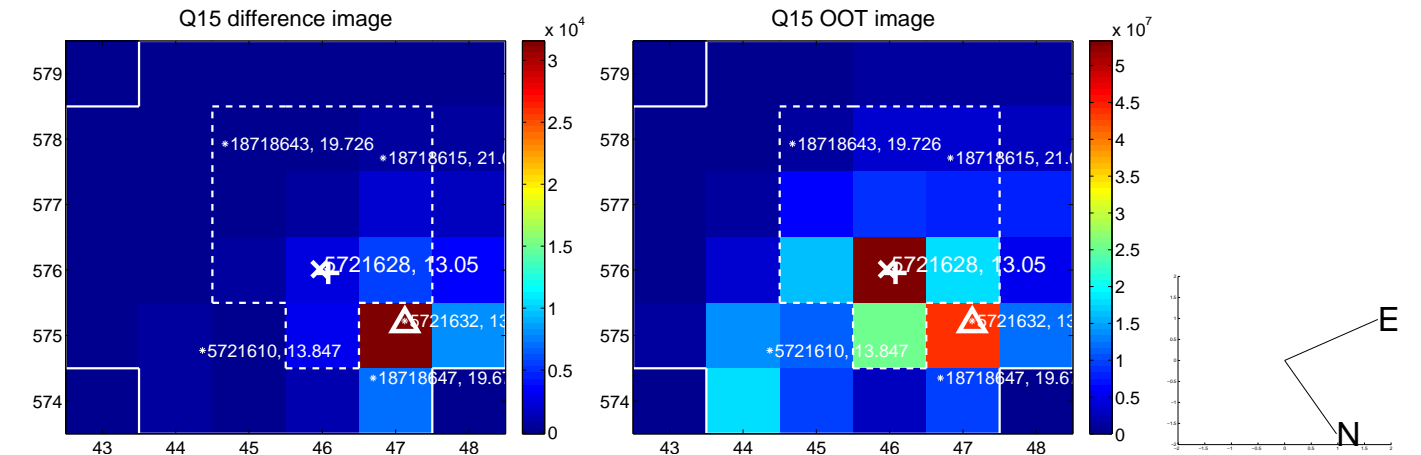
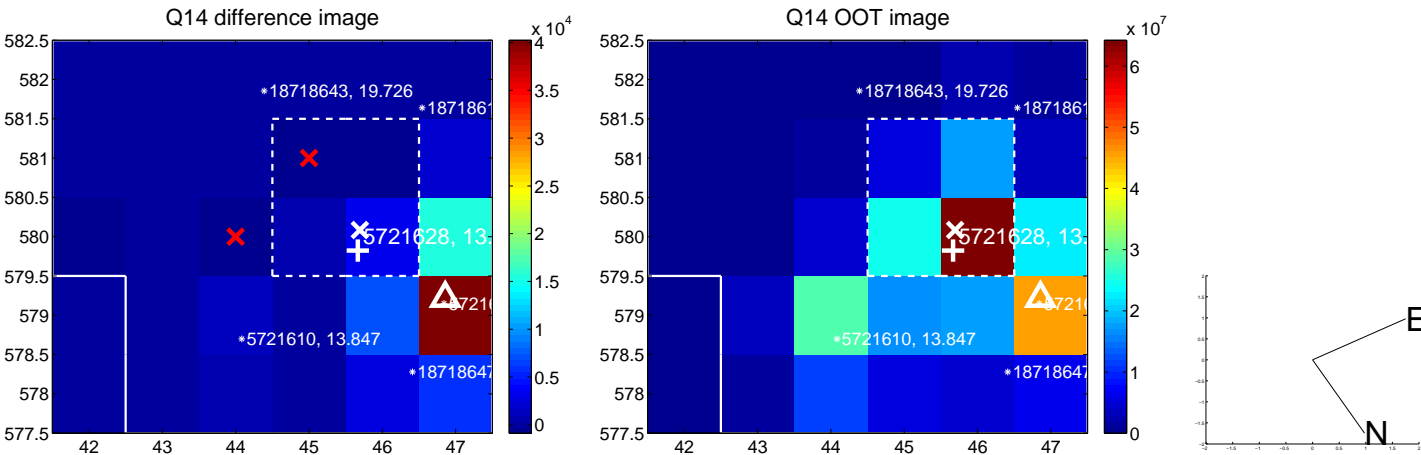
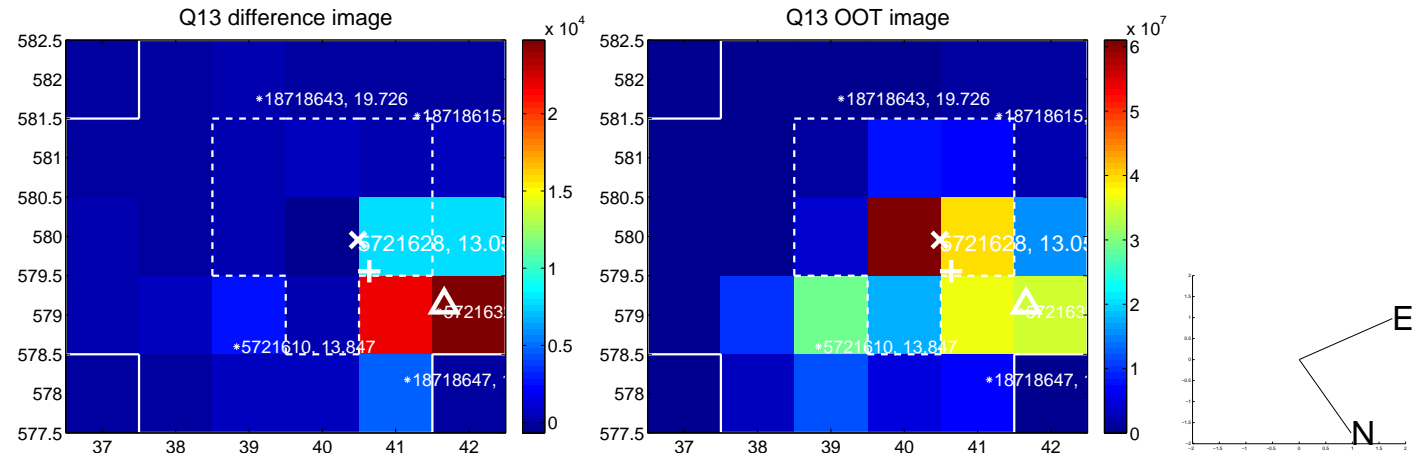
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



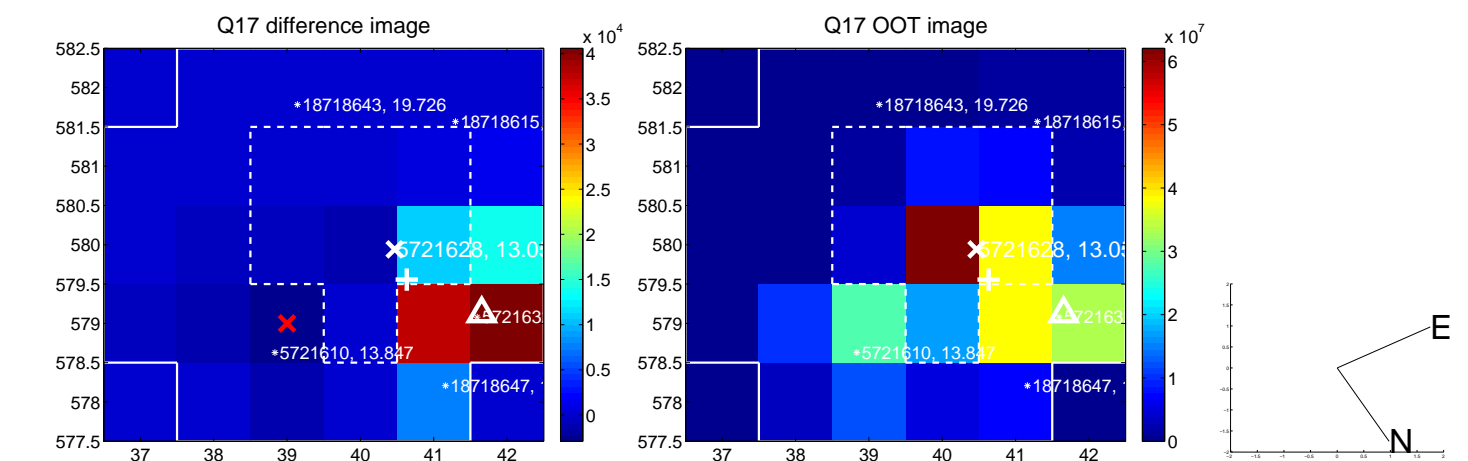
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



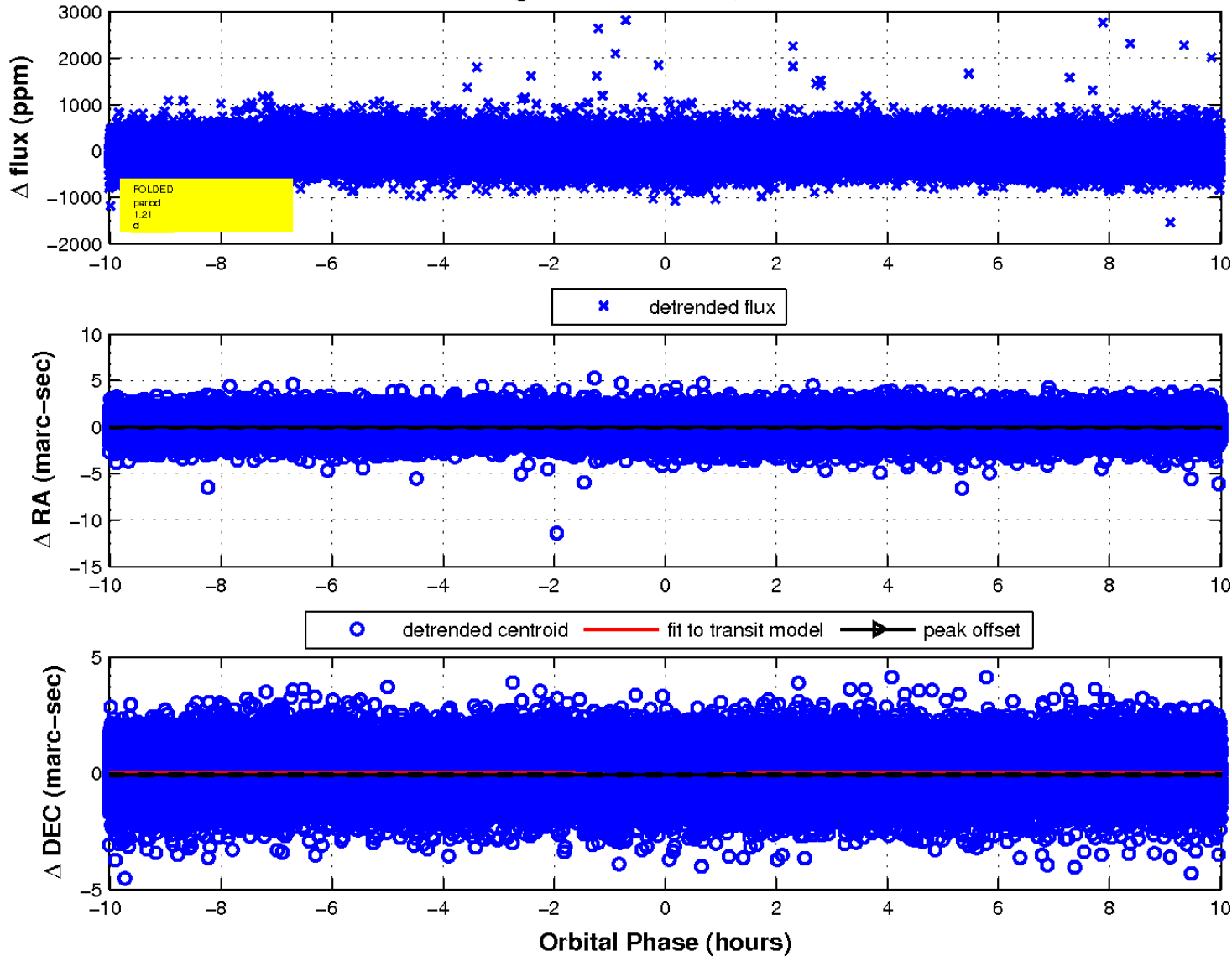
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

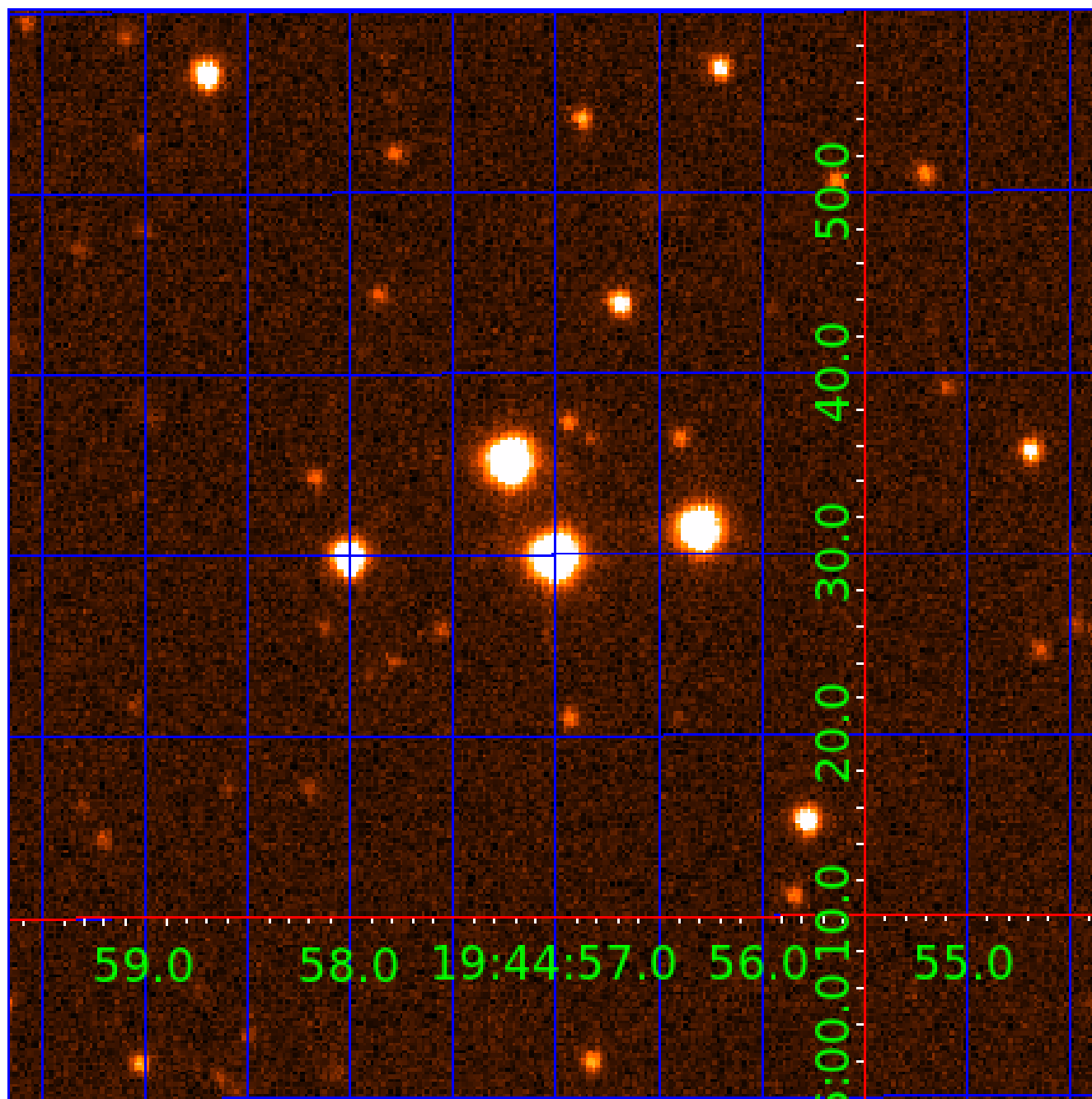


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 005721628

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})
005721628-01	OBS	No	1.210461	132.733338	38.6	3.341	9.3	9.4	2.01	7758	1.55	18890.08
005721628-02	OBS	No	1.210410	131.944824	30.3	4.704	9.5	8.5	2.01	7758	1.29	18891.14
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005721628-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_RESOLVED_OFFSET
005721628-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
005721628-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

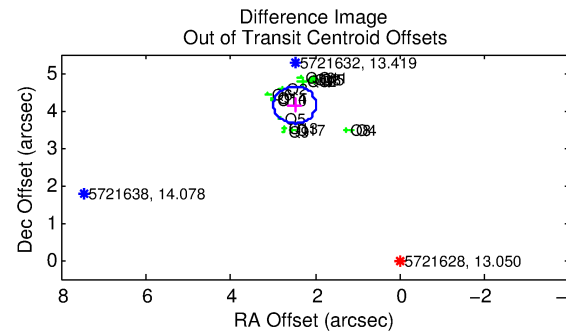
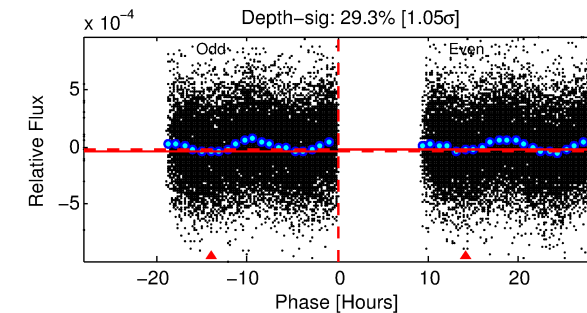
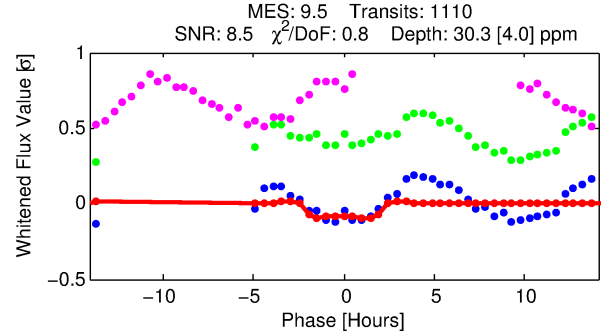
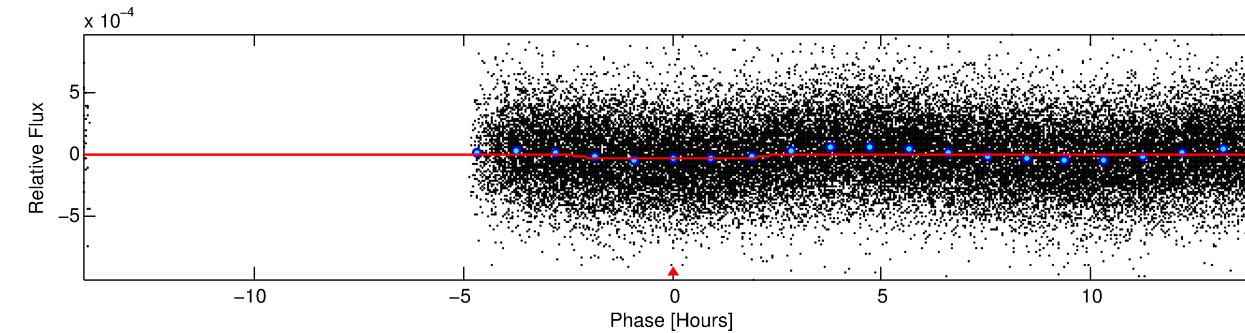
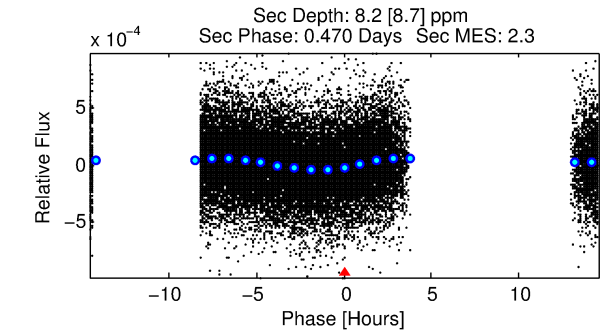
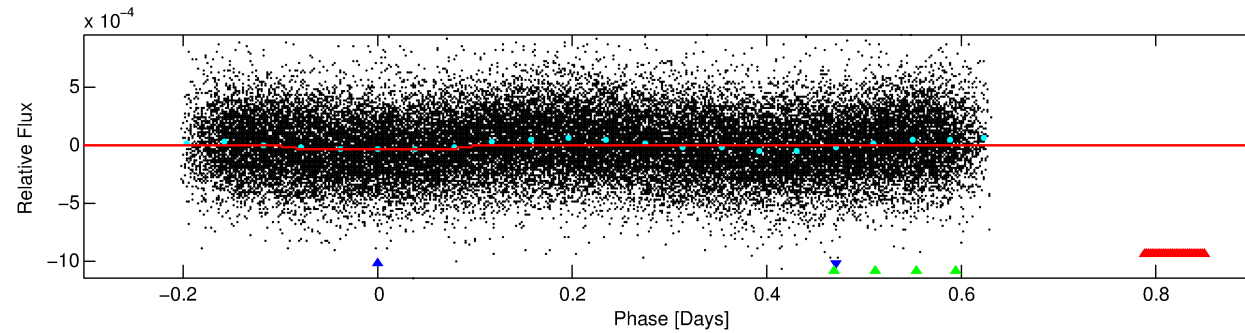
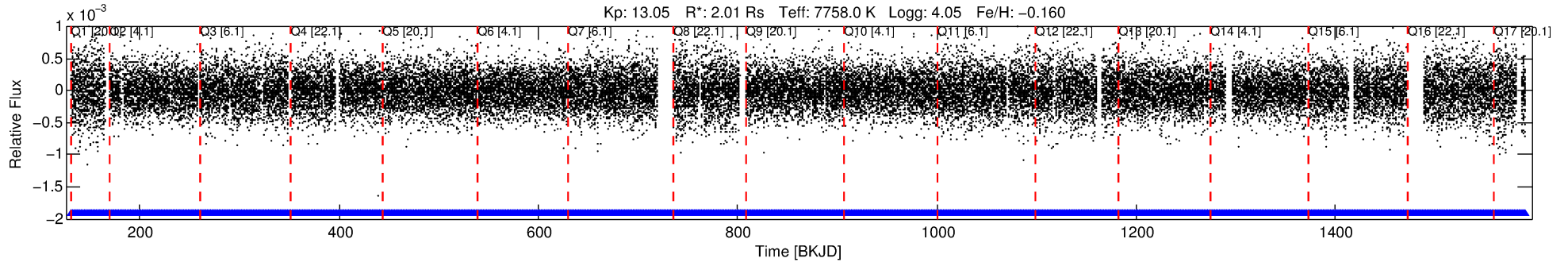
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005721628-02

