

KIC 007658578

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})
007658578-01	OBS	No	1.131224	132.582836	11.9	6.202	28.4	4.2	1.44	6621	0.51	6866.98
007658578-02	OBS	No	623.318937	306.326911	160.2	4.500	11.9	-1.0	1.44	6621	1.84	1.52
007658578-03	OBS	No	4.523228	134.858790	149.0	4.482	10.5	10.9	1.44	6621	2.02	1082.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007658578-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_SATURATED
007658578-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007658578-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

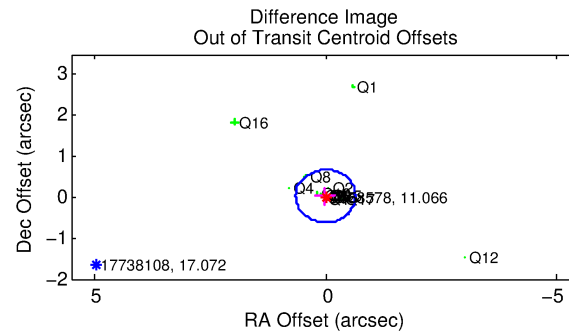
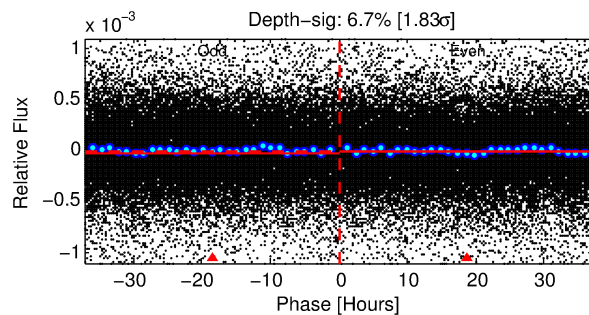
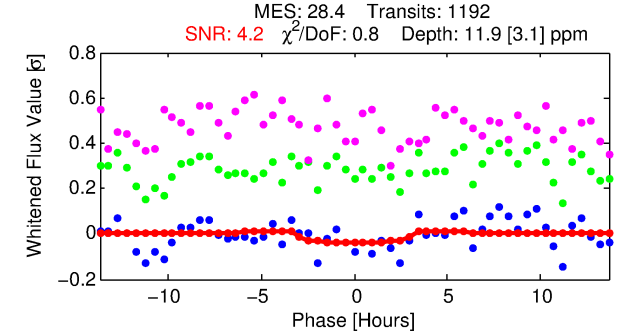
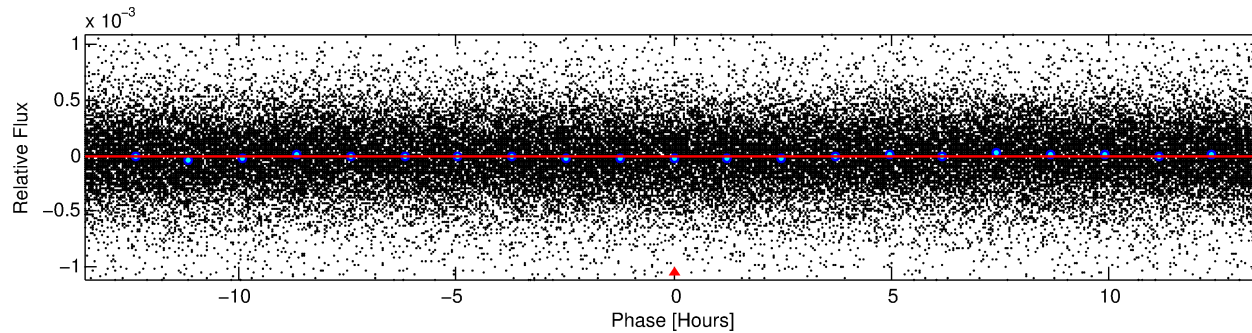
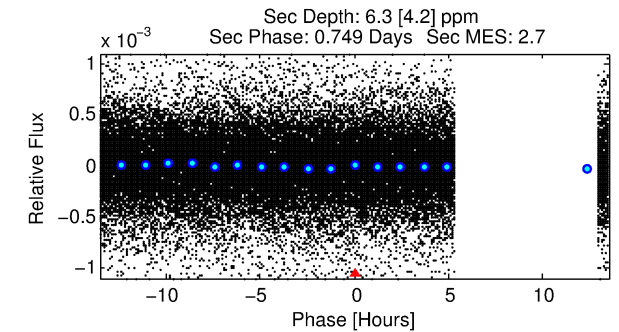
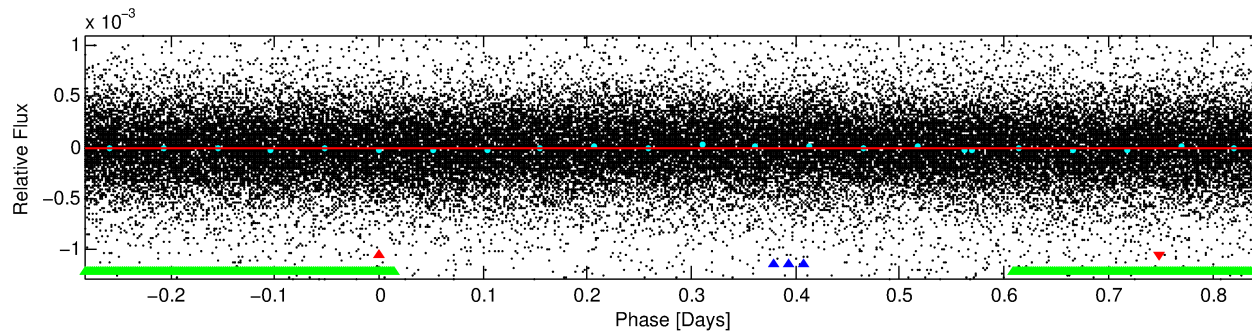
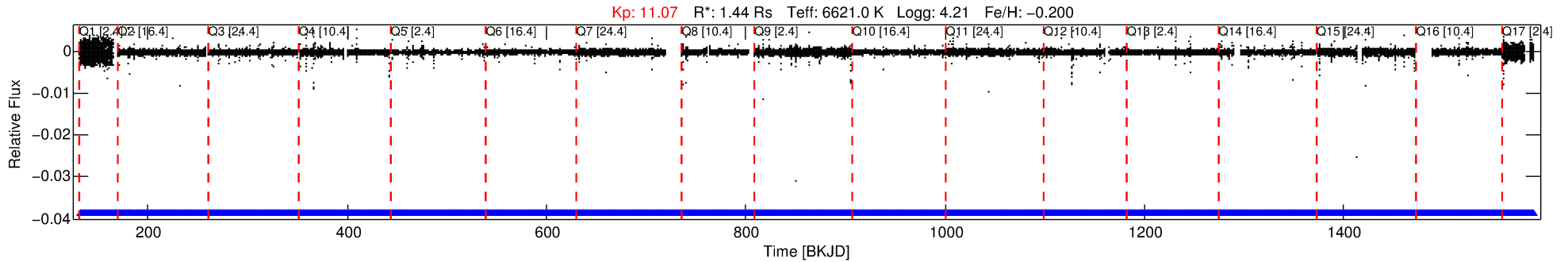
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007658578-01

No Significant Match Found

DV One-Page Summary

KIC: 7658578 Candidate: 1 of 3 Period: 1.131 d



DV Fit Results:

Period = 1.13122 [0.00003] d
Epoch = 132.5828 [0.0126] BKJD
Rp/R* = 0.0032 [0.0029]
a/R* = 1.44 [3.57]
b = 0.45 [8.73]
Seff = 6866.98 [2676.29]
Teff = 2321 [226] K
Rp = 0.51 [0.48] Re
a = 0.0228 [0.0057] AU
Ag = 6.94 [13.44] [0.44σ]
Teffp = 5824 [2781] K [1.26σ]

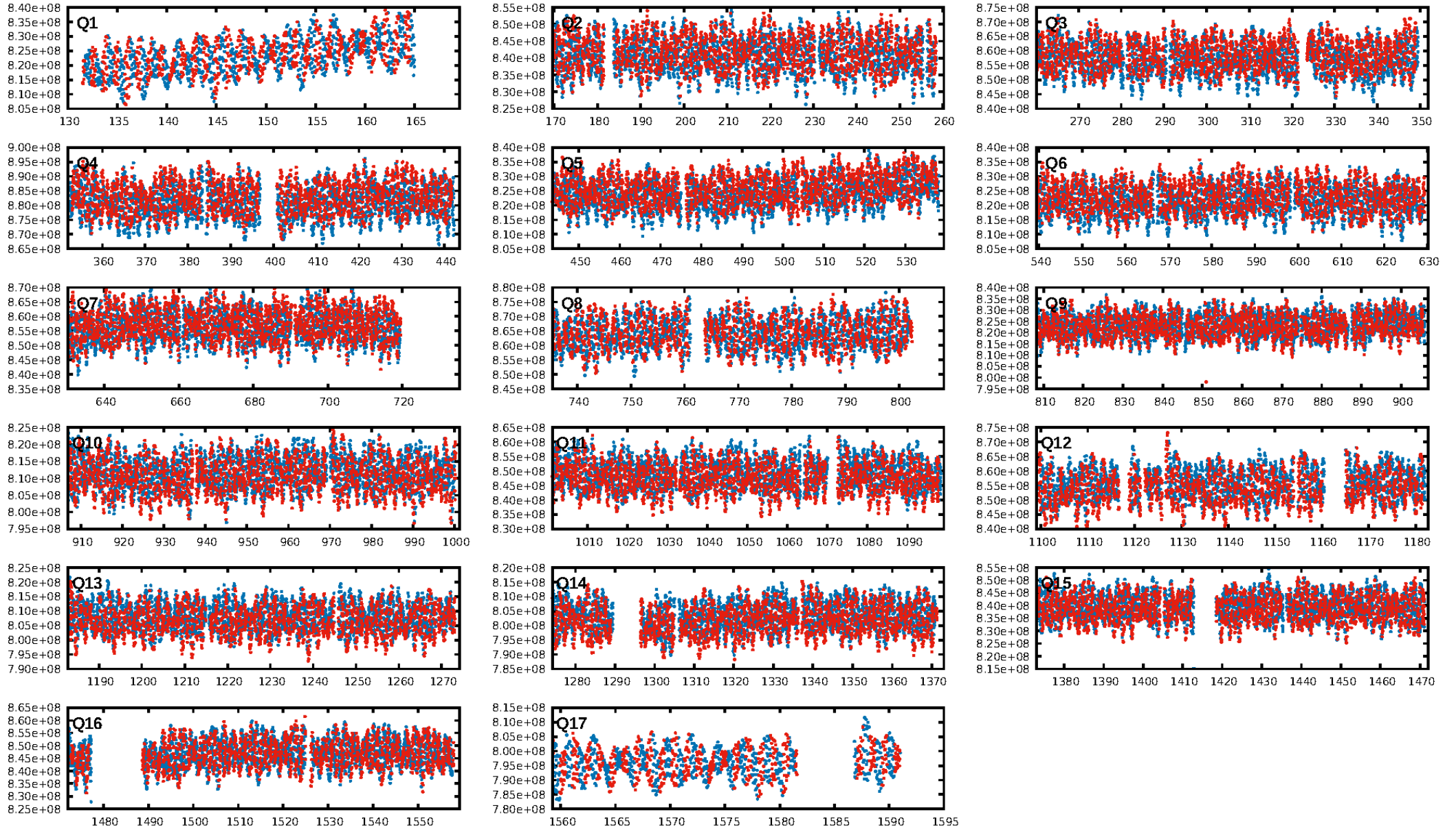
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [10.64σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.54e-80
RollingBand-fgt: 1.00 [1138/1138]
GhostDiagnostic-chr: 3.07
Centroid-sig: 70.7%
Centroid-so: 0.488 arcsec [0.52σ]
OotOffset-rm: 0.028 arcsec [0.13σ]
KicOffset-rm: 0.165 arcsec [0.65σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.41 [7/17]
DiffImageOverlap-fno: 1.00 [17/17]

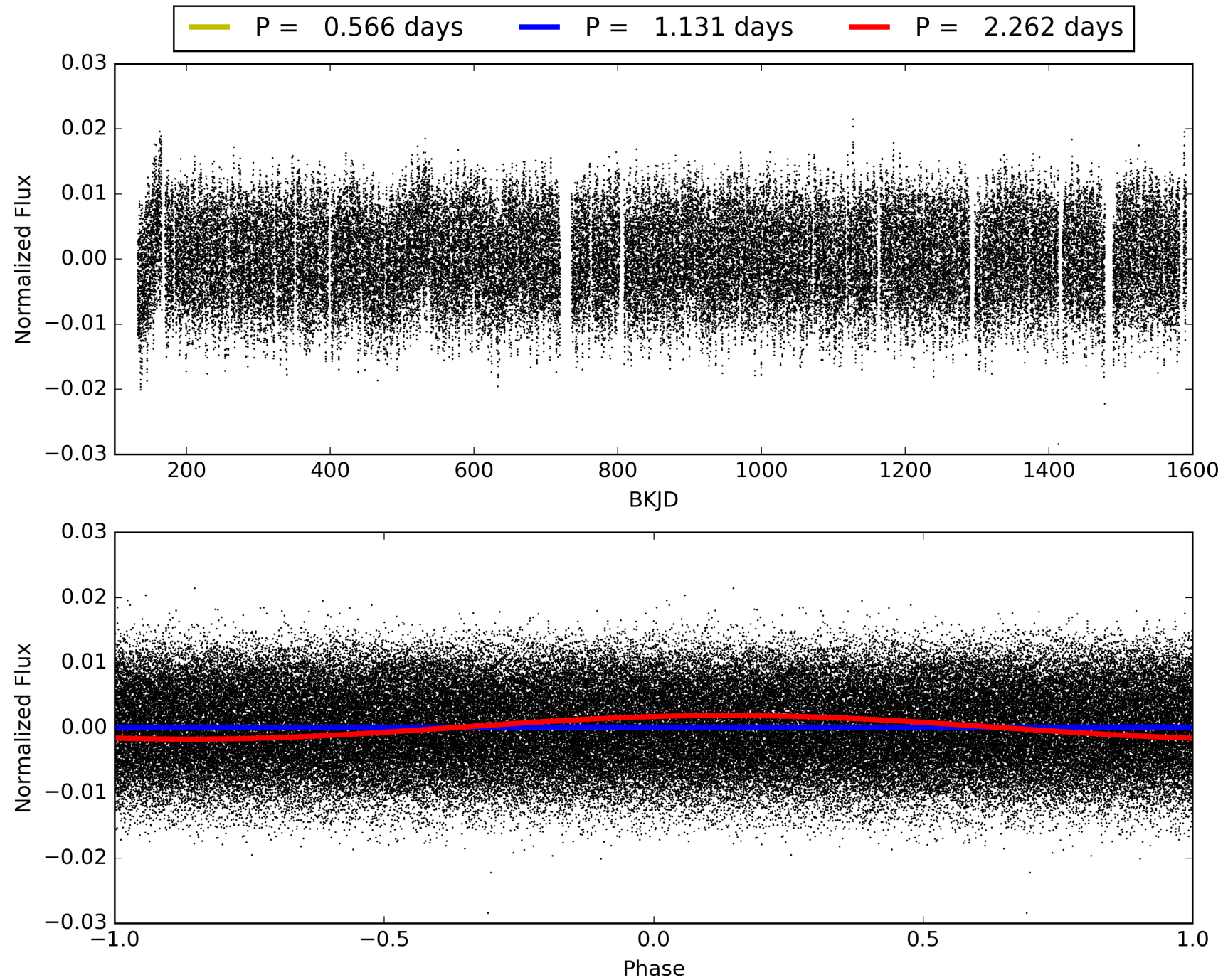
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 13:58:18 Z

