

KIC 005792656

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})
005792656-01	OBS	No	0.926748	132.261100	28.1	5.820	12.1	9.1	2.24	7328	1.22	29601.32
005792656-02	OBS	No	8.346071	133.741140	59.9	8.457	17.8	4.4	2.24	7328	2.09	1579.86
005792656-03	OBS	No	75.696395	135.551705	403.6	5.338	12.9	6.3	2.24	7328	8.56	83.53
005792656-04	OBS	No	46.694140	152.488697	374.7	5.682	12.2	9.5	2.24	7328	8.26	159.07
005792656-05	OBS	No	89.960139	192.886063	369.7	3.443	12.9	8.6	2.24	7328	4.82	66.35
005792656-06	OBS	No	52.160133	167.773368	231.2	5.417	11.7	6.1	2.24	7328	3.49	137.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005792656-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005792656-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_ZUMA—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

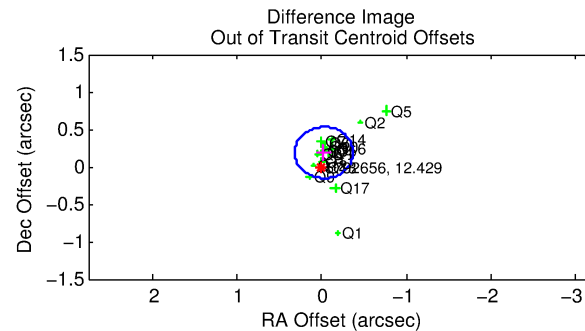
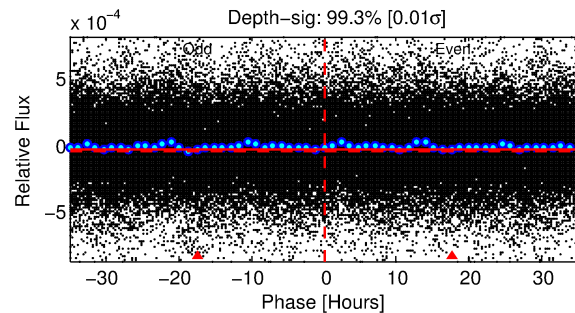
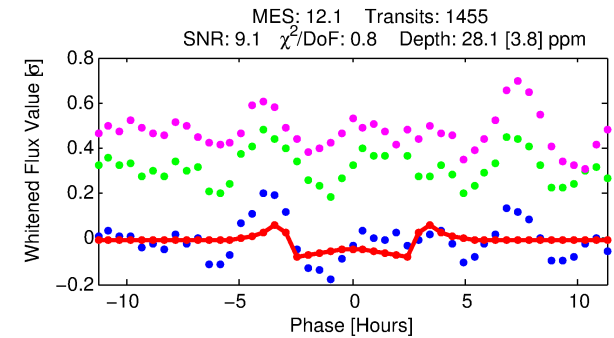
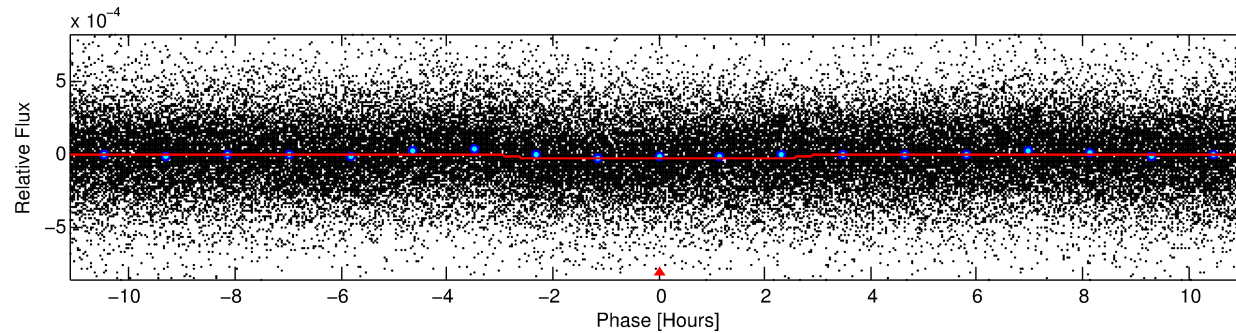
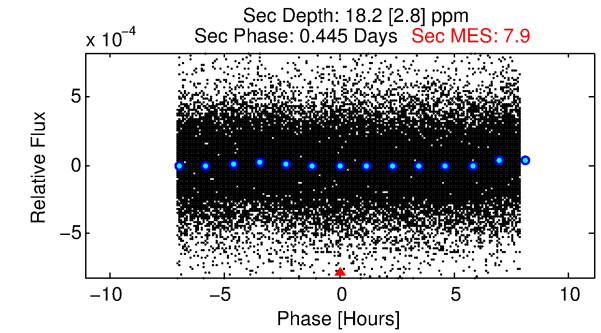
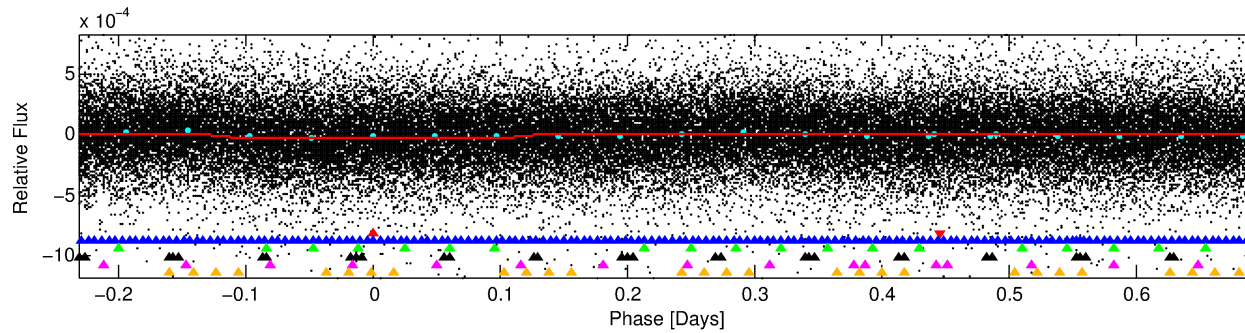
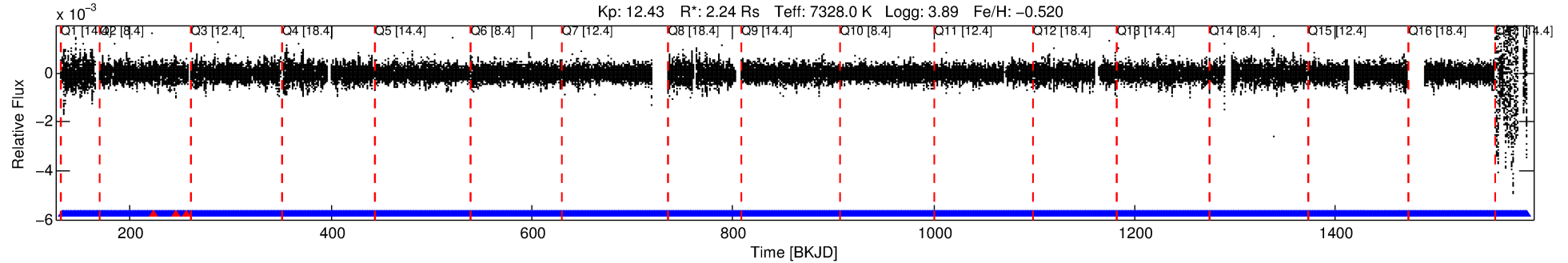
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005792656-01

No Significant Match Found

DV One-Page Summary

KIC: 5792656 Candidate: 1 of 6 Period: 0.927 d



DV Fit Results:

Period = 0.92675 [0.00001] d
Epoch = 132.2611 [0.0023] BKJD
Rp/R* = 0.0050 [0.0015]
a/R* = 1.33 [1.06]
b = 0.37 [4.33]
Seff = 29601.32 [20149.12]
Teq = 3345 [569] K
Rp = 1.22 [0.62] Re
a = 0.0209 [0.0085] AU
Ag = 2.96 [2.70] [0.73σ]
Teffp = 6784 [1107] K [2.76σ]

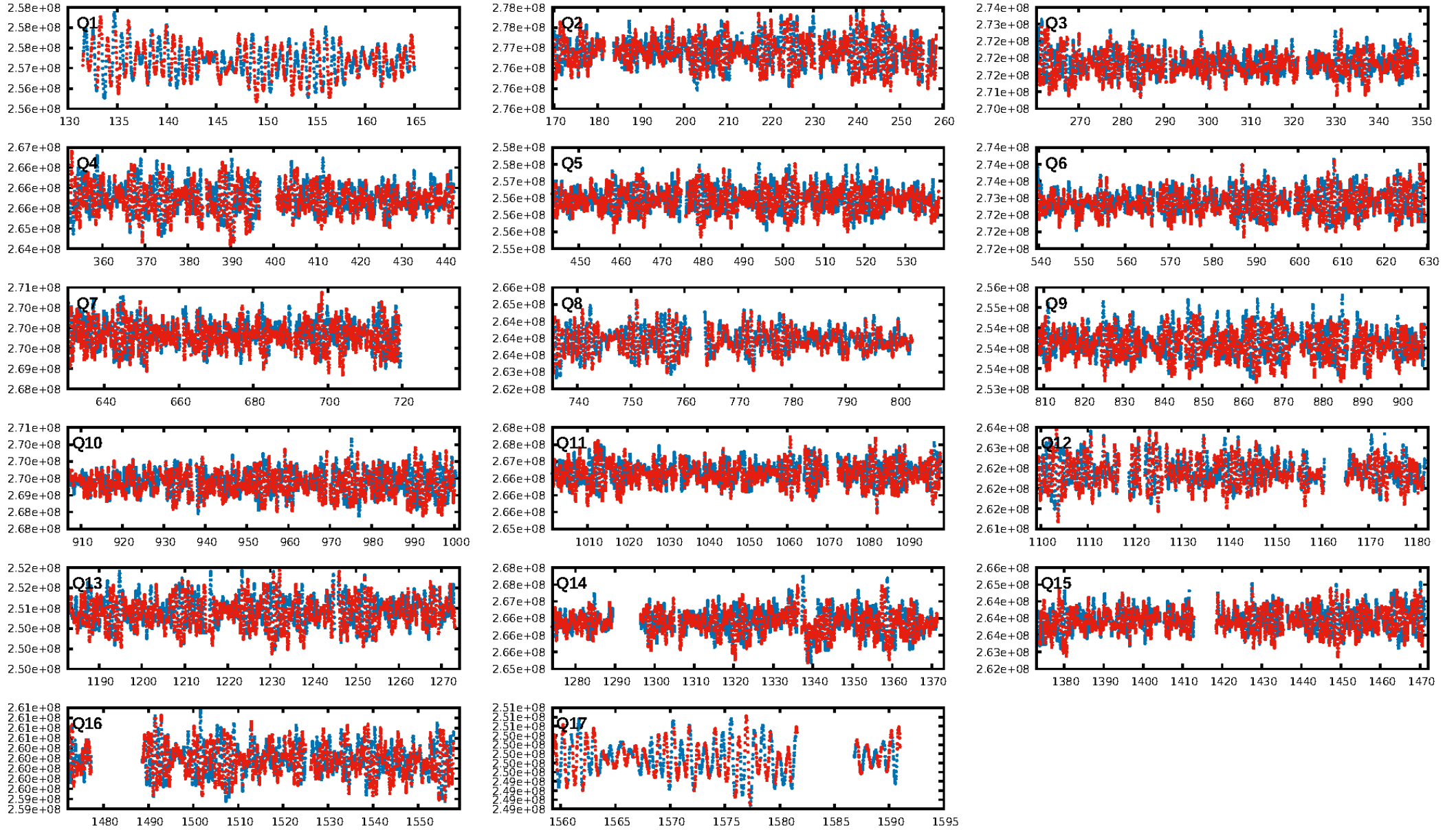
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [17.35σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.53e-16
RollingBand-fgt: 1.00 [1386/1389]
GhostDiagnostic-chr: 0.4967
Centroid-sig: 77.6%
Centroid-so: 0.075 arcsec [0.23σ]
OotOffset-rm: 0.190 arcsec [1.66σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.255 arcsec [2.32σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

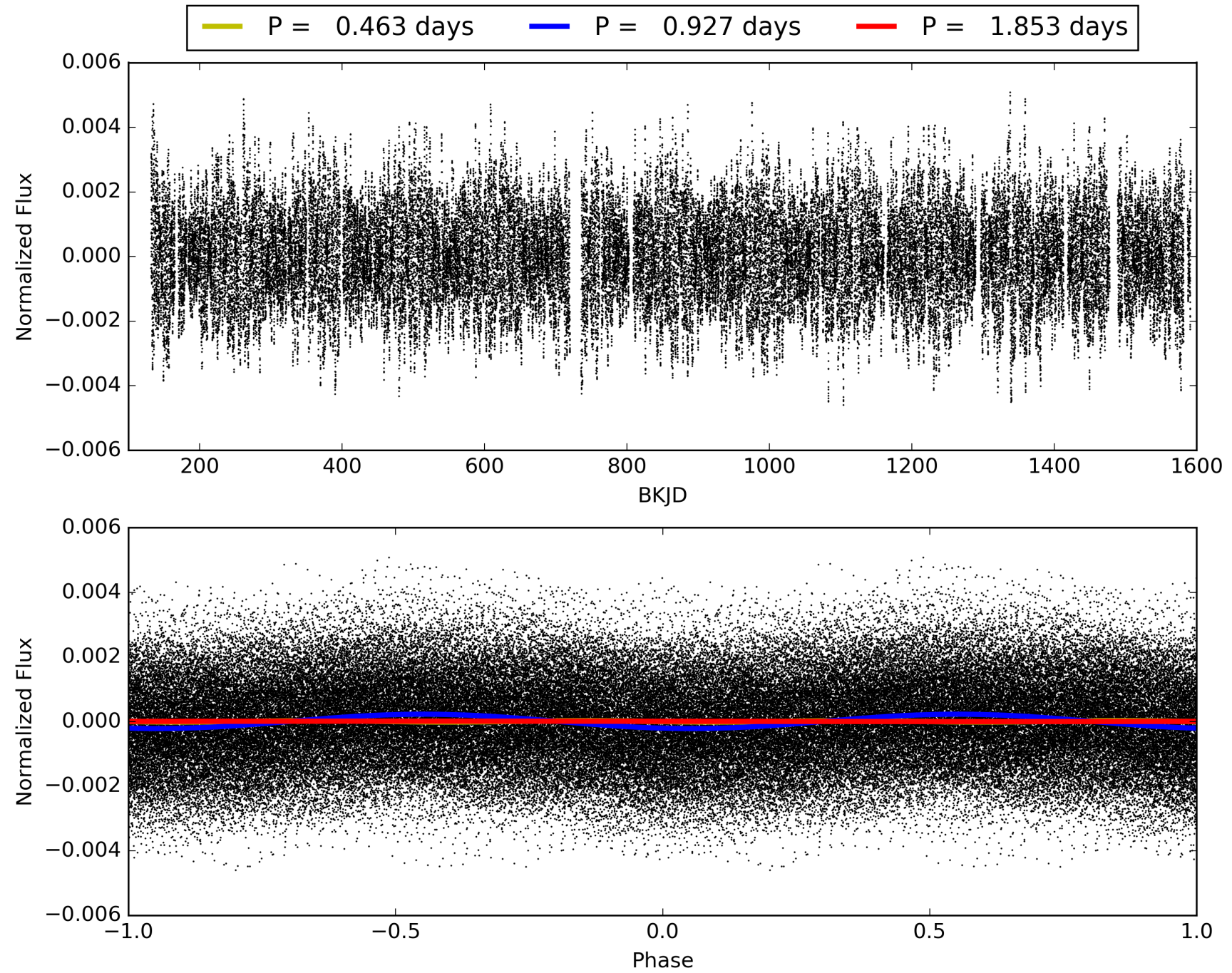
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005792656-01, PDC Light Curves

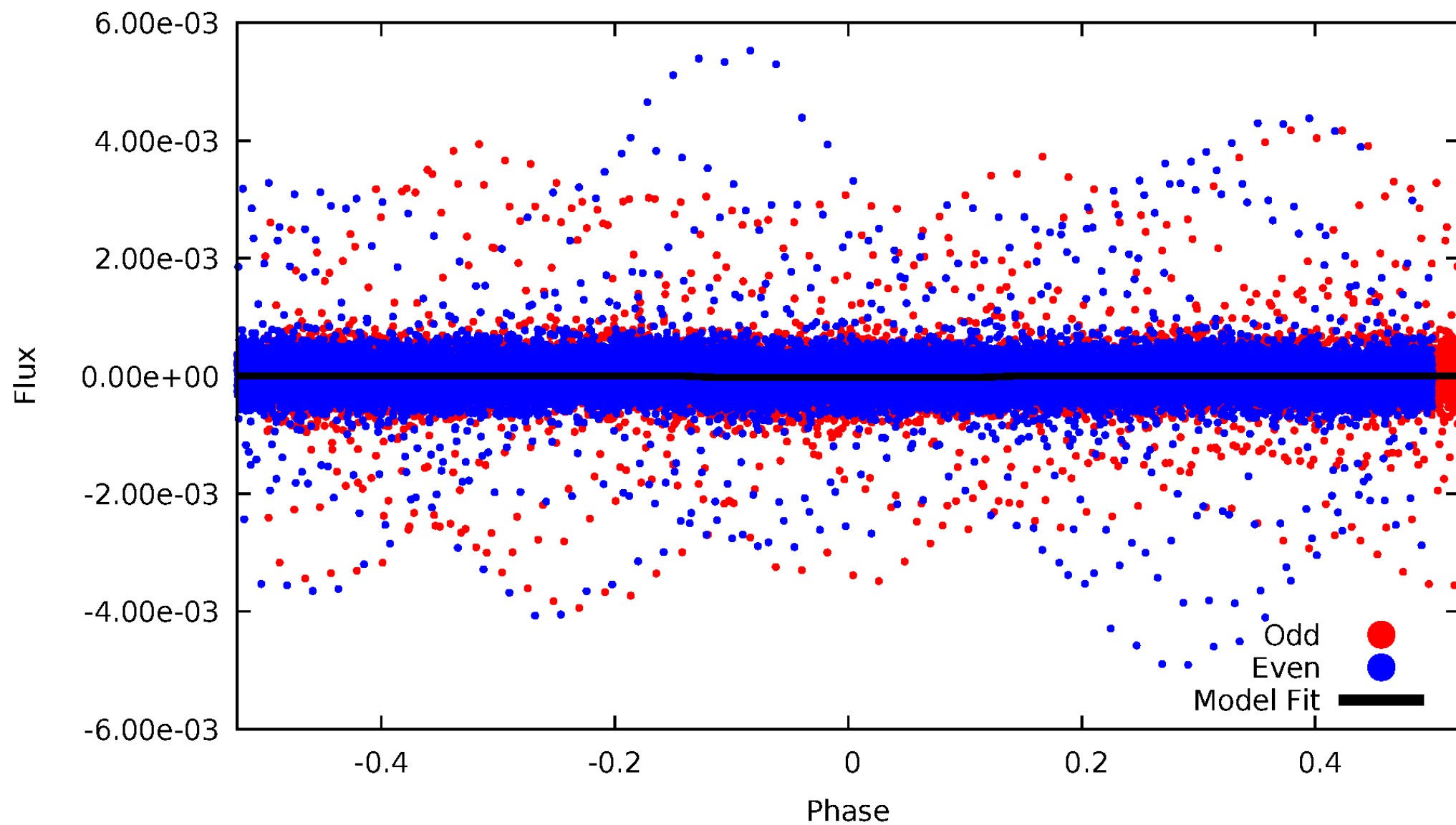


TCE 005792656-01



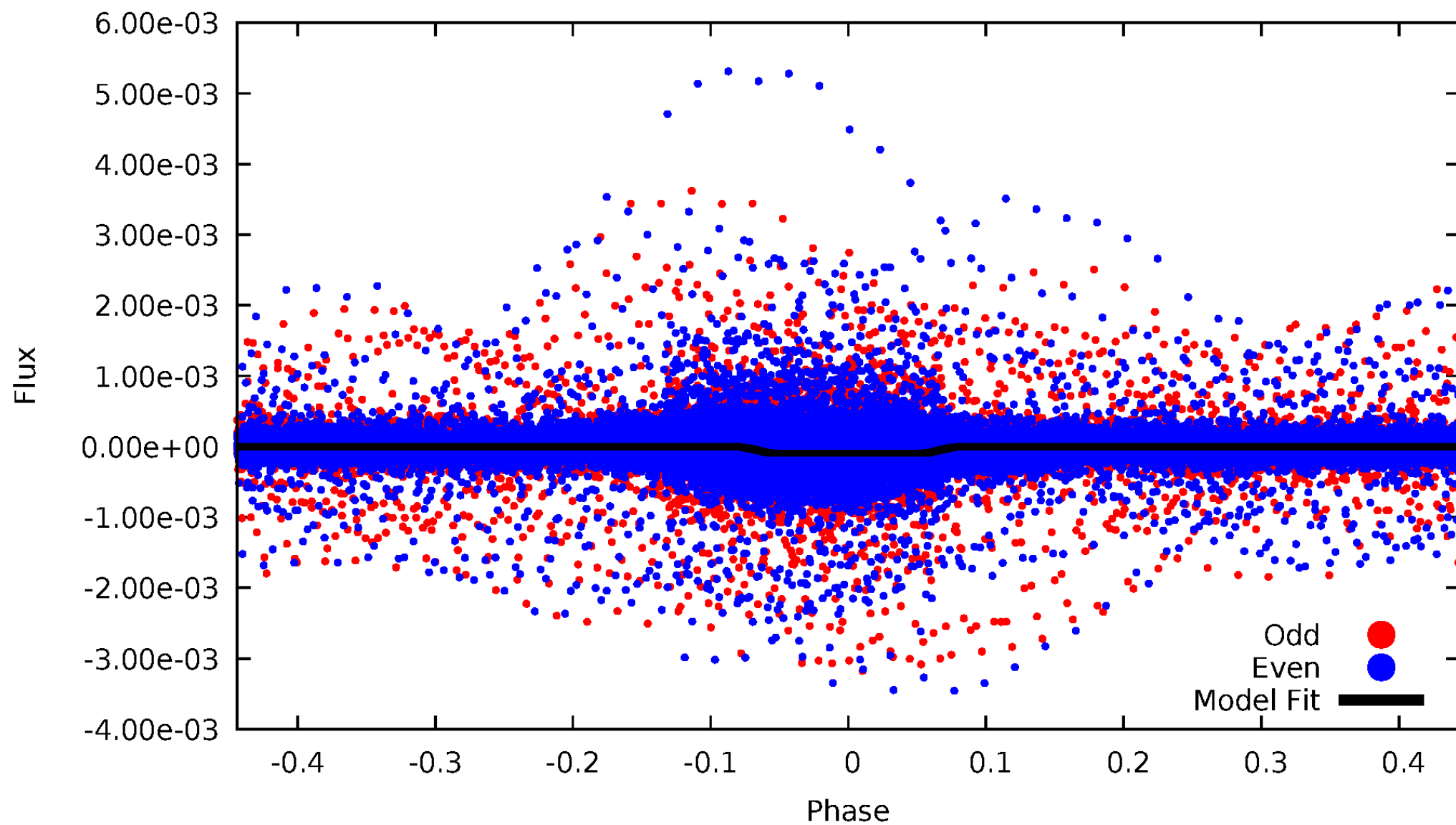
DV Odd/Even

TCE 005792656-01



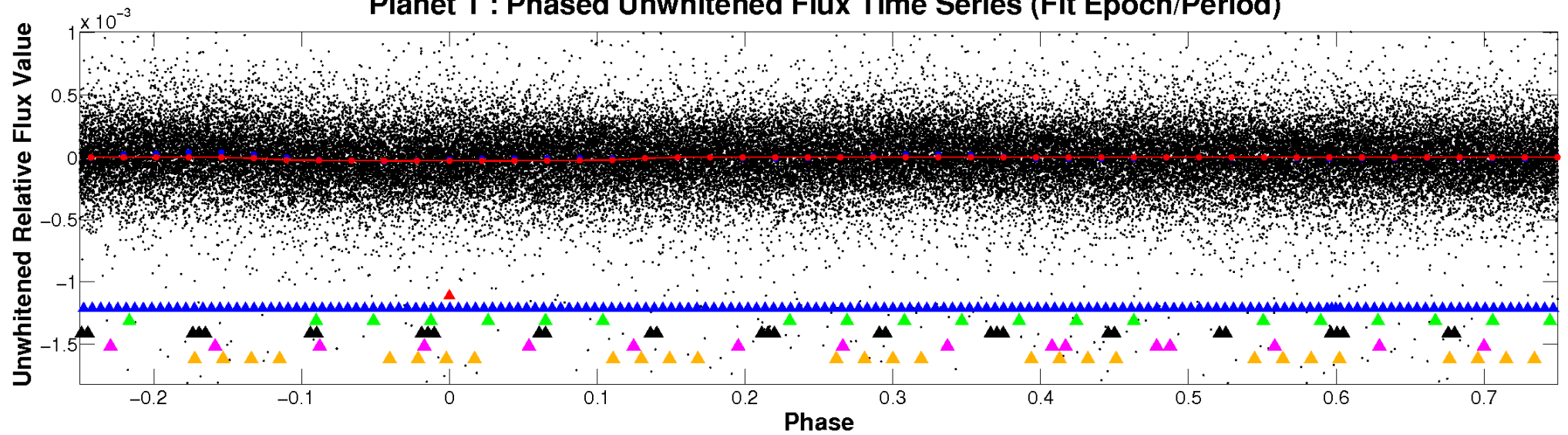
ALT Odd/Even

TCE 005792656-01

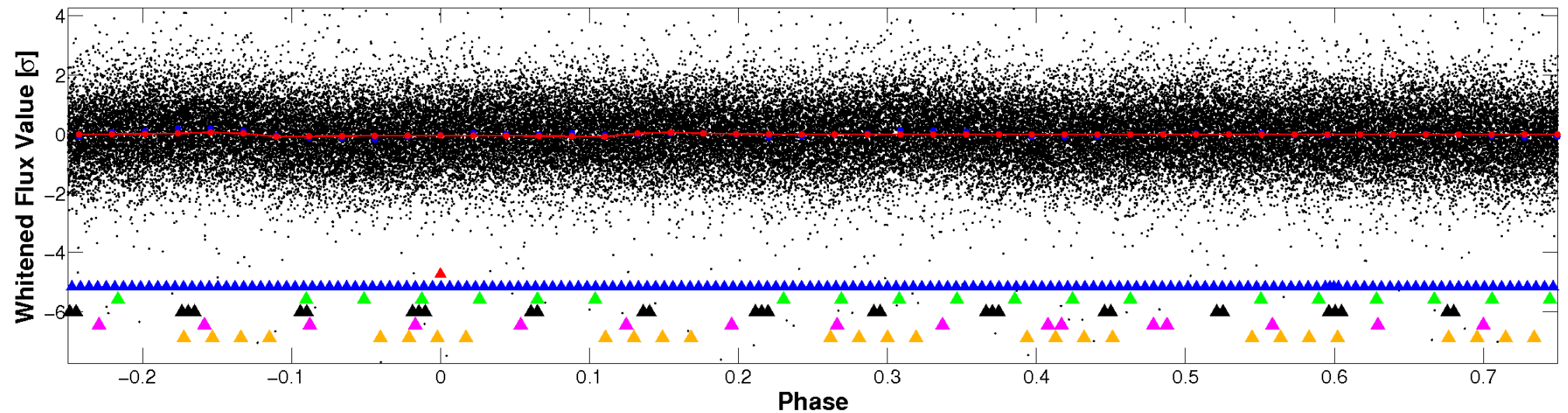


Non-Whitened Vs. Whitened Light Curve

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

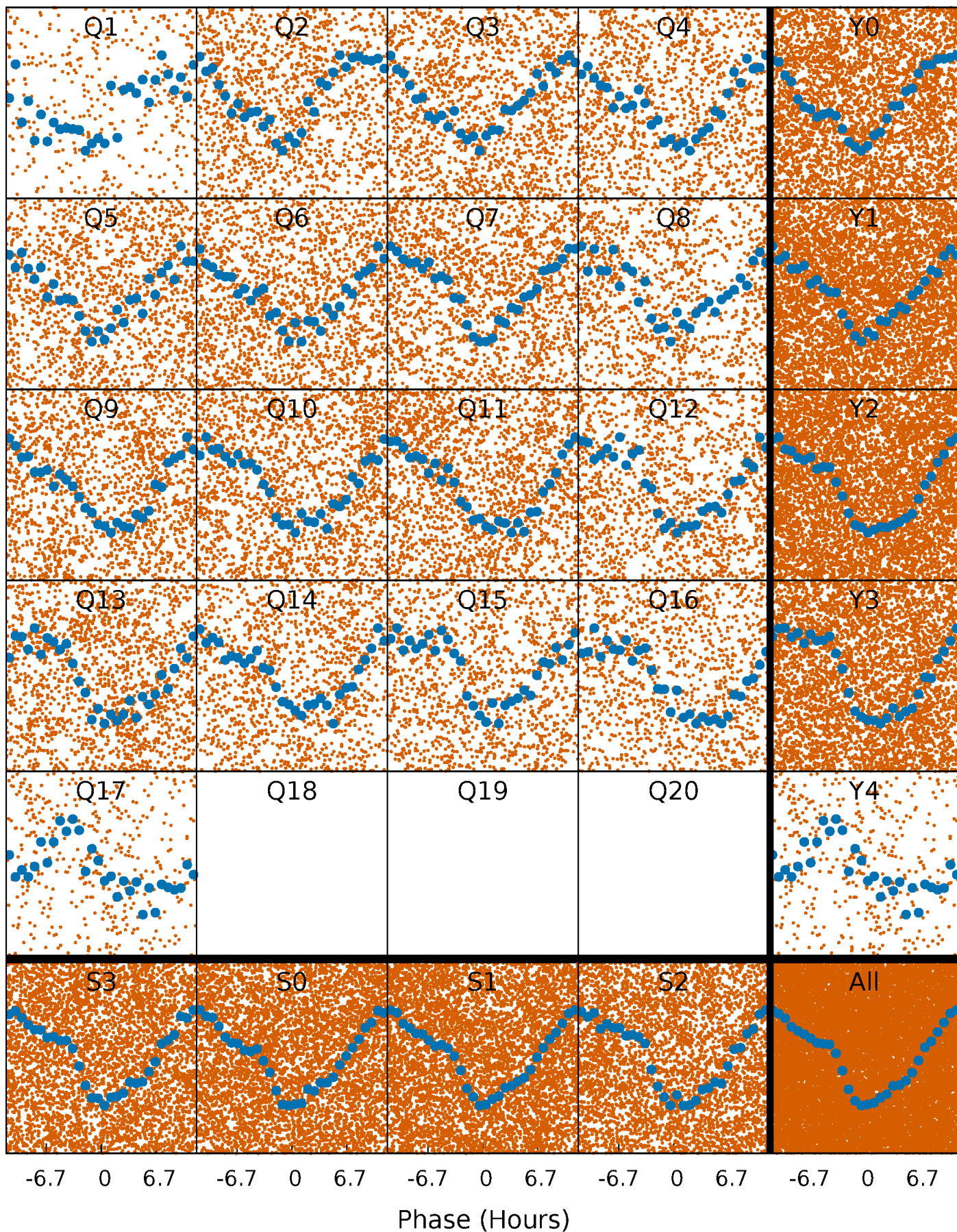


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



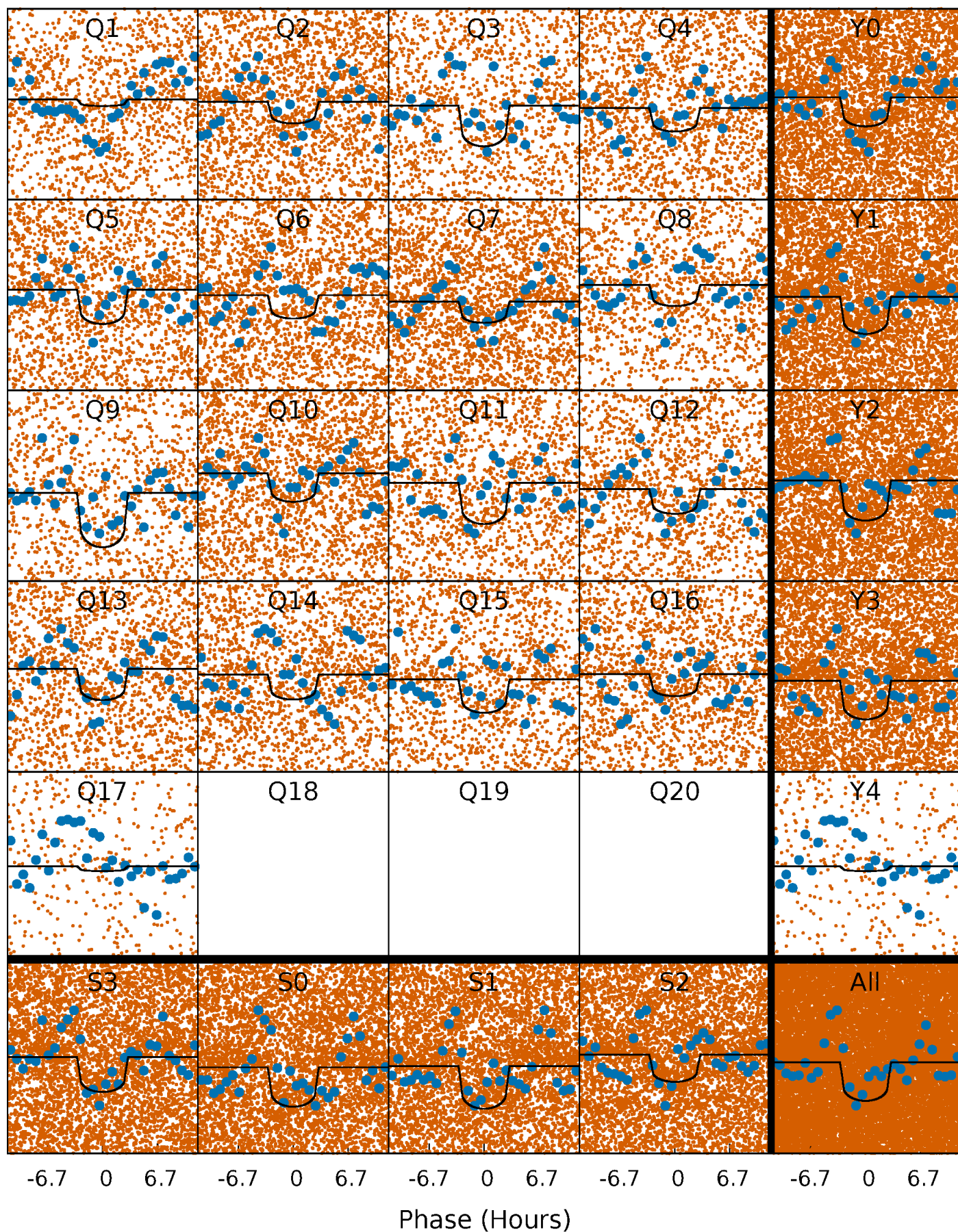
PDC Quarter-Phased Transit Curves

TCE 005792656-01 P= 0.926748 Days $T_0=132.261100$ (BKJD)



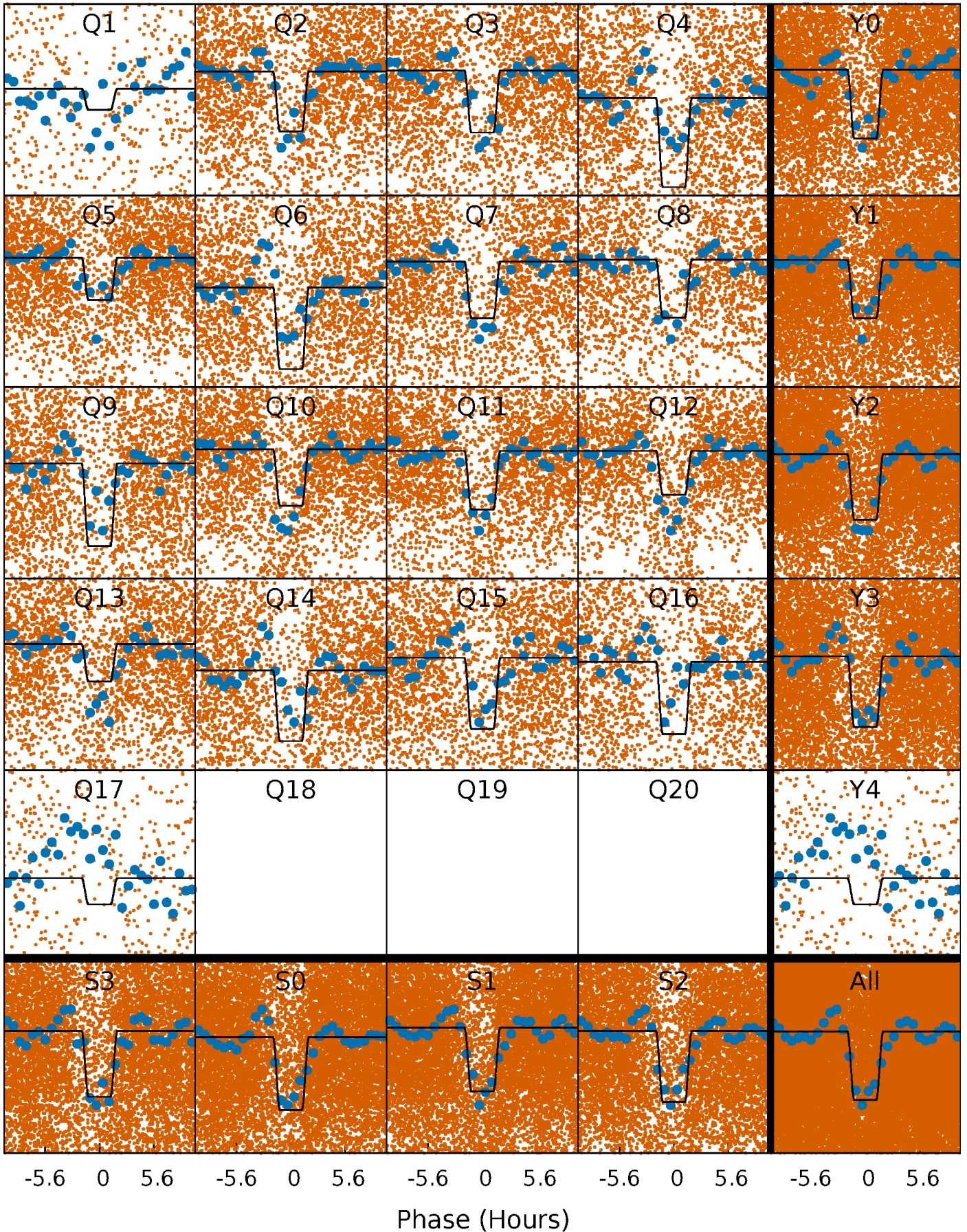
DV Quarter-Phased Transit Curves

TCE 005792656-01 P= 0.926748 Days $T_0=132.261100$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

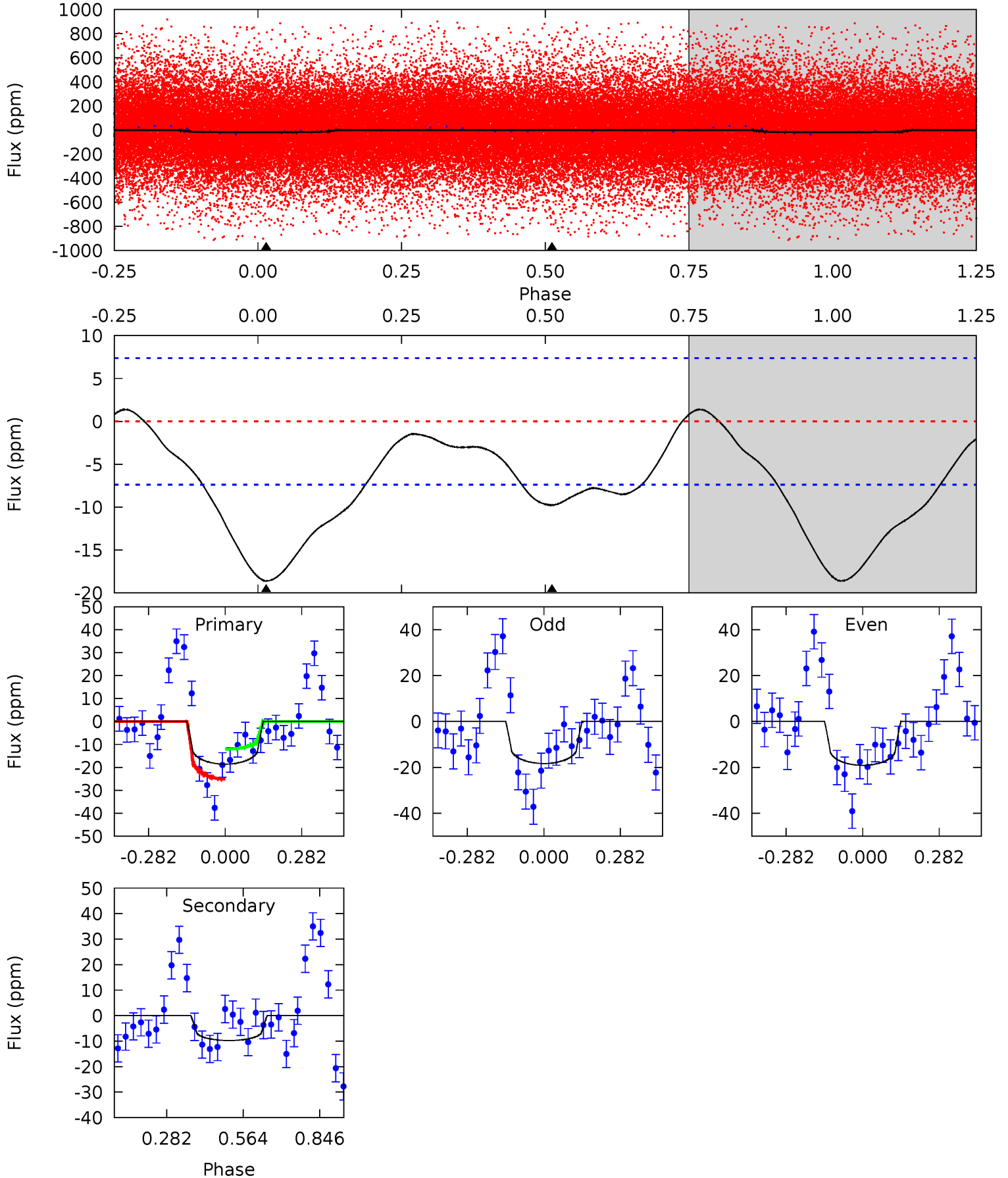
TCE 005792656-01 P= 0.926739 Days $T_0=132.236989$ (BKJD)



DV Model-Shift Uniqueness Test

005792656-01, P = 0.926748 Days, E = 131.334352 Days

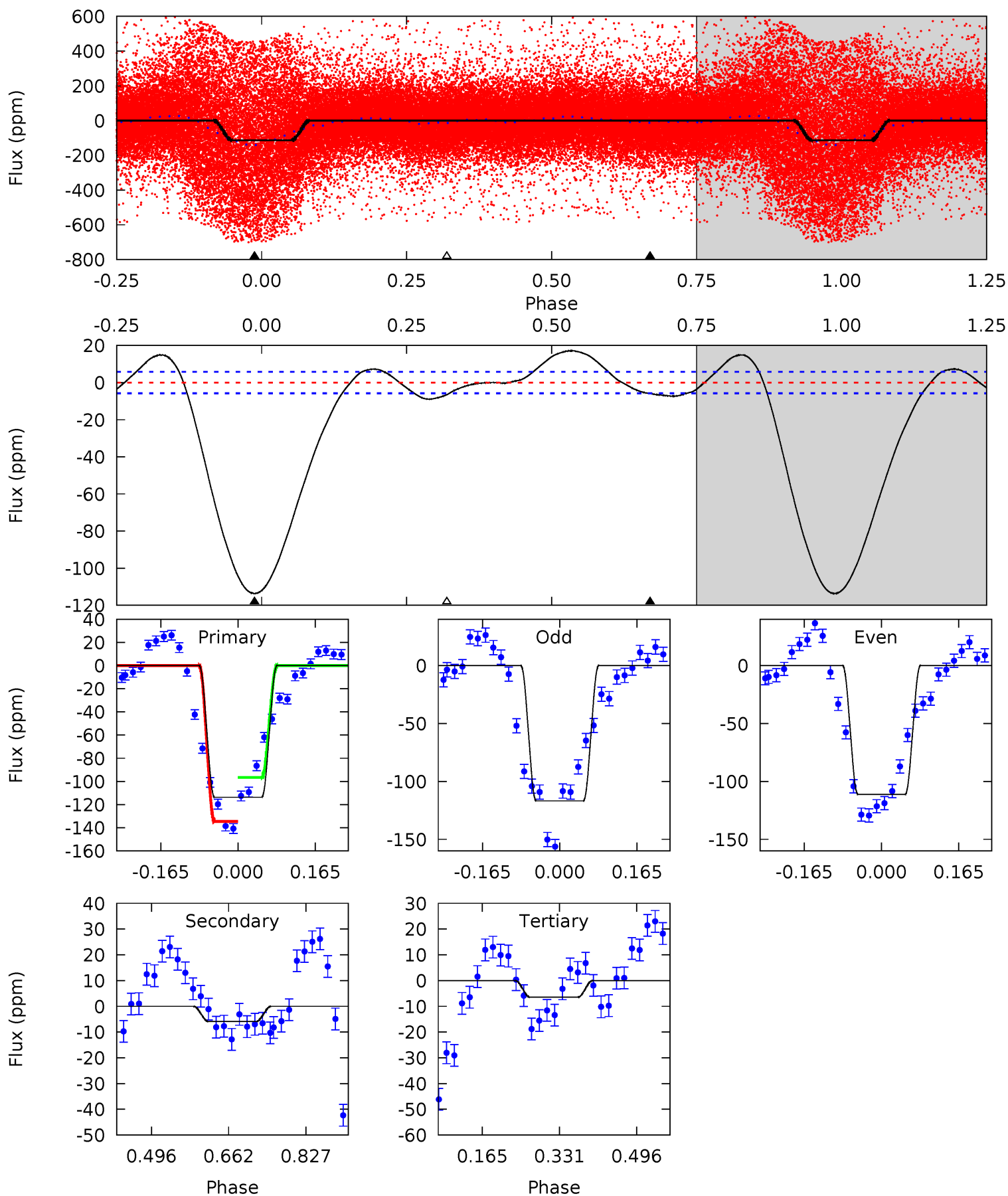
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	5.75	0	0	4.34	1.08	0.84	10.9	10.9	5.75	5.75	0.23	0.80	0.07	3.81



Alt Model-Shift Uniqueness Test

005792656-01, P = 0.926739 Days, E = 131.310250 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
87.1	4.53	4.98	0	4.46	1.39	4.34	82.1	87.1	-0.44	4.53	2.13	0.84	0.13	0



Stellar Parameters For KIC 005792656

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7328^{+207}_{-311}	$3.891^{+0.392}_{-0.123}$	$-0.520^{+0.250}_{-0.300}$	$2.242^{+0.487}_{-0.905}$	$1.427^{+0.210}_{-0.280}$	$0.178^{+0.526}_{-0.064}$
	+3%/-4%	+10%/-3%	+48%/-58%	+22%/-40%	+15%/-20%	+295%/-36%
Source	KIC0	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 005792656-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 2	$1.13^{+0.42}_{-0.43}$	4542^{+341}_{-498}	5446^{+1294}_{-817}	$1.814^{+2.685}_{-0.867}$
Alt.	-6 ± 1	$2.27^{+0.56}_{-0.59}$	4562^{+356}_{-505}	-2748^{+6278}_{-860}	$0.275^{+0.231}_{-0.108}$

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

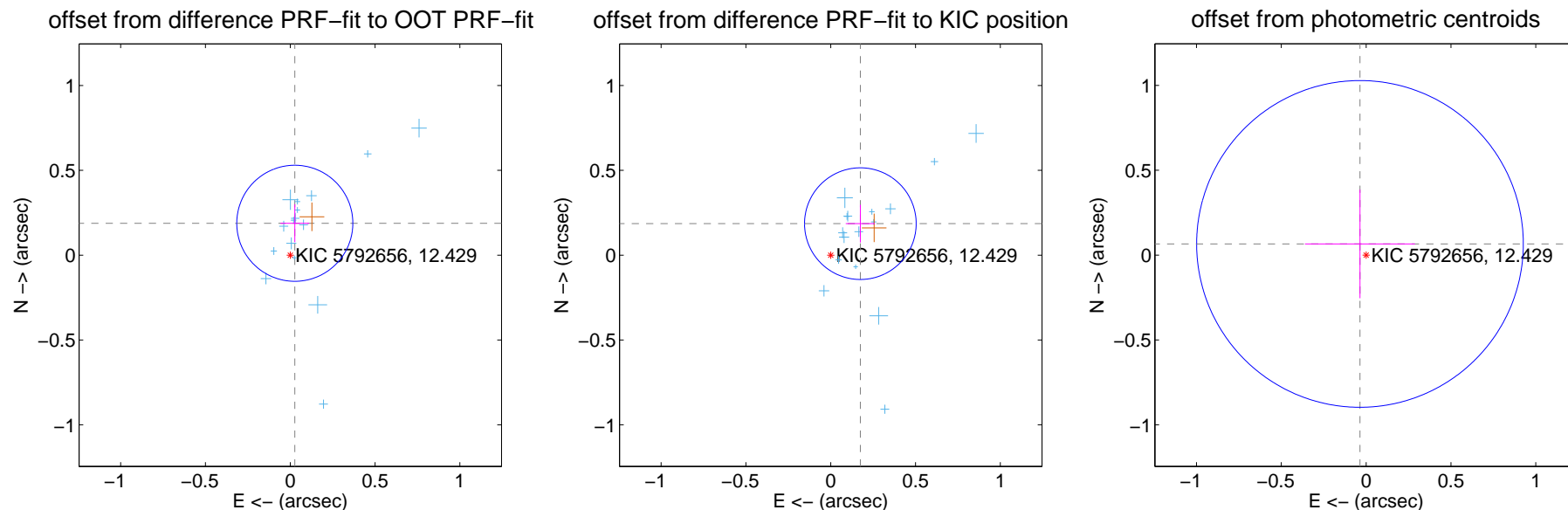
DV Centroid Data

Supplemental centroid analysis for 005792656-01. Kepler magnitude: 12.43. Transit SNR 9.06

There are 16 quarters with good PRF difference image offsets

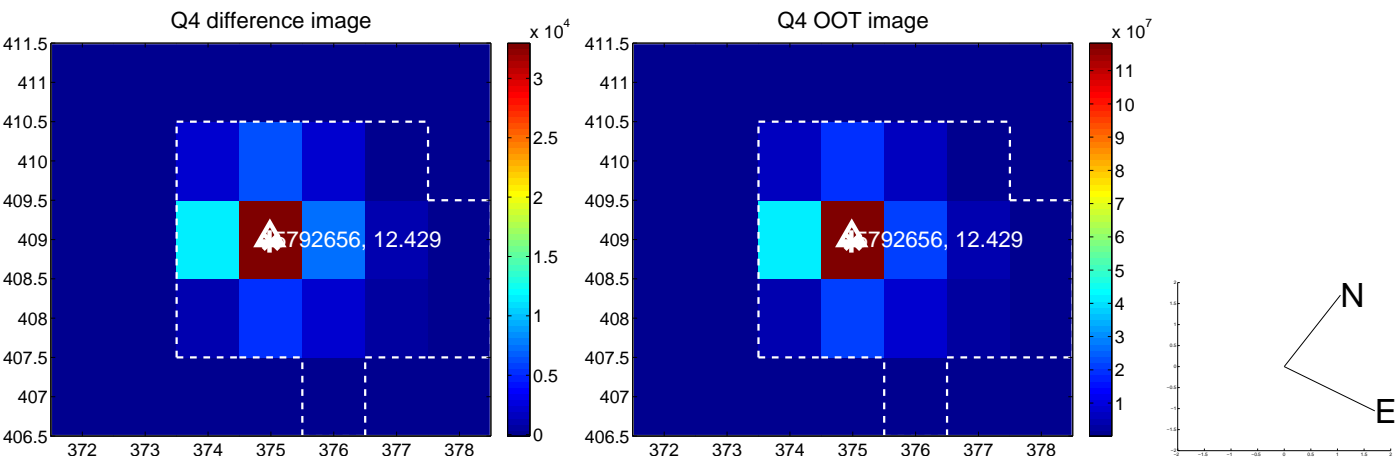
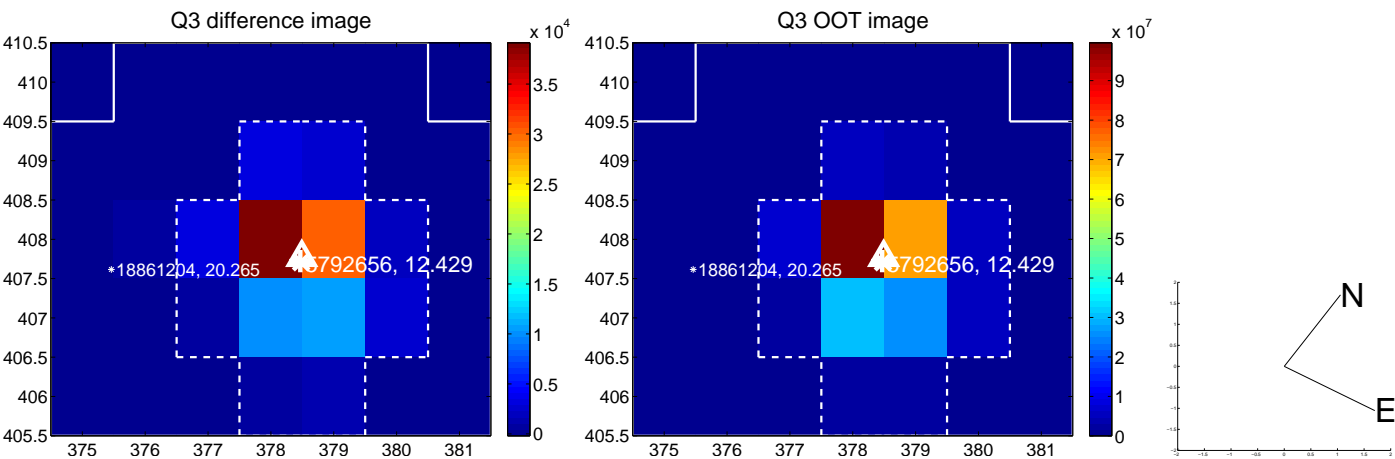
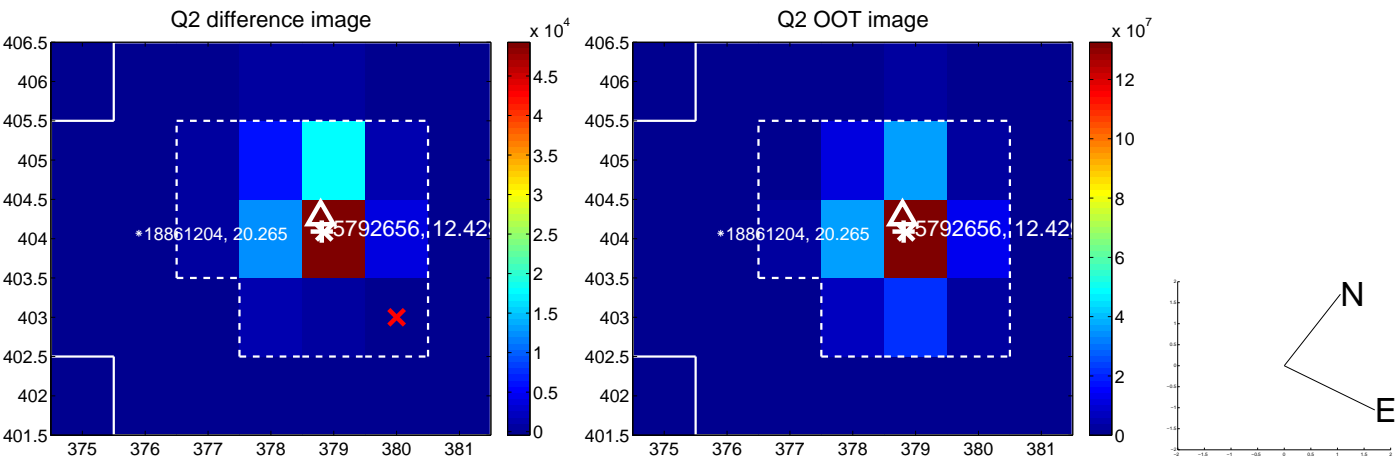
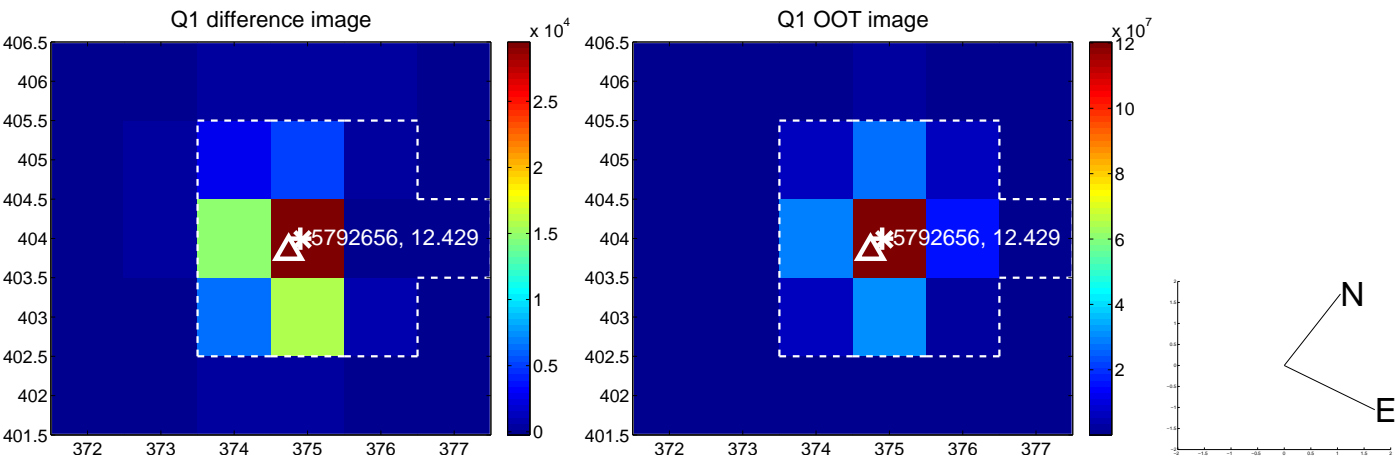
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.190 ± 0.114	1.66	-0.027 ± 0.085	0.188 ± 0.112
PRF-fit source offset from KIC position	0.255 ± 0.110	2.32	-0.175 ± 0.086	0.186 ± 0.111
photometric centroid source offset	0.08 ± 0.32	0.23	0.04 ± 0.32	0.07 ± 0.32

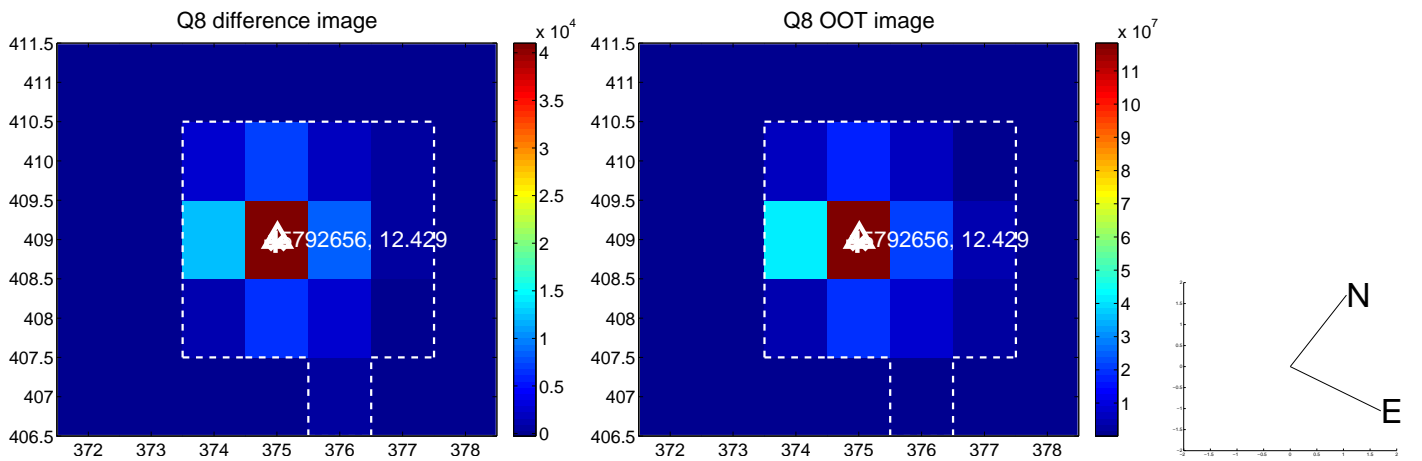
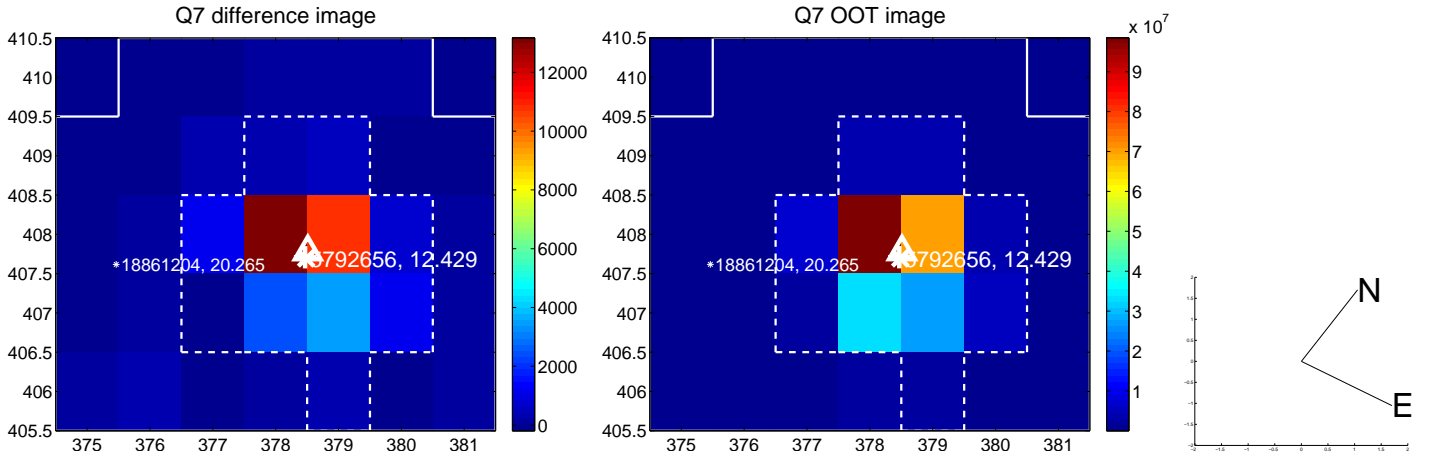
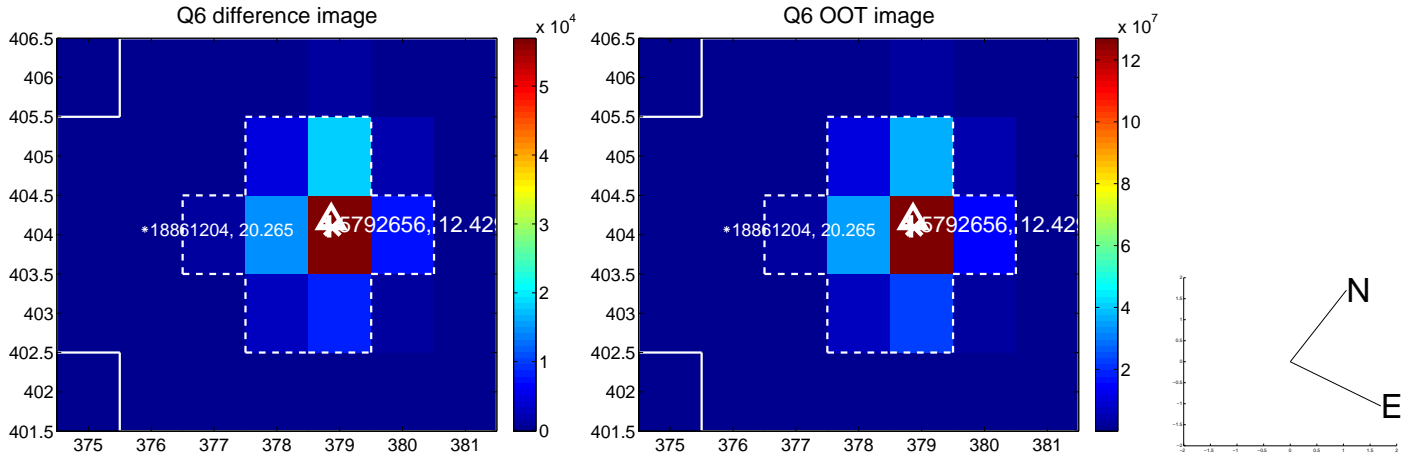
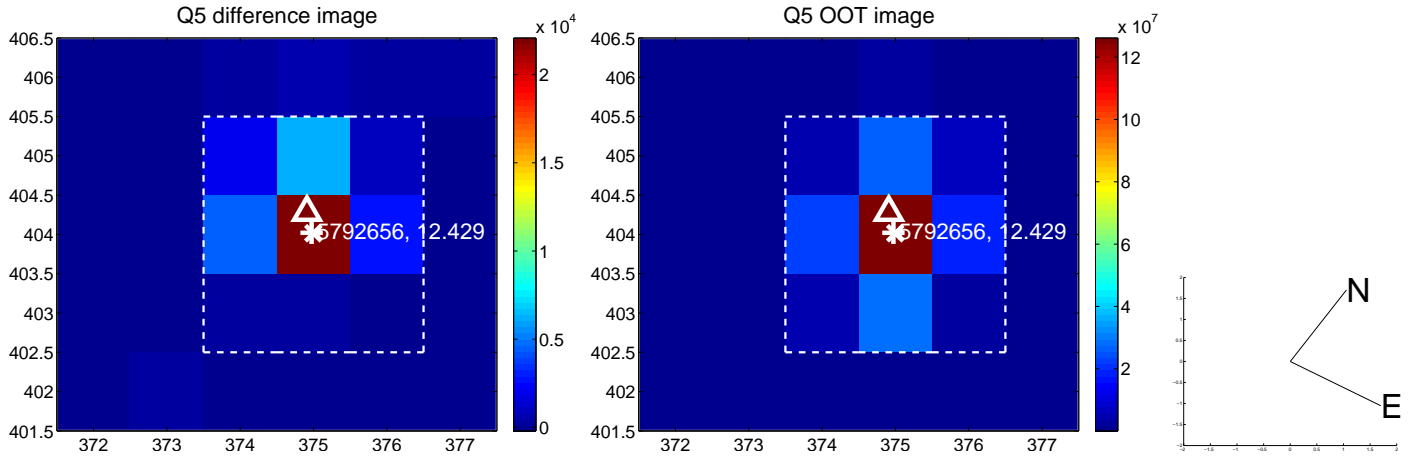