No Significant Match Found

DV One-Page Summary

KIC: 5721628 Candidate: 2 of 3 Period: 1.210 d



DV Fit Results:

Period = 1.21041 [0.00002] d
Epoch = 131.9448 [0.0048] BKJD
Rp/R* = 0.0059 [0.0025]
a/R* = 1.29 [1.32]
b = 0.90 [0.55]
Seff = 18891.14 [4004.12]
Teq = 2989 [158] K
Rp = 1.29 [0.58] Re
a = 0.0264 [0.0037] AU
Ag = 1.88 [2.59] [0.34σ]
Teffp = 5415 [1839] K [1.31σ]

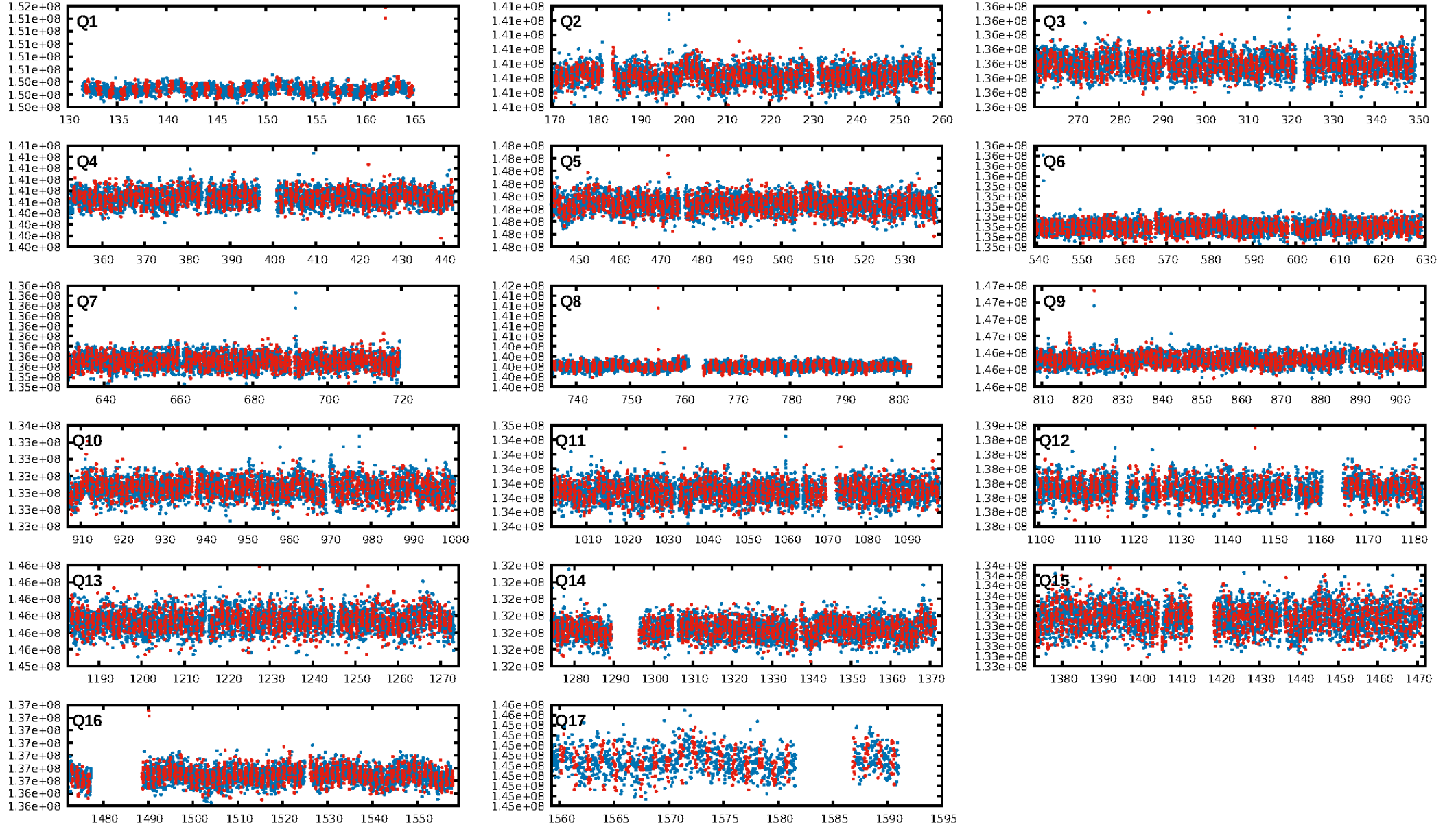
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.30e-12
RollingBand-fgt: 1.00 [1060/1060]
GhostDiagnostic-chr: -4.142
Centroid-sig: 4.6%
Centroid-so: 2.999 arcsec [2.41σ]
OotOffset-rm: 4.836 arcsec [29.02σ]
KicOffset-rm: 5.809 arcsec [76.59σ]
OotOffset-st: 4/4/4/4 [16]
KicOffset-st: 4/4/4/4 [16]
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DiffImageOverlap-fno: 0.00 [0/17]

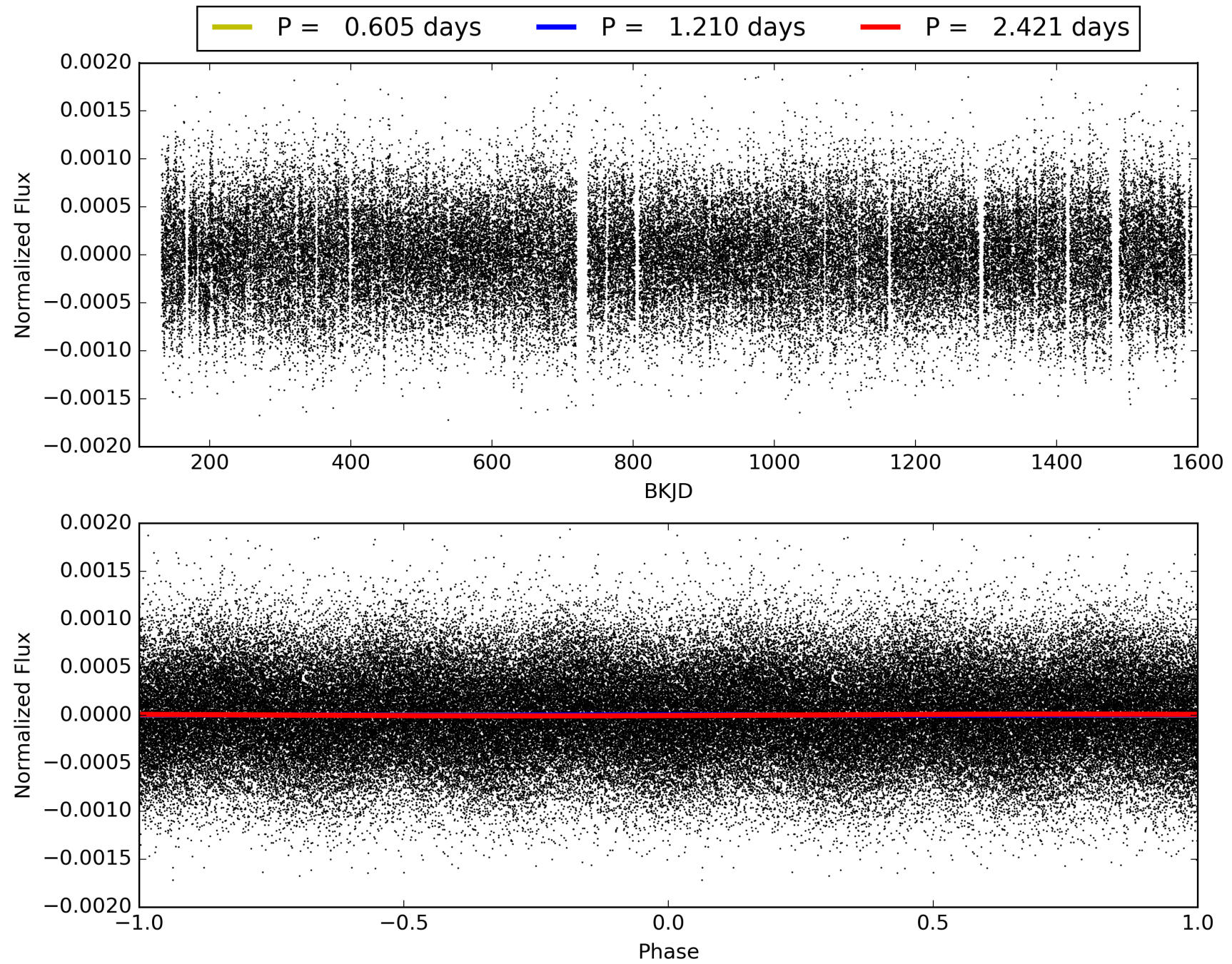
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005721628-02, PDC Light Curves