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

TCE 007658578-01, PDC Light Curves

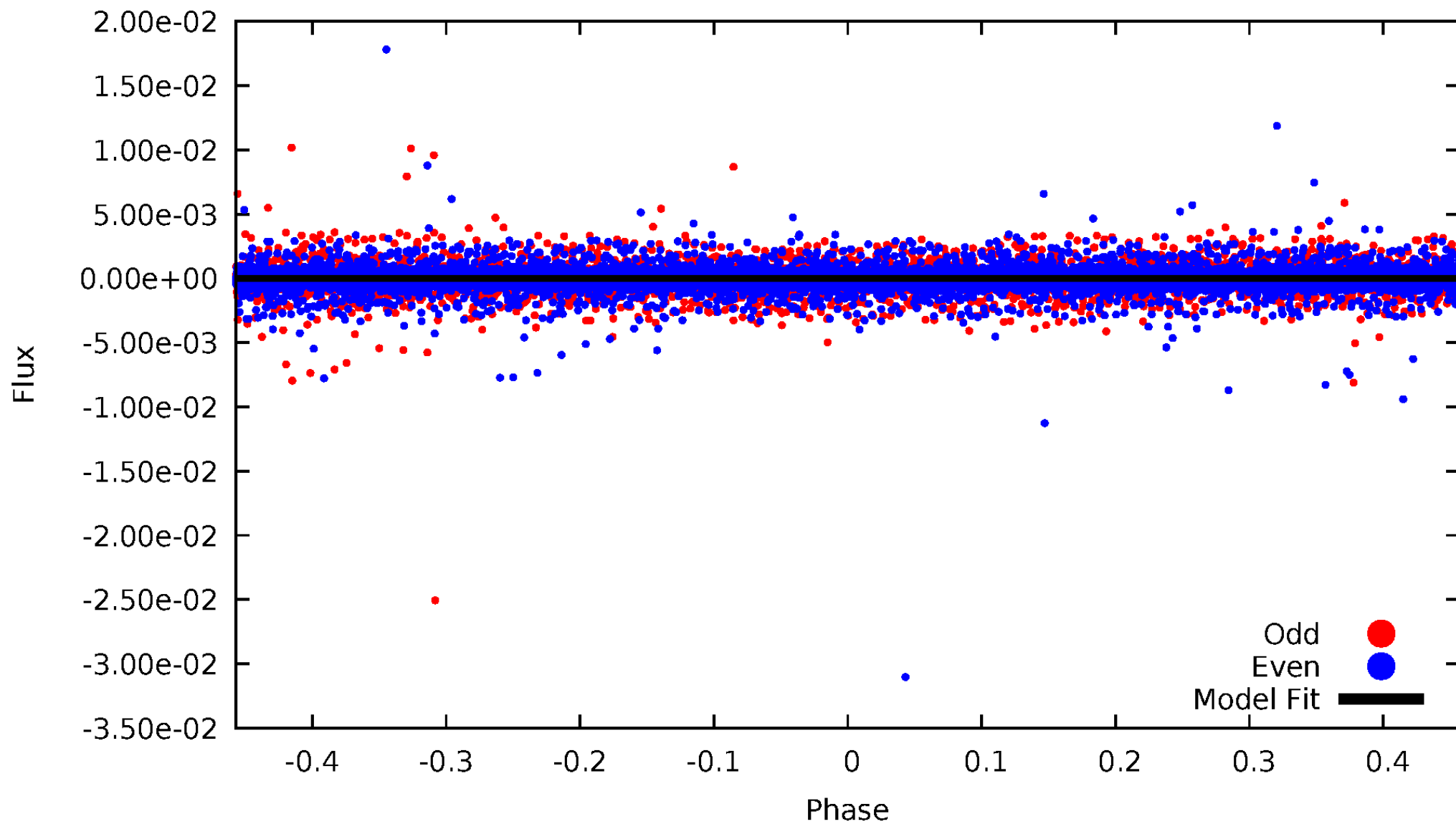


TCE 007658578-01



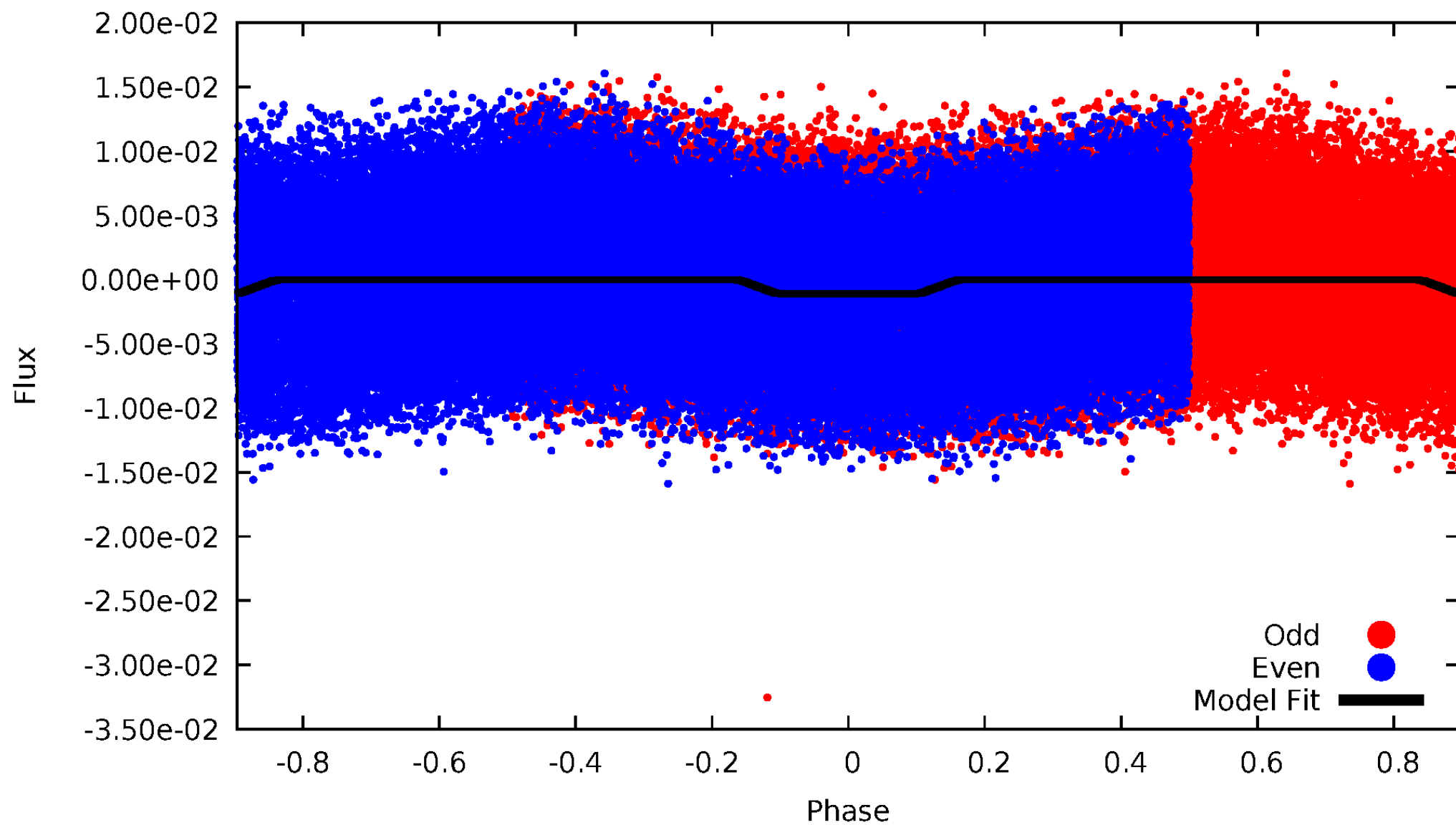
DV Odd/Even

TCE 007658578-01

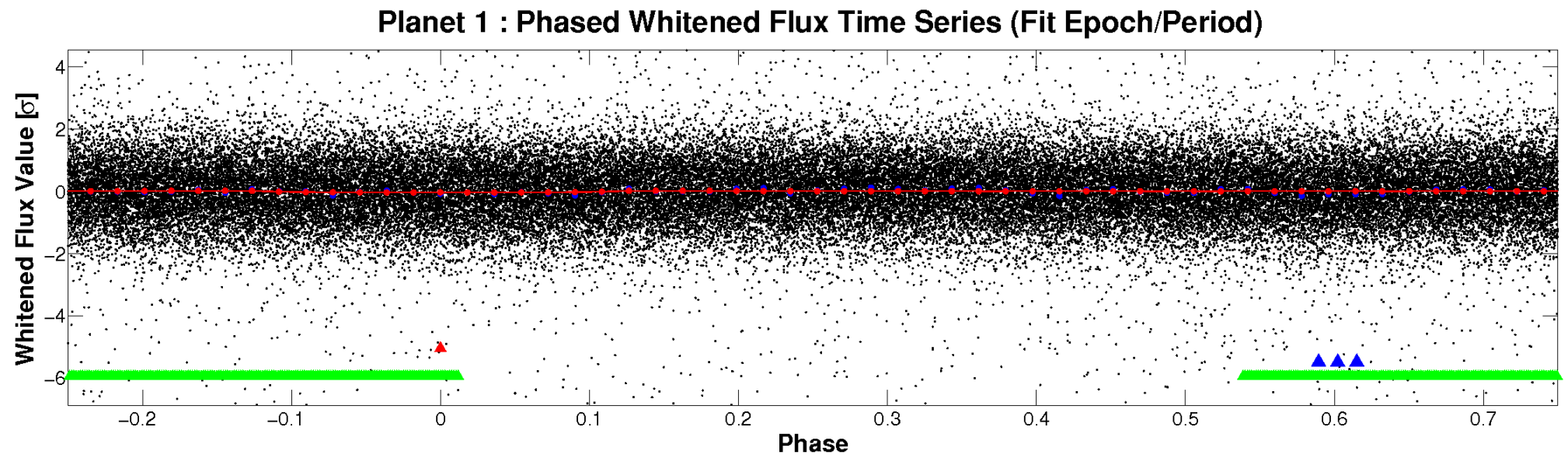
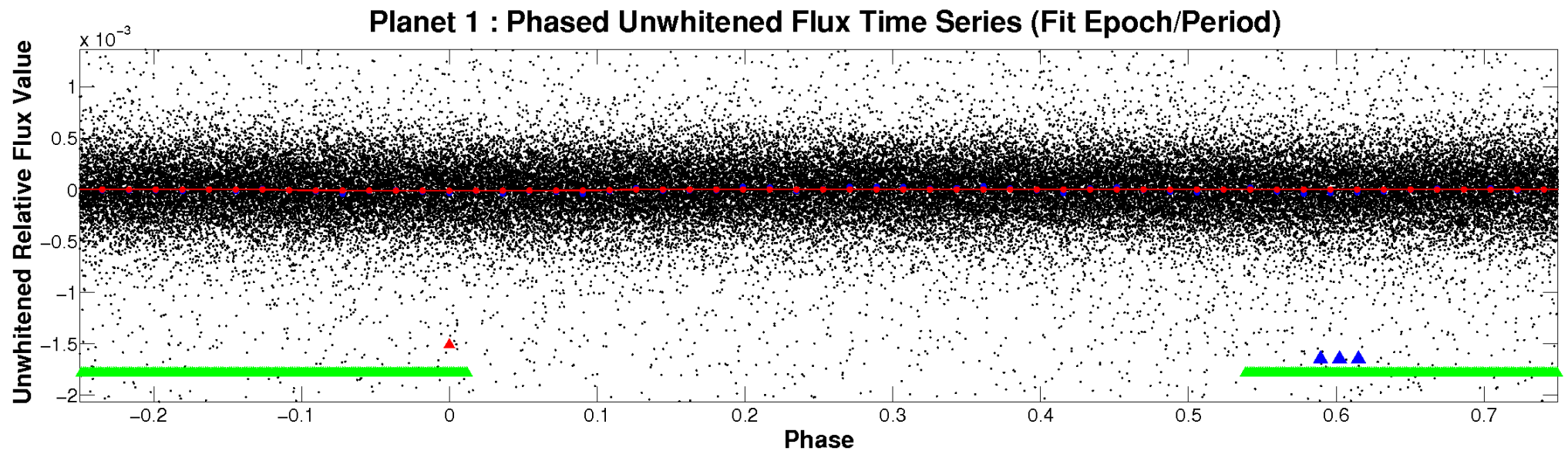


ALT Odd/Even

TCE 007658578-01

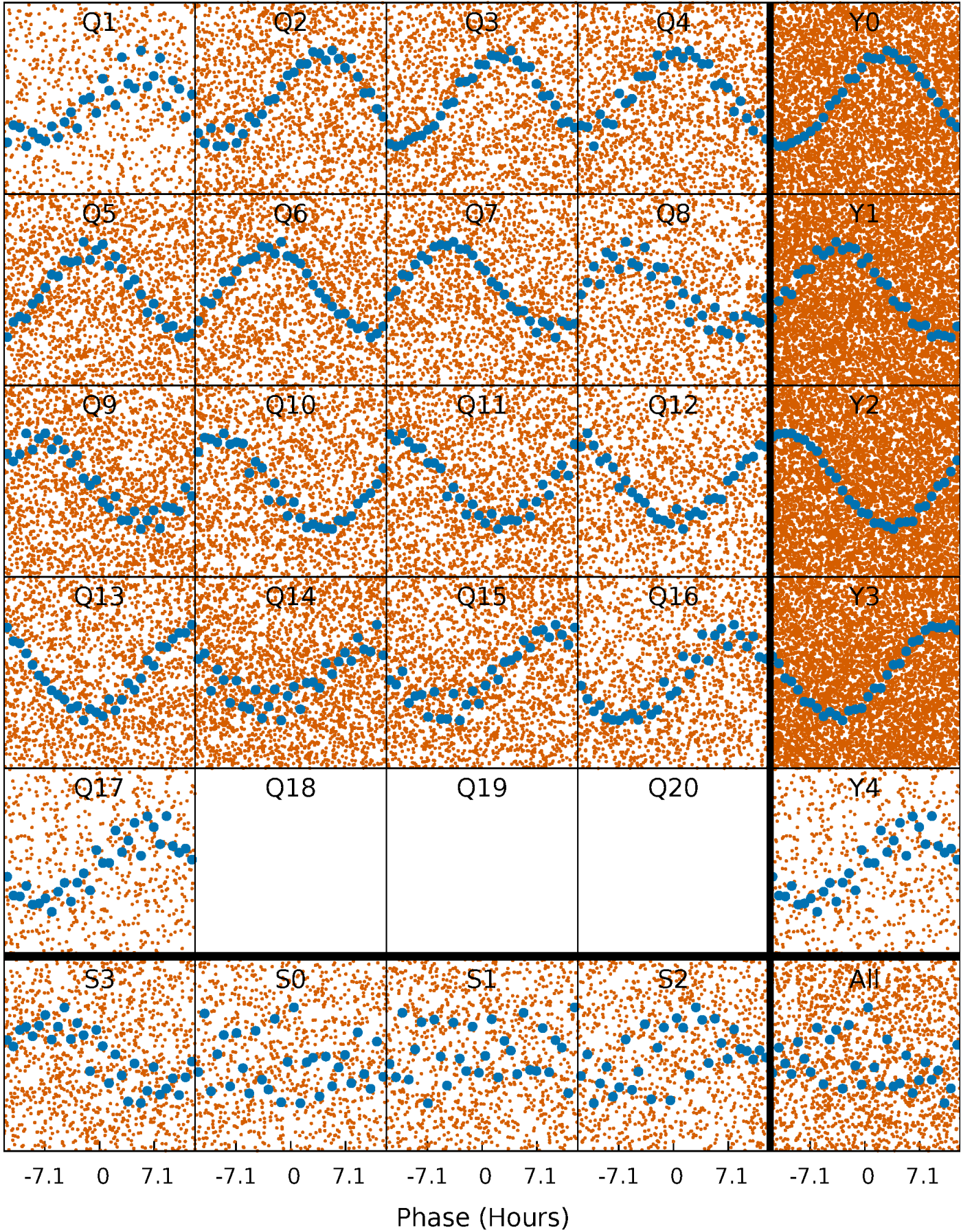


Non-Whitened Vs. Whitened Light Curve



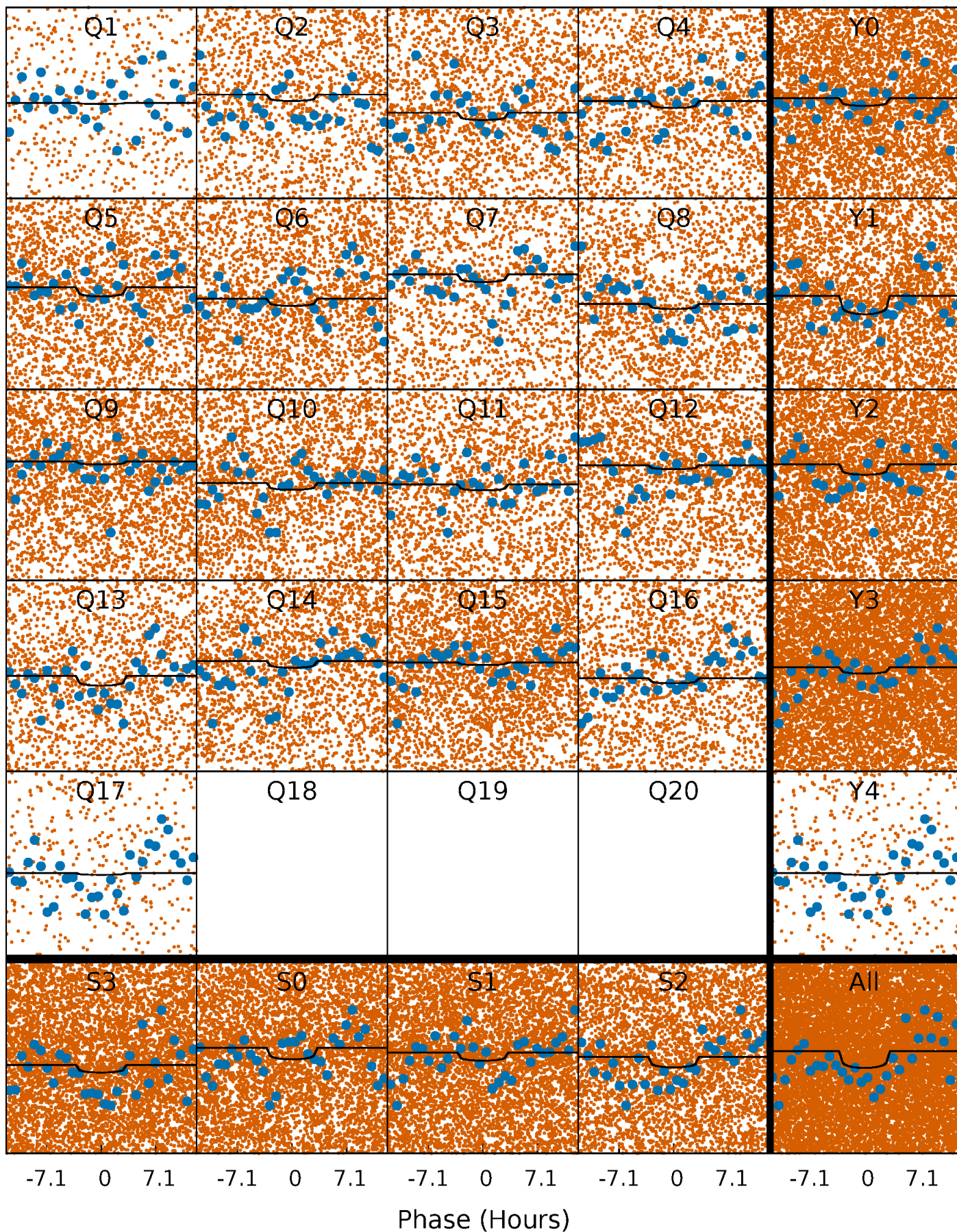
PDC Quarter-Phased Transit Curves

TCE 007658578-01 P= 1.131224 Days $T_0=132.582836$ (BKJD)



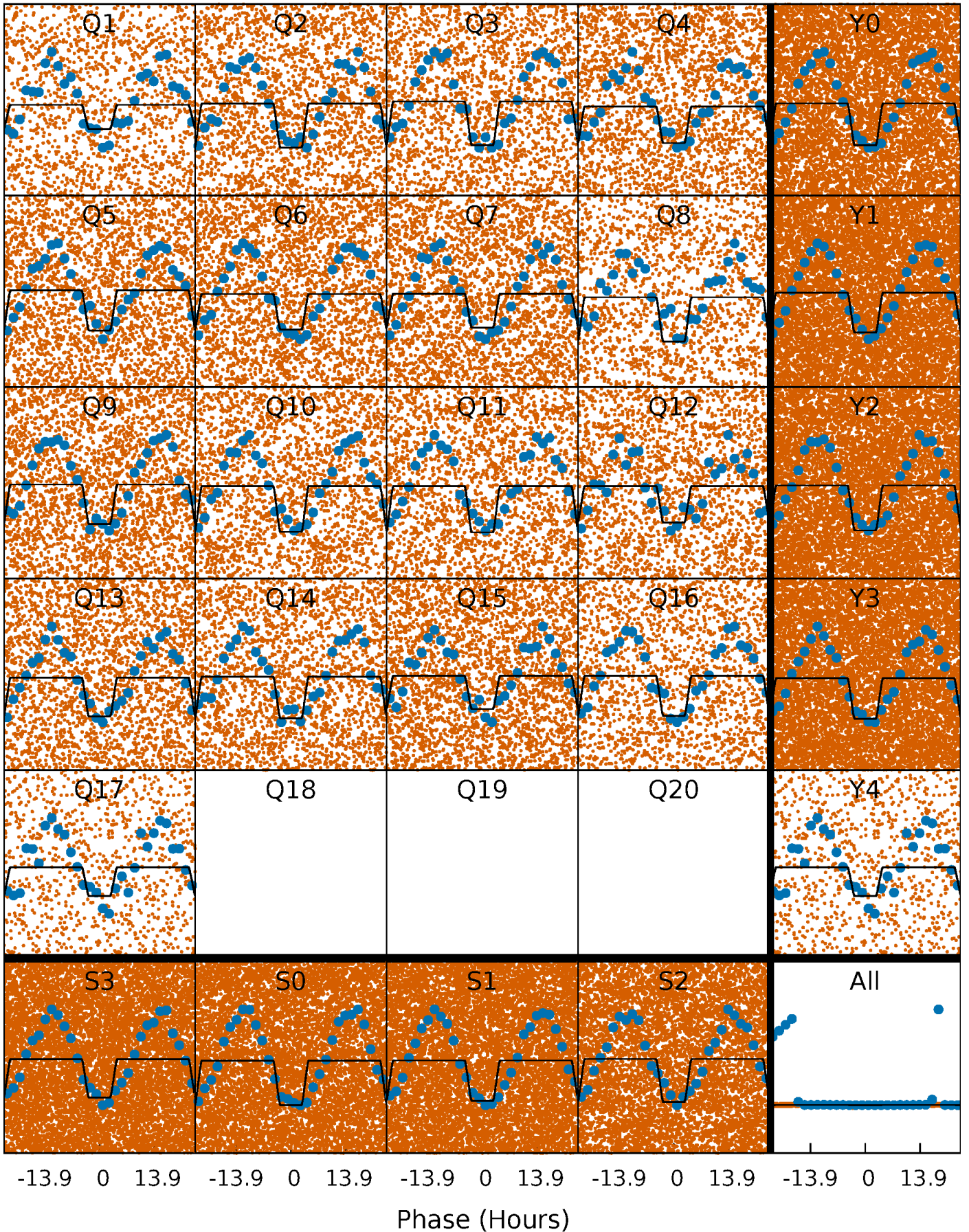
DV Quarter-Phased Transit Curves

TCE 007658578-01 P= 1.131224 Days $T_0=132.582836$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