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

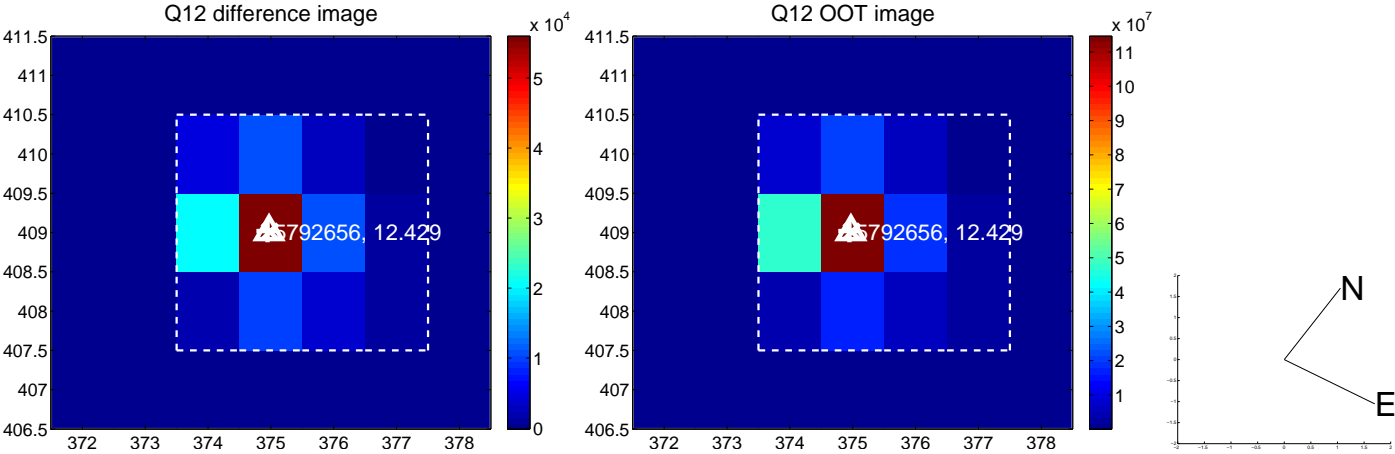
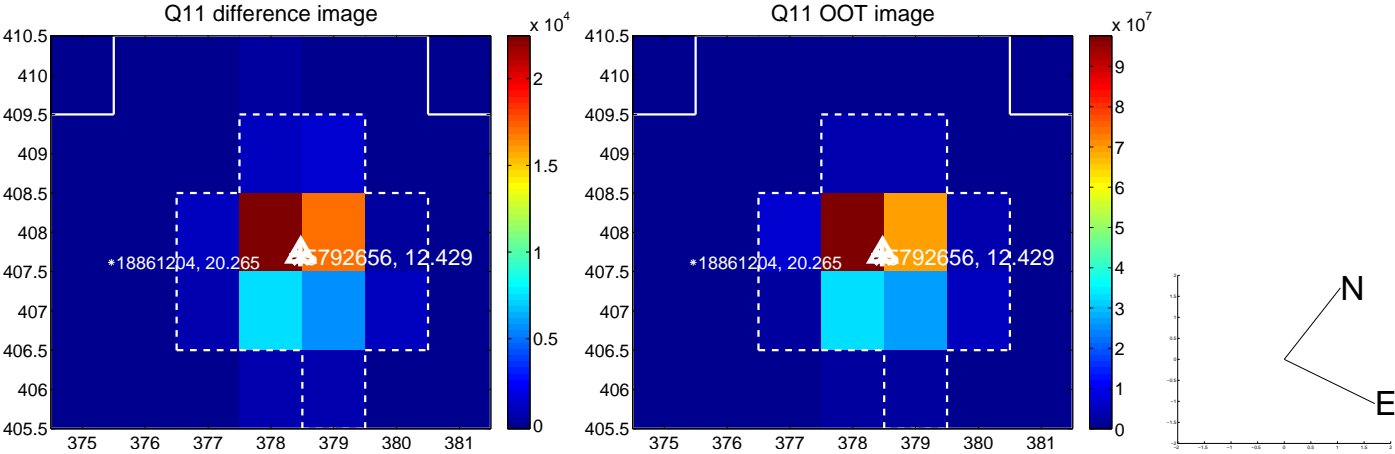
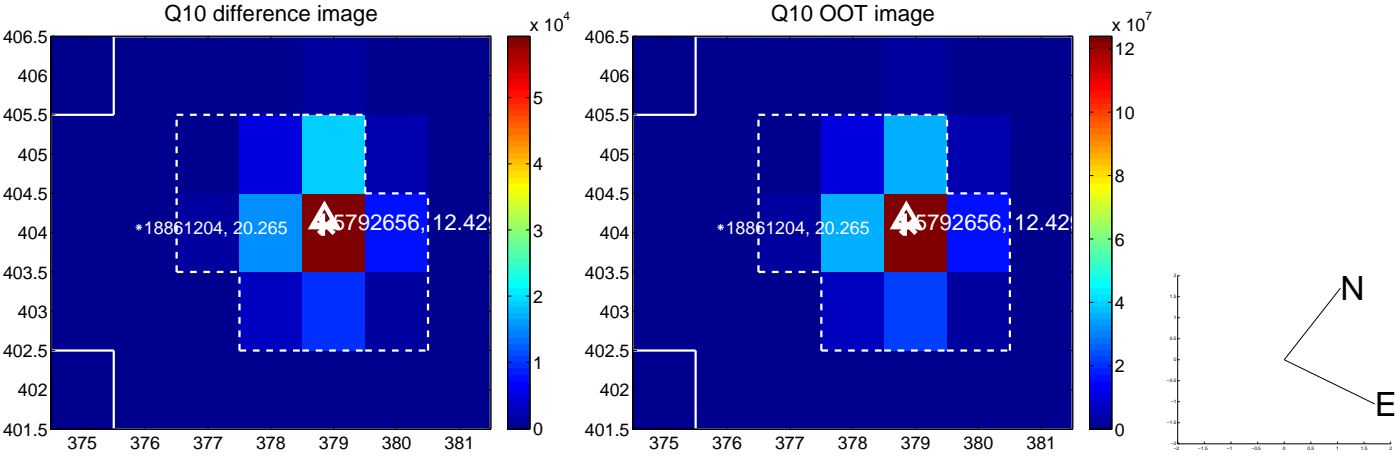
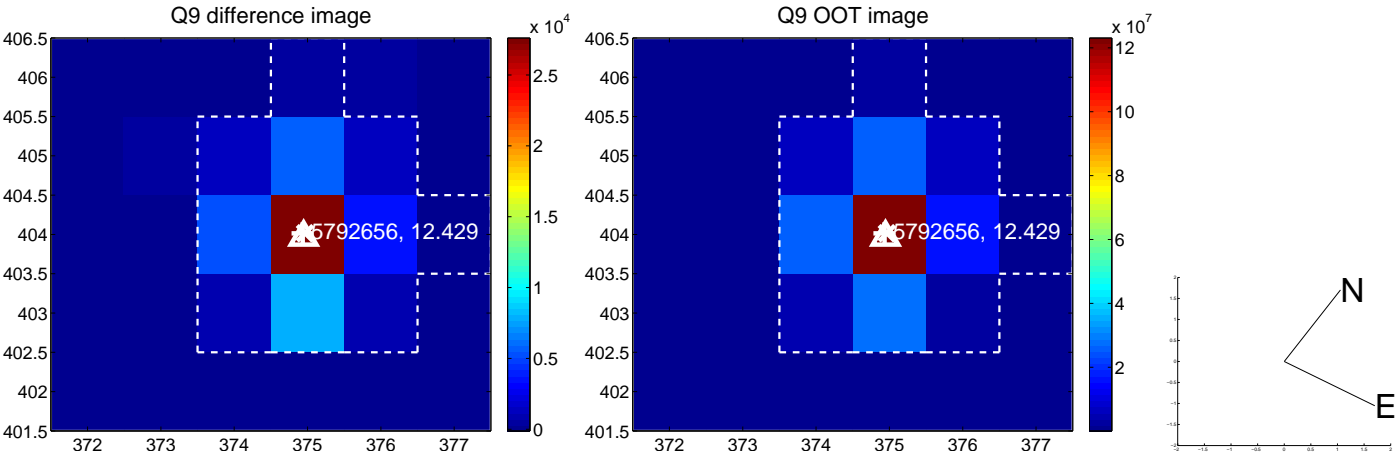
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



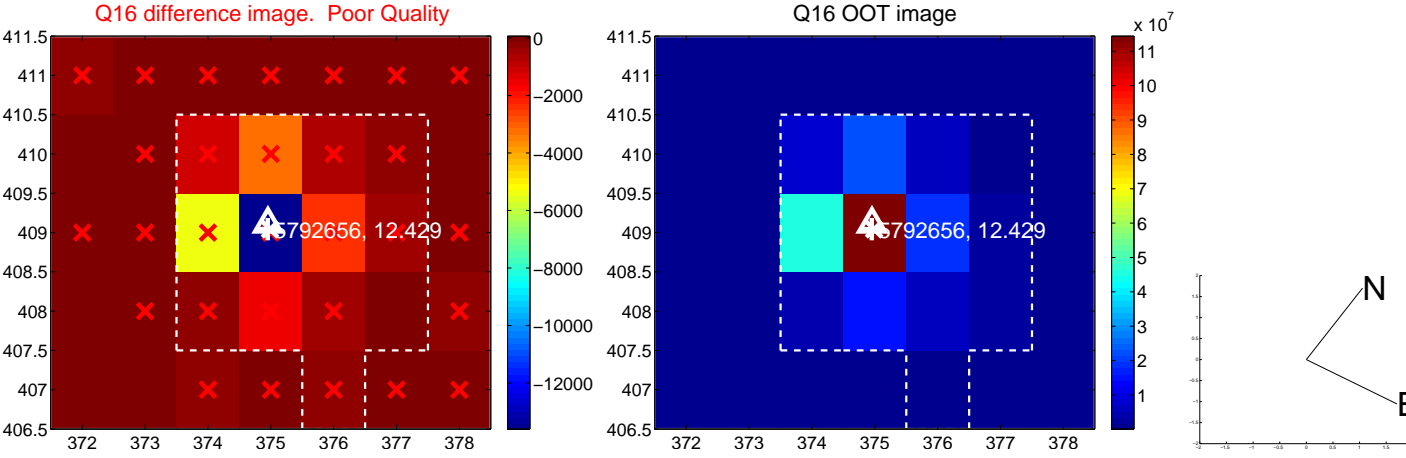
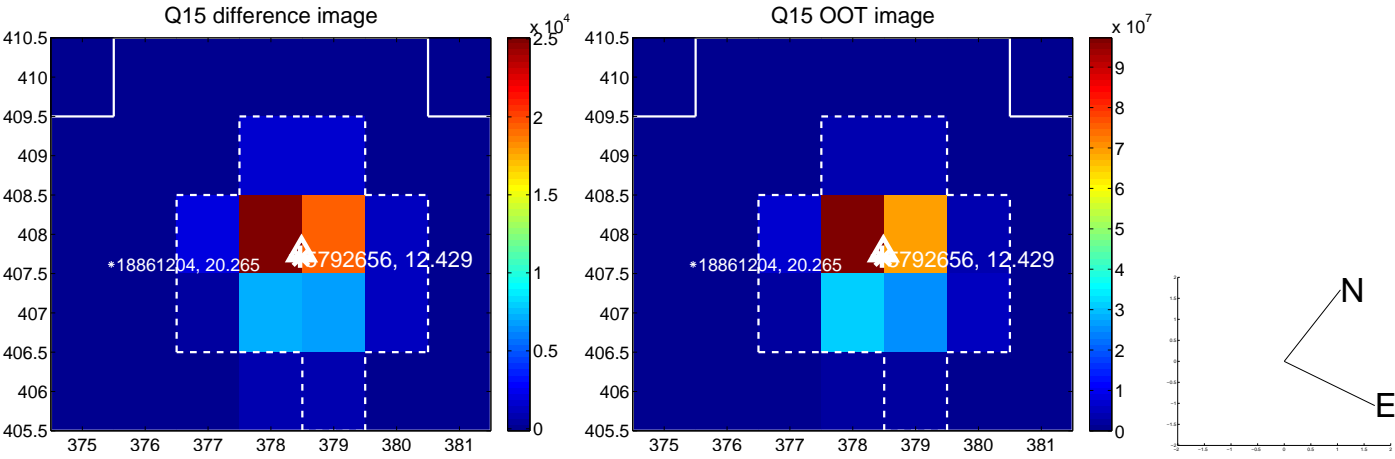
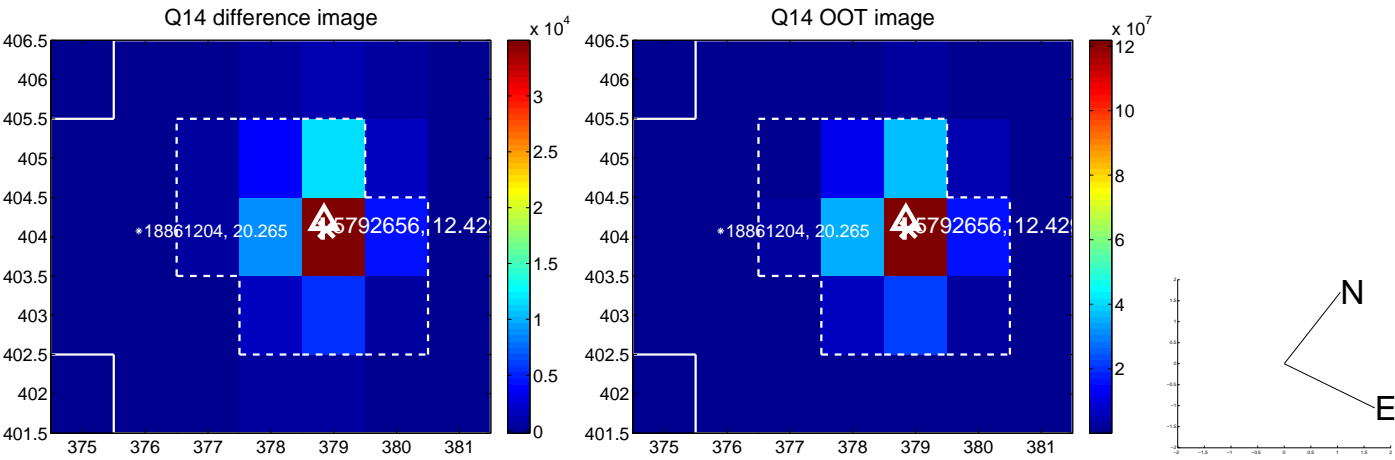
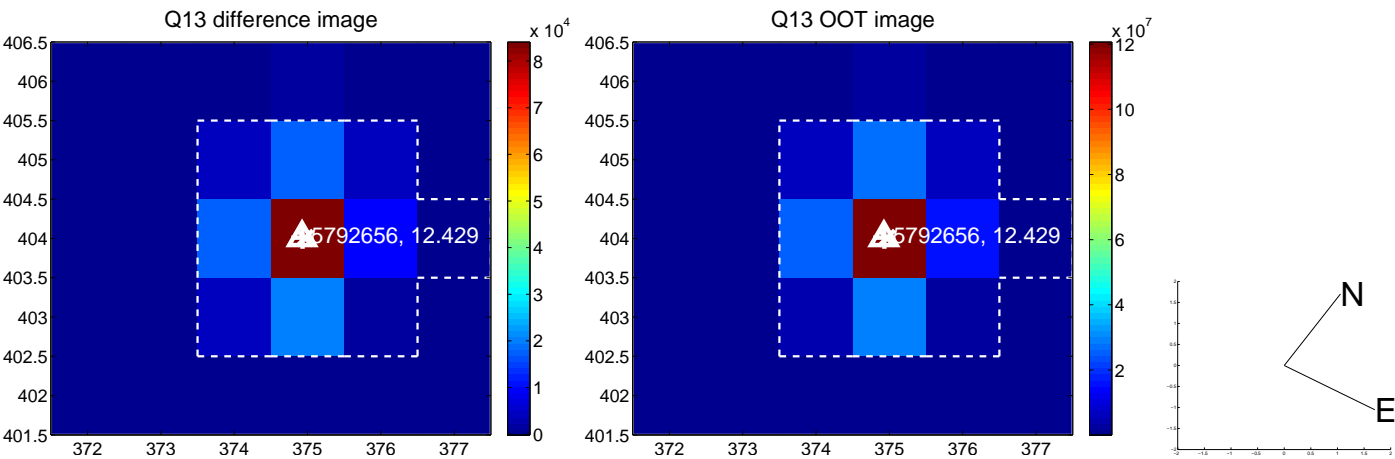
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



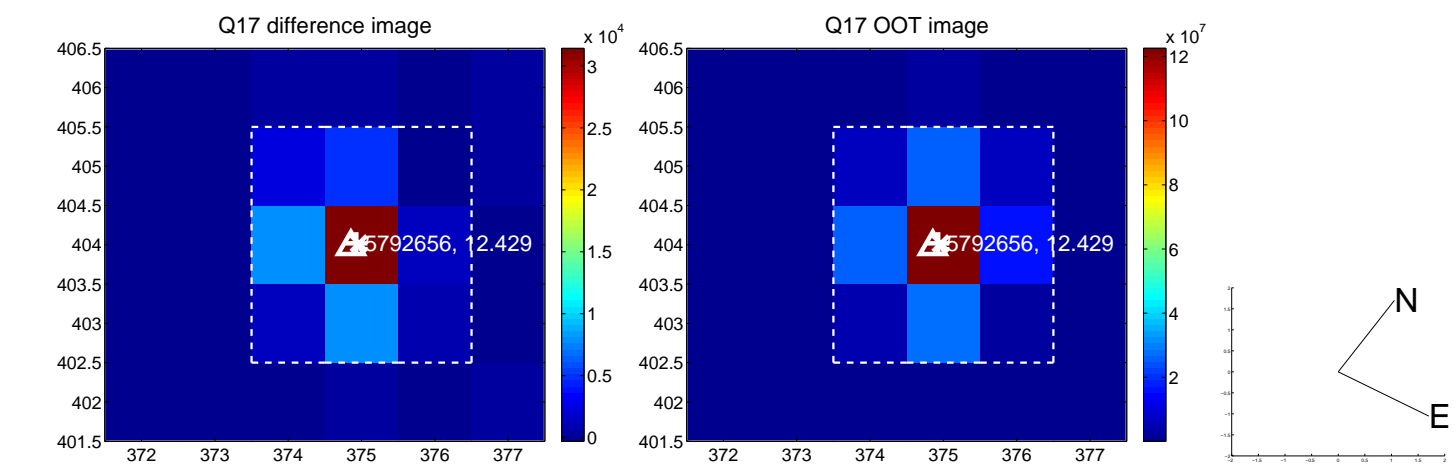
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



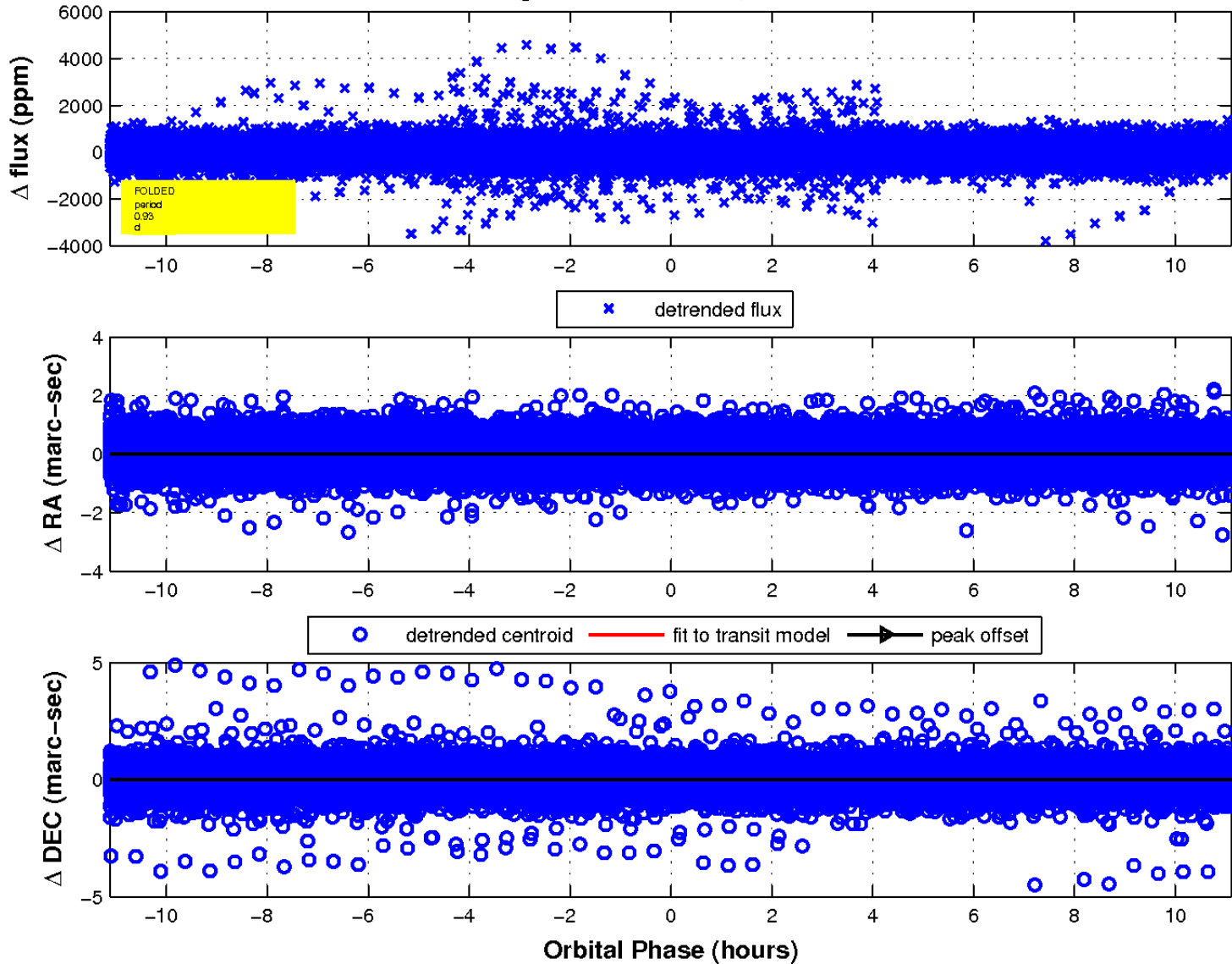
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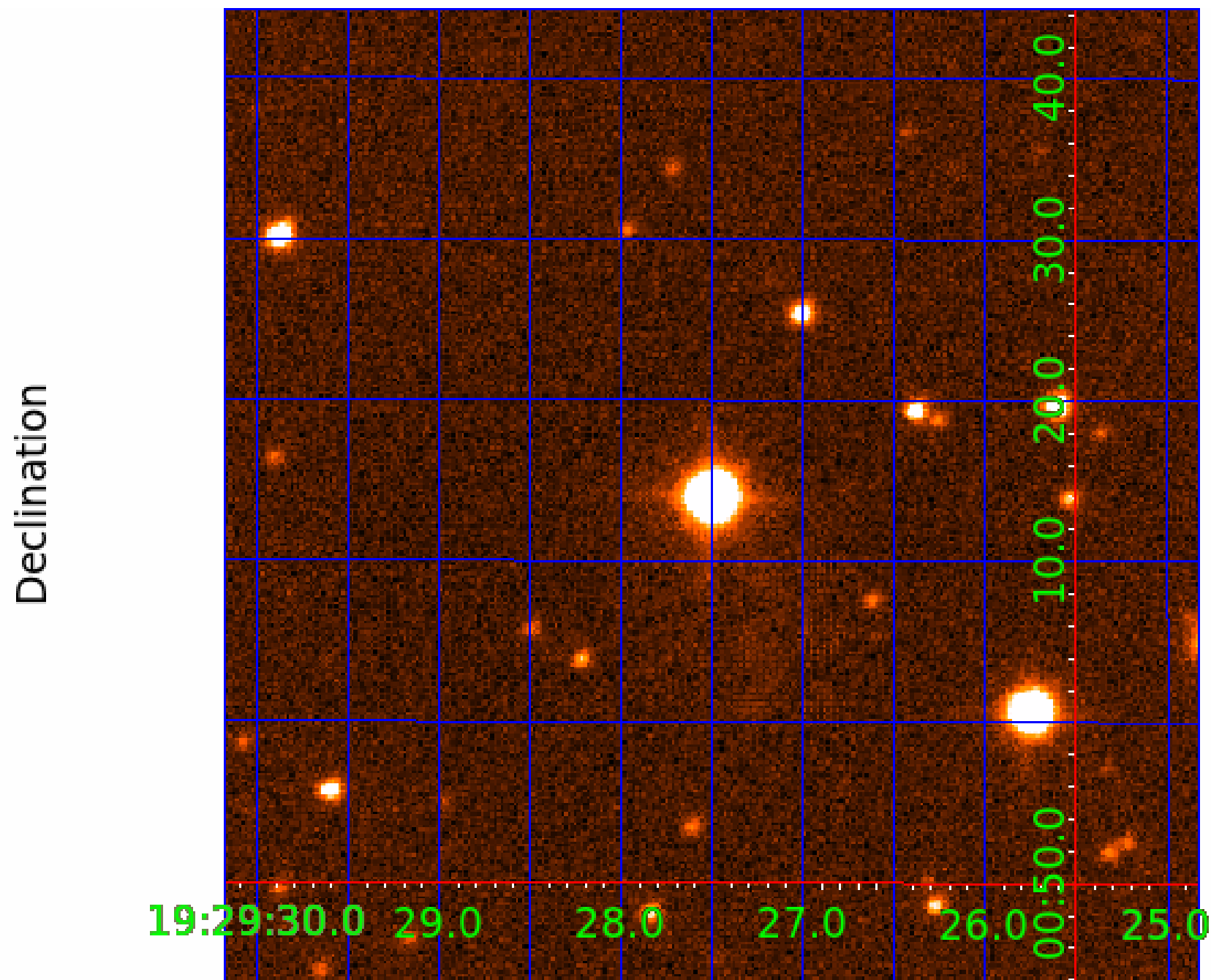
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 1 of 6



UKIRT Image



KIC 005792656

Q1-17 DR25 TCE Parameters

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005792656-05	OBS	No	89.960139	192.886063	369.7	3.443	12.9	8.6	2.24	7328	4.82	66.35
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Robovetter Results

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005792656-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

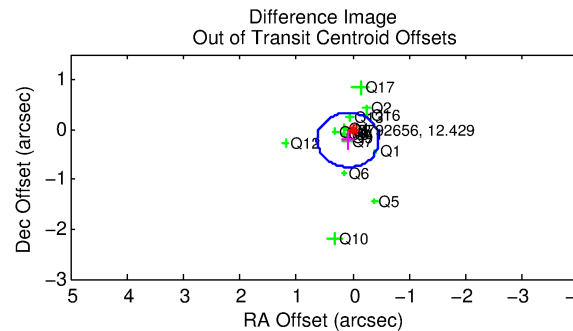
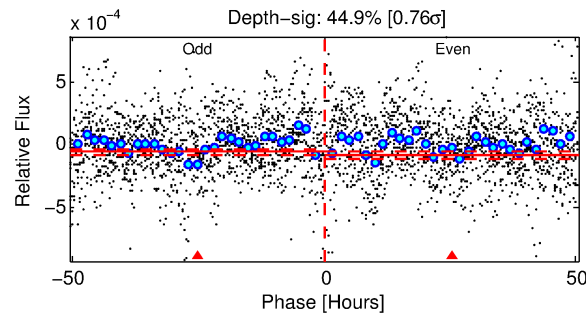
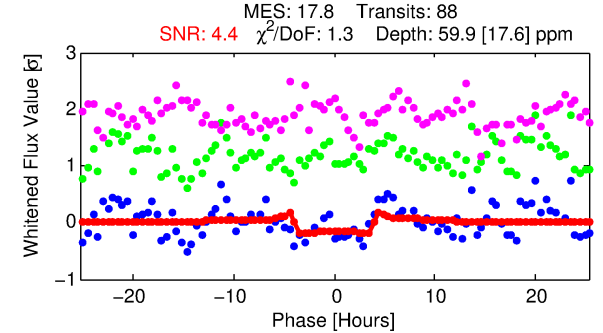
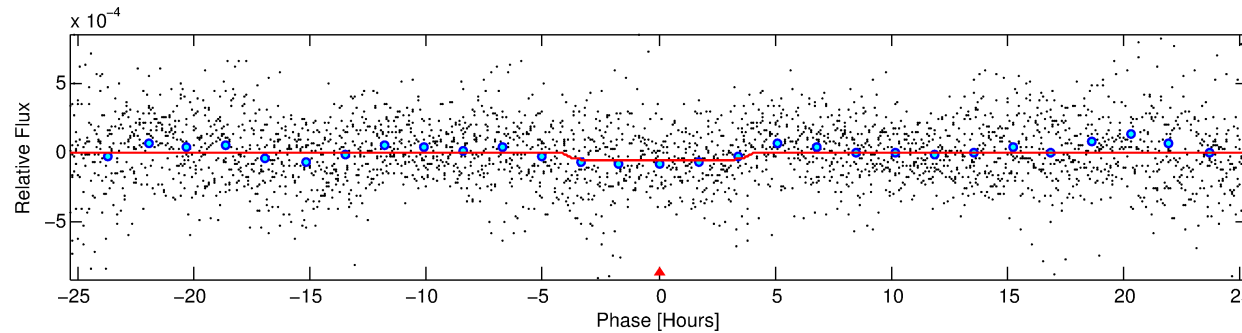
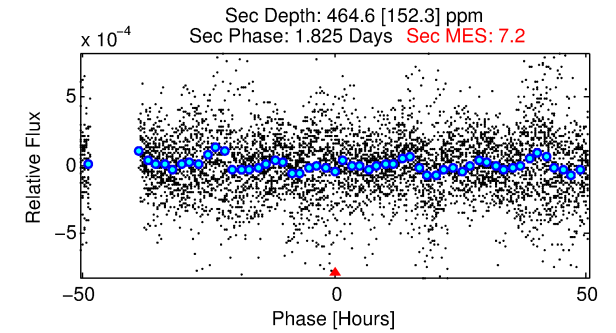
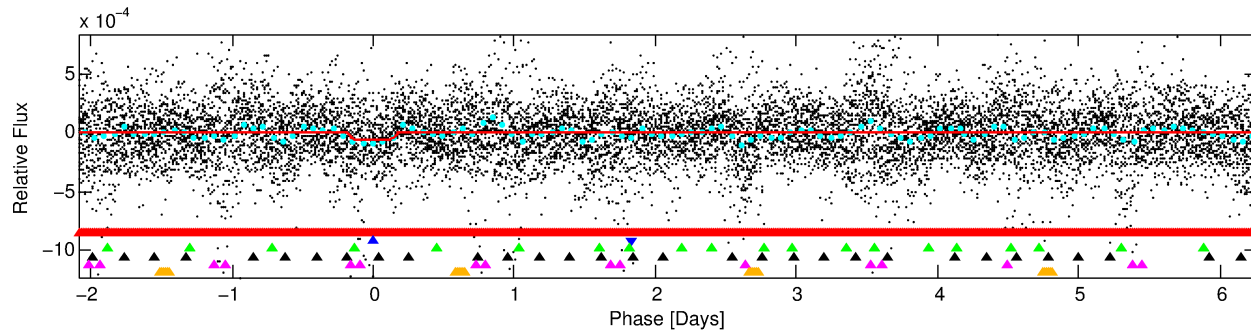
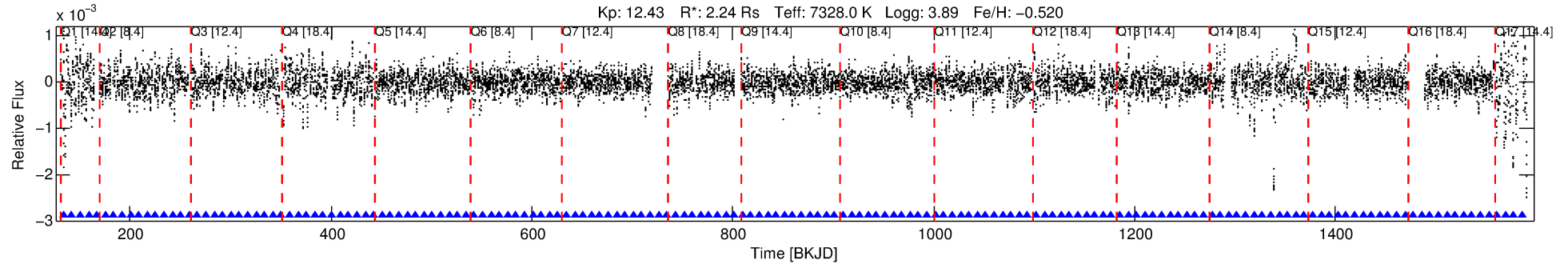
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005792656-02

No Significant Match Found

DV One-Page Summary

KIC: 5792656 Candidate: 2 of 6 Period: 8.346 d



DV Fit Results:

Period = 8.34607 [0.00025] d
Epoch = 133.7411 [0.0201] BKJD
Rp/R* = 0.0086 [0.0020]
a/R* = 2.86 [2.68]
b = 0.94 [0.12]
Seff = 1579.85 [1075.38]
Teq = 1608 [274] K
Rp = 2.09 [0.98] Re
a = 0.0907 [0.0366] AU
Ag = 479.18 [417.80] [1.14σ]
Teffp = 11629 [1731] K [5.72σ]

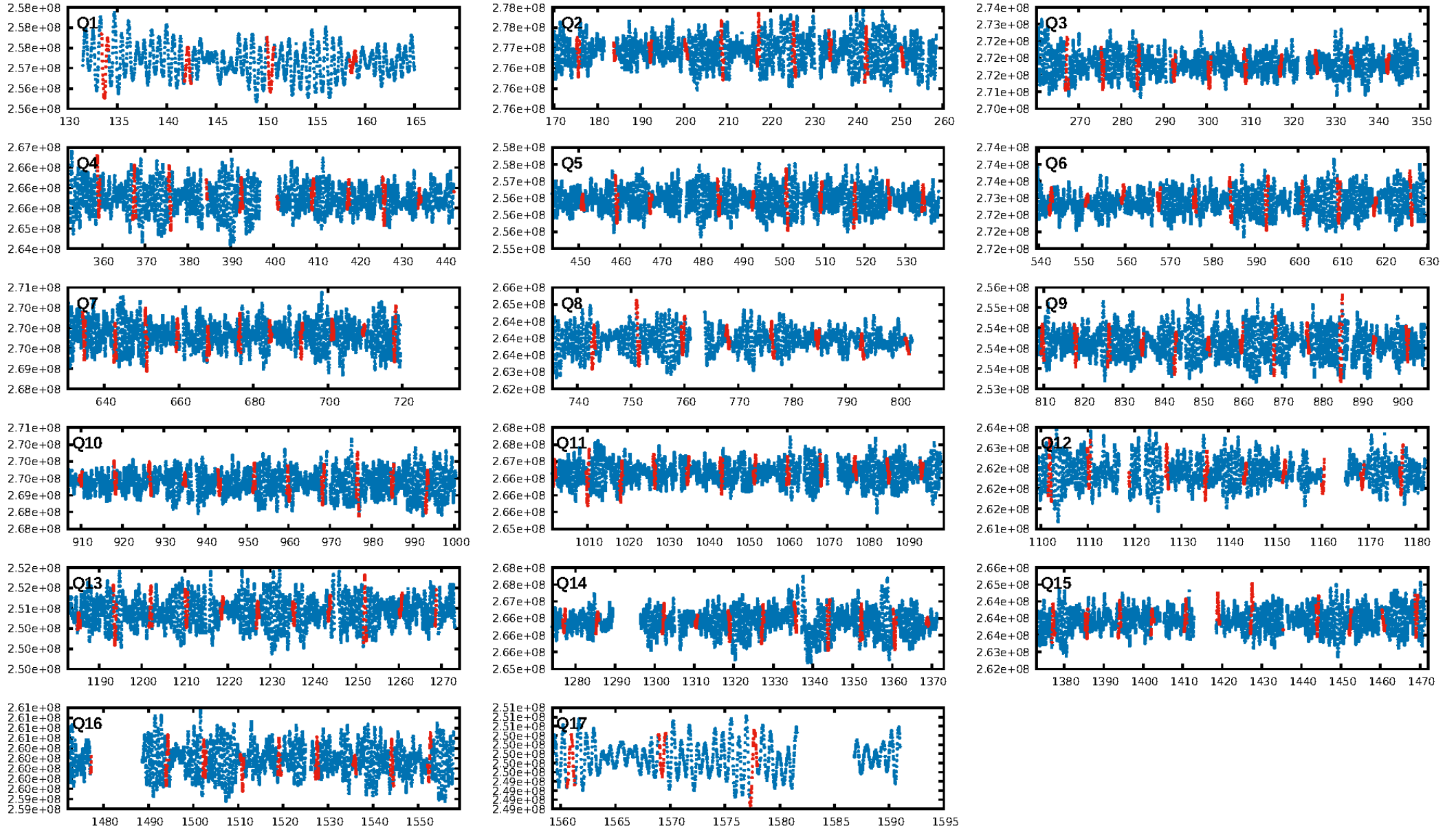
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [17.35σ]
LongPeriod-sig: 100.0% [90.33σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.70e-28
RollingBand-fgt: 1.00 [81/81]
GhostDiagnostic-chr: 4.358
Centroid-sig: 34.7%
Centroid-so: 0.568 arcsec [1.34σ]
OotOffset-rm: 0.232 arcsec [1.27σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-rm: 0.235 arcsec [1.26σ]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.50 [8/16]
DiffImageOverlap-fno: 0.00 [0/17]

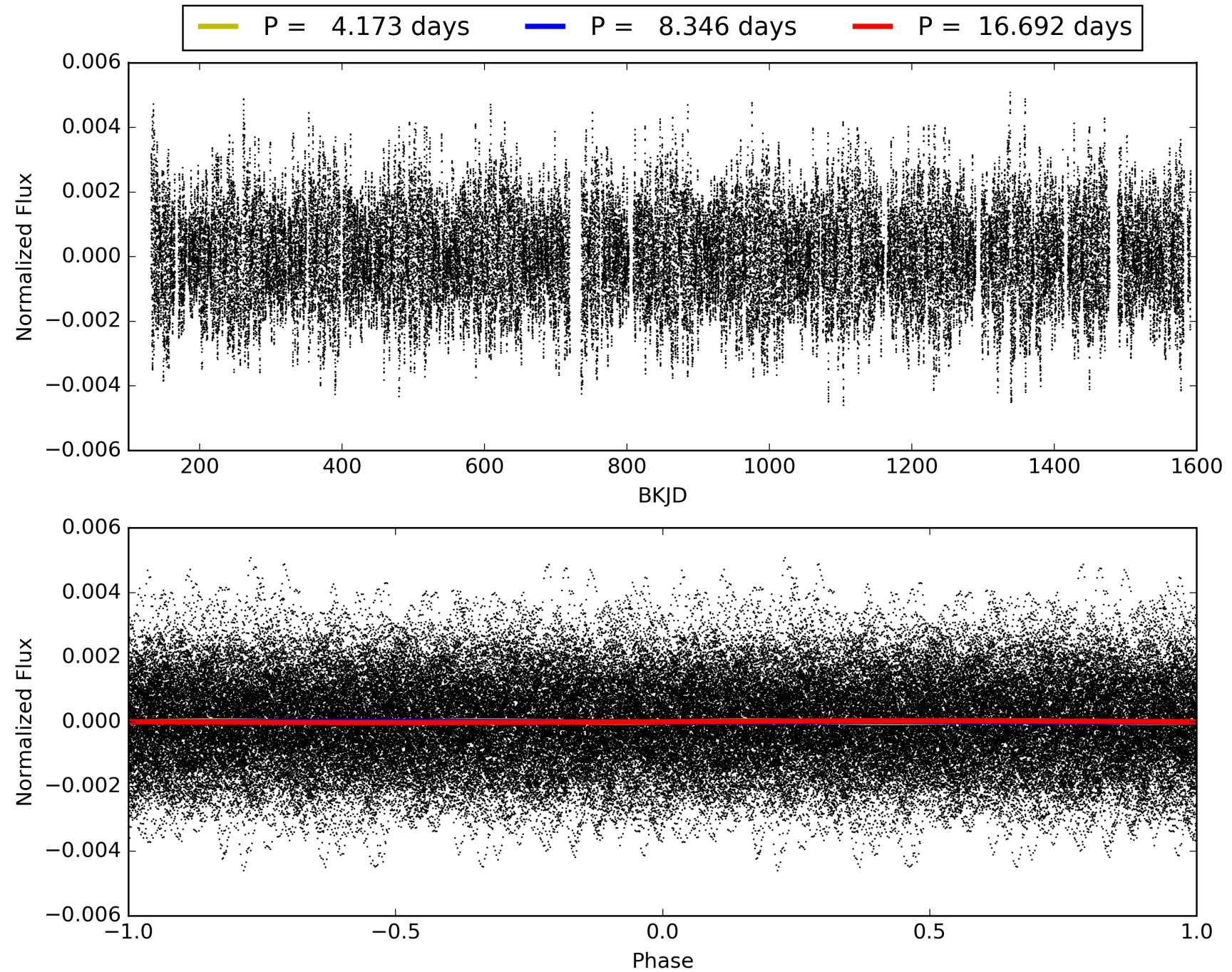
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:10:44 Z

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

TCE 005792656-02, PDC Light Curves

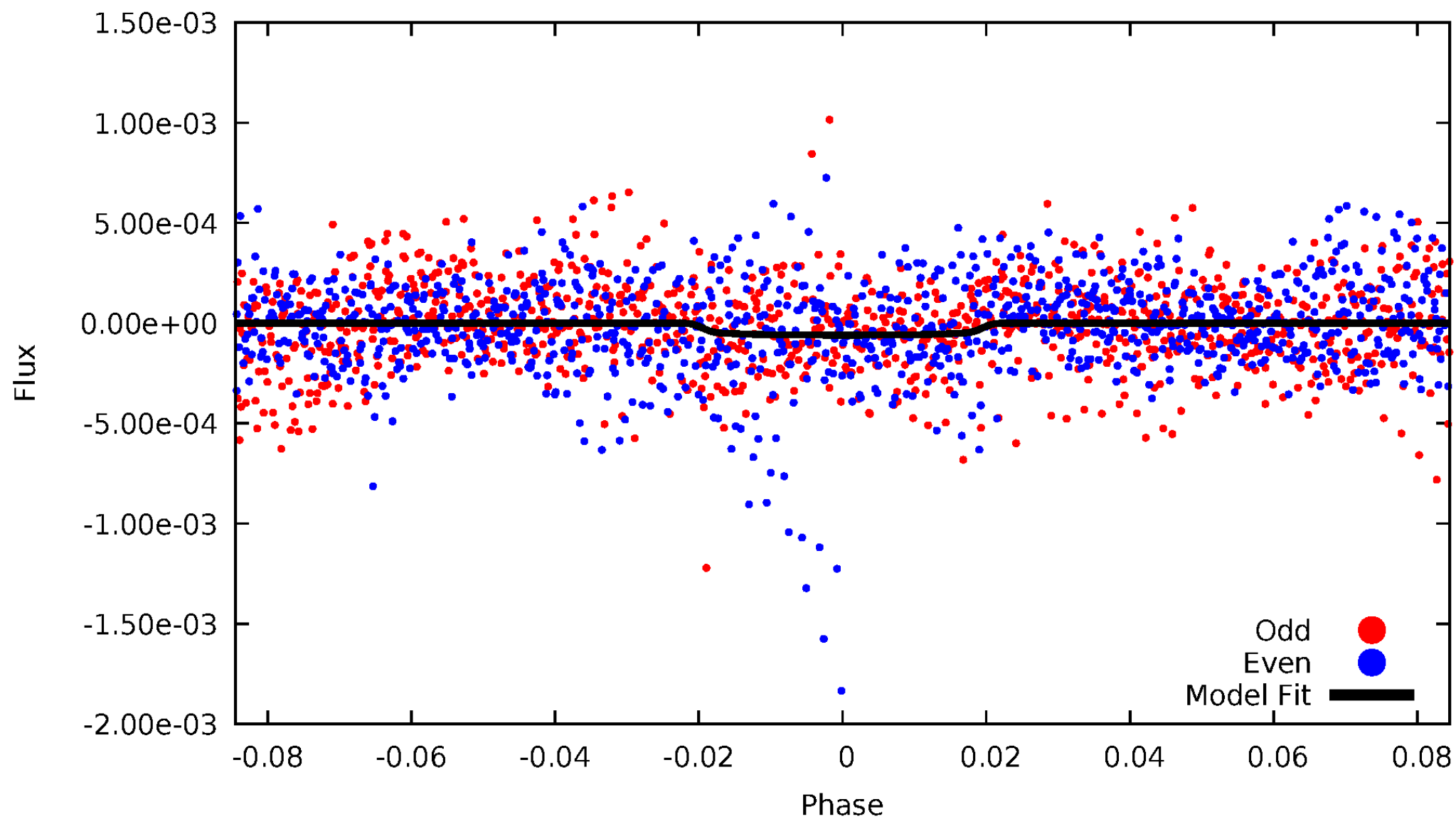


TCE 005792656-02



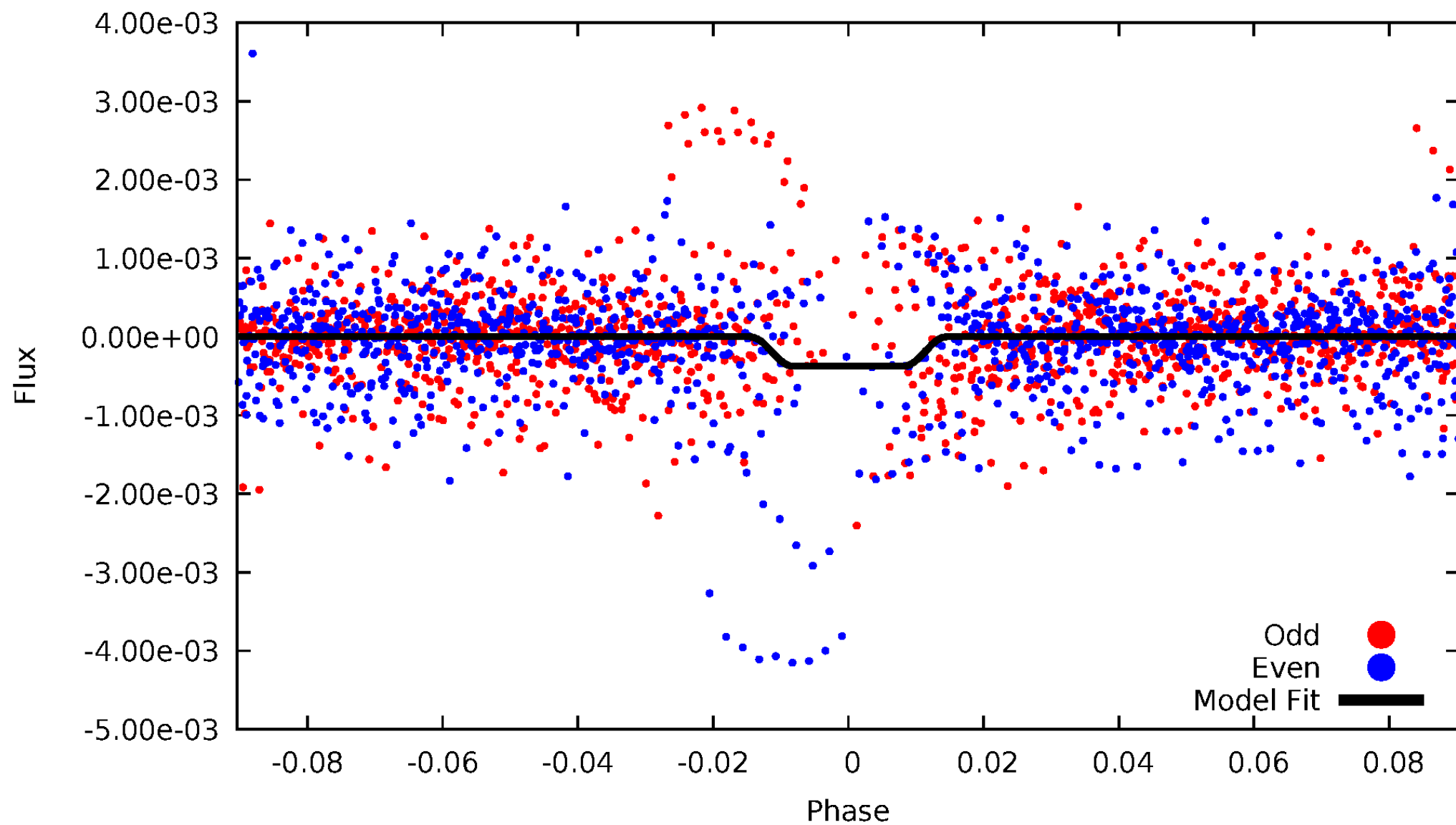
DV Odd/Even

TCE 005792656-02



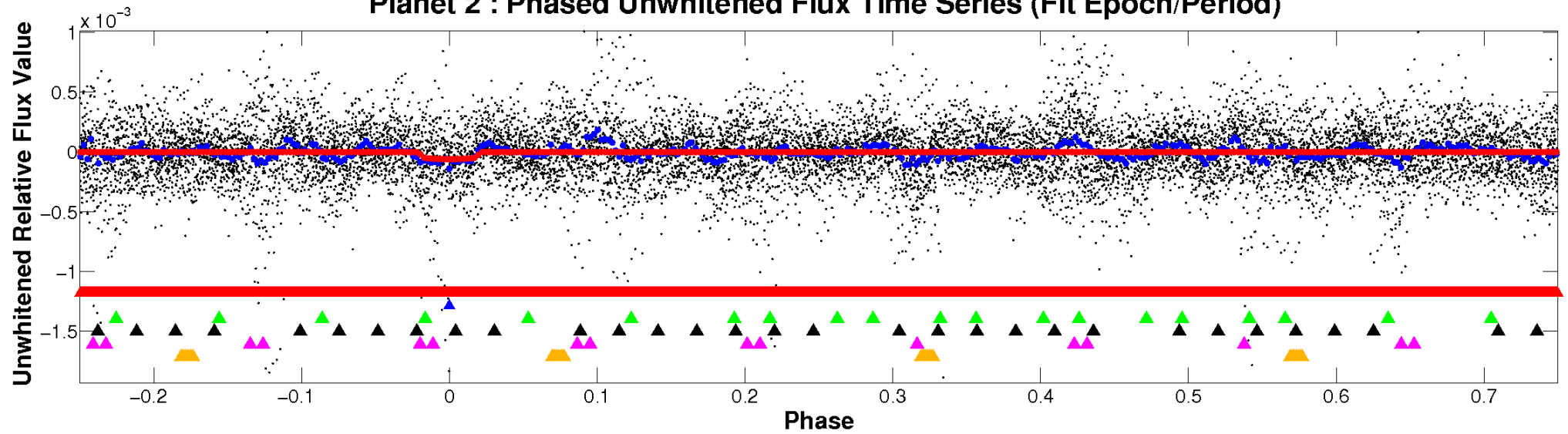
ALT Odd/Even

TCE 005792656-02

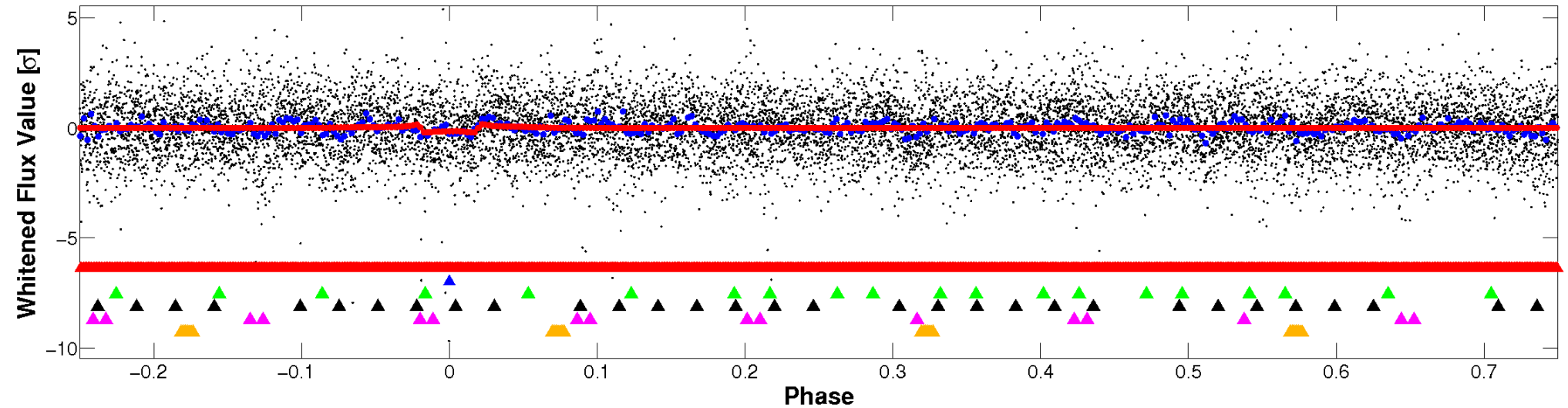


Non-Whitened Vs. Whitened Light Curve

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

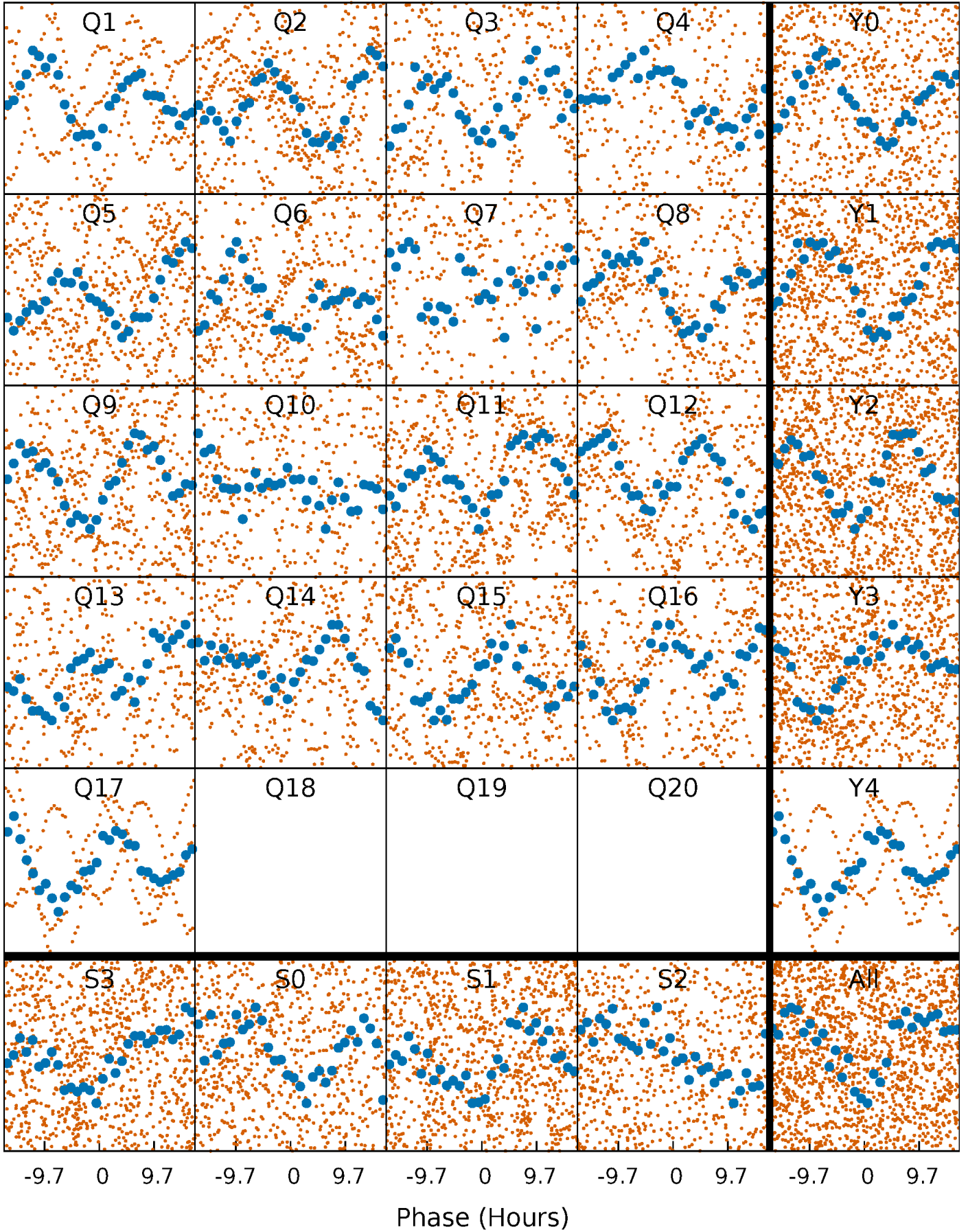


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



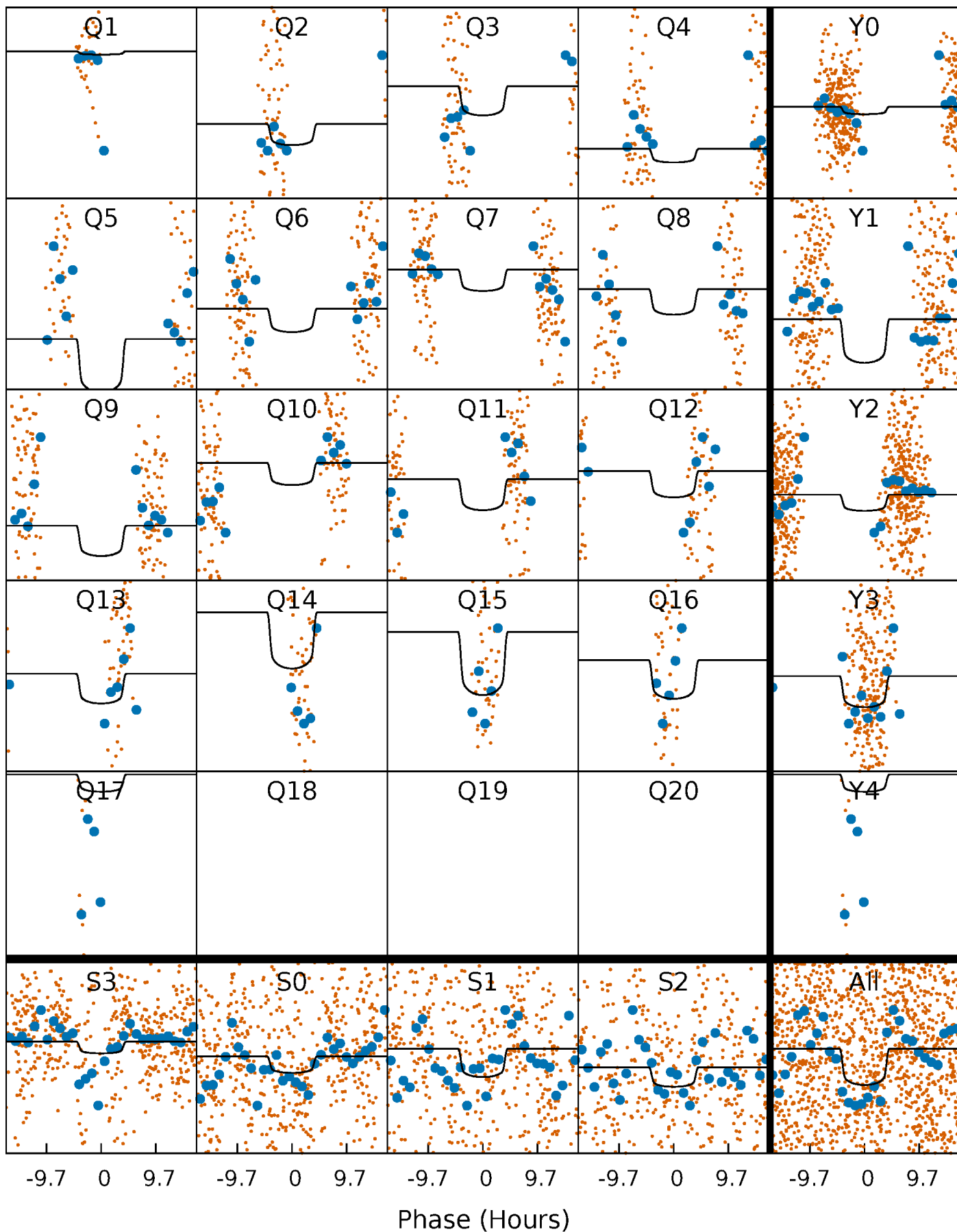
PDC Quarter-Phased Transit Curves

TCE 005792656-02 P= 8.346071 Days $T_0=133.741140$ (BKJD)



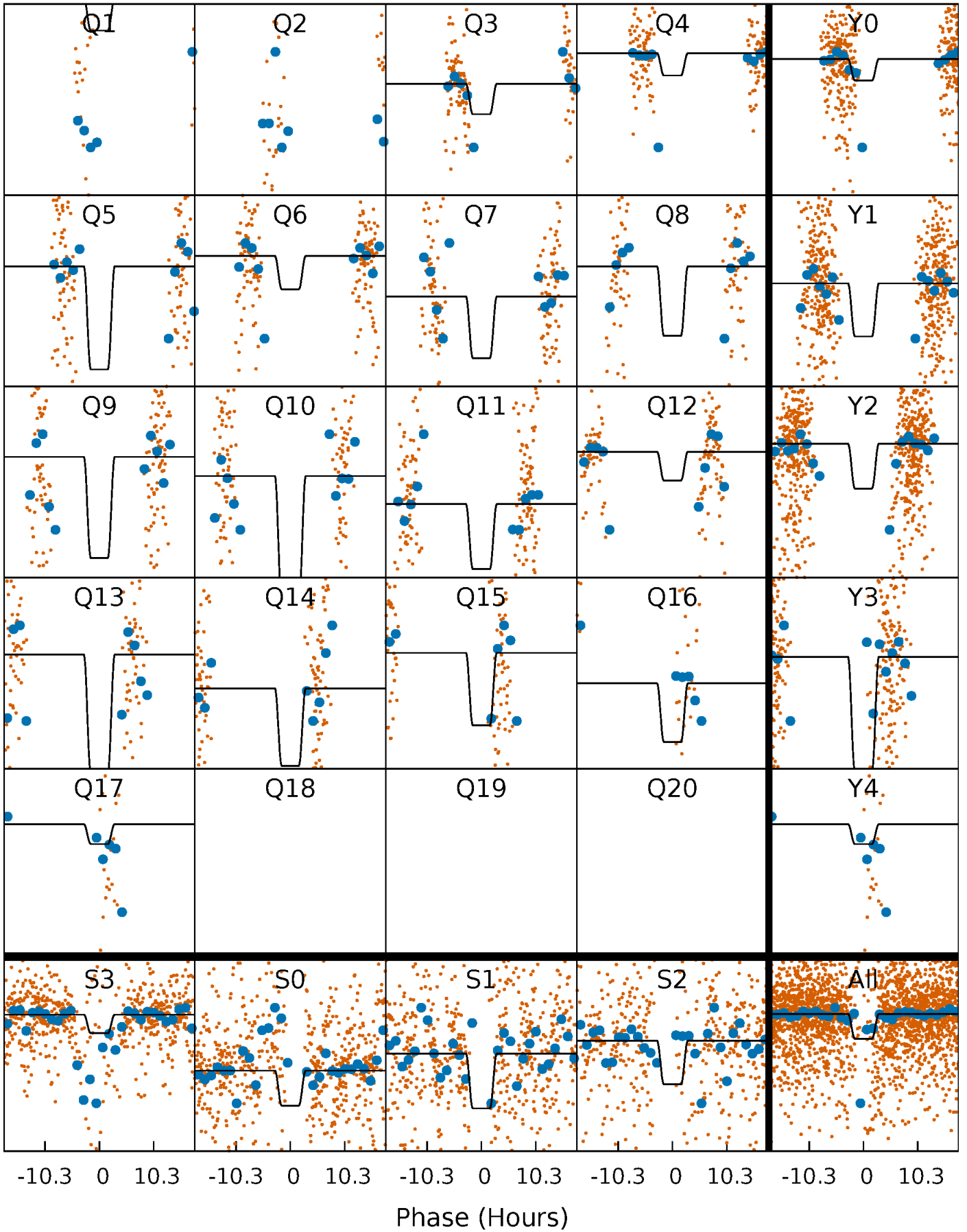
DV Quarter-Phased Transit Curves

TCE 005792656-02 P= 8.346071 Days $T_0=133.741140$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