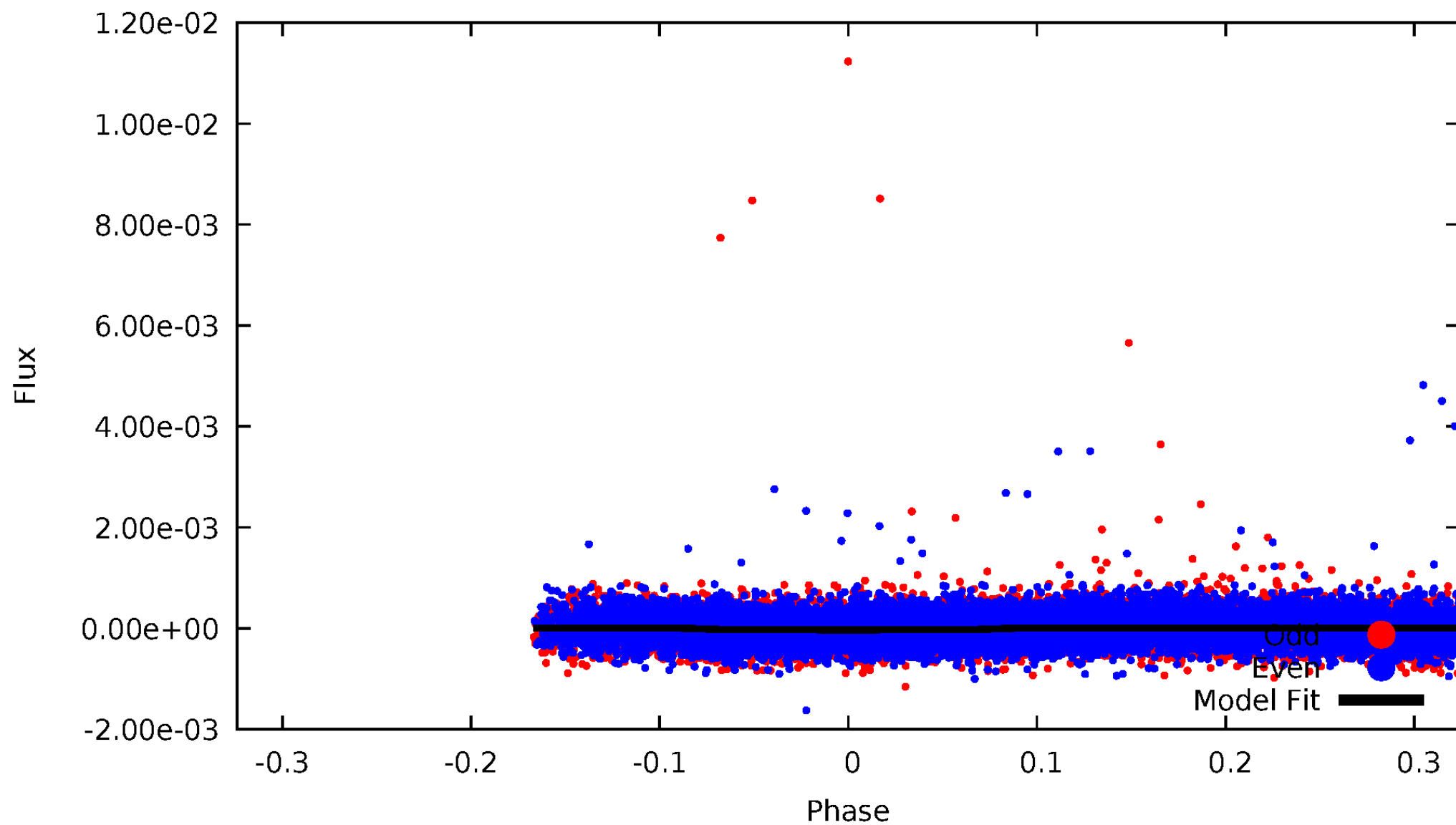


TCE 005721628-02



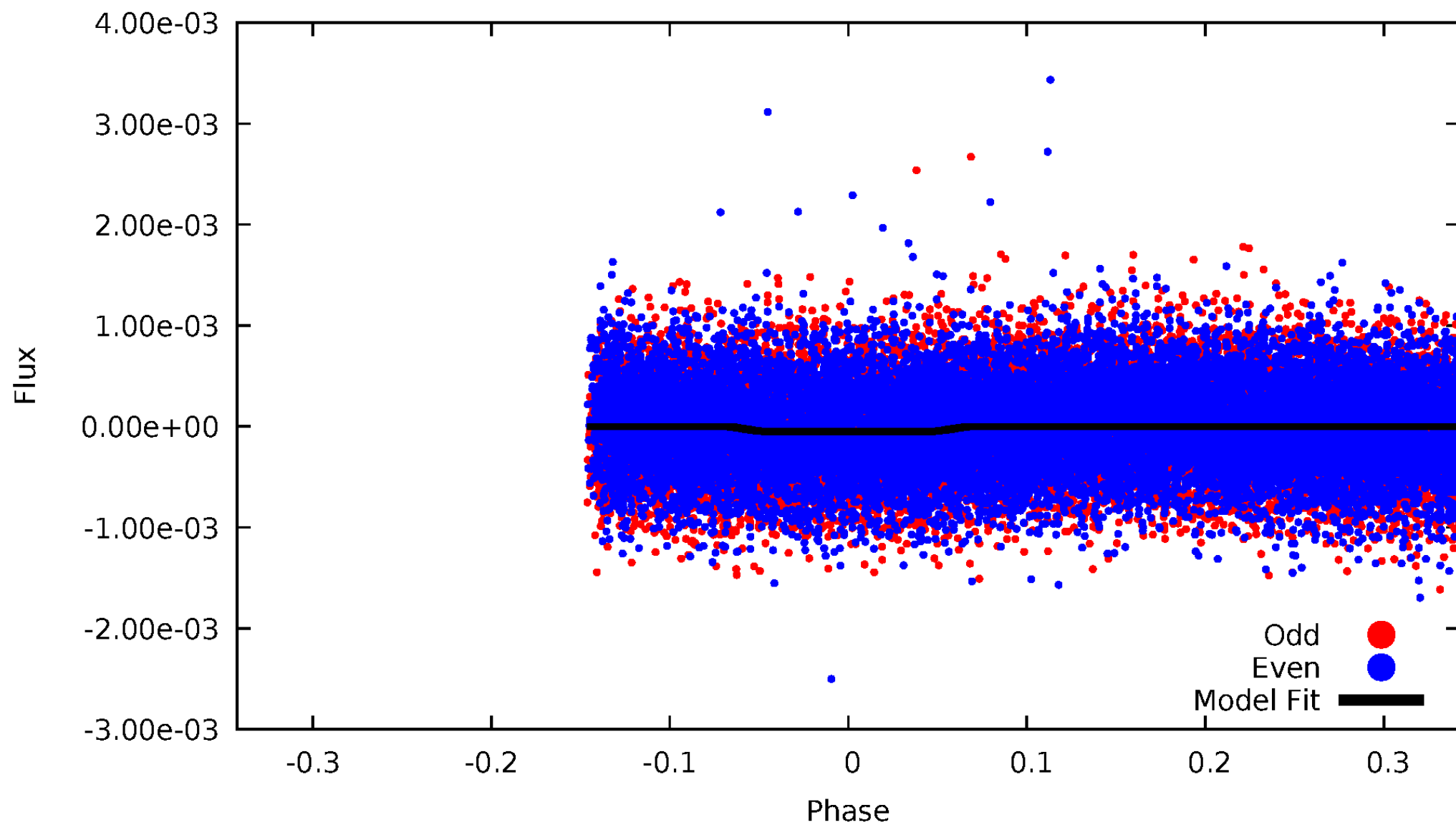
DV Odd/Even

TCE 005721628-02



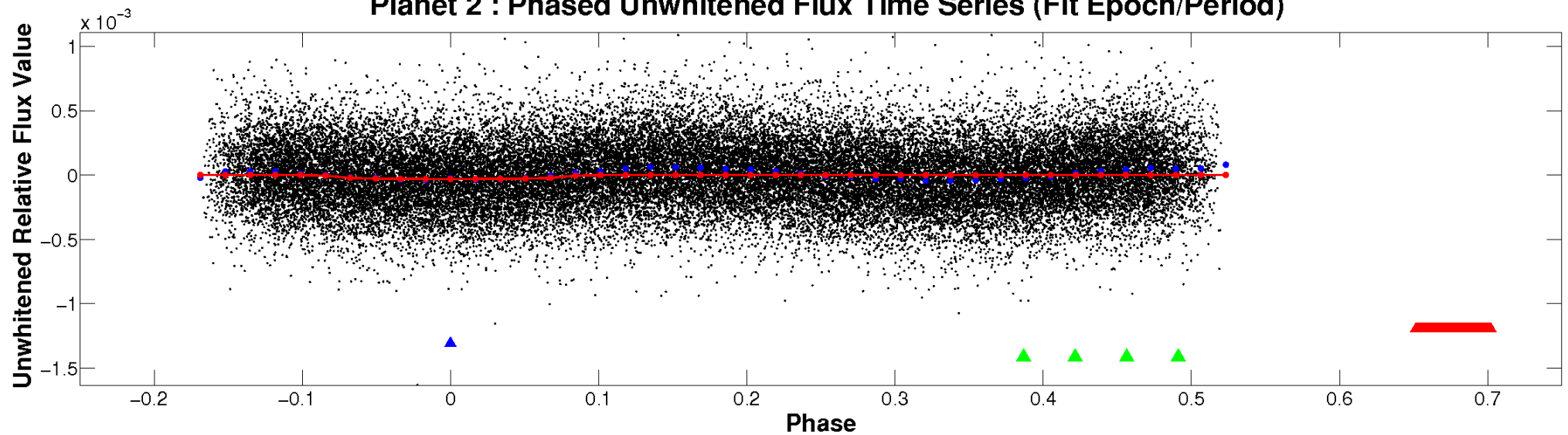
ALT Odd/Even

TCE 005721628-02

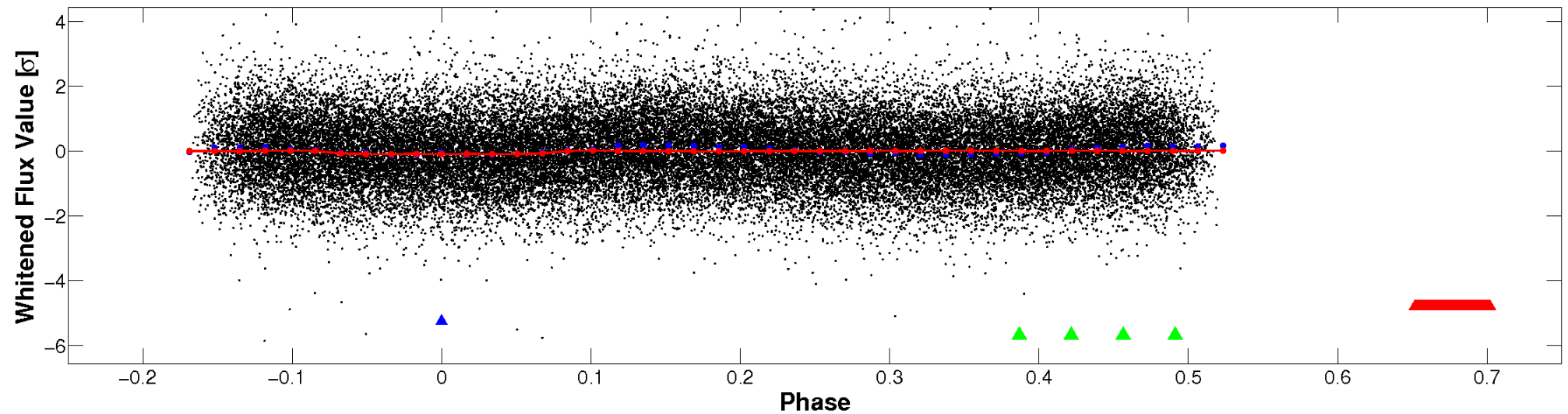


Non-Whitened Vs. Whitened Light Curve

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

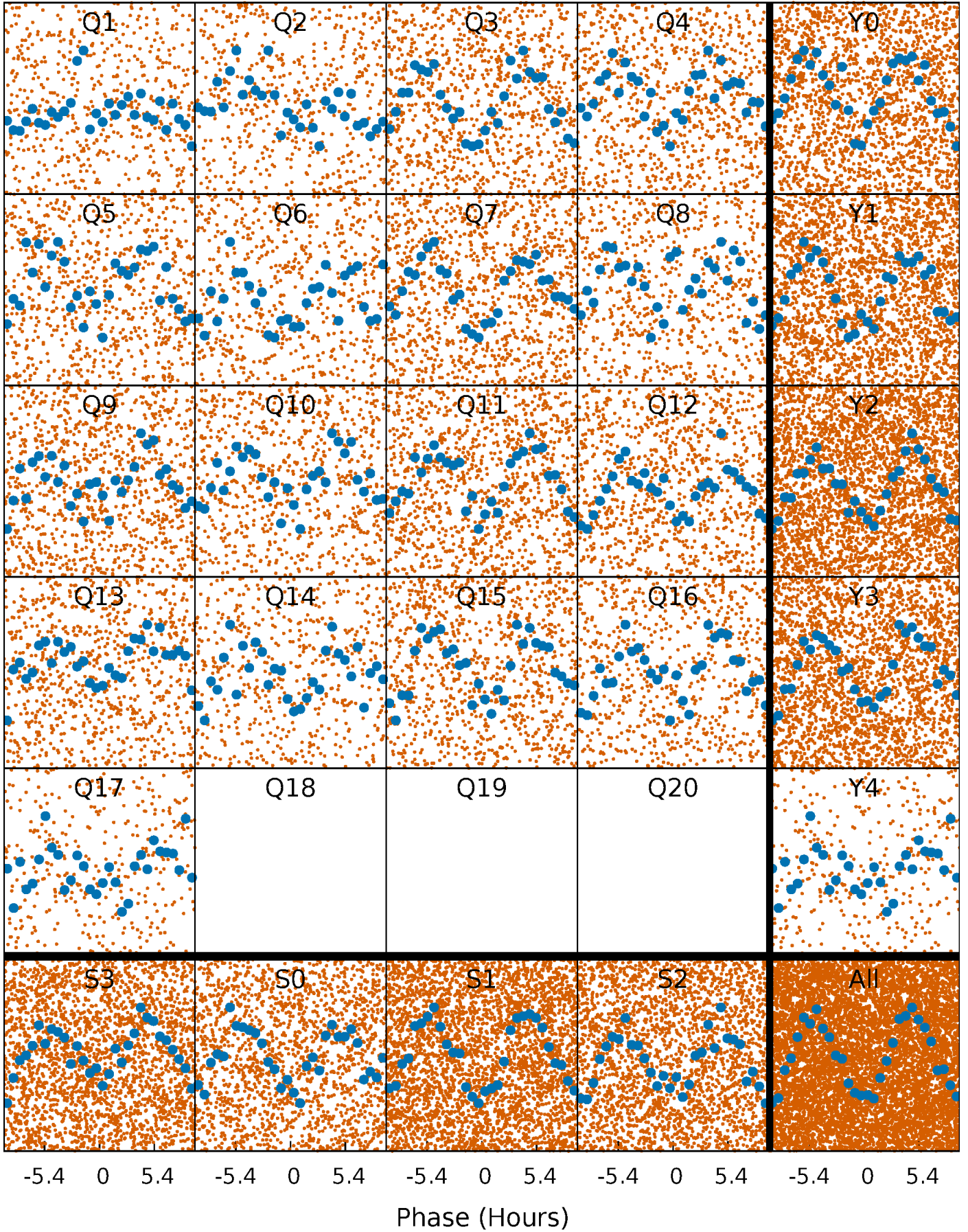


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



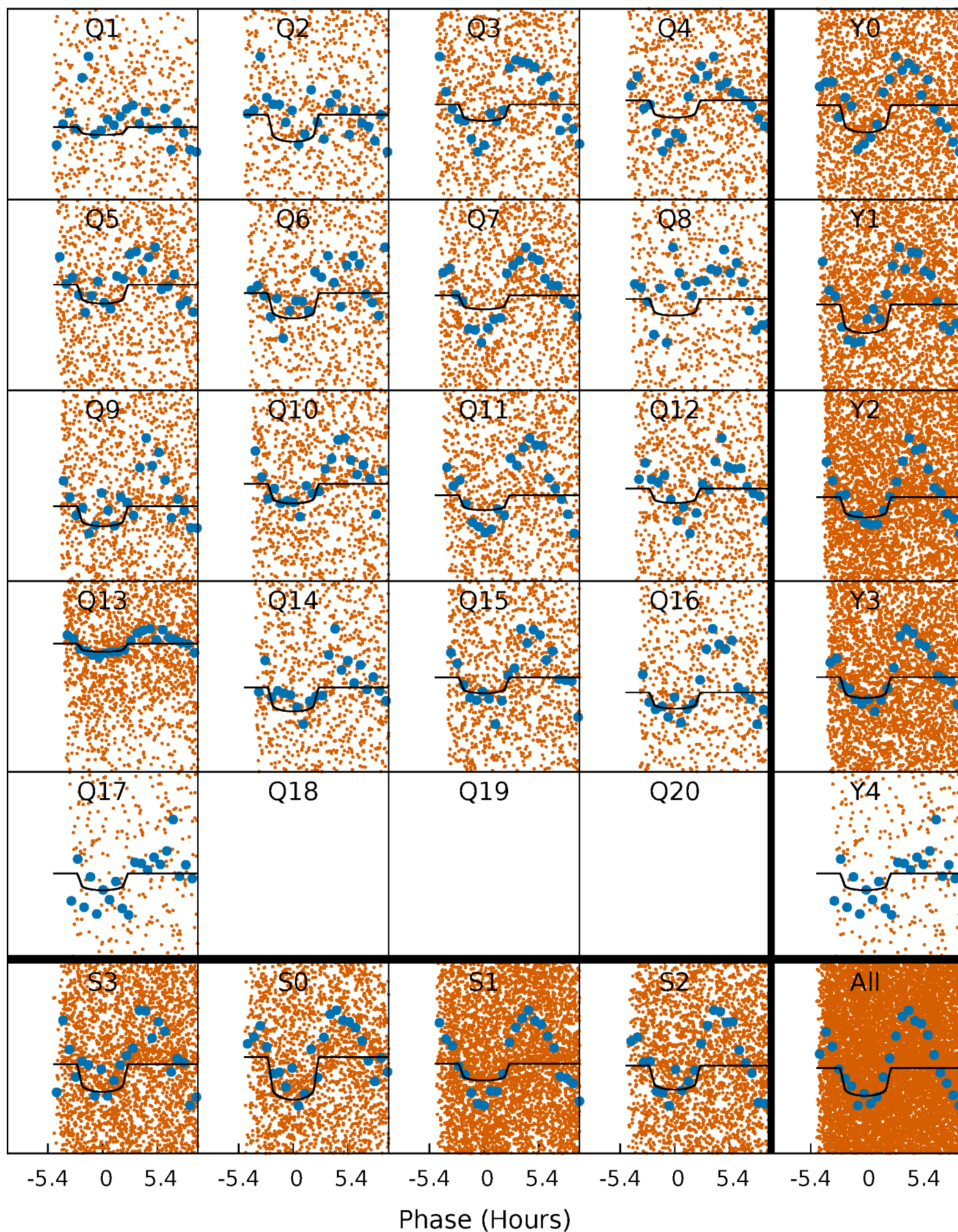
PDC Quarter-Phased Transit Curves

TCE 005721628-02 P= 1.210410 Days $T_0=131.944824$ (BKJD)



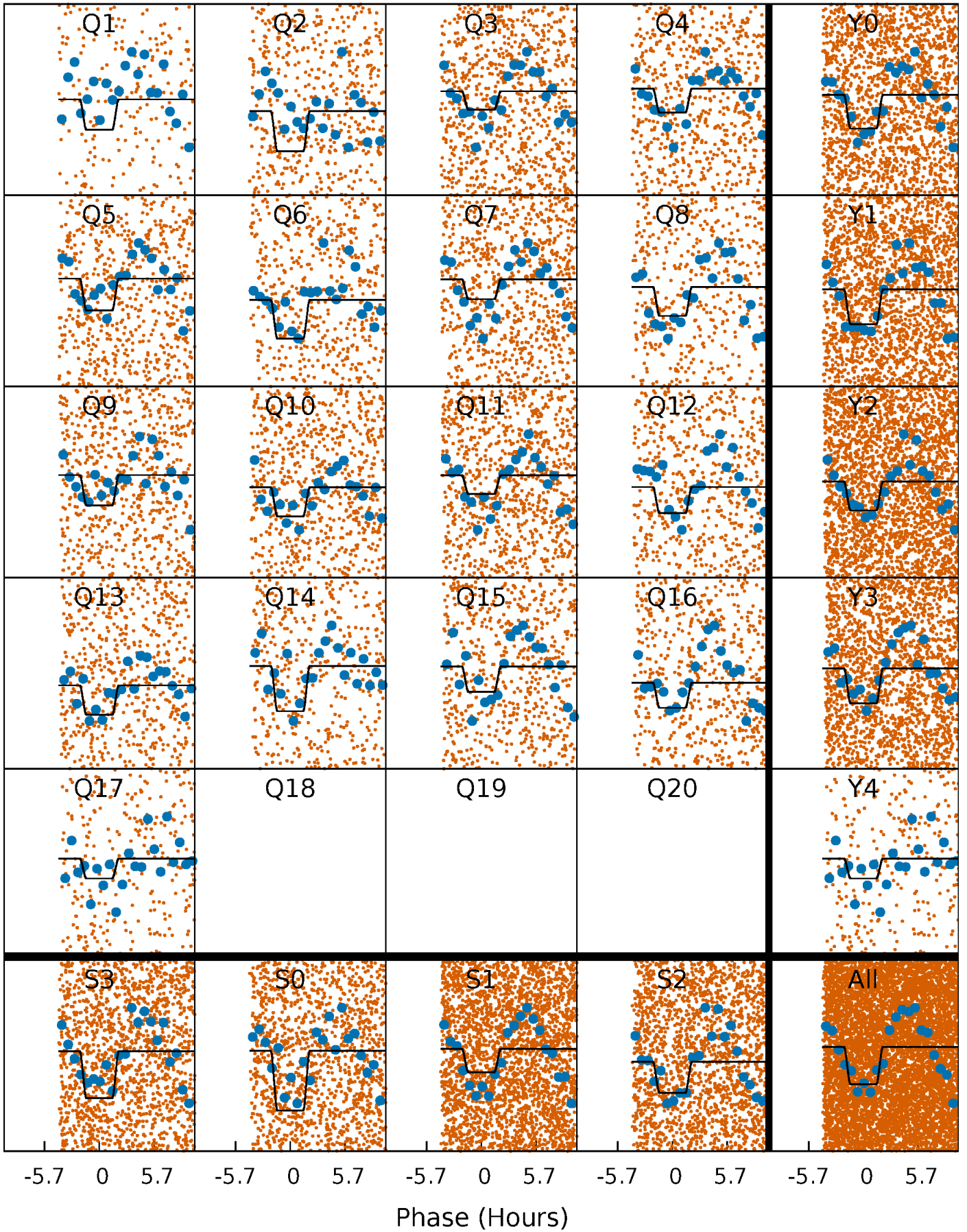
DV Quarter-Phased Transit Curves

TCE 005721628-02 P= 1.210410 Days $T_0=131.944824$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

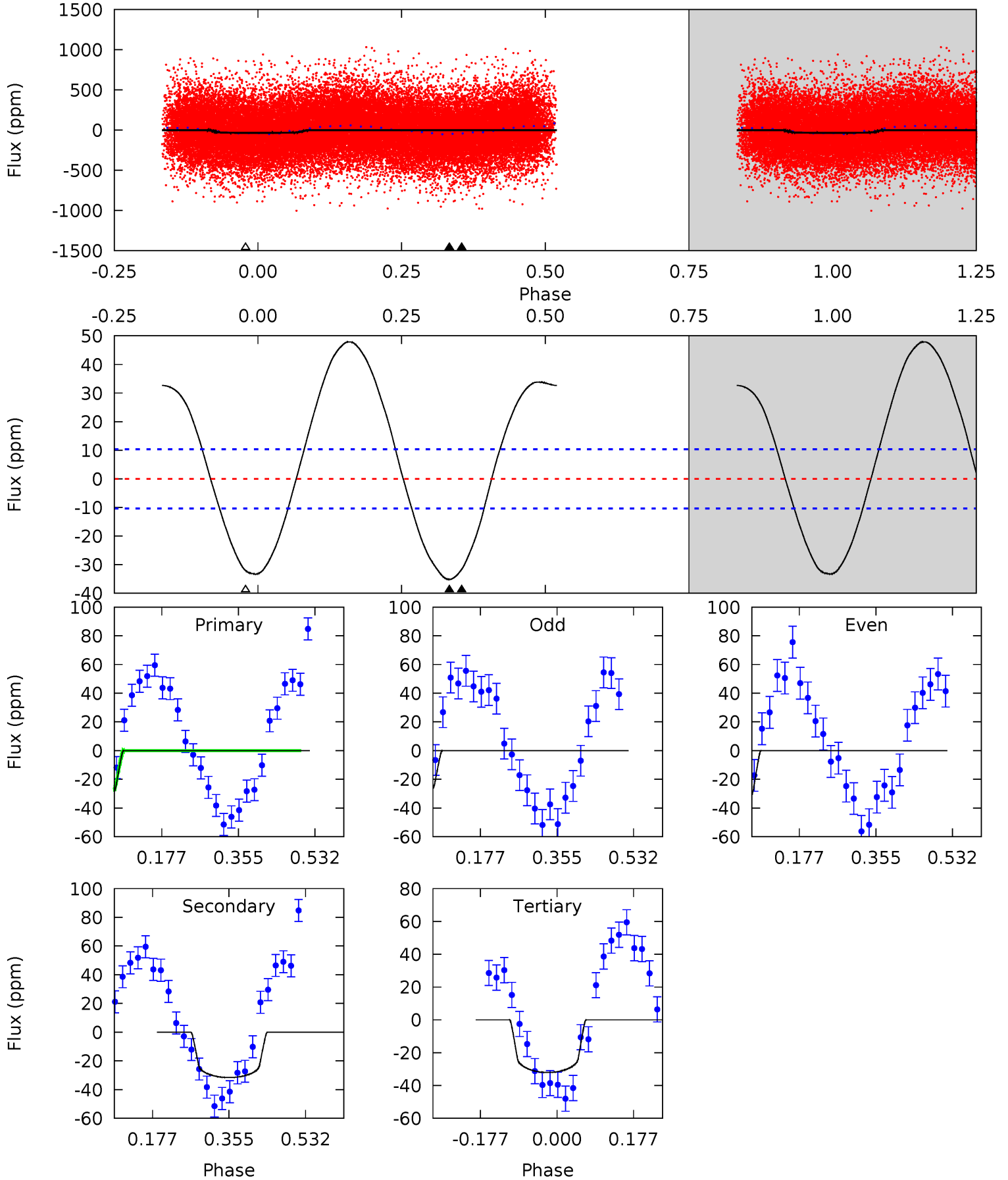
TCE 005721628-02 P= 1.210449 Days $T_0=131.919613$ (BKJD)



DV Model-Shift Uniqueness Test

005721628-02, P = 1.210410 Days, E = 130.734414 Days

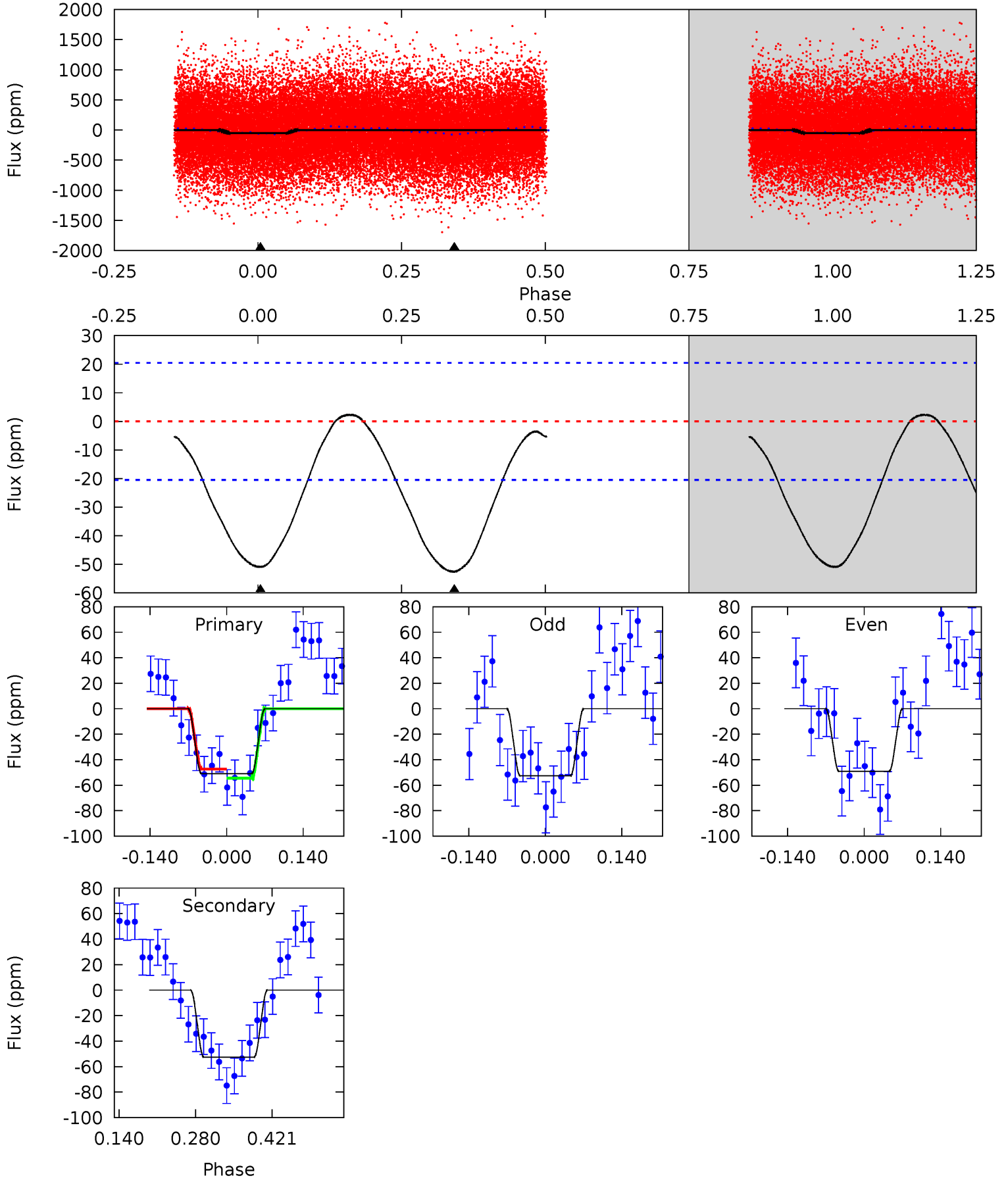
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.1	13.6	13.8	0	4.44	1.35	11.3	1.34	15.1	-0.19	13.6	1.12	0.75	0.58	0.81



Alt Model-Shift Uniqueness Test

005721628-02, P = 1.210449 Days, E = 130.709164 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.2	11.5	0	0	4.49	1.48	0.65	11.2	11.2	11.5	11.5	0.40	0.98	0.04	0.78



Stellar Parameters For KIC 005721628

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7758^{+77}_{-77}	$4.053^{+0.115}_{-0.103}$	$-0.160^{+0.150}_{-0.150}$	$2.011^{+0.333}_{-0.300}$	$1.664^{+0.163}_{-0.133}$	$0.288^{+0.149}_{-0.099}$
	+1%/-1%	+3%/-3%	+94%/-94%	+17%/-15%	+10%/-8%	+52%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005721628-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-32 ± 2	$1.32^{+0.52}_{-0.55}$	4177^{+177}_{-178}	7304^{+3132}_{-1274}	$6.914^{+13.334}_{-3.371}$
Alt.	-53 ± 5	$1.52^{+0.57}_{-0.49}$	4169^{+168}_{-168}	7894^{+2349}_{-1348}	$8.867^{+10.465}_{-4.225}$