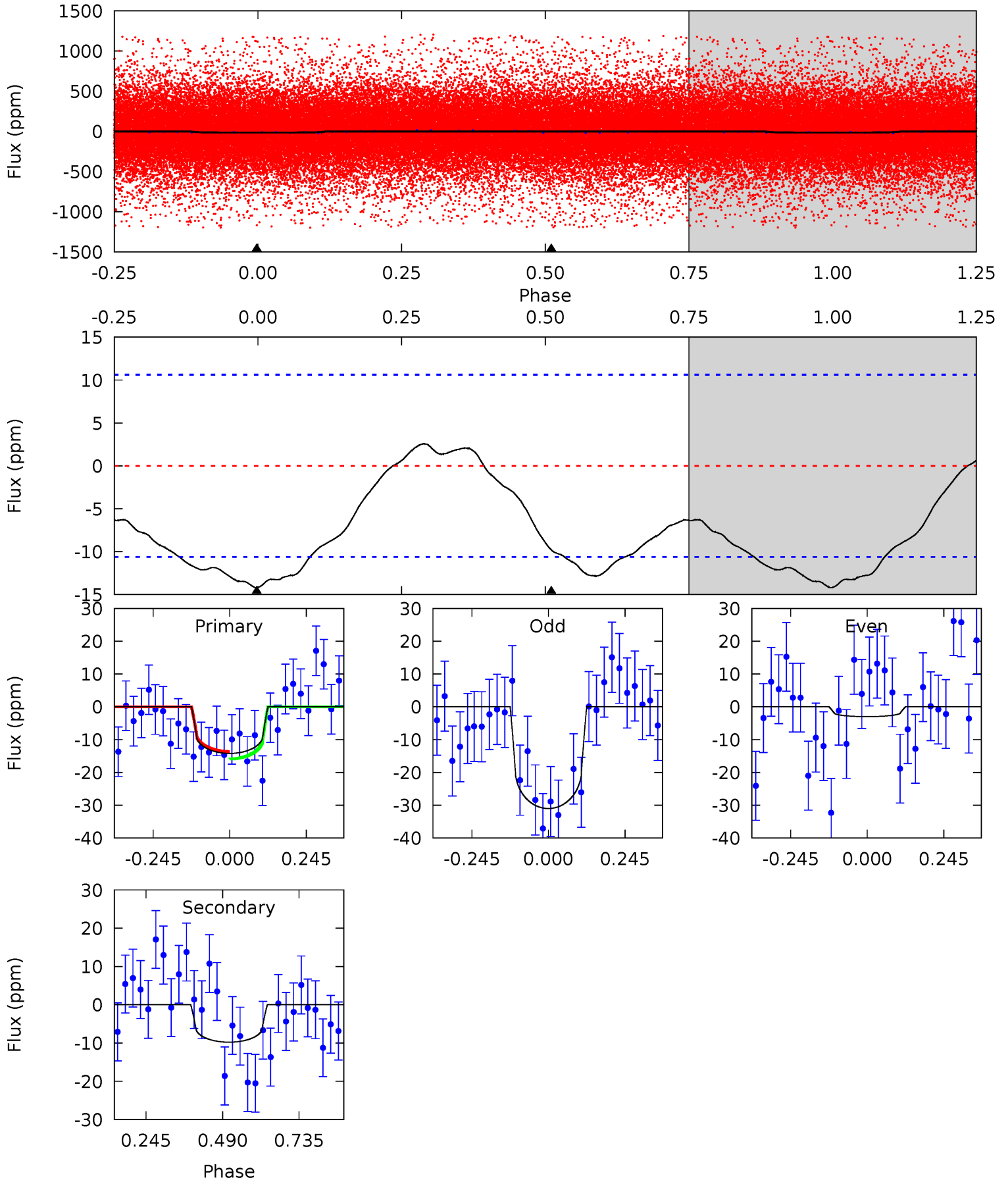
TCE 007658578-01 P= 1.130364 Days $T_0=132.181235$ (BKJD)



DV Model-Shift Uniqueness Test

007658578-01, P = 1.131224 Days, E = 131.451612 Days

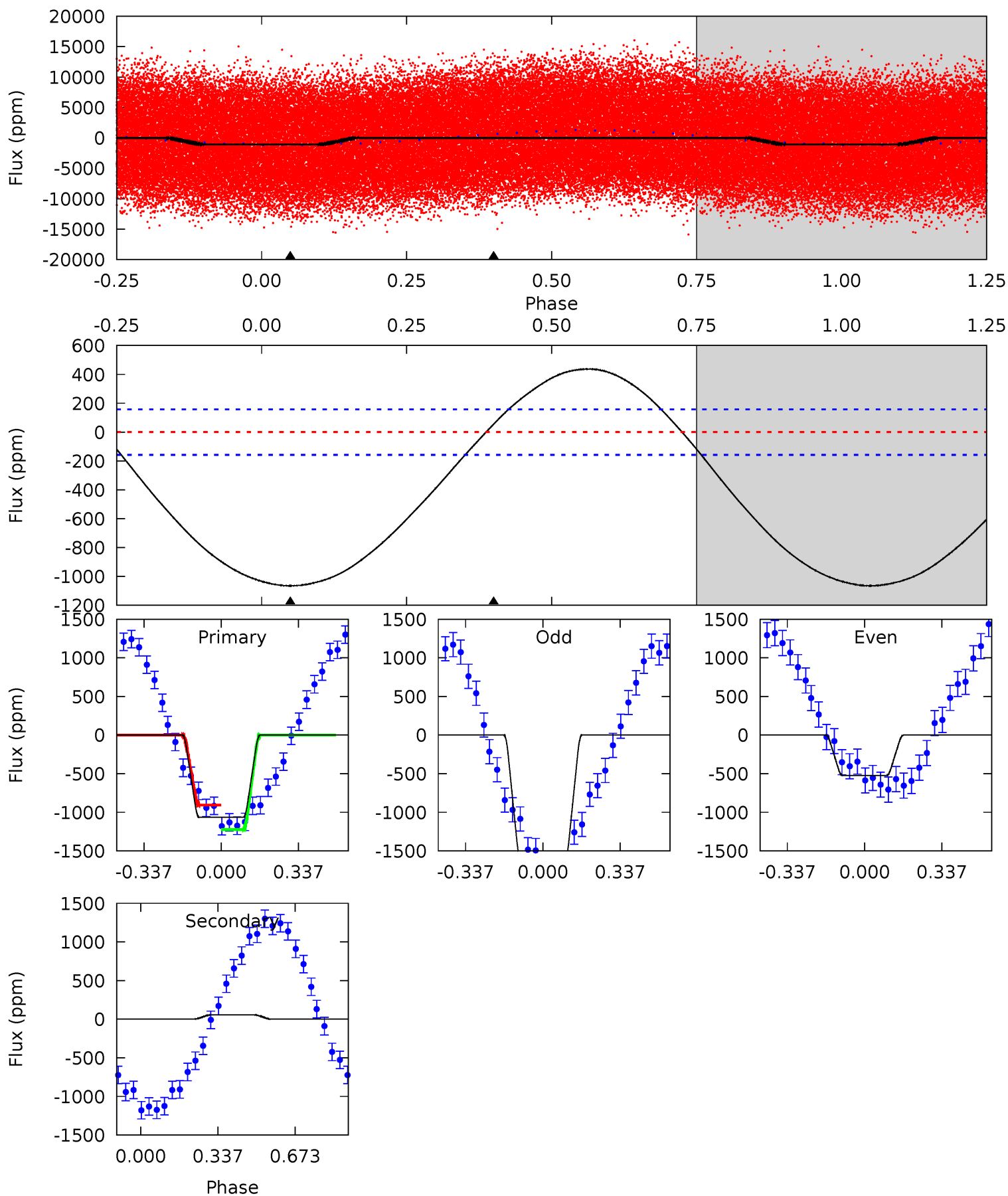
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.85	4.02	0	0	4.37	1.16	1.50	5.85	5.85	4.02	4.02	5.77	1.77	0.15	0.47



Alt Model-Shift Uniqueness Test

007658578-01, P = 1.130364 Days, E = 131.050871 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.0	-1.49	0	0	4.30	0.96	3.61	29.0	29.0	-1.49	-1.49	14.7	0.96	0.29	4.34



Stellar Parameters For KIC 007658578

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+181}_{-250}	$4.213^{+0.158}_{-0.193}$	$-0.200^{+0.250}_{-0.300}$	$1.440^{+0.439}_{-0.293}$	$1.240^{+0.181}_{-0.201}$	$0.585^{+0.464}_{-0.299}$
	+3%/-4%	+4%/-5%	+125%/-150%	+30%/-20%	+15%/-16%	+79%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007658578-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-10 ± 2	$0.58^{+0.44}_{-0.37}$	3235^{+254}_{-215}	5851^{+5196}_{-1274}	$7.848^{+53.219}_{-5.281}$
Alt.	55 ± 37	$5.23^{+0.93}_{-0.77}$	3244^{+259}_{-203}	-3826^{+373}_{-284}	$-0.493^{+0.337}_{-0.508}$

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

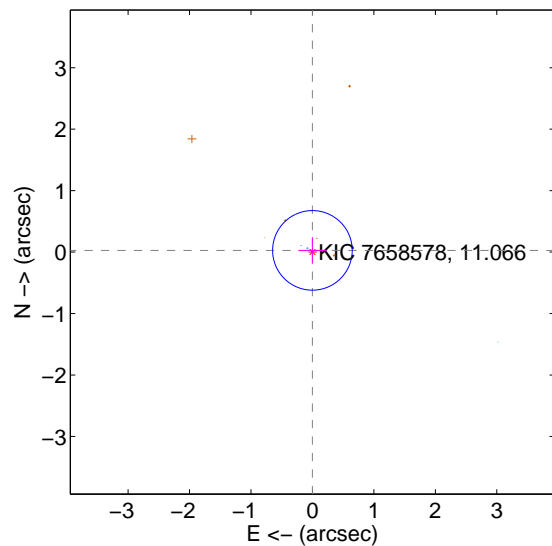
Supplemental centroid analysis for 007658578-01. **Kepler magnitude: 11.07.** Transit SNR 4.21

There are 7 quarters with good PRF difference image offsets

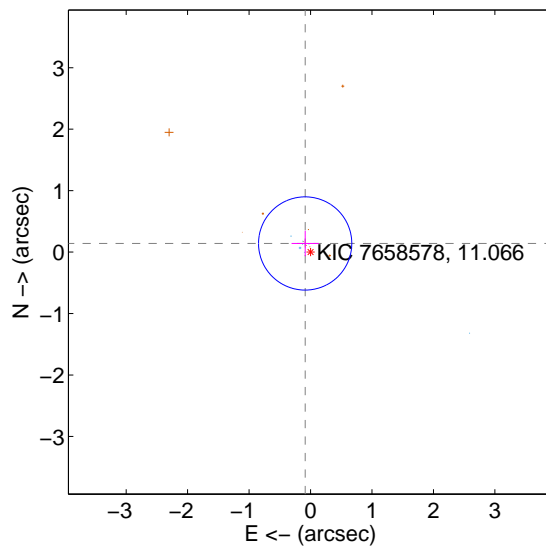
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.028 ± 0.216	0.13	0.000 ± 0.228	0.028 ± 0.214
PRF-fit source offset from KIC position	0.165 ± 0.253	0.65	0.087 ± 0.222	0.140 ± 0.206
photometric centroid source offset	0.49 ± 0.93	0.52	0.44 ± 0.97	-0.20 ± 0.70

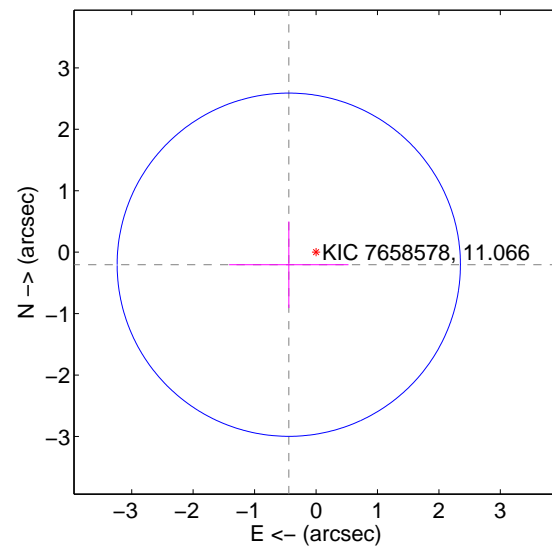
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