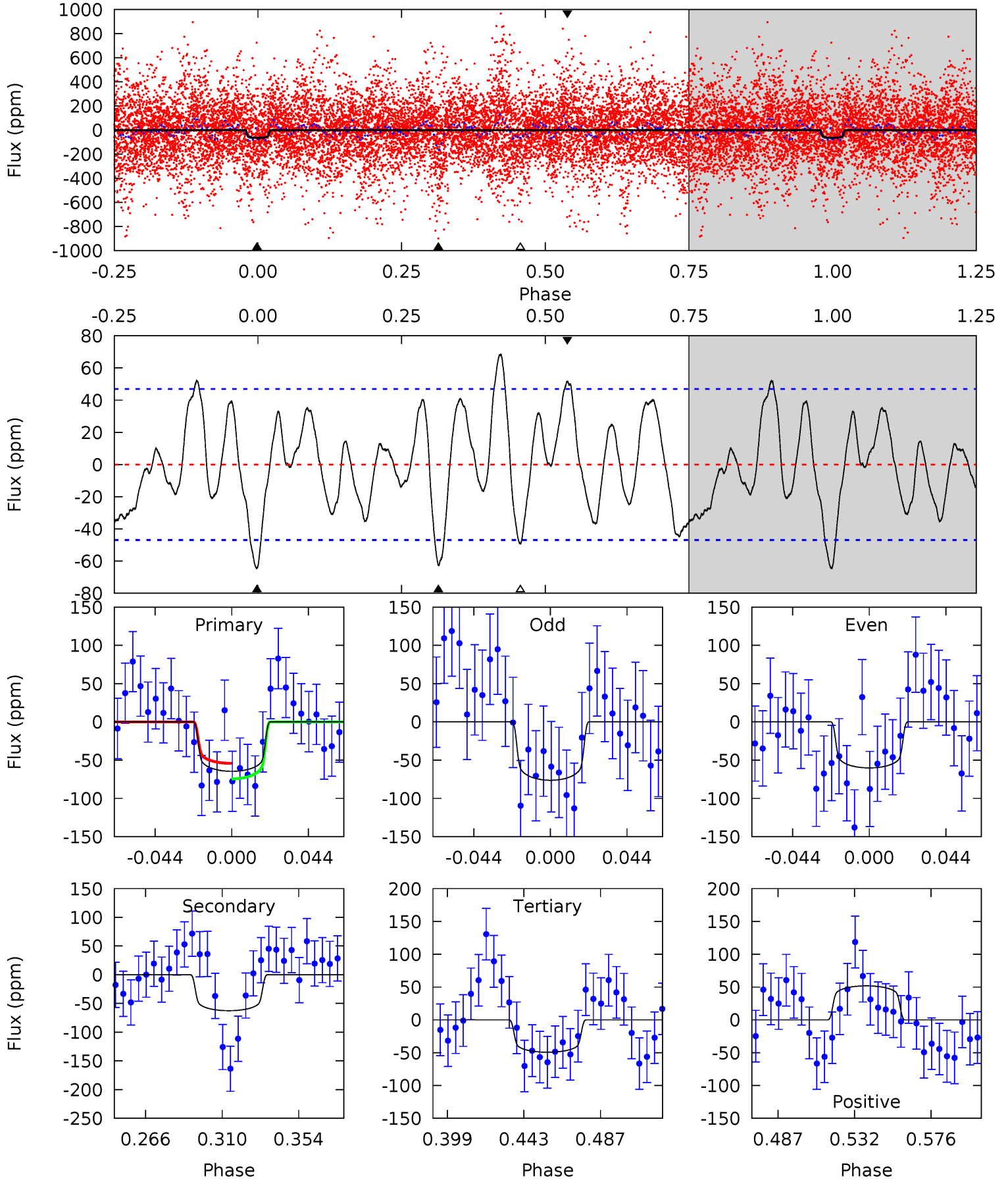
TCE 005792656-02 P= 8.345060 Days $T_0=133.747565$ (BKJD)



DV Model-Shift Uniqueness Test

005792656-02, P = 8.346071 Days, E = 125.395069 Days

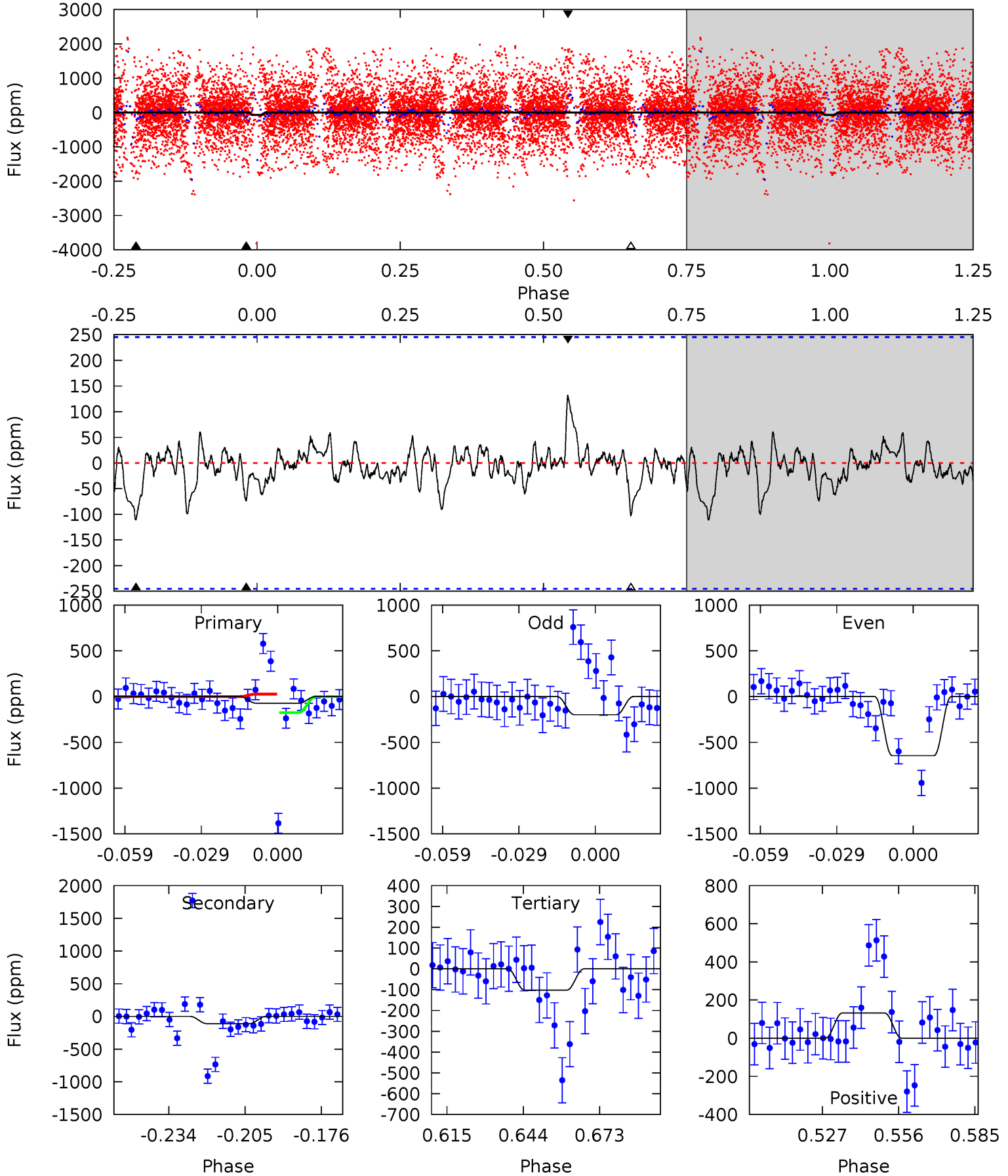
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.50	6.31	4.97	5.22	4.73	2.01	2.59	1.54	1.28	1.34	1.09	0.82	0.94	0.51	1.03



Alt Model-Shift Uniqueness Test

005792656-02, P = 8.345060 Days, E = 125.402505 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.45	2.19	2.02	2.60	4.82	2.18	0.50	-0.57	-1.16	0.17	-0.41	4.39	0.55	0.54	1.47



Stellar Parameters For KIC 005792656

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7328^{+207}_{-311}	$3.891^{+0.392}_{-0.123}$	$-0.520^{+0.250}_{-0.300}$	$2.242^{+0.487}_{-0.905}$	$1.427^{+0.210}_{-0.280}$	$0.178^{+0.526}_{-0.064}$
	+3%/-4%	+10%/-3%	+48%/-58%	+22%/-40%	+15%/-20%	+295%/-36%
Source	KIC0	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 005792656-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-63 ± 10	$1.96^{+0.60}_{-0.56}$	2200^{+159}_{-255}	6946^{+1219}_{-828}	71^{+71}_{-28}
Alt.	-111 ± 51	$4.53^{+0.91}_{-0.98}$	2187^{+174}_{-217}	5306^{+636}_{-730}	24^{+21}_{-13}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

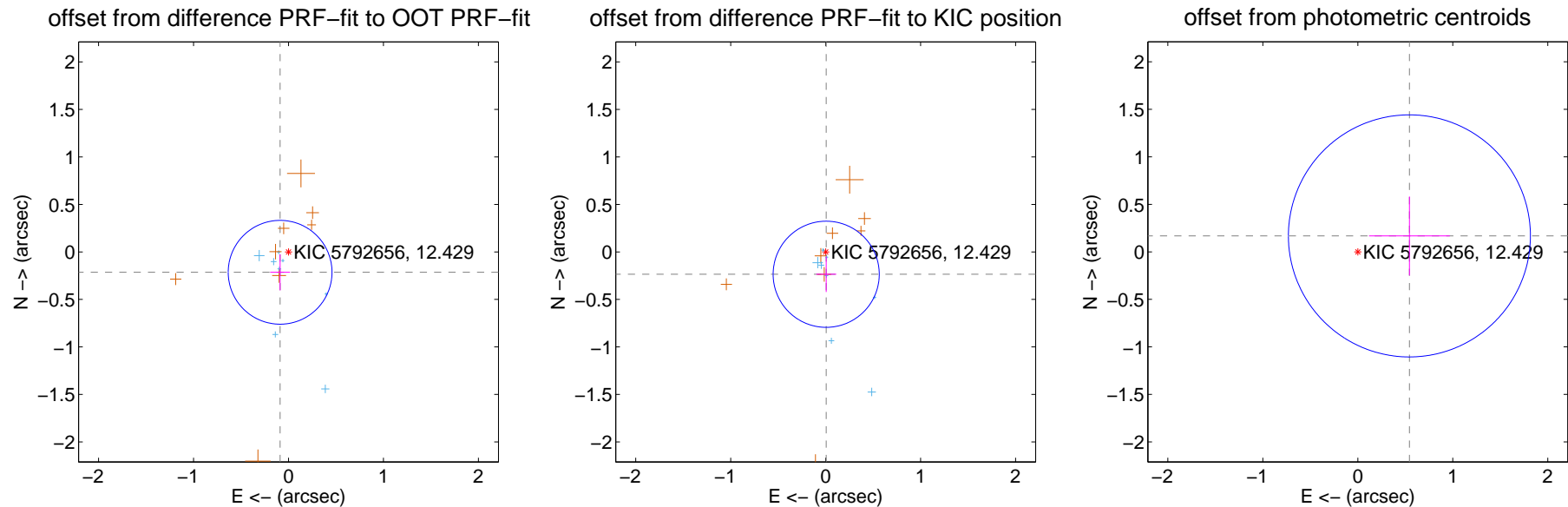
DV Centroid Data

Supplemental centroid analysis for 005792656-02. Kepler magnitude: 12.43. Transit SNR 4.35

There are 8 quarters with good PRF difference image offsets

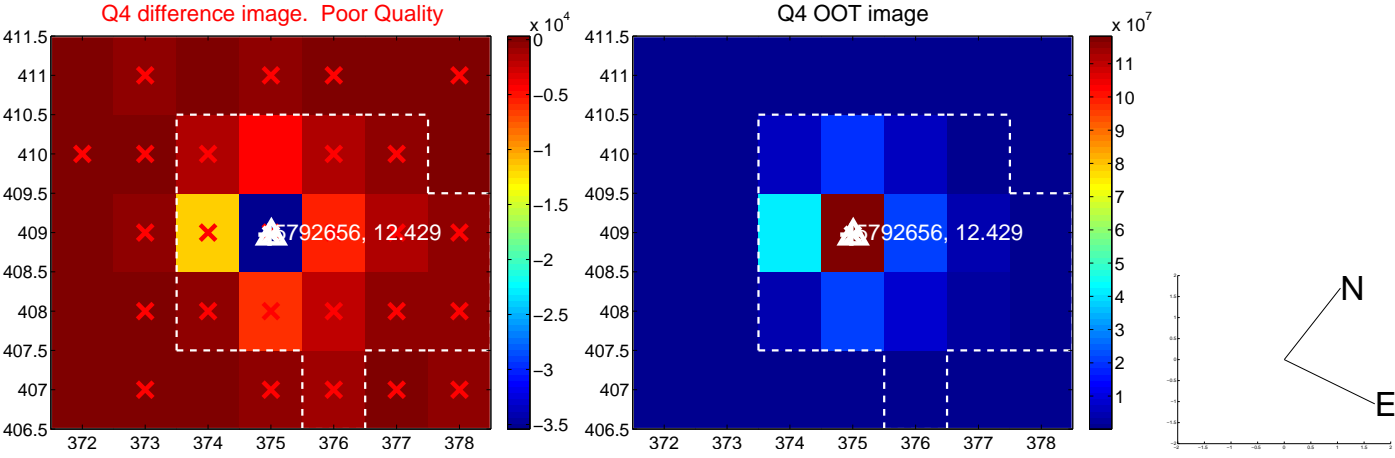
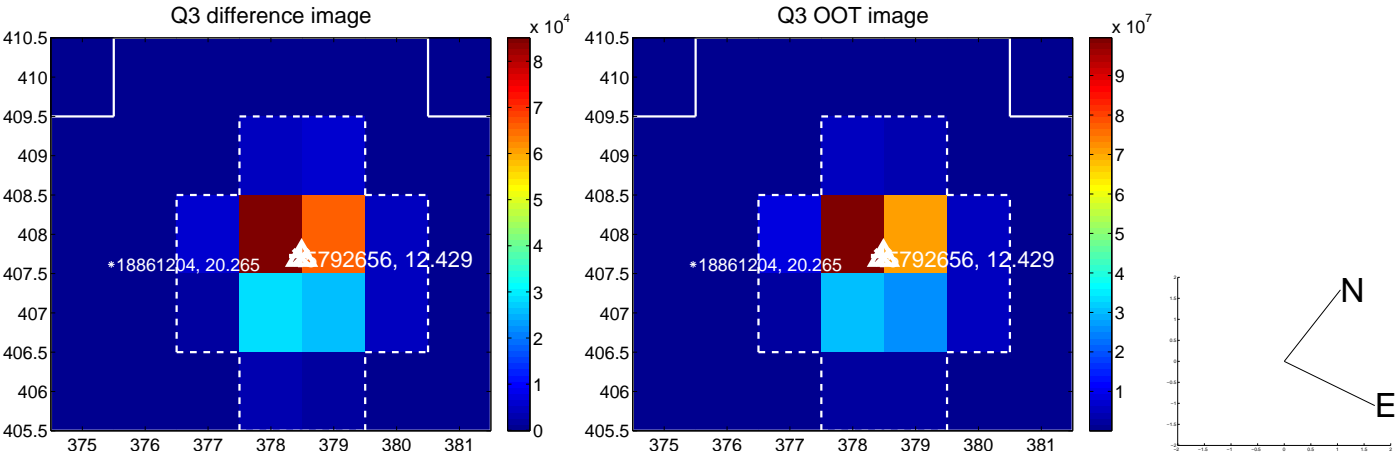
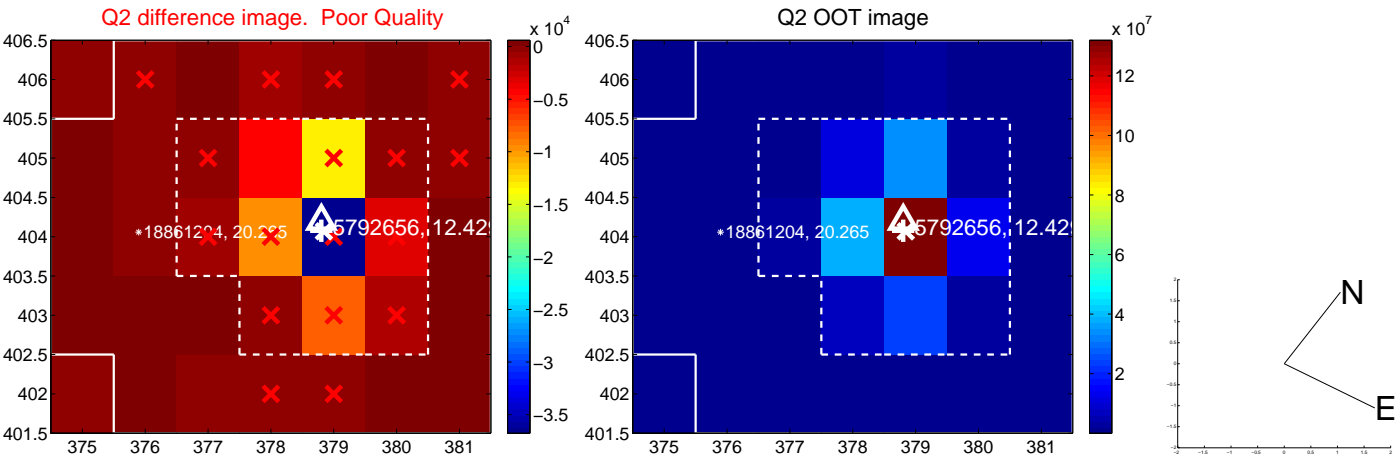
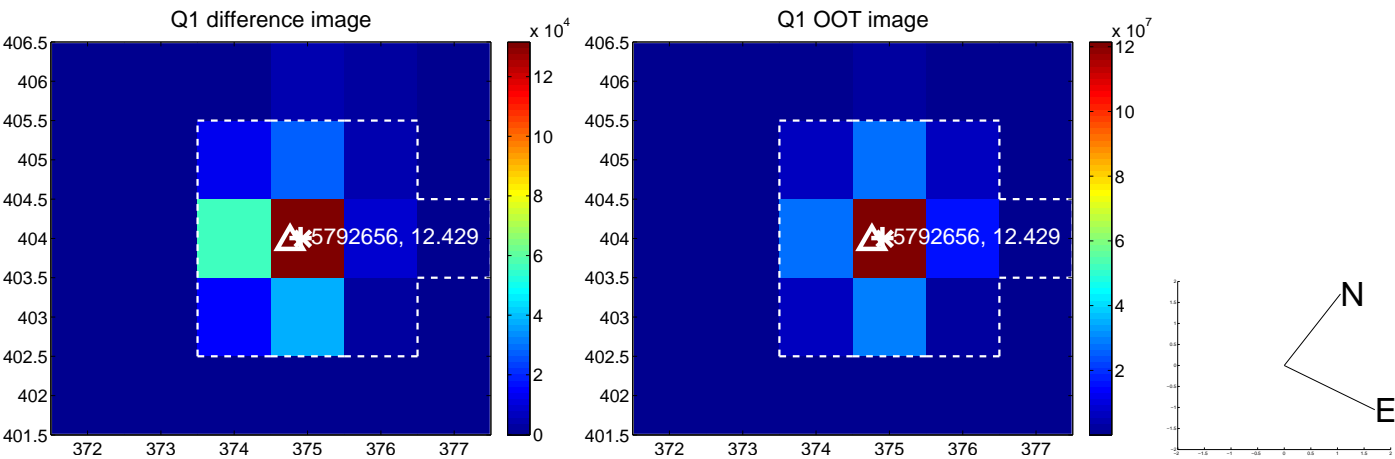
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.232 ± 0.182	1.27	0.088 ± 0.105	-0.214 ± 0.190
PRF-fit source offset from KIC position	0.235 ± 0.186	1.26	-0.006 ± 0.106	-0.235 ± 0.187
photometric centroid source offset	0.57 ± 0.42	1.34	-0.54 ± 0.43	0.17 ± 0.41

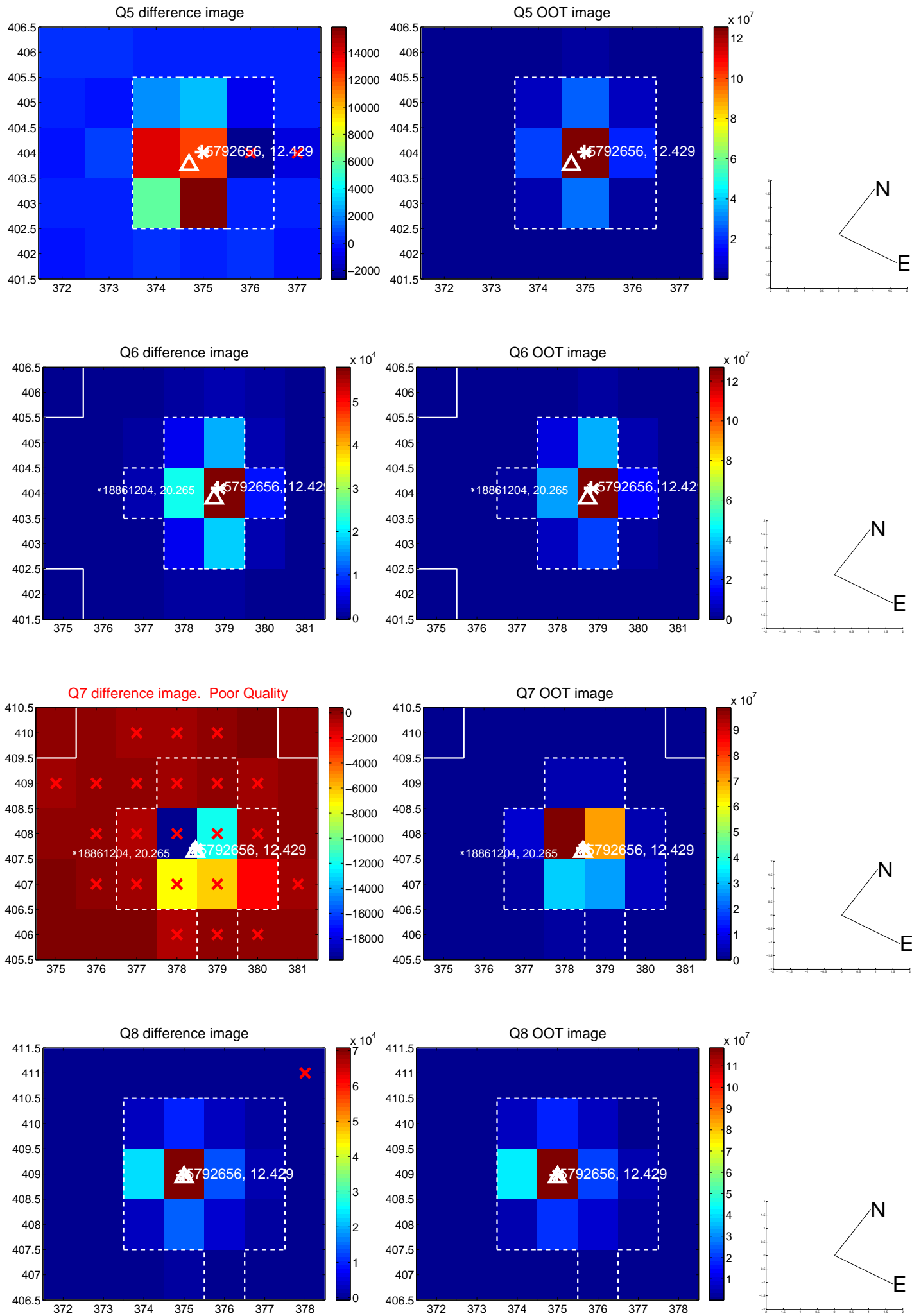


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

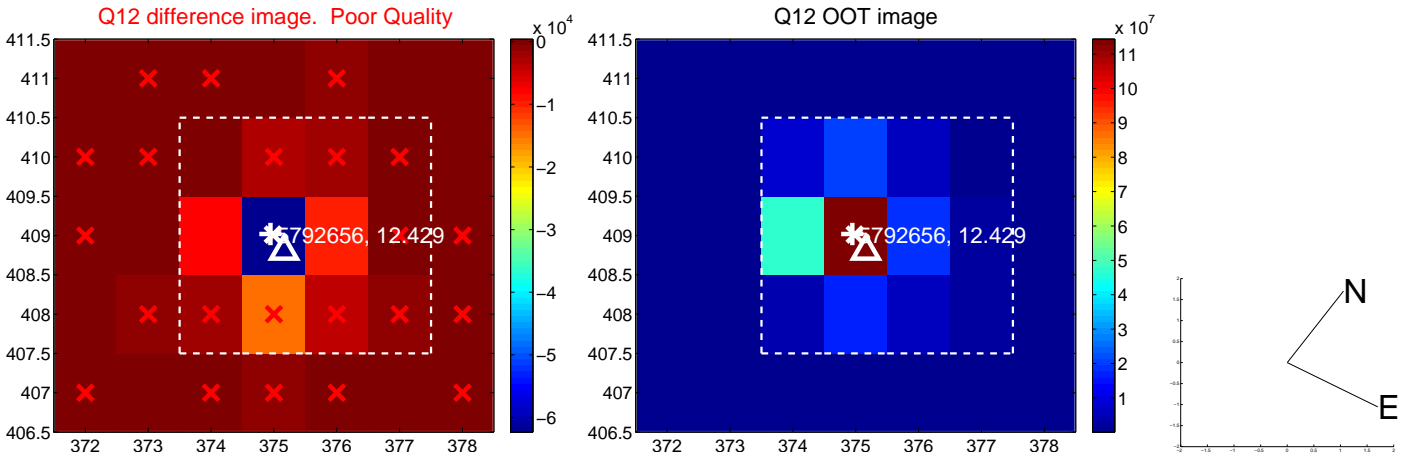
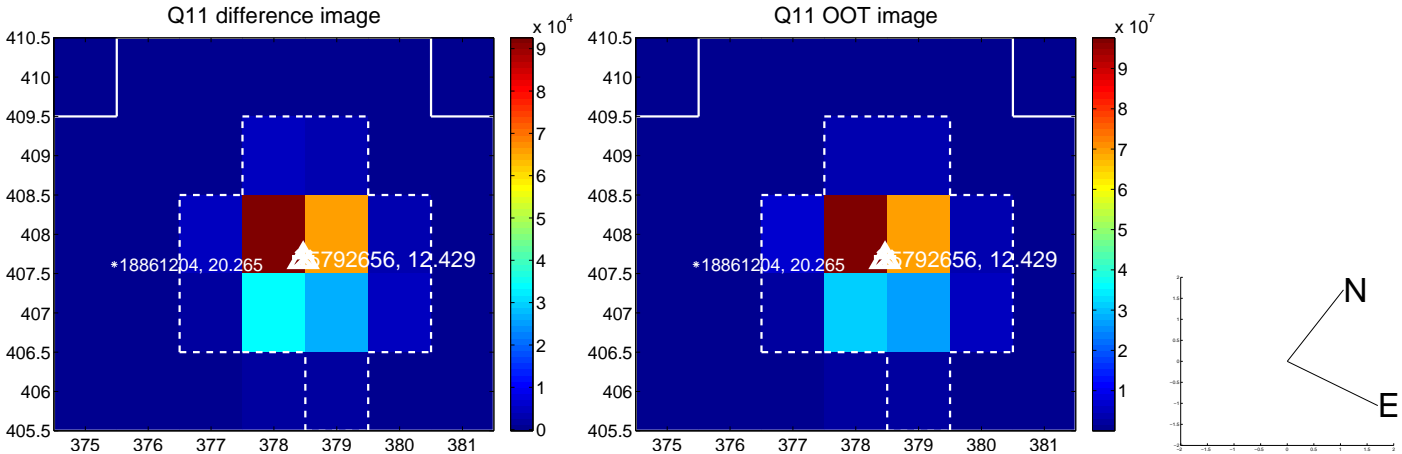
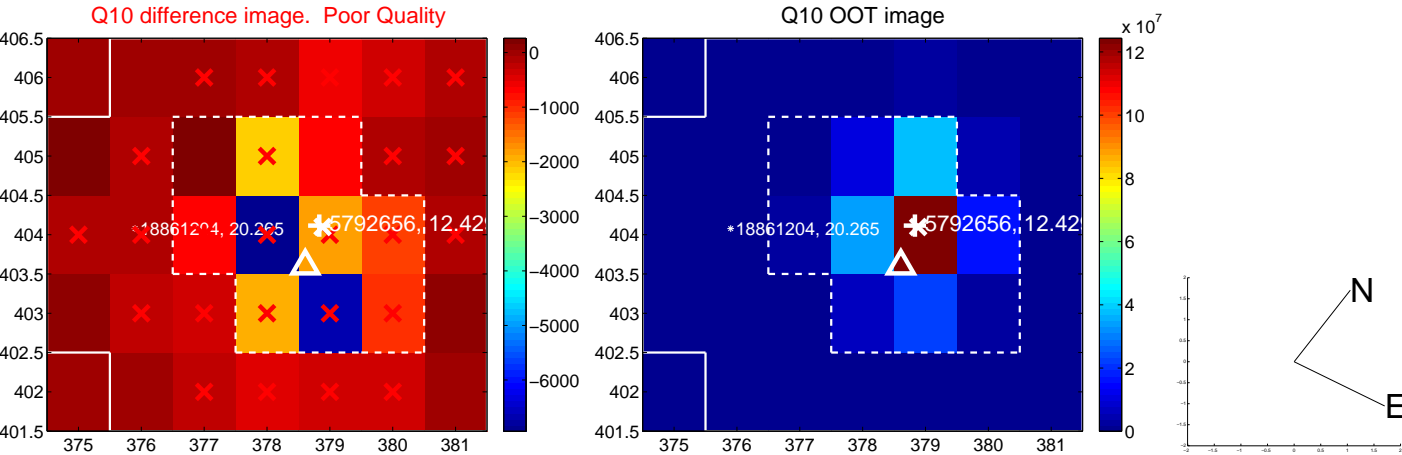
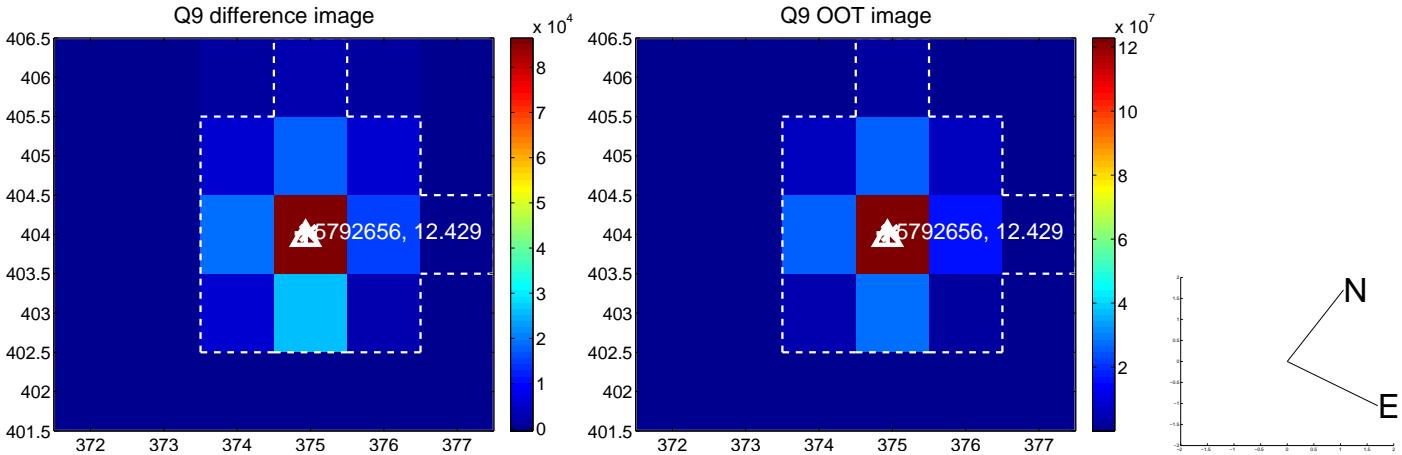
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



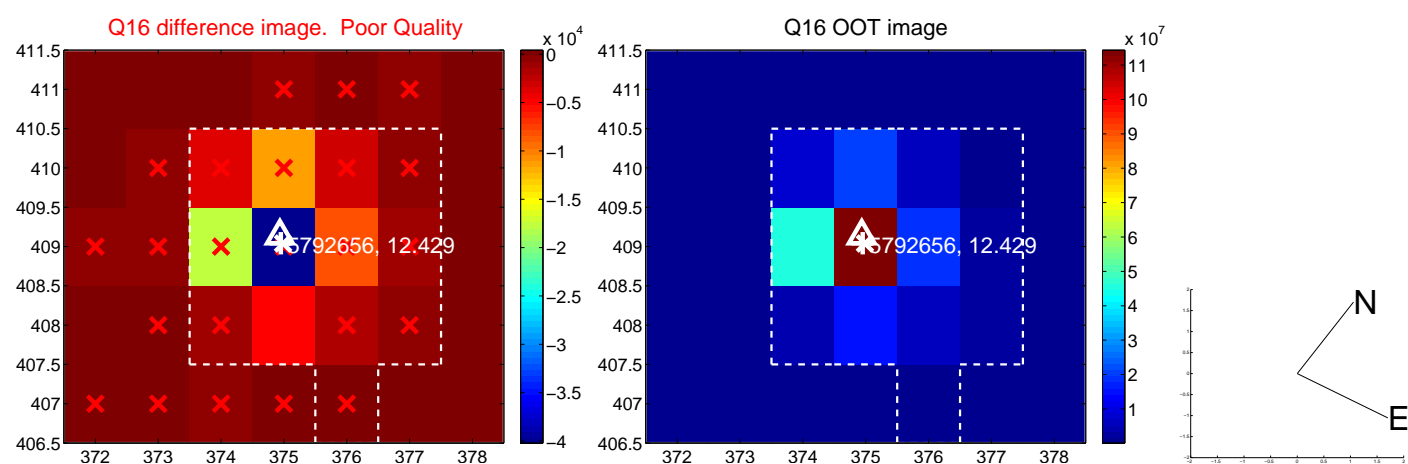
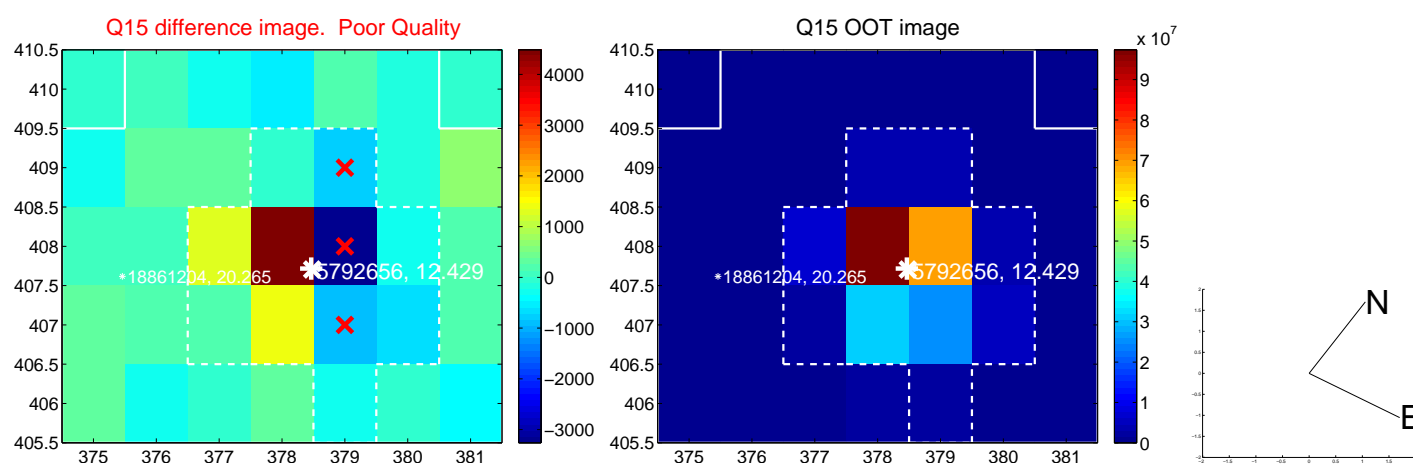
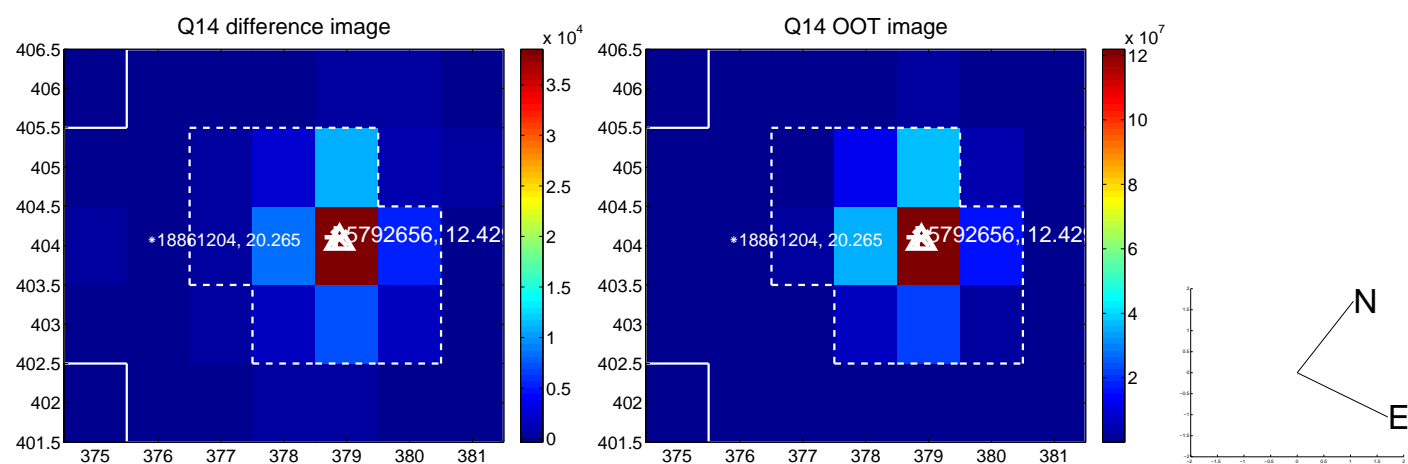
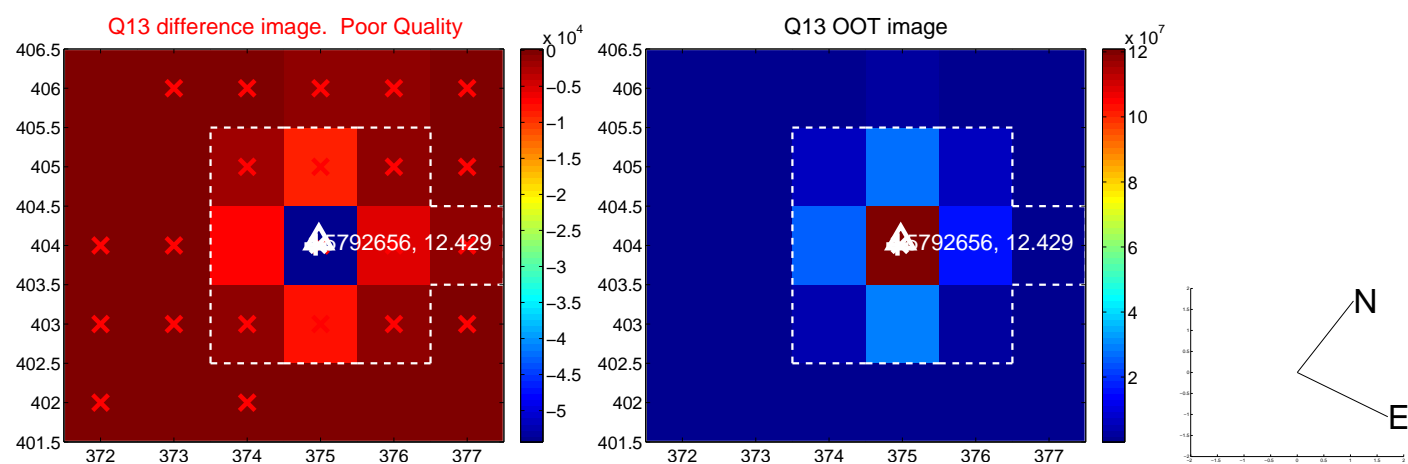
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



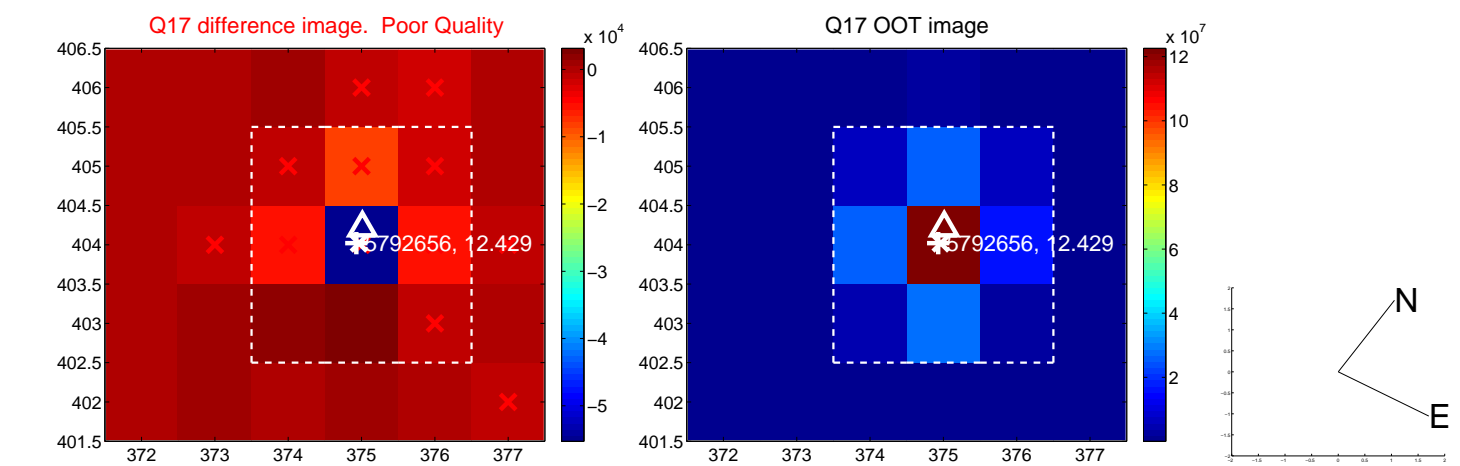
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



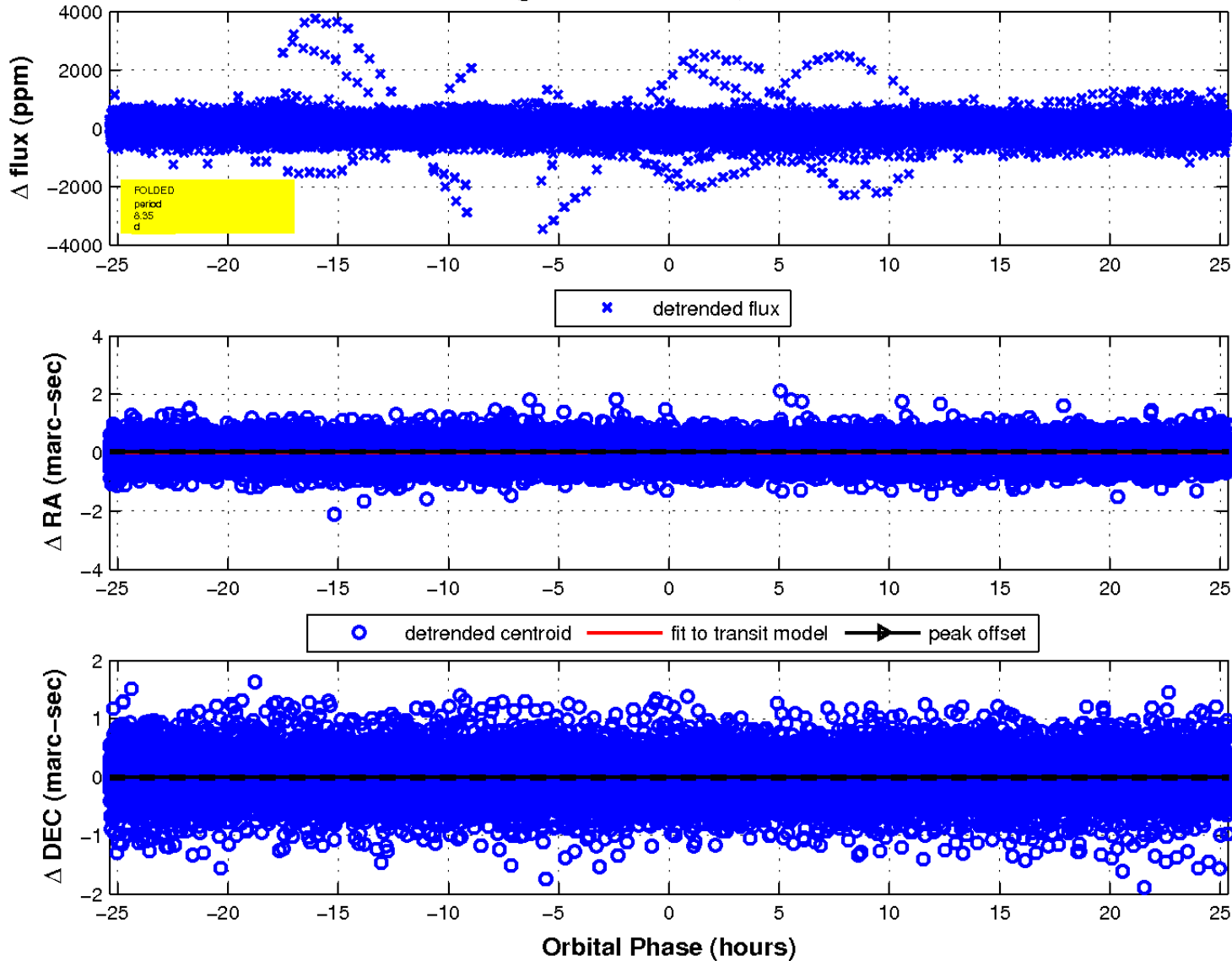
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



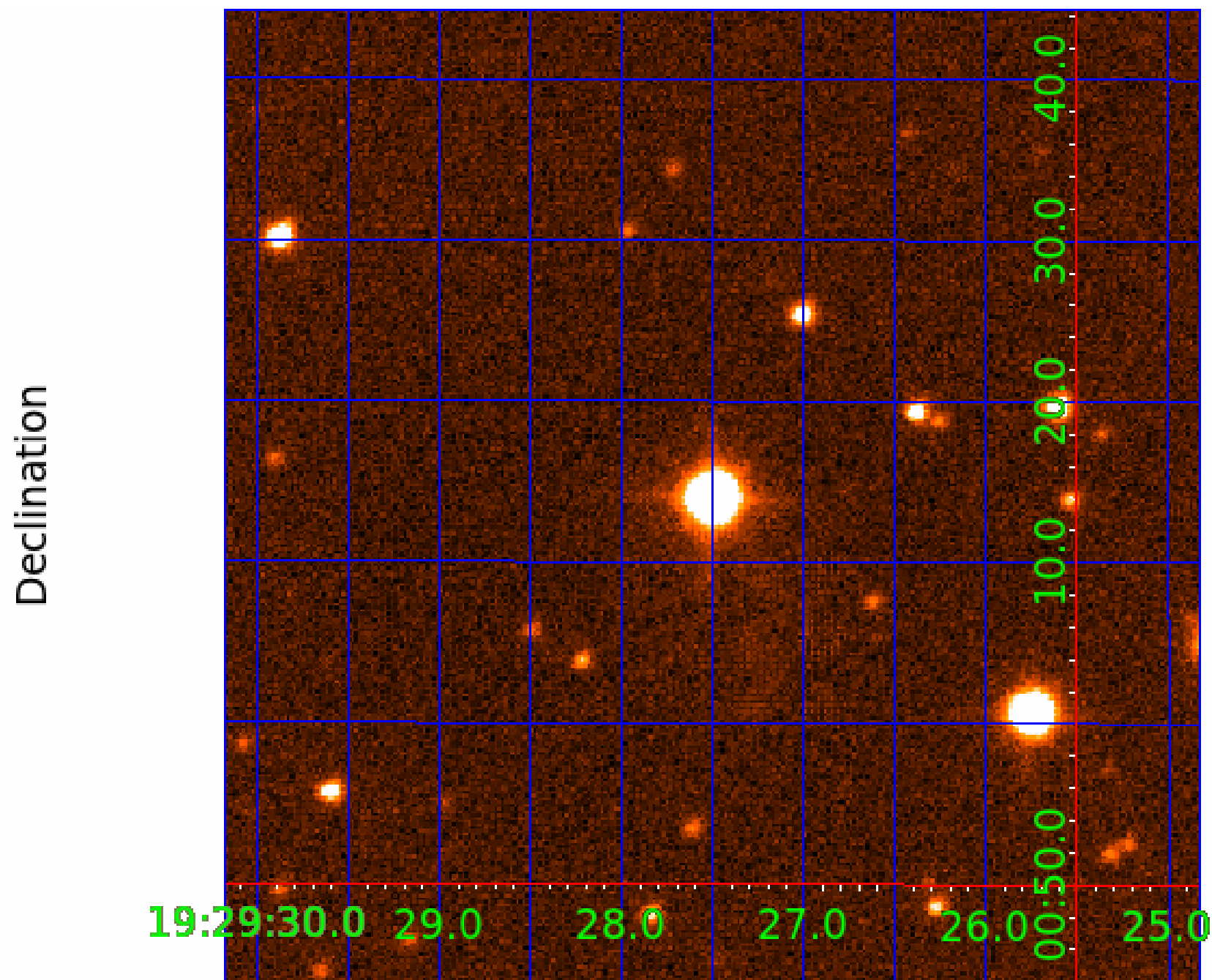
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 2 of 6



UKIRT Image



KIC 005792656

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})
005792656-01	OBS	No	0.926748	132.261100	28.1	5.820	12.1	9.1	2.24	7328	1.22	29601.32
005792656-02	OBS	No	8.346071	133.741140	59.9	8.457	17.8	4.4	2.24	7328	2.09	1579.86
005792656-03	OBS	No	75.696395	135.551705	403.6	5.338	12.9	6.3	2.24	7328	8.56	83.53
005792656-04	OBS	No	46.694140	152.488697	374.7	5.682	12.2	9.5	2.24	7328	8.26	159.07
005792656-05	OBS	No	89.960139	192.886063	369.7	3.443	12.9	8.6	2.24	7328	4.82	66.35
005792656-06	OBS	No	52.160133	167.773368	231.2	5.417	11.7	6.1	2.24	7328	3.49	137.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005792656-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005792656-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

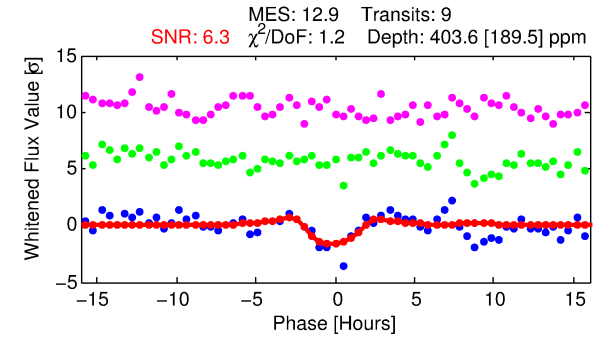
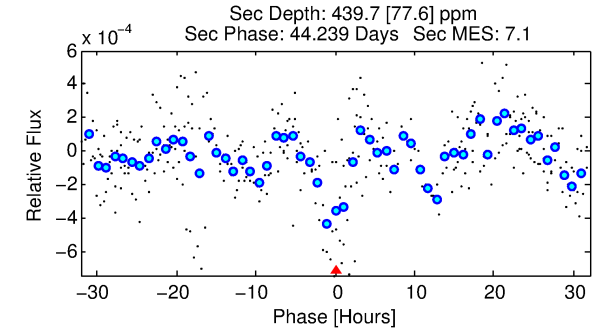
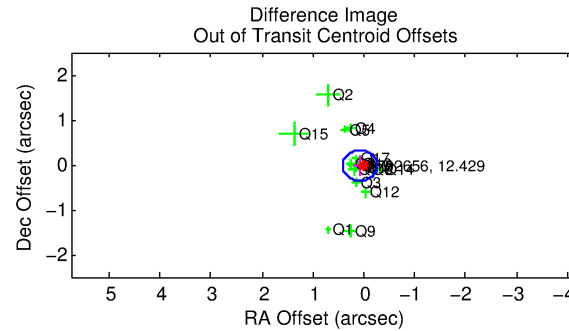
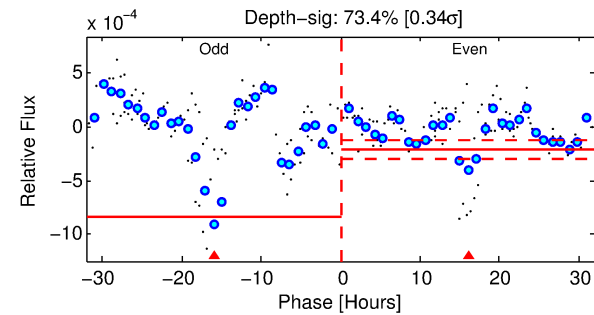
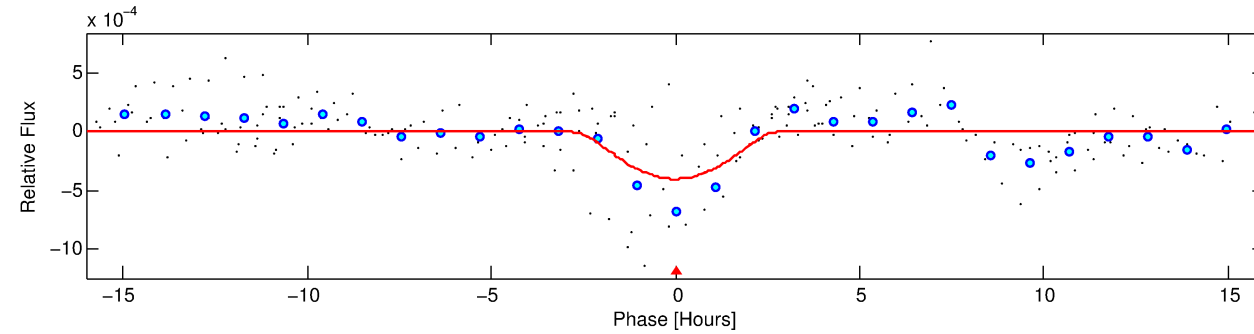
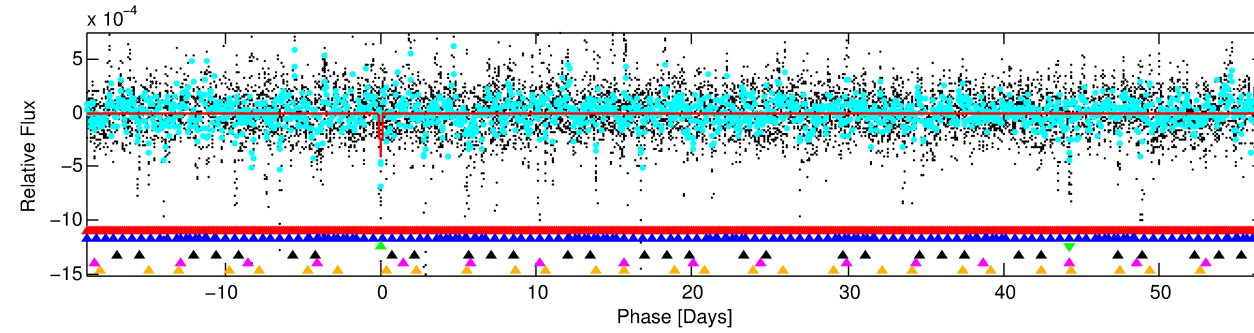
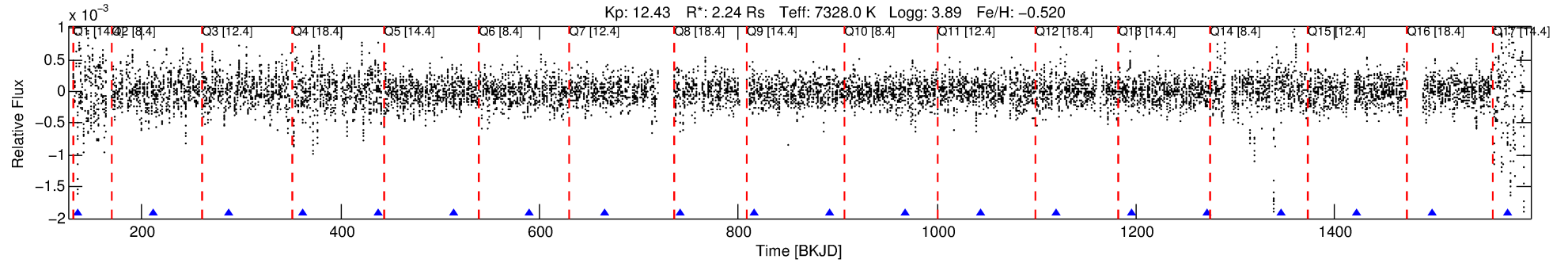
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005792656-03

No Significant Match Found

DV One-Page Summary

KIC: 5792656 Candidate: 3 of 6 Period: 75.696 d



DV Fit Results:

Period = 75.69640 [0.00161] d
Epoch = 135.5517 [0.0151] BKJD
Rp/R* = 0.0350 [0.1295]
a/R* = 28.95 [27.54]
b = 1.00 [0.18]
Seff = 83.53 [56.86]
Teq = 771 [131] K
Rp = 8.56 [31.87] Re
a = 0.3943 [0.1592] AU
Ag = 513.35 [3816.16] [0.13 σ]
Teffp = 5673 [10505] K [0.47 σ]

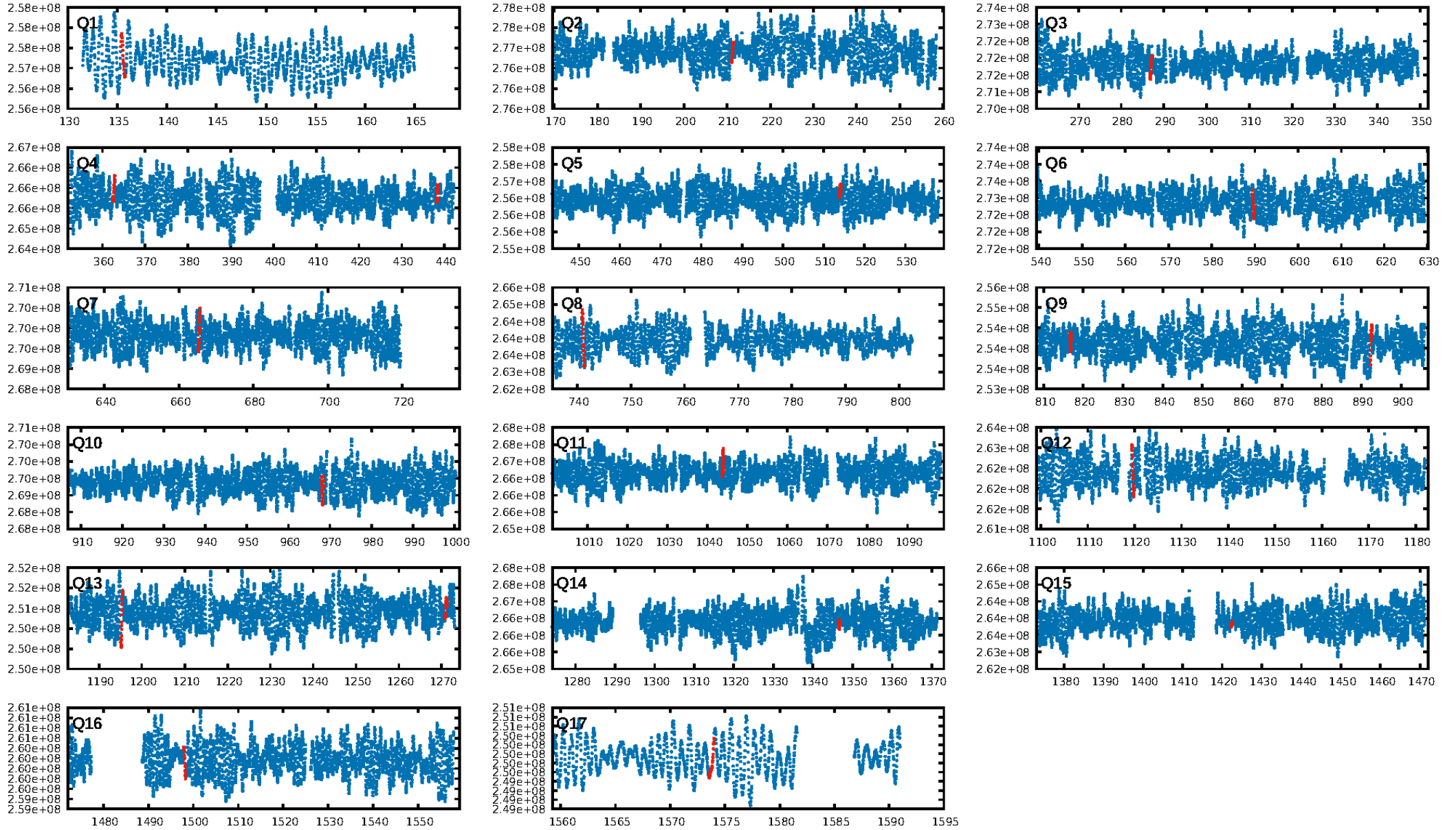
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [74.28 σ]
LongPeriod-sig: 100.0% [53.89 σ]
ModelChiSquare2-sig: 0.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.32e-14
RollingBand-fgt: 1.00 [7/7]
GhostDiagnostic-chr: 50.97
Centroid-sig: 1.2%
Centroid-so: 0.614 arcsec [2.32 σ]
OotOffset-rm: 0.077 arcsec [0.68 σ]
KicOffset-rm: 0.083 arcsec [0.43 σ]
OotOffset-st: 4/4/3/5 [16]
KicOffset-st: 4/4/3/5 [16]
DiffImageQuality-fgm: 0.56 [9/16]
DiffImageOverlap-fno: 0.00 [0/16]

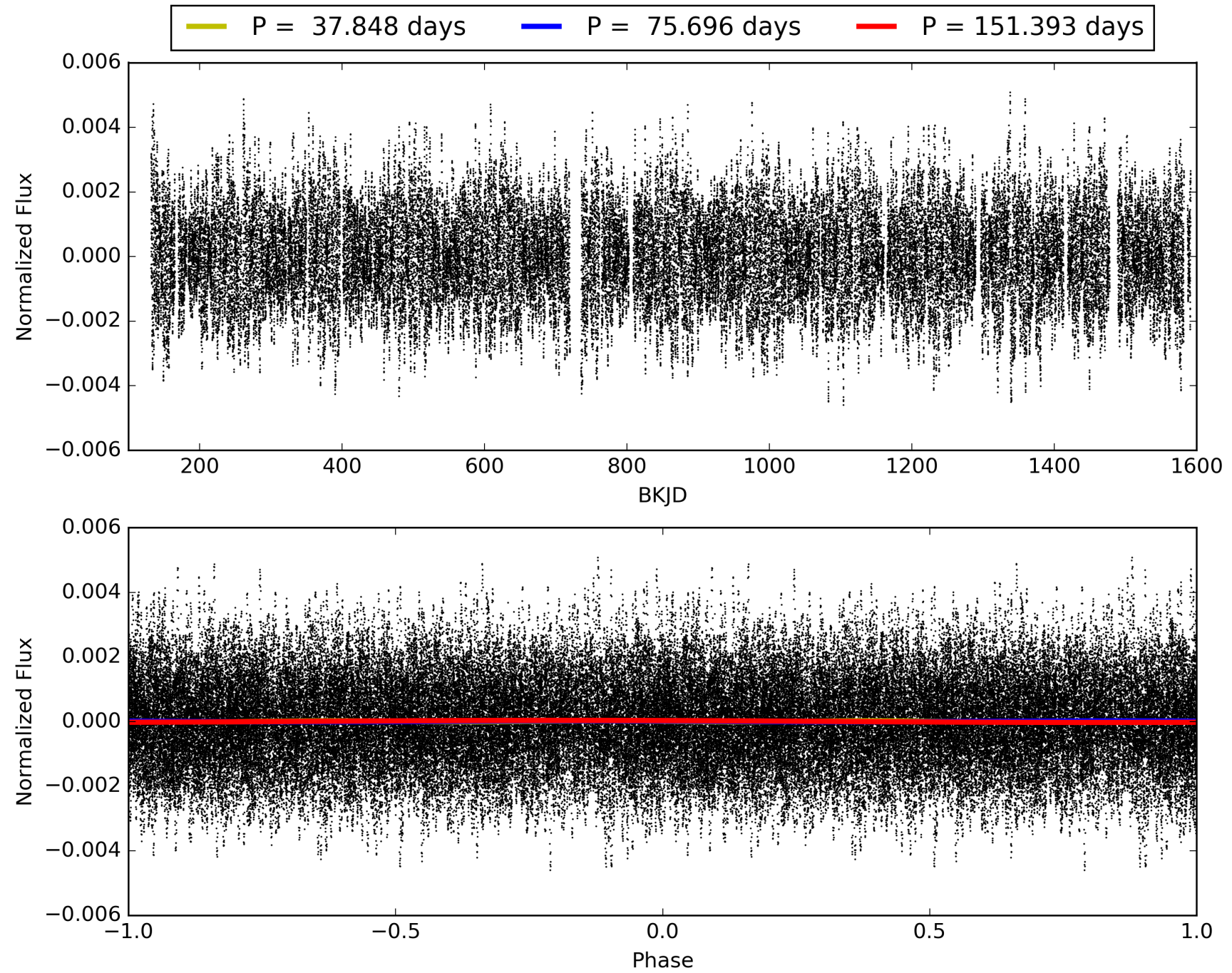
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:10:48 Z