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

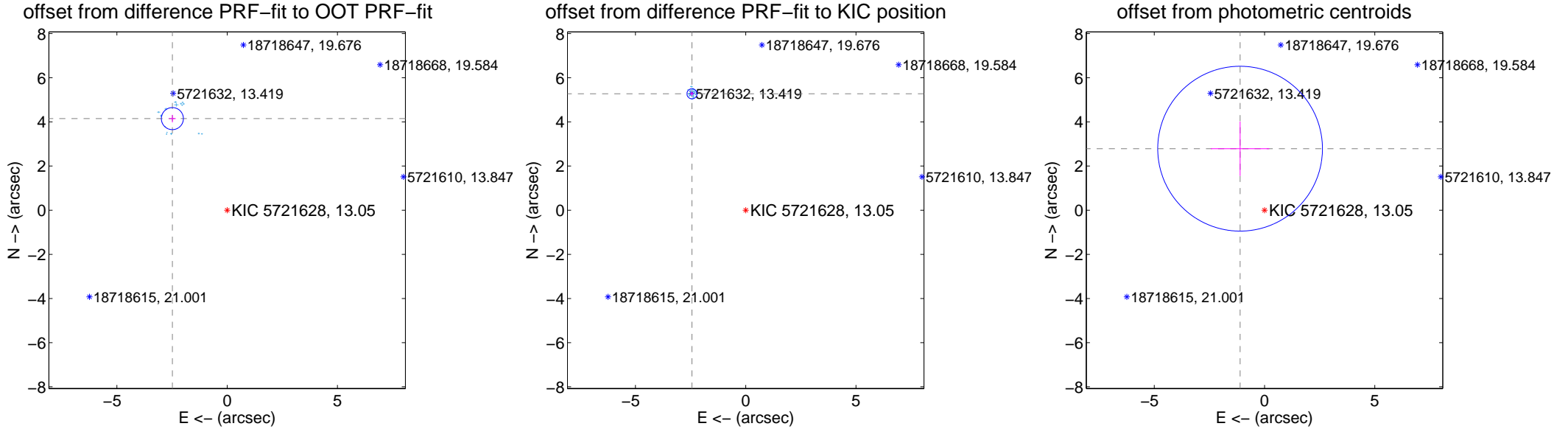
DV Centroid Data

Supplemental centroid analysis for 005721628-02. Kepler magnitude: 13.05. Transit SNR 8.46

There are 16 quarters with good PRF difference image offsets

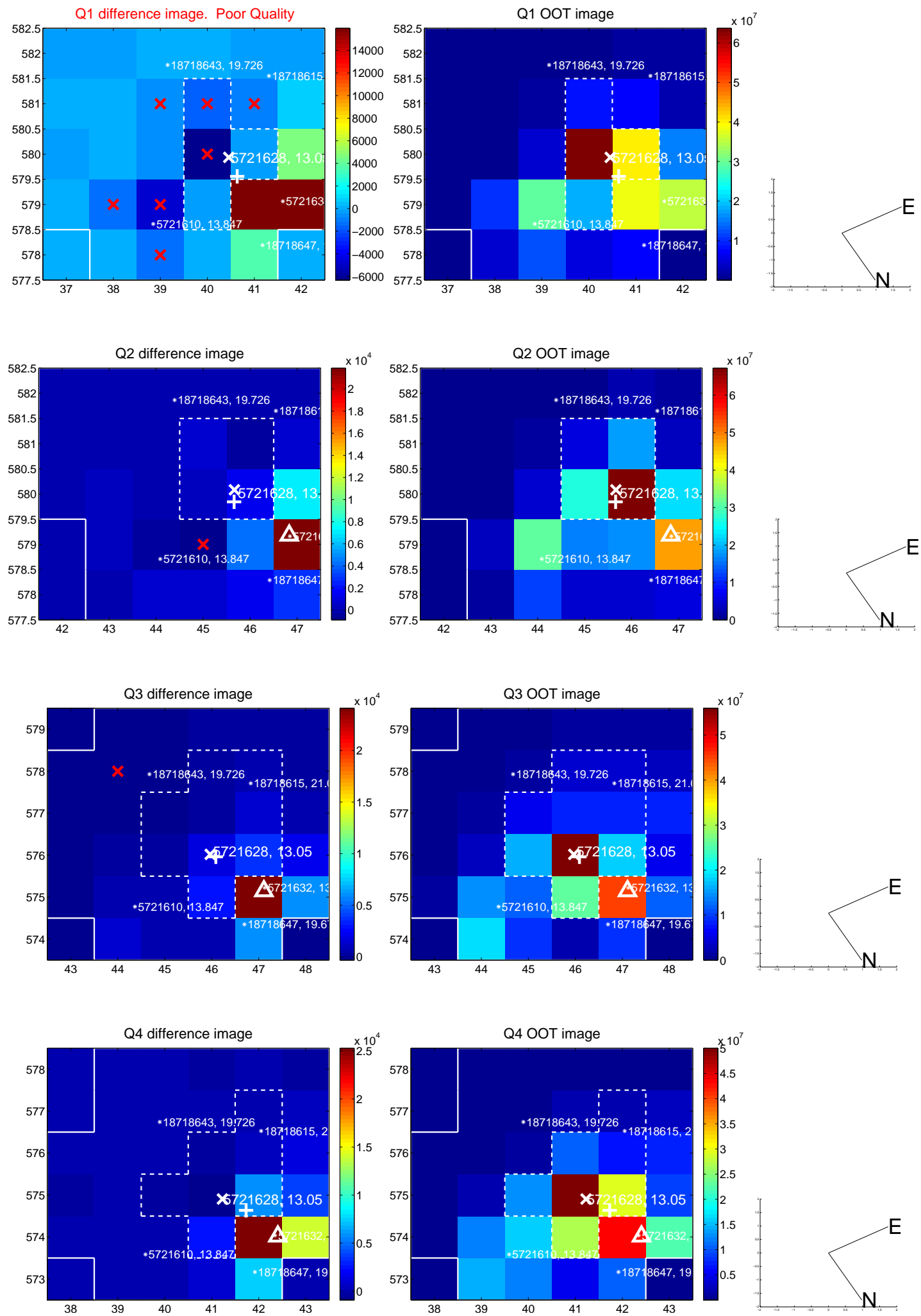
The direct PRF centroid is offset from the target star catalog position by about 1.66 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	4.836 \pm 0.167	29.02	2.484 \pm 0.156	4.149 \pm 0.170
PRF-fit source offset from KIC position	5.809 \pm 0.076	76.59	2.437 \pm 0.072	5.273 \pm 0.077
photometric centroid source offset	3.00 \pm 1.24	2.41	1.11 \pm 1.33	2.79 \pm 1.23

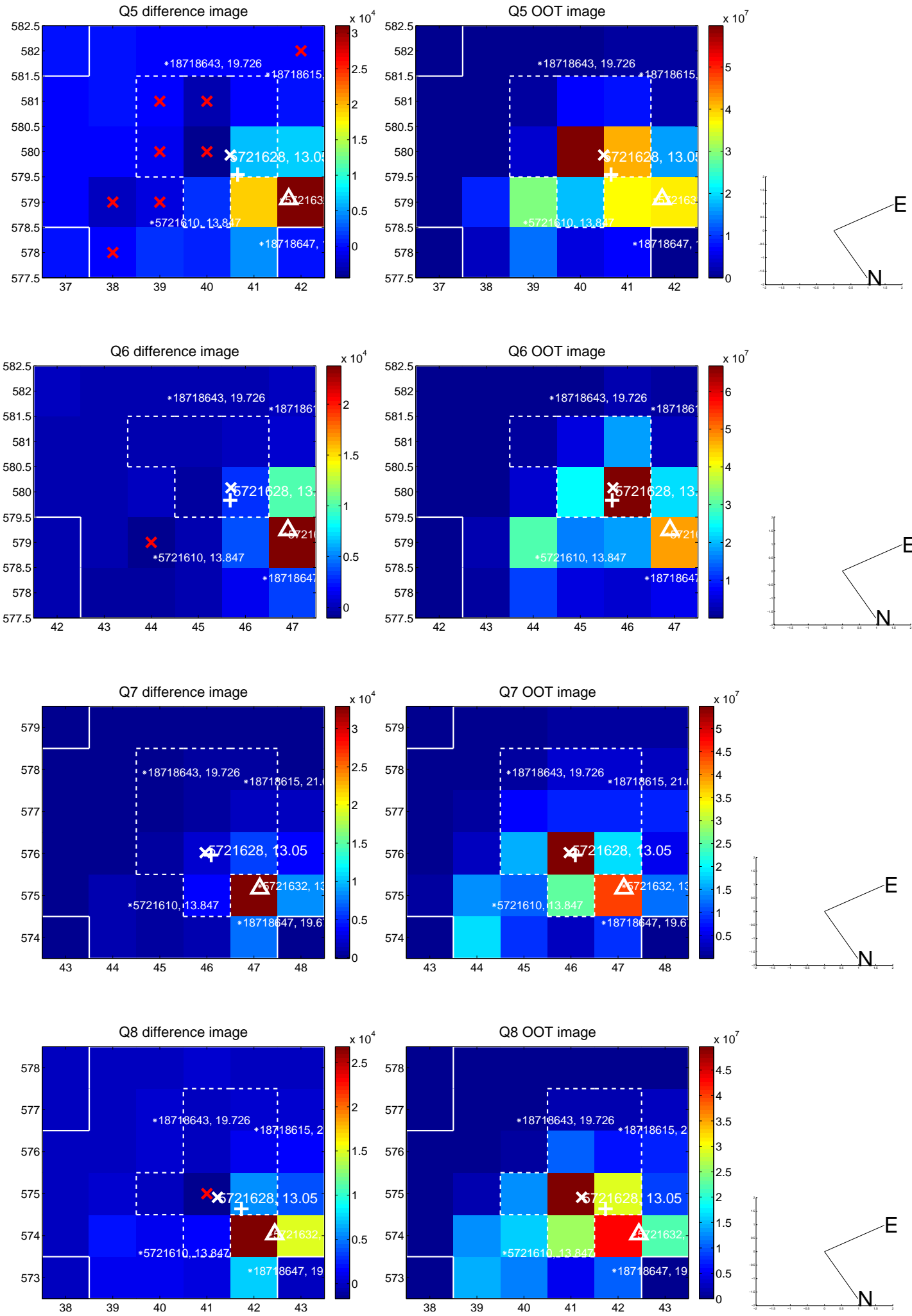


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

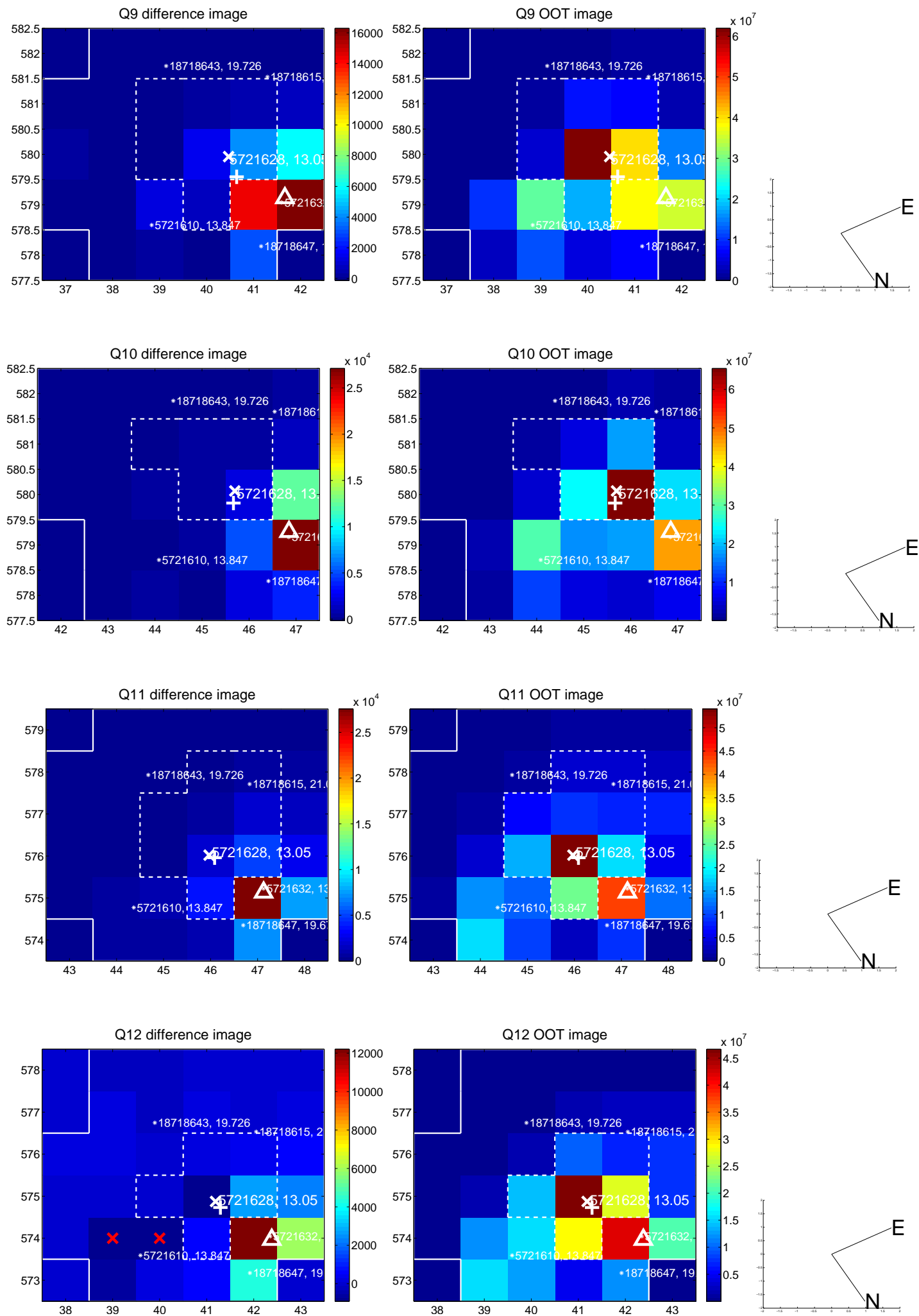
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



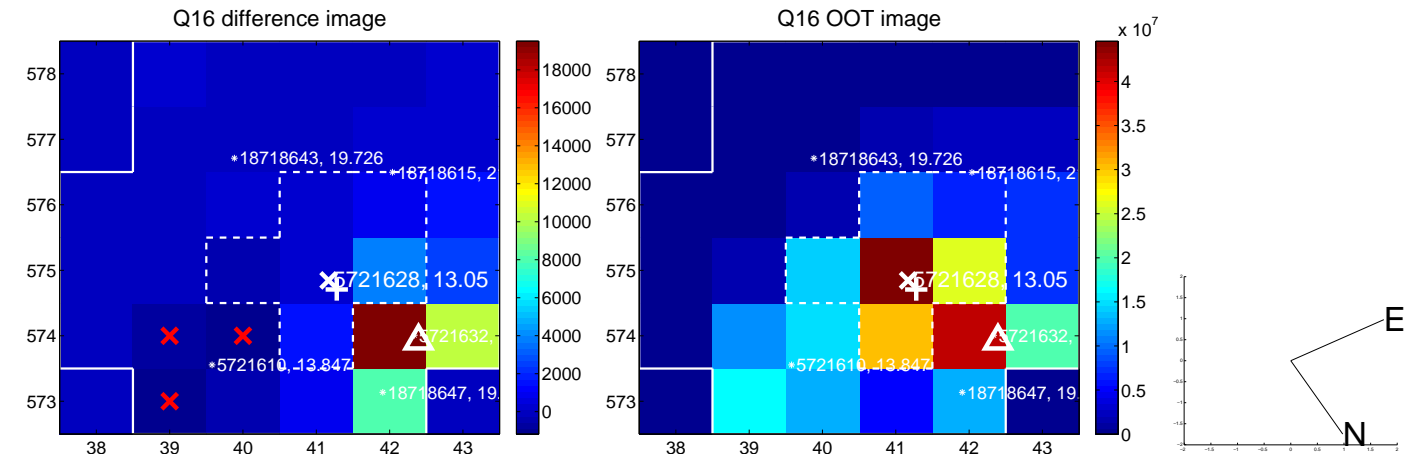
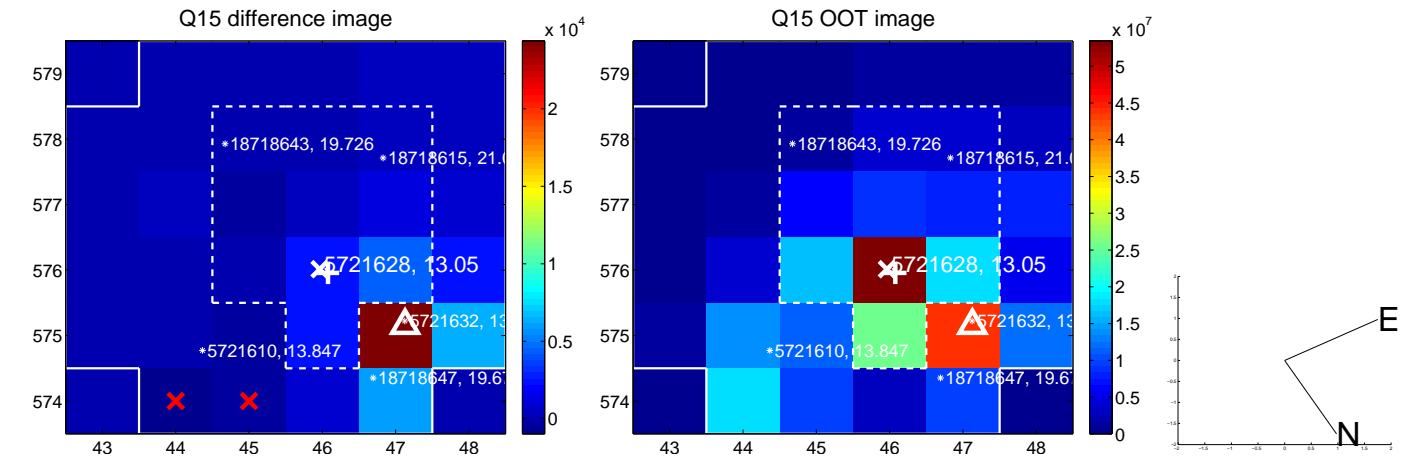
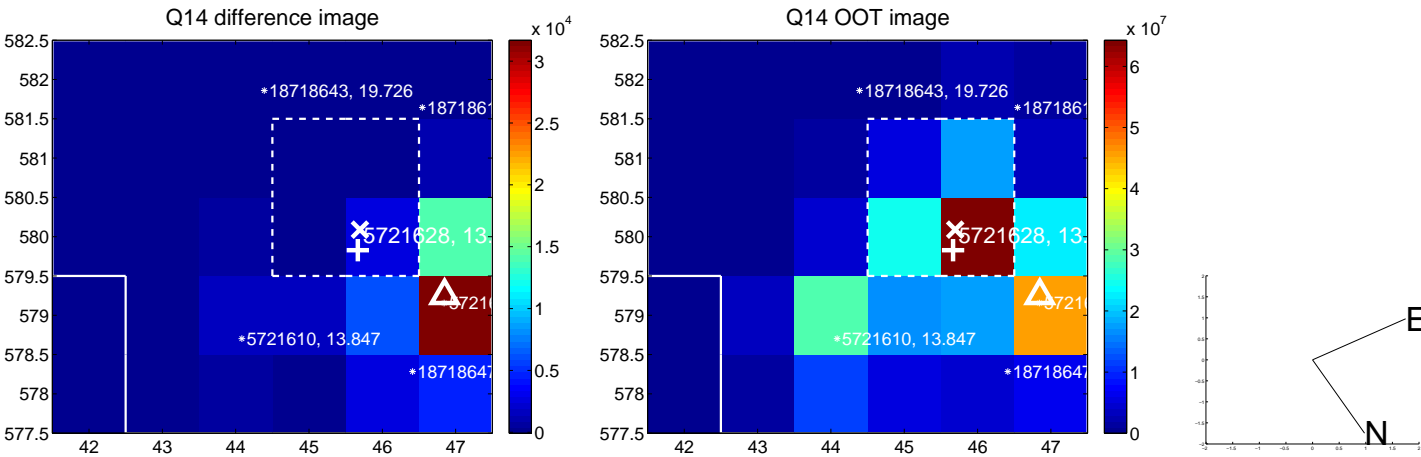
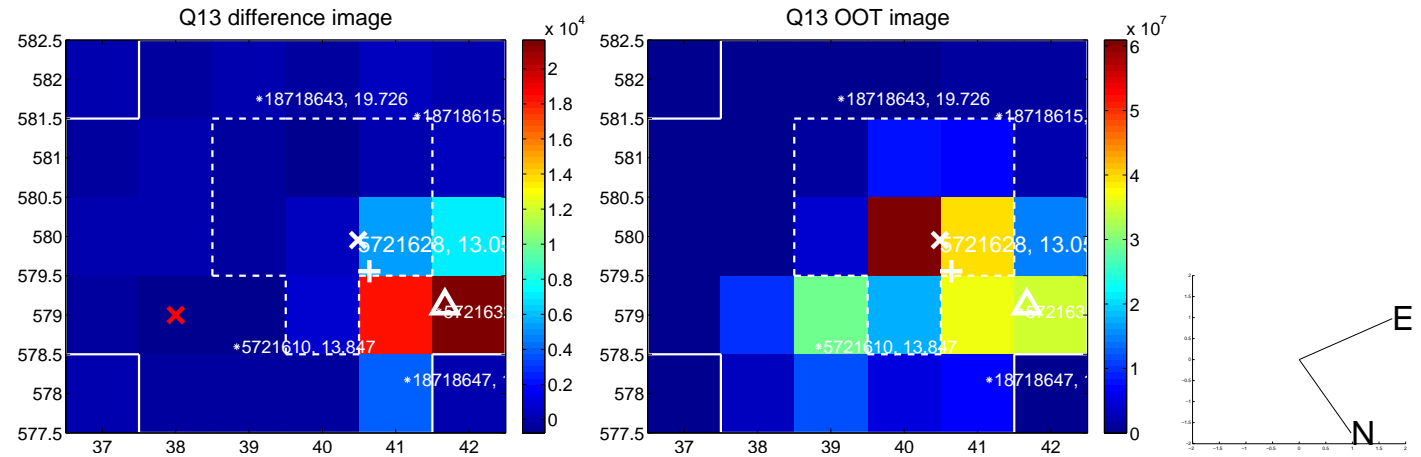
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