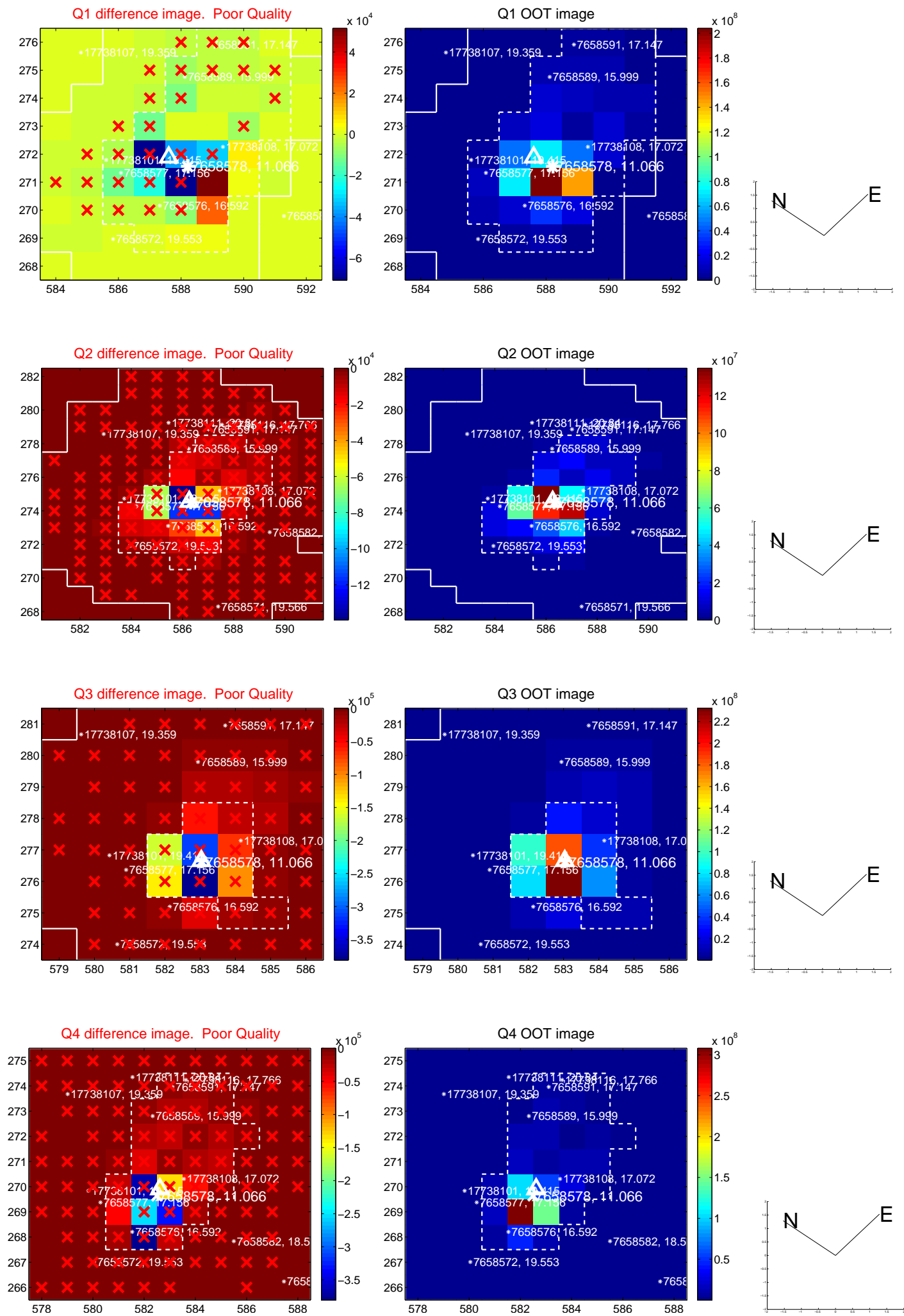


offset from photometric centroids

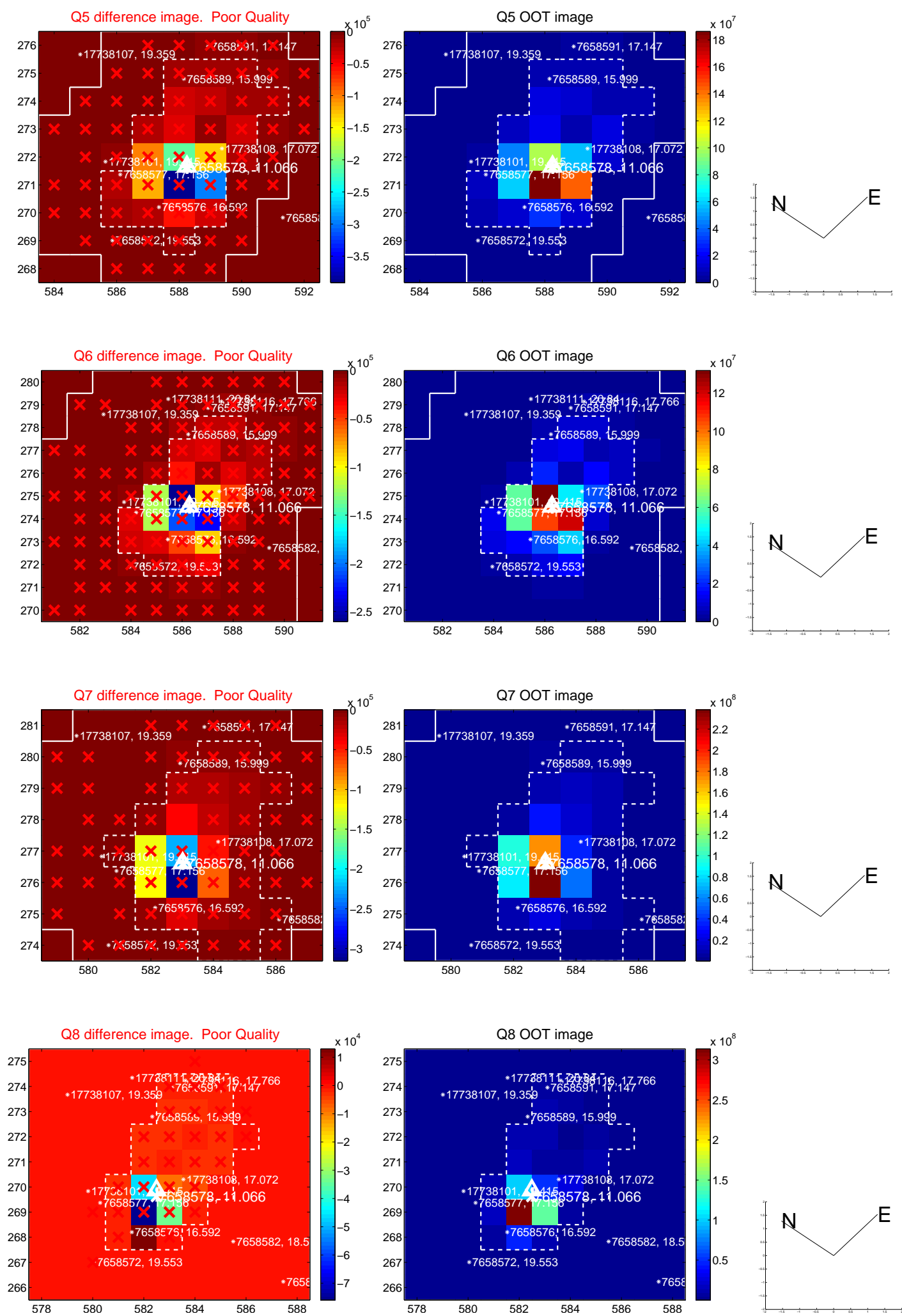


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

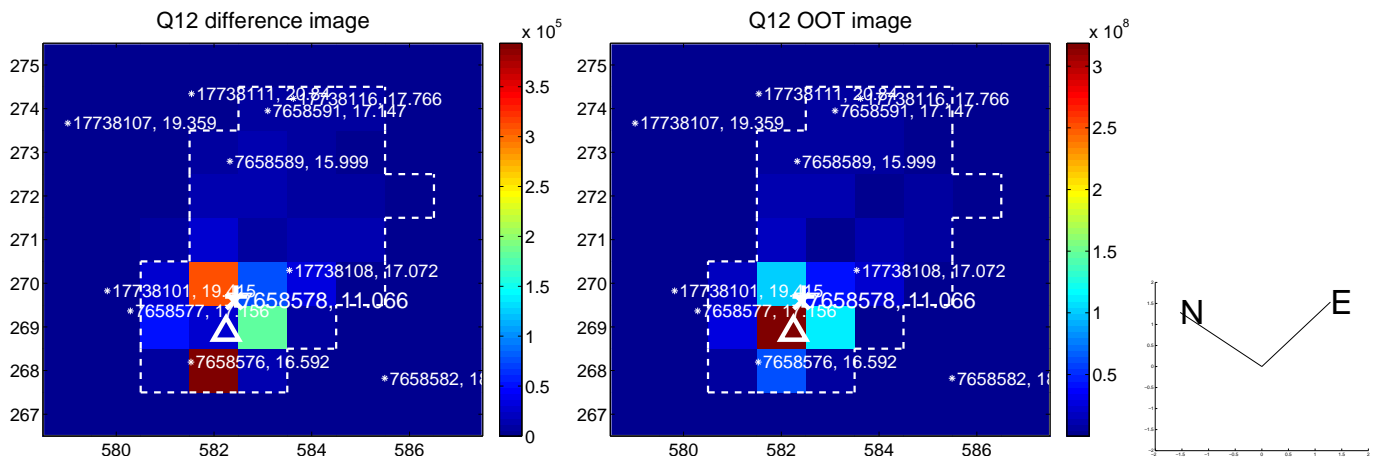
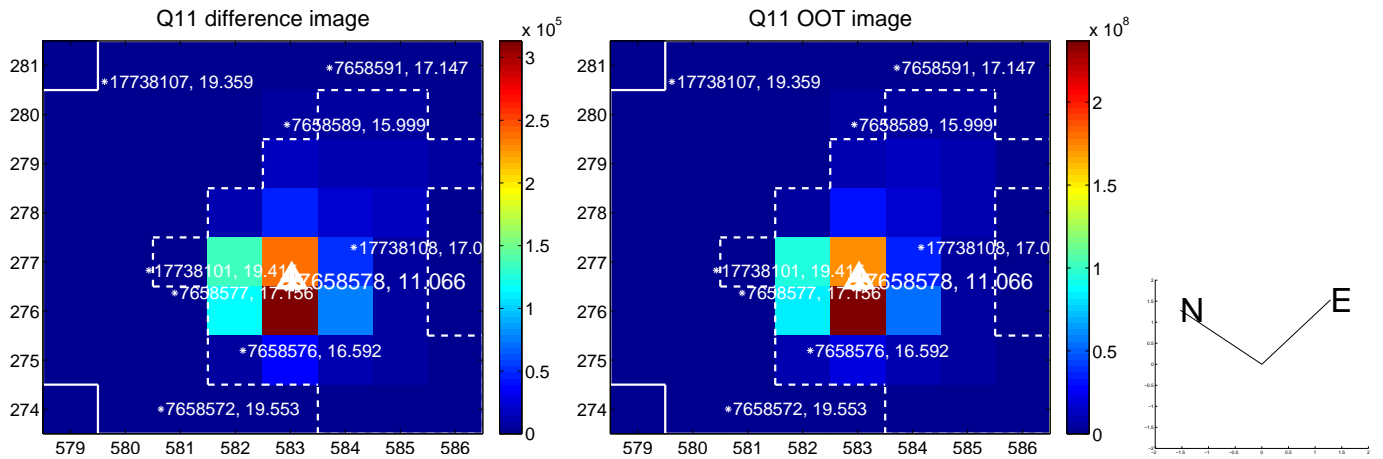
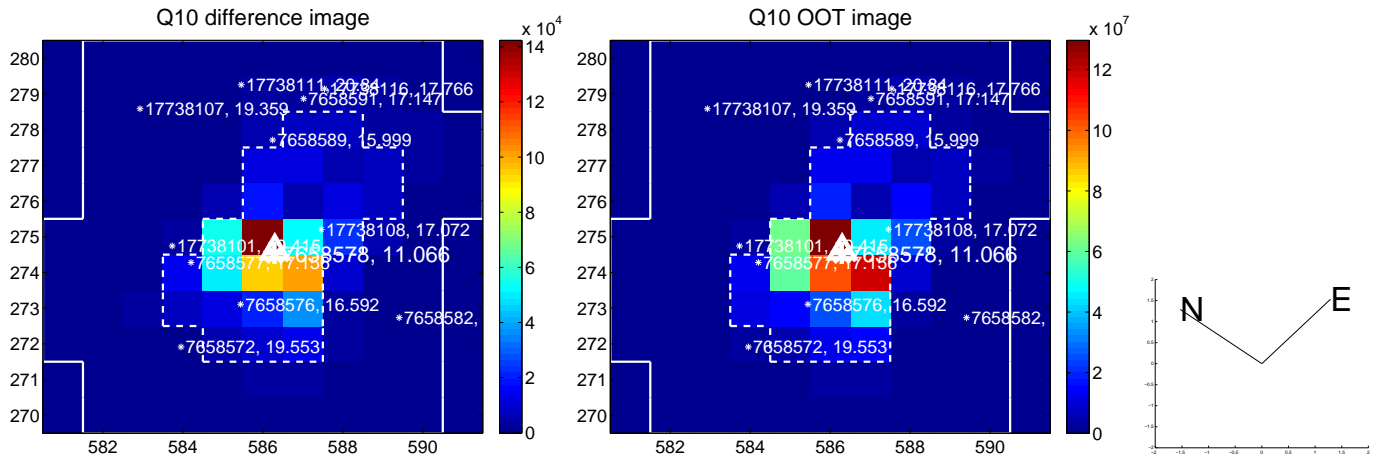
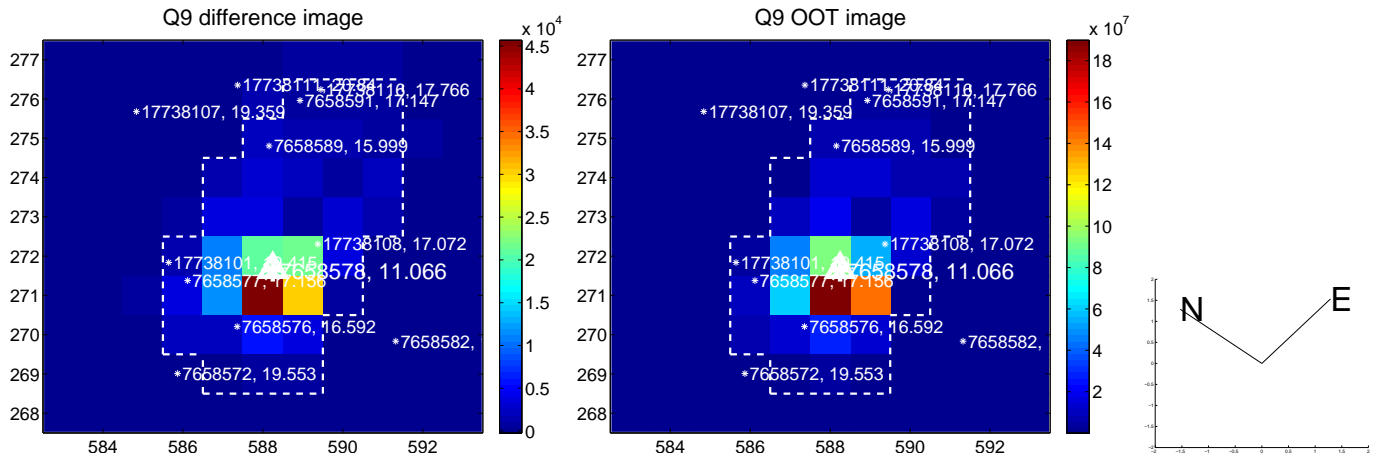
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



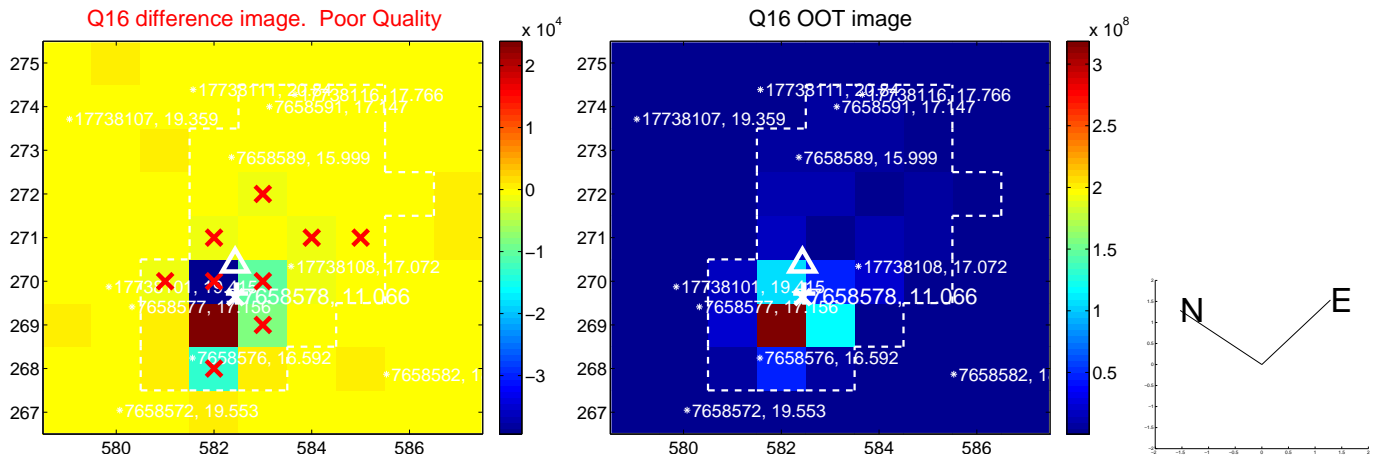
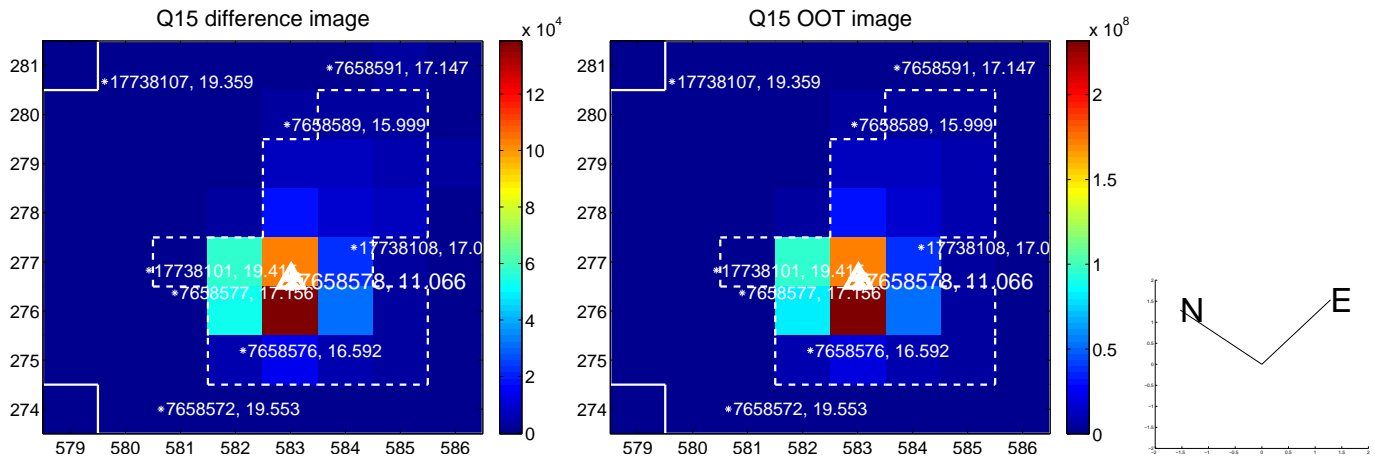
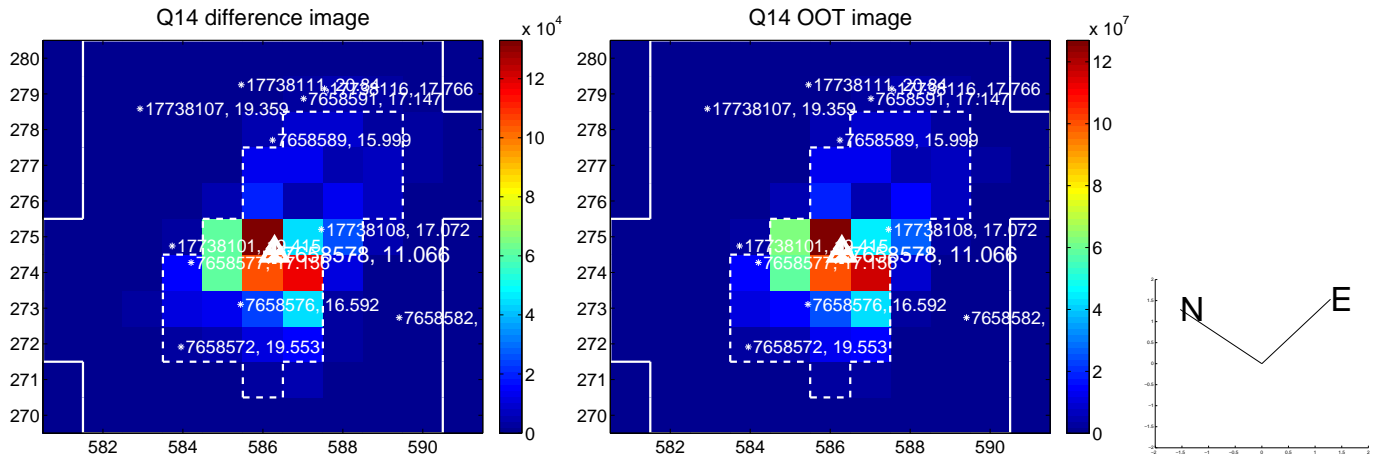
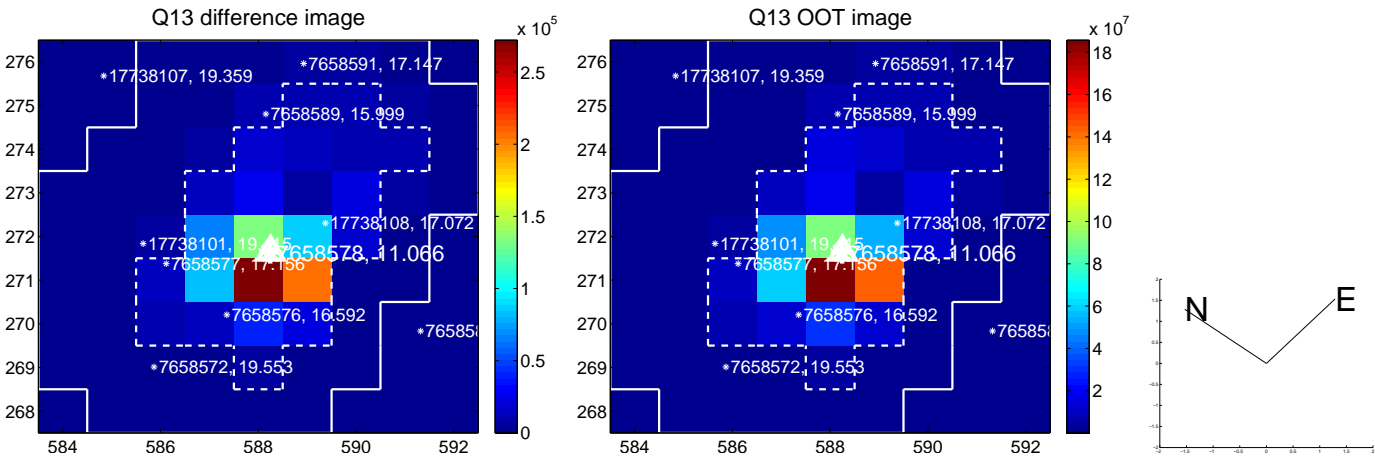
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