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

TCE 005792656-03, PDC Light Curves

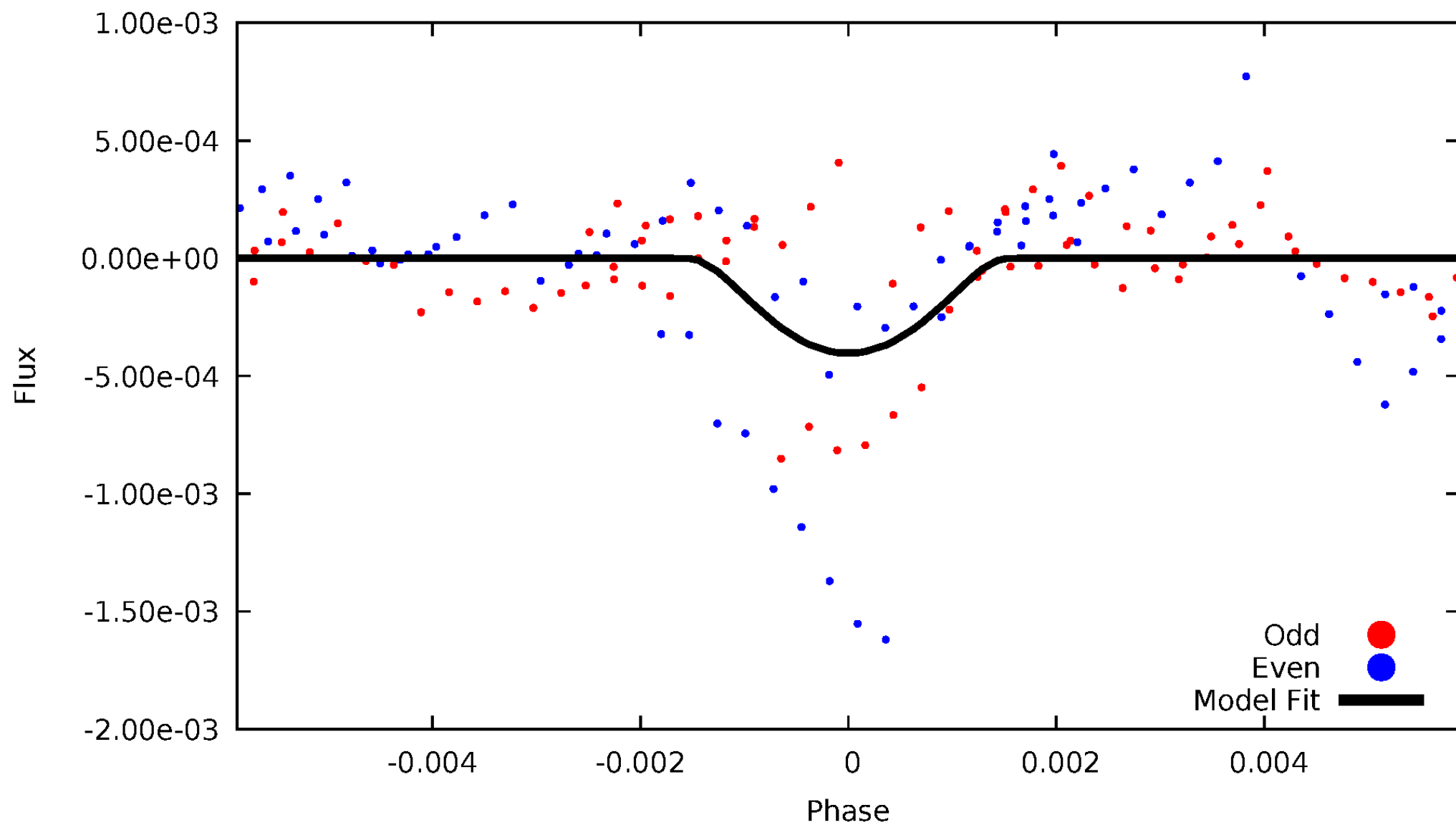


TCE 005792656-03



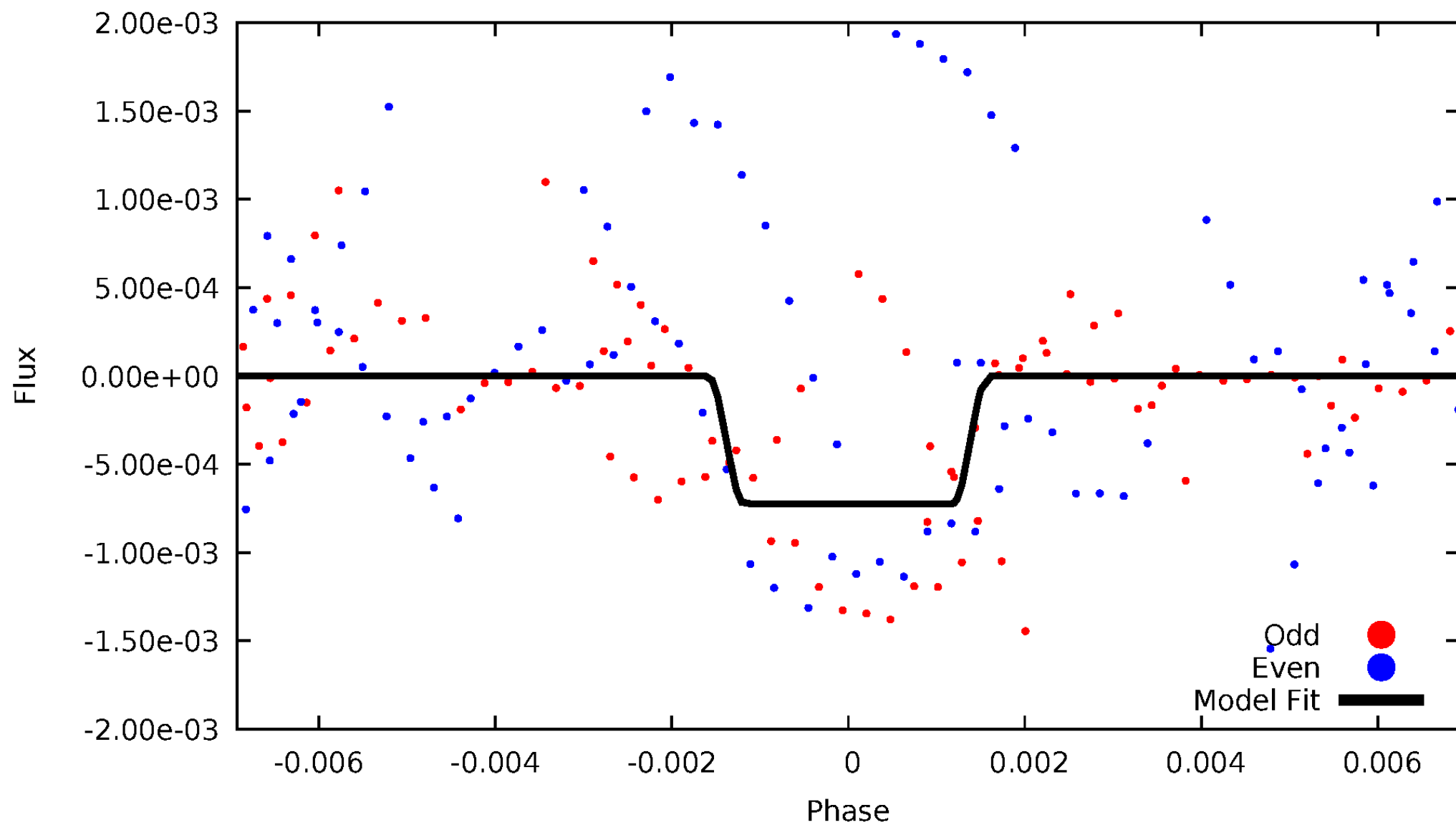
DV Odd/Even

TCE 005792656-03



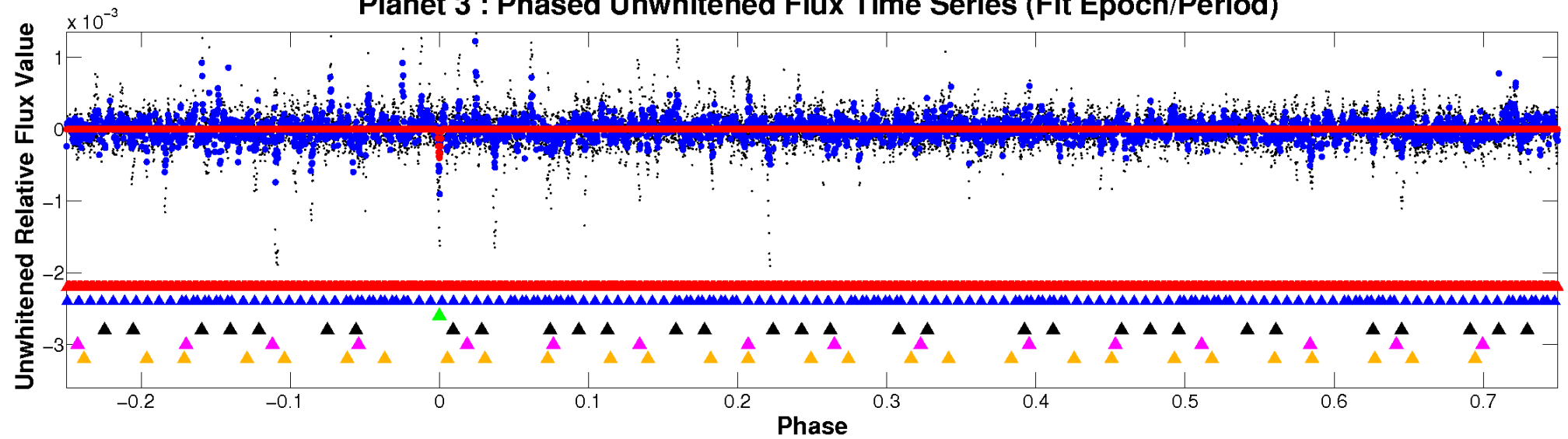
ALT Odd/Even

TCE 005792656-03

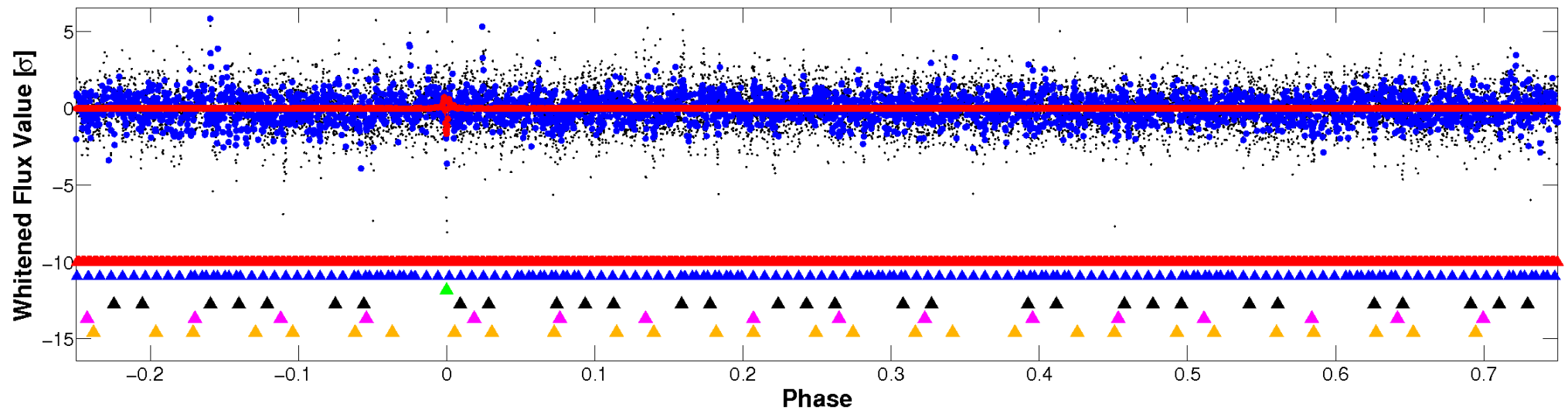


Non-Whitened Vs. Whitened Light Curve

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

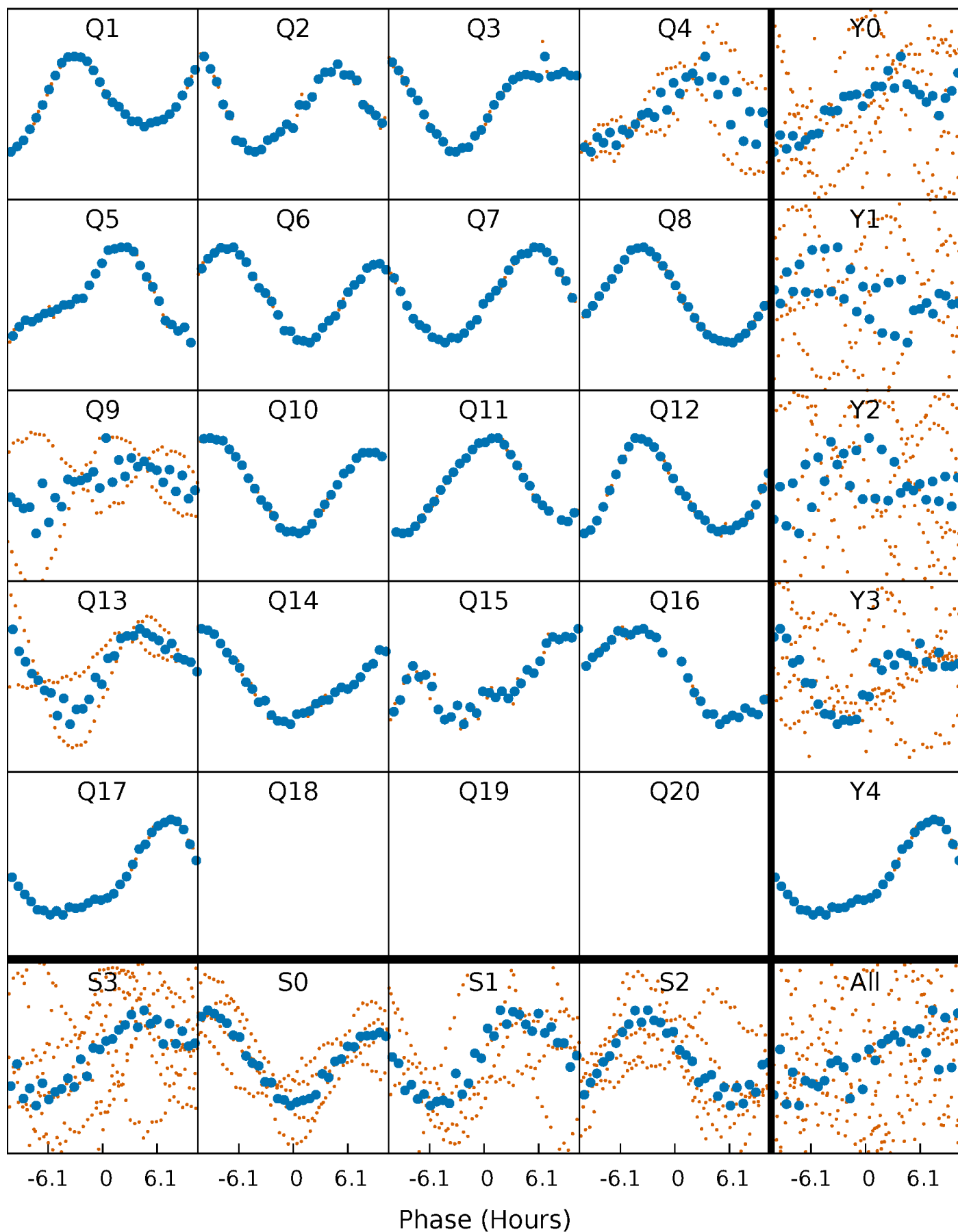


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



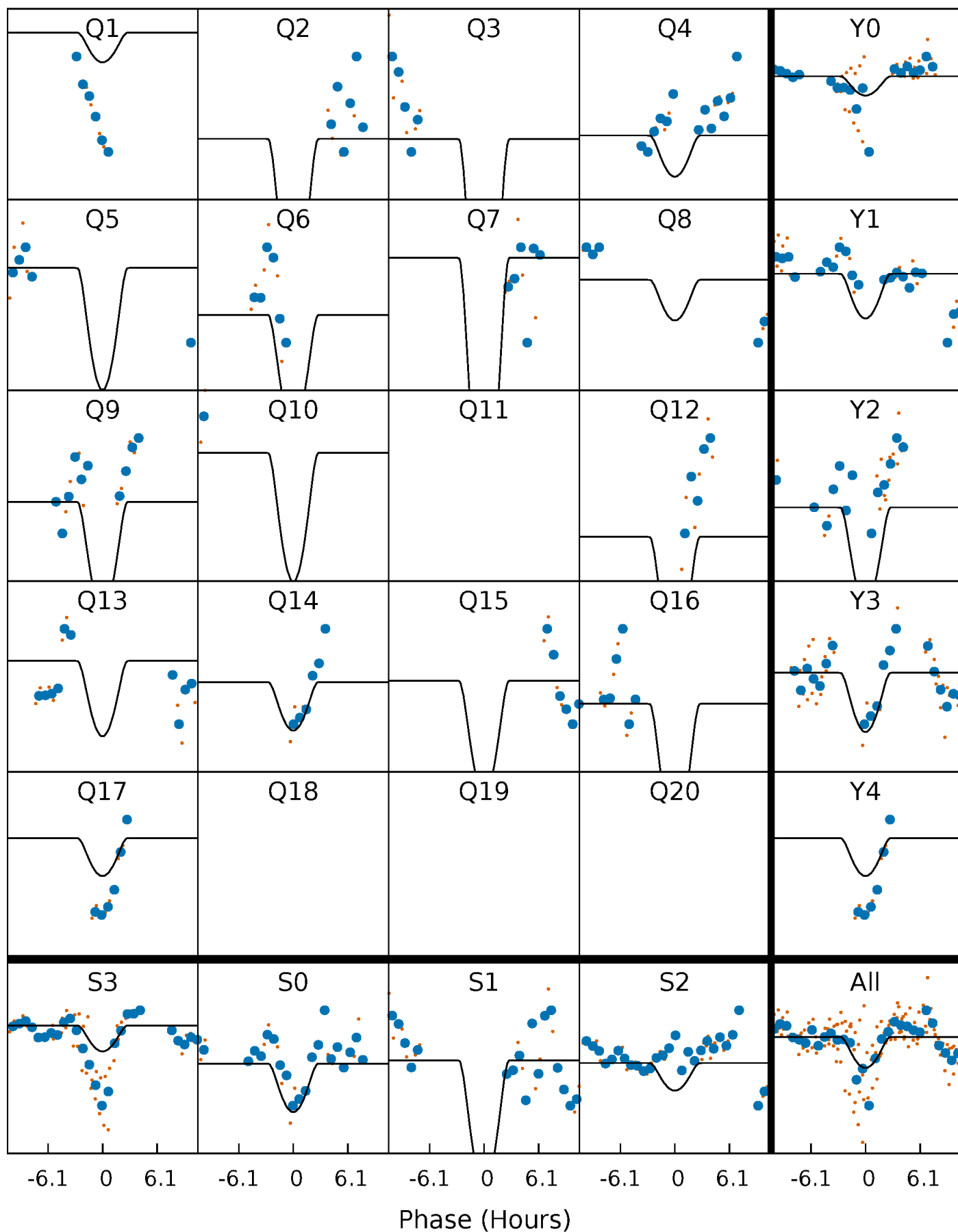
PDC Quarter-Phased Transit Curves

TCE 005792656-03 P= 75.696395 Days $T_0=135.551705$ (BKJD)



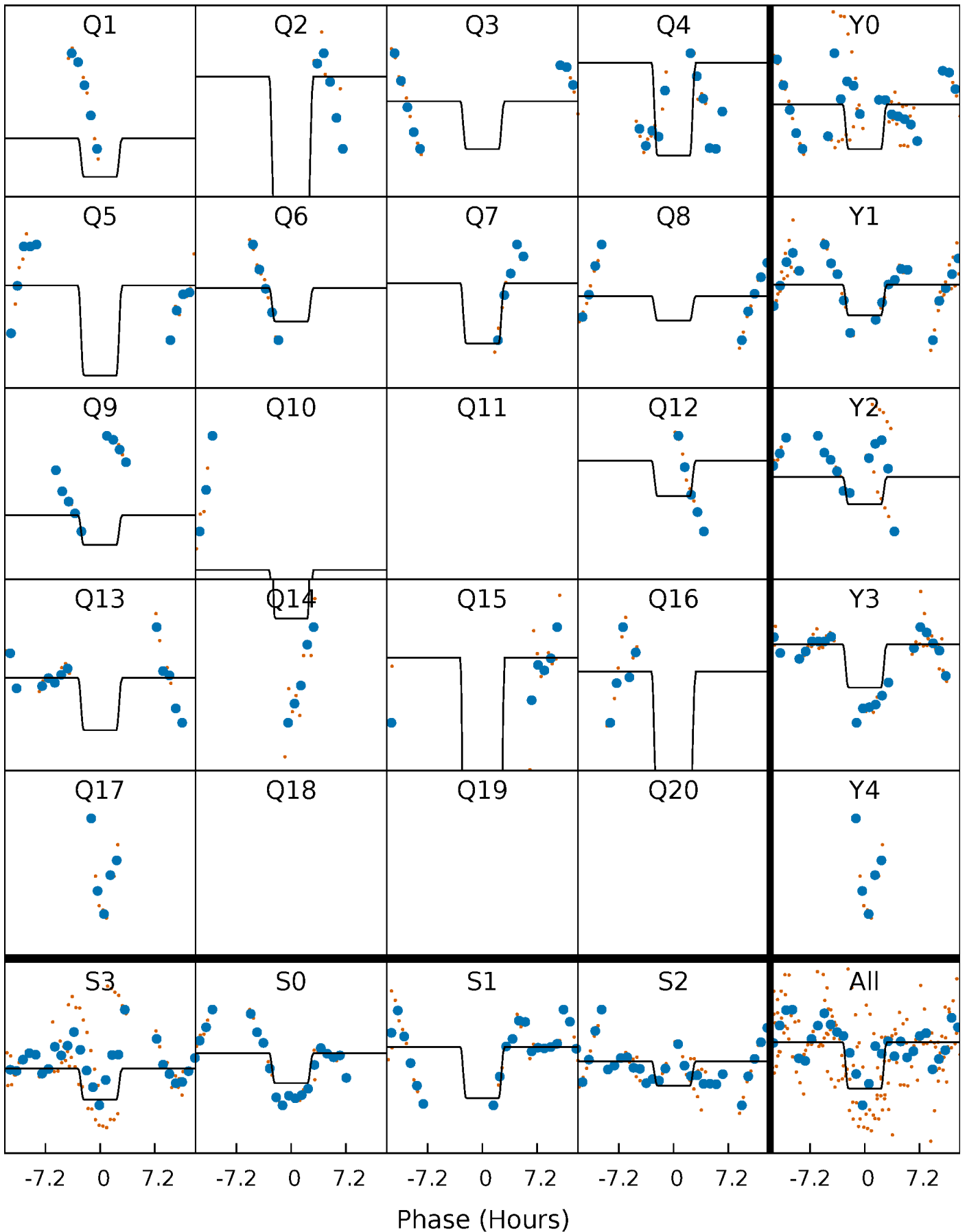
DV Quarter-Phased Transit Curves

TCE 005792656-03 $P = 75.696395$ Days $T_0 = 135.551705$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

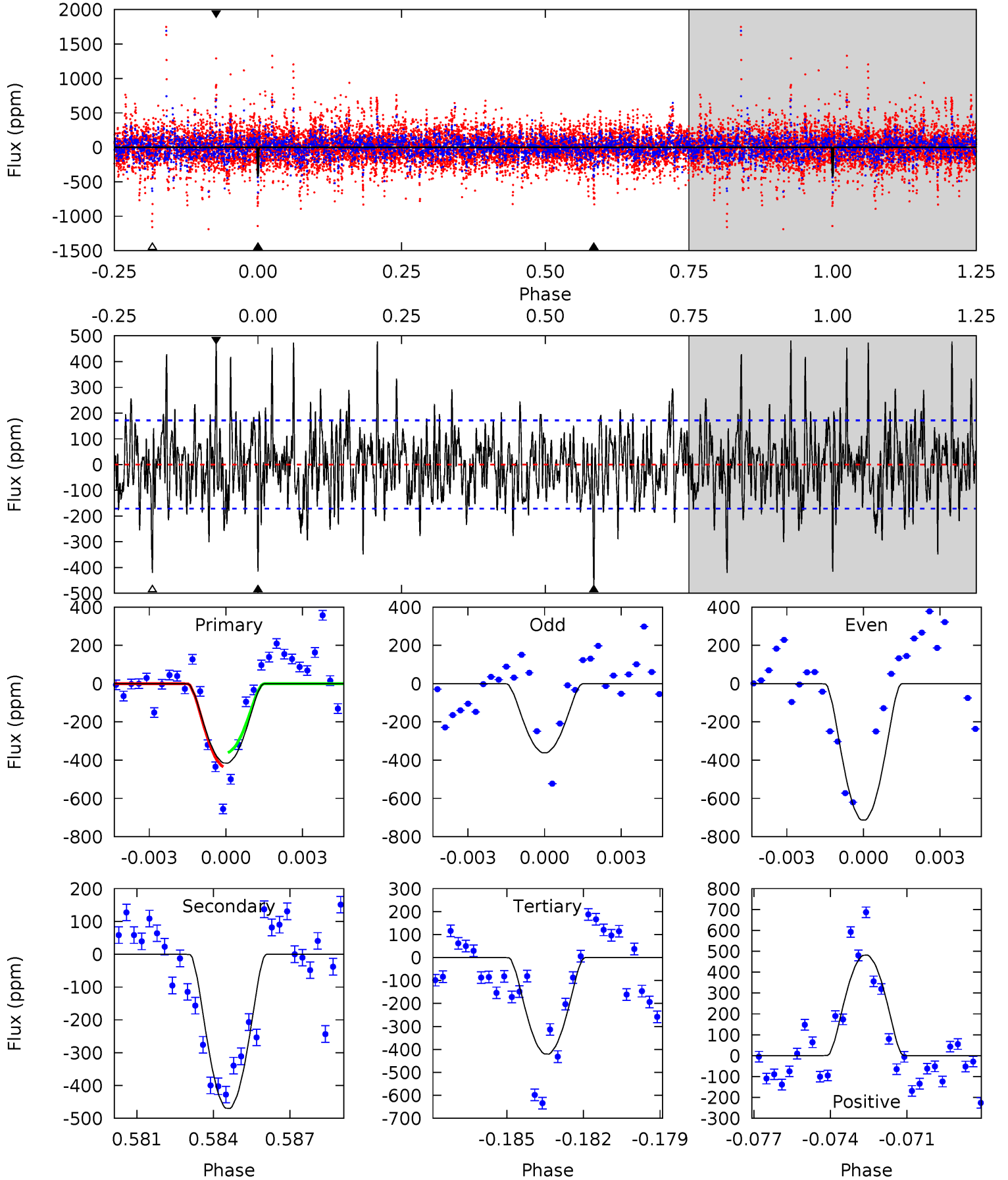
TCE 005792656-03 P= 75.695355 Days $T_0=135.588666$ (BKJD)



DV Model-Shift Uniqueness Test

005792656-03, P = 75.696395 Days, E = 59.855310 Days

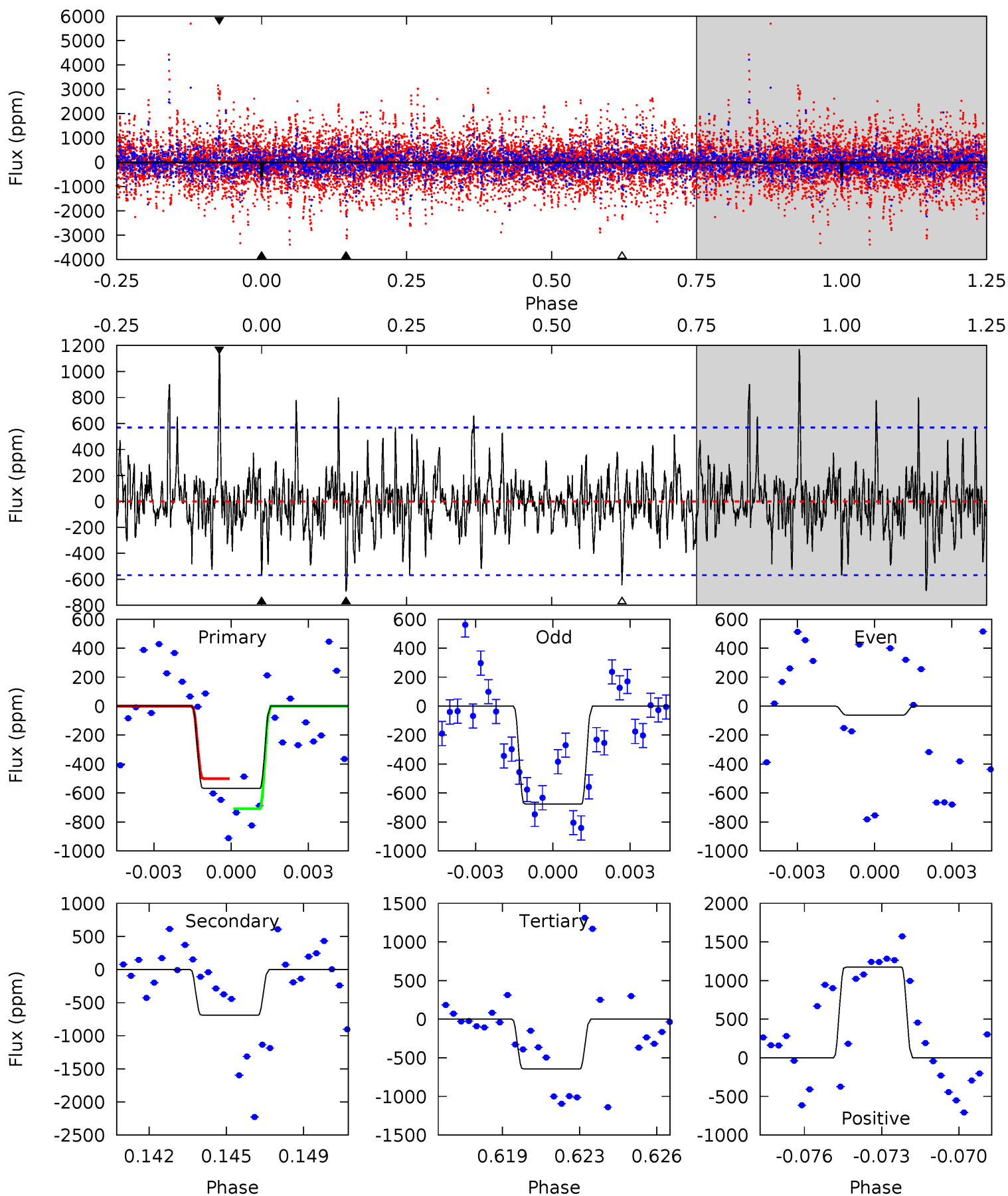
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.7	14.4	12.9	14.7	5.25	2.96	3.42	-0.15	-2.02	1.52	-0.35	5.28	3.85	0.51	0



Alt Model-Shift Uniqueness Test

005792656-03, P = 75.695355 Days, E = 59.893311 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.25	6.37	5.95	10.8	5.24	2.95	1.77	-0.70	-5.57	0.42	-4.46	2.70	0.56	0.63	0.96



Stellar Parameters For KIC 005792656

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7328^{+207}_{-311}	$3.891^{+0.392}_{-0.123}$	$-0.520^{+0.250}_{-0.300}$	$2.242^{+0.487}_{-0.905}$	$1.427^{+0.210}_{-0.280}$	$0.178^{+0.526}_{-0.064}$
	+3%/-4%	+10%/-3%	+48%/-58%	+22%/-40%	+15%/-20%	+295%/-36%
Source	KIC0	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 005792656-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-470 ± 33	$21.69^{+23.80}_{-15.11}$	1052^{+78}_{-110}	3802^{+2330}_{-752}	86^{+818}_{-66}
Alt.	-690 ± 108	$21.97^{+24.60}_{-14.73}$	1044^{+86}_{-107}	4047^{+2530}_{-840}	122^{+1020}_{-94}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

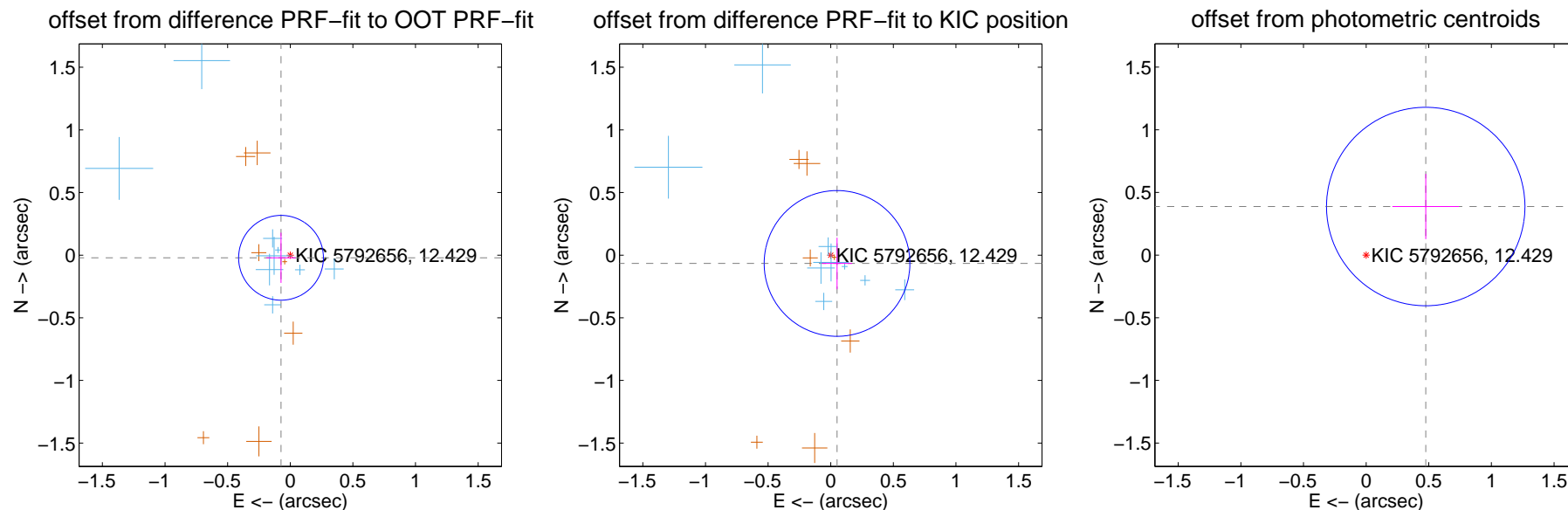
DV Centroid Data

Supplemental centroid analysis for 005792656-03. Kepler magnitude: 12.43. Transit SNR 6.33

There are 9 quarters with good PRF difference image offsets

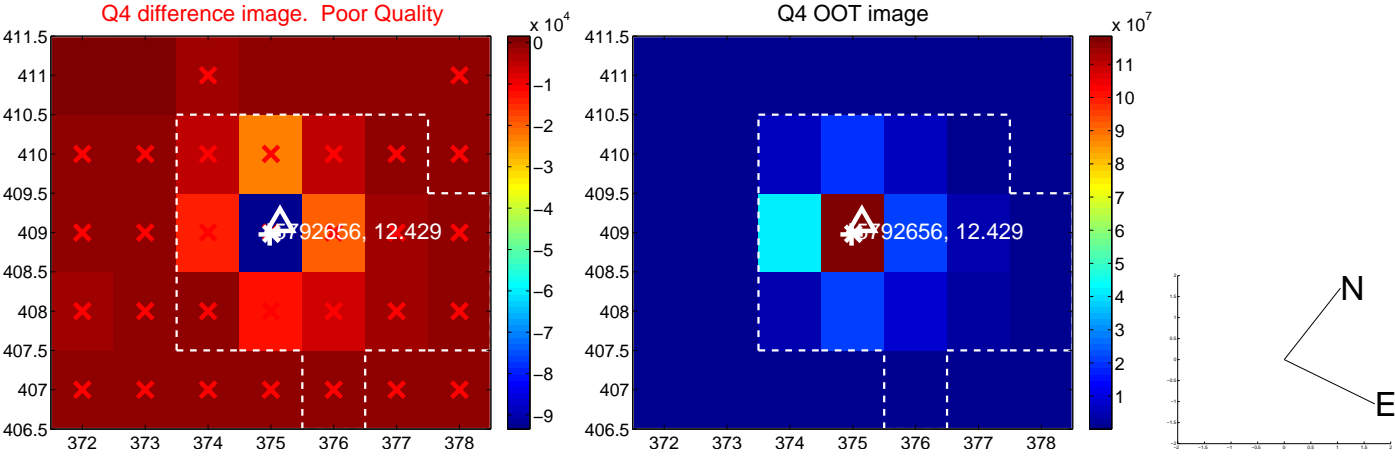
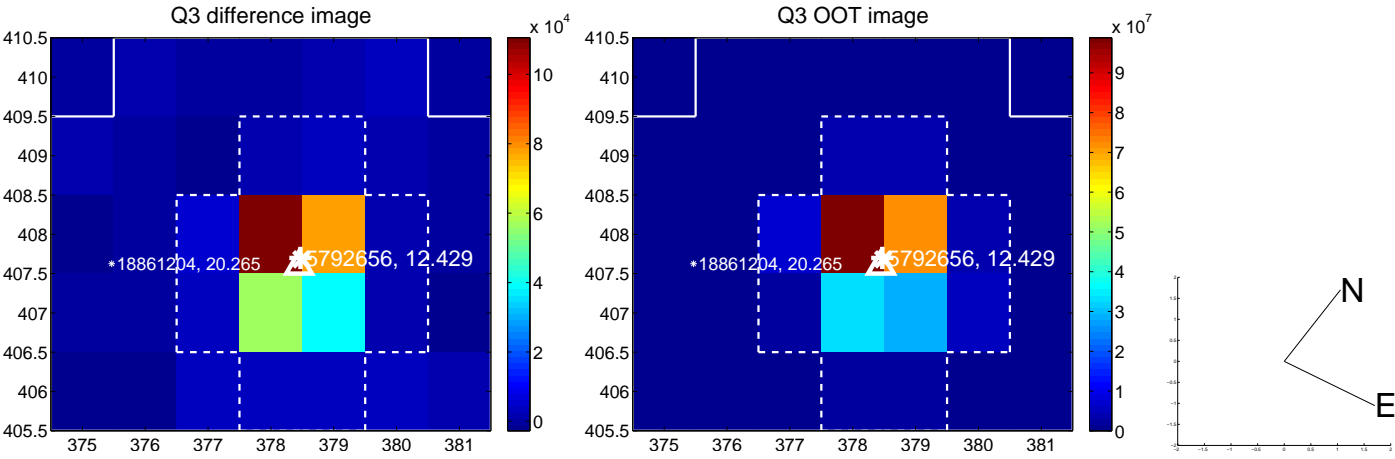
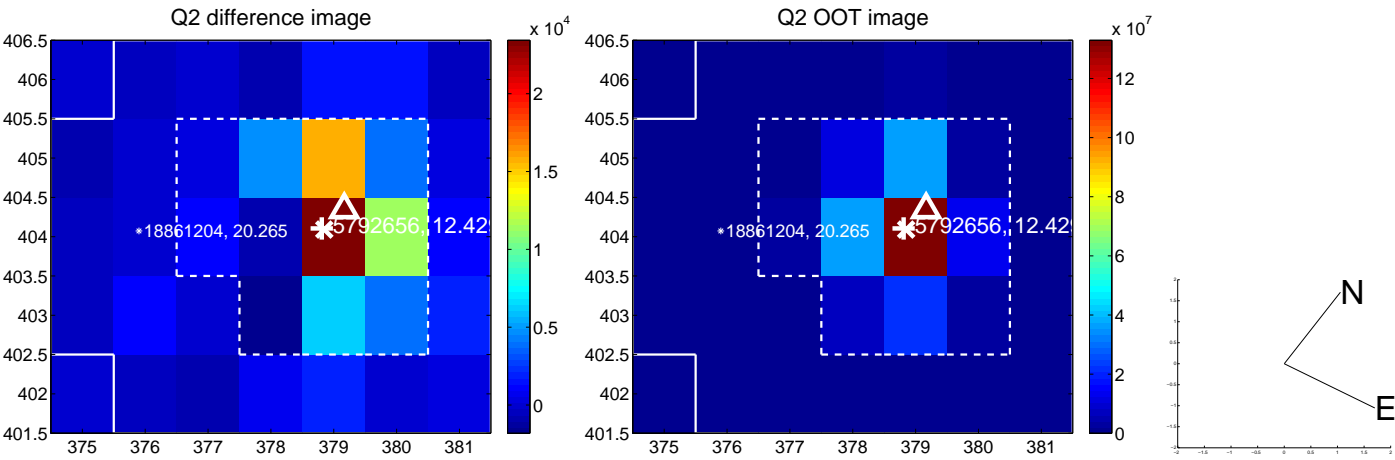
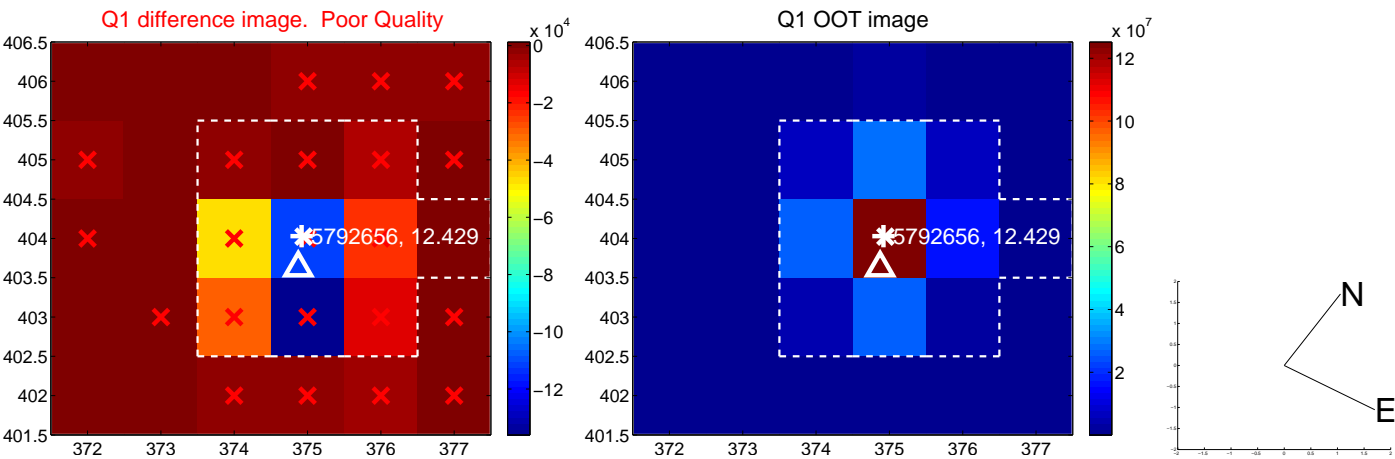
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.077 ± 0.113	0.68	0.074 ± 0.117	-0.021 ± 0.200
PRF-fit source offset from KIC position	0.083 ± 0.194	0.43	-0.050 ± 0.120	-0.066 ± 0.206
photometric centroid source offset	0.61 ± 0.26	2.32	-0.48 ± 0.27	0.39 ± 0.26

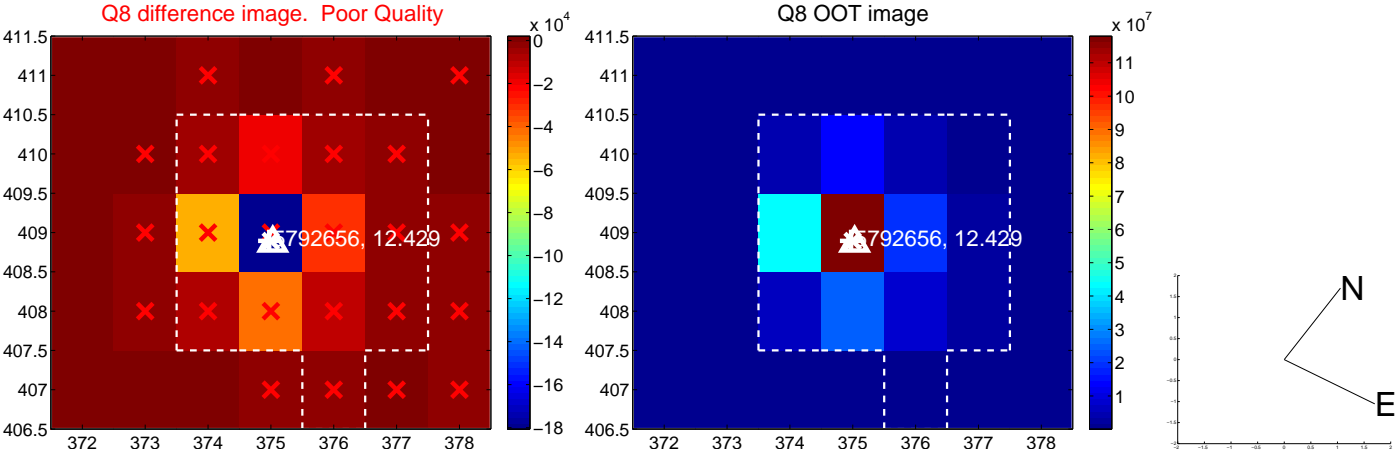
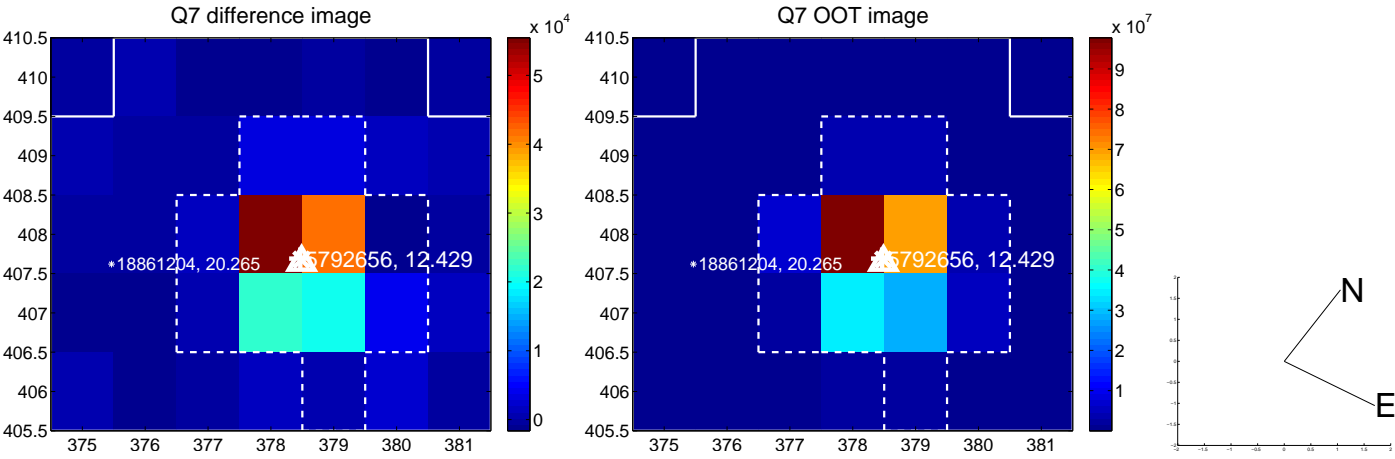
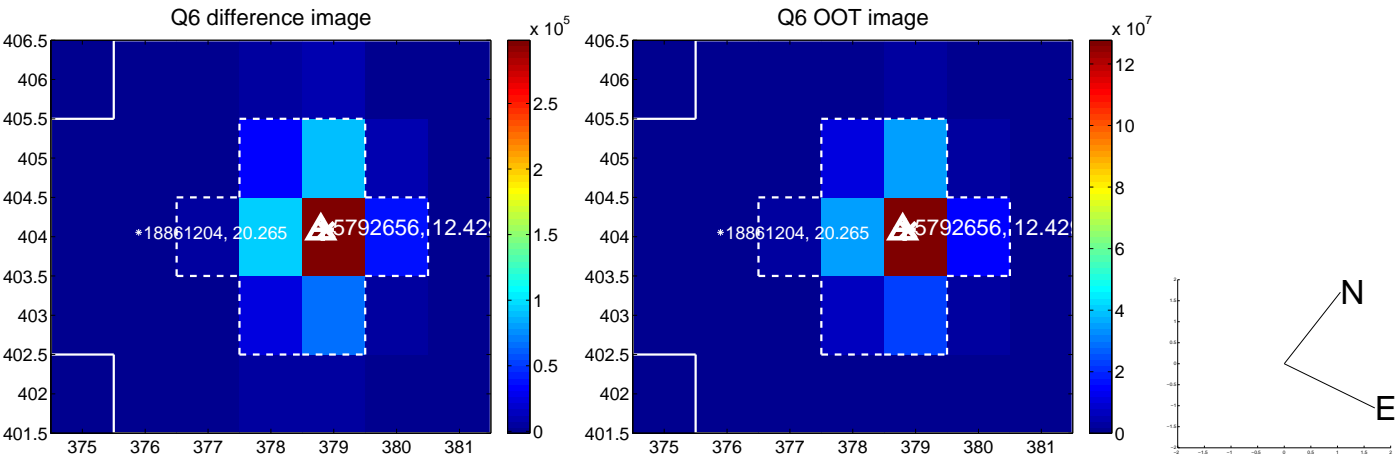
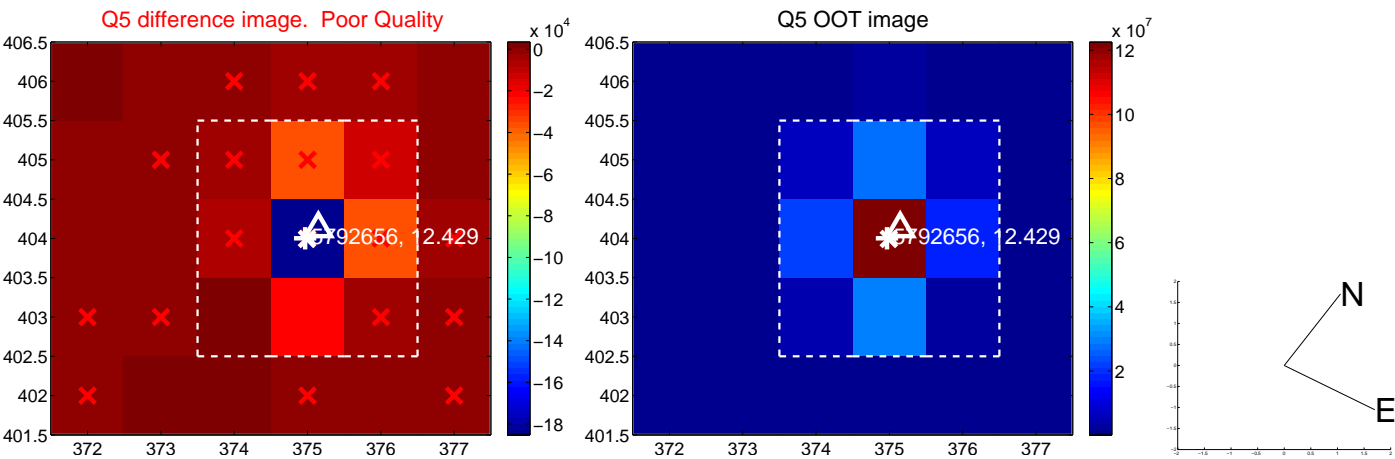


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

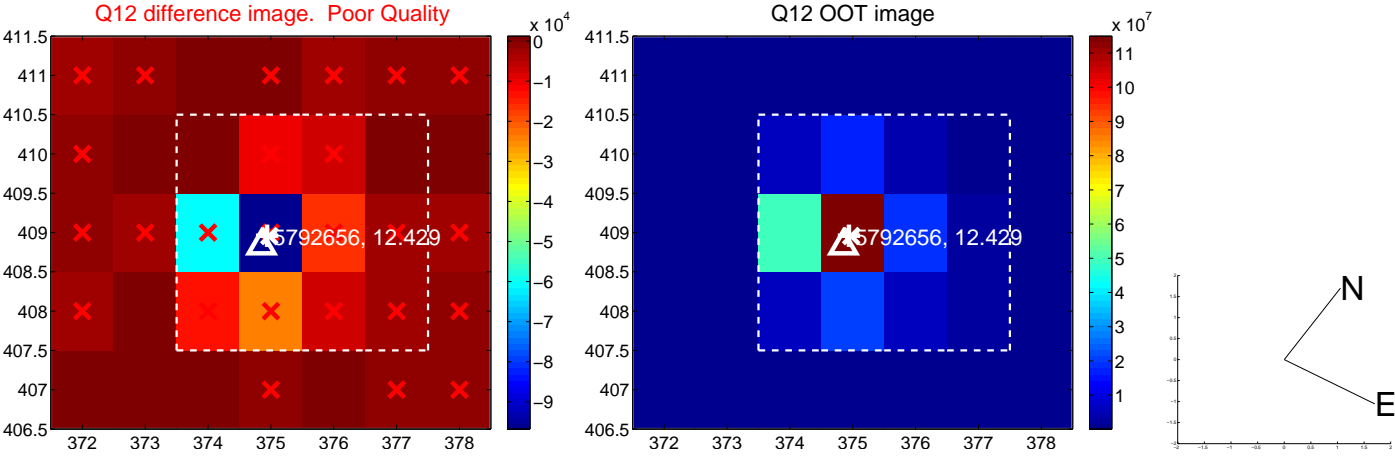
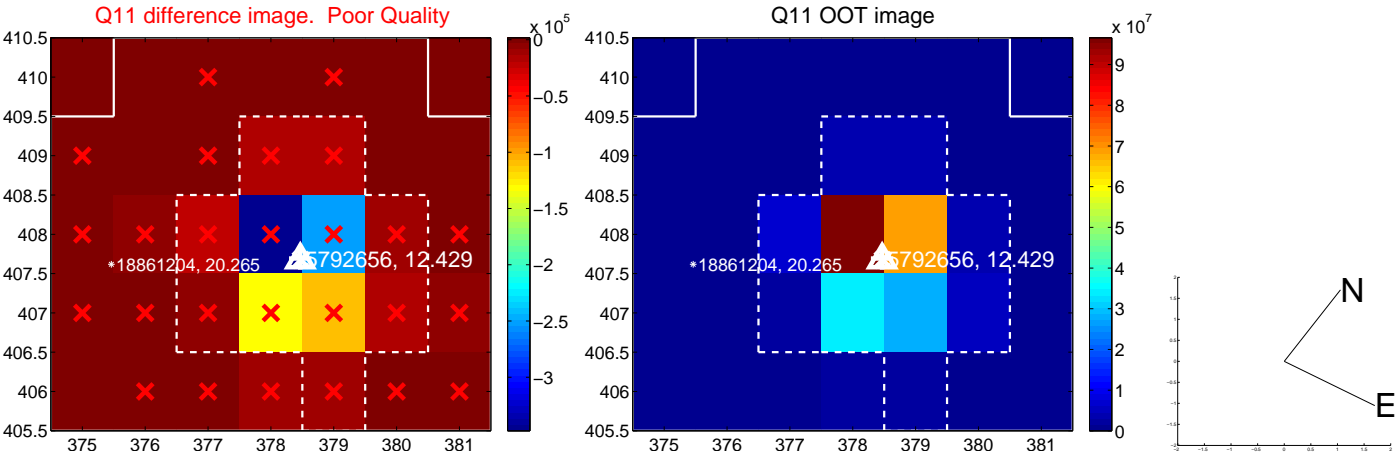
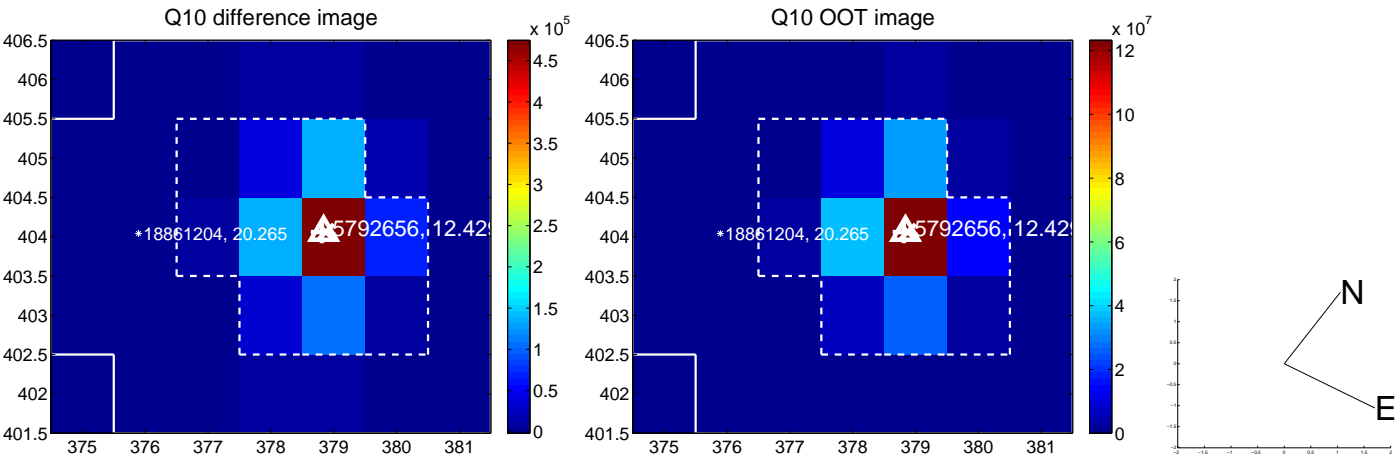
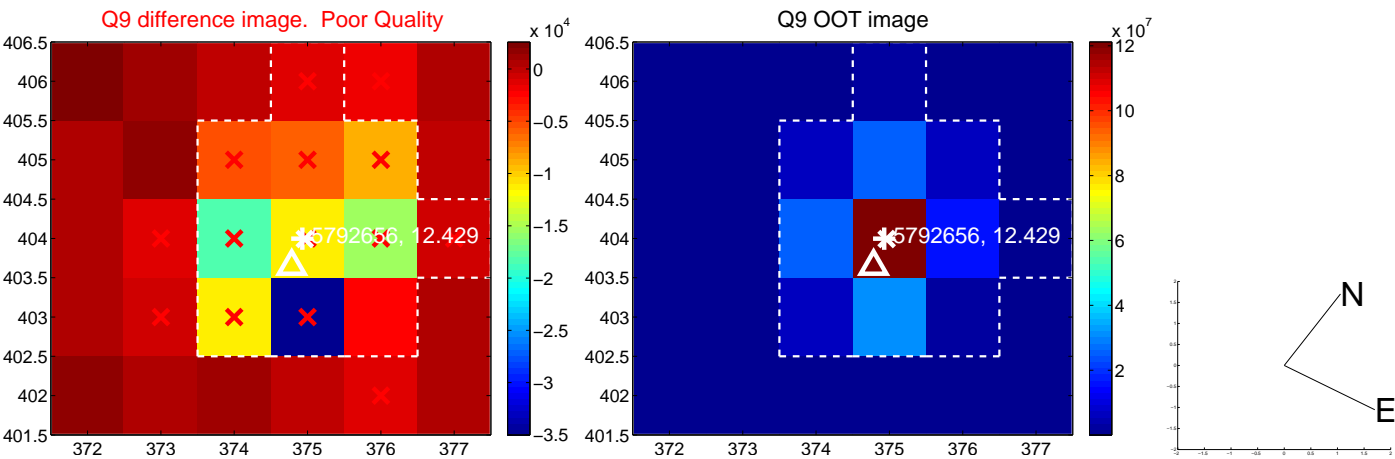
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



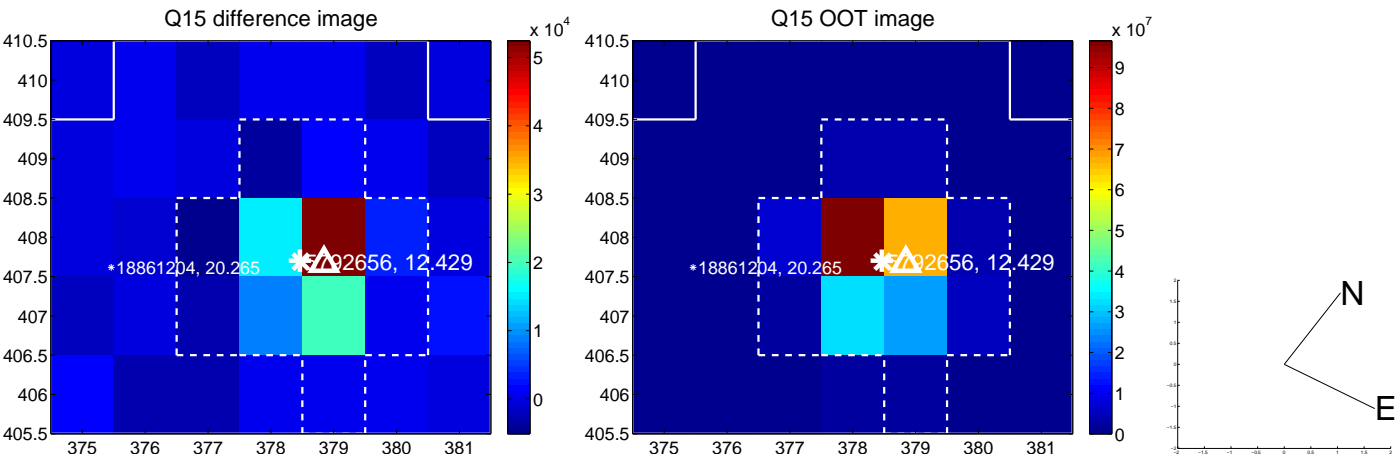
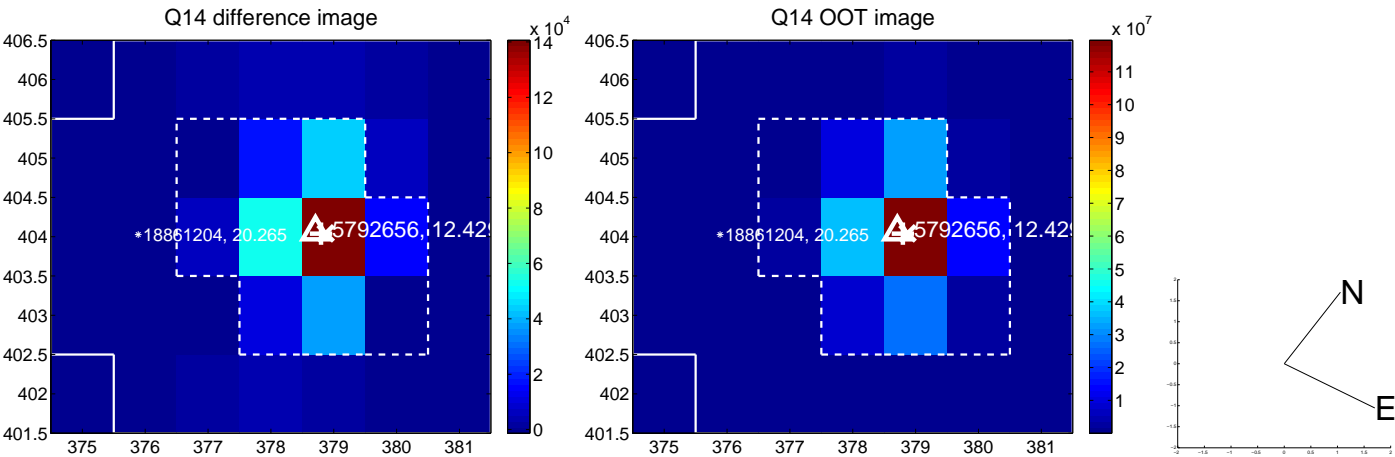
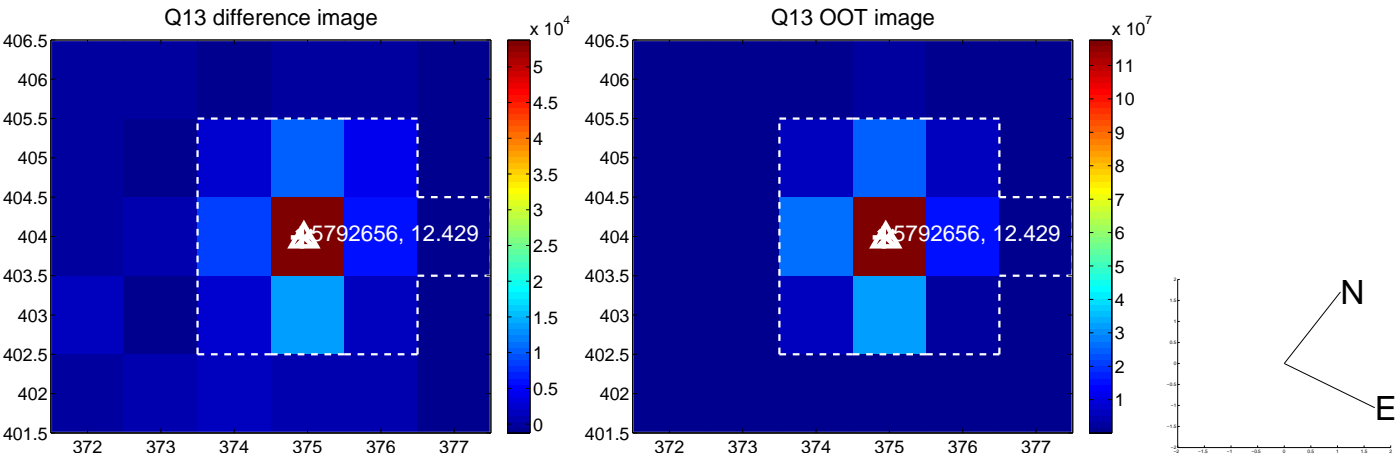
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



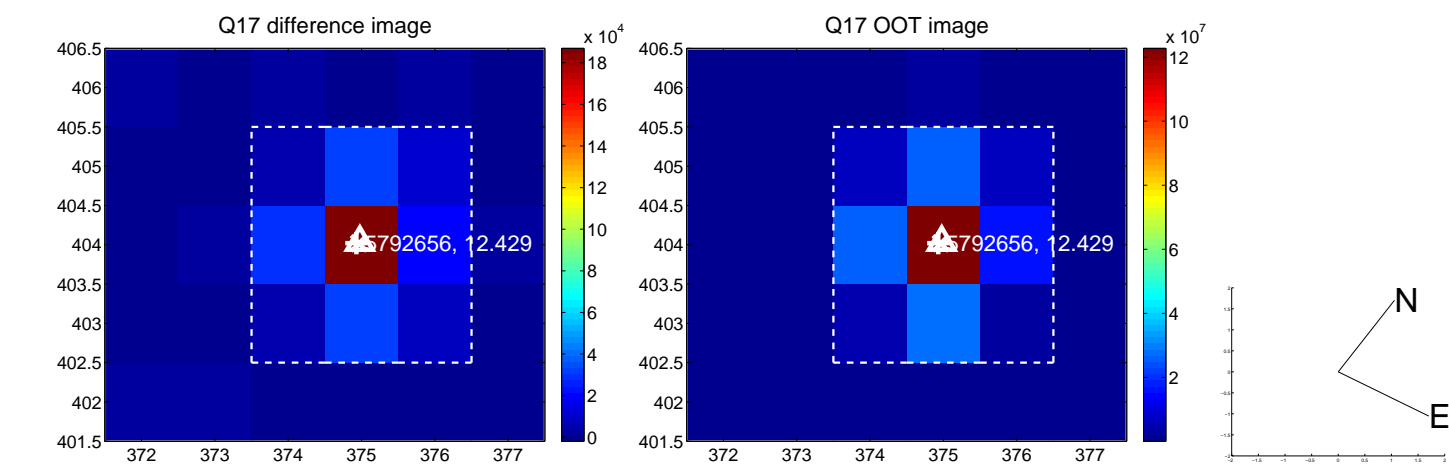
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