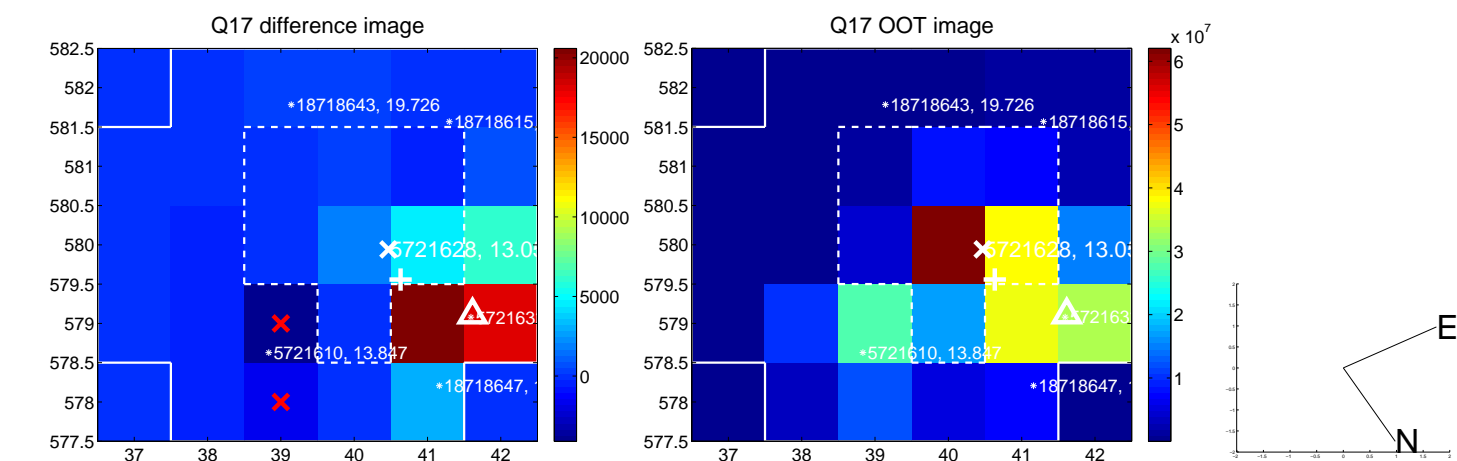
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



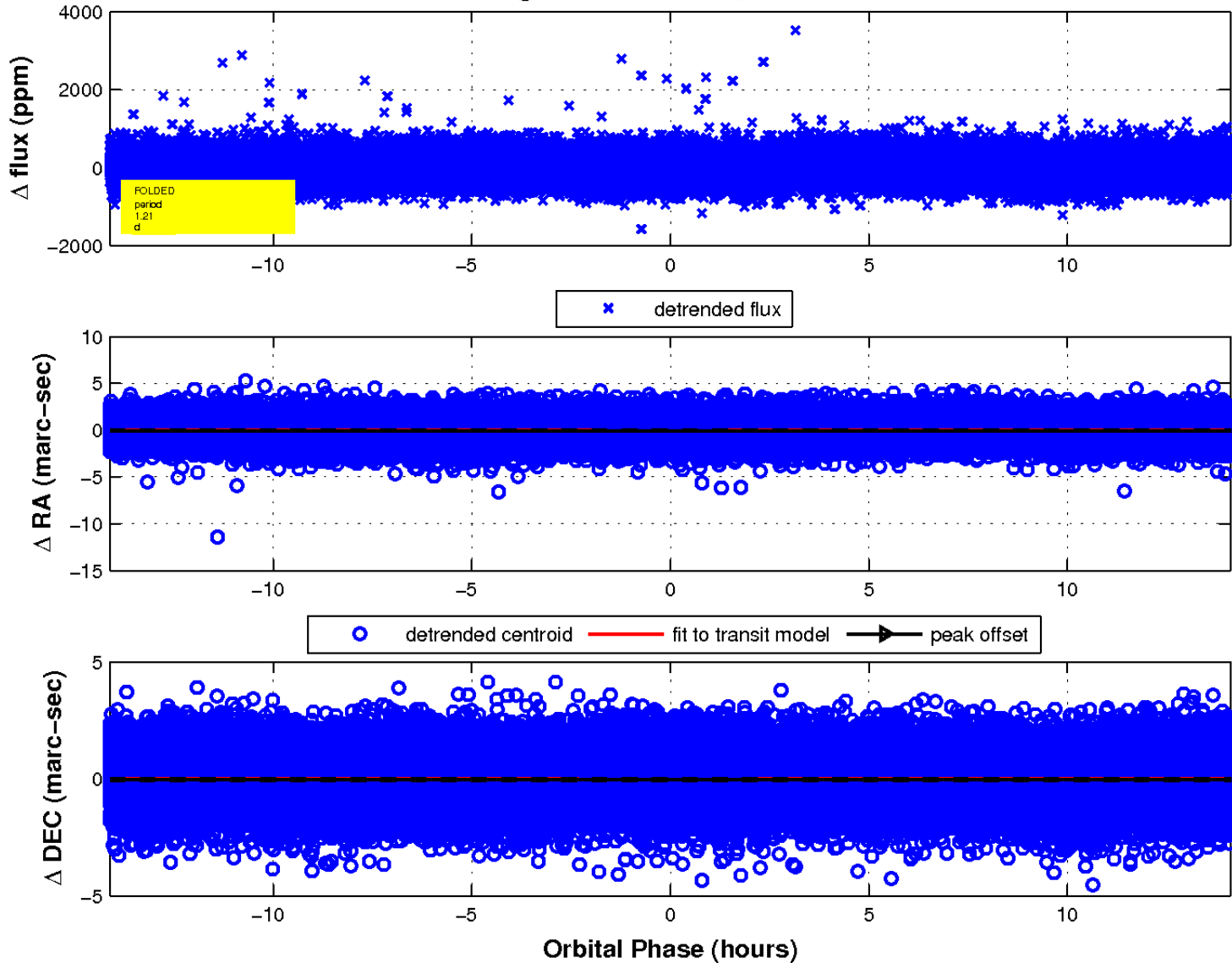
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

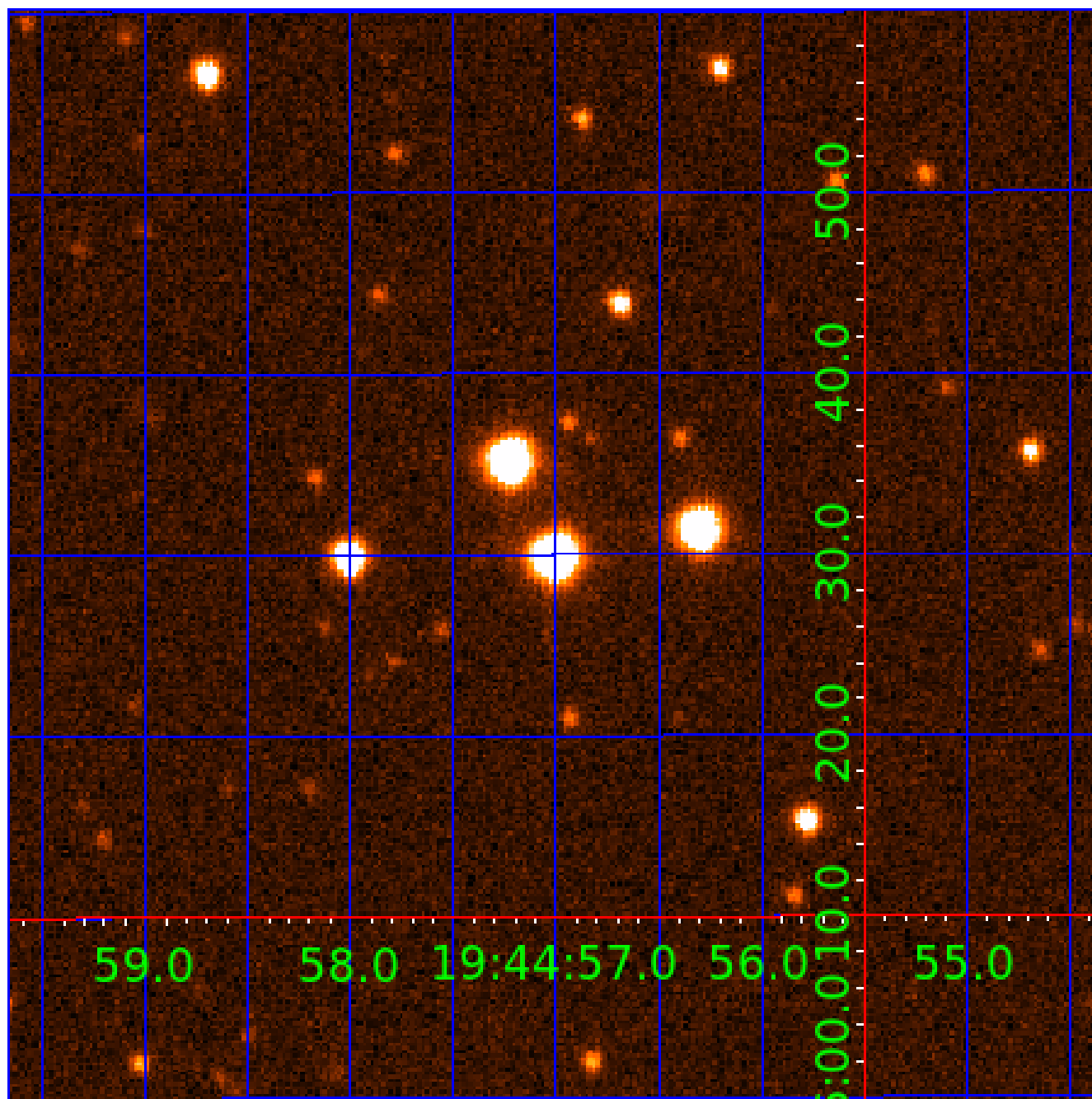


fluxWeightedCentroids, Planet 2 of 3



UKIRT Image

Declination



KIC 005721628

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})
005721628-01	OBS	No	1.210461	132.733338	38.6	3.341	9.3	9.4	2.01	7758	1.55	18890.08
005721628-02	OBS	No	1.210410	131.944824	30.3	4.704	9.5	8.5	2.01	7758	1.29	18891.14
005721628-03	OBS	No	361.870530	311.680070	442.3	6.540	8.0	7.2	2.01	7758	4.73	9.45

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005721628-01	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—CENT_RESOLVED_OFFSET
005721628-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—CENT_RESOLVED_OFFSET
005721628-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS—HALO_GHOST

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

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

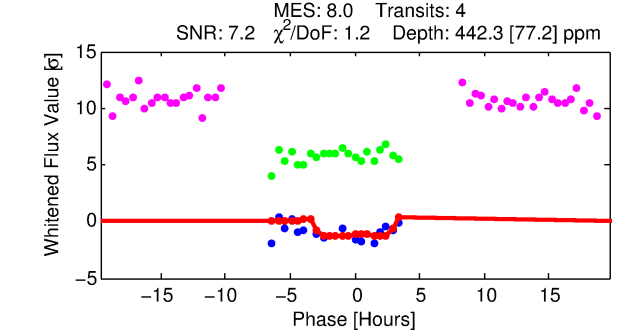
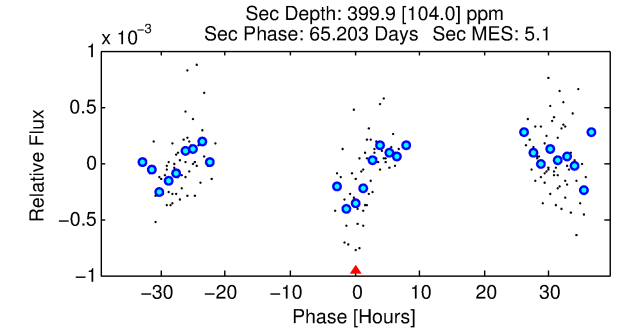
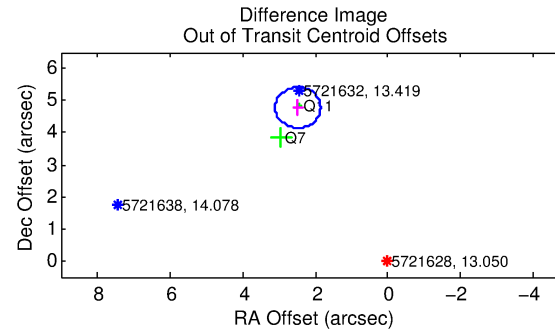
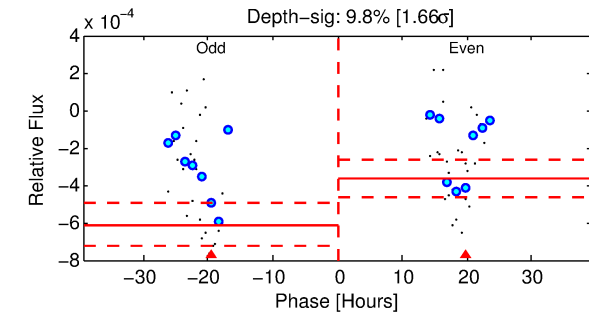
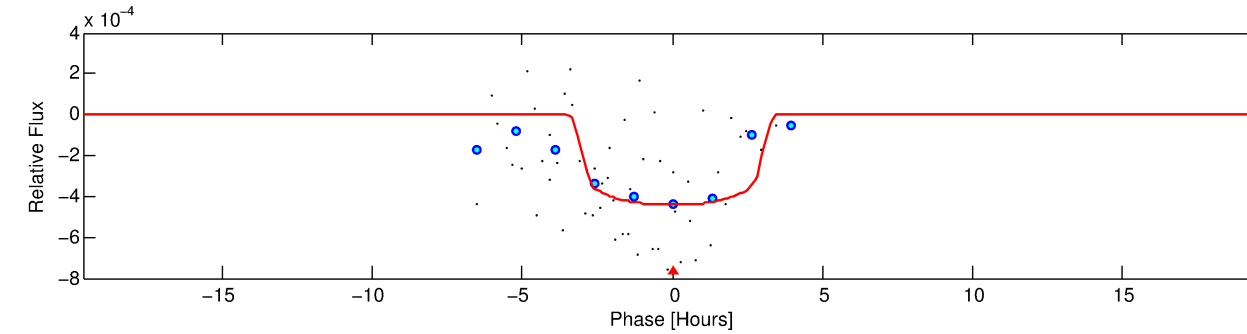
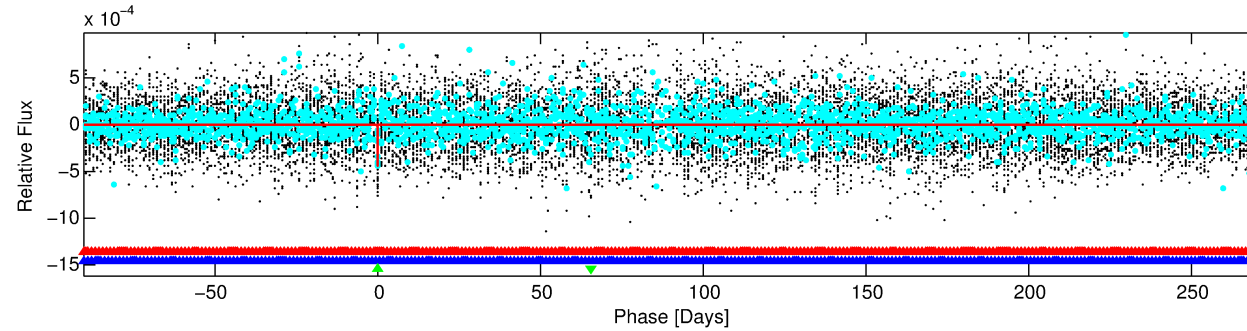
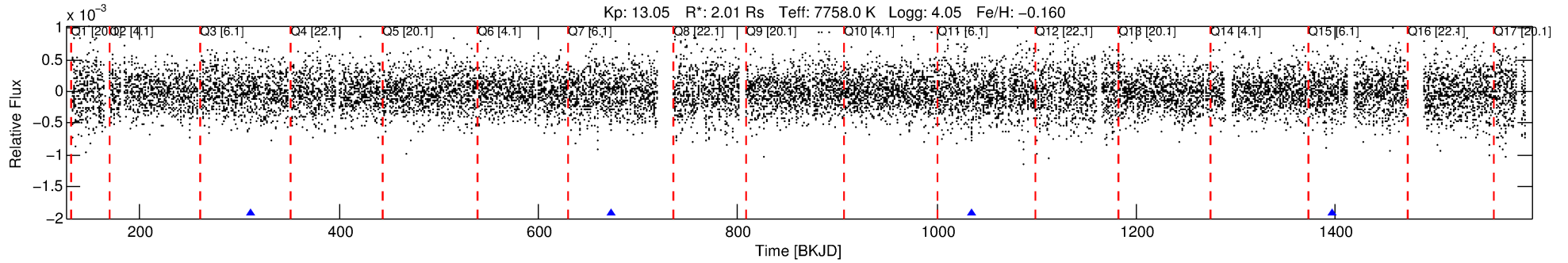
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005721628-03

No Significant Match Found

DV One-Page Summary

KIC: 5721628 Candidate: 3 of 3 Period: 361.871 d



DV Fit Results:

Period = 361.87053 [0.00865] d
Epoch = 311.6801 [0.0219] BKJD
Rp/R* = 0.0215 [0.0094]
a/R* = 251.48 [626.17]
b = 0.83 [0.93]
Seff = 9.45 [2.00]
Teq = 447 [24] K
Rp = 4.73 [2.21] Re
a = 1.1785 [0.1666] AU
Ag = 13670.73 [12785.32] [1.07σ]
Teffp = 7474 [1705] K [4.12σ]

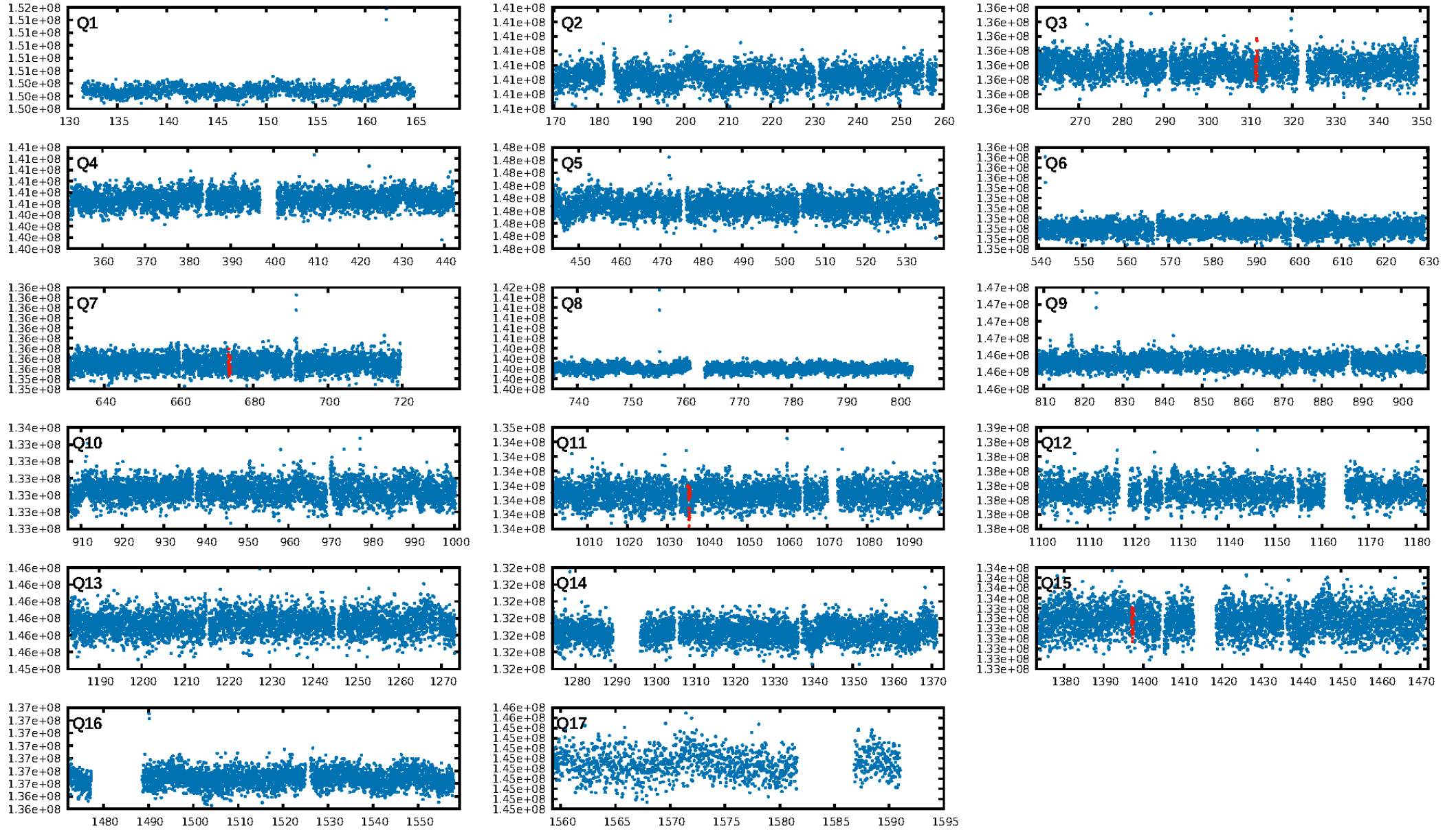
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [1178.67σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.3%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 1.20e-09
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.1583
Centroid-sig: 1.2%
Centroid-so: 4.090 arcsec [2.55σ]
OotOffset-rm: 5.384 arcsec [25.54σ]
KicOffset-rm: 5.985 arcsec [21.48σ]
OotOffset-st: 0/2/0/0 [2]
KicOffset-st: 0/2/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 0.00 [0/3]