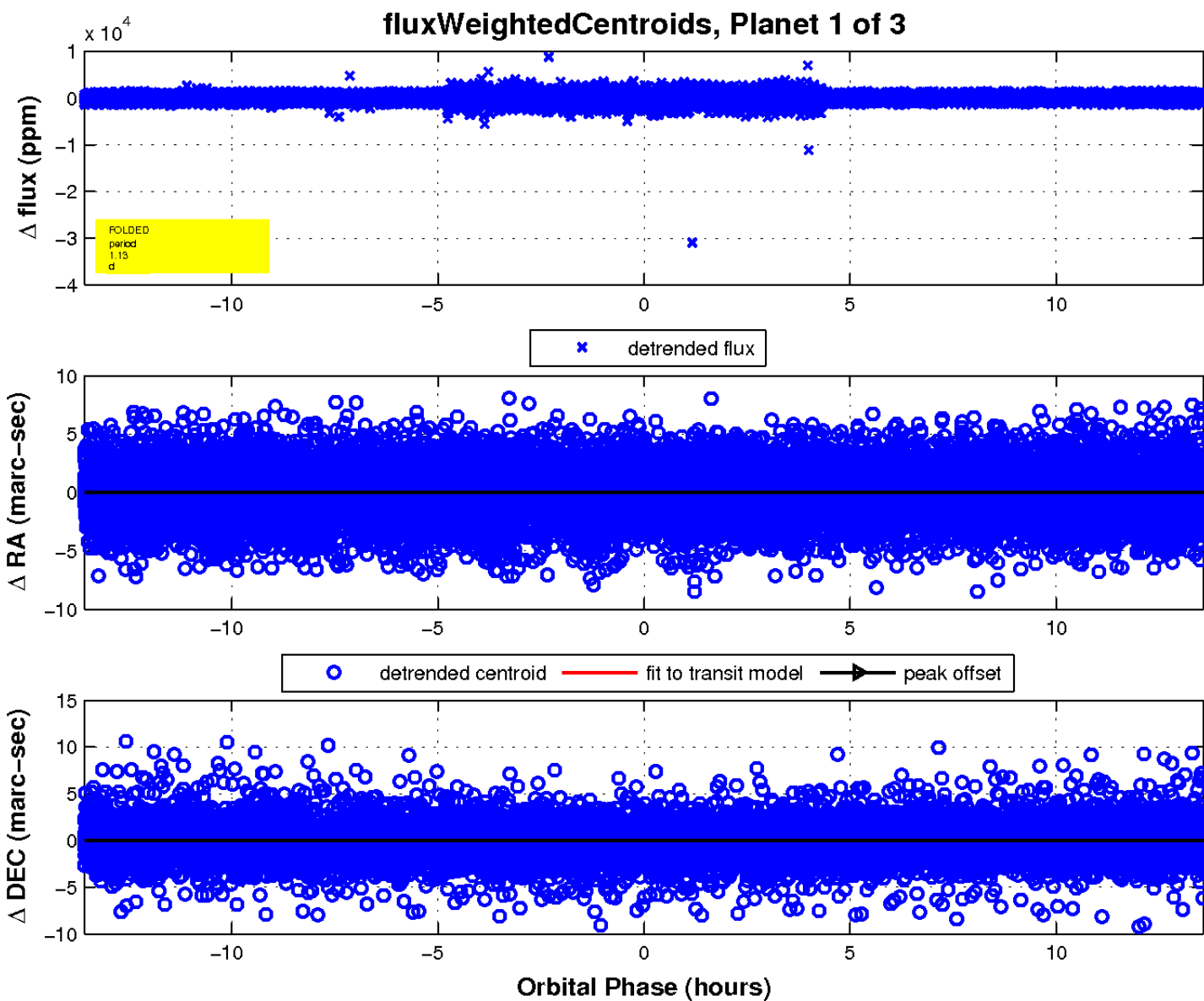
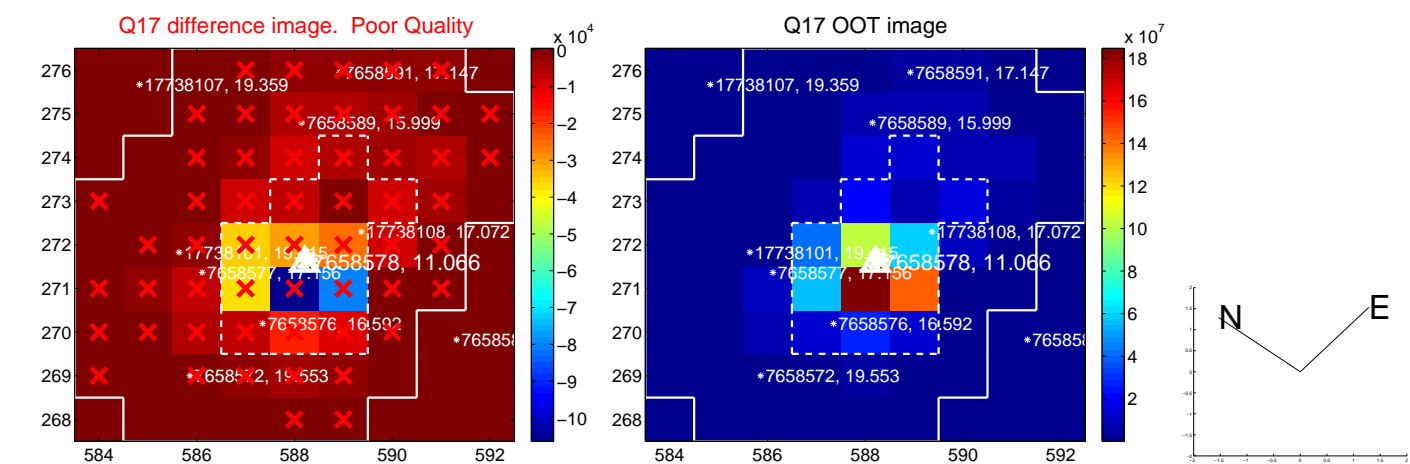
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

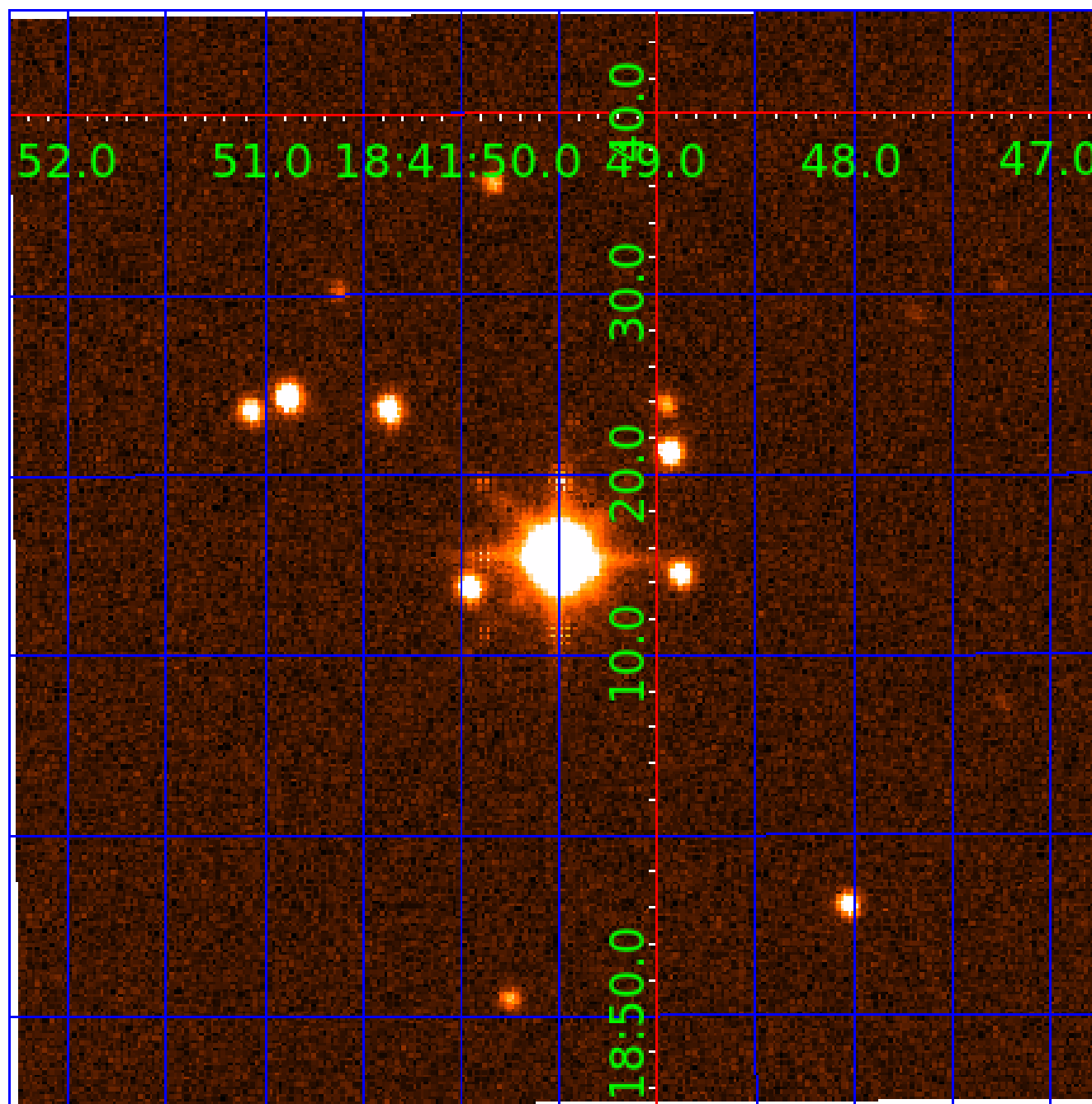


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007658578

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})
007658578-01	OBS	No	1.131224	132.582836	11.9	6.202	28.4	4.2	1.44	6621	0.51	6866.98
007658578-02	OBS	No	623.318937	306.326911	160.2	4.500	11.9	-1.0	1.44	6621	1.84	1.52
007658578-03	OBS	No	4.523228	134.858790	149.0	4.482	10.5	10.9	1.44	6621	2.02	1082.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007658578-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_SATURATED
007658578-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007658578-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

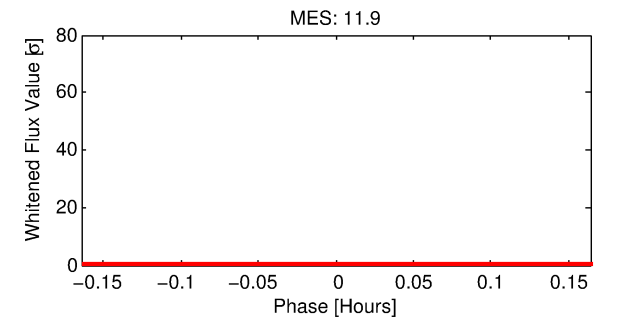
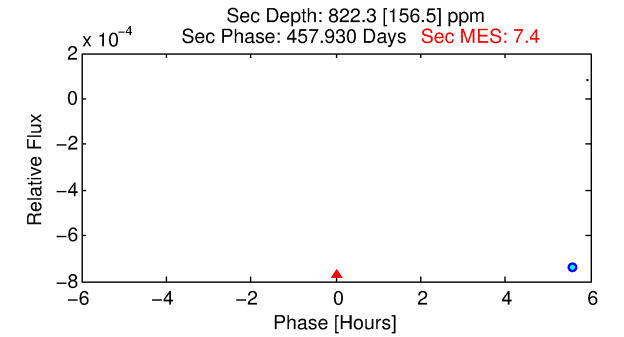
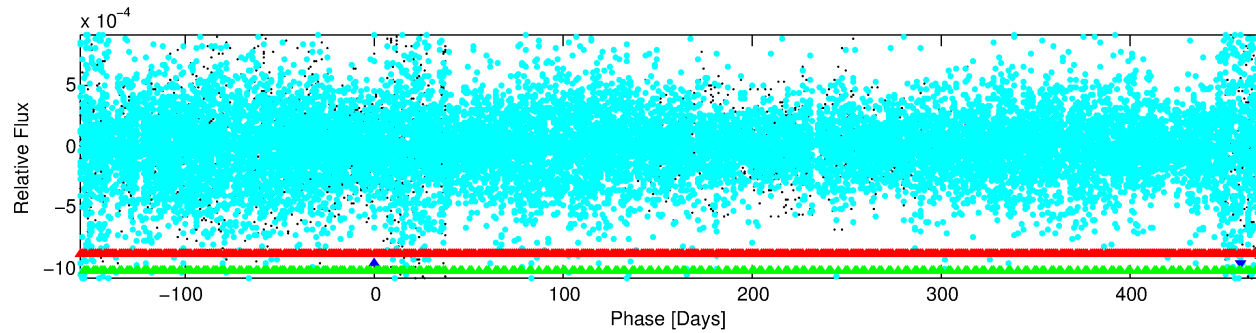
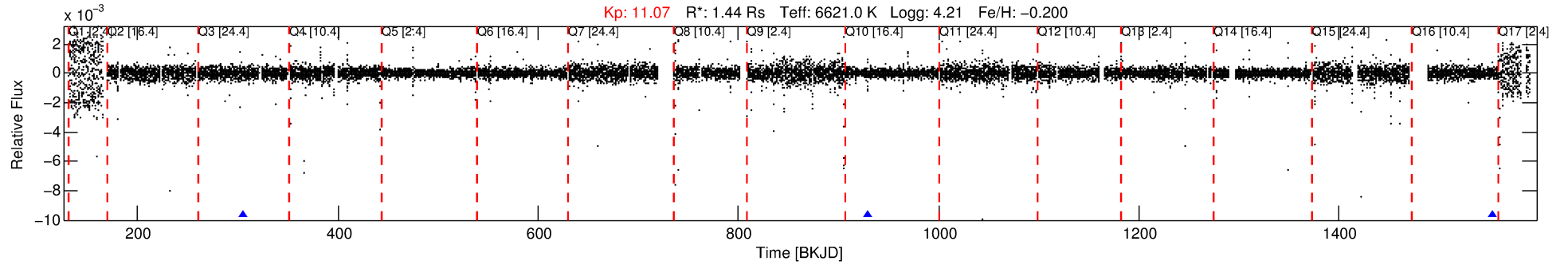
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007658578-02

No Significant Match Found

DV One-Page Summary

KIC: 7658578 Candidate: 2 of 3 Period: 623.319 d



TPS TCE Results:

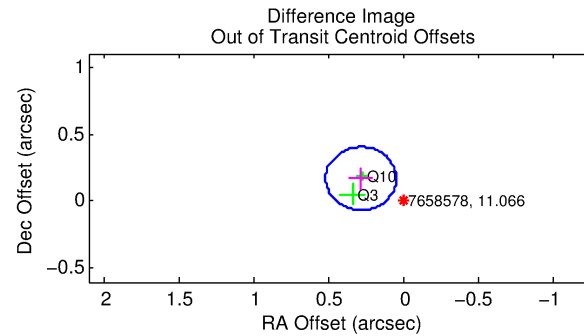
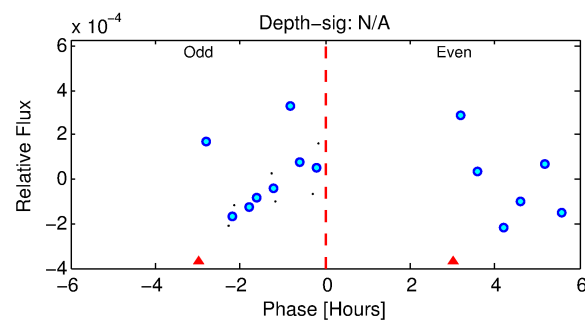
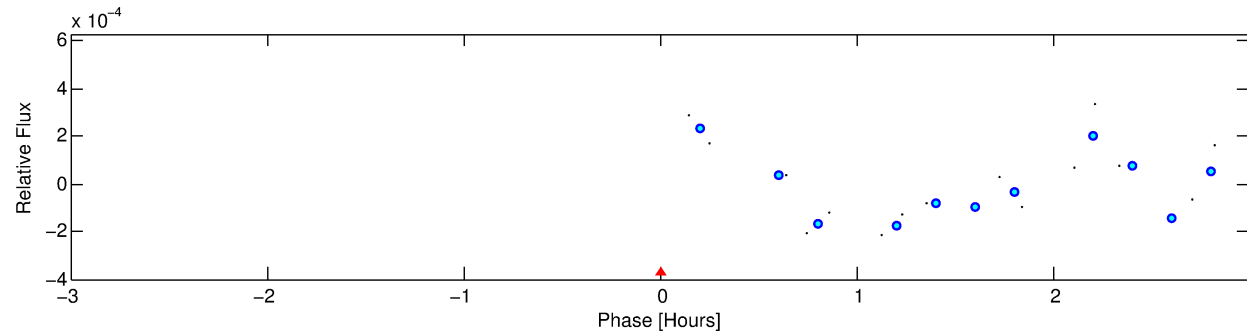
Period = 623.31894 d
Epoch = 306.3269 BKJD

DV fit results are unavailable

DV Diagnostic Results:

ShortPeriod-sig: 100.0% [2338.20σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.08e-05
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.857

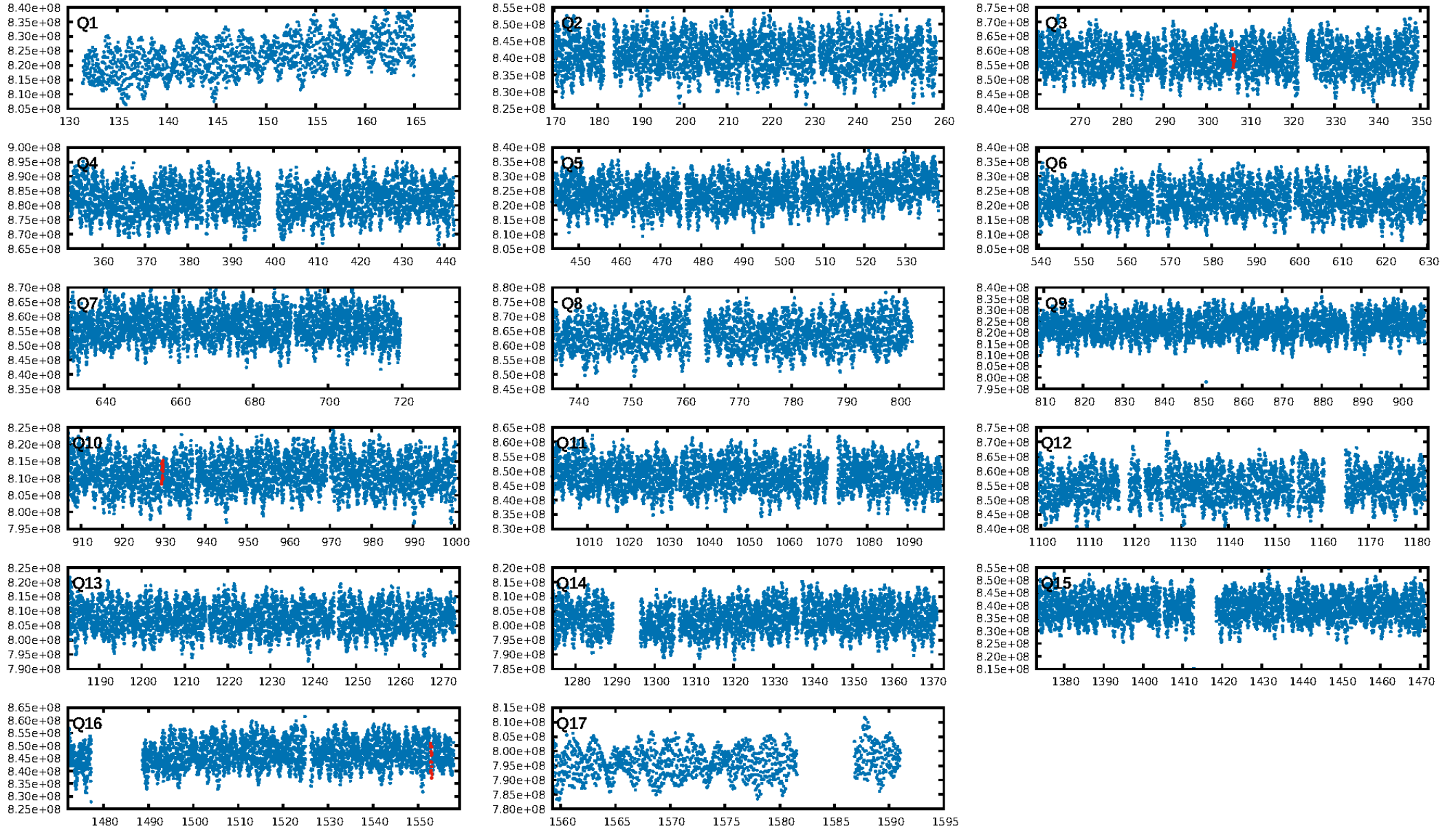
Centroid-sig: 29.9%
Centroid-so: 37.628 arcsec [0.77σ]
OotOffset-rm: 0.327 arcsec [4.18σ]
KicOffset-rm: 0.497 arcsec [5.76σ]
OotOffset-st: 1/1/0/0 [2]
KicOffset-st: 1/1/0/0 [2]
DiffImageQuality-fgm: 1.00 [2/2]
DiffImageOverlap-fno: 1.00 [2/2]