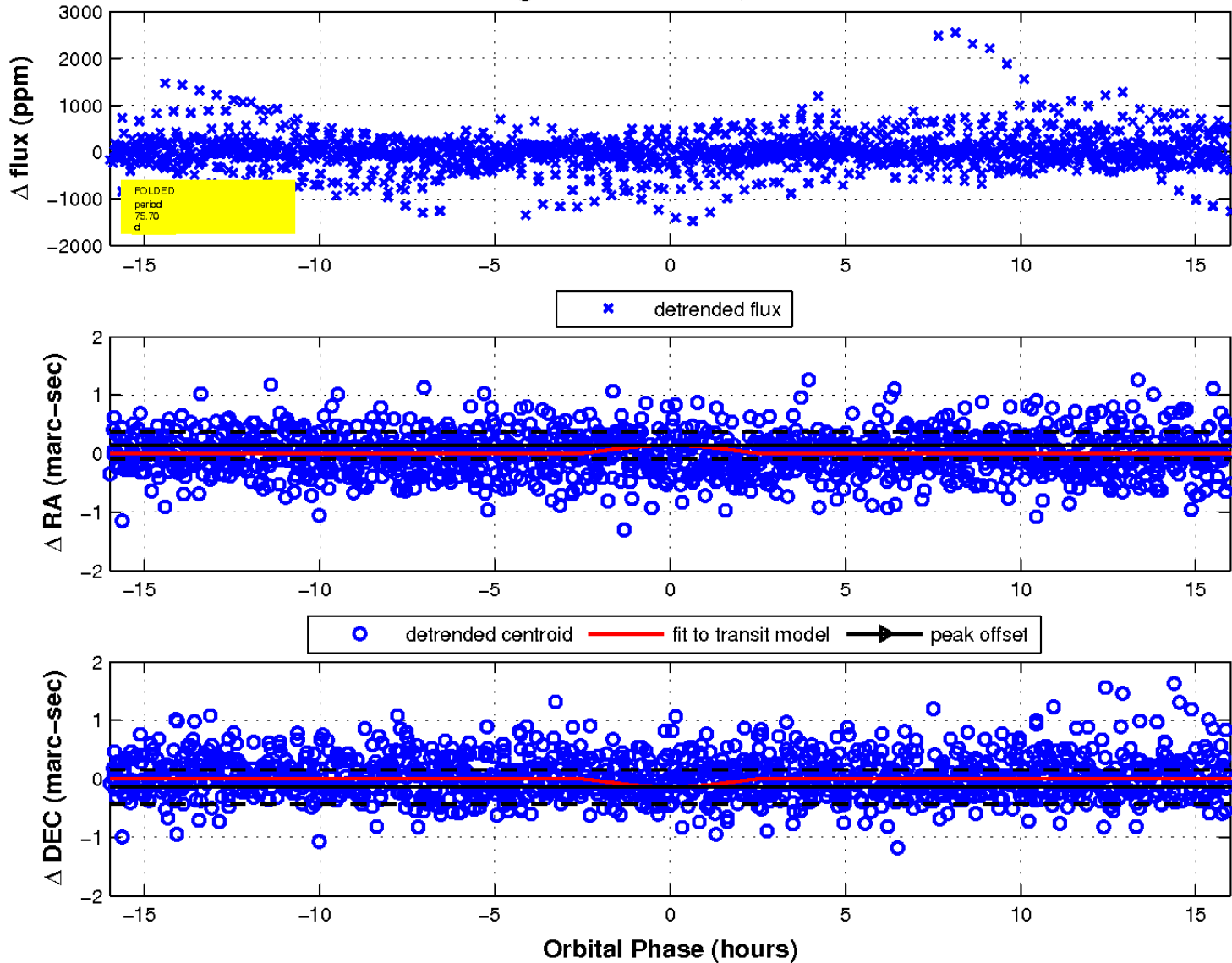
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



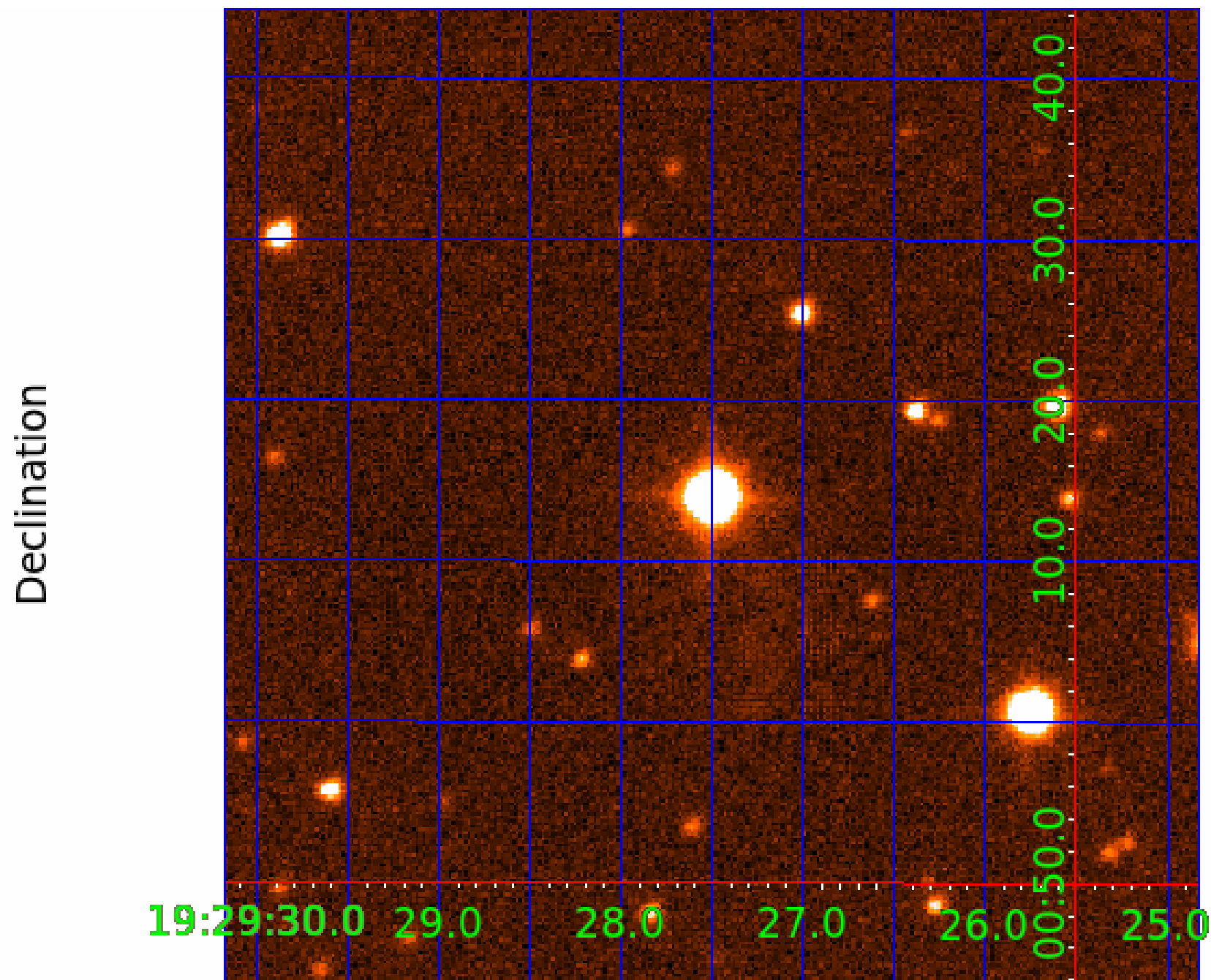
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 3 of 6



UKIRT Image



KIC 005792656

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})
005792656-01	OBS	No	0.926748	132.261100	28.1	5.820	12.1	9.1	2.24	7328	1.22	29601.32
005792656-02	OBS	No	8.346071	133.741140	59.9	8.457	17.8	4.4	2.24	7328	2.09	1579.86
005792656-03	OBS	No	75.696395	135.551705	403.6	5.338	12.9	6.3	2.24	7328	8.56	83.53
005792656-04	OBS	No	46.694140	152.488697	374.7	5.682	12.2	9.5	2.24	7328	8.26	159.07
005792656-05	OBS	No	89.960139	192.886063	369.7	3.443	12.9	8.6	2.24	7328	4.82	66.35
005792656-06	OBS	No	52.160133	167.773368	231.2	5.417	11.7	6.1	2.24	7328	3.49	137.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005792656-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005792656-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

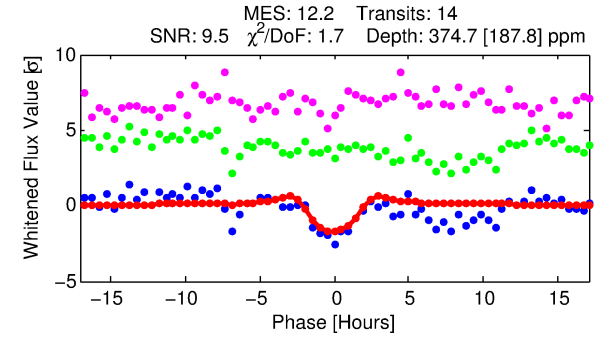
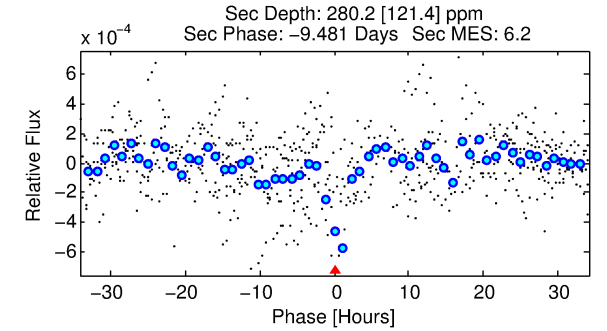
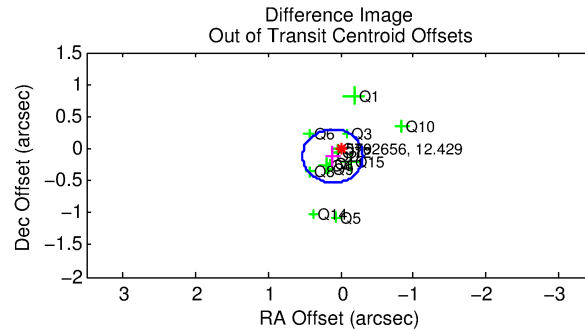
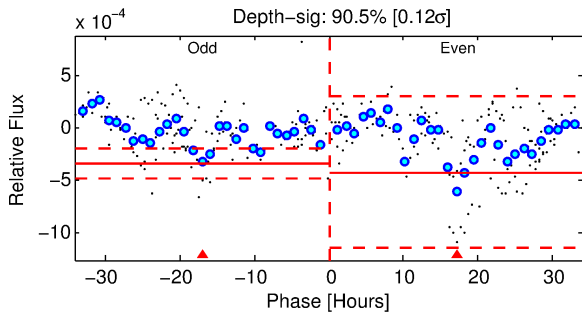
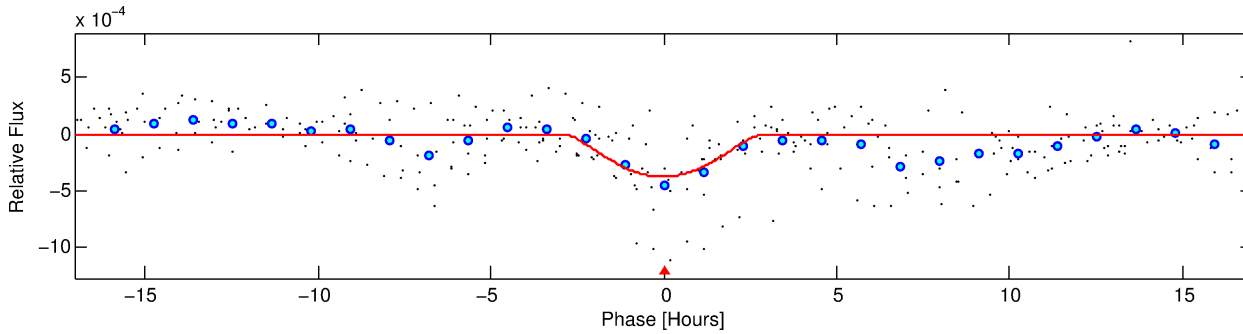
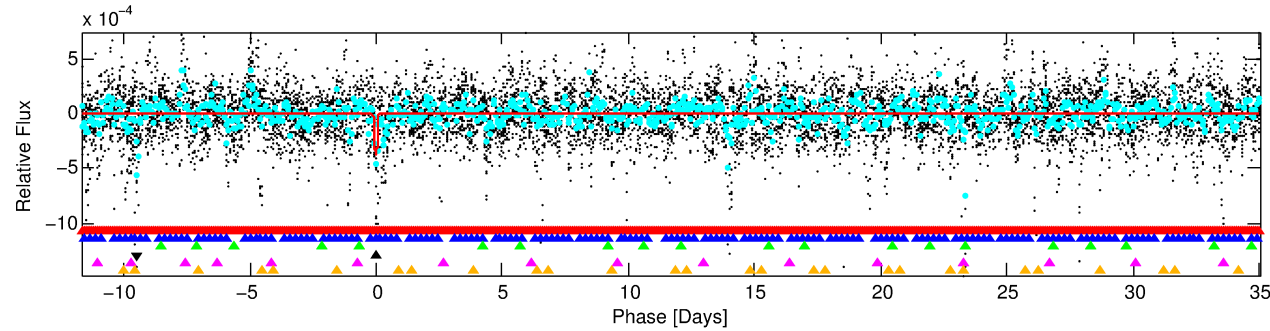
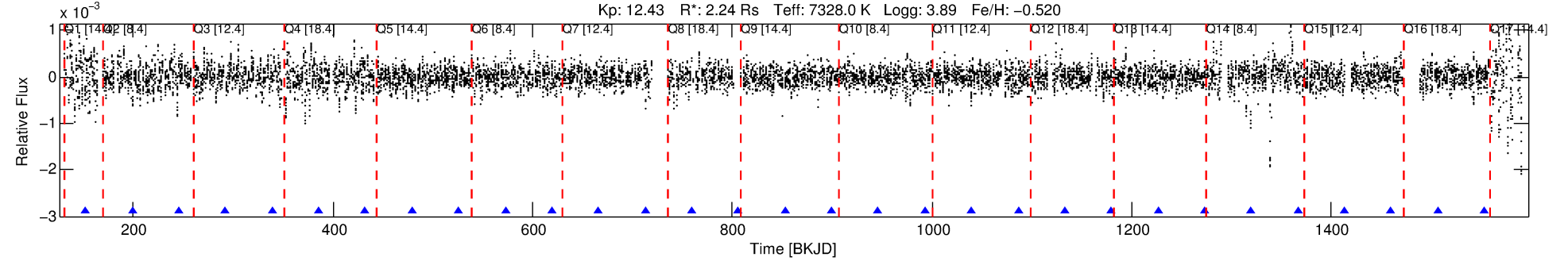
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005792656-04

No Significant Match Found

DV One-Page Summary

KIC: 5792656 Candidate: 4 of 6 Period: 46.694 d



DV Fit Results:

Period = 46.69414 [0.00085] d
Epoch = 152.4887 [0.0153] BKJD
Rp/R* = 0.0337 [0.1113]
a/R* = 16.50 [14.11]
b = 1.00 [0.17]
Seff = 159.07 [108.27]
Teq = 906 [154] K
Rp = 8.26 [27.44] Re
a = 0.2857 [0.1153] AU
Ag = 184.67 [1227.24] [0.15 σ]
Teffp = 5161 [8536] K [0.50 σ]

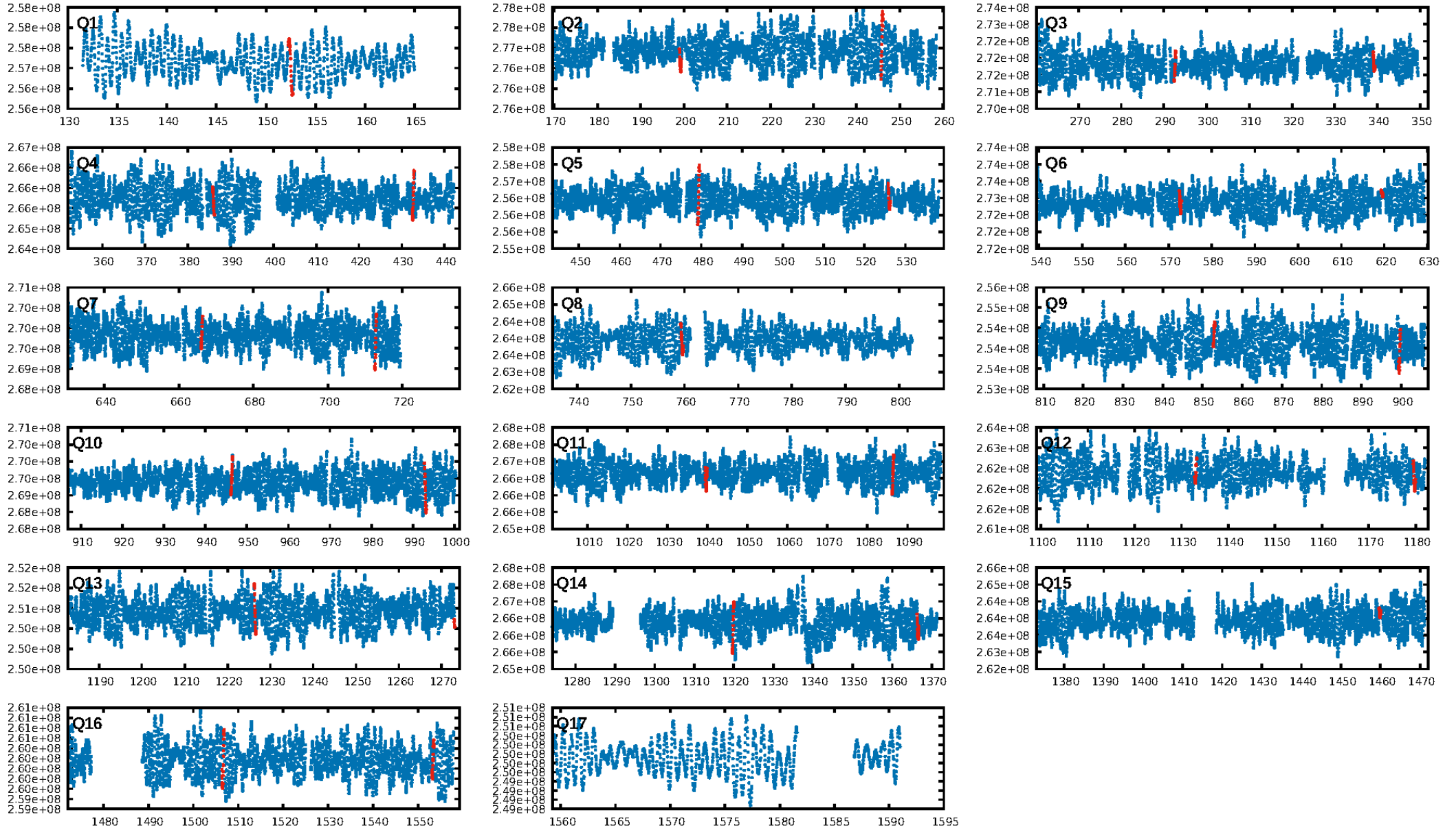
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [90.33 σ]
LongPeriod-sig: 100.0% [16.71 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.81e-13
RollingBand-fgt: 1.00 [14/14]
GhostDiagnostic-chr: 0.6684
Centroid-sig: 2.2%
Centroid-so: 0.261 arcsec [1.12 σ]
OotOffset-rm: 0.158 arcsec [1.13 σ]
KicOffset-rm: 0.147 arcsec [1.09 σ]
OotOffset-st: 4/4/4/3 [15]
KicOffset-st: 4/4/4/3 [15]
DiffImageQuality-fgm: 0.93 [14/15]
DiffImageOverlap-fno: 0.00 [0/15]

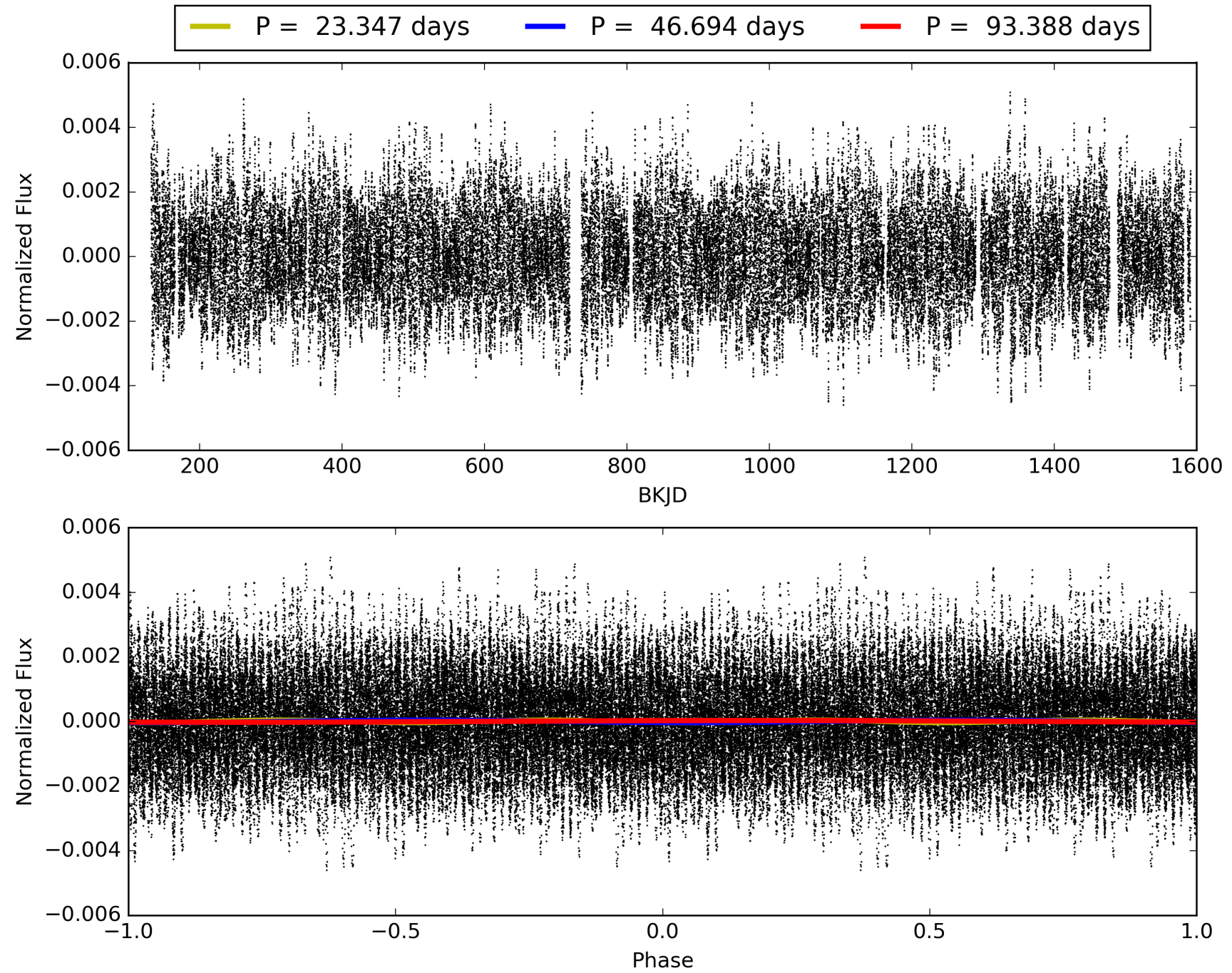
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:10:51 Z

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

TCE 005792656-04, PDC Light Curves

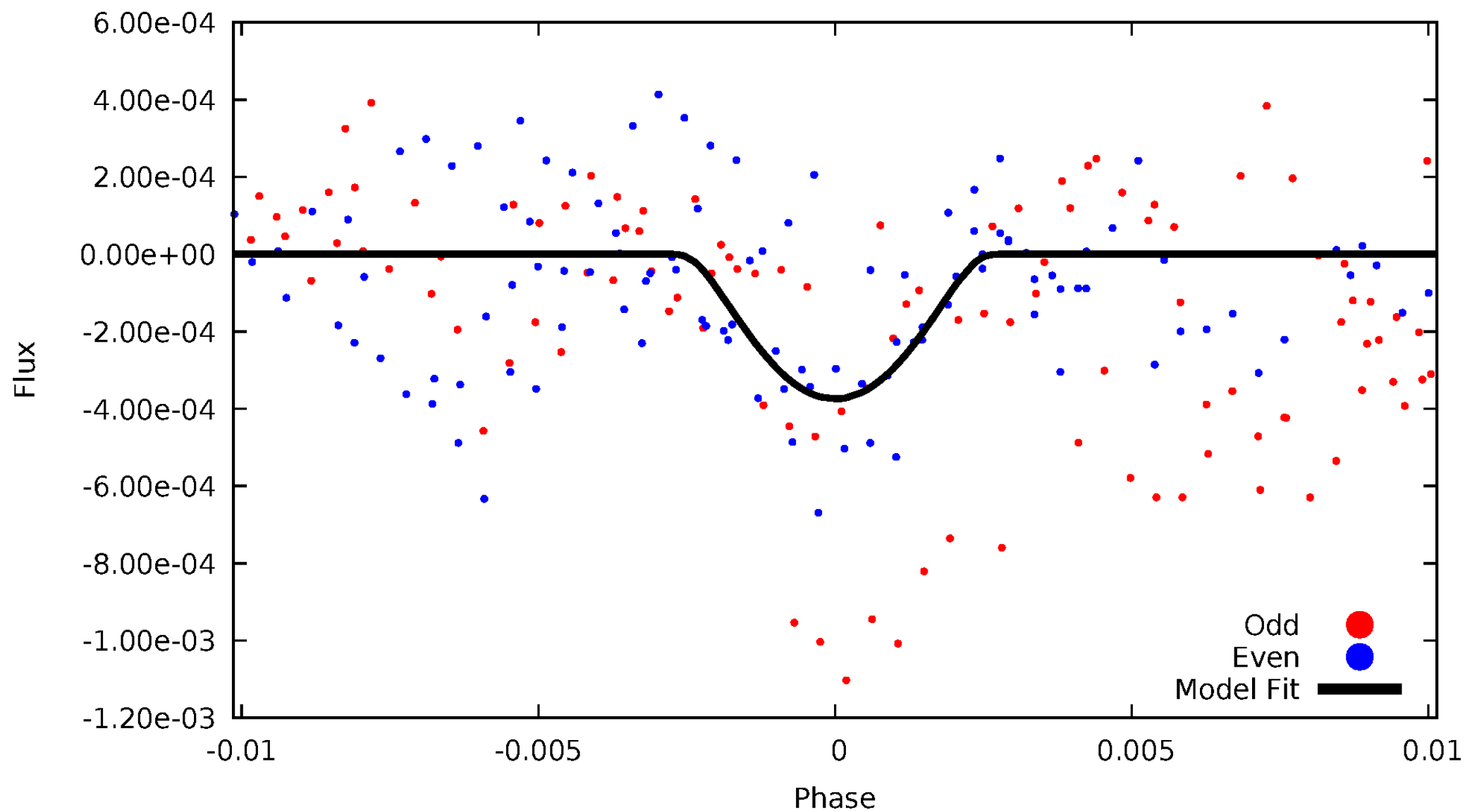


TCE 005792656-04



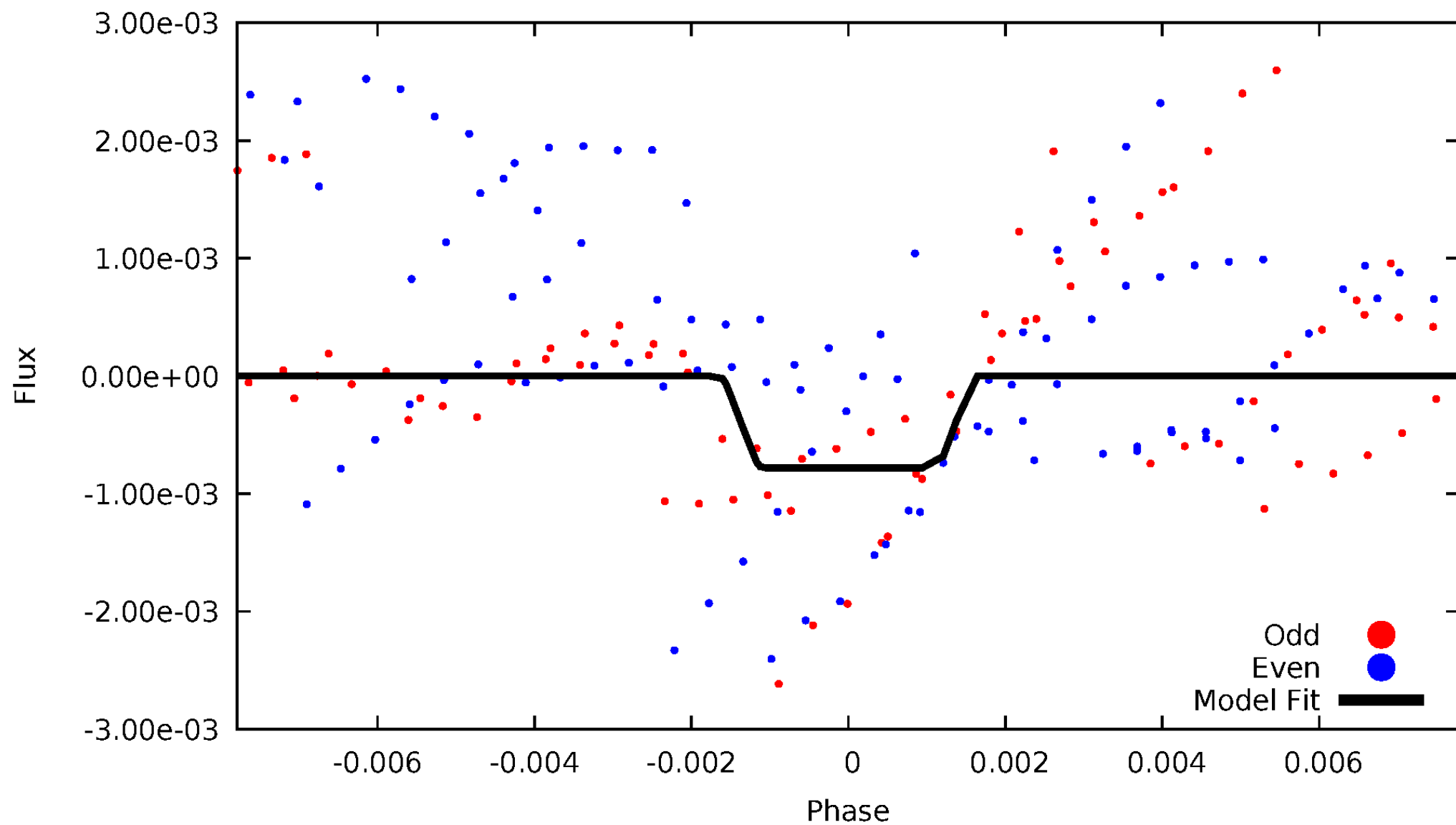
DV Odd/Even

TCE 005792656-04



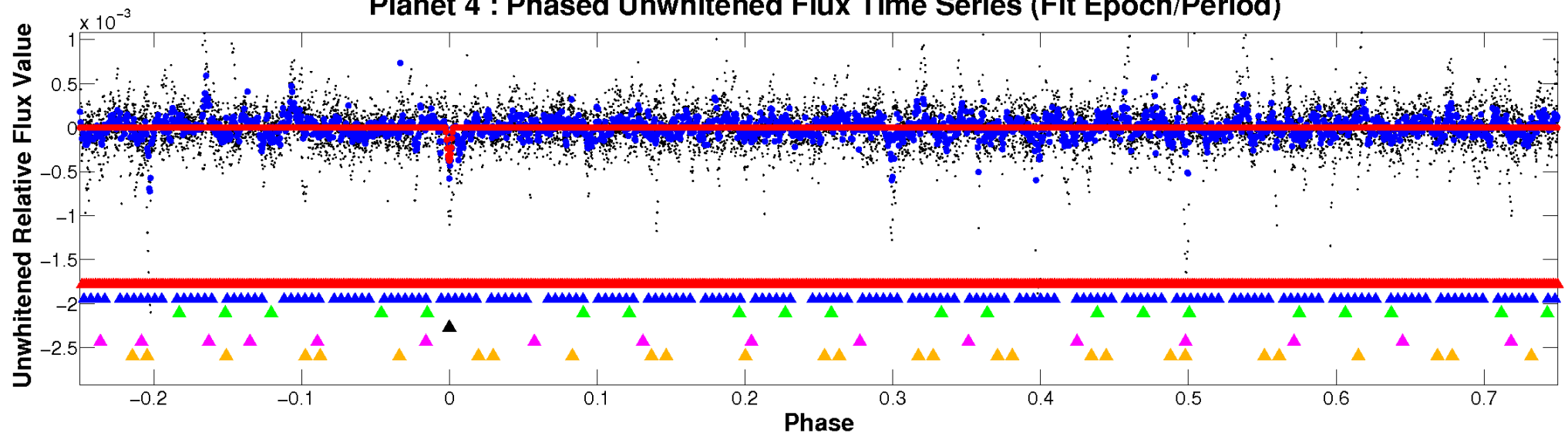
ALT Odd/Even

TCE 005792656-04

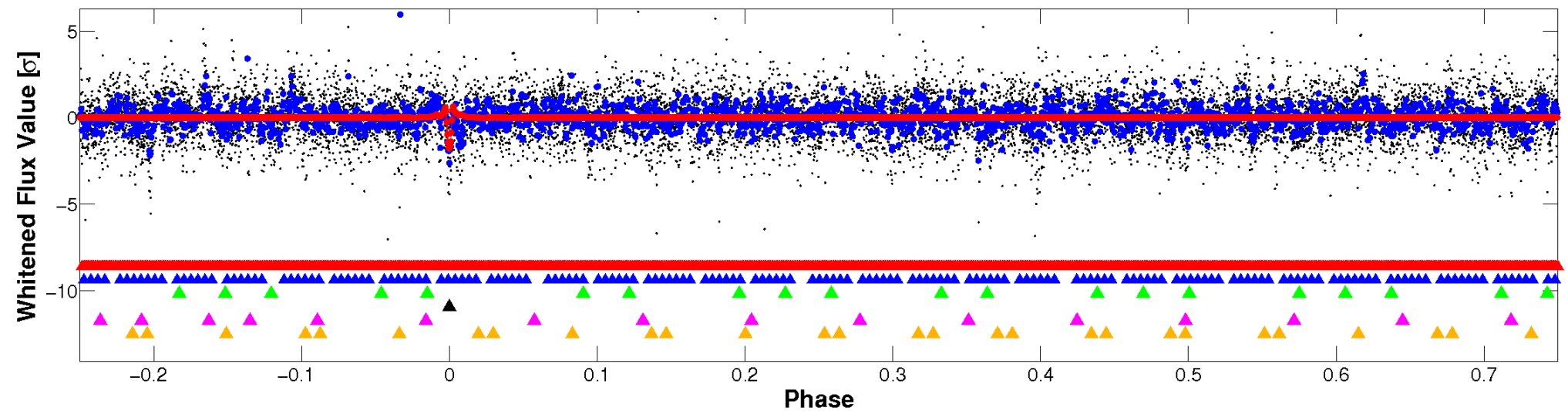


Non-Whitened Vs. Whitened Light Curve

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

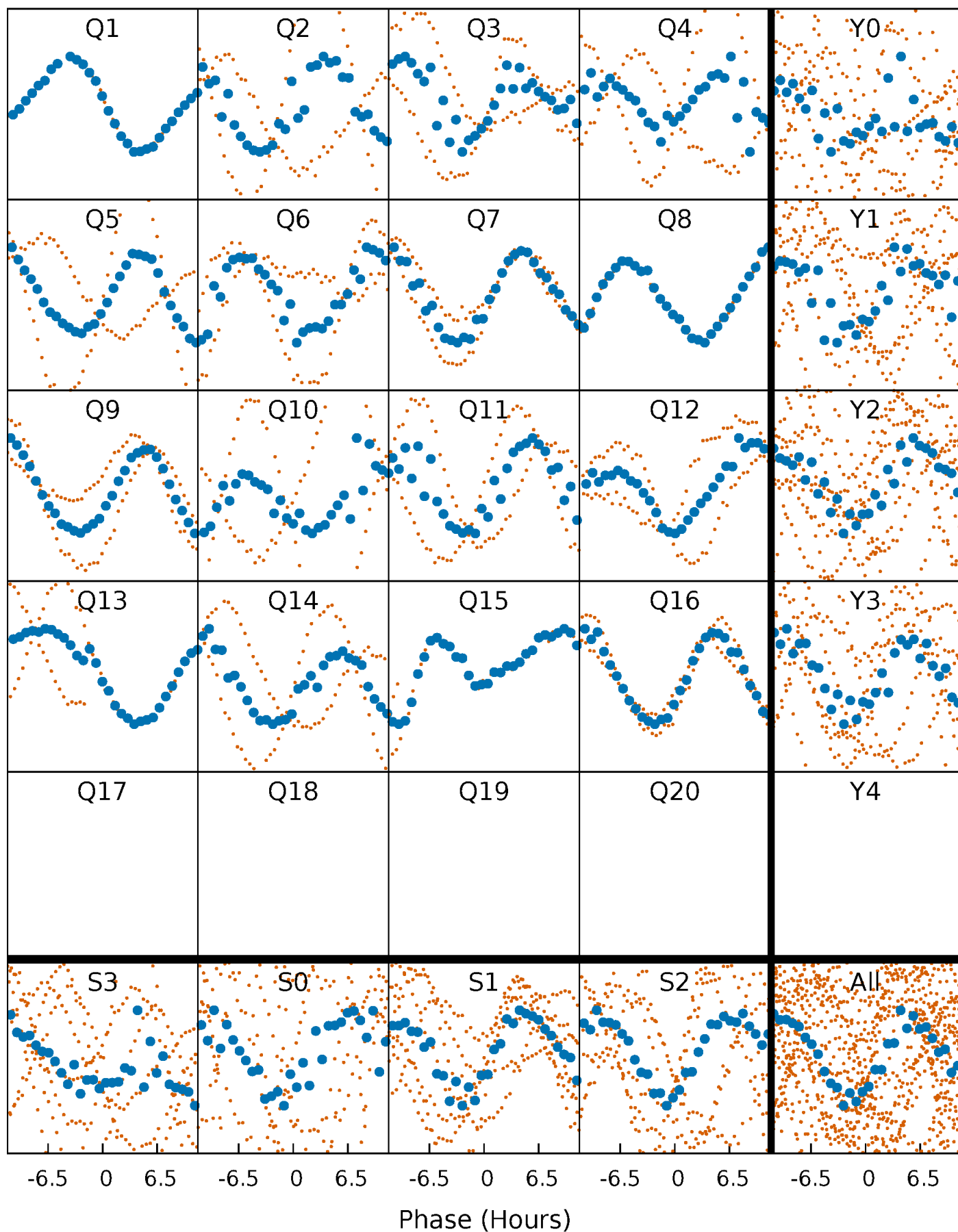


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



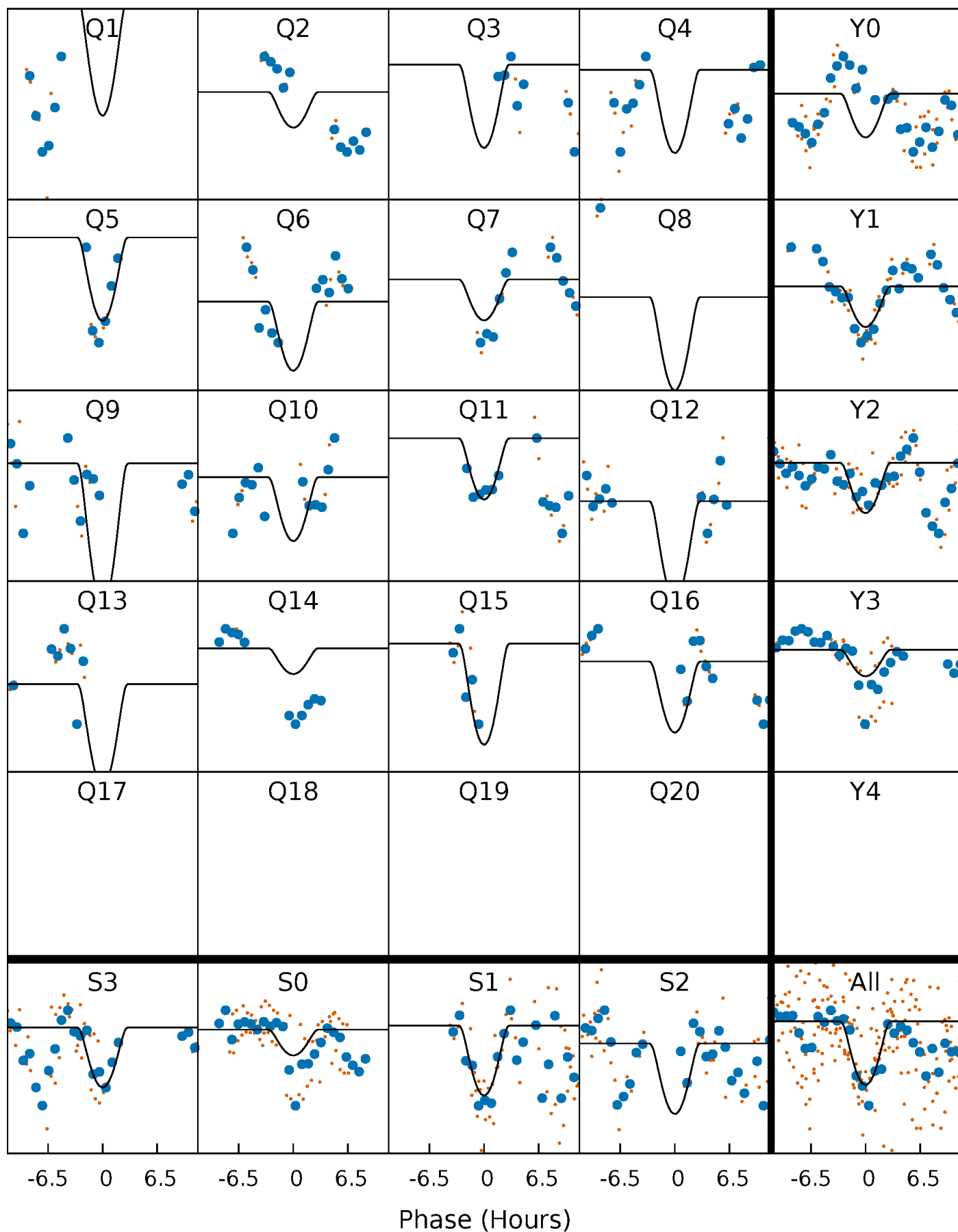
PDC Quarter-Phased Transit Curves

TCE 005792656-04 P= 46.694140 Days $T_0=152.488697$ (BKJD)



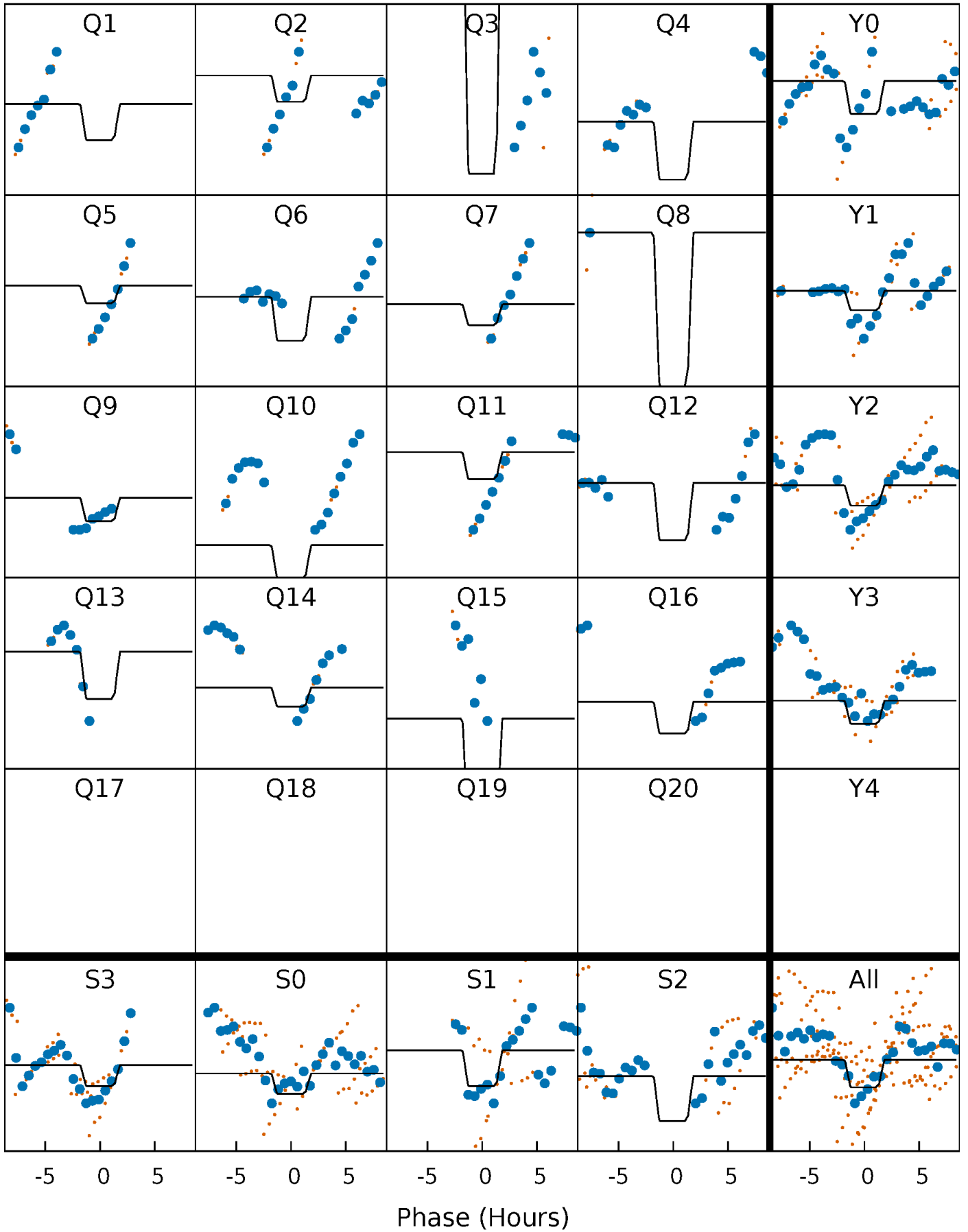
DV Quarter-Phased Transit Curves

TCE 005792656-04 P= 46.694140 Days $T_0=152.488697$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

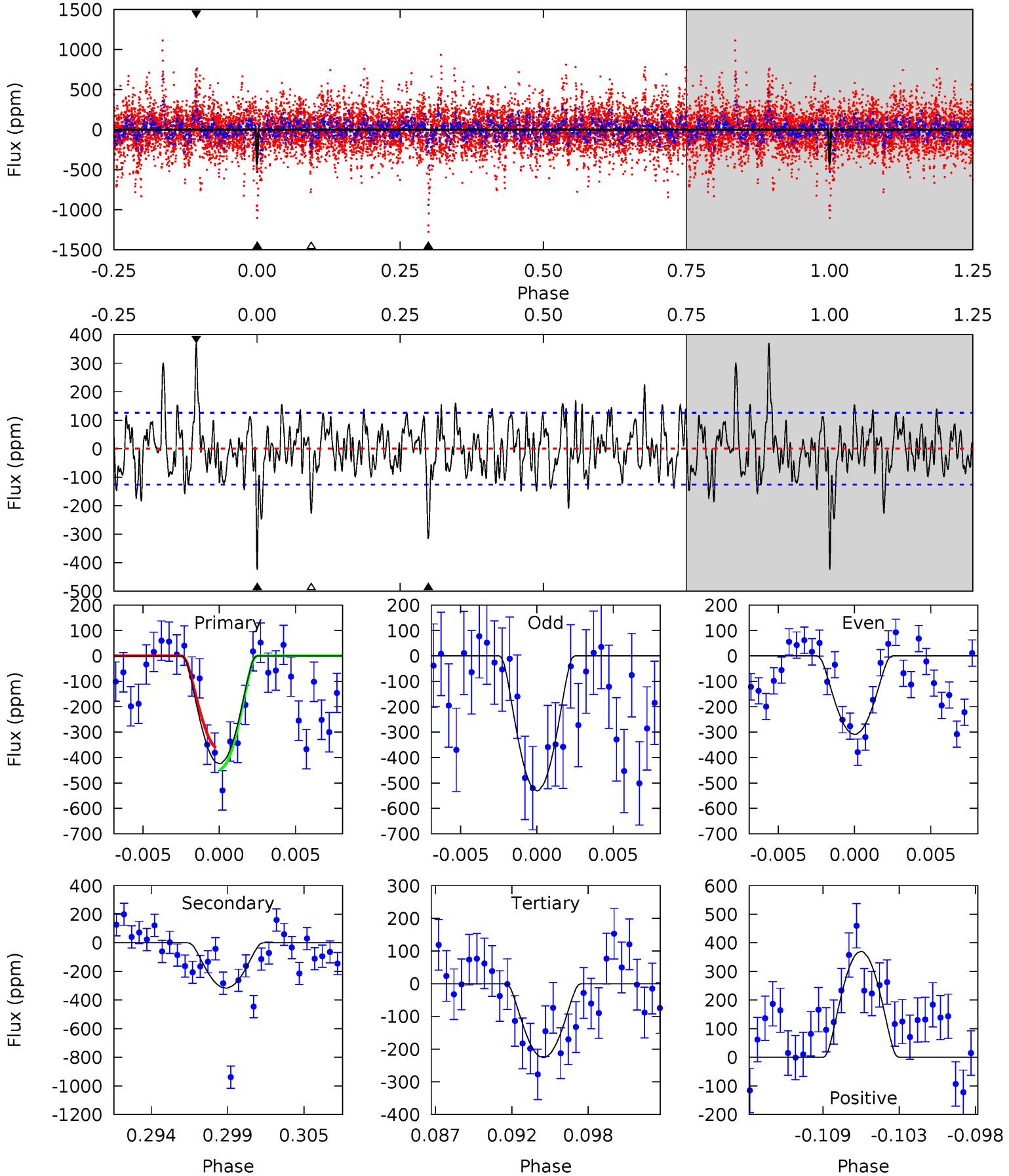
TCE 005792656-04 P= 46.694157 Days $T_0=152.432675$ (BKJD)



DV Model-Shift Uniqueness Test

005792656-04, P = 46.694140 Days, E = 105.794557 Days

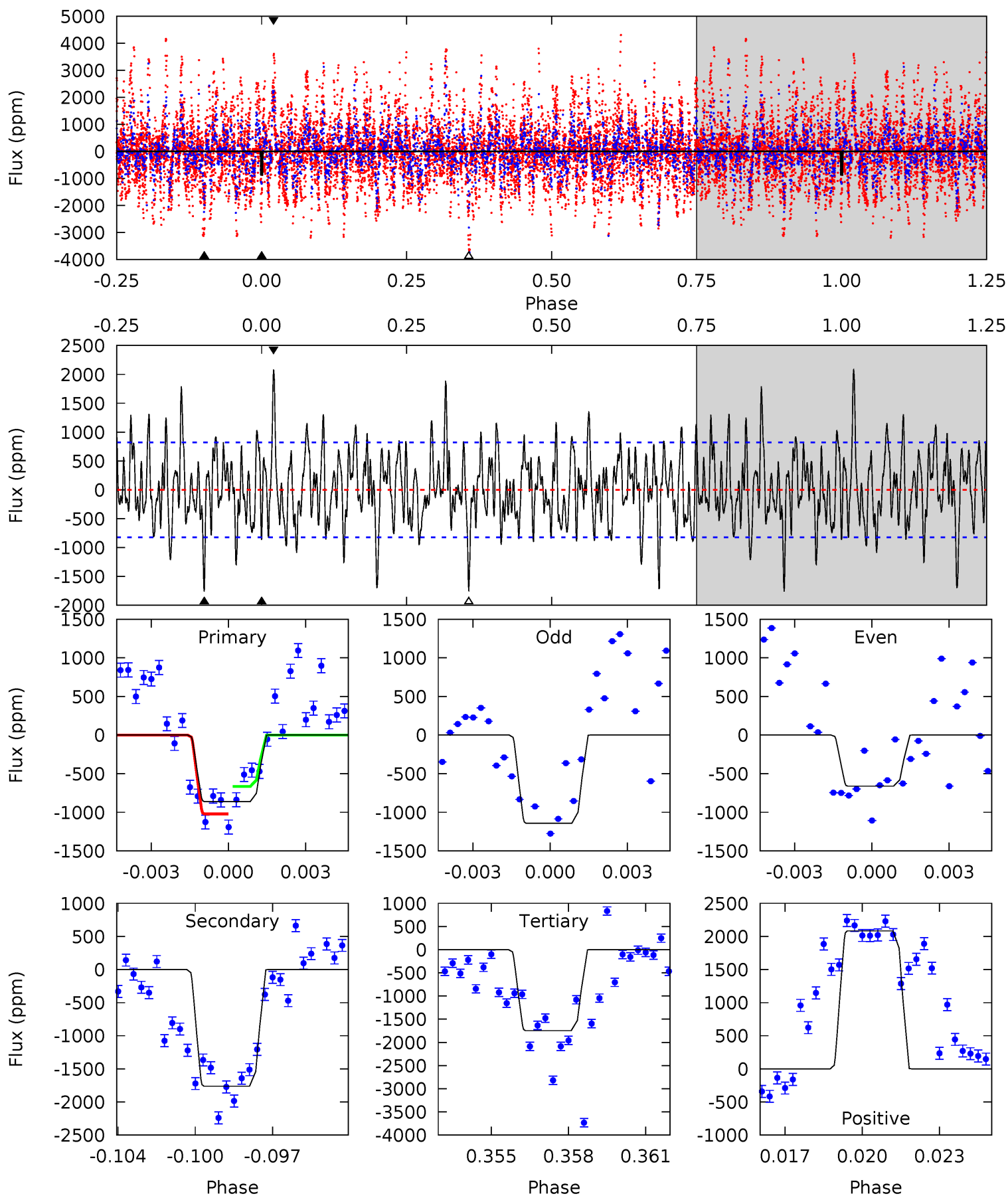
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.3	12.9	9.23	15.1	5.14	2.78	3.22	8.09	2.21	3.68	-2.20	4.35	1.36	0.47	1.73



Alt Model-Shift Uniqueness Test

005792656-04, P = 46.694157 Days, E = 105.738518 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.48	11.2	11.1	13.3	5.23	2.93	3.48	-5.62	-7.77	0.10	-2.04	1.49	0.90	0.54	1.13



Stellar Parameters For KIC 005792656

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7328^{+207}_{-311}	$3.891^{+0.392}_{-0.123}$	$-0.520^{+0.250}_{-0.300}$	$2.242^{+0.487}_{-0.905}$	$1.427^{+0.210}_{-0.280}$	$0.178^{+0.526}_{-0.064}$
	+3%/-4%	+10%/-3%	+48%/-58%	+22%/-40%	+15%/-20%	+295%/-36%
Source	KIC0	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 005792656-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-316 ± 24	$18.73^{+21.54}_{-13.25}$	1231^{+93}_{-125}	3721^{+2298}_{-741}	40^{+421}_{-31}
Alt.	-1762 ± 157	$19.29^{+20.50}_{-13.34}$	1228^{+98}_{-138}	5058^{+4806}_{-1141}	212^{+2112}_{-163}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

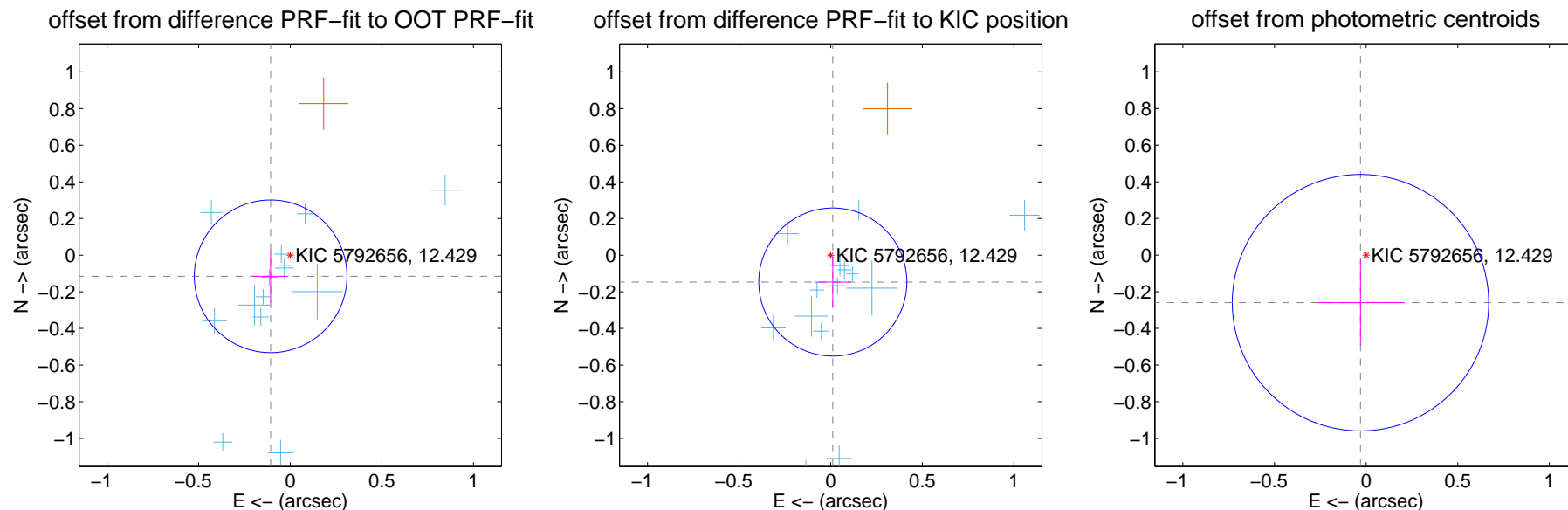
DV Centroid Data

Supplemental centroid analysis for 005792656-04. Kepler magnitude: 12.43. Transit SNR 9.48

There are 14 quarters with good PRF difference image offsets

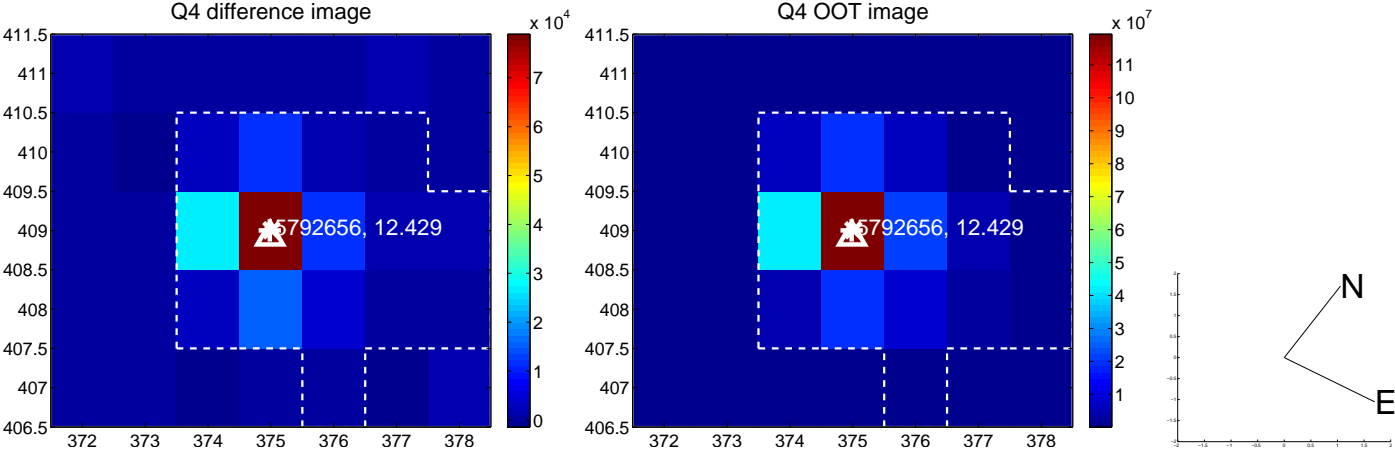
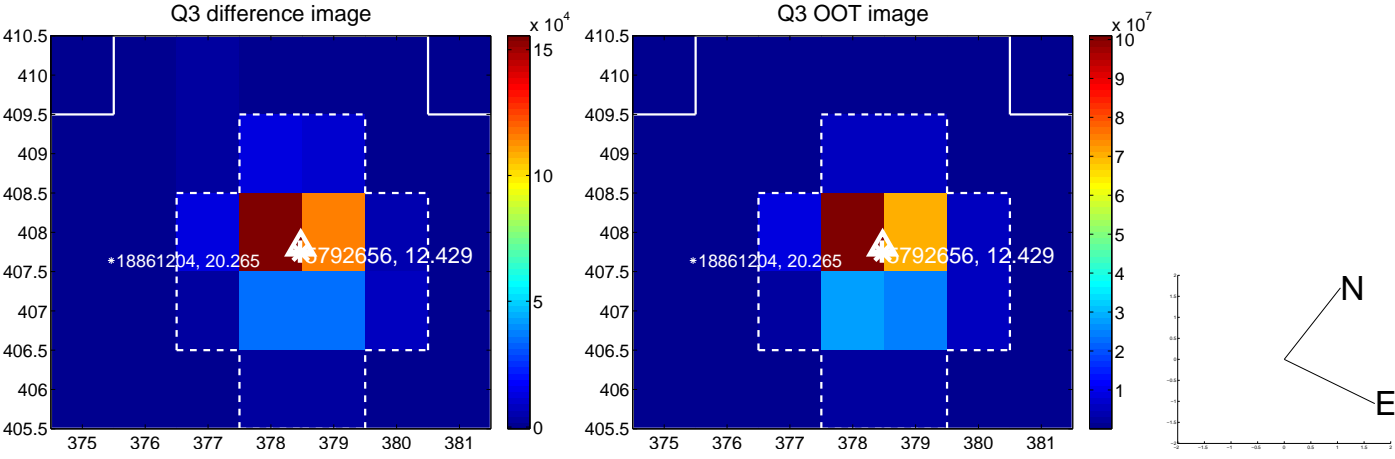
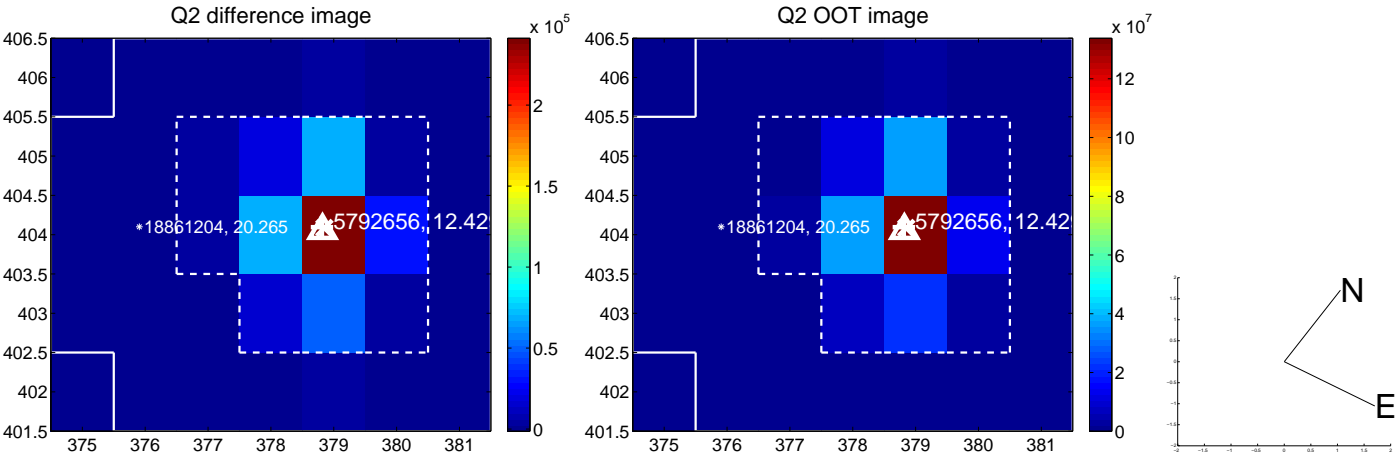
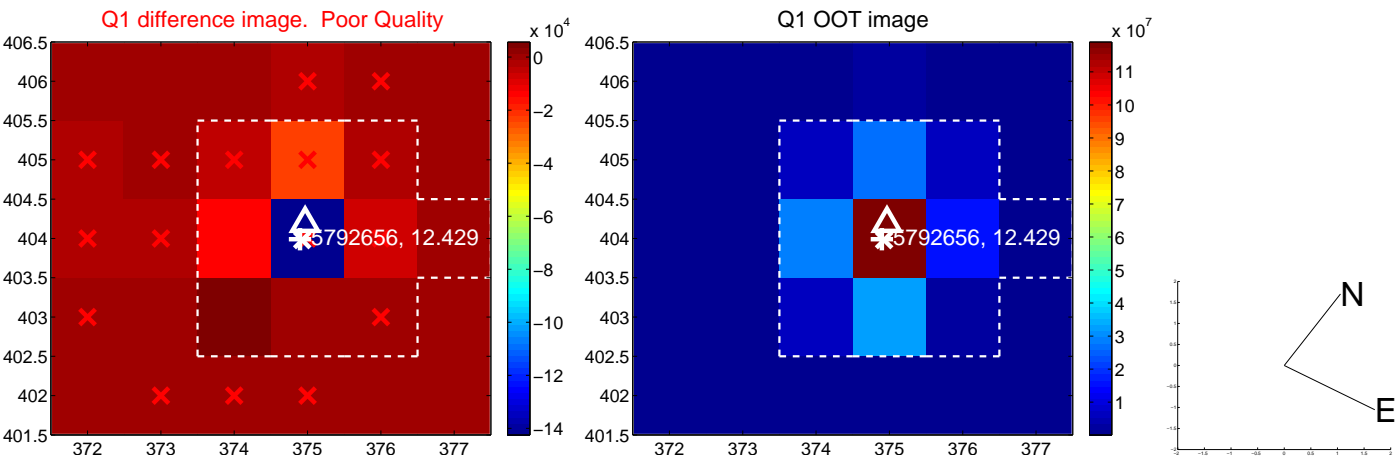
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.158 ± 0.139	1.13	0.107 ± 0.098	-0.116 ± 0.143
PRF-fit source offset from KIC position	0.147 ± 0.135	1.09	-0.011 ± 0.099	-0.147 ± 0.137
photometric centroid source offset	0.26 ± 0.23	1.12	0.03 ± 0.24	-0.26 ± 0.23