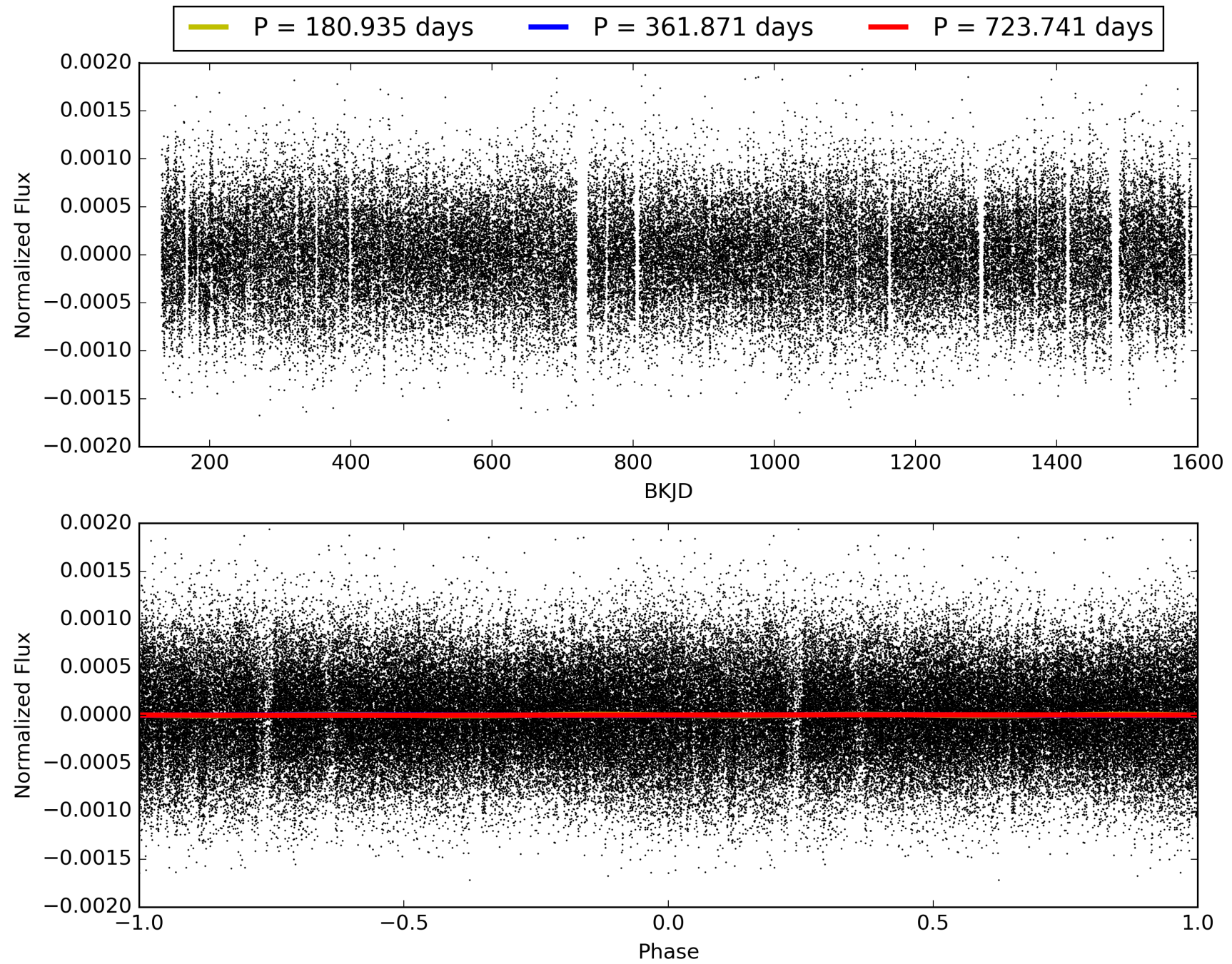
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:37:13 Z

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

TCE 005721628-03, PDC Light Curves

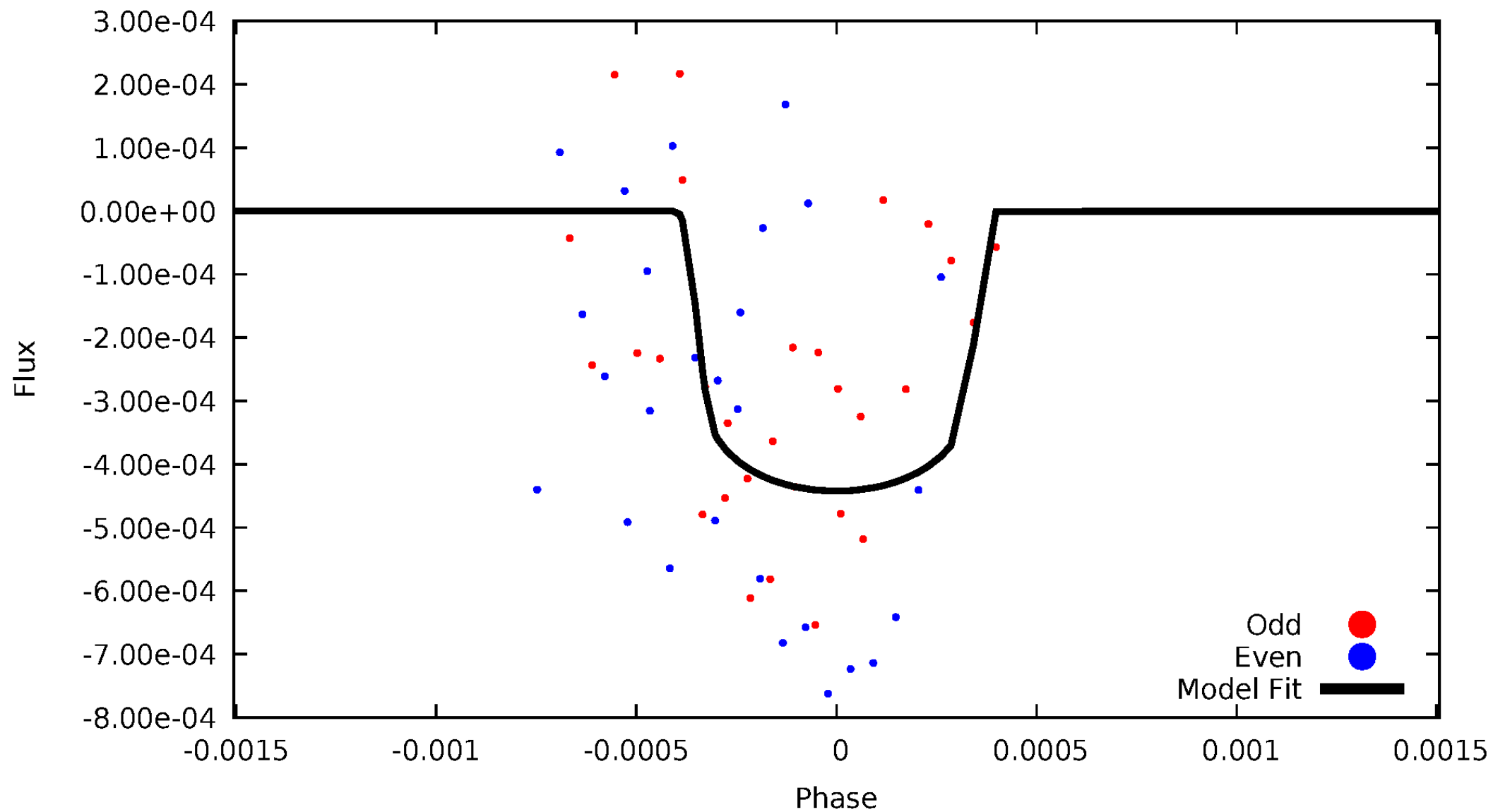


TCE 005721628-03



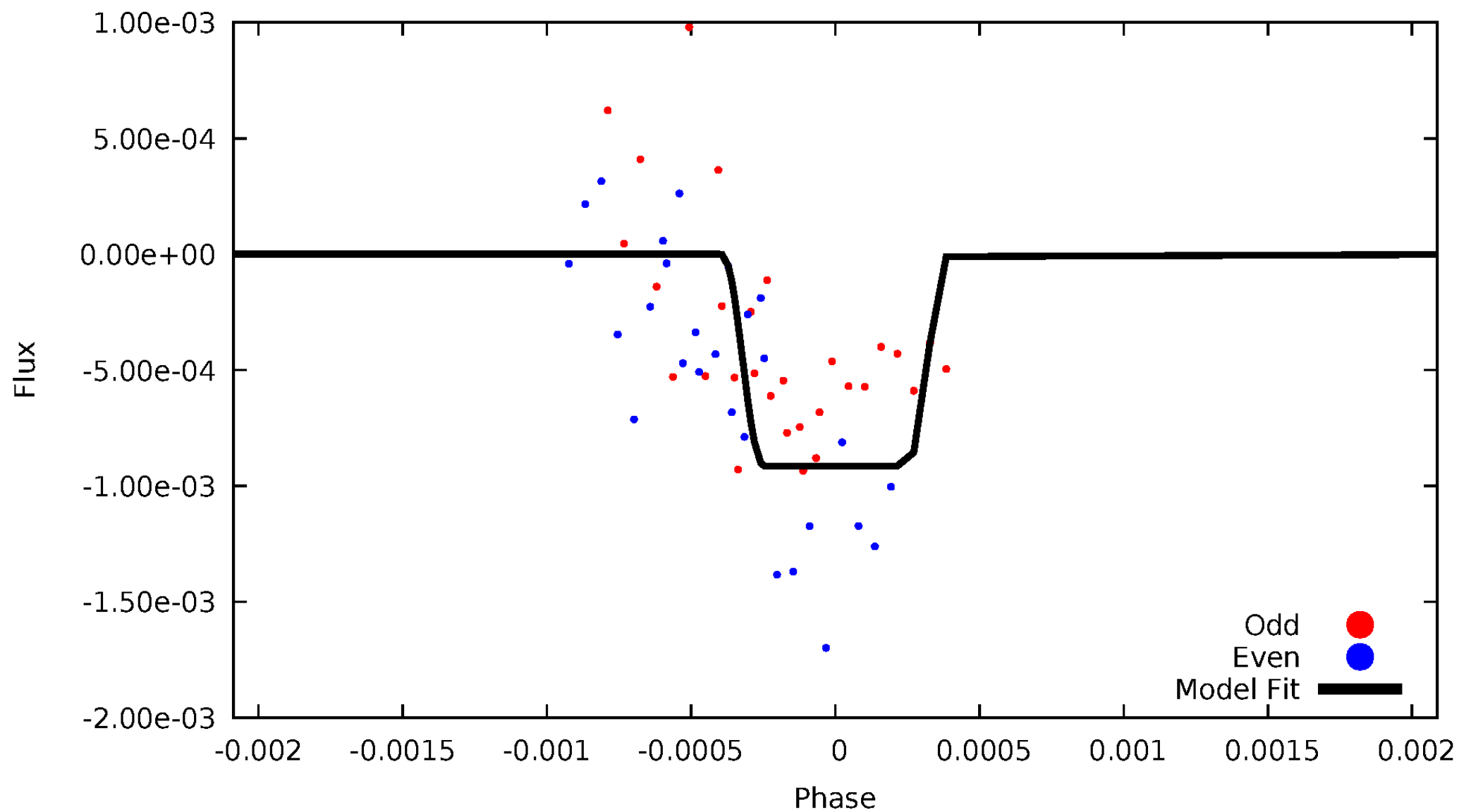
DV Odd/Even

TCE 005721628-03



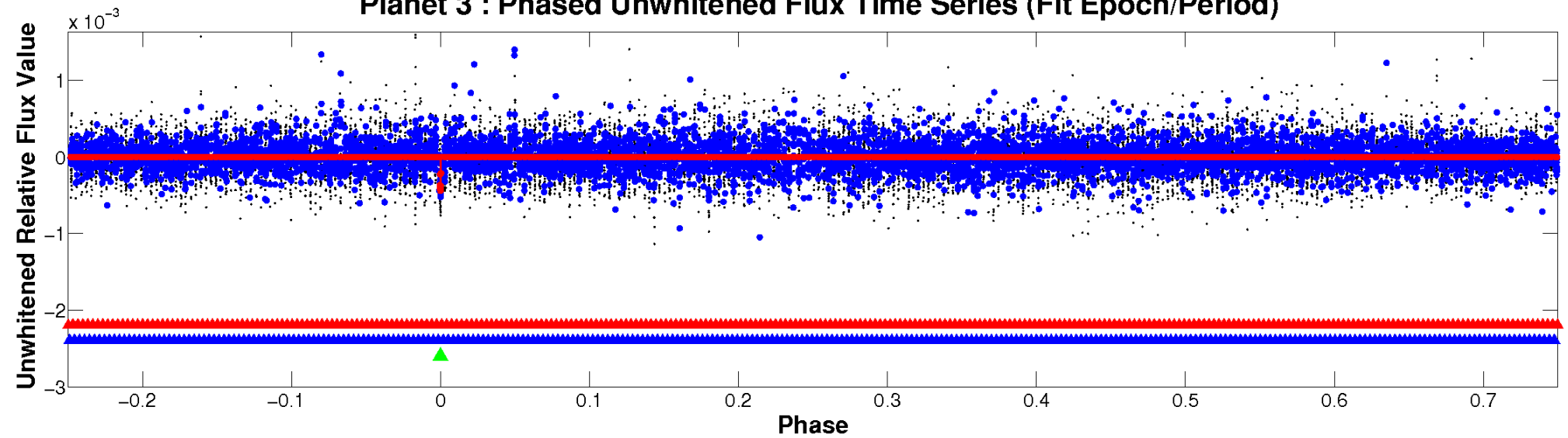
ALT Odd/Even

TCE 005721628-03

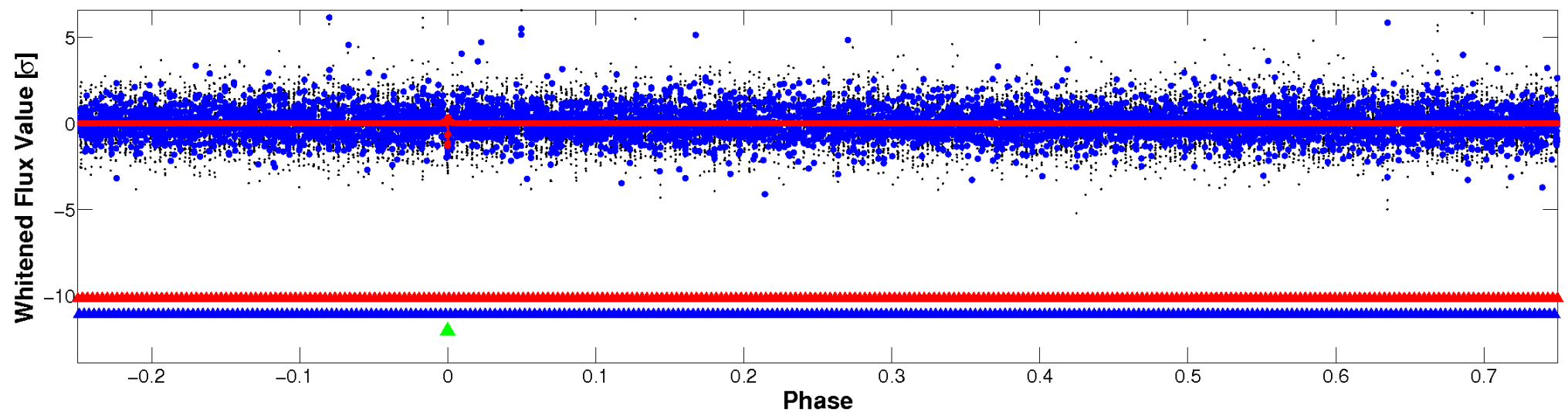


Non-Whitened Vs. Whitened Light Curve

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

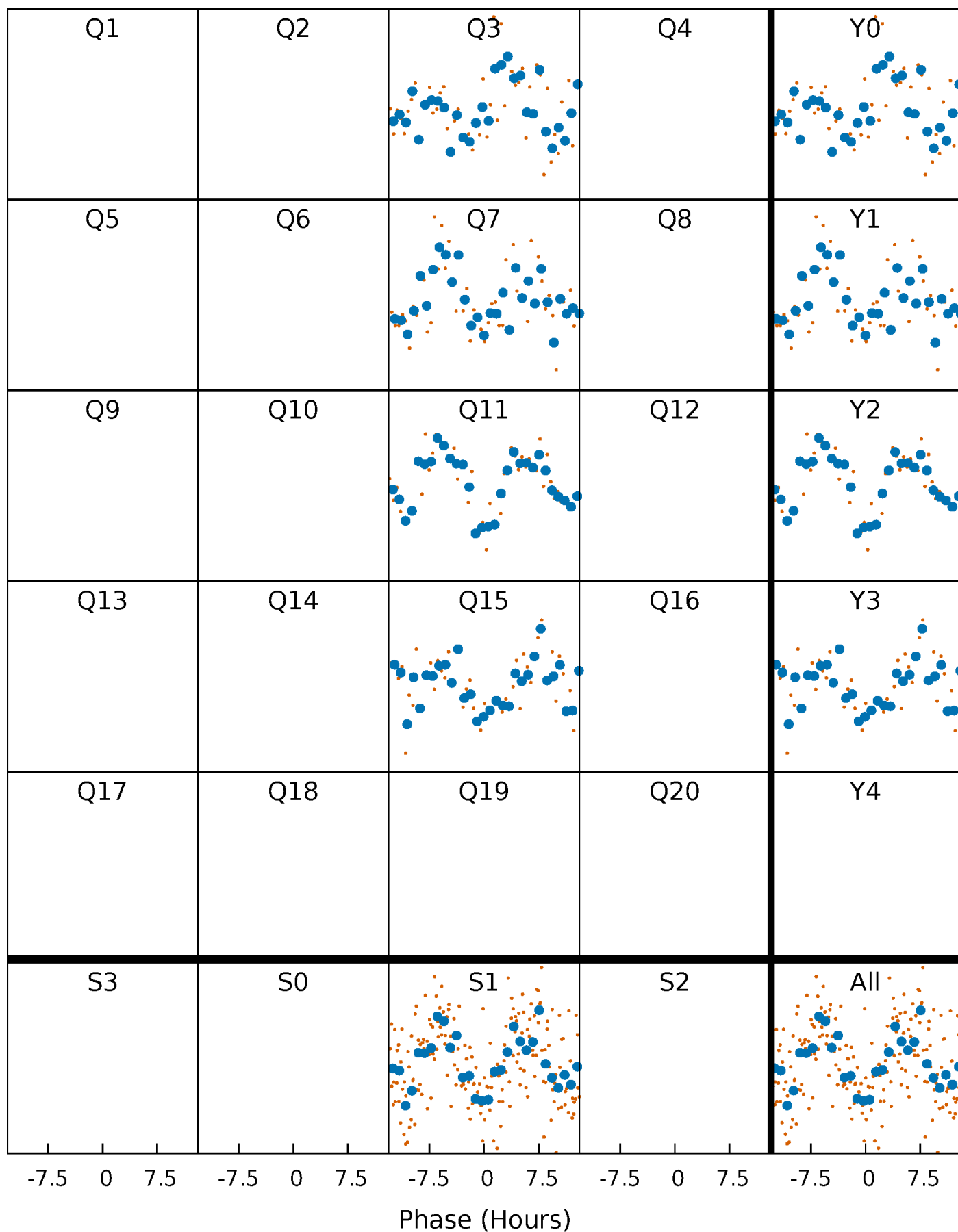


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



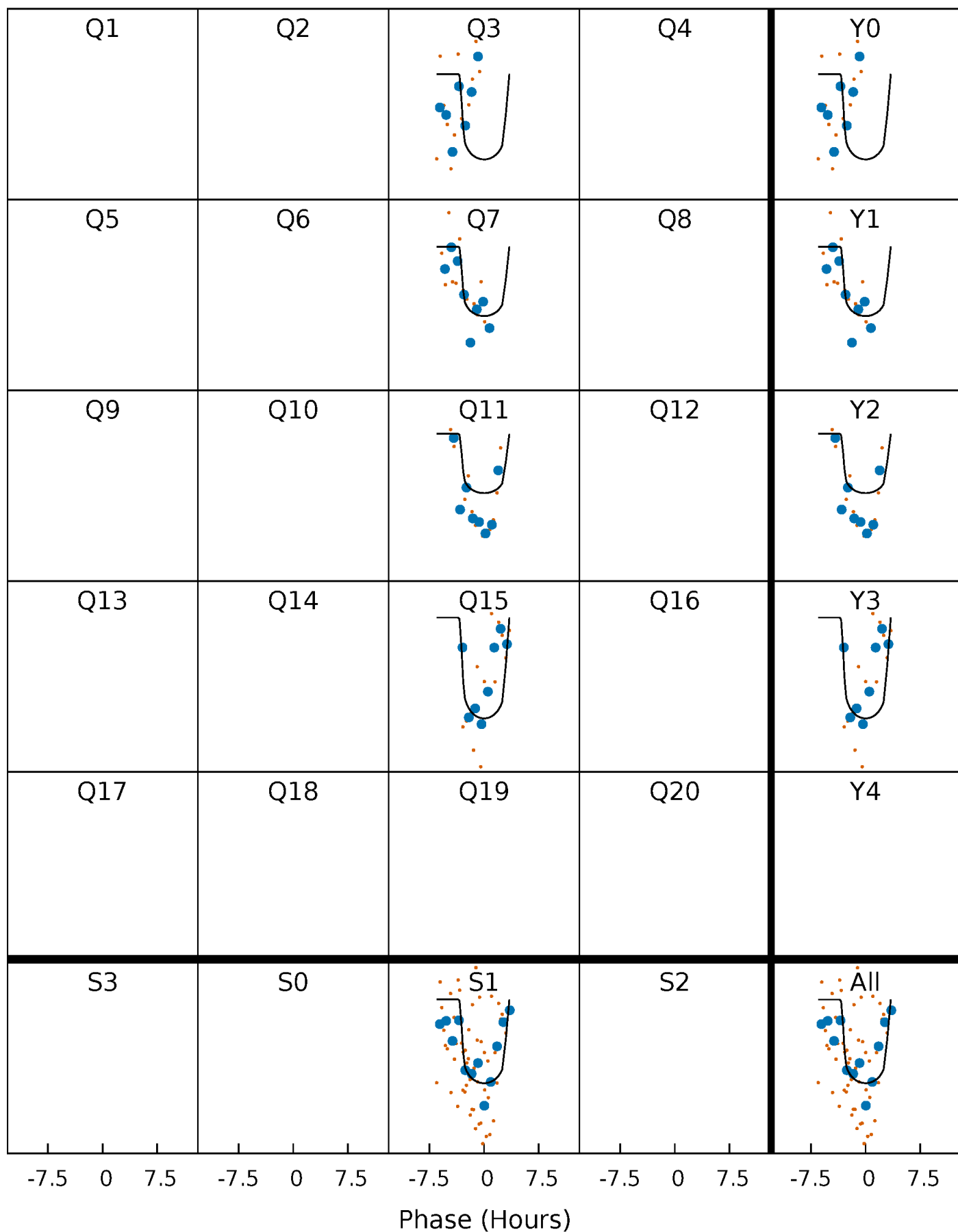
PDC Quarter-Phased Transit Curves

TCE 005721628-03 $P=361.870530$ Days $T_0=311.680070$ (BKJD)