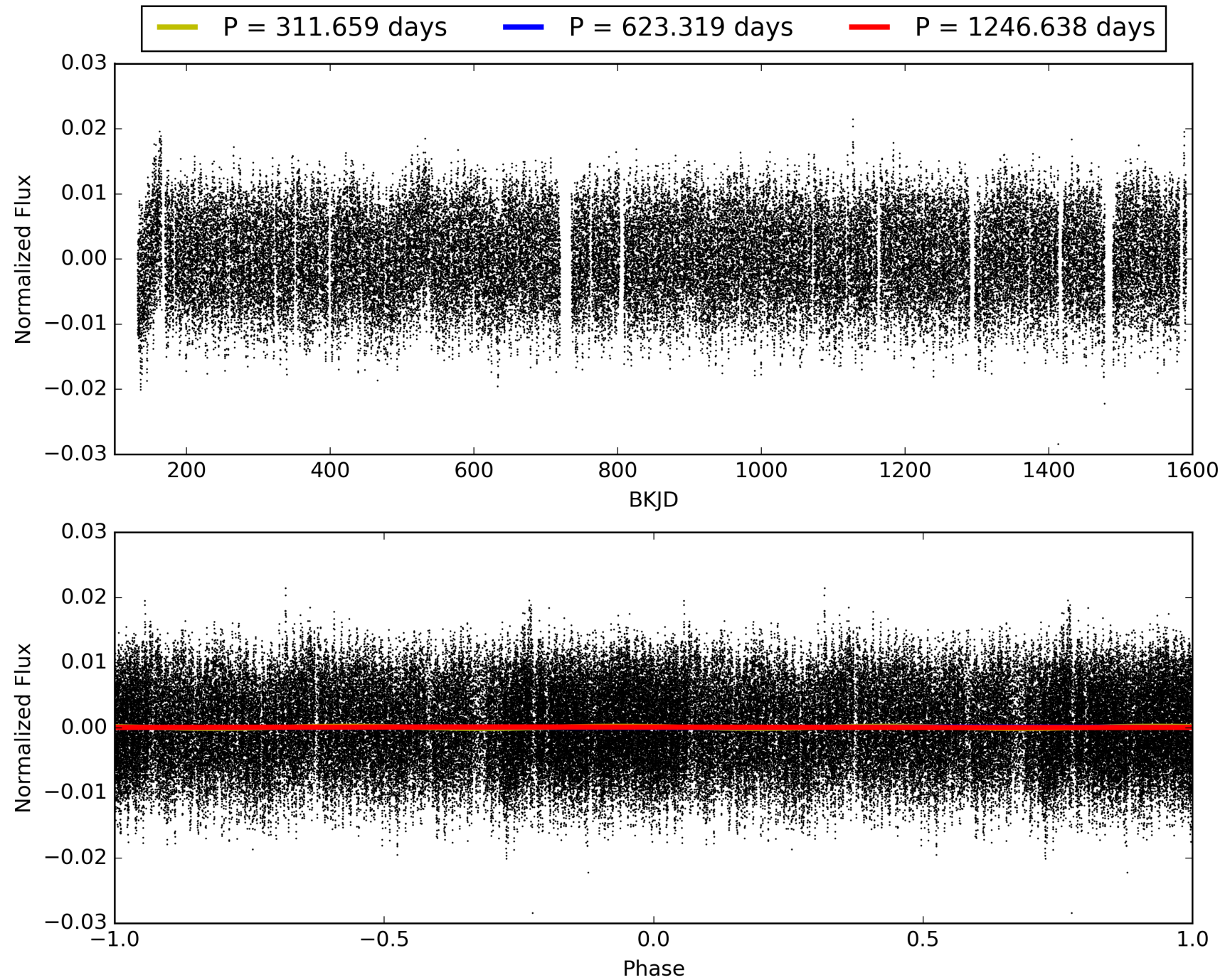
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 13:58:47 Z

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

TCE 007658578-02, PDC Light Curves

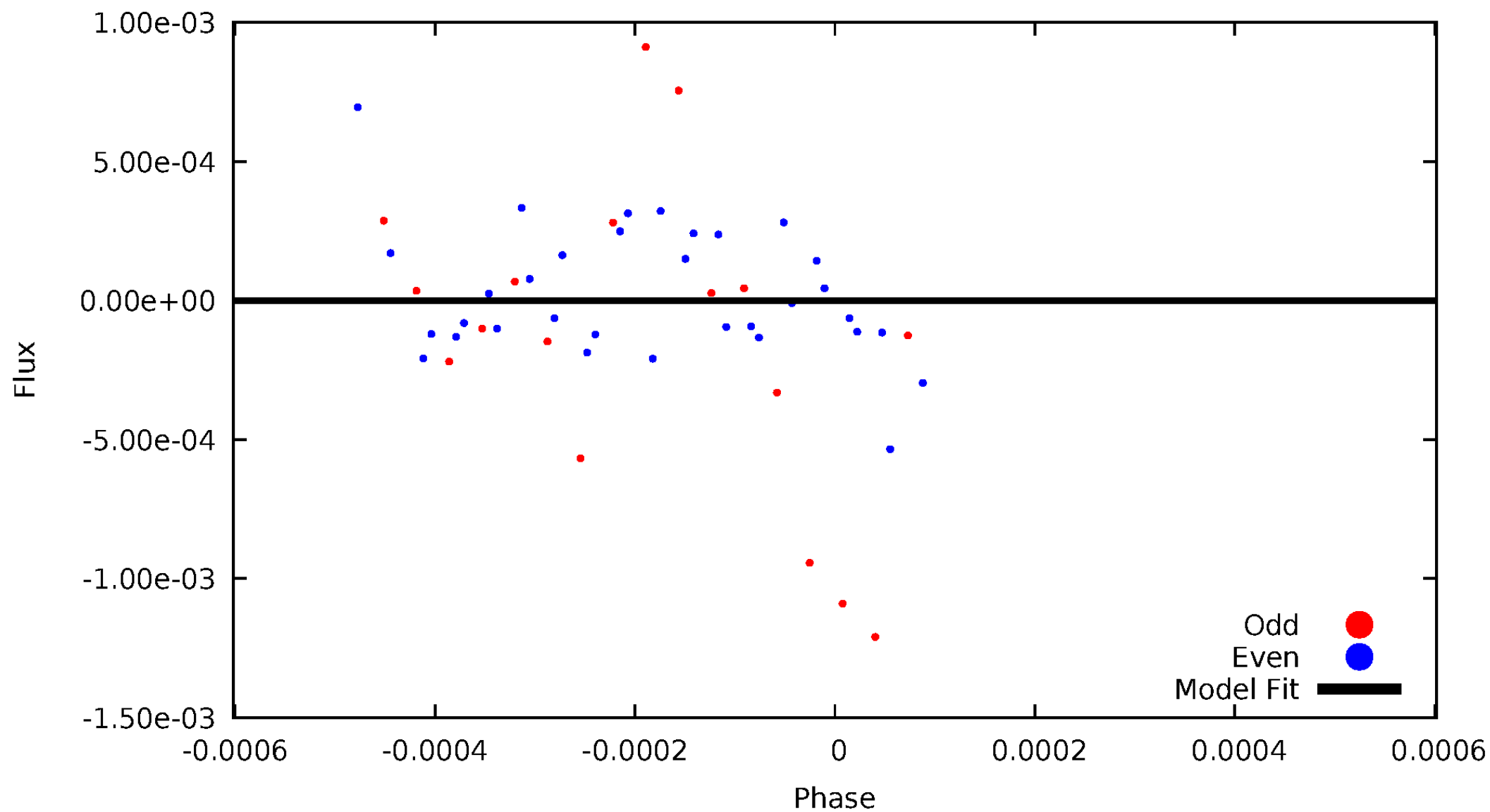


TCE 007658578-02



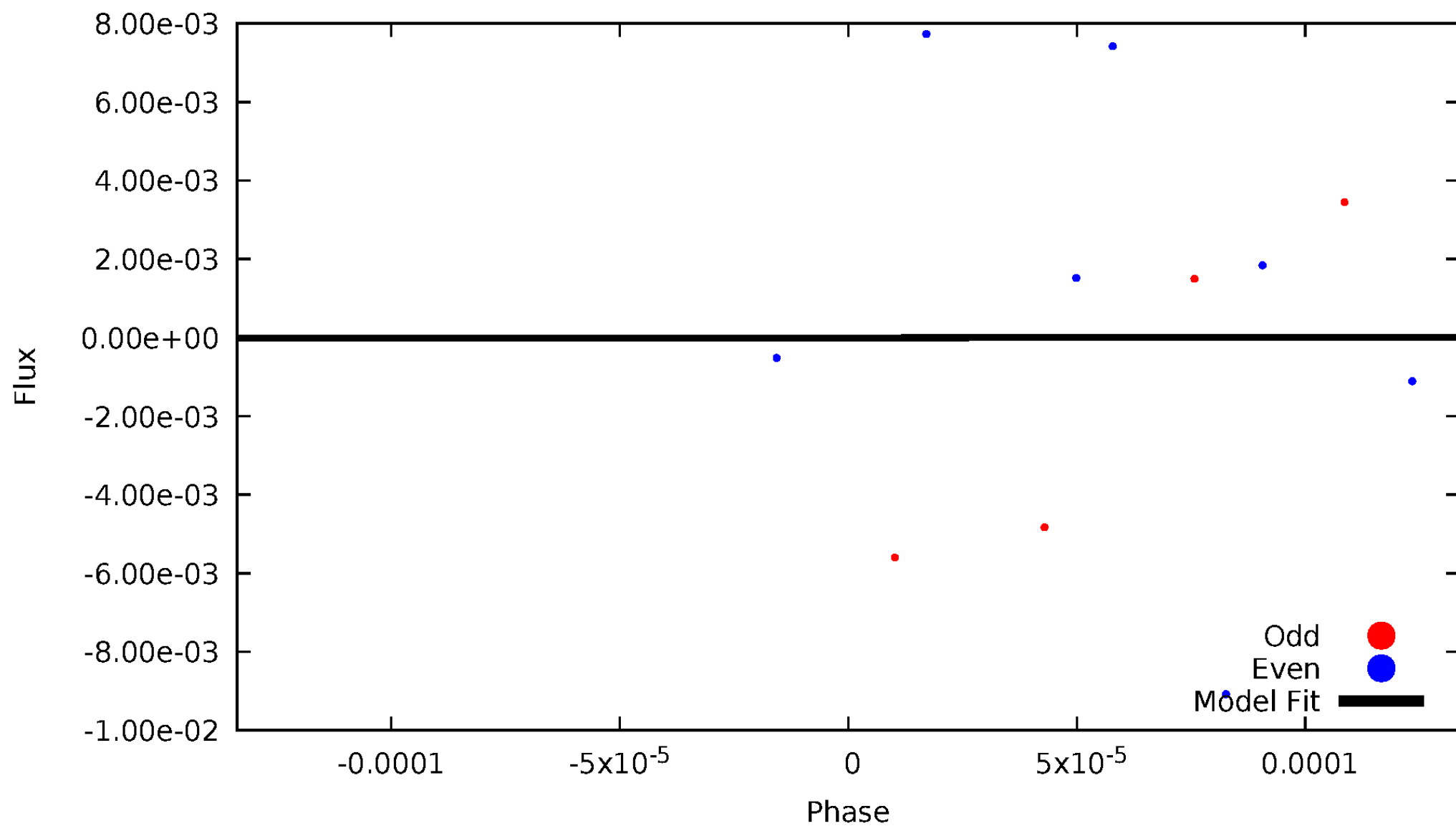
DV Odd/Even

TCE 007658578-02



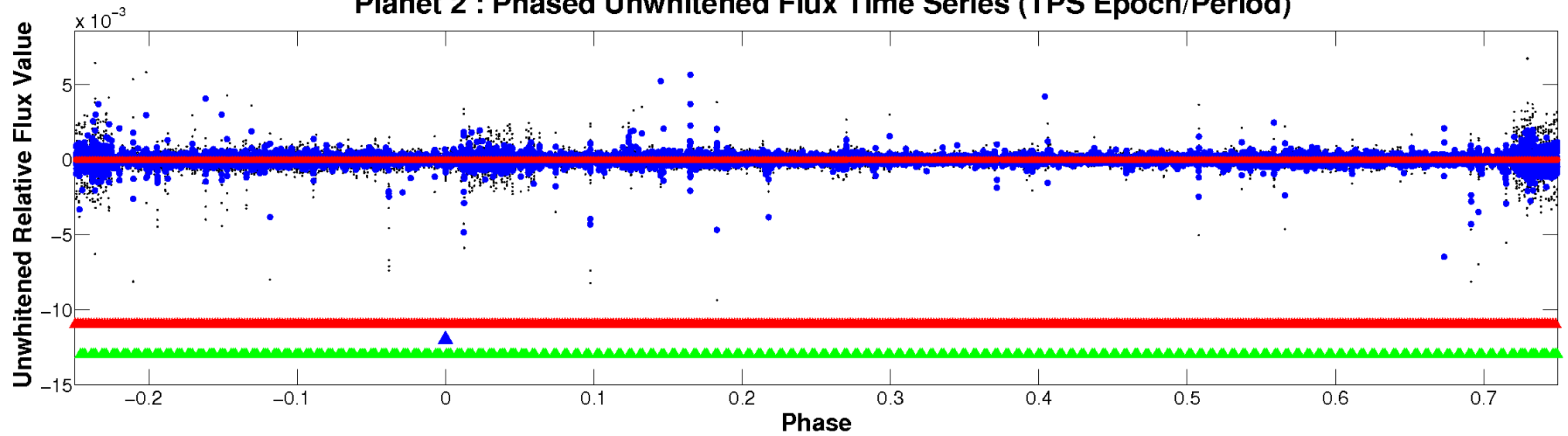
ALT Odd/Even

TCE 007658578-02



Non-Whitened Vs. Whitened Light Curve

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

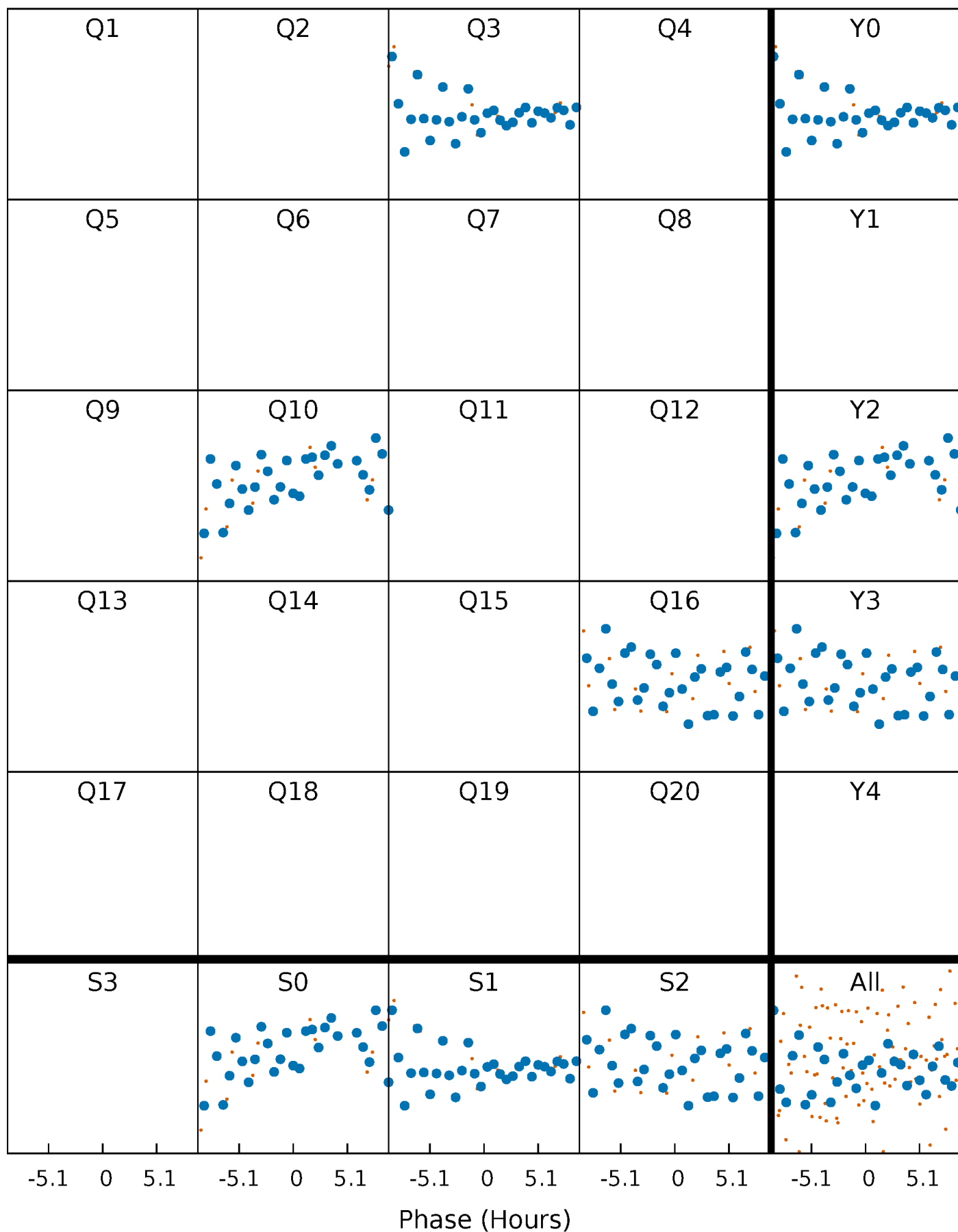


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



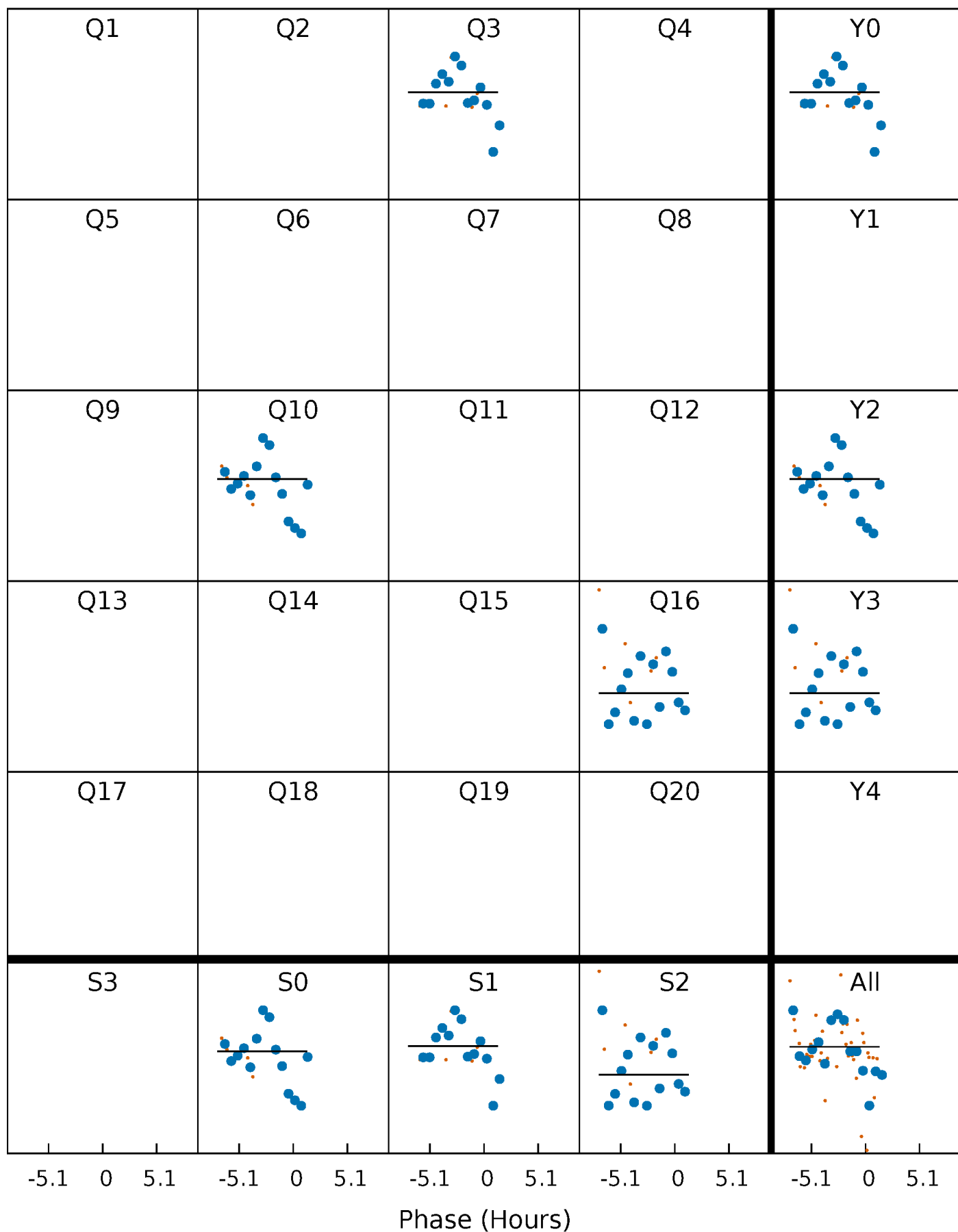
PDC Quarter-Phased Transit Curves

TCE 007658578-02 $P=623.318937$ Days $T_0=306.326911$ (BKJD)