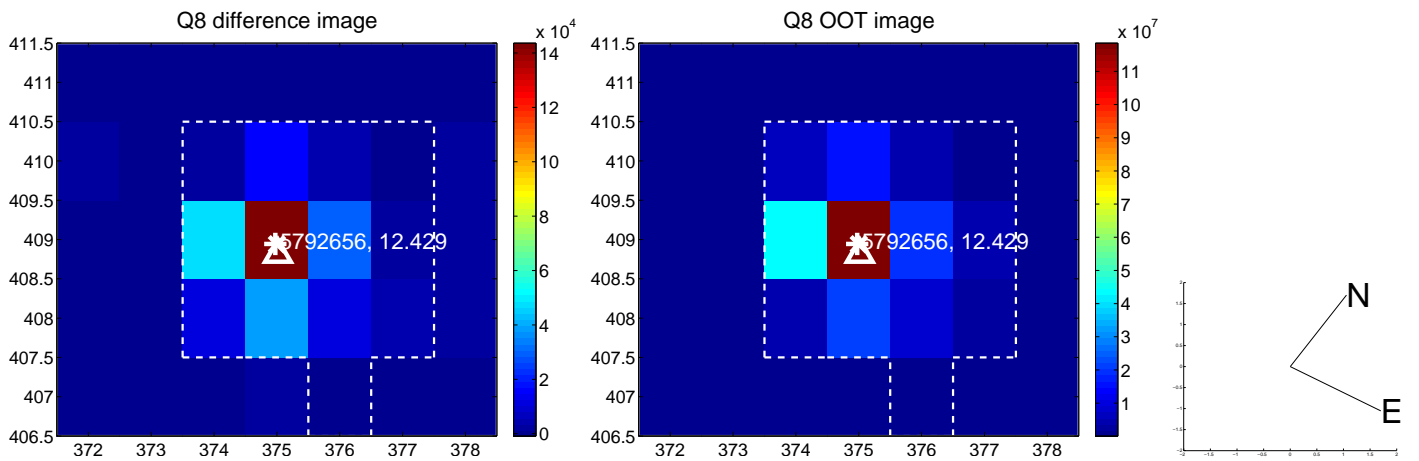
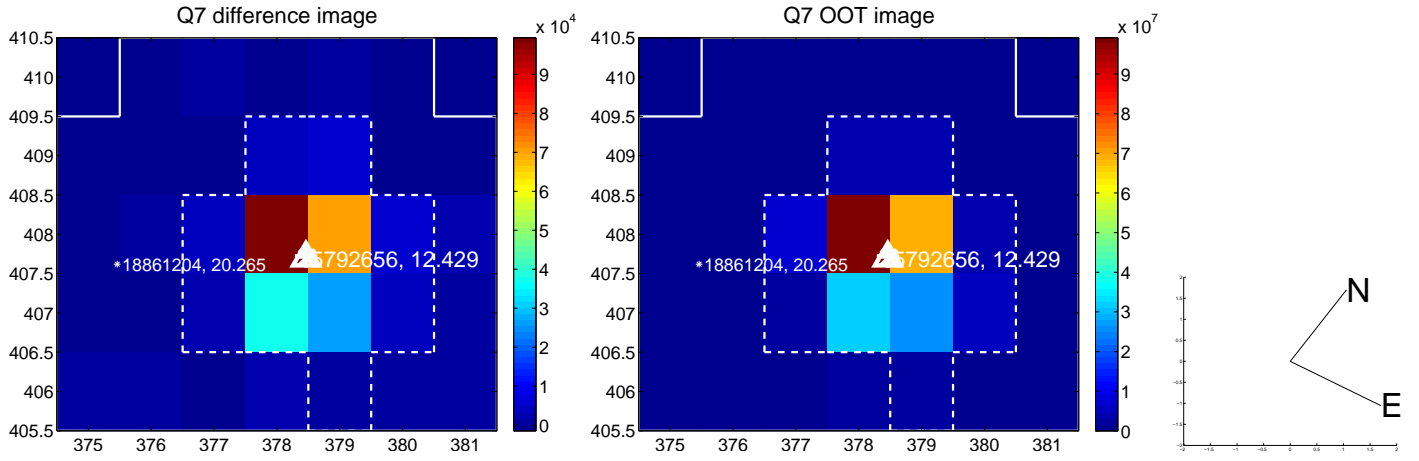
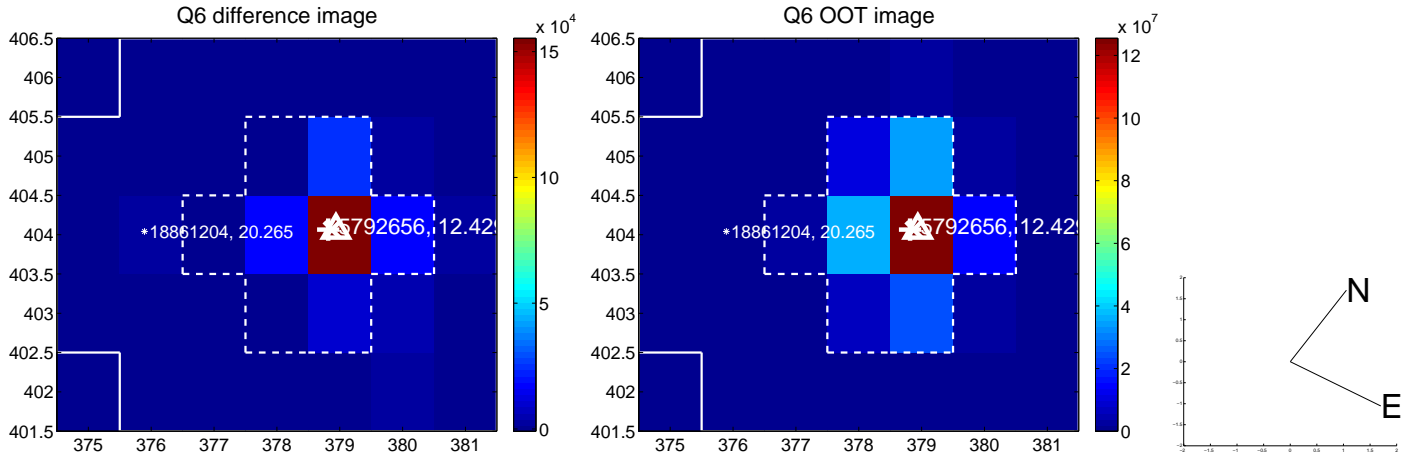
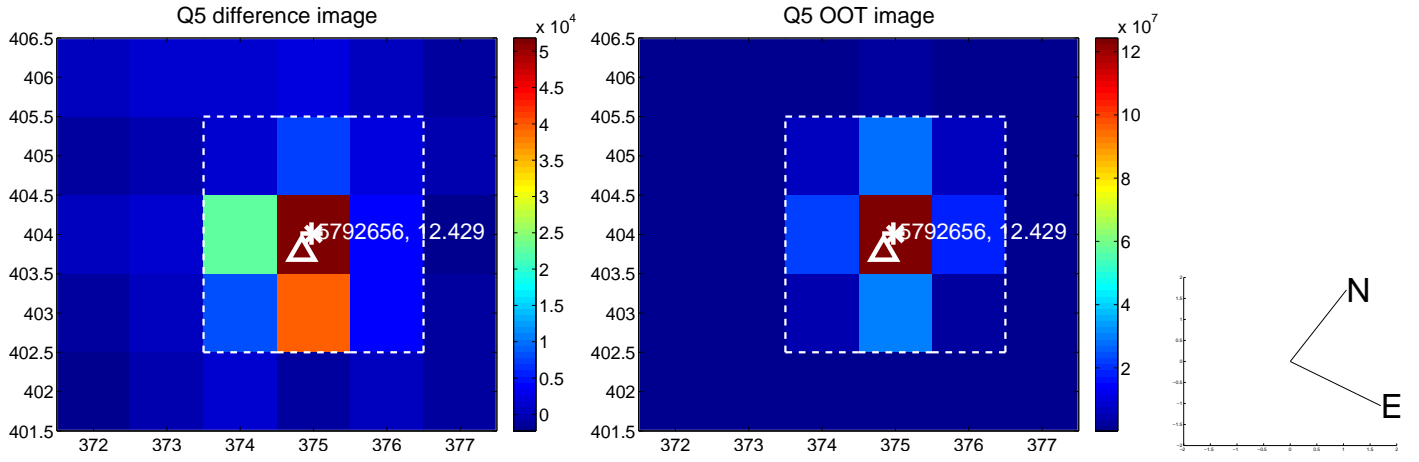


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

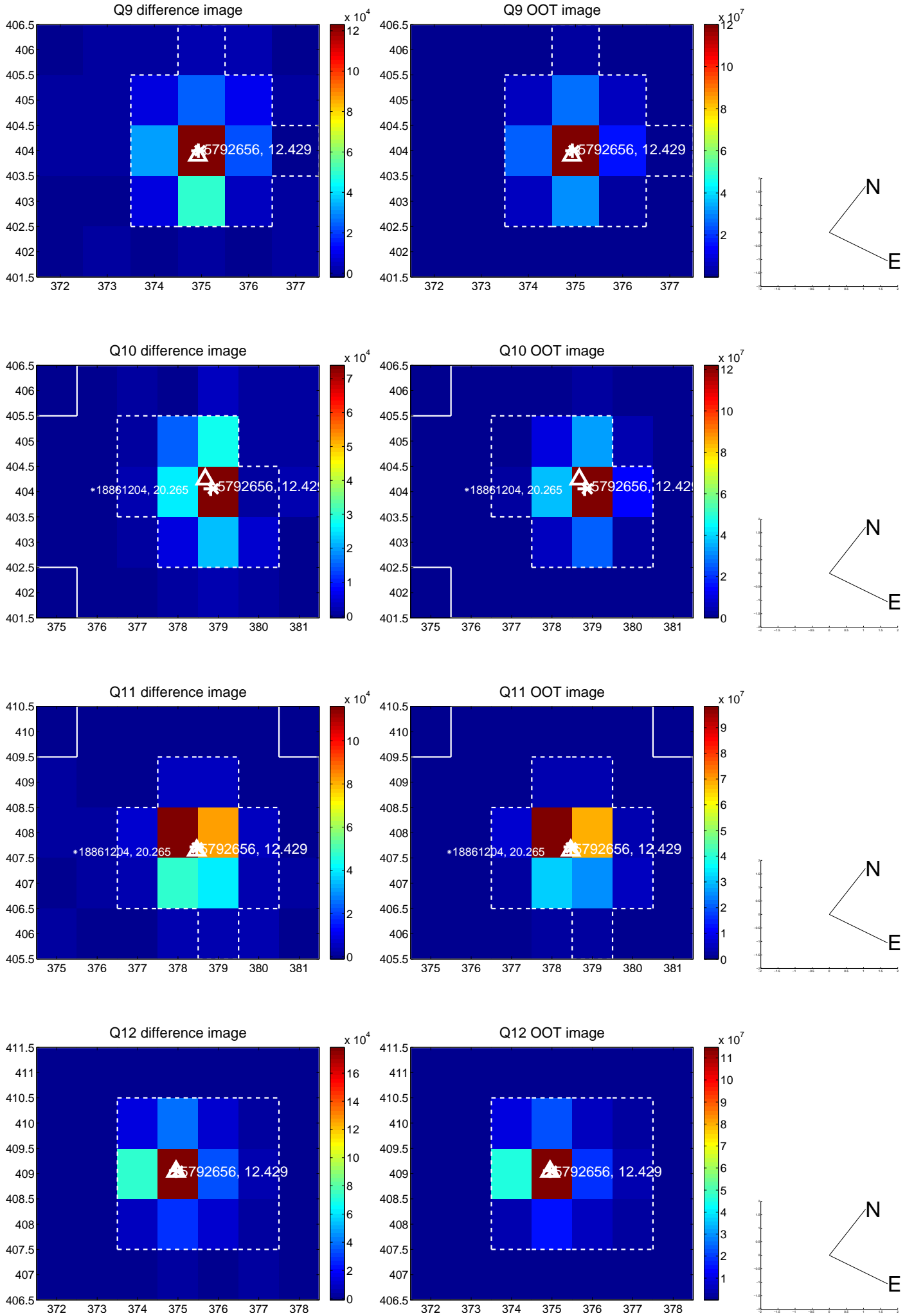
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



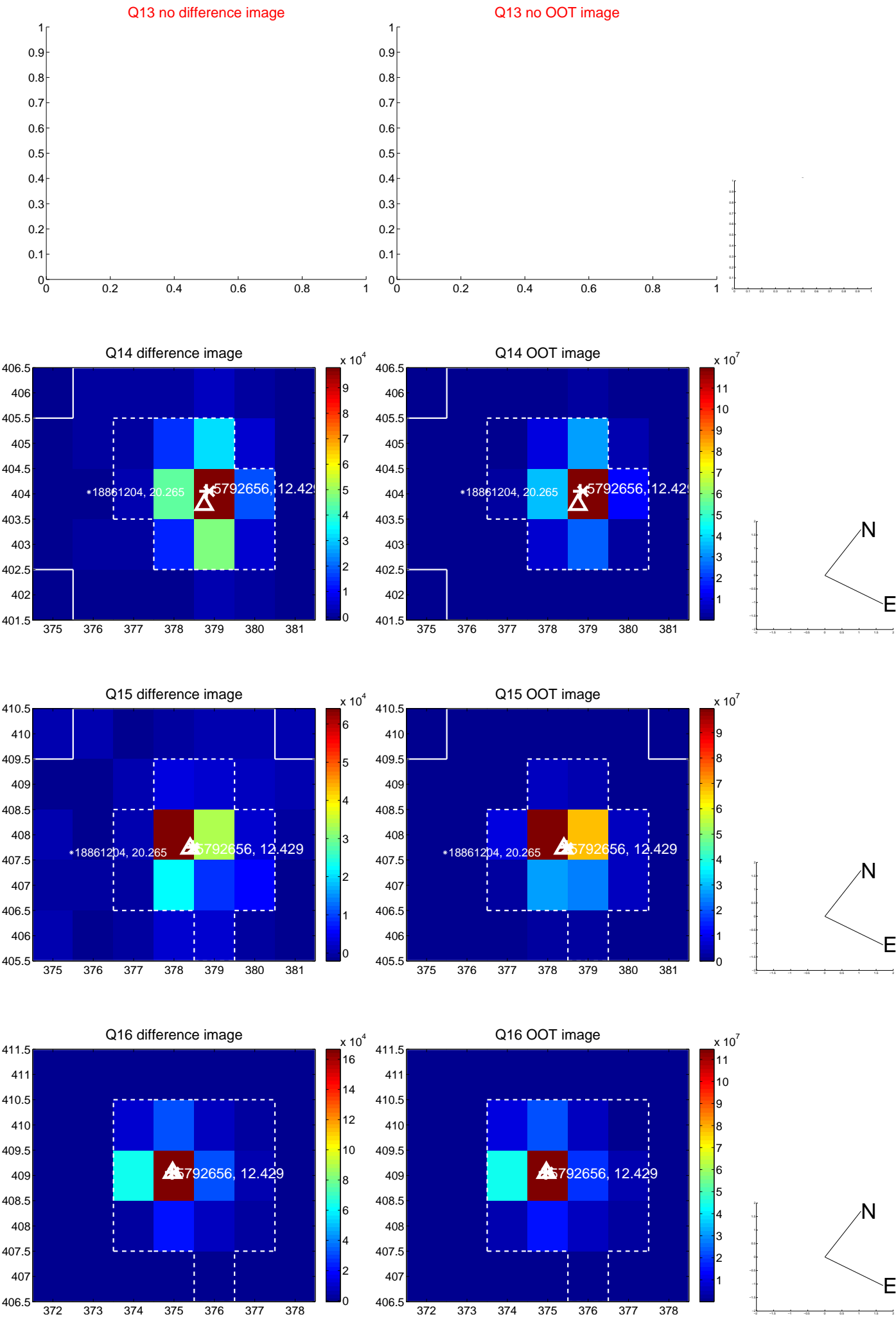
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



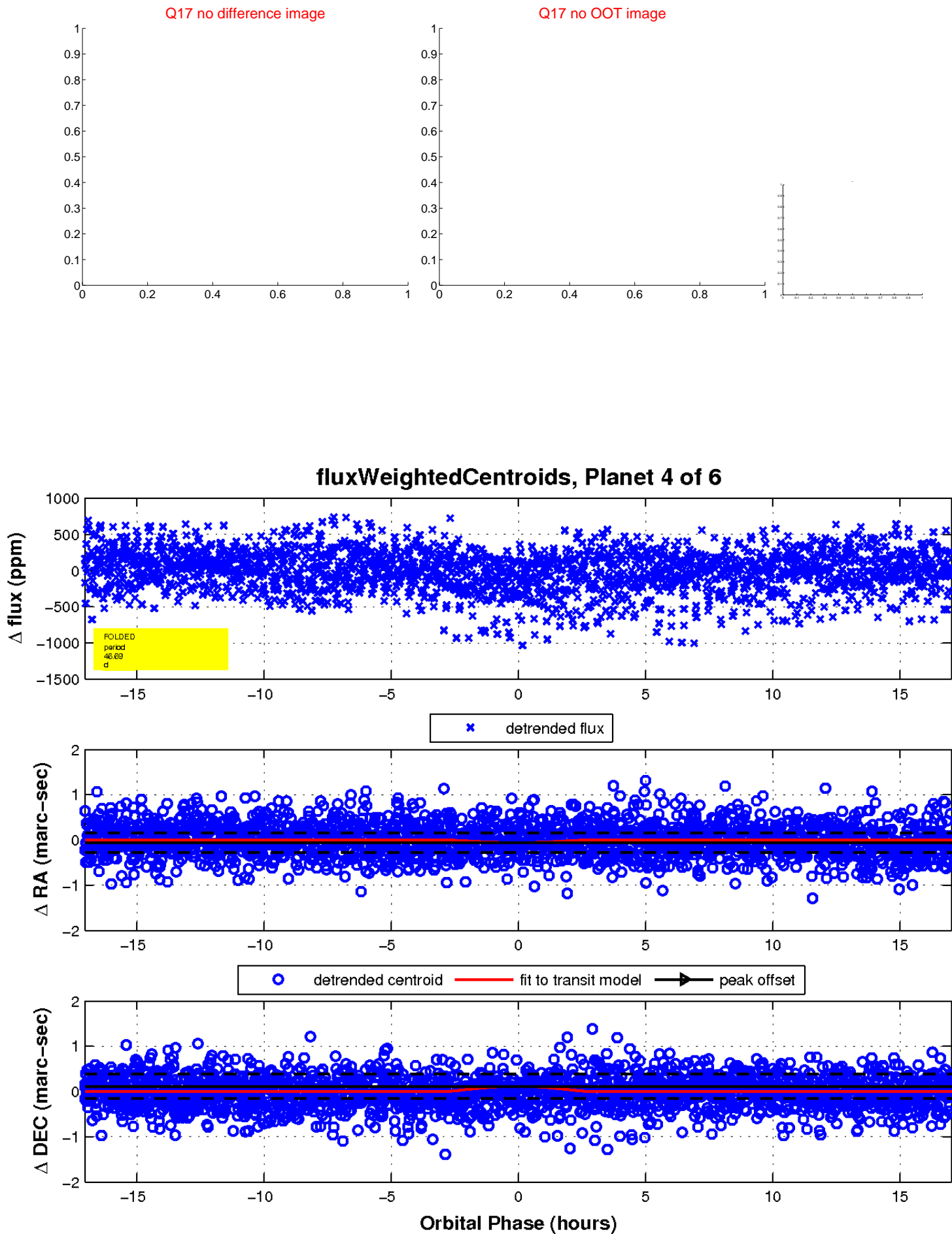
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



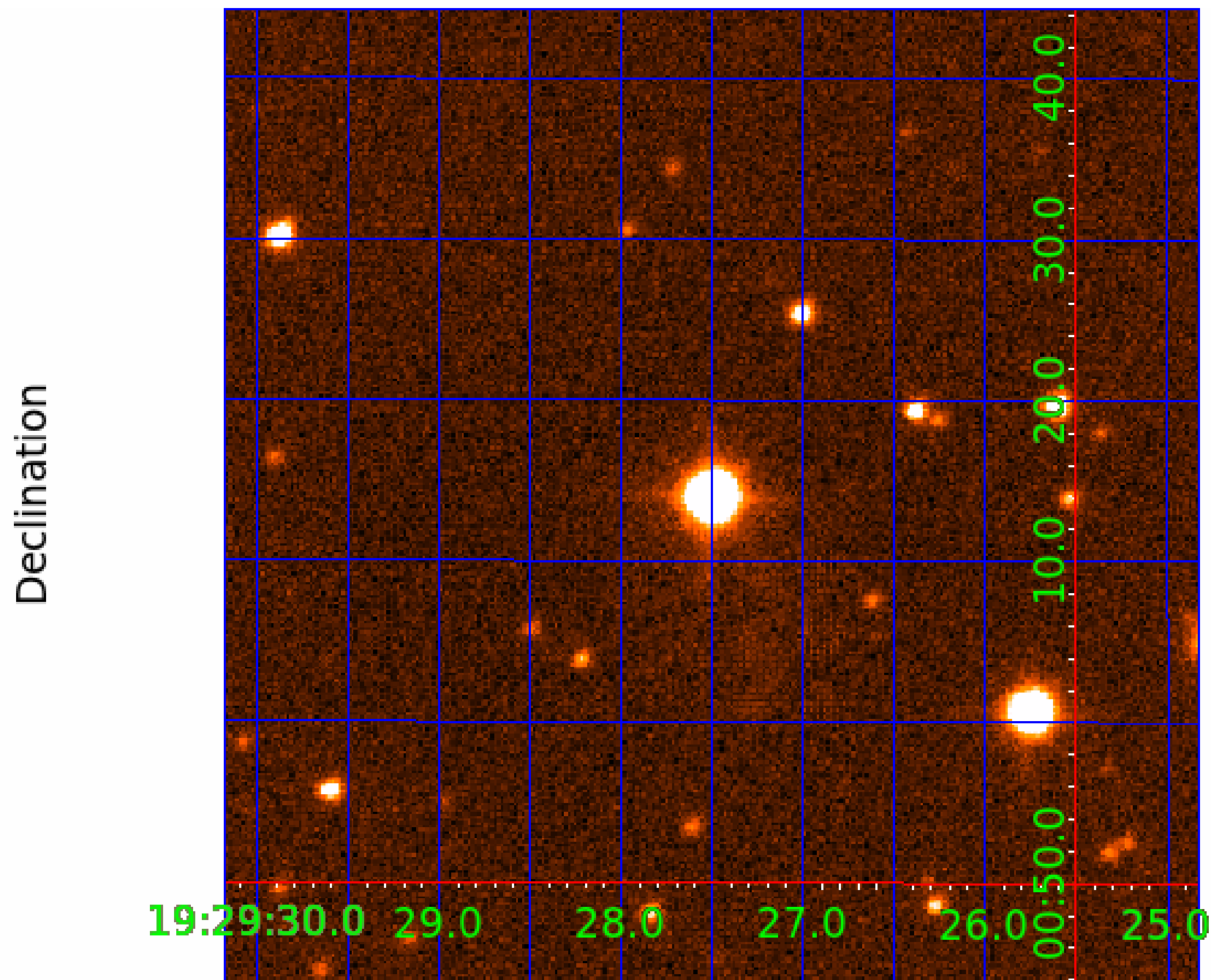
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005792656

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})
005792656-01	OBS	No	0.926748	132.261100	28.1	5.820	12.1	9.1	2.24	7328	1.22	29601.32
005792656-02	OBS	No	8.346071	133.741140	59.9	8.457	17.8	4.4	2.24	7328	2.09	1579.86
005792656-03	OBS	No	75.696395	135.551705	403.6	5.338	12.9	6.3	2.24	7328	8.56	83.53
005792656-04	OBS	No	46.694140	152.488697	374.7	5.682	12.2	9.5	2.24	7328	8.26	159.07
005792656-05	OBS	No	89.960139	192.886063	369.7	3.443	12.9	8.6	2.24	7328	4.82	66.35
005792656-06	OBS	No	52.160133	167.773368	231.2	5.417	11.7	6.1	2.24	7328	3.49	137.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005792656-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005792656-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

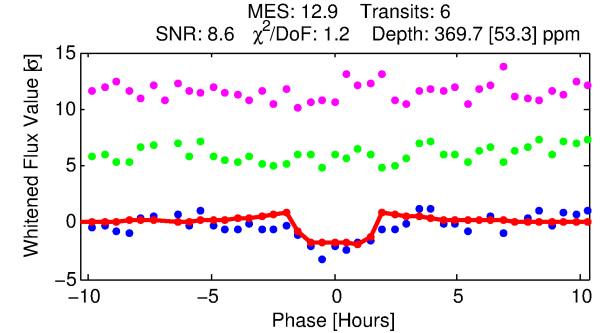
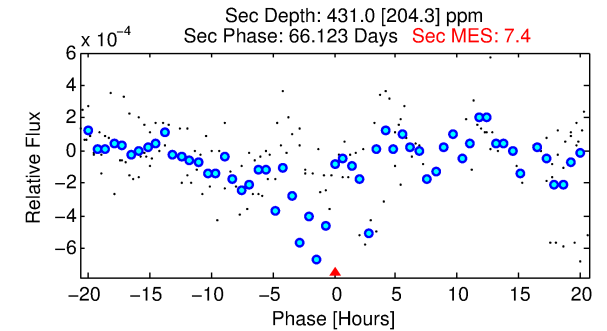
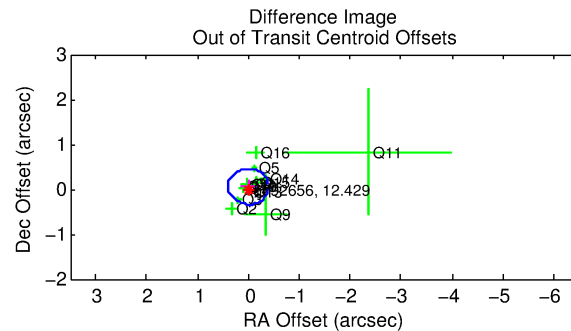
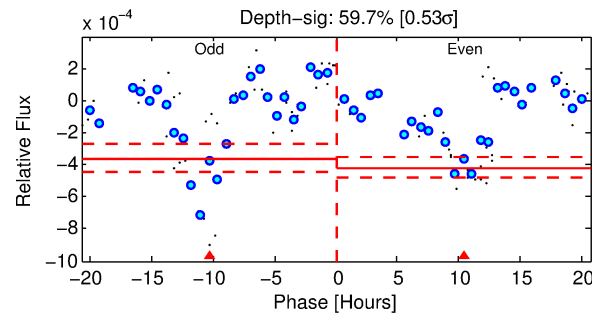
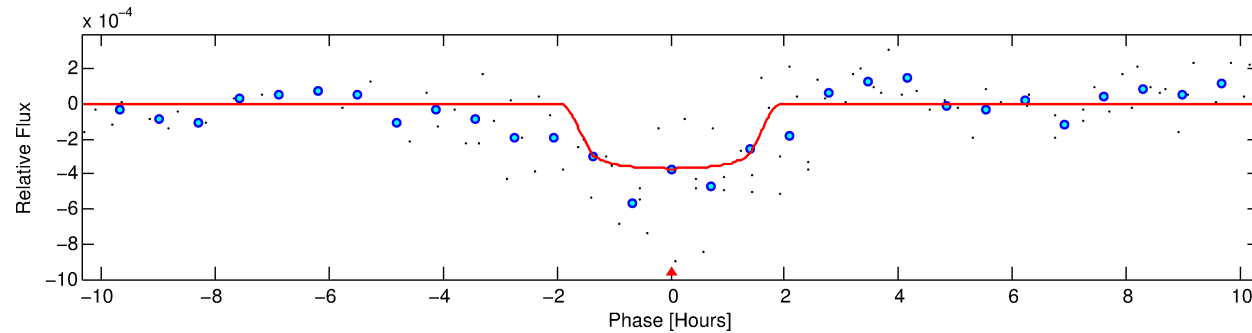
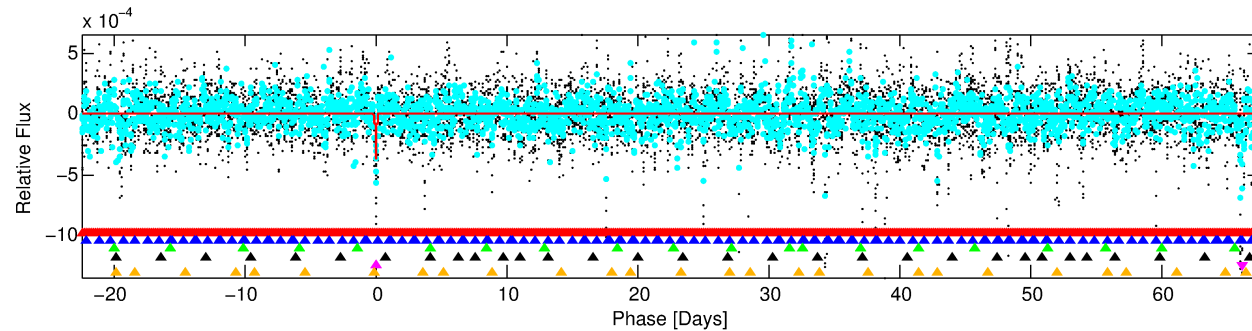
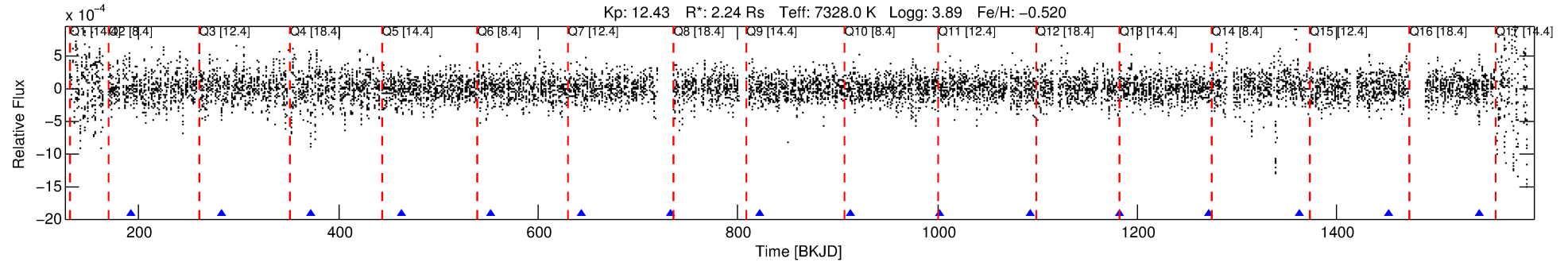
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005792656-05

No Significant Match Found

DV One-Page Summary

KIC: 5792656 Candidate: 5 of 6 Period: 89.960 d



DV Fit Results:

Period = 89.96014 [0.00056] d
Epoch = 192.8861 [0.0052] BKJD
Rp/R* = 0.0197 [0.0092]
a/R* = 117.19 [334.36]
b = 0.83 [1.05]
Seff = 66.35 [45.17]
Teq = 728 [124] K
Rp = 4.81 [2.97] Re
a = 0.4424 [0.1786] AU
Ag = 2002.15 [2479.20] [0.81 σ]
Teffp = 7527 [1998] K [3.40 σ]

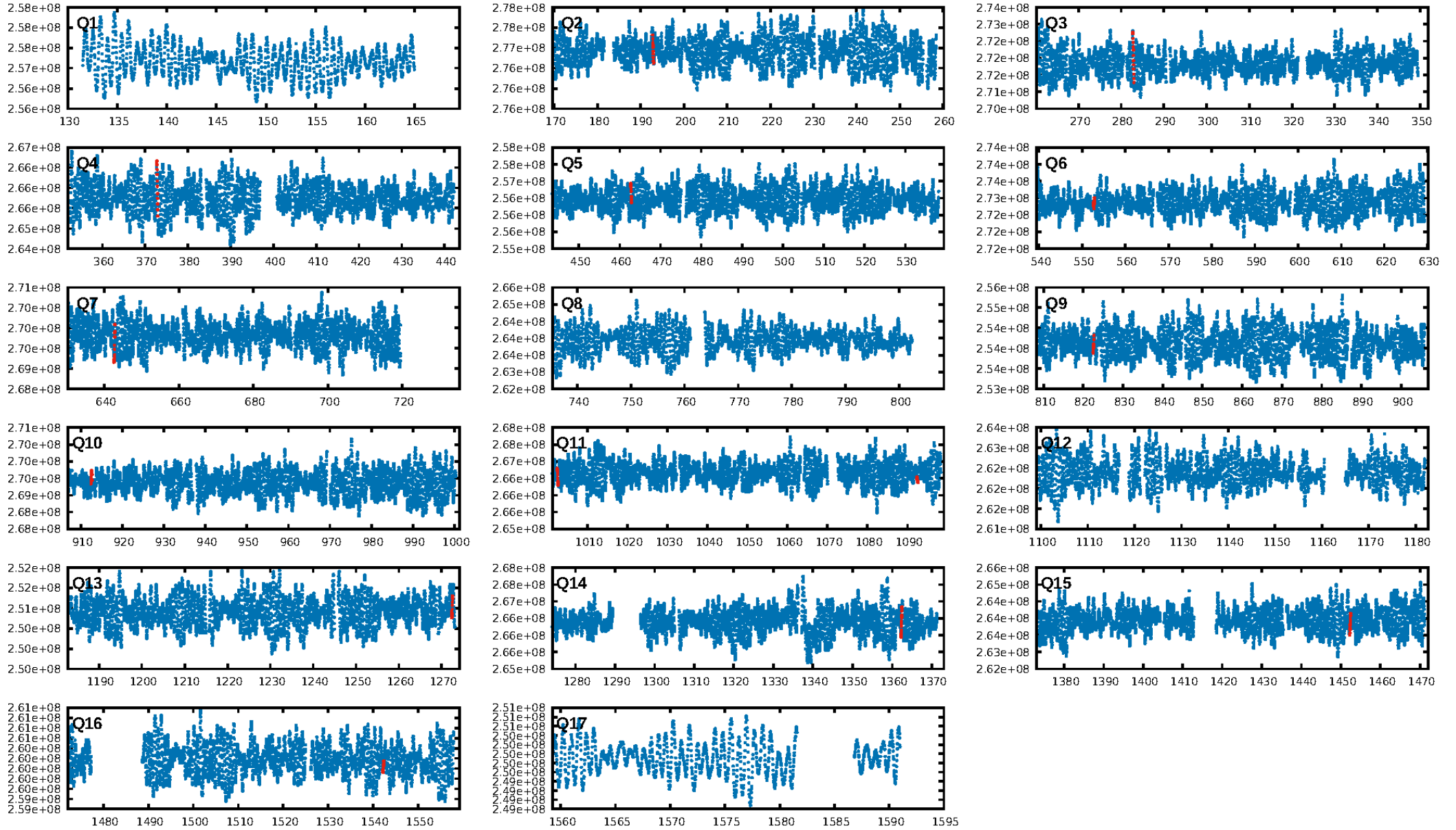
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [53.89 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 5.1%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: 6.36e-19
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.2758
Centroid-sig: 20.2%
Centroid-so: 0.295 arcsec [0.92 σ]
OotOffset-rm: 0.058 arcsec [0.44 σ]
KicOffset-rm: 0.128 arcsec [0.70 σ]
OotOffset-st: 4/4/2/3 [13]
KicOffset-st: 4/4/2/3 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 0.00 [0/13]

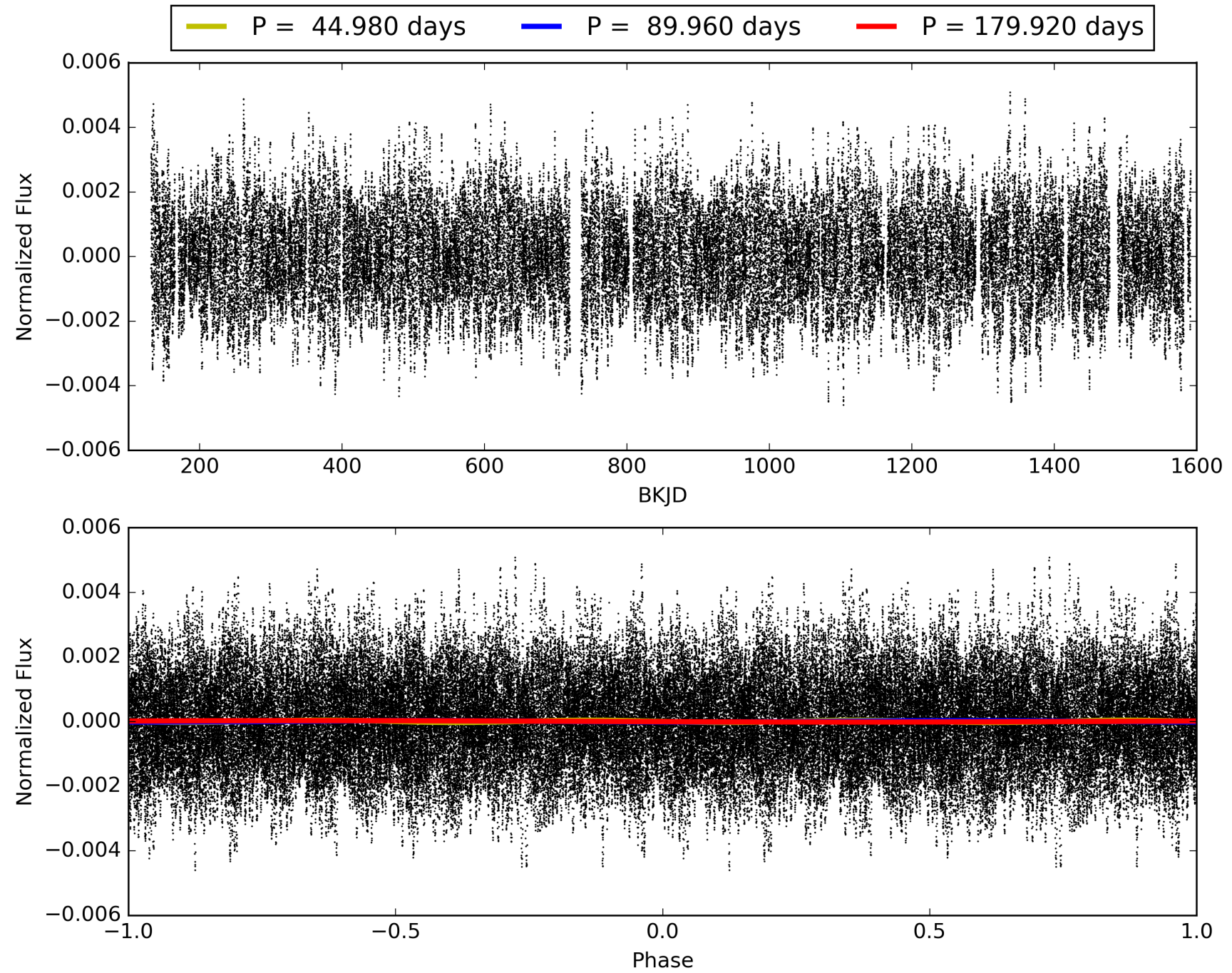
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:10:55 Z

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

TCE 005792656-05, PDC Light Curves

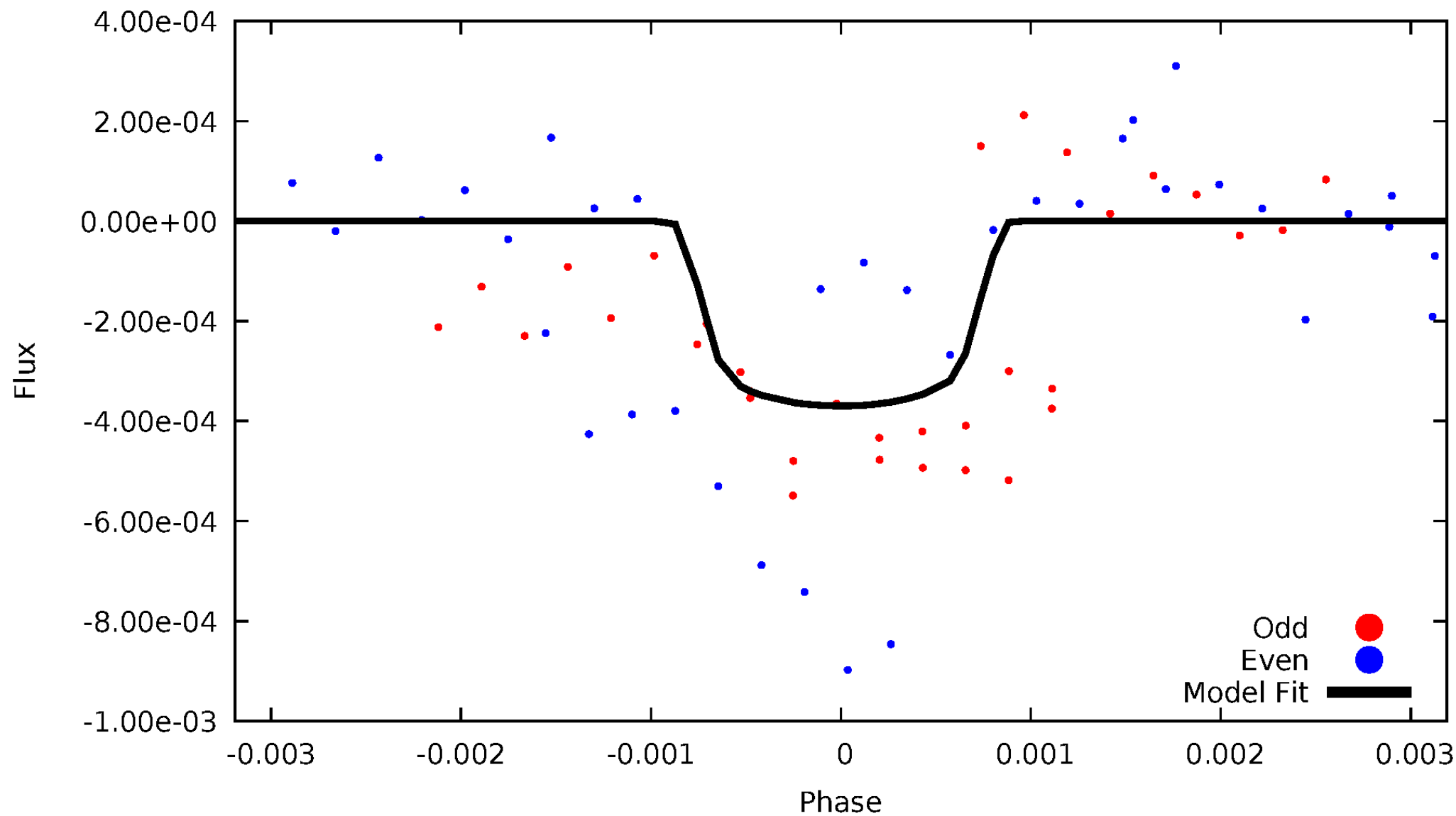


TCE 005792656-05



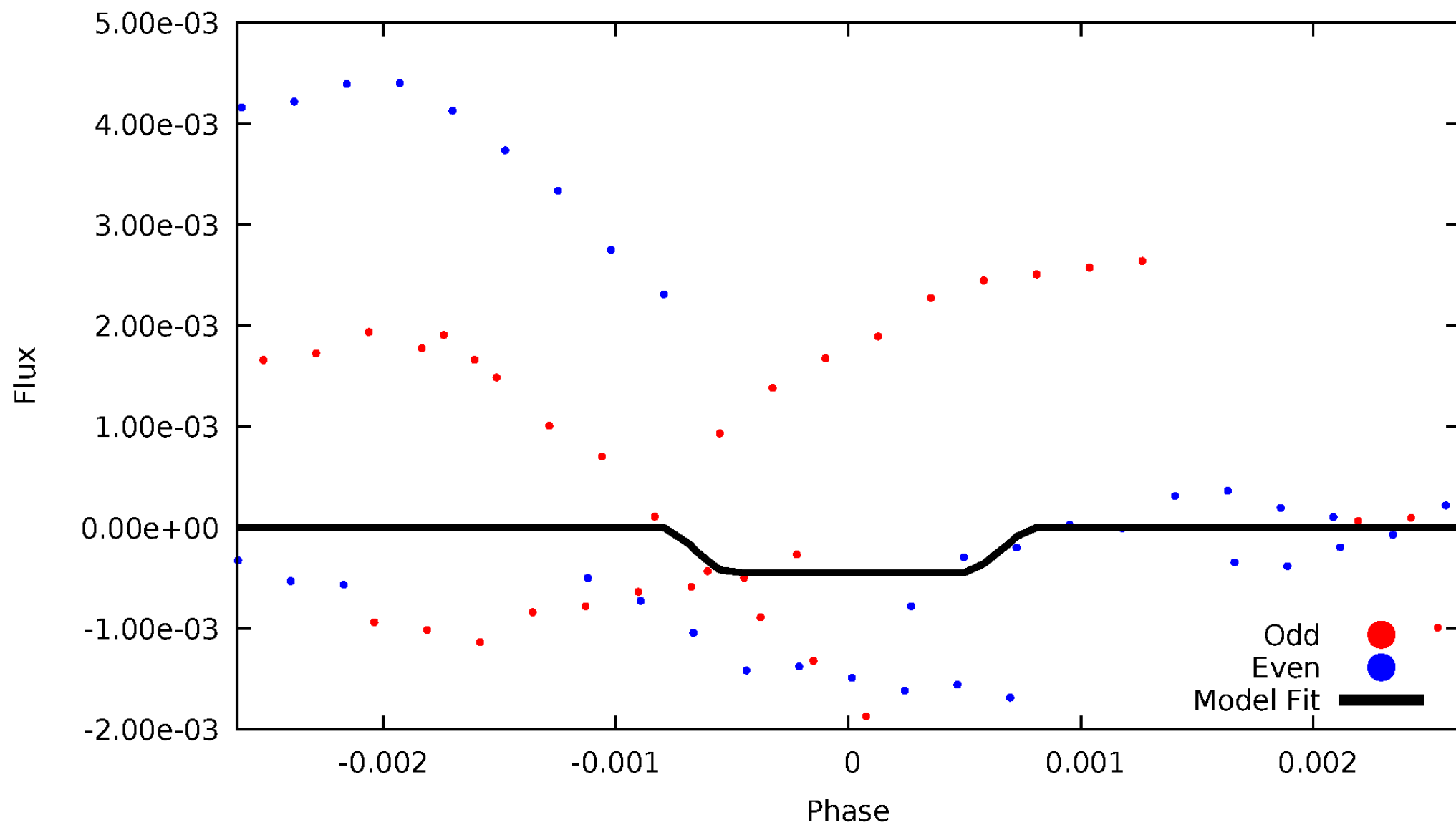
DV Odd/Even

TCE 005792656-05



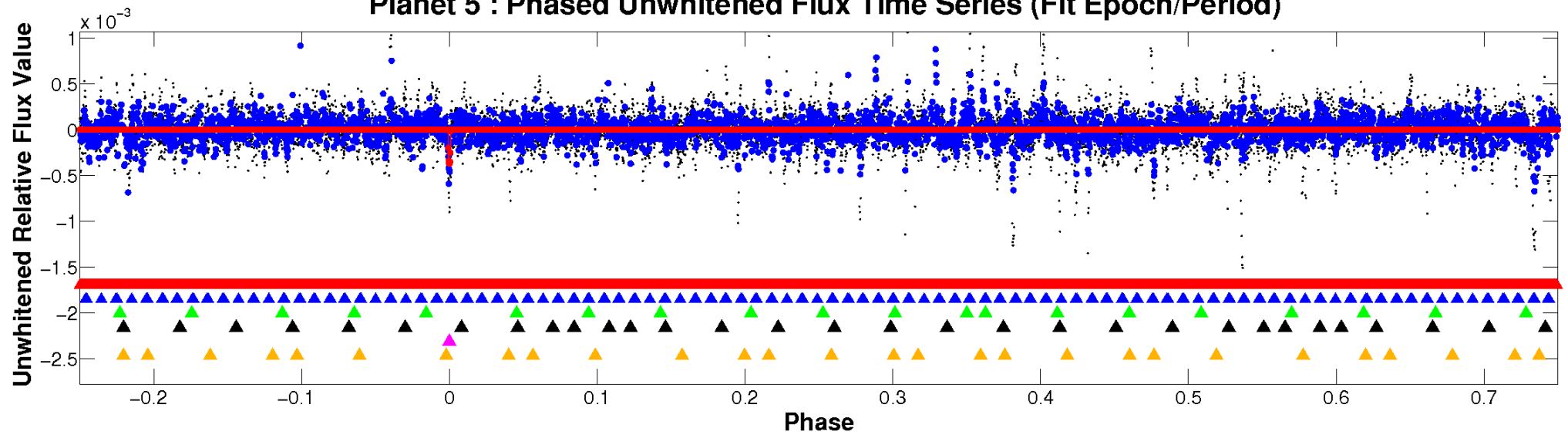
ALT Odd/Even

TCE 005792656-05

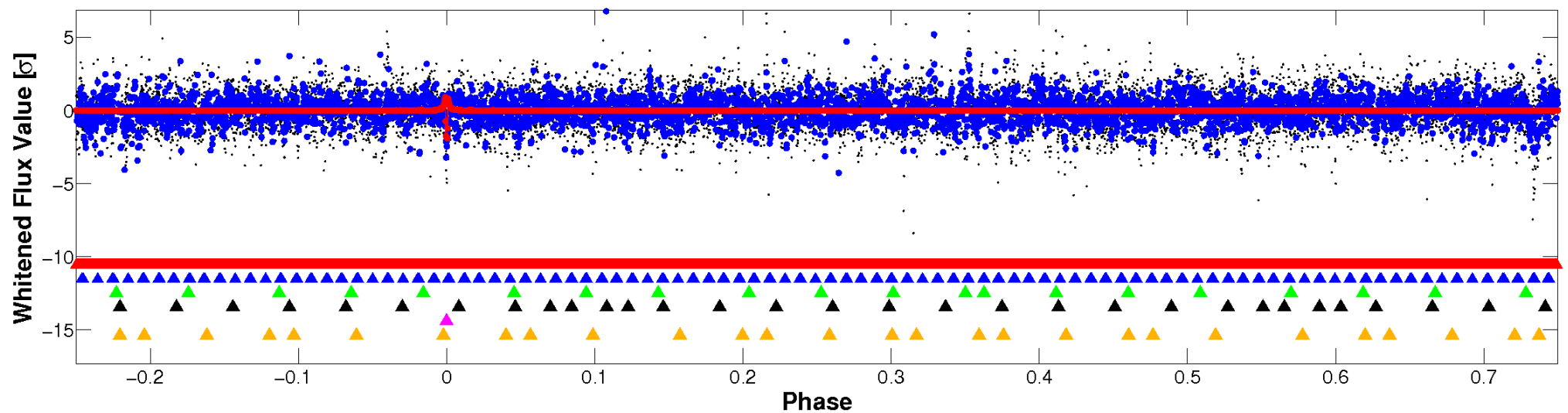


Non-Whitened Vs. Whitened Light Curve

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

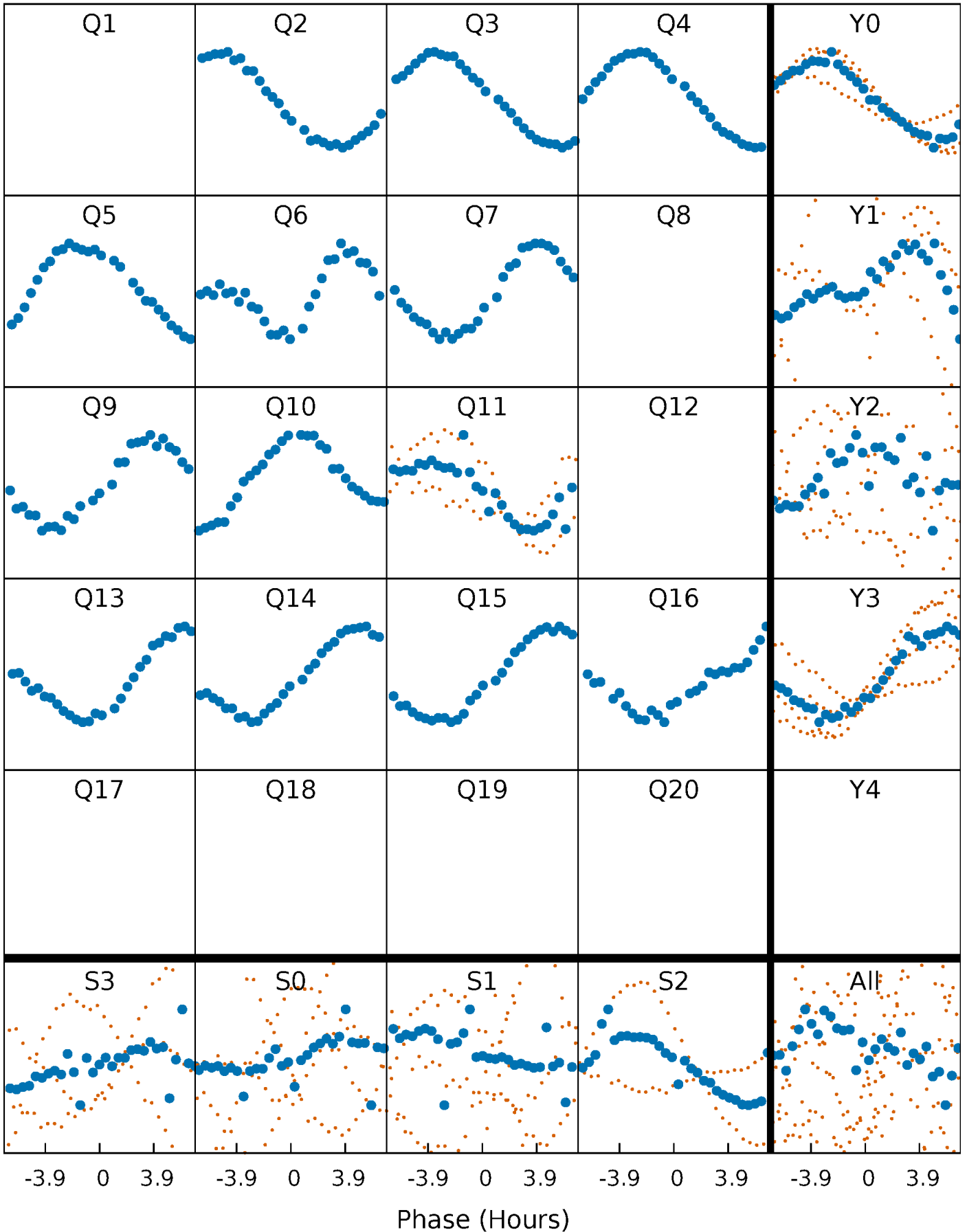


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



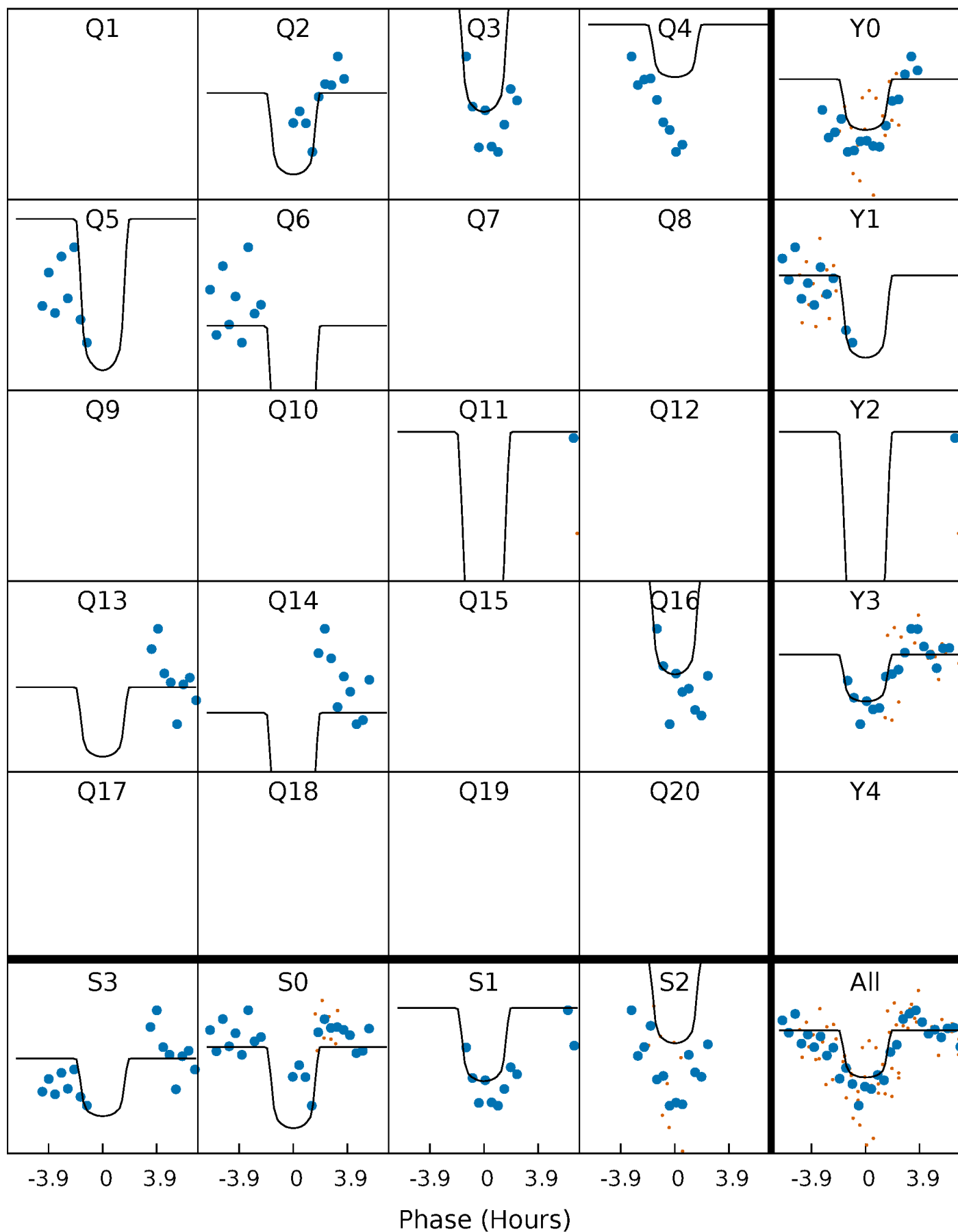
PDC Quarter-Phased Transit Curves

TCE 005792656-05 $P = 89.960139$ Days $T_0 = 192.886063$ (BKJD)



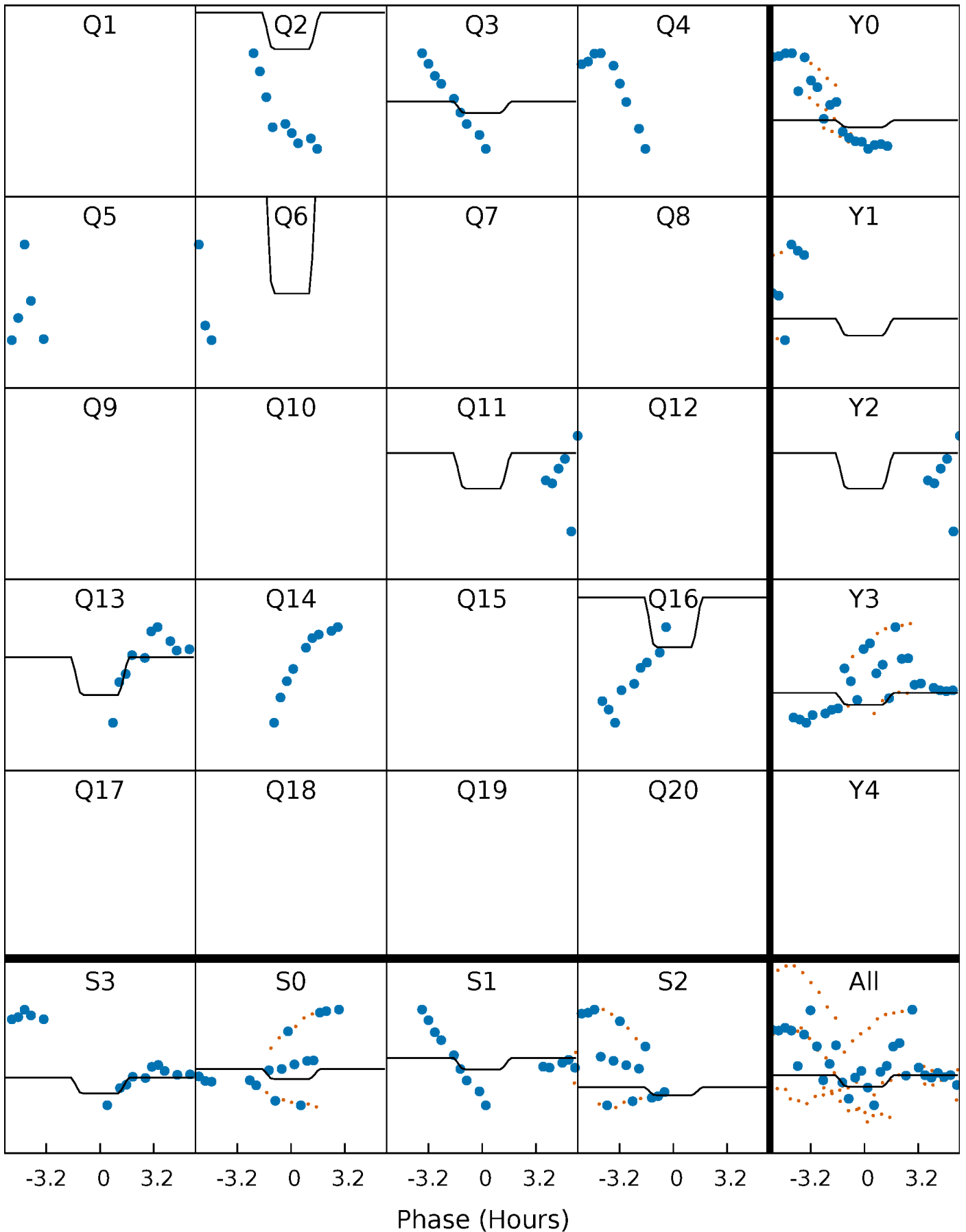
DV Quarter-Phased Transit Curves

TCE 005792656-05 P= 89.960139 Days $T_0=192.886063$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

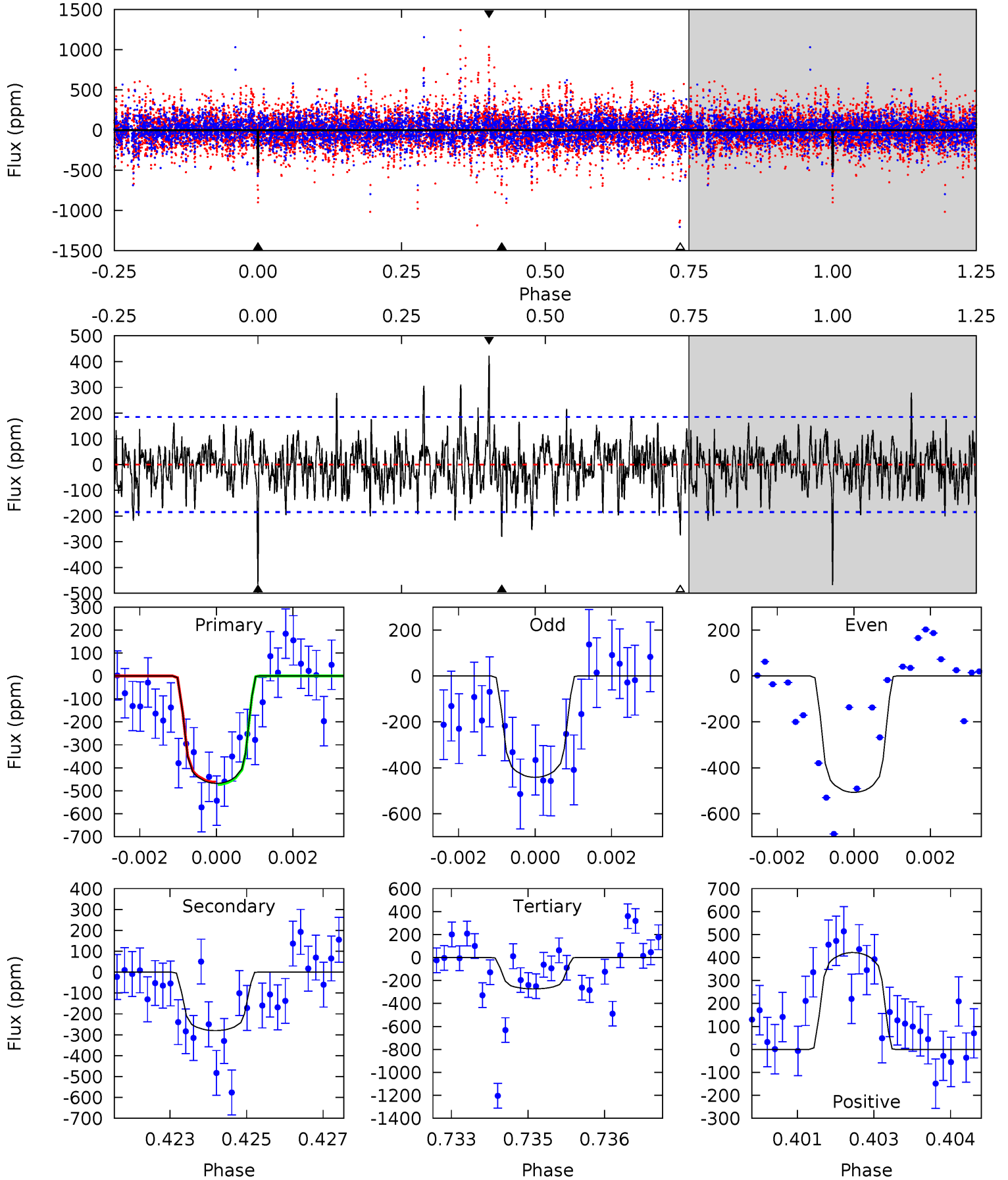
TCE 005792656-05 $P = 89.962046$ Days $T_0 = 192.977309$ (BKJD)