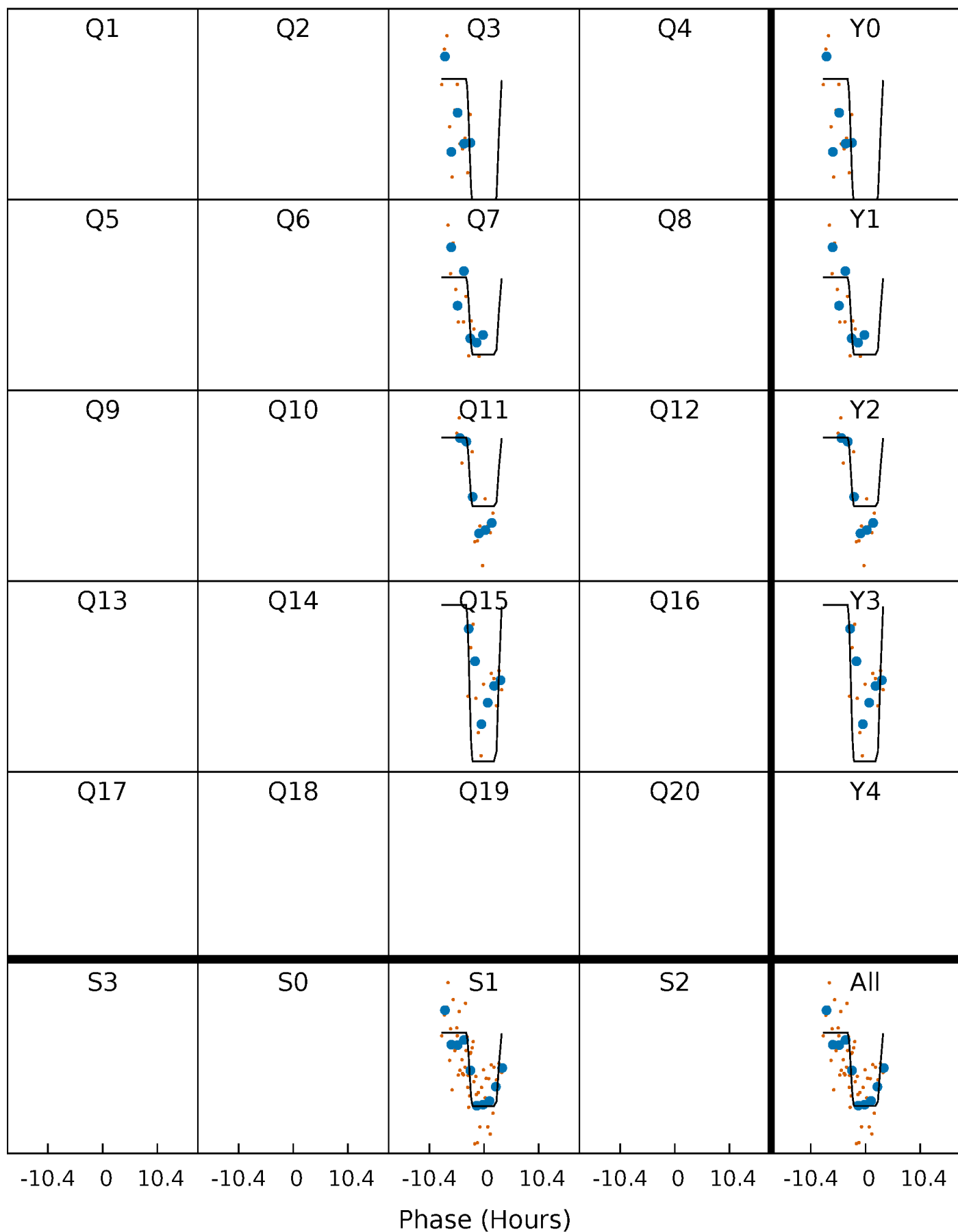
DV Quarter-Phased Transit Curves

TCE 005721628-03 P=361.870530 Days $T_0=311.680070$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

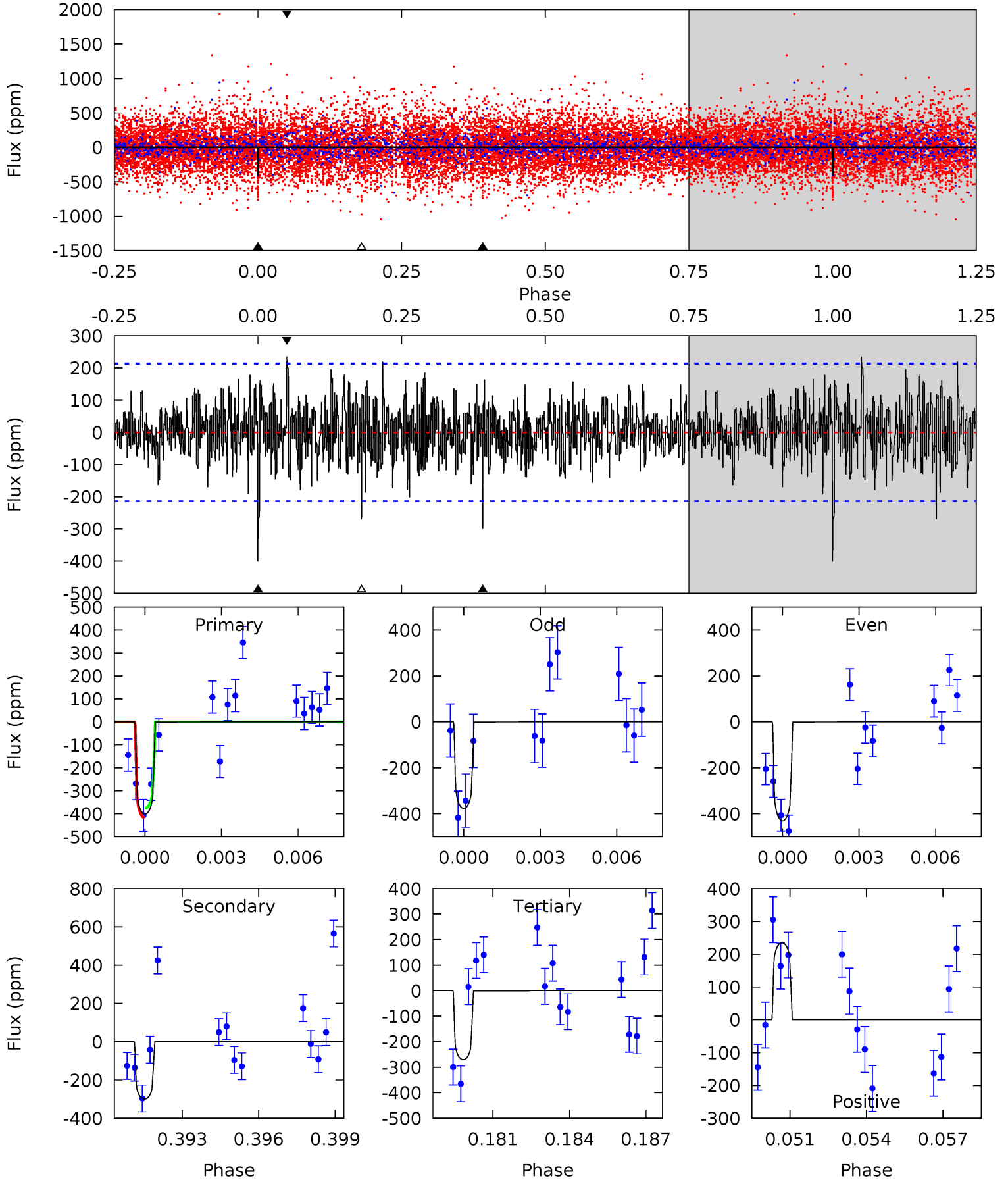
TCE 005721628-03 P=361.851103 Days $T_0=311.743456$ (BKJD)



DV Model-Shift Uniqueness Test

005721628-03, P = 361.870530 Days, E = 311.680070 Days

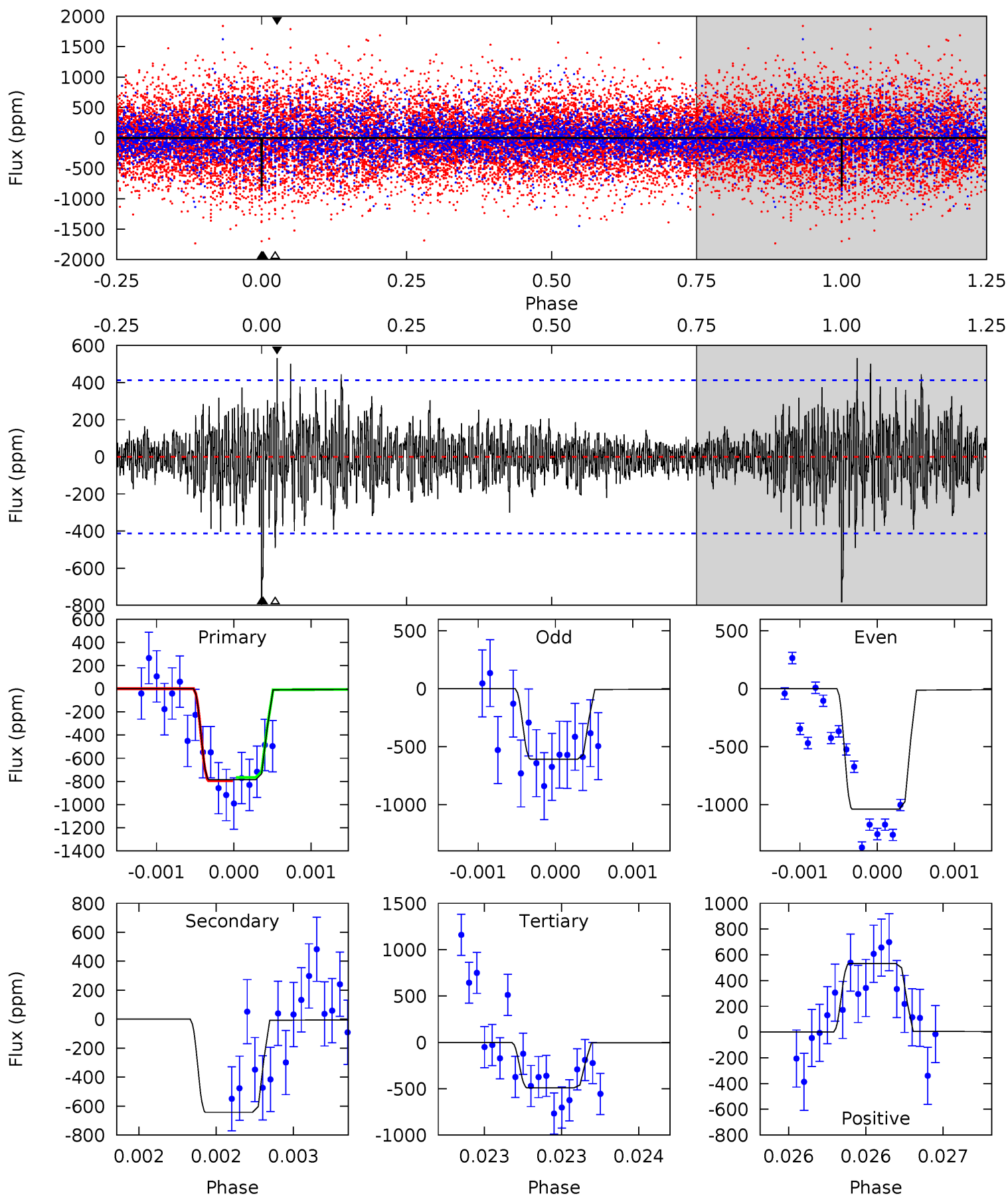
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.87	7.36	6.64	5.78	5.25	2.97	1.58	3.22	4.09	0.72	1.59	0.64	0.93	0.37	0.49



Alt Model-Shift Uniqueness Test

005721628-03, P = 361.851103 Days, E = 311.743456 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.5	8.57	6.54	7.09	5.50	3.37	1.50	3.92	3.37	2.02	1.48	2.83	1.12	0.40	0.17



Stellar Parameters For KIC 005721628

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7758^{+77}_{-77}	$4.053^{+0.115}_{-0.103}$	$-0.160^{+0.150}_{-0.150}$	$2.011^{+0.333}_{-0.300}$	$1.664^{+0.163}_{-0.133}$	$0.288^{+0.149}_{-0.099}$
	+1%/-1%	+3%/-3%	+94%/-94%	+17%/-15%	+10%/-8%	+52%/-34%
Source	SPE68	SPE68	SPE68	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 005721628-03 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-300 ± 41	$4.70^{+2.14}_{-2.01}$	625^{+29}_{-26}	6815^{+3026}_{-1110}	10216^{+22010}_{-5372}
Alt.	-643 ± 75	$6.75^{+2.21}_{-2.23}$	622^{+27}_{-23}	6887^{+2057}_{-908}	10834^{+14010}_{-4799}

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

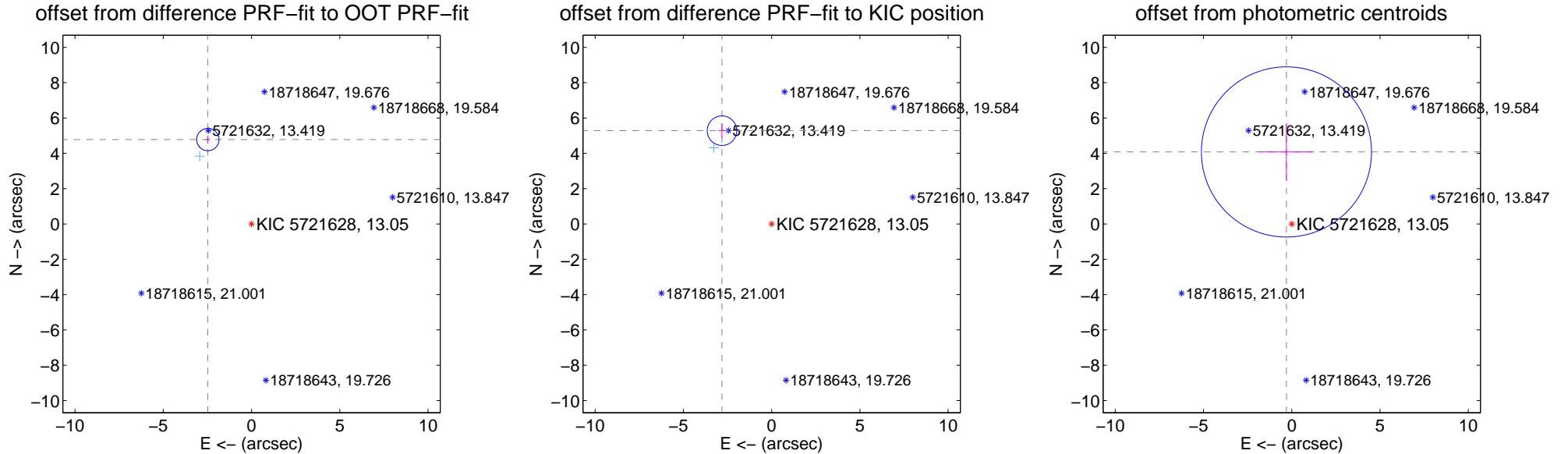
DV Centroid Data

Supplemental centroid analysis for 005721628-03. Kepler magnitude: 13.05. Transit SNR 7.15