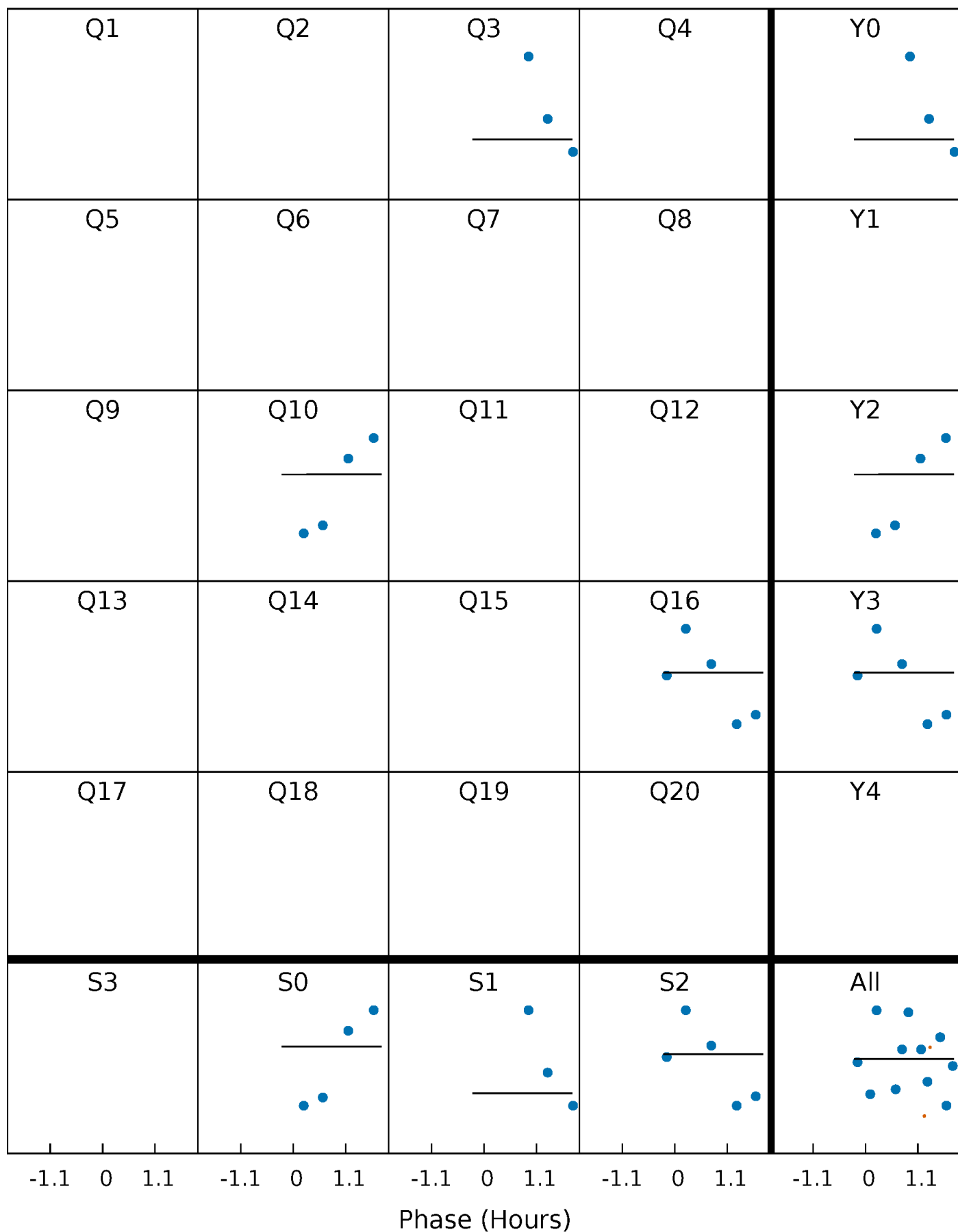
DV Quarter-Phased Transit Curves

TCE 007658578-02 P=623.318937 Days $T_0=306.326911$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

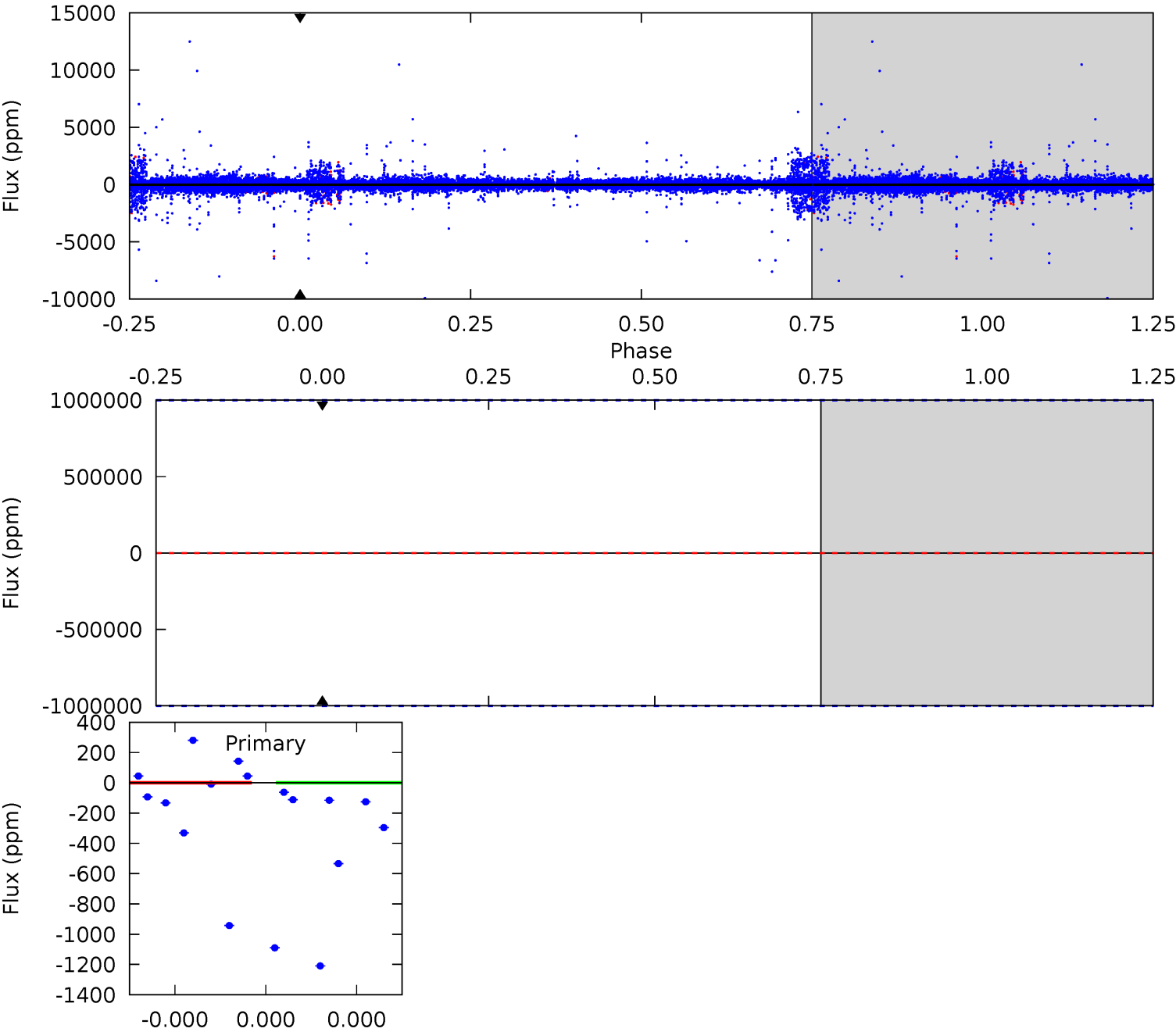
TCE 007658578-02 P=623.318937 Days $T_0=306.039220$ (BKJD)



DV Model-Shift Uniqueness Test

007658578-02, P = 623.318937 Days, E = 306.326911 Days

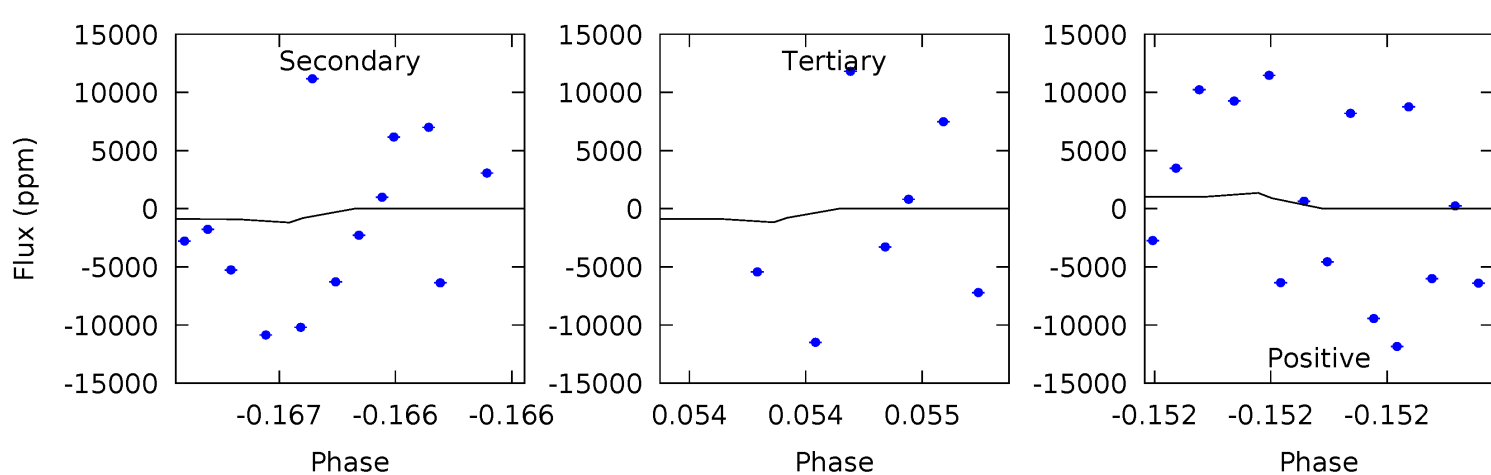
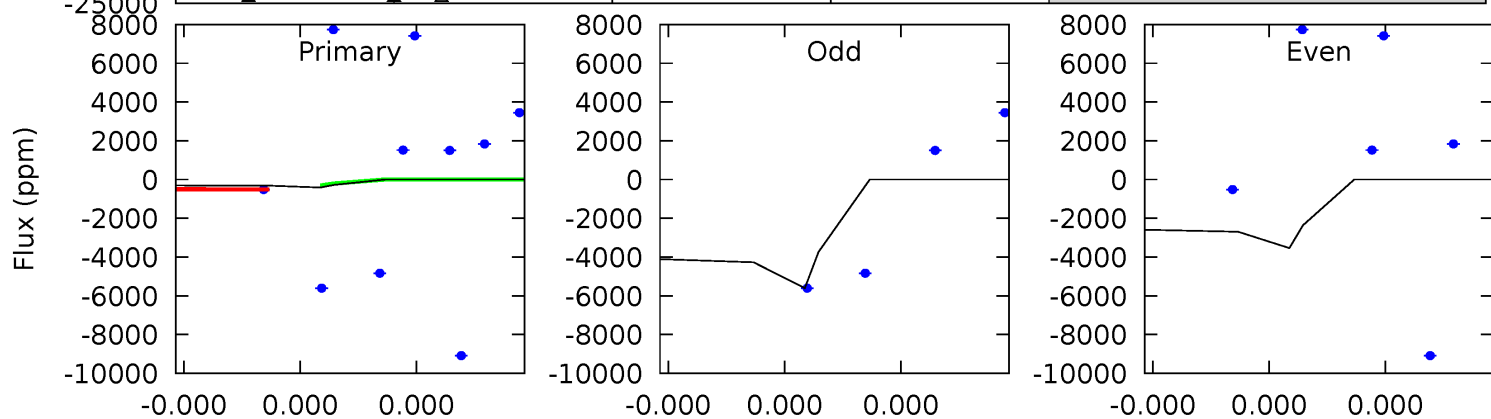
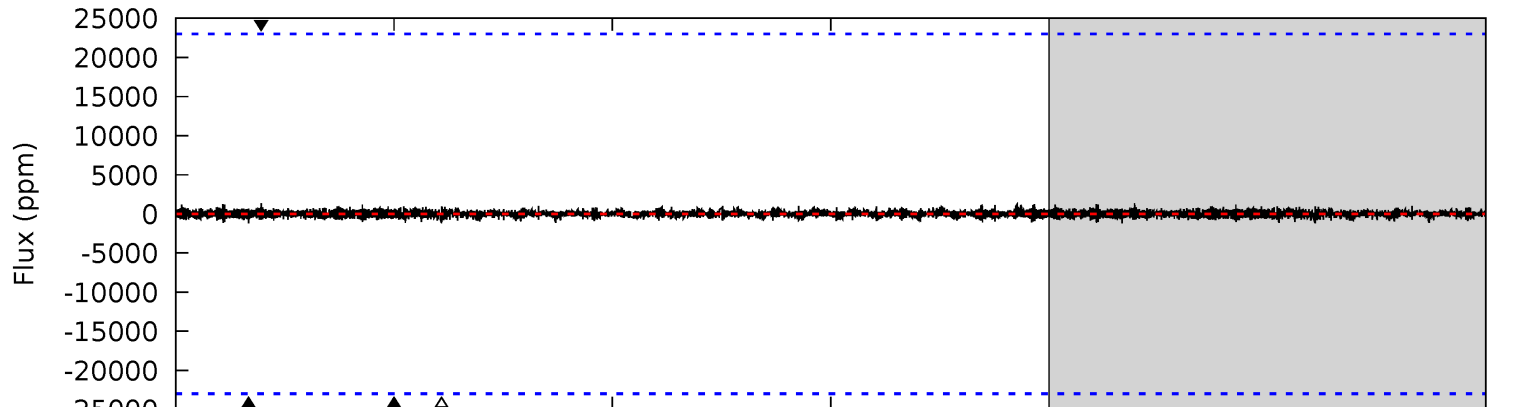
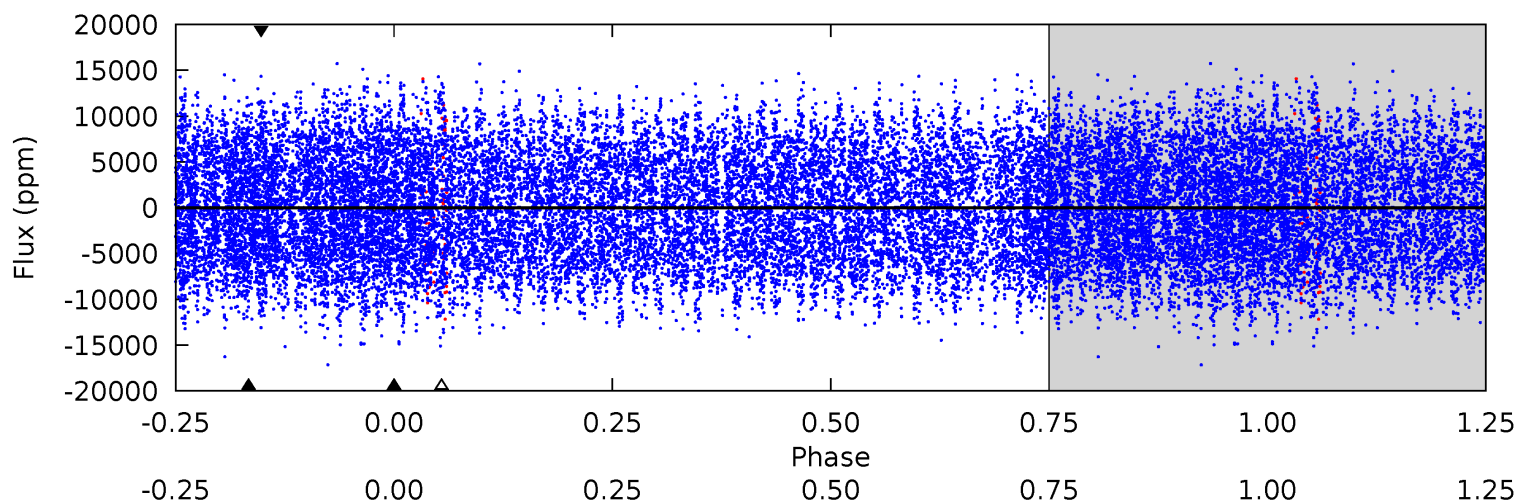
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007658578-02, P = 623.318937 Days, E = 306.039220 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0.11	0.31	0.30	0.35	5.94	4.02	0.07	-0.19	-0.24	0.01	-0.04	0.27	1.00	0.53	0.00



Stellar Parameters For KIC 007658578

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+181}_{-250}	$4.213^{+0.158}_{-0.193}$	$-0.200^{+0.250}_{-0.300}$	$1.440^{+0.439}_{-0.293}$	$1.240^{+0.181}_{-0.201}$	$0.585^{+0.464}_{-0.299}$
	+3%/-4%	+4%/-5%	+125%/-150%	+30%/-20%	+15%/-16%	+79%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007658578-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$11.65^{+12.31}_{-8.64}$	396^{+32}_{-27}	-5665^{+33305}_{-28244}	$-28608.175^{+1621394.512}_{-2132339.560}$
Alt.	-1193 ± 3874	$11.04^{+12.83}_{-7.66}$	397^{+31}_{-27}	4116^{+4312}_{-10302}	$5336^{+113121}_{-43629}$