DV Model-Shift Uniqueness Test

005792656-05, P = 89.960139 Days, E = 102.925924 Days

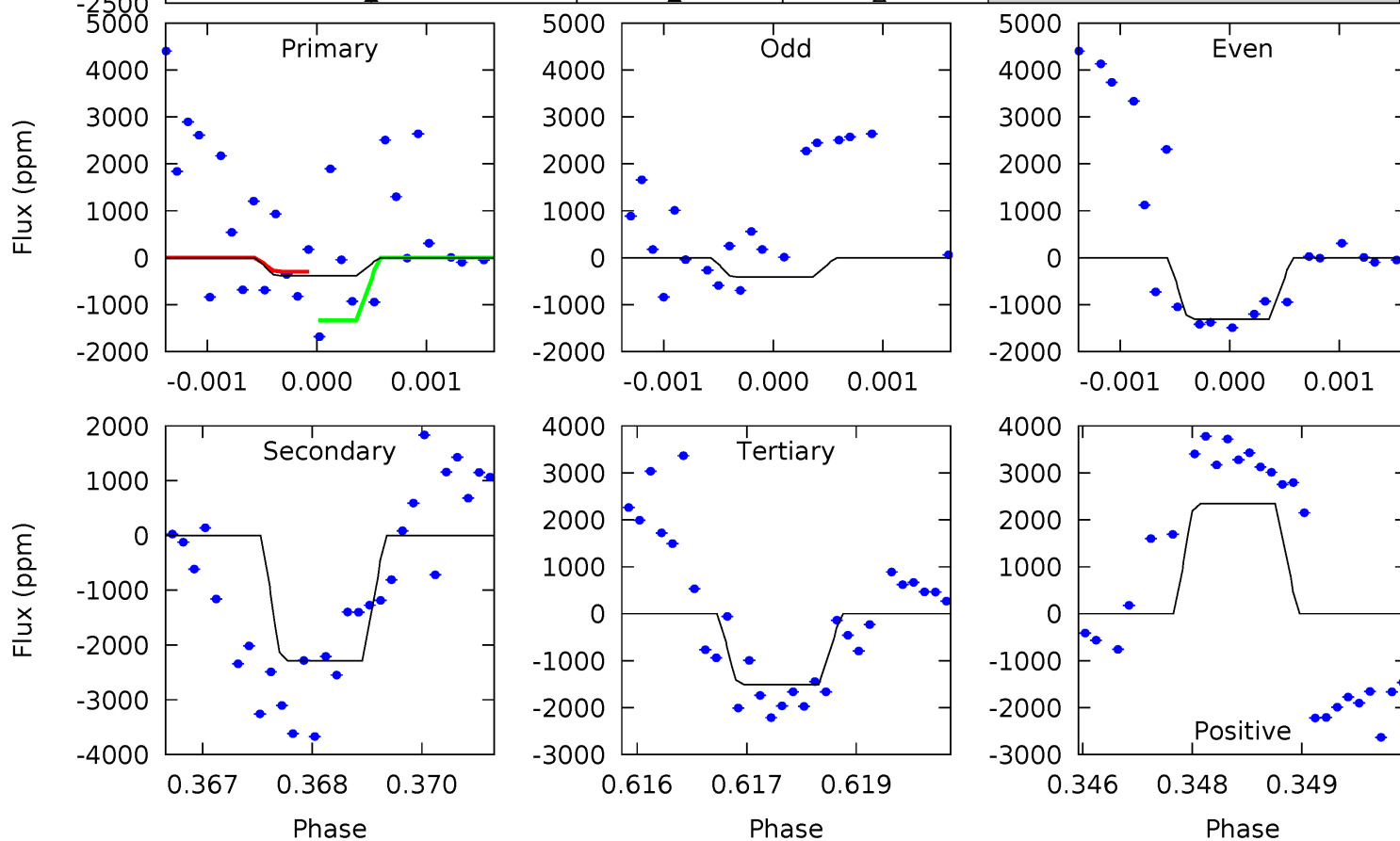
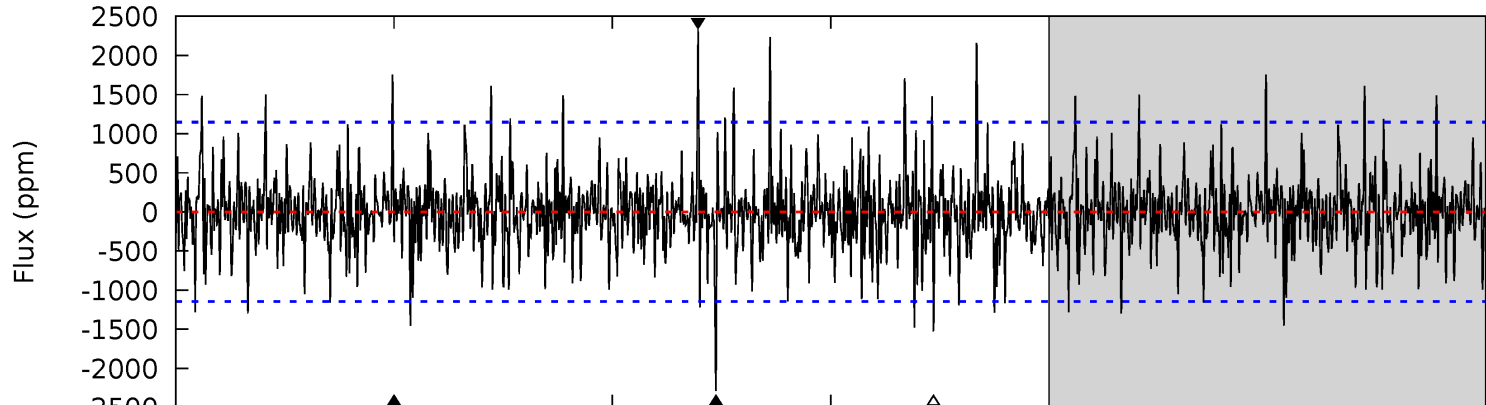
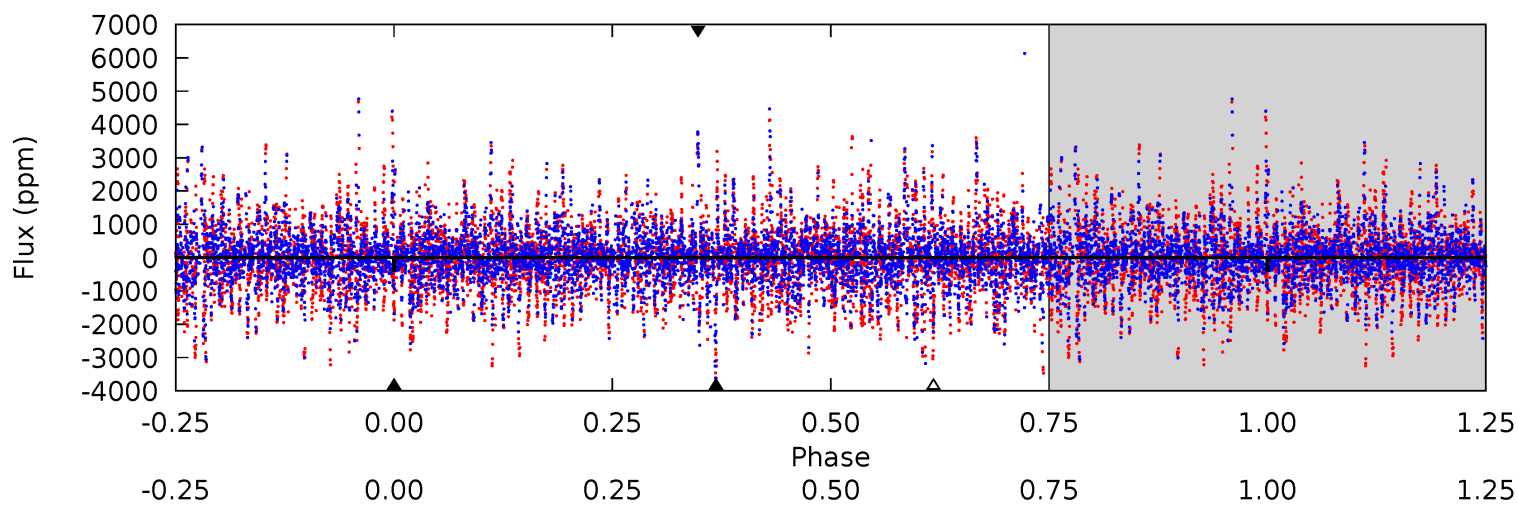
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.6	8.11	7.91	12.2	5.35	3.13	2.21	5.64	1.34	0.20	-4.10	0.89	0.99	0.47	0.15



Alt Model-Shift Uniqueness Test

005792656-05, P = 89.962046 Days, E = 103.015263 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.82	10.8	7.10	11.0	5.39	3.20	2.04	-5.28	-9.21	3.65	-0.27	2.08	0.74	0.51	2.31



Stellar Parameters For KIC 005792656

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7328^{+207}_{-311}	$3.891^{+0.392}_{-0.123}$	$-0.520^{+0.250}_{-0.300}$	$2.242^{+0.487}_{-0.905}$	$1.427^{+0.210}_{-0.280}$	$0.178^{+0.526}_{-0.064}$
	+3%/-4%	+10%/-3%	+48%/-58%	+22%/-40%	+15%/-20%	+295%/-36%
Source	KIC0	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 005792656-05 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-280 ± 35	$4.42^{+2.26}_{-2.06}$	993^{+73}_{-112}	6691^{+2997}_{-1201}	1527^{+3496}_{-868}
Alt.	-2287 ± 213	$4.69^{+2.51}_{-2.09}$	986^{+78}_{-107}	12932^{+10309}_{-3305}	11044^{+23352}_{-6228}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

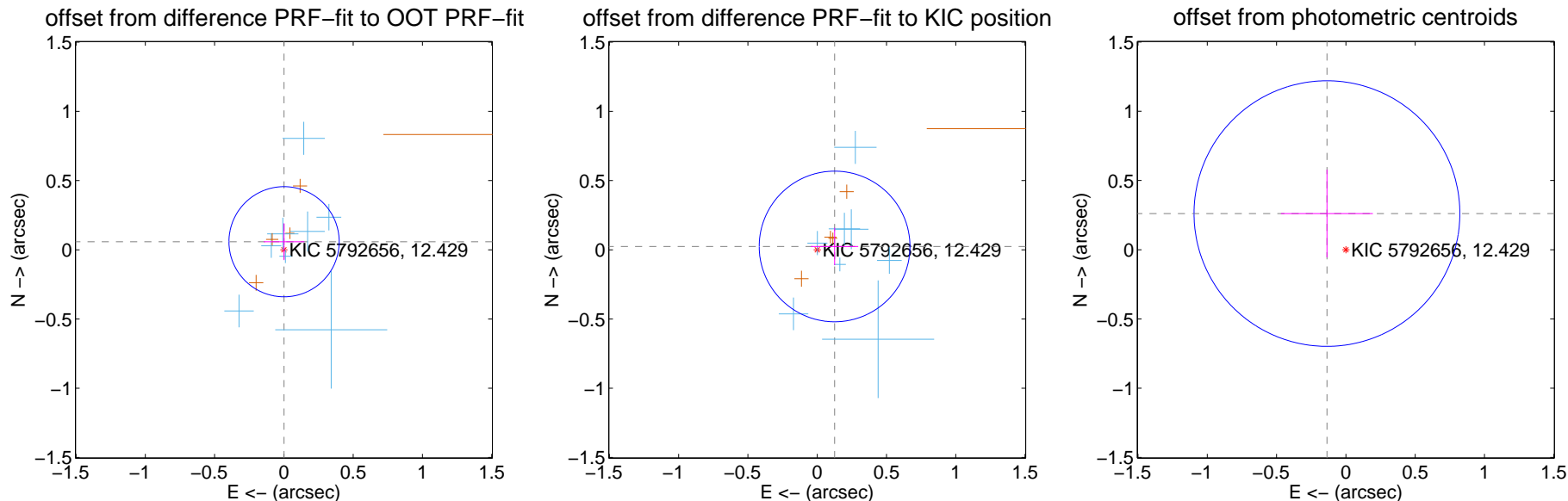
DV Centroid Data

Supplemental centroid analysis for 005792656-05. Kepler magnitude: 12.43. Transit SNR 8.59

There are 8 quarters with good PRF difference image offsets

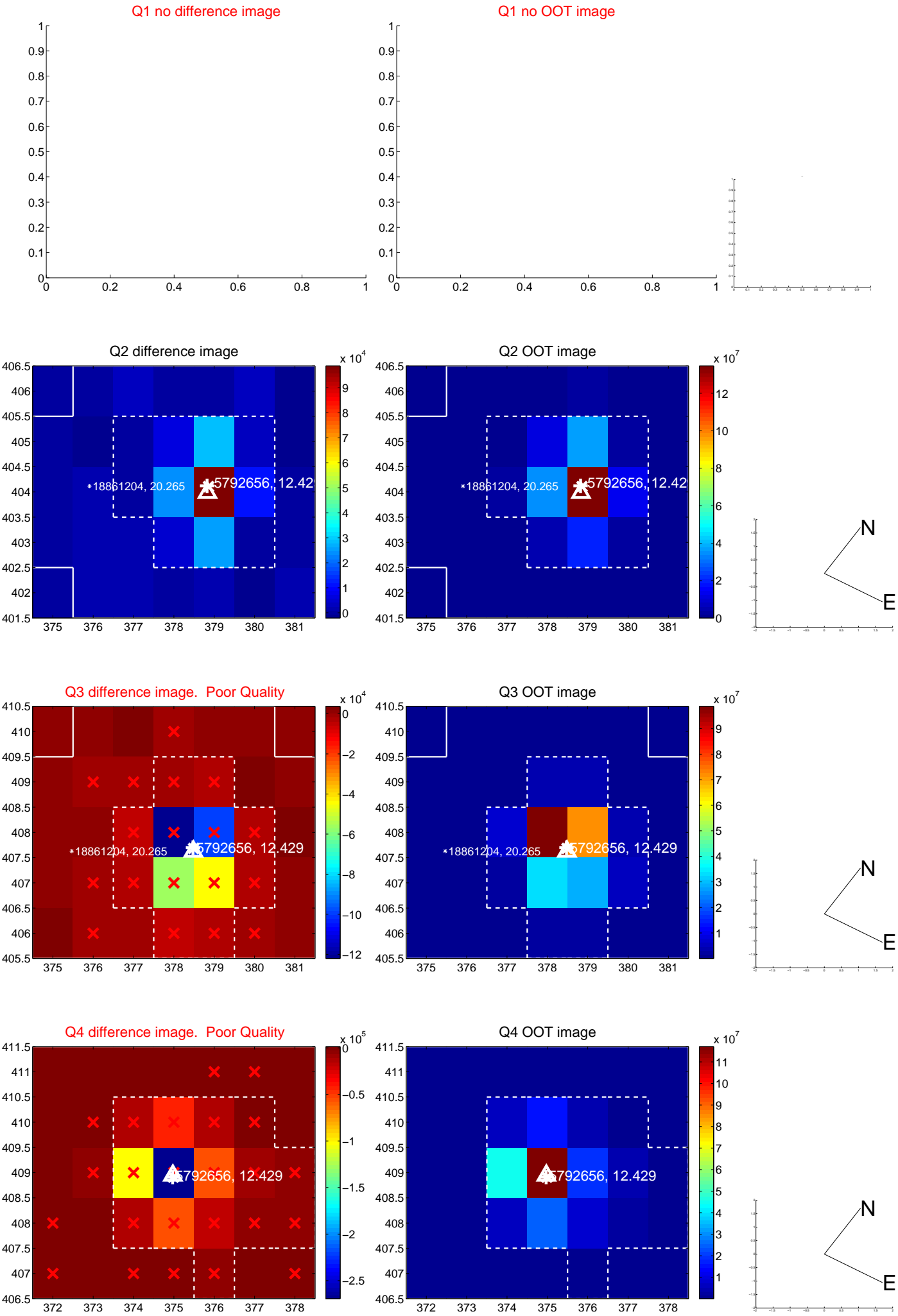
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.058 ± 0.133	0.44	-0.001 ± 0.147	0.058 ± 0.133
PRF-fit source offset from KIC position	0.128 ± 0.181	0.70	-0.125 ± 0.171	0.024 ± 0.135
photometric centroid source offset	0.29 ± 0.32	0.92	0.14 ± 0.33	0.26 ± 0.32

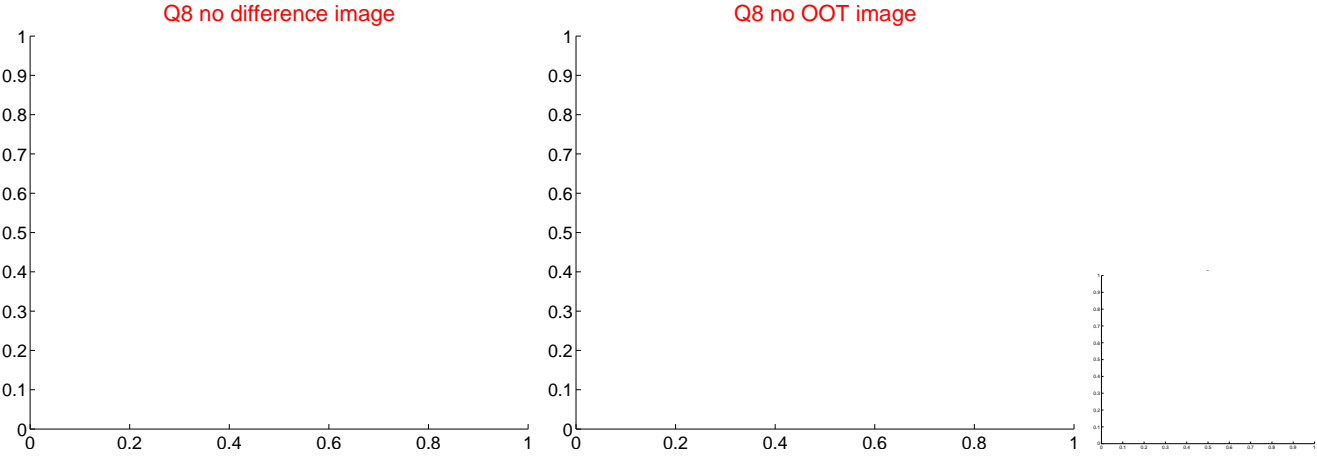
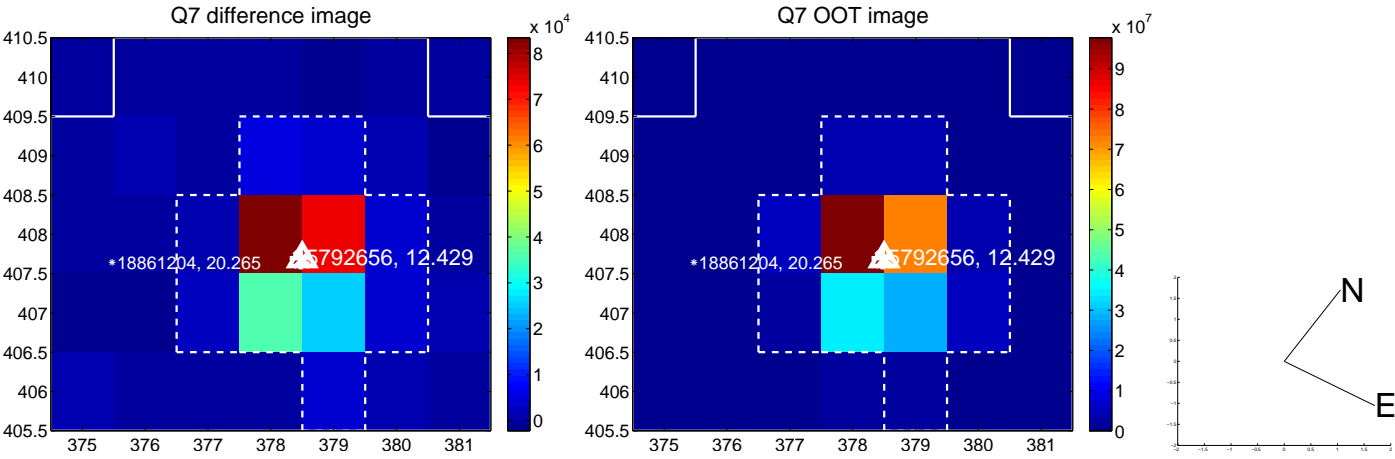
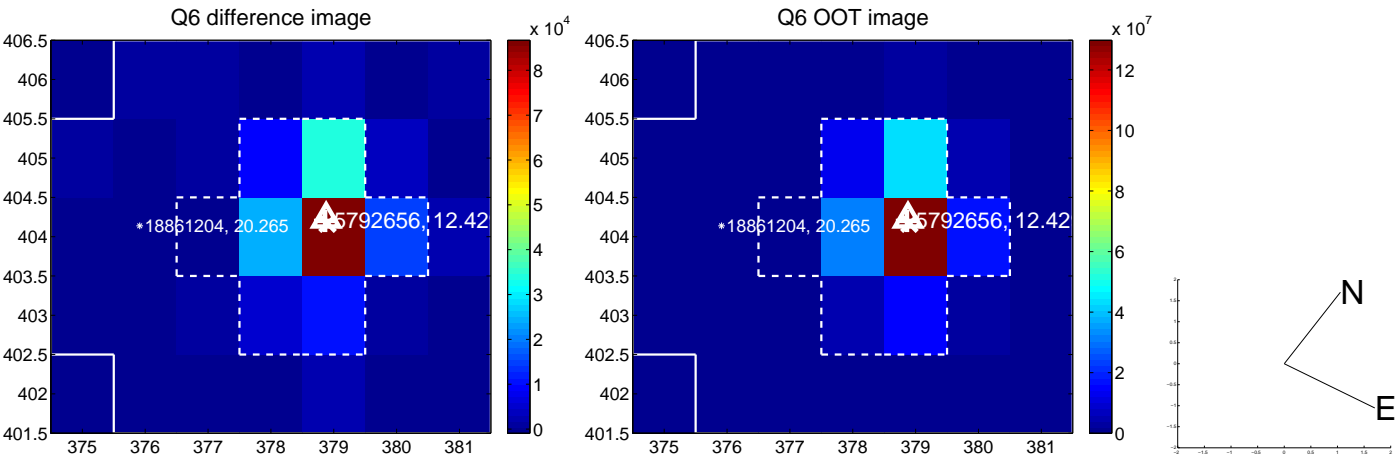
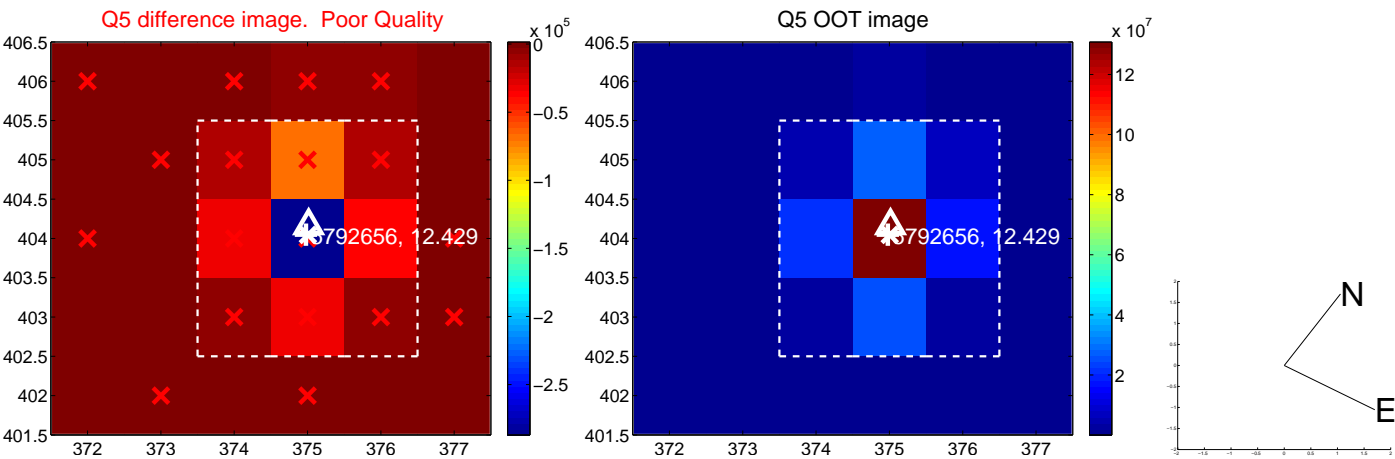


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

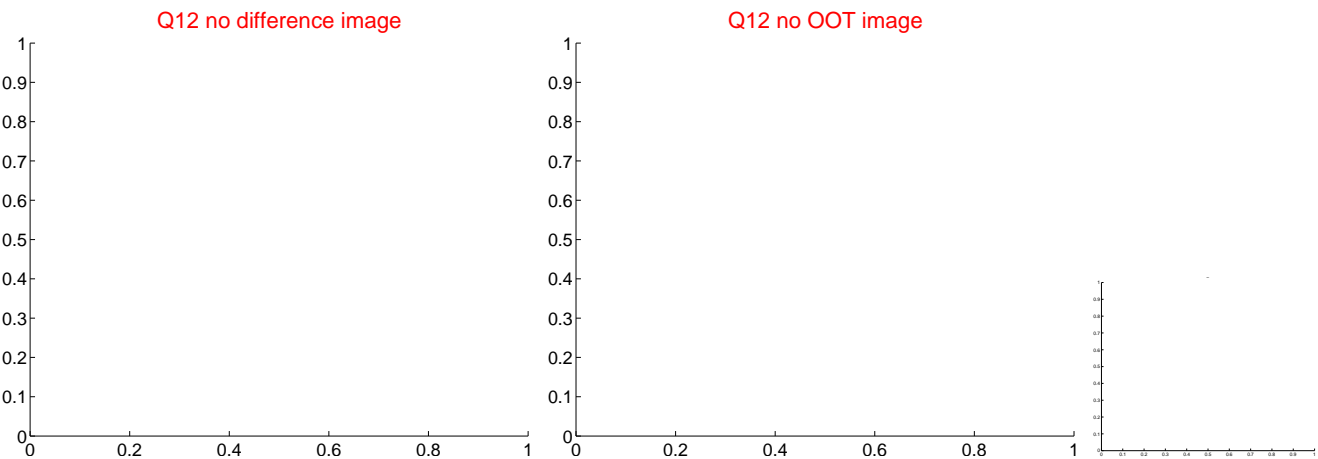
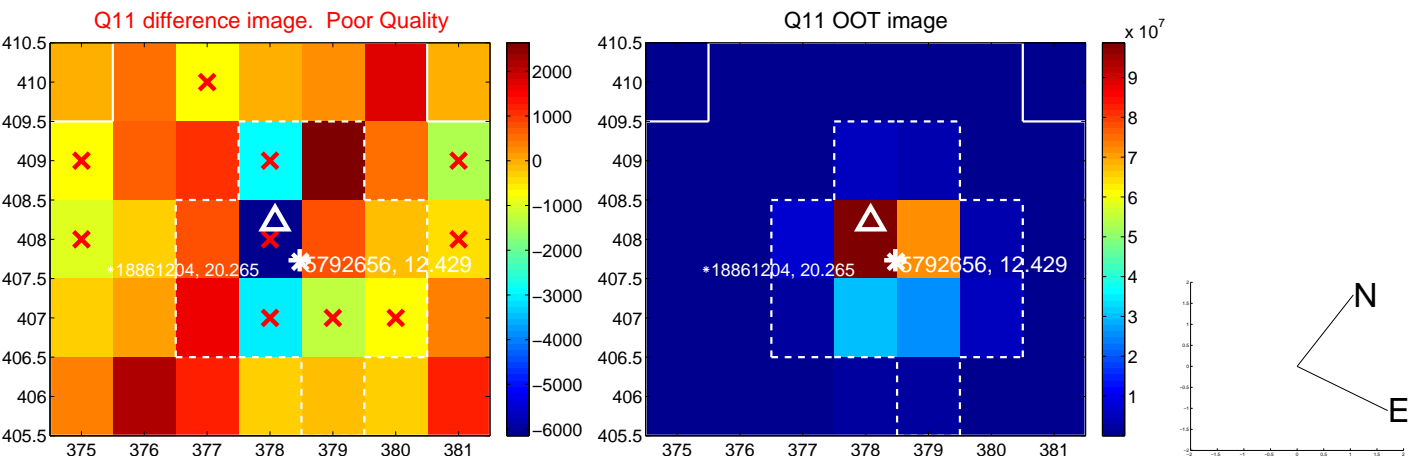
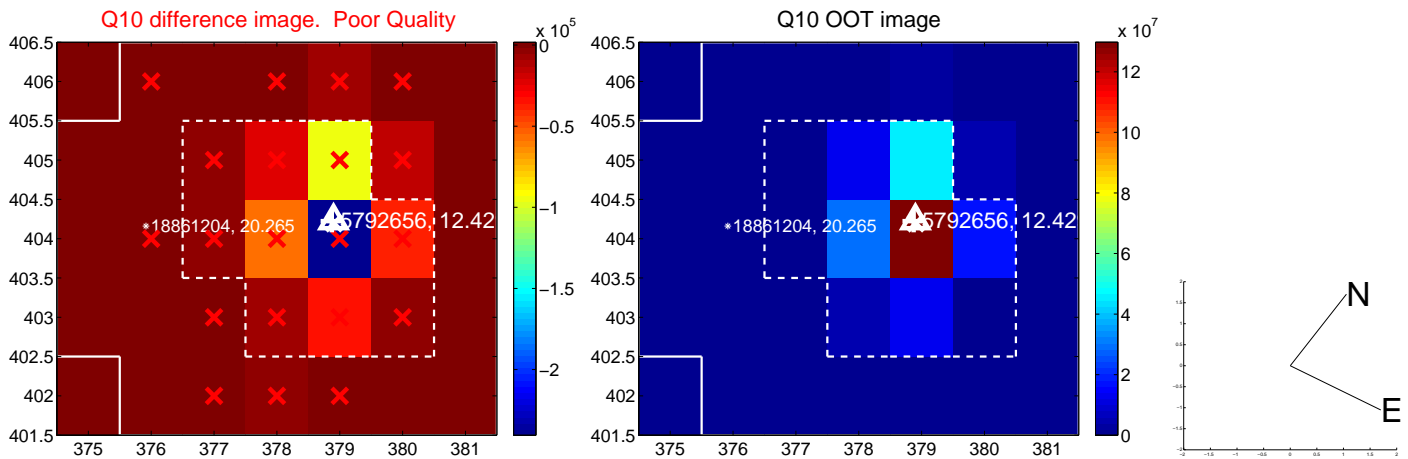
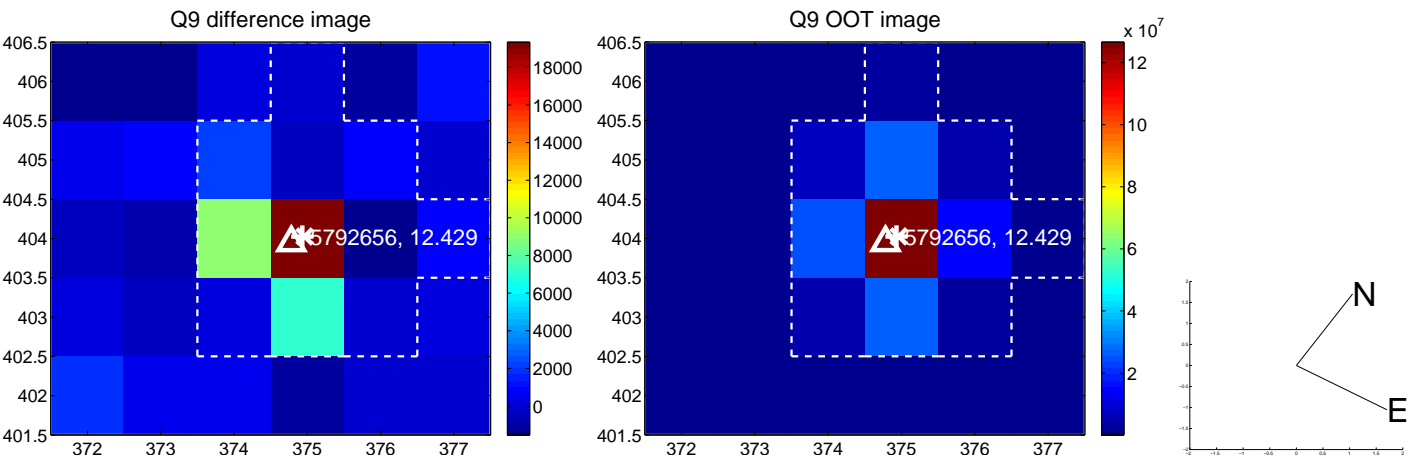
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



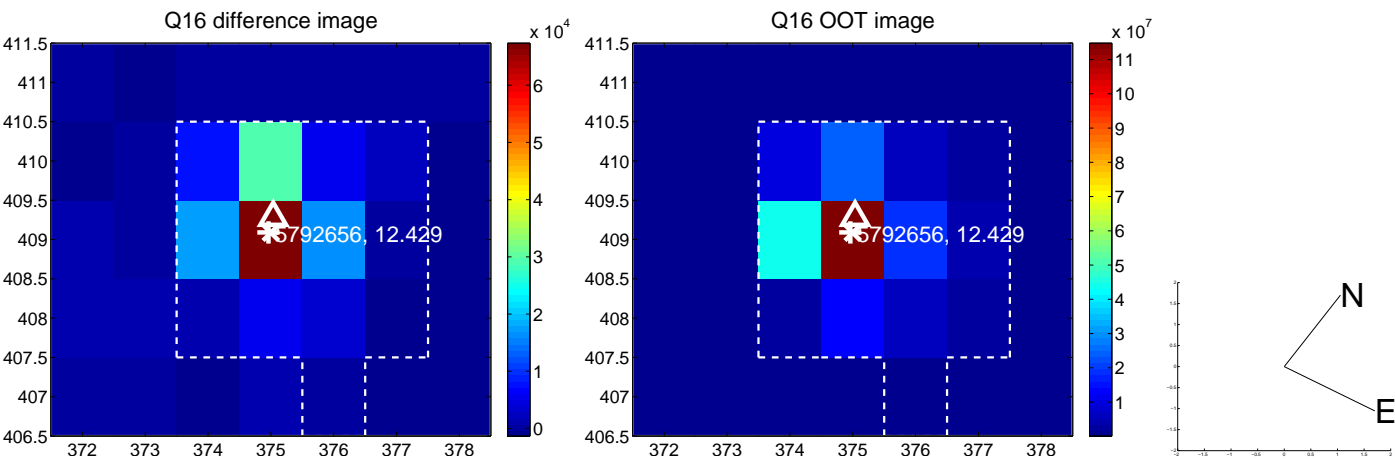
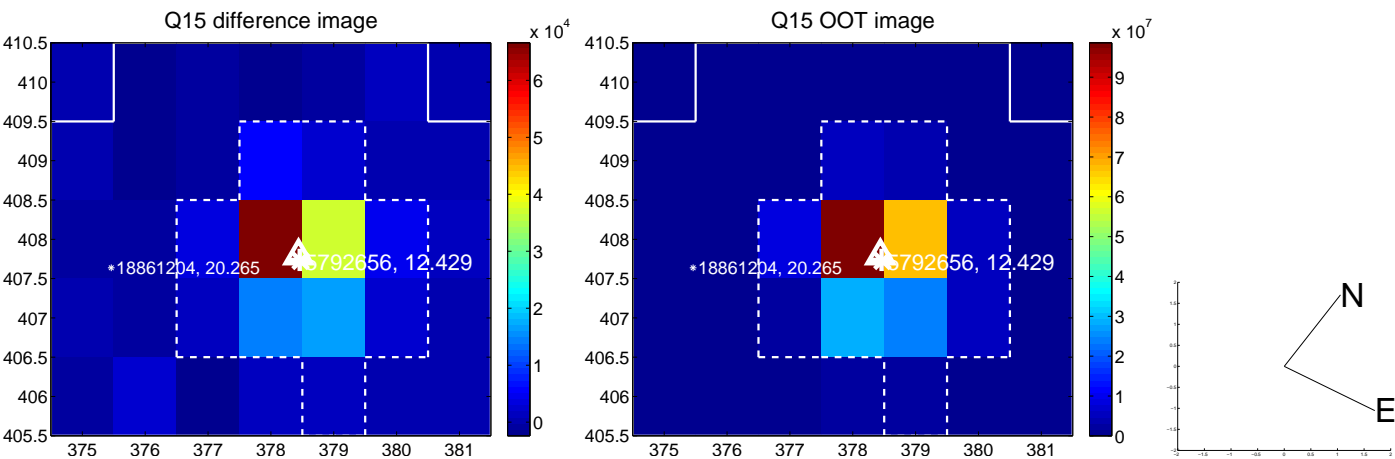
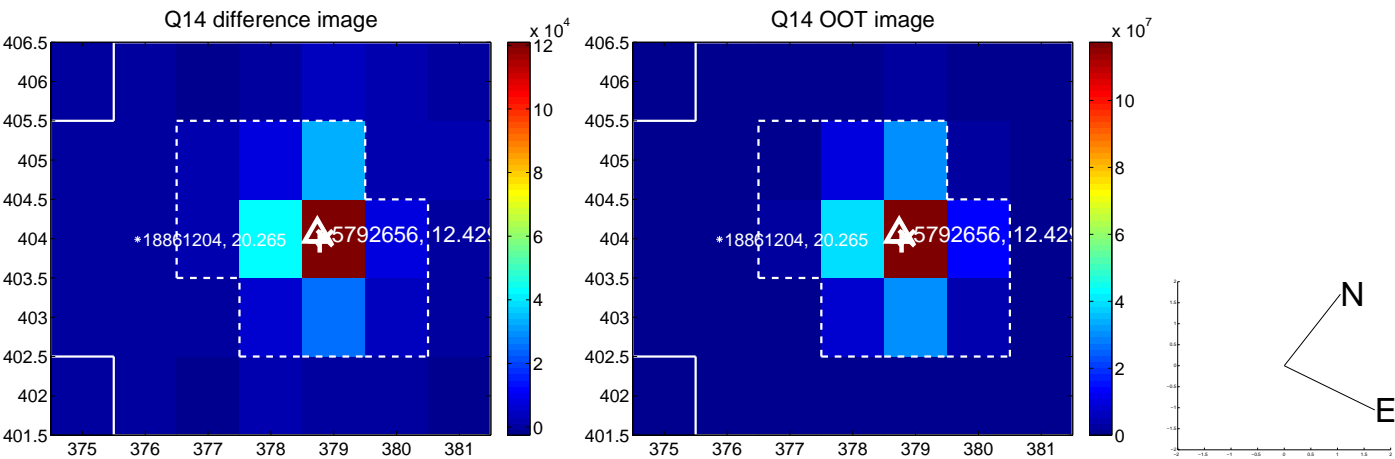
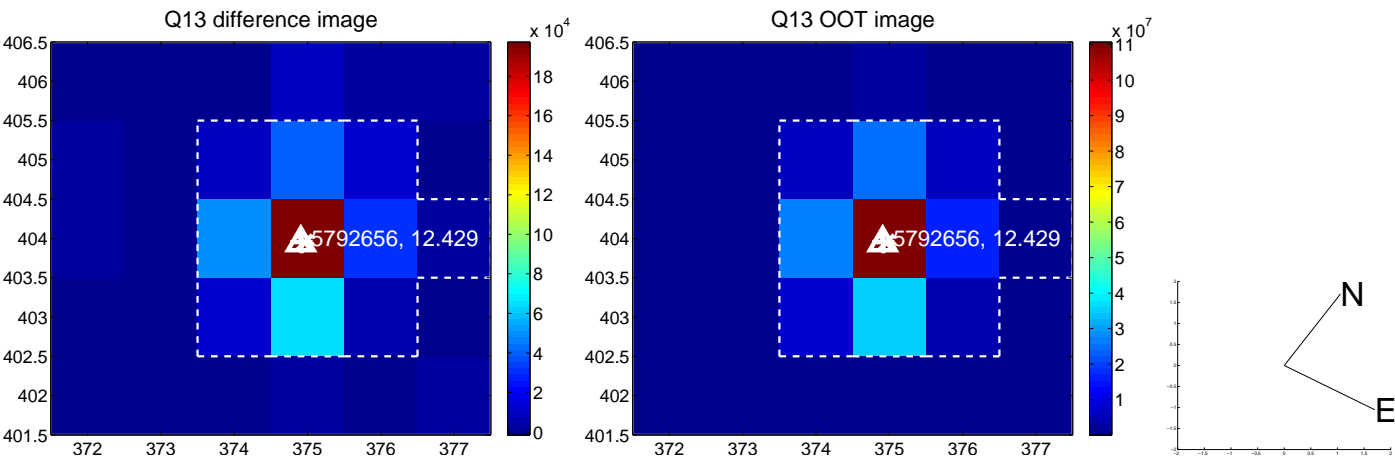
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



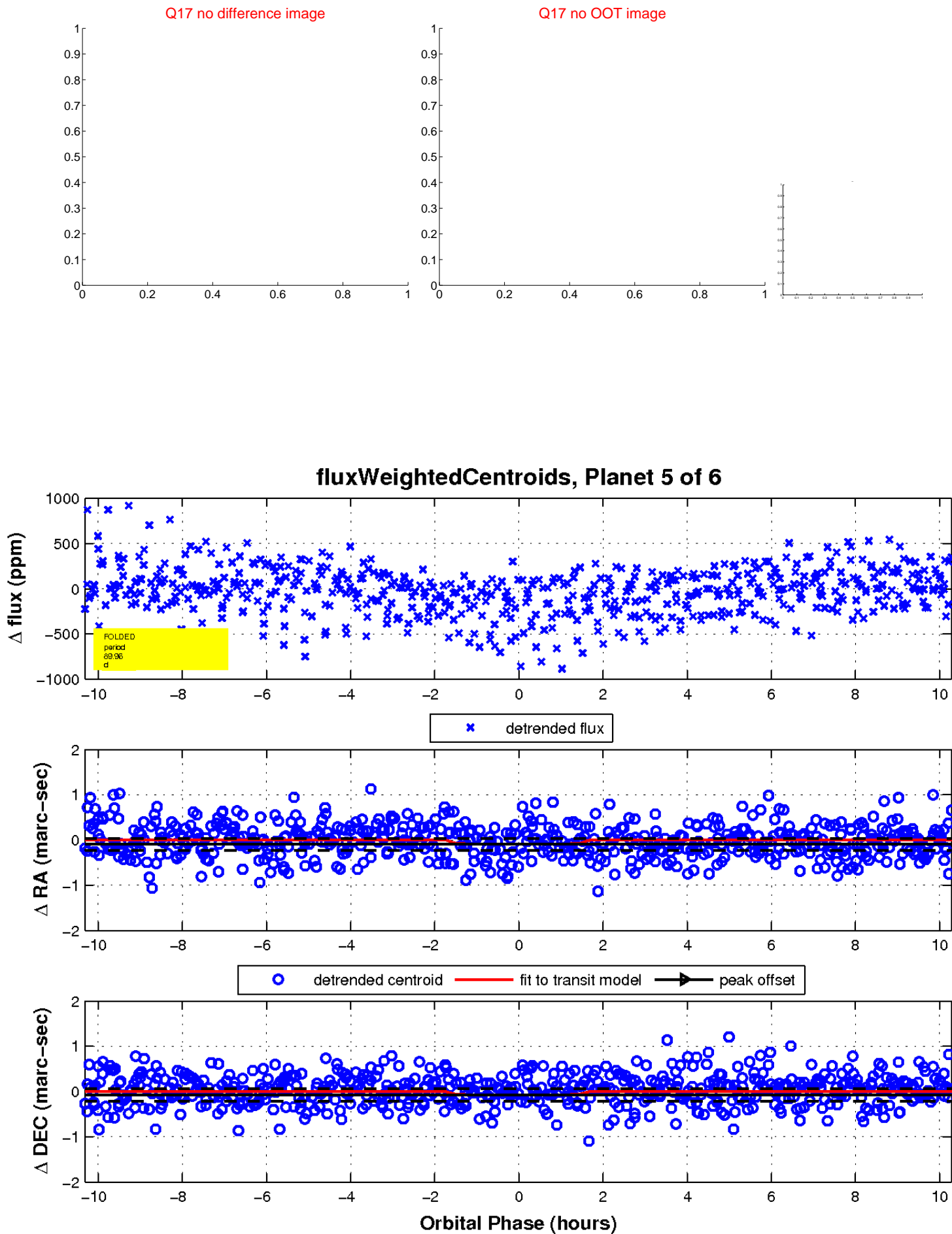
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



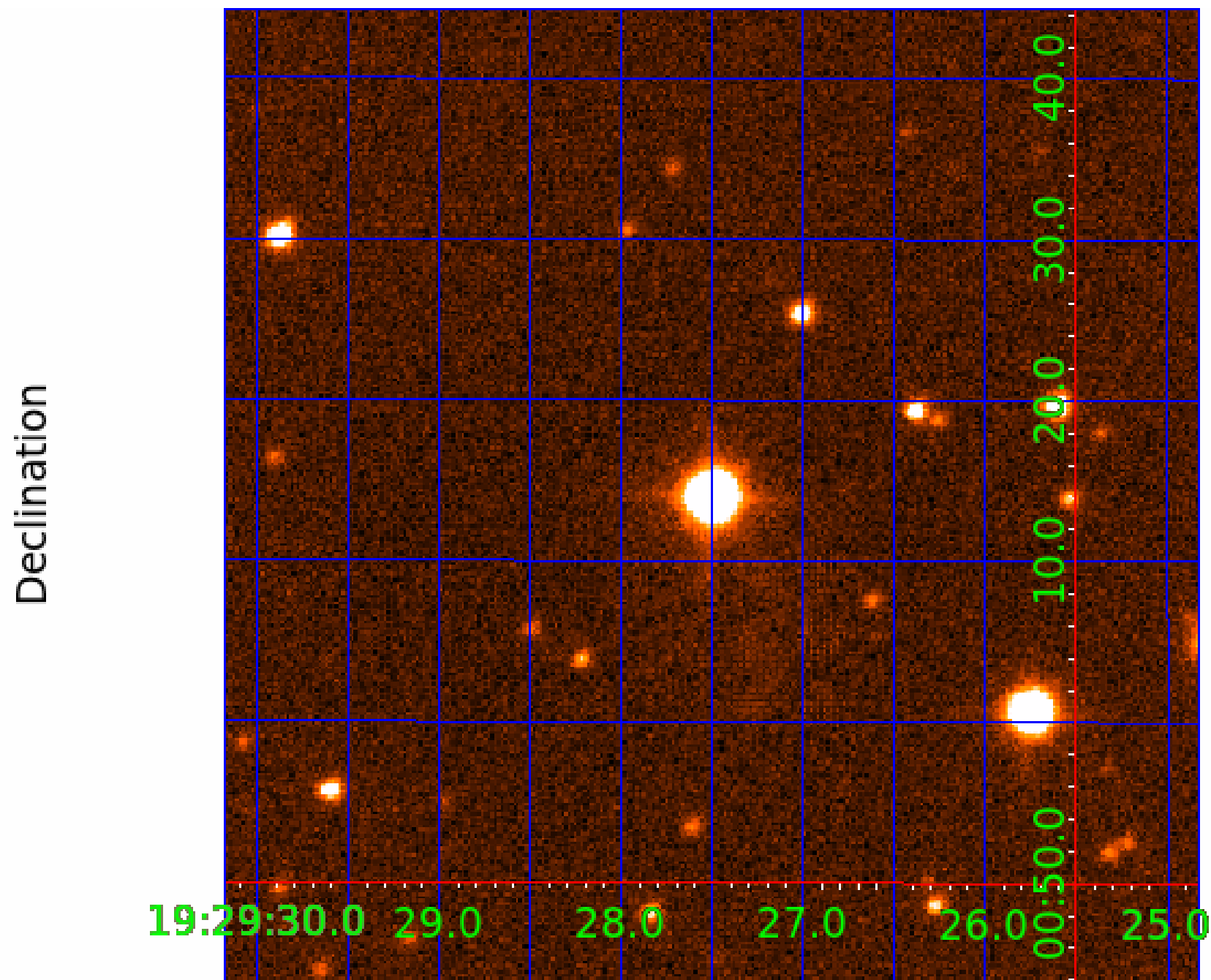
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005792656

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})
005792656-01	OBS	No	0.926748	132.261100	28.1	5.820	12.1	9.1	2.24	7328	1.22	29601.32
005792656-02	OBS	No	8.346071	133.741140	59.9	8.457	17.8	4.4	2.24	7328	2.09	1579.86
005792656-03	OBS	No	75.696395	135.551705	403.6	5.338	12.9	6.3	2.24	7328	8.56	83.53
005792656-04	OBS	No	46.694140	152.488697	374.7	5.682	12.2	9.5	2.24	7328	8.26	159.07
005792656-05	OBS	No	89.960139	192.886063	369.7	3.443	12.9	8.6	2.24	7328	4.82	66.35
005792656-06	OBS	No	52.160133	167.773368	231.2	5.417	11.7	6.1	2.24	7328	3.49	137.24

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005792656-01	OBS	FP	0.00	1	0	0	0	LPP_DV
005792656-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
005792656-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

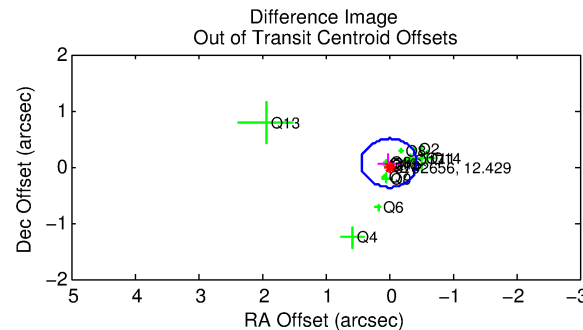
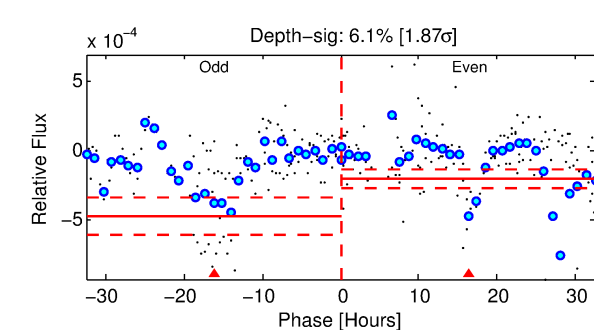
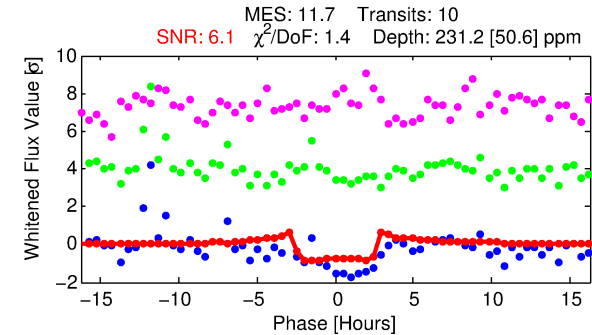
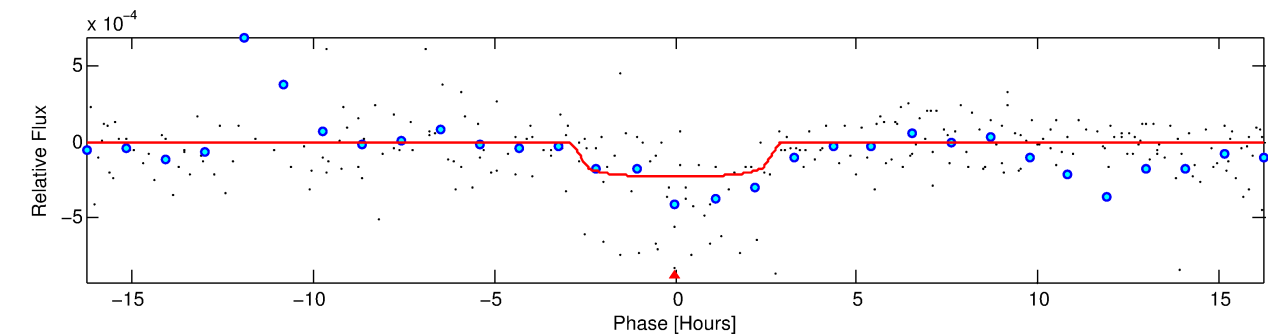
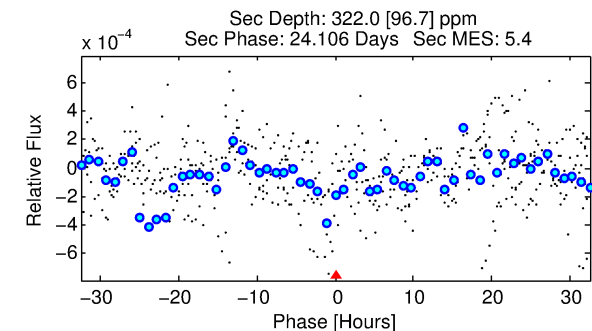
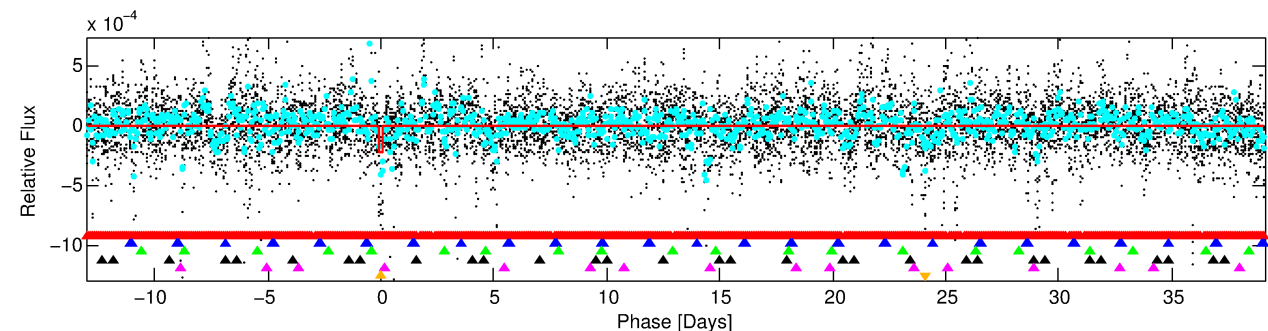
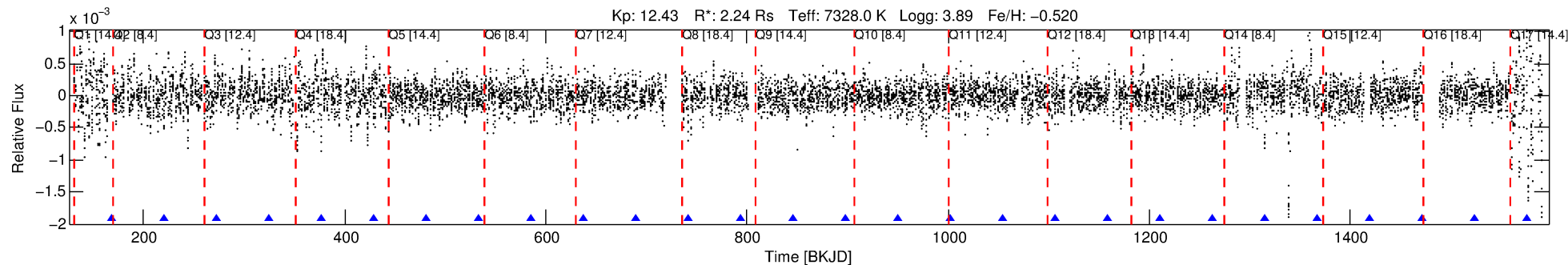
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005792656-06

No Significant Match Found

DV One-Page Summary

KIC: 5792656 Candidate: 6 of 6 Period: 52.160 d



DV Fit Results:

Period = 52.16013 [0.00077] d
Epoch = 167.7734 [0.0123] BKJD
Rp/R* = 0.0143 [0.0193]
a/R* = 70.33 [571.32]
b = 0.34 [21.31]
Seff = 137.24 [93.42]
Teq = 873 [149] K
Rp = 3.49 [4.94] Re
a = 0.3076 [0.1242] AU
Ag = 1375.45 [3858.19] [0.36 σ]
Teffp = 8218 [5612] K [1.31 σ]

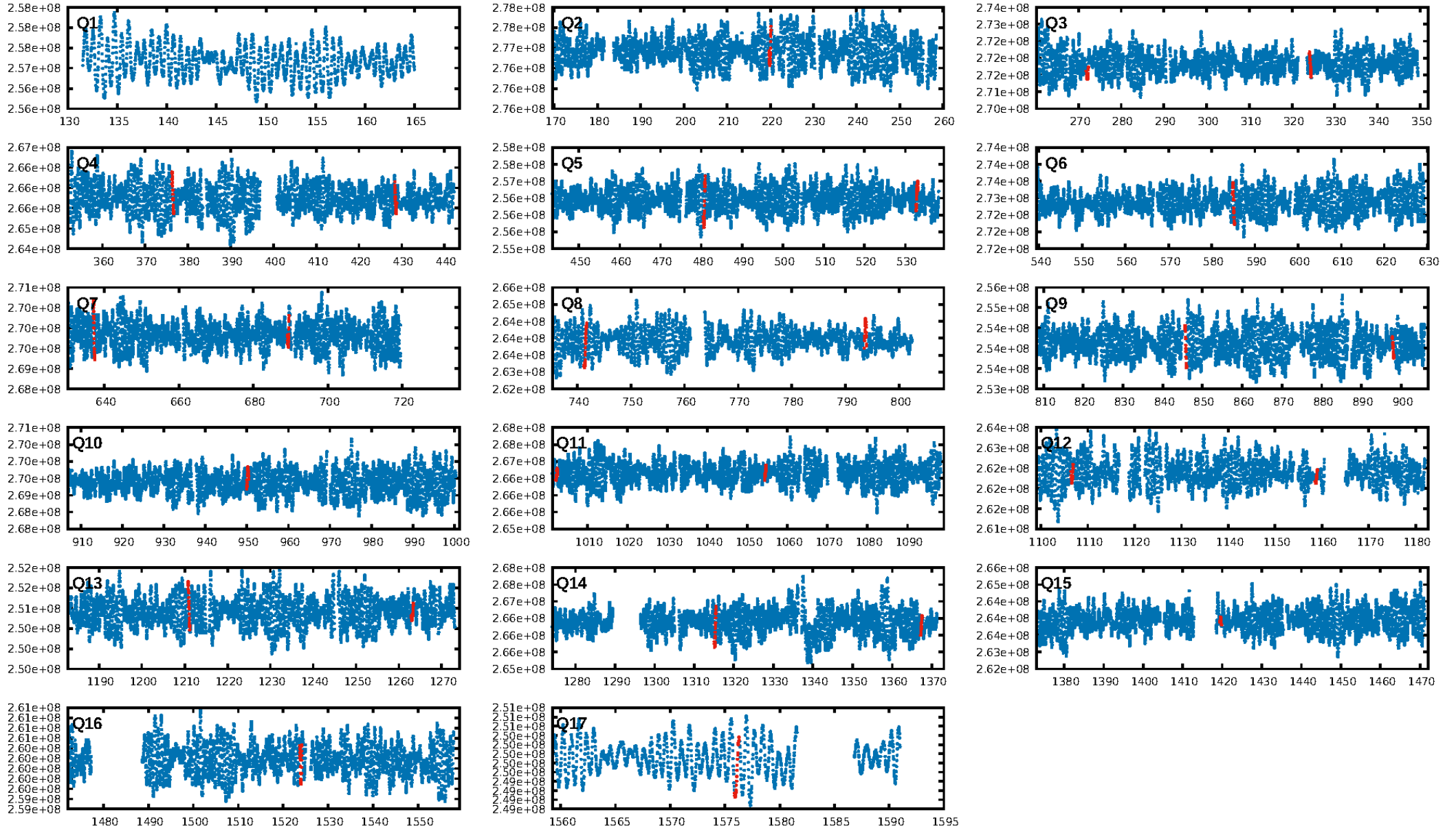
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [16.71 σ]
LongPeriod-sig: 100.0% [74.28 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.00e-11
RollingBand-fgt: 1.00 [10/10]
GhostDiagnostic-chr: 0.2806
Centroid-sig: 1.2%
Centroid-so: 0.784 arcsec [2.48 σ]
OotOffset-rm: 0.066 arcsec [0.45 σ]
KicOffset-rm: 0.127 arcsec [0.78 σ]
OotOffset-st: 4/3/4/3 [14]
KicOffset-st: 4/3/4/3 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.00 [0/15]

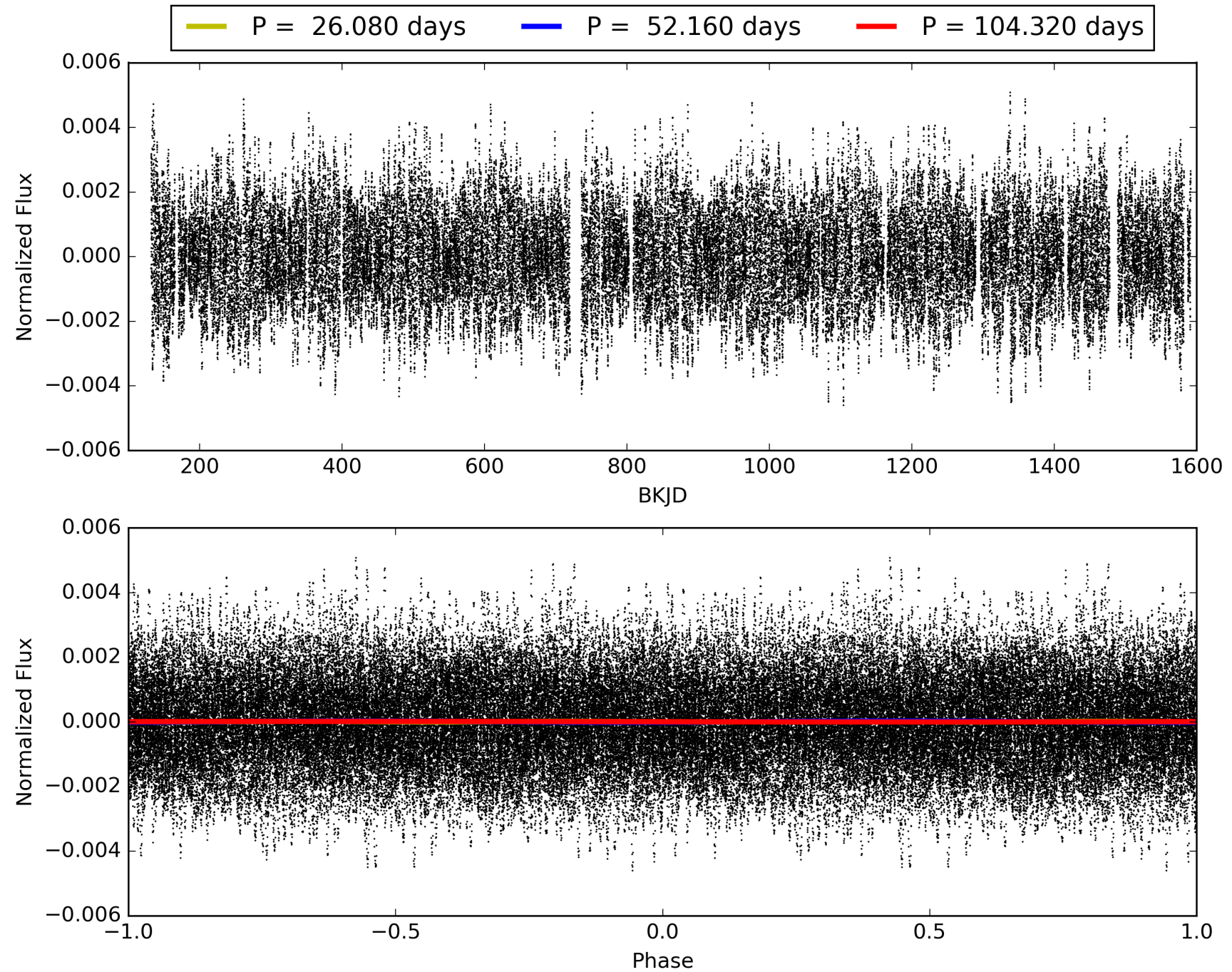
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 15:10:58 Z