There are 2 quarters with good PRF difference image offsets

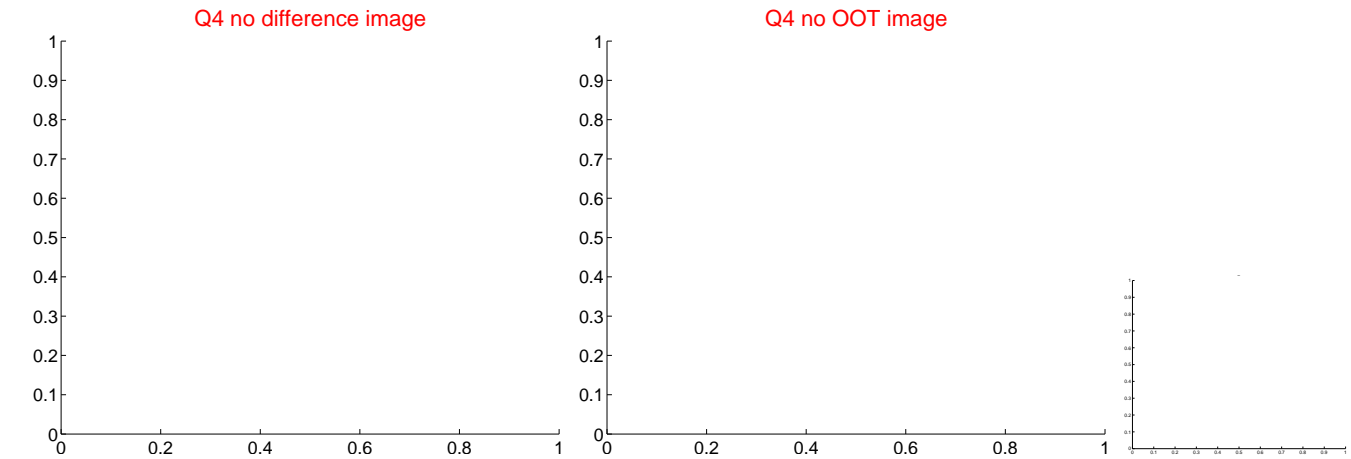
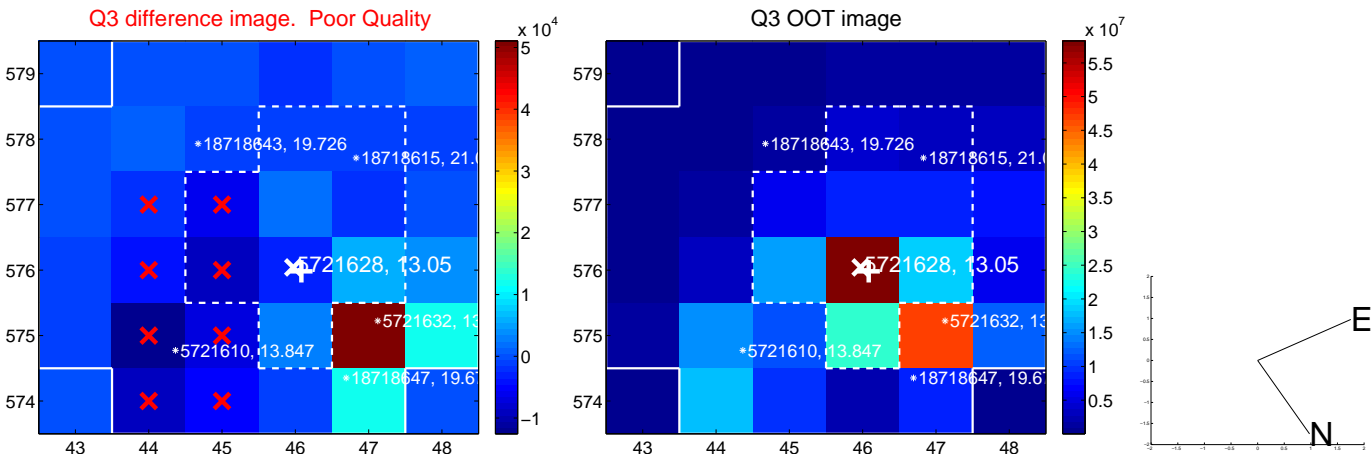
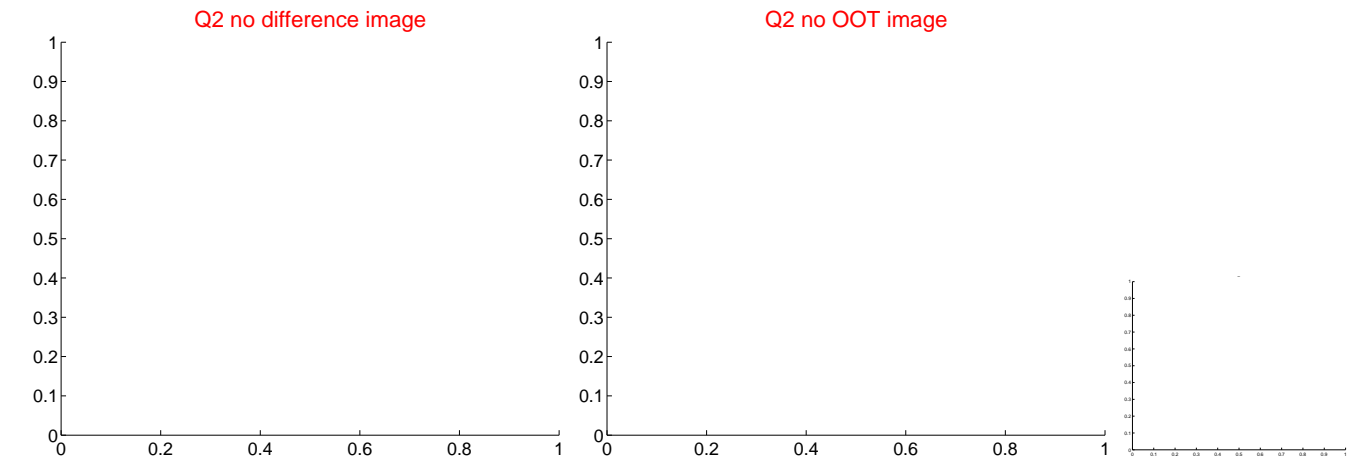
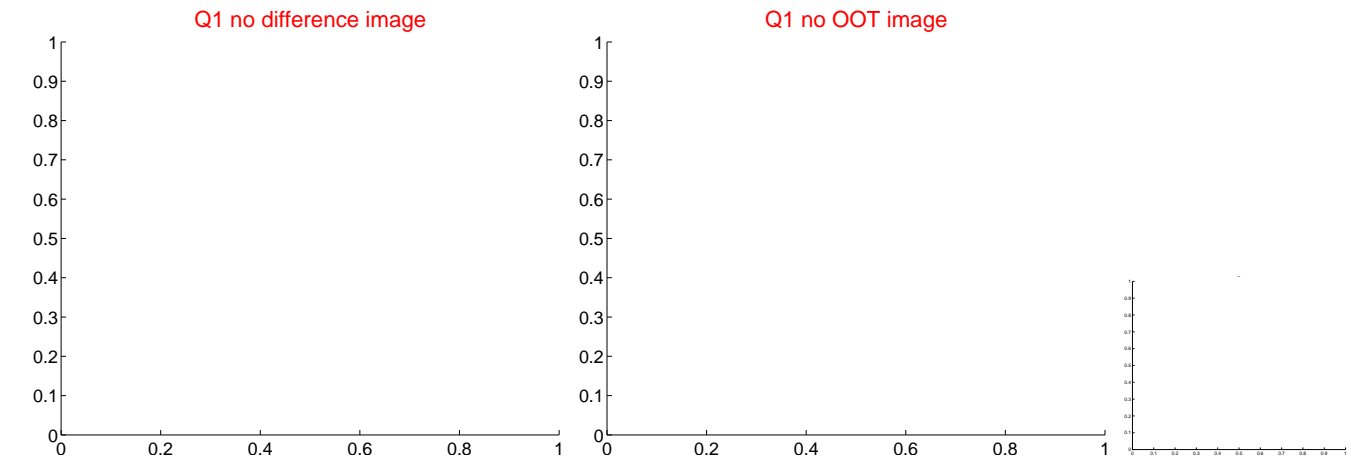
The direct PRF centroid is offset from the target star catalog position by about 0.61 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	5.384 \pm 0.211	25.54	2.476 \pm 0.130	4.781 \pm 0.228
PRF-fit source offset from KIC position	5.985 \pm 0.279	21.48	2.814 \pm 0.209	5.283 \pm 0.417
photometric centroid source offset	4.09 \pm 1.61	2.55	0.30 \pm 1.54	4.08 \pm 1.61

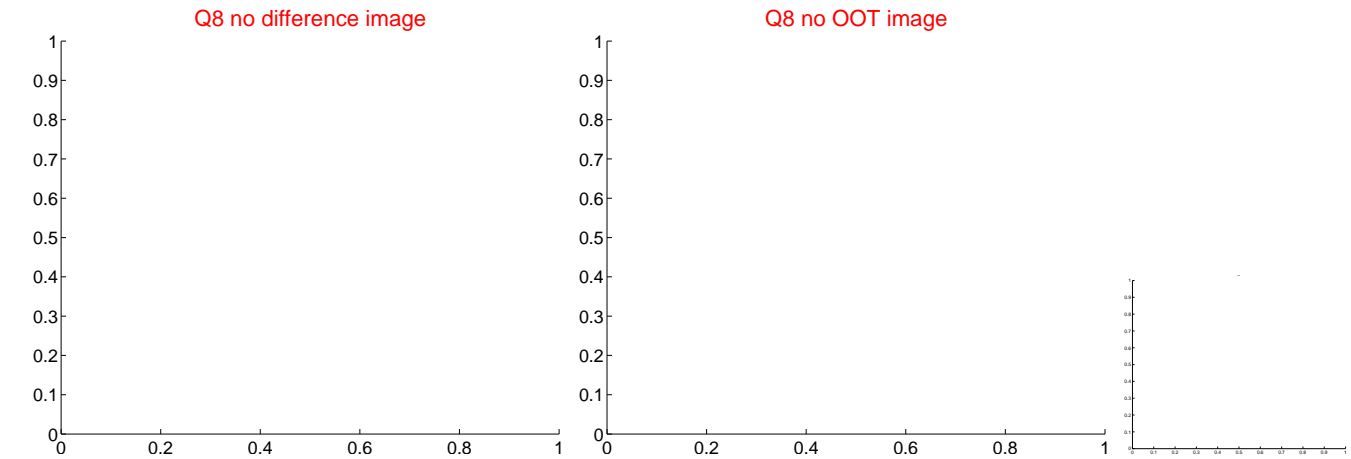
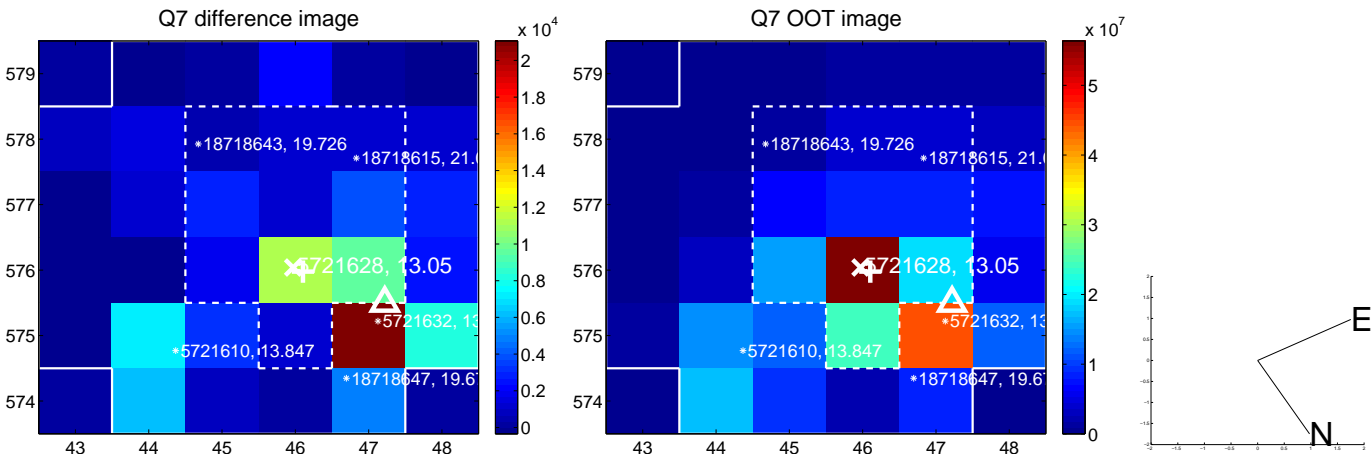
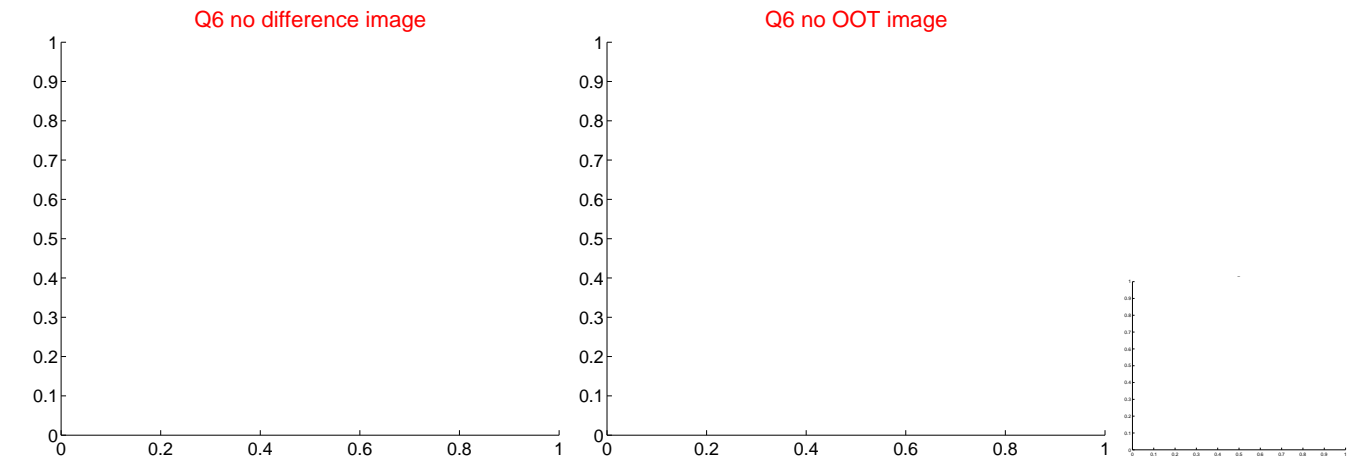
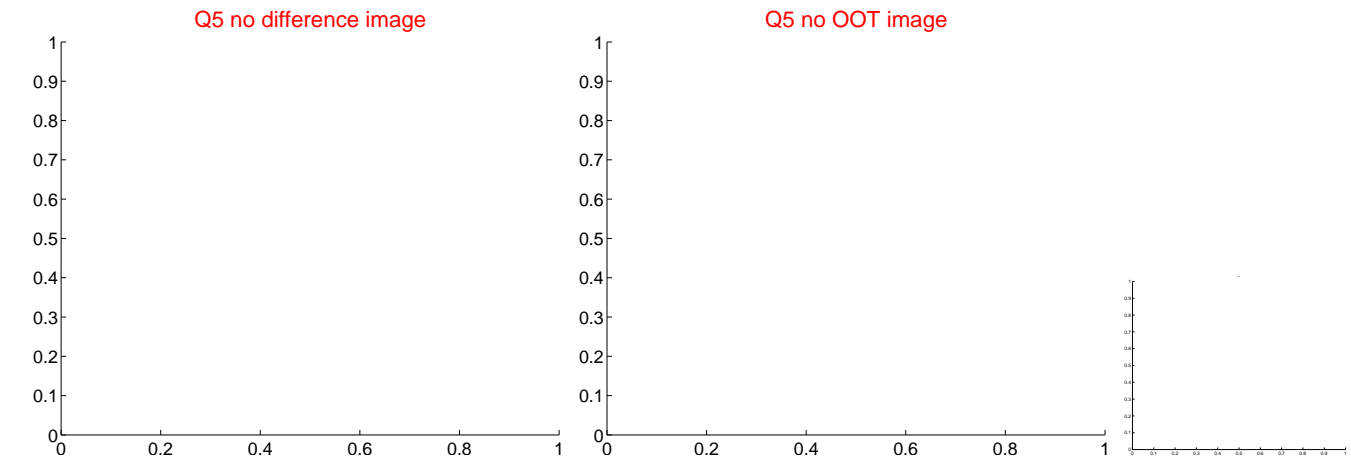


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

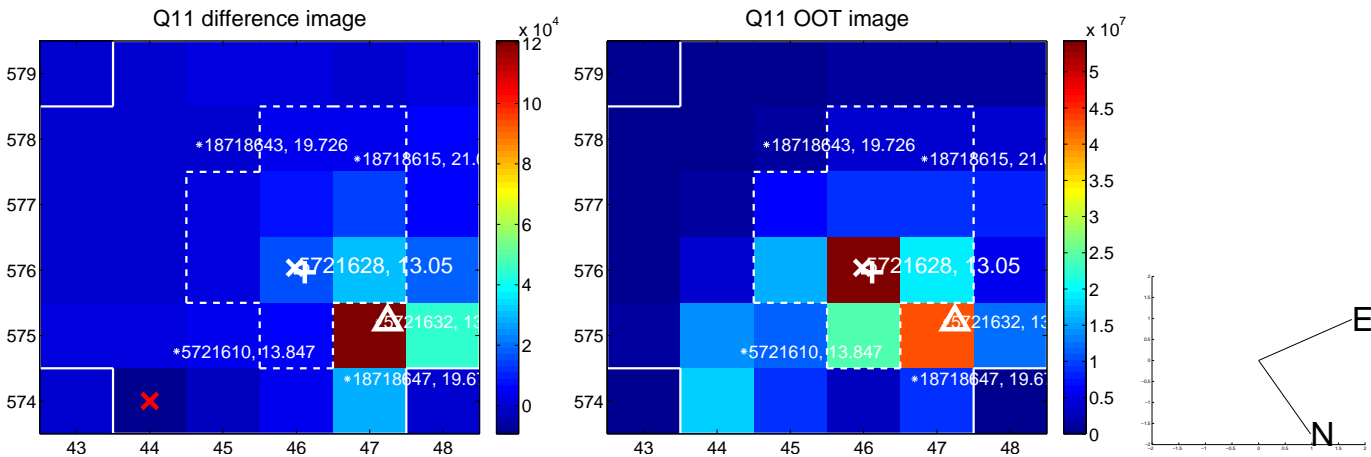
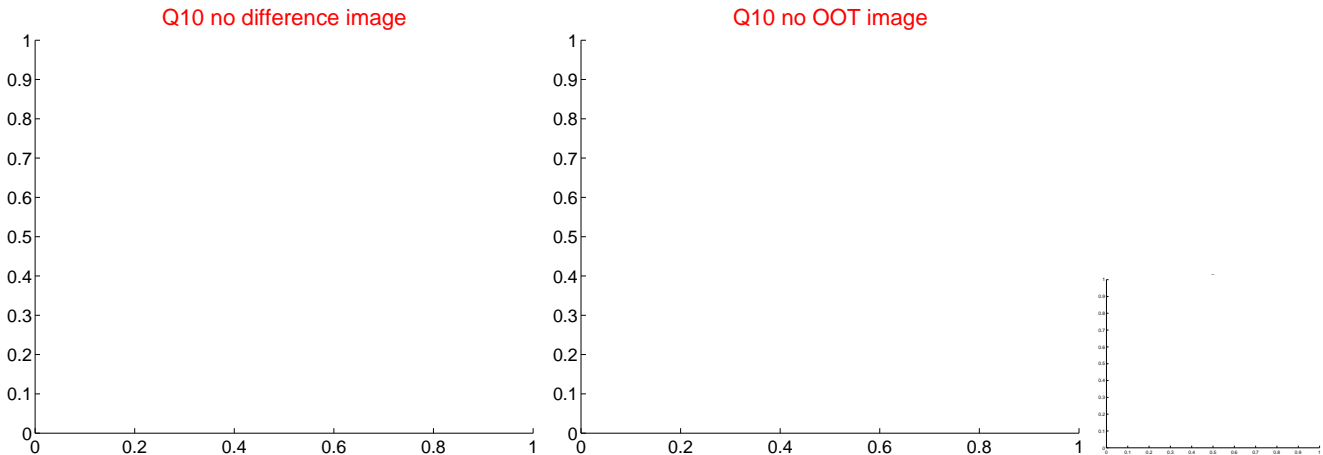
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



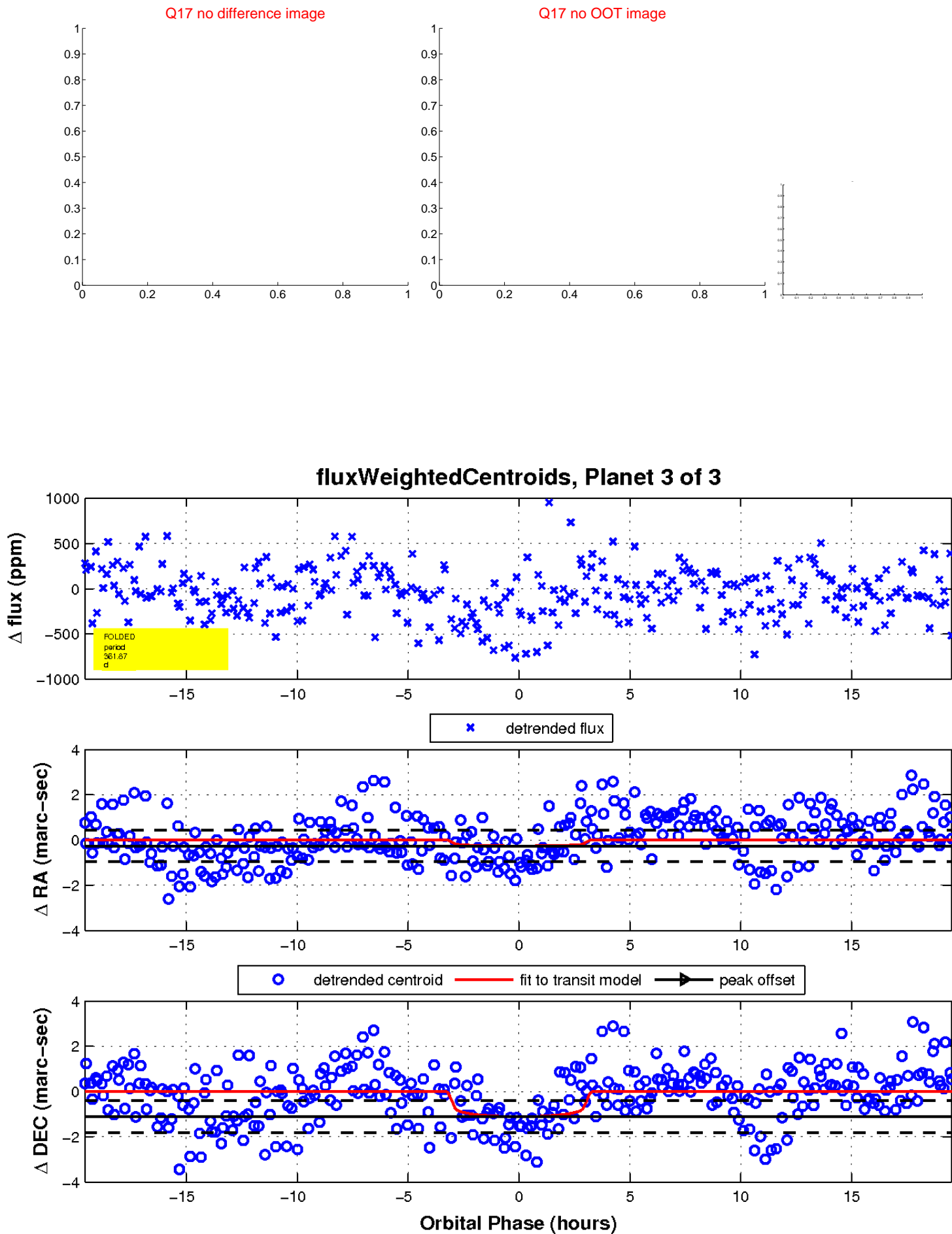
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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