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

TCE 005792656-06, PDC Light Curves

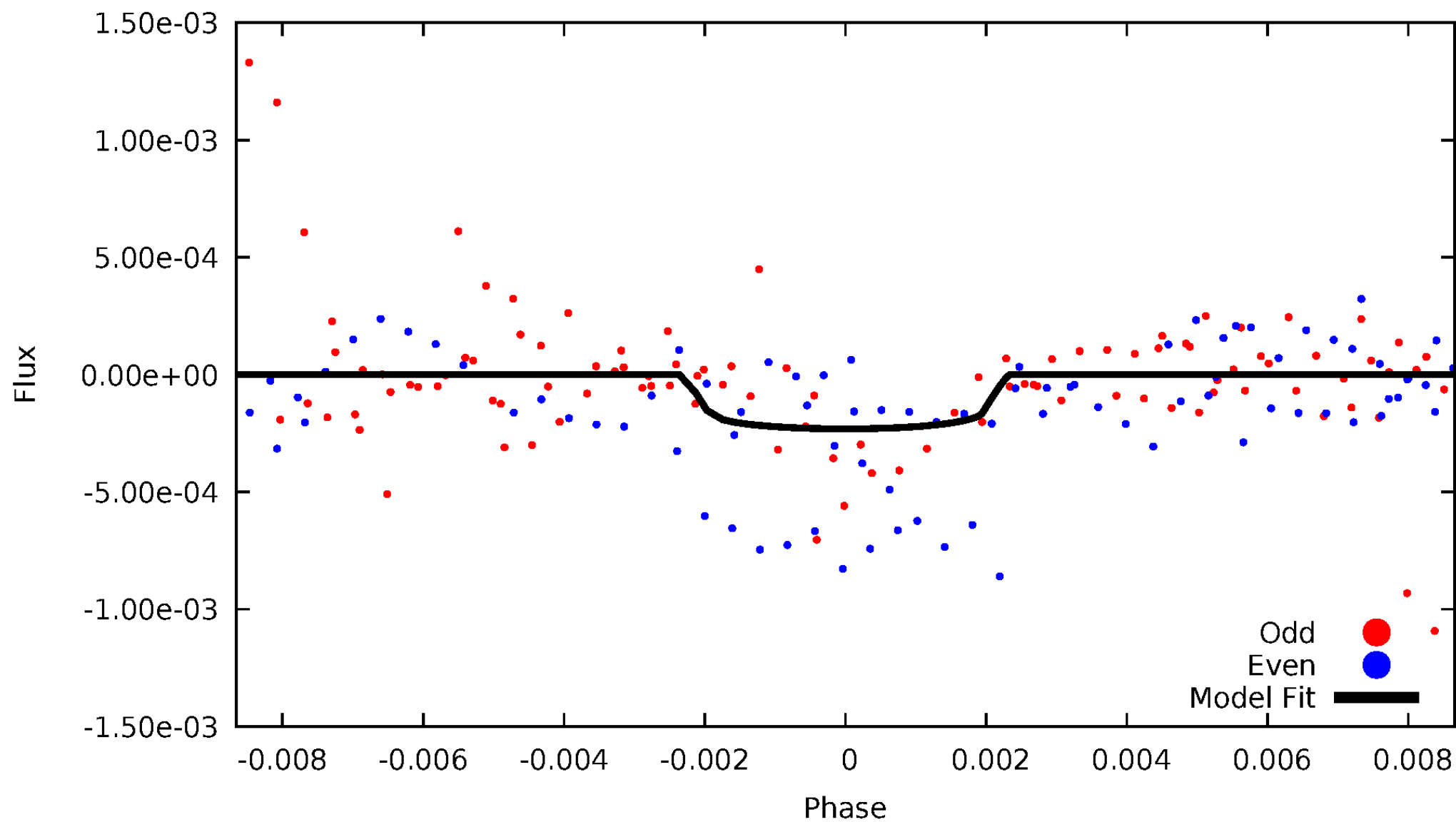


TCE 005792656-06



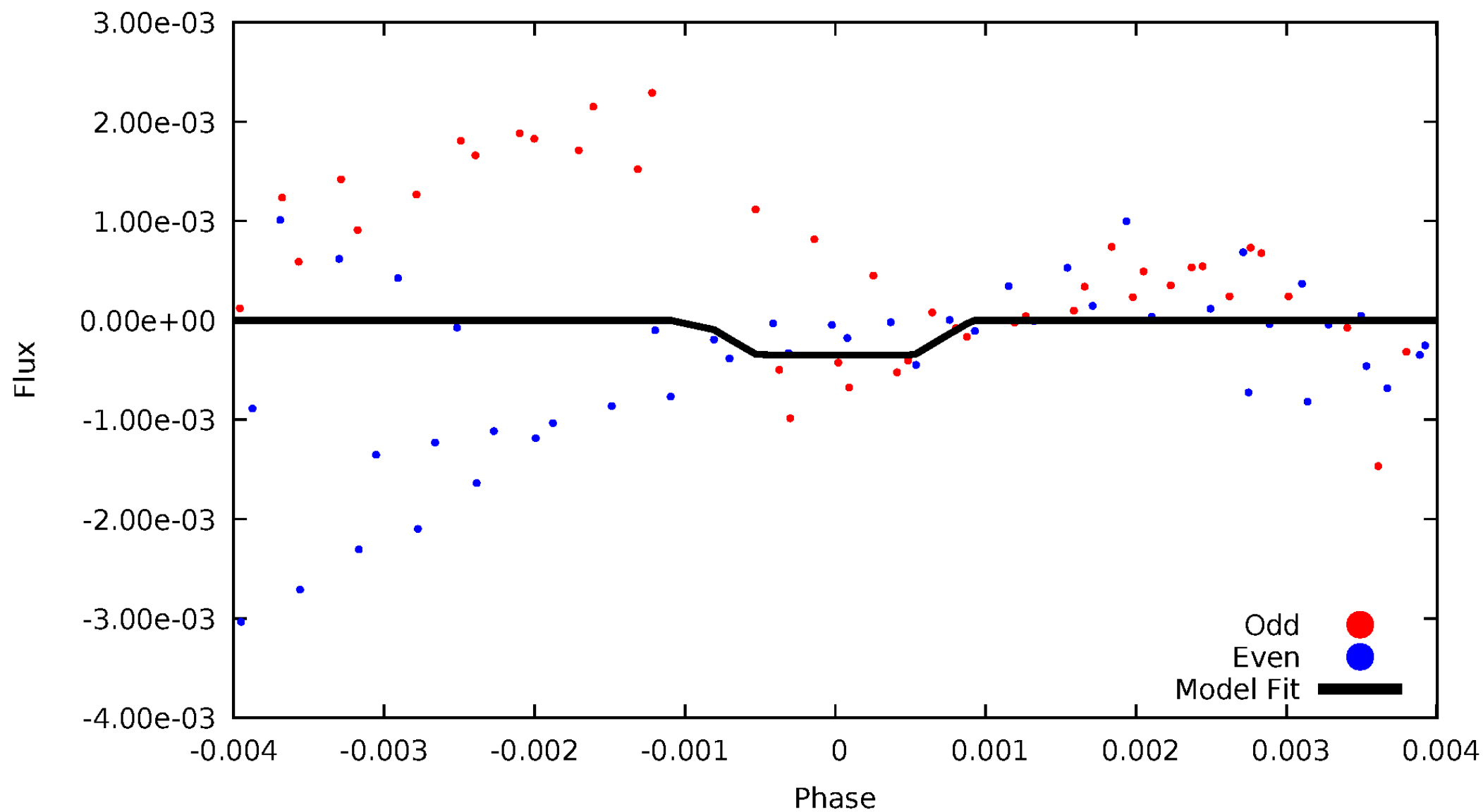
DV Odd/Even

TCE 005792656-06



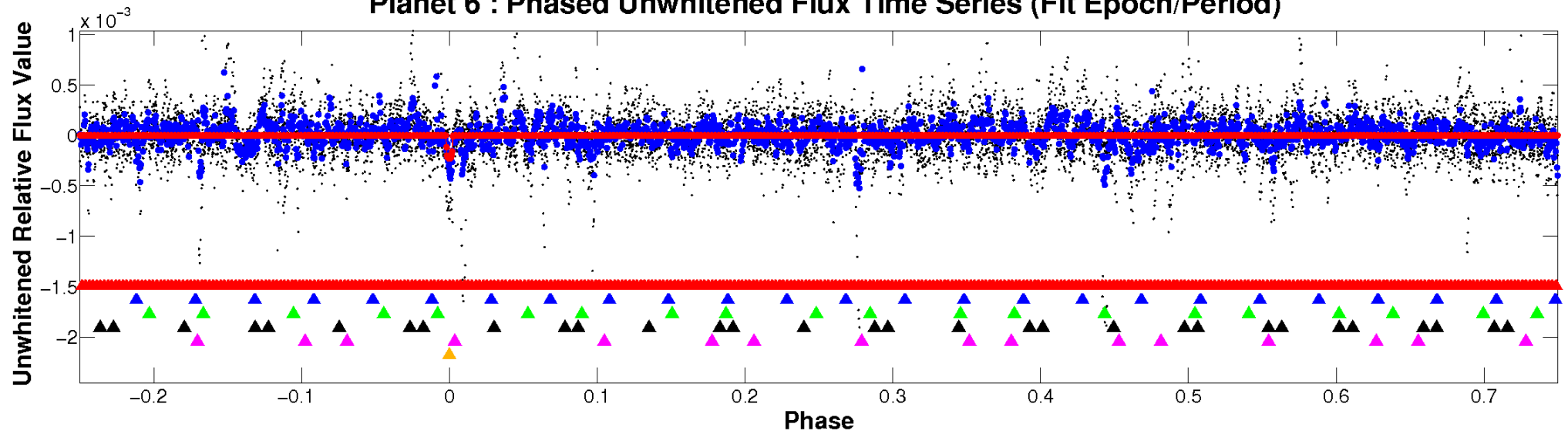
ALT Odd/Even

TCE 005792656-06

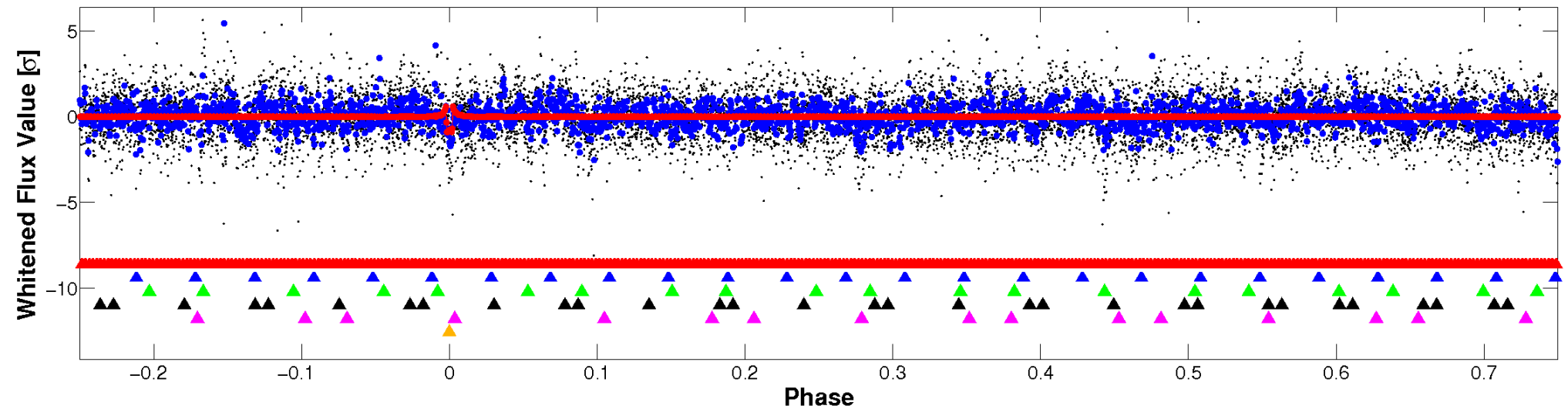


Non-Whitened Vs. Whitened Light Curve

Planet 6 : Phased Unwhitened Flux Time Series (Fit Epoch/Period)

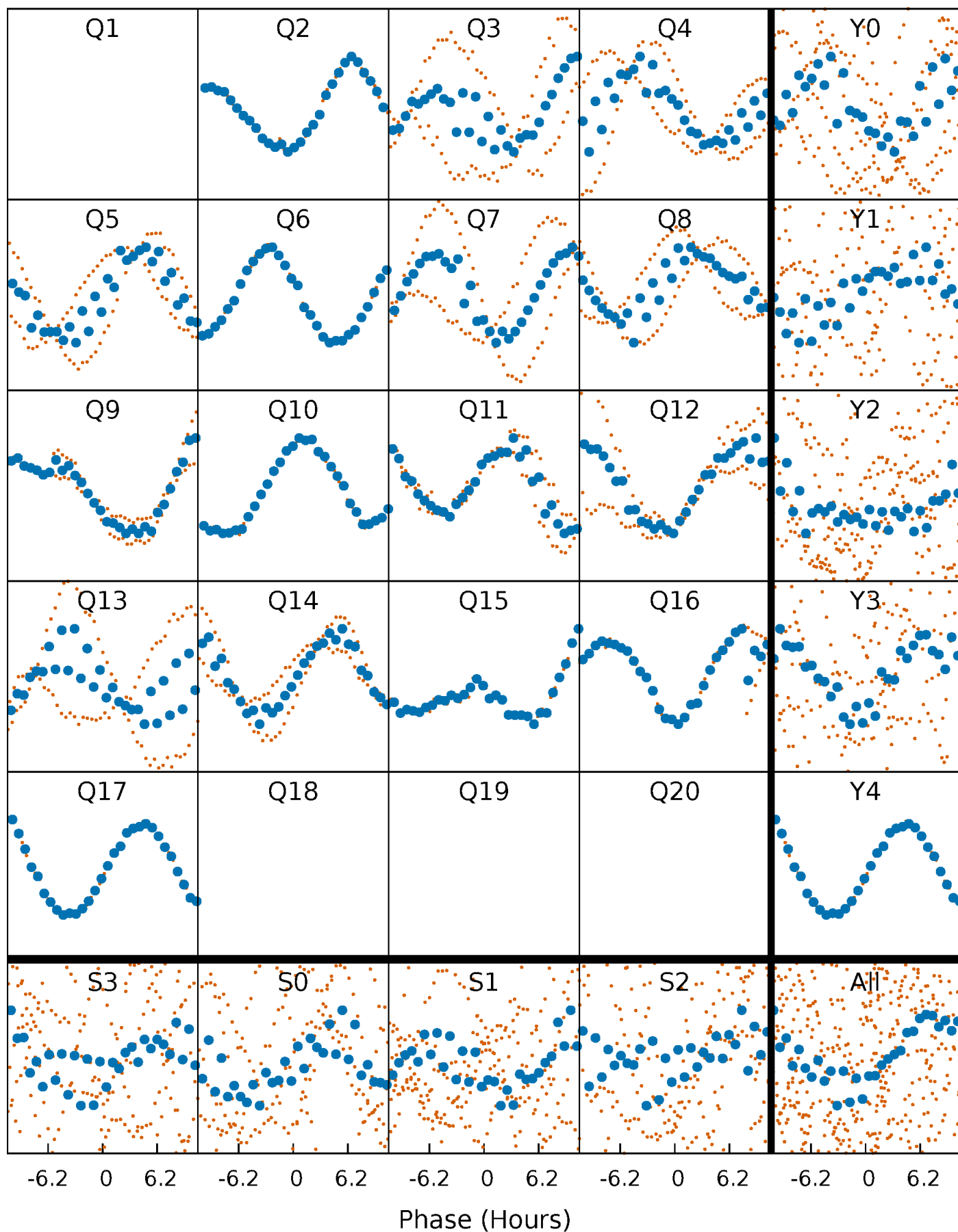


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



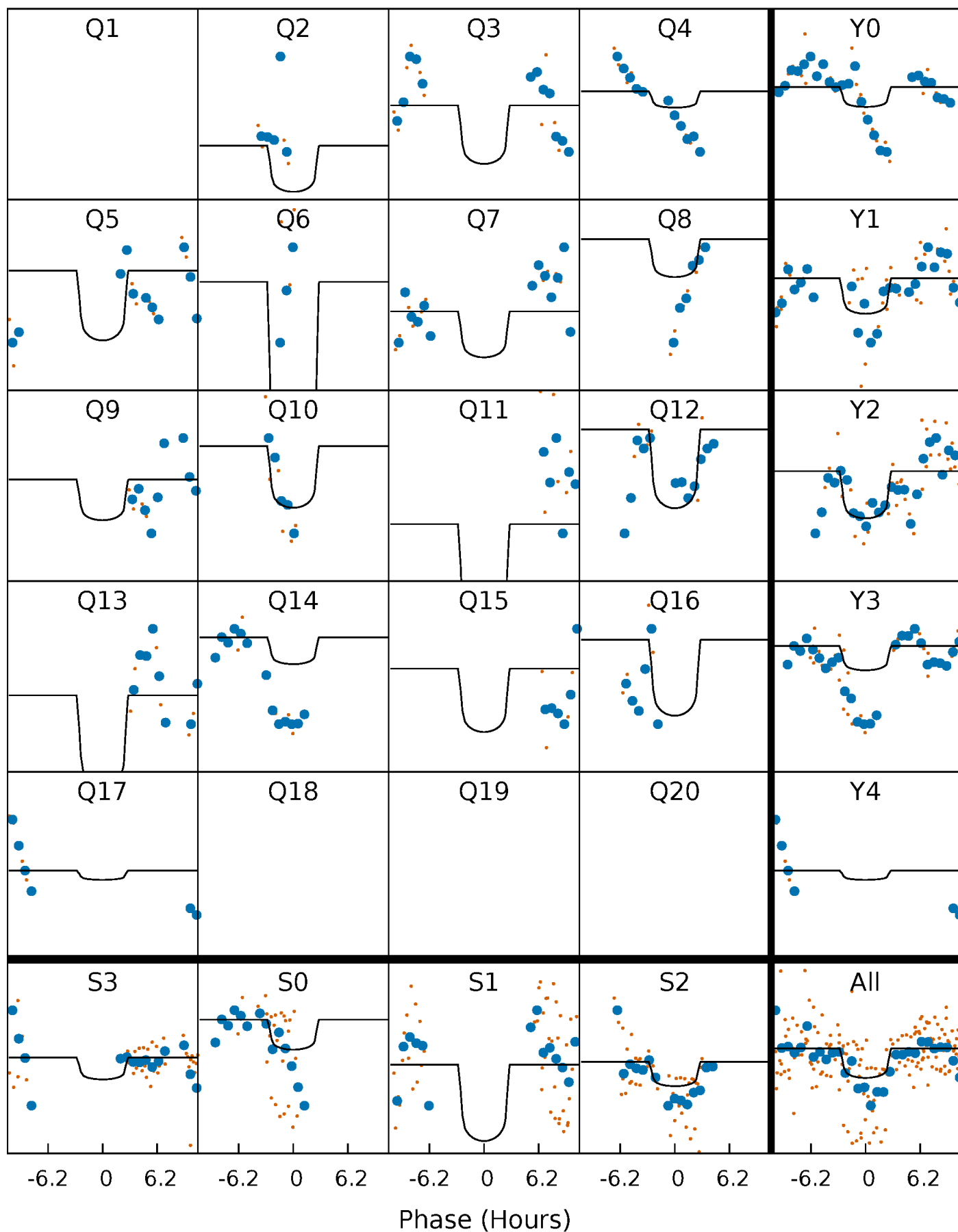
PDC Quarter-Phased Transit Curves

TCE 005792656-06 P= 52.160133 Days $T_0=167.773368$ (BKJD)



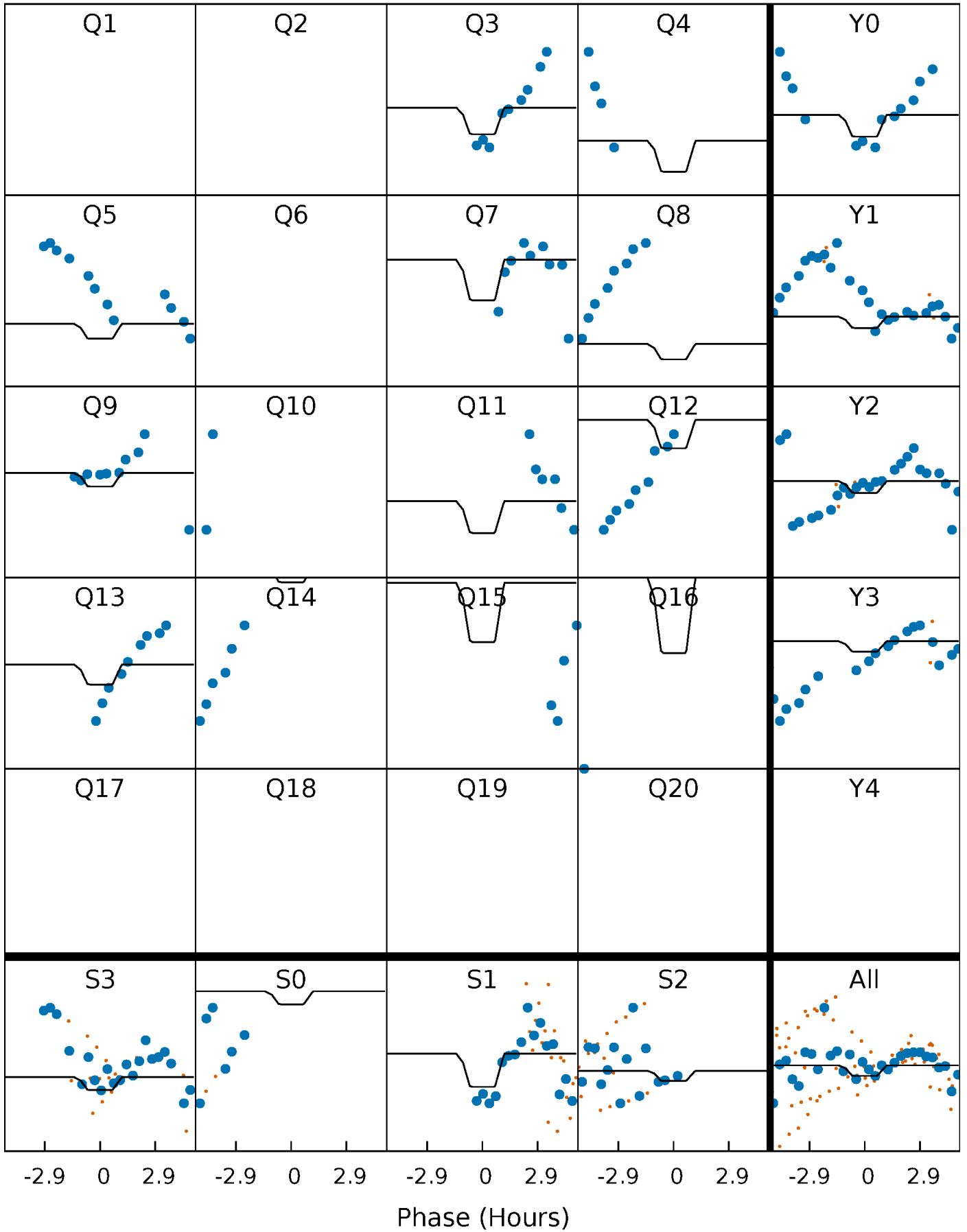
DV Quarter-Phased Transit Curves

TCE 005792656-06 P= 52.160133 Days $T_0=167.773368$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

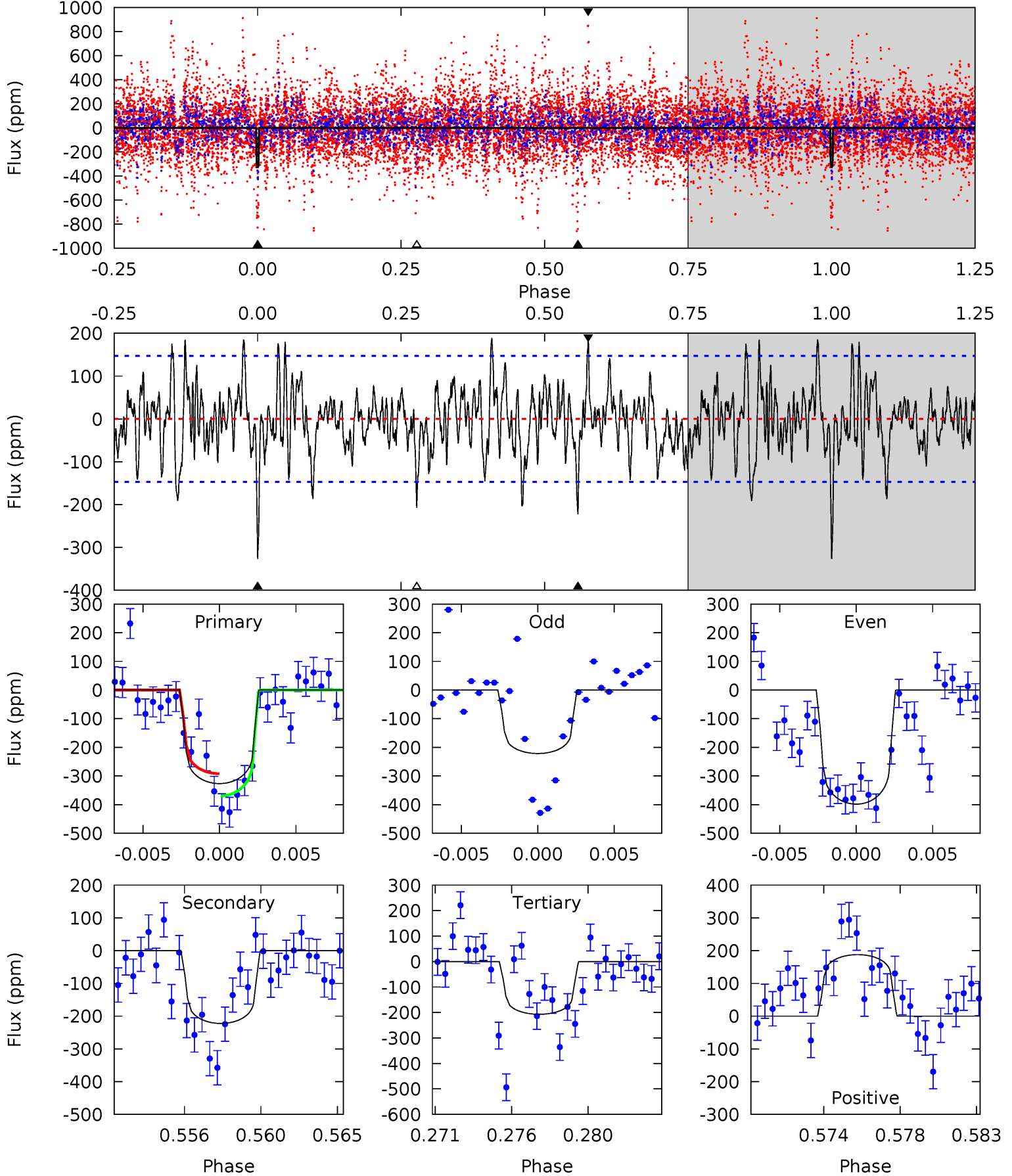
TCE 005792656-06 P= 52.154408 Days $T_0=168.042013$ (BKJD)



DV Model-Shift Uniqueness Test

005792656-06, P = 52.160133 Days, E = 115.613235 Days

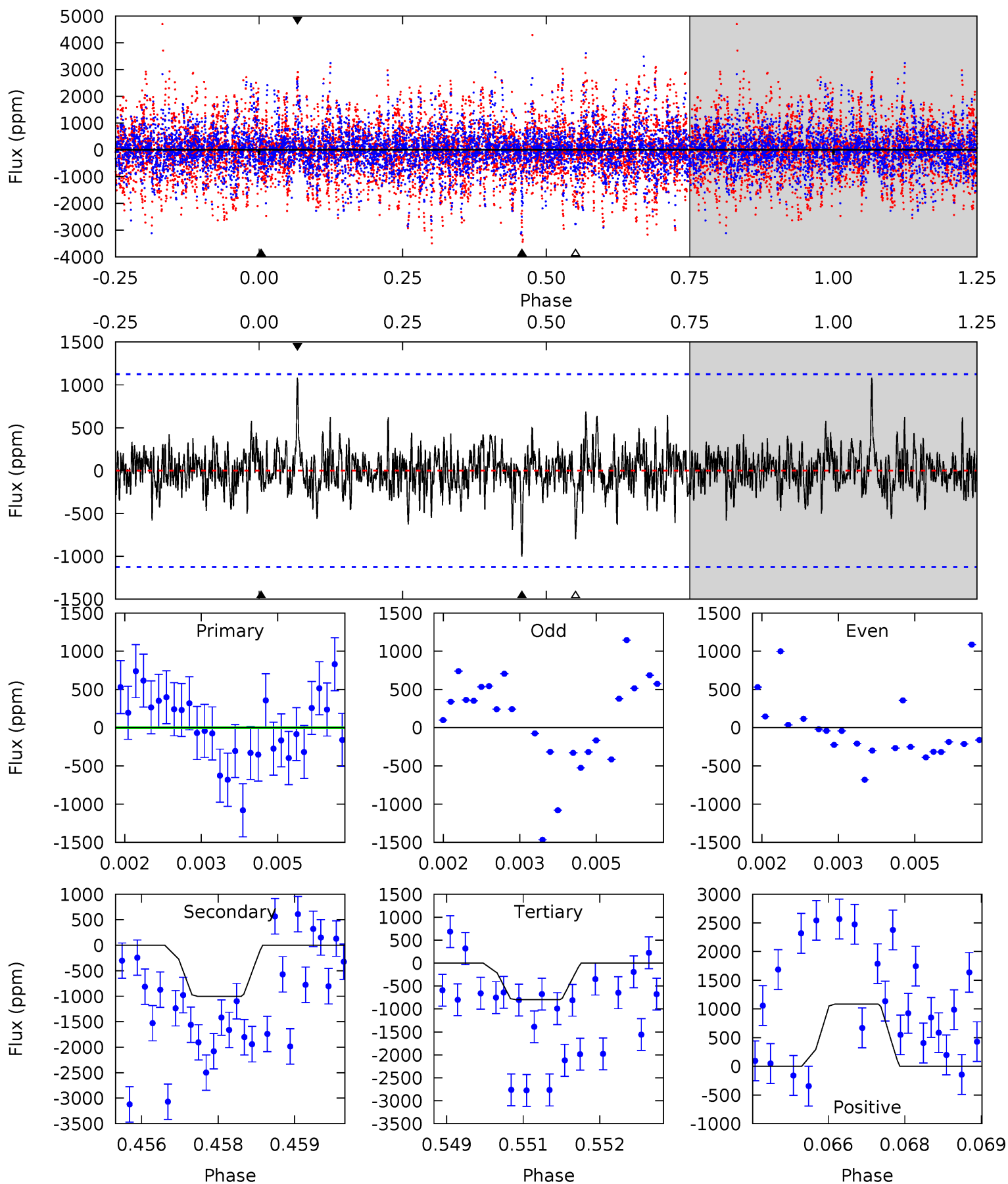
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	7.82	7.28	6.61	5.18	2.84	2.25	4.21	4.88	0.54	1.21	2.86	1.20	0.37	1.38



Alt Model-Shift Uniqueness Test

005792656-06, P = 52.154408 Days, E = 115.887605 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.73	4.78	3.82	5.18	5.37	3.16	0.96	-3.09	-4.45	0.97	-0.39	0.18	0.53	0.52	0.52



Stellar Parameters For KIC 005792656

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7328^{+207}_{-311}	$3.891^{+0.392}_{-0.123}$	$-0.520^{+0.250}_{-0.300}$	$2.242^{+0.487}_{-0.905}$	$1.427^{+0.210}_{-0.280}$	$0.178^{+0.526}_{-0.064}$
	+3%/-4%	+10%/-3%	+48%/-58%	+22%/-40%	+15%/-20%	+295%/-36%
Source	KIC0	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 005792656-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-222 ± 28	$4.42^{+3.86}_{-2.96}$	1187^{+98}_{-133}	6292^{+6159}_{-1535}	587^{+4686}_{-420}
Alt.	-1002 ± 209	$5.10^{+4.47}_{-3.19}$	1187^{+92}_{-123}	8872^{+11363}_{-2571}	1935^{+12309}_{-1401}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming $A=0.3$)

A_{obs} = Observed Albedo (Assuming $T=0$)

If a secondary eclipse is present, the system is likely an EB if $T_{obs} \gg T_{max}$ AND $A_{obs} \gg 1.0$

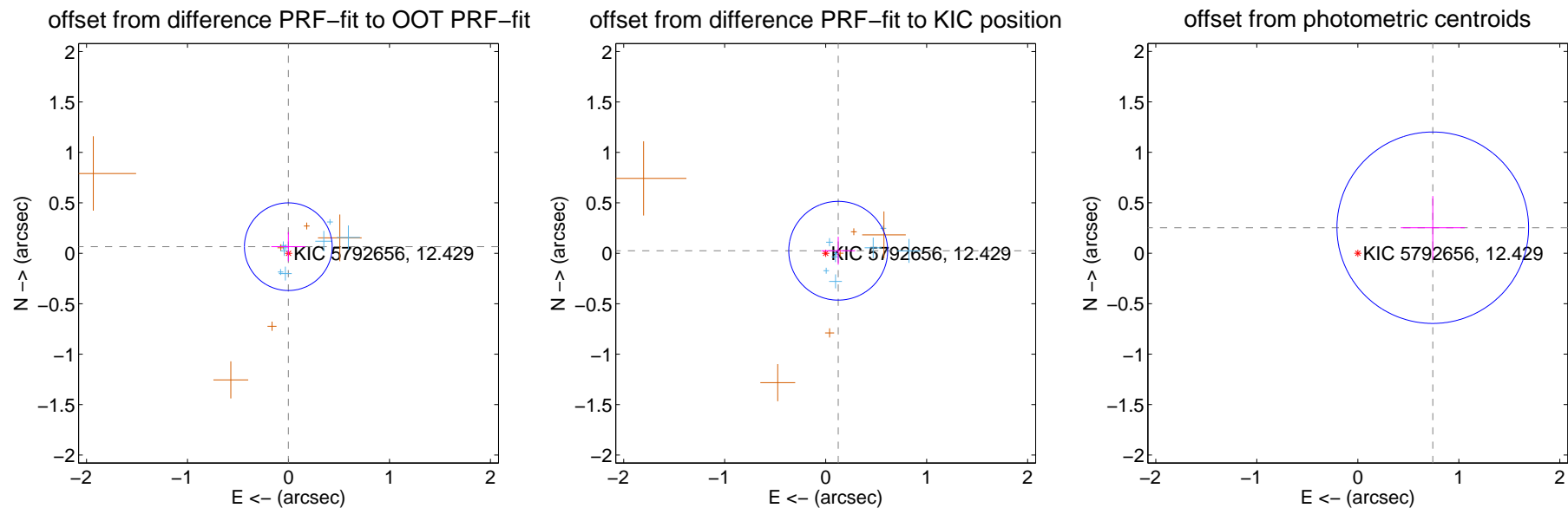
DV Centroid Data

Supplemental centroid analysis for 005792656-06. Kepler magnitude: 12.43. Transit SNR 6.13

There are 8 quarters with good PRF difference image offsets

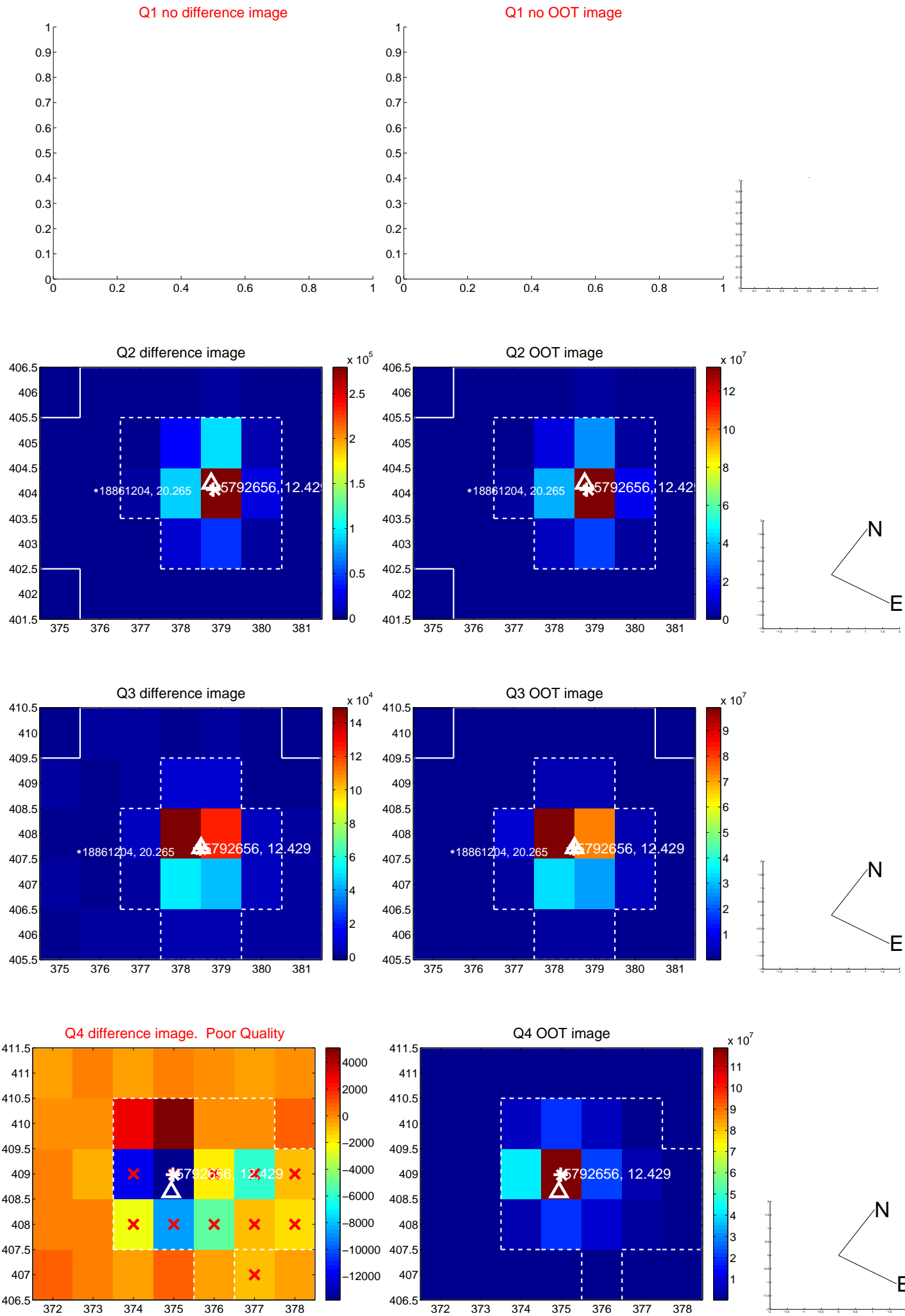
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.066 ± 0.145	0.45	0.002 ± 0.169	0.065 ± 0.144
PRF-fit source offset from KIC position	0.127 ± 0.163	0.78	-0.124 ± 0.167	0.025 ± 0.138
photometric centroid source offset	0.78 ± 0.32	2.48	-0.74 ± 0.32	0.25 ± 0.31

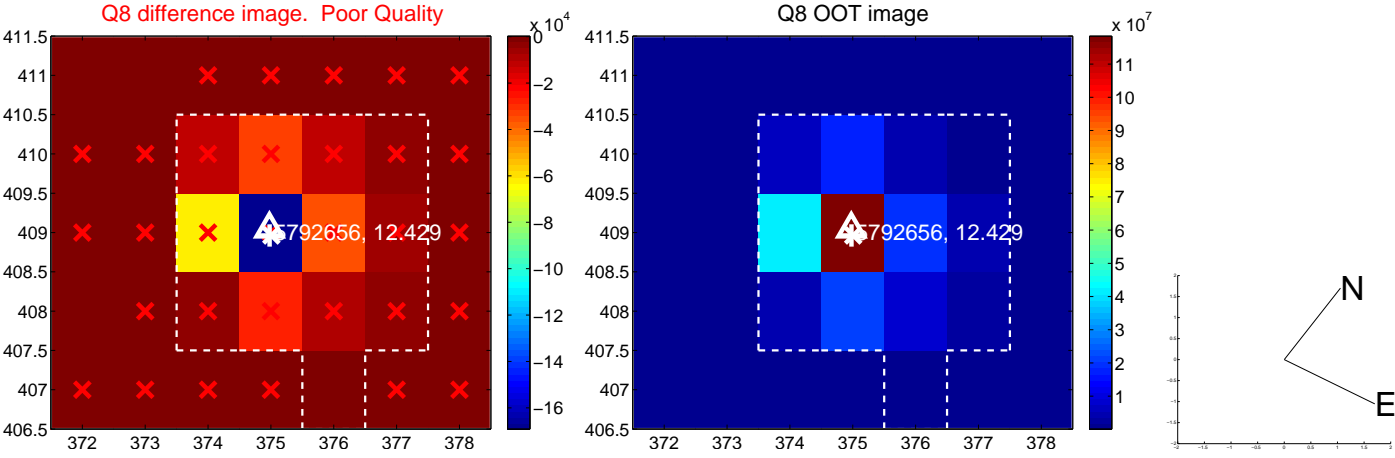
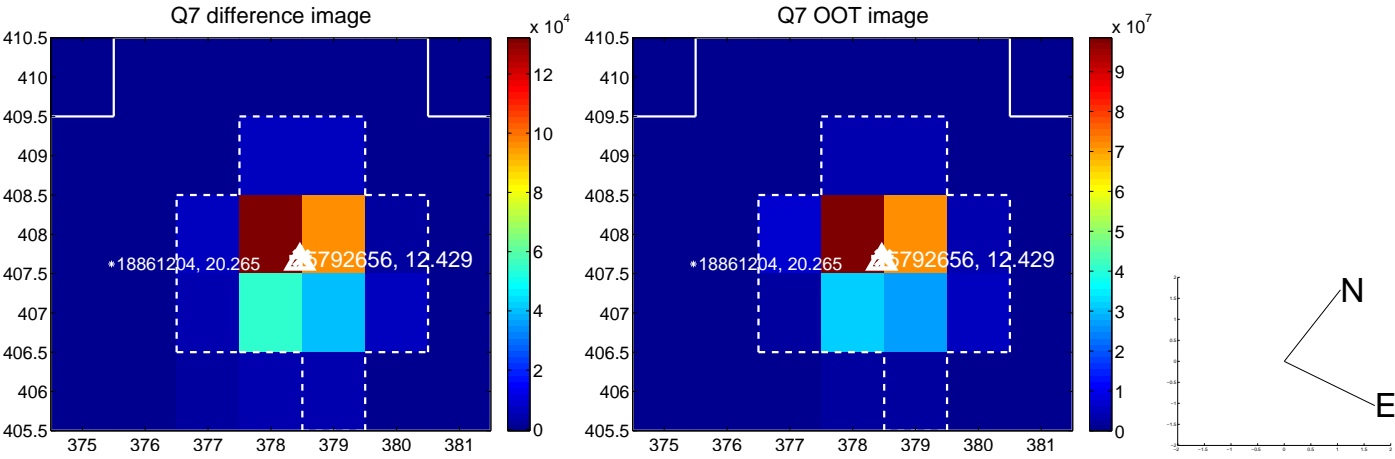
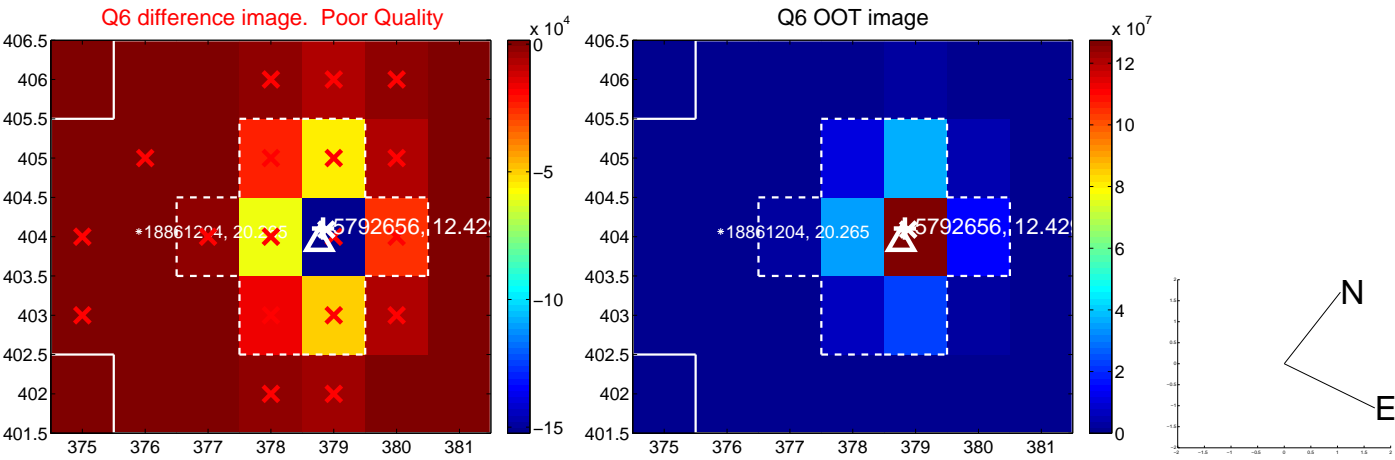
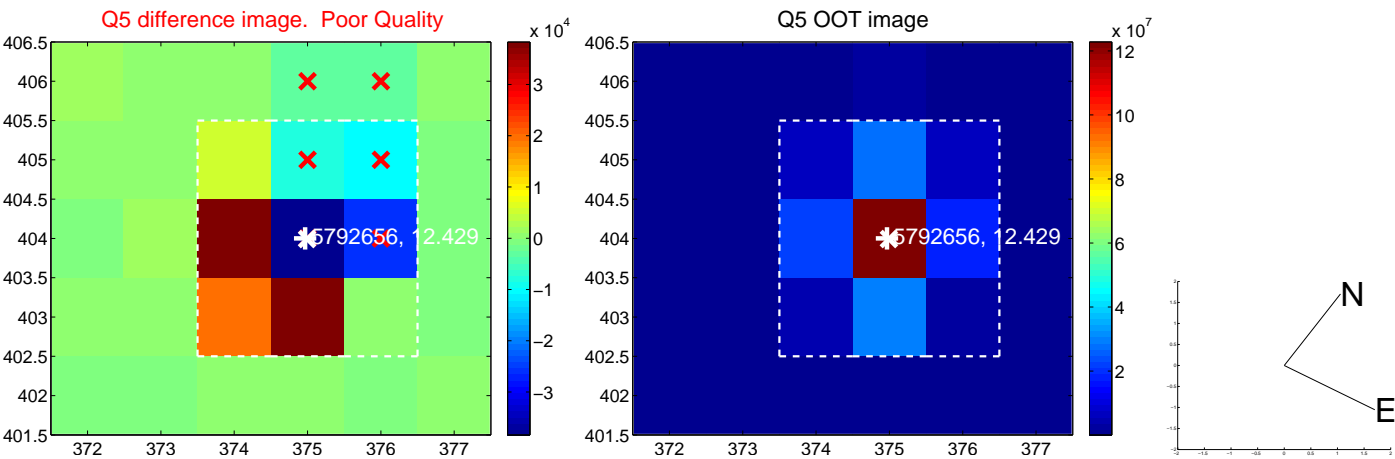


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

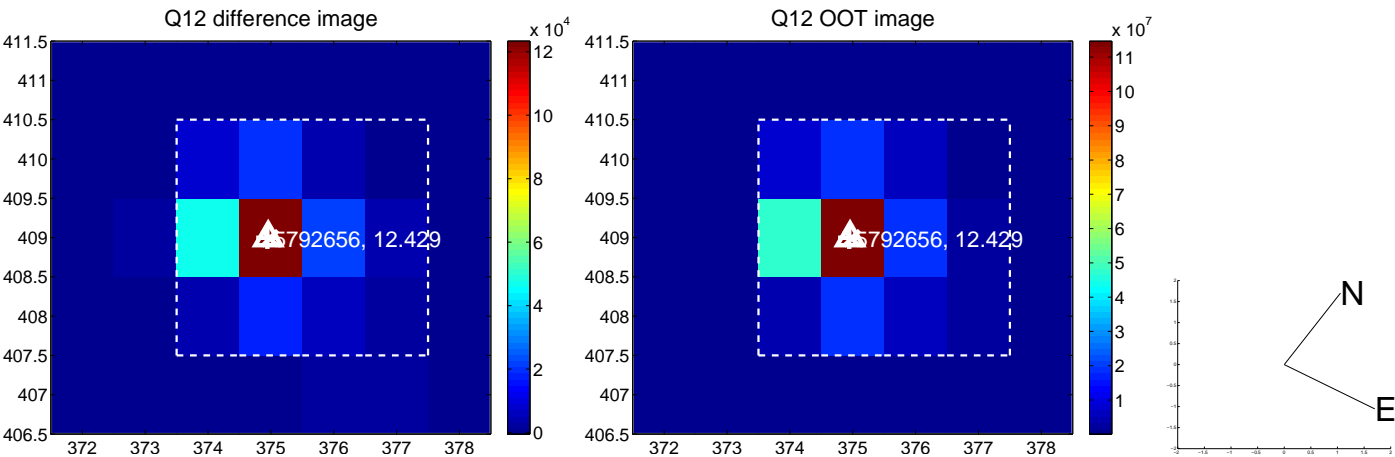
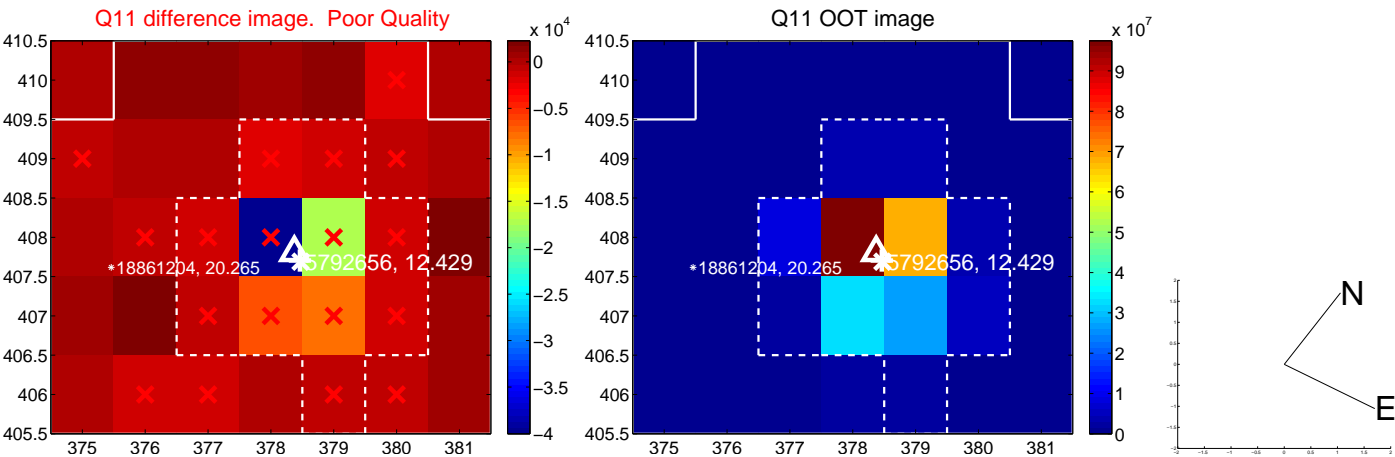
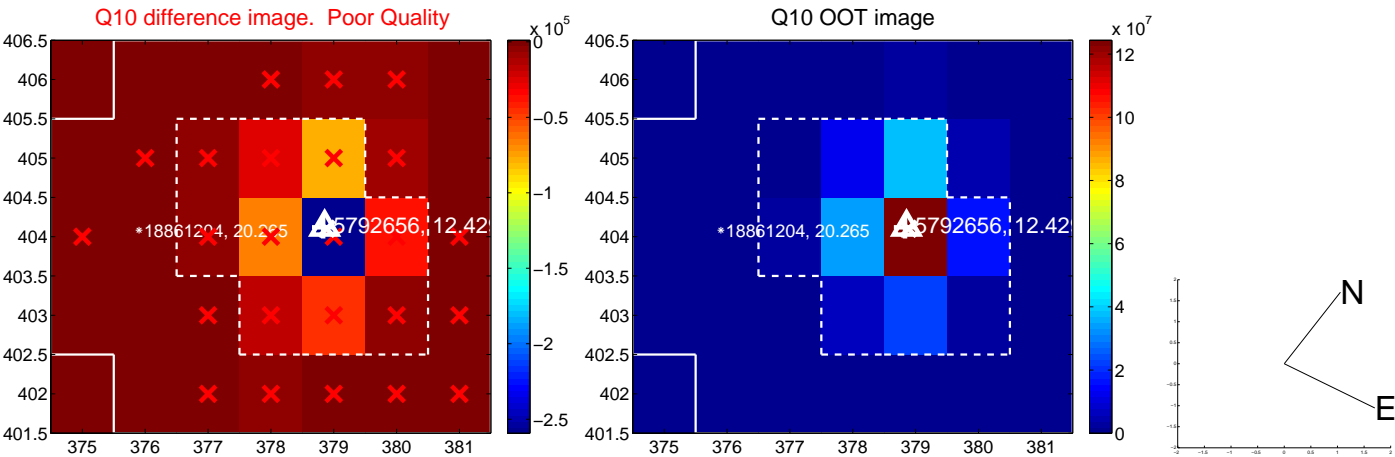
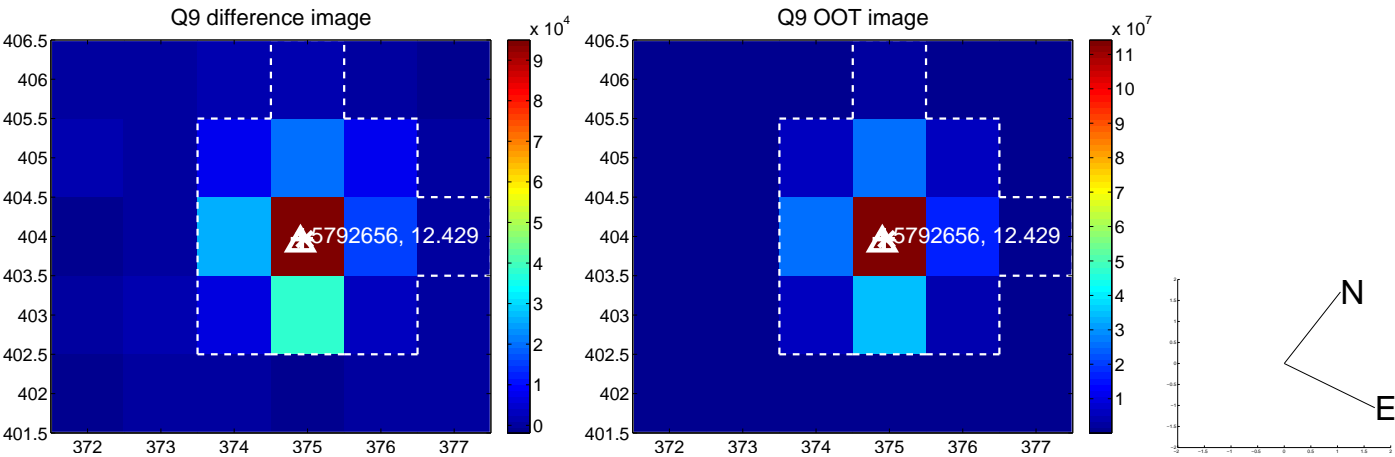
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



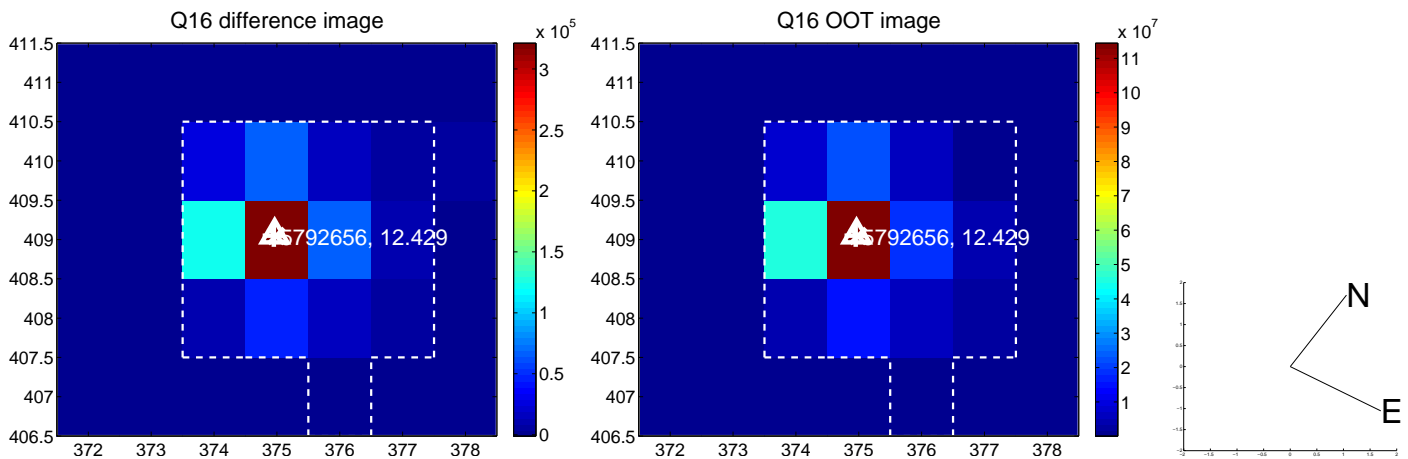
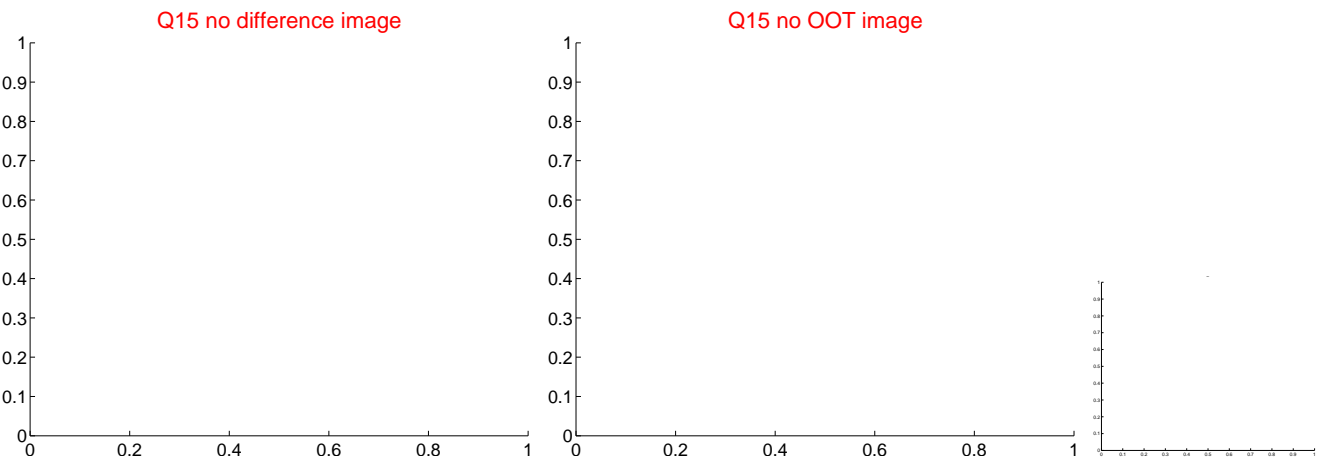
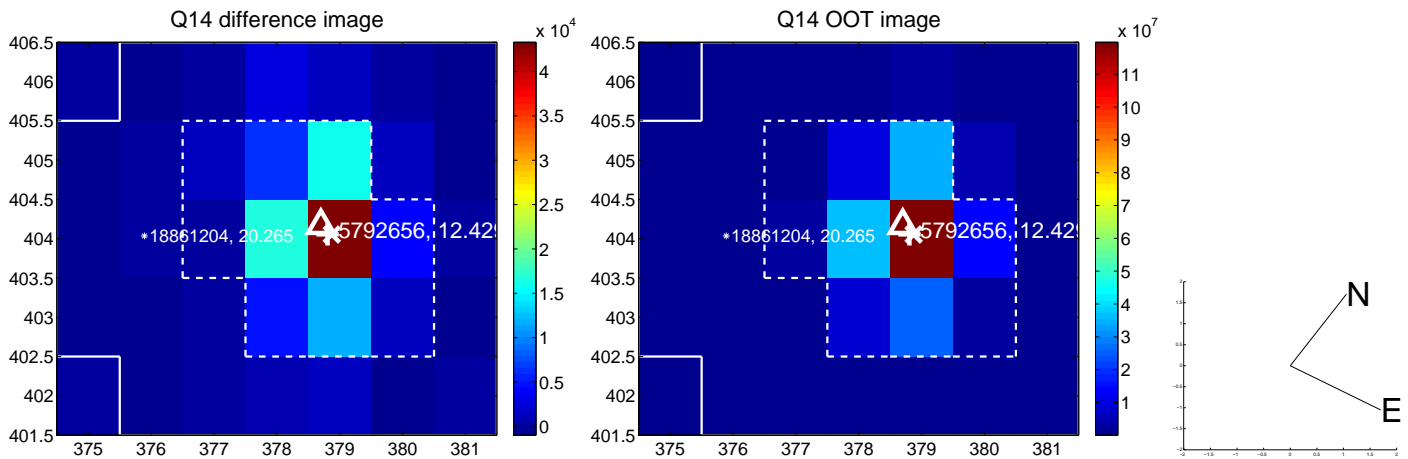
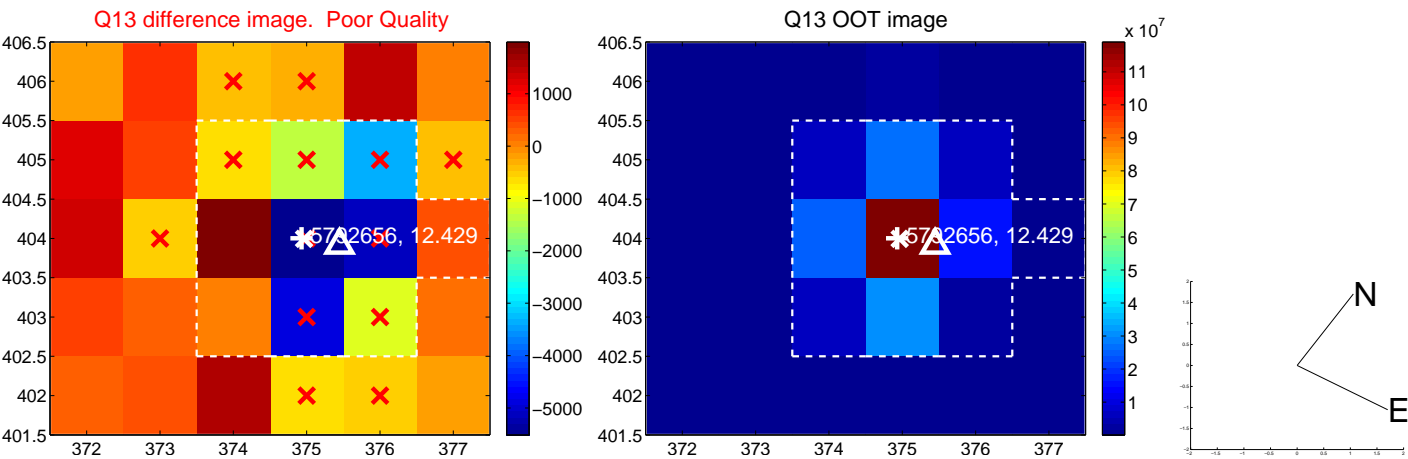
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



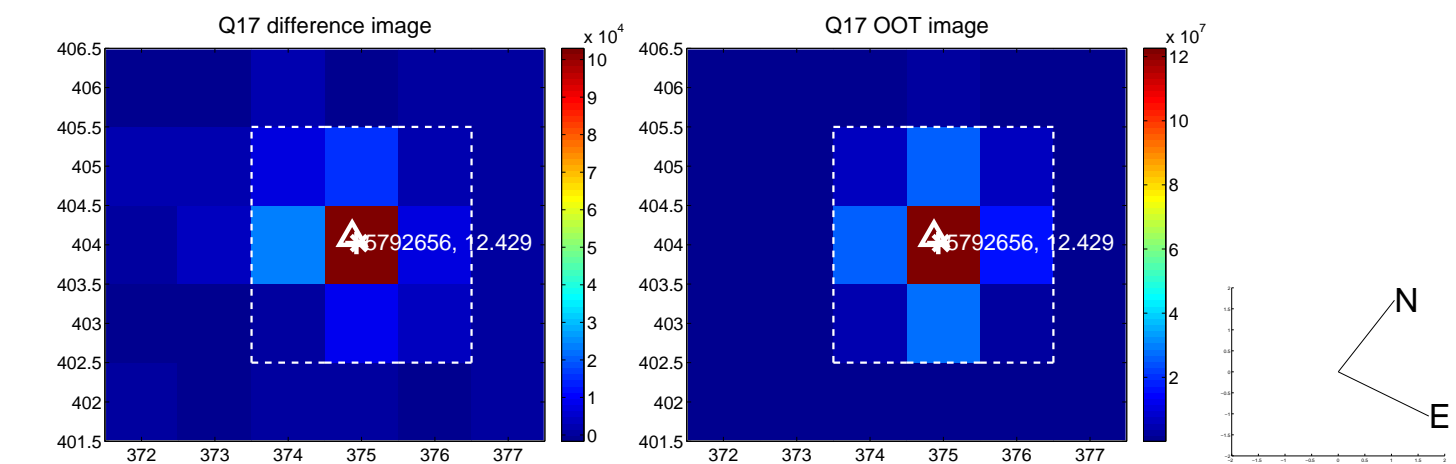
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



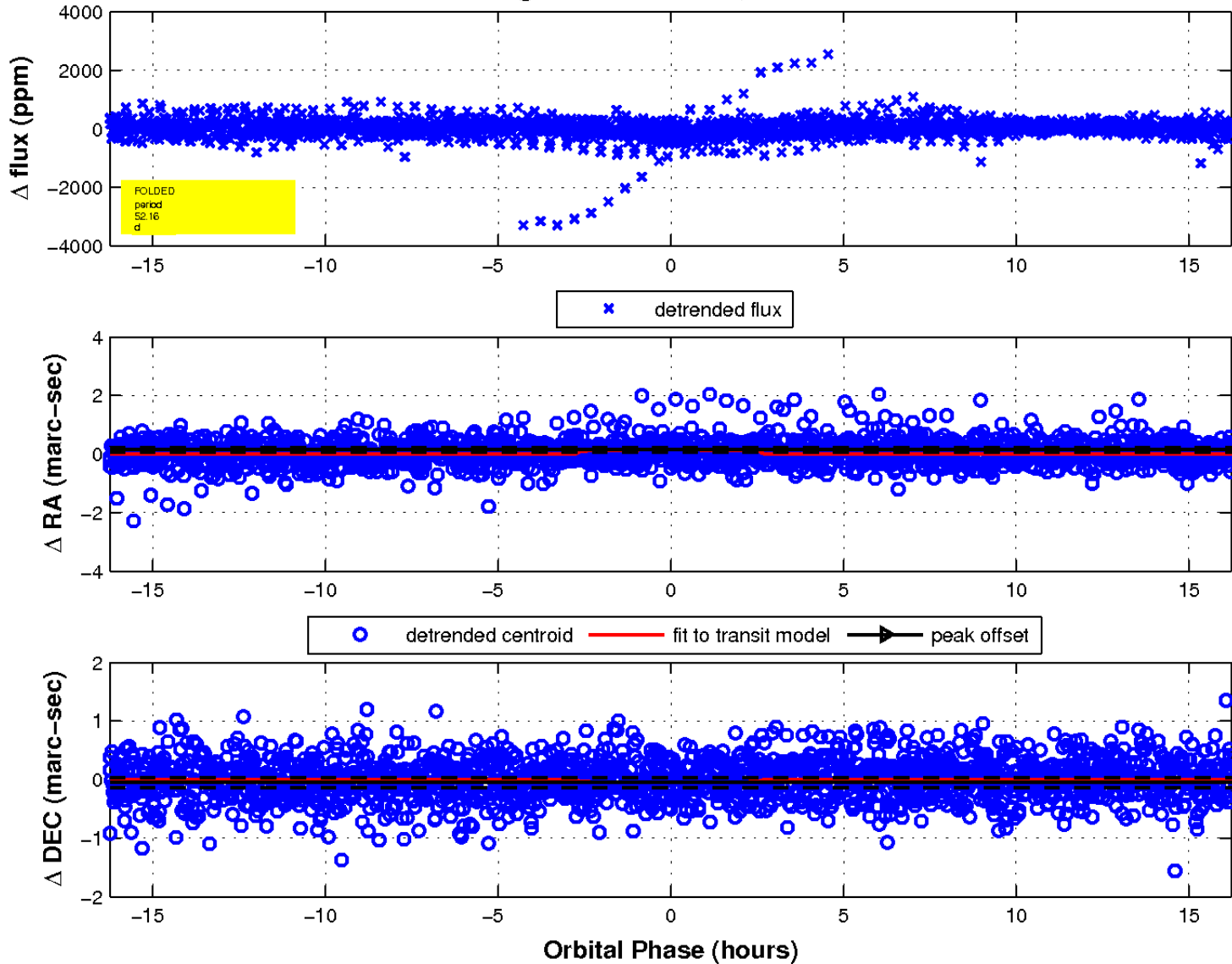
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 6 of 6



UKIRT Image