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

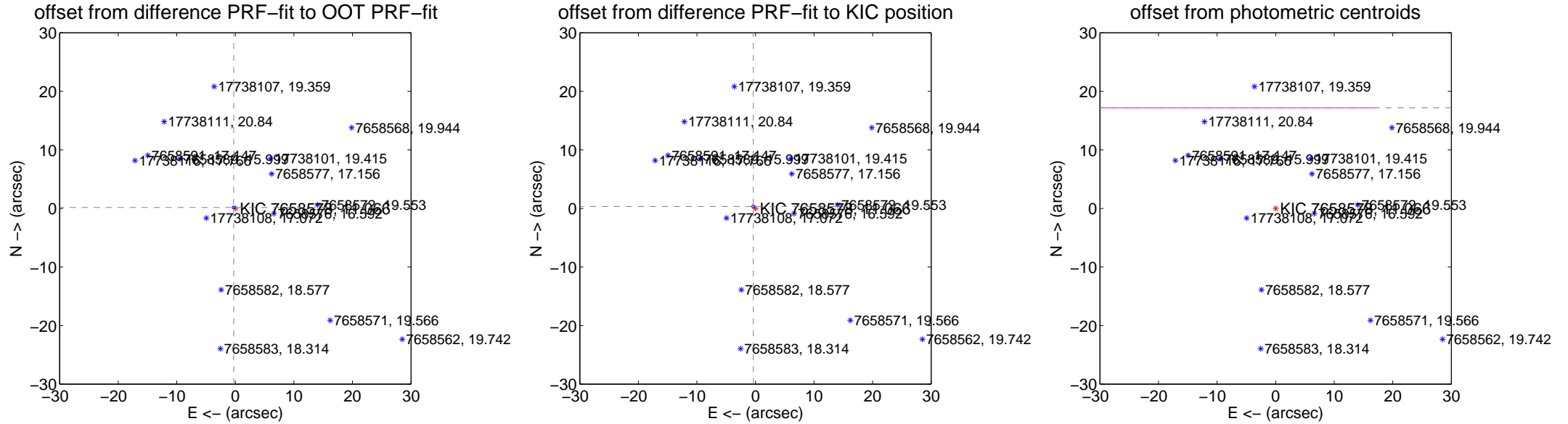
DV Centroid Data

Supplemental centroid analysis for 007658578-02. **Kepler magnitude: 11.07.** Transit SNR -1.00

There are 2 quarters with good PRF difference image offsets

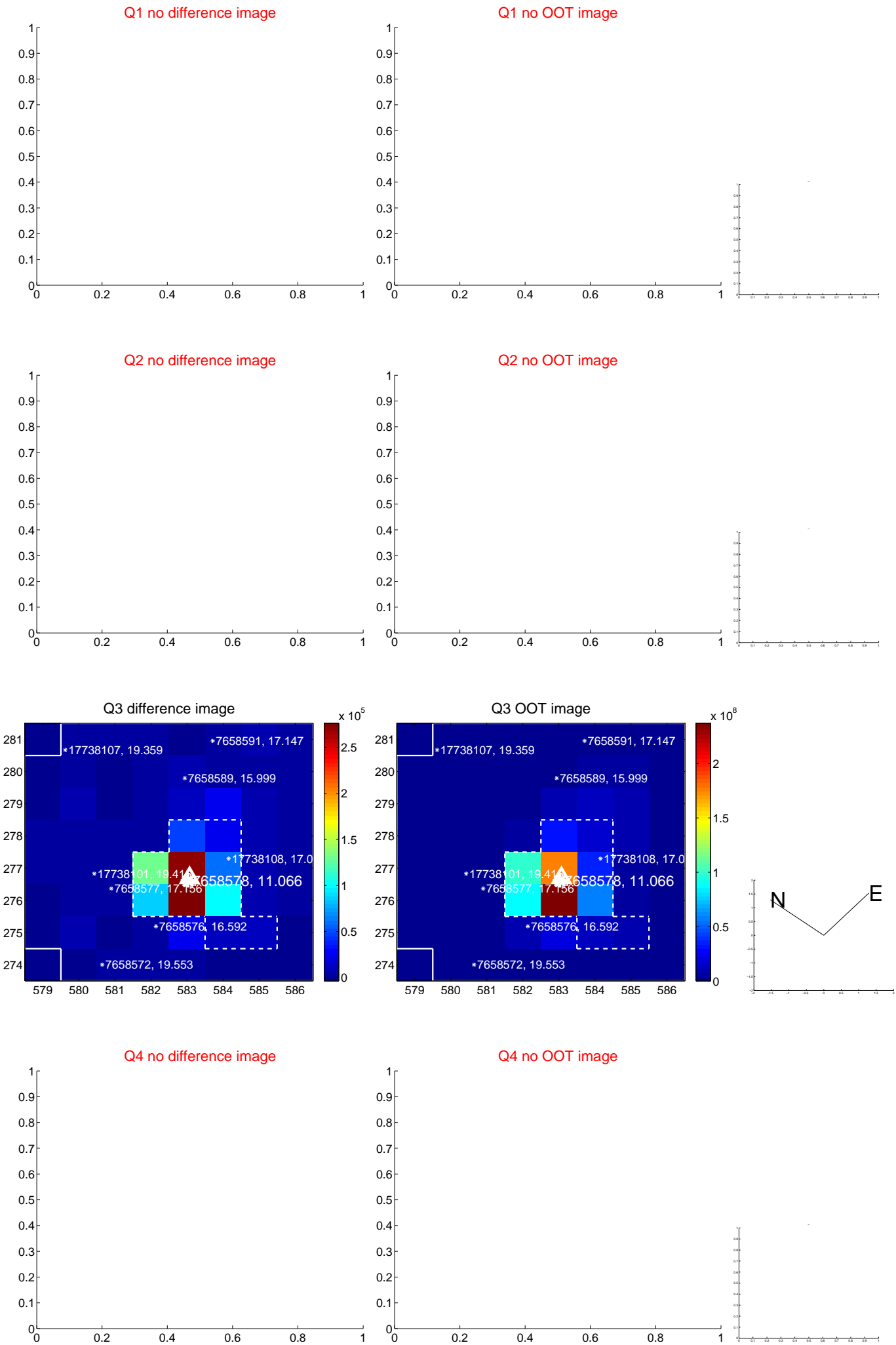
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.327 ± 0.078	4.18	0.280 ± 0.079	0.169 ± 0.077
PRF-fit source offset from KIC position	0.497 ± 0.086	5.76	0.373 ± 0.070	0.328 ± 0.104
photometric centroid source offset	37.63 ± 48.94	0.77	33.47 ± 50.39	17.18 ± 42.99



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.

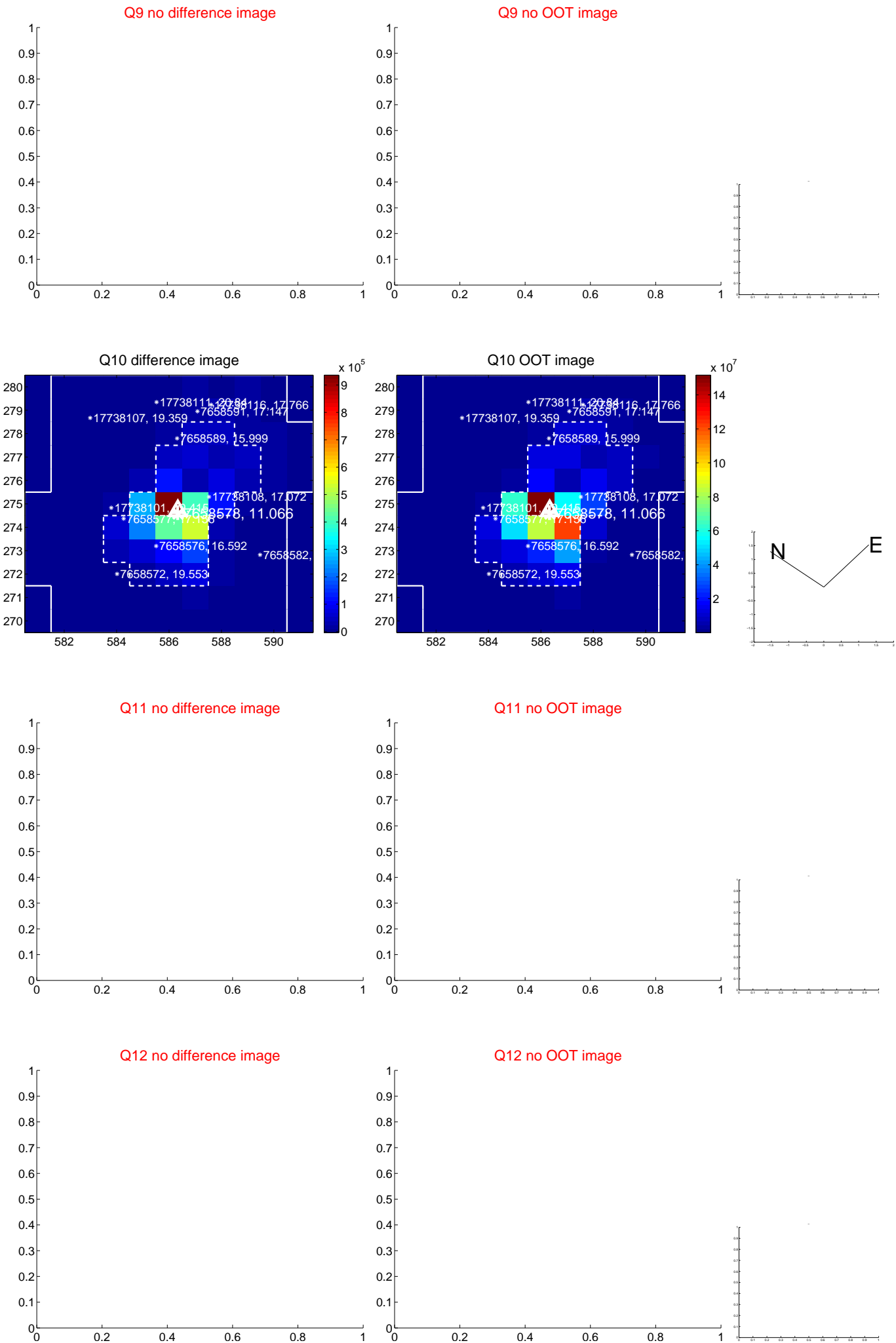
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



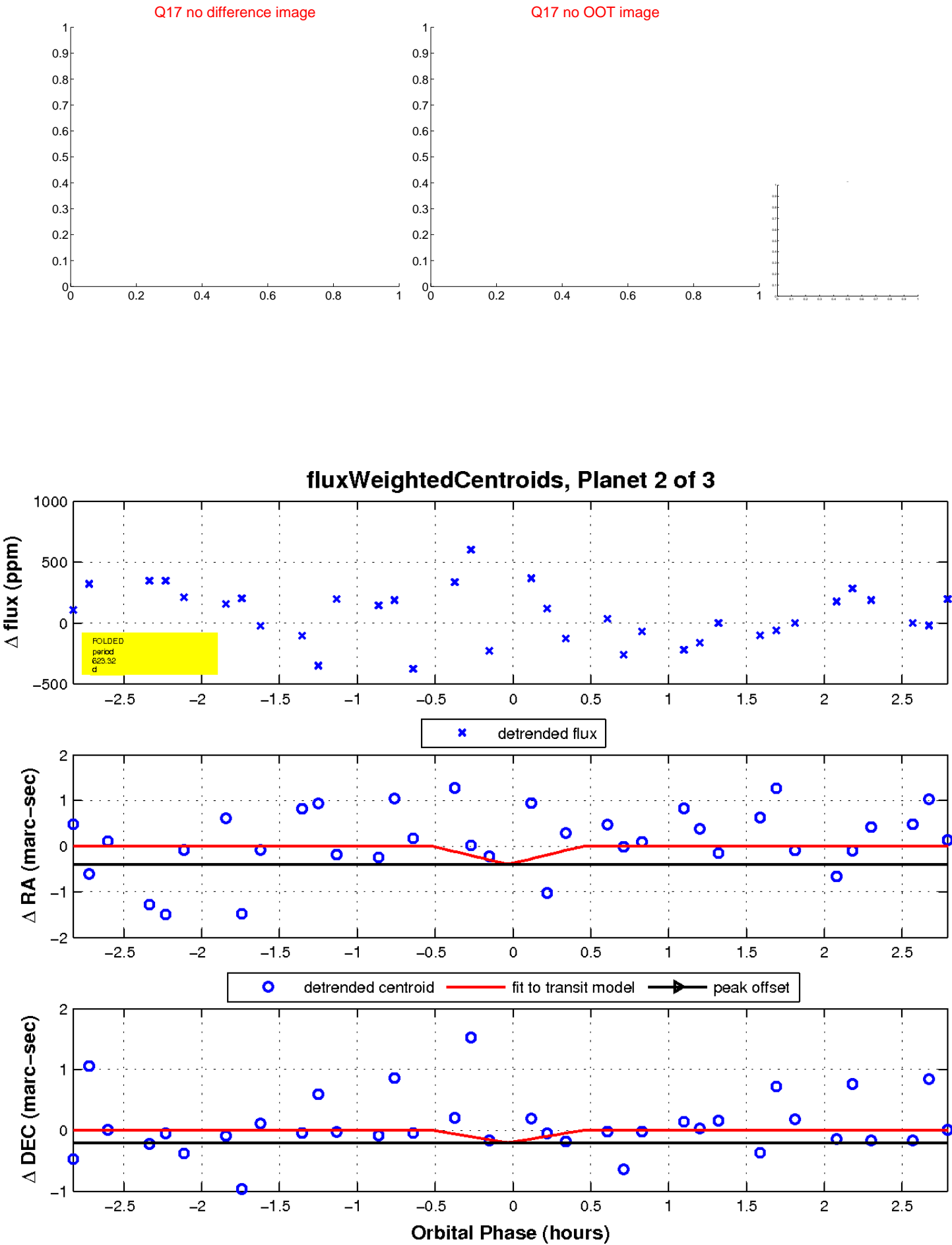
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

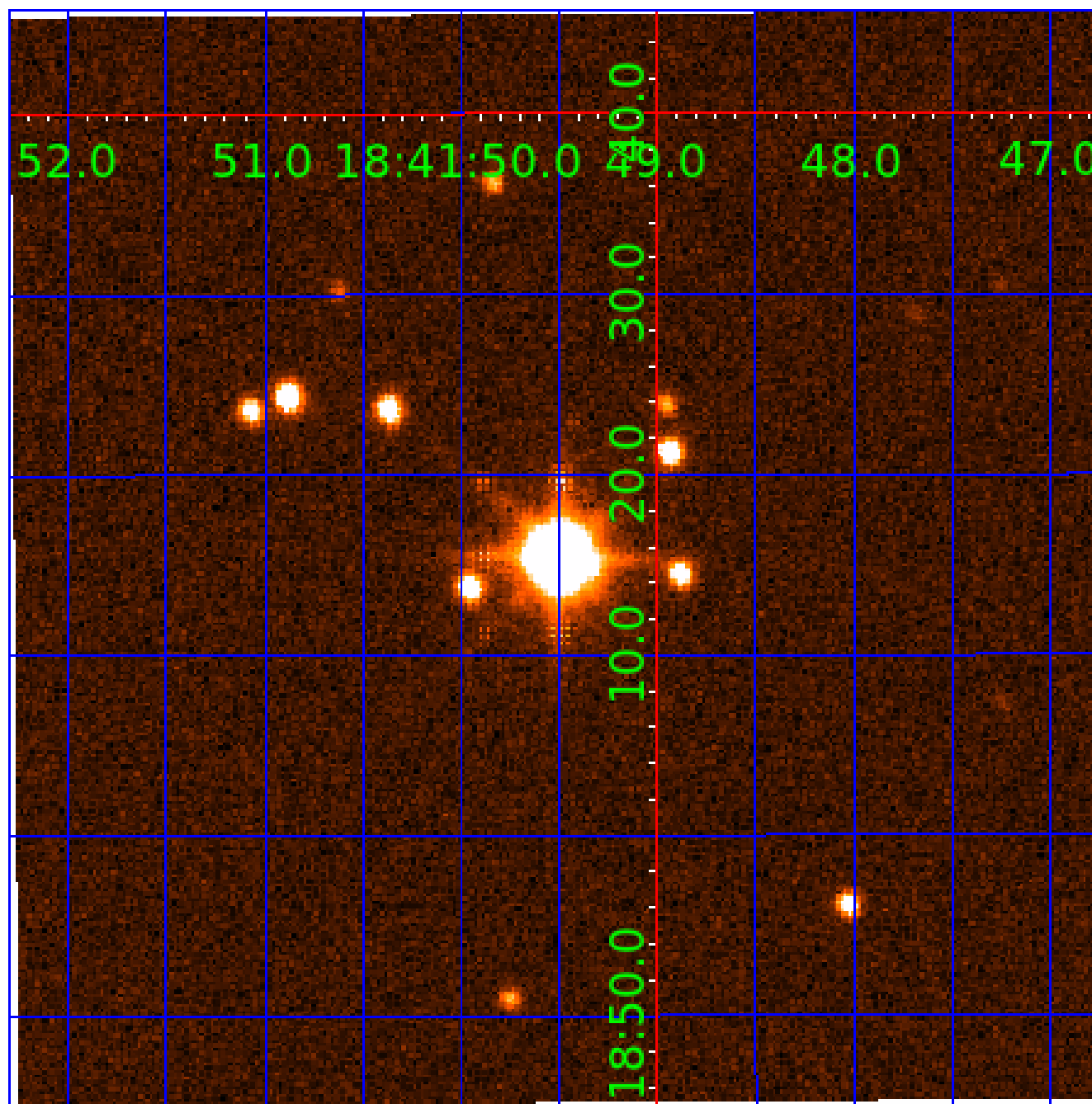


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 007658578

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})
007658578-01	OBS	No	1.131224	132.582836	11.9	6.202	28.4	4.2	1.44	6621	0.51	6866.98
007658578-02	OBS	No	623.318937	306.326911	160.2	4.500	11.9	-1.0	1.44	6621	1.84	1.52
007658578-03	OBS	No	4.523228	134.858790	149.0	4.482	10.5	10.9	1.44	6621	2.02	1082.01

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007658578-01	OBS	FP	0.00	1	0	0	0	SWEET_NTL—LPP_DV—LPP_ALT—CENT_SATURATED
007658578-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
007658578-03	OBS	FP	0.00	1	0	0	0	TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

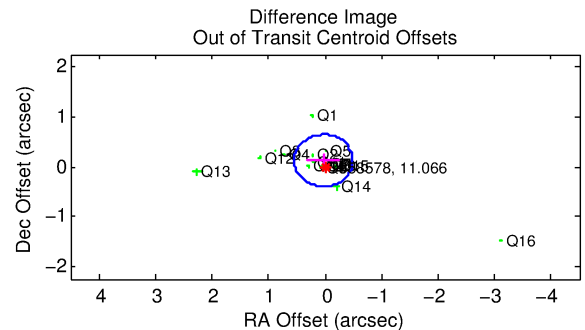
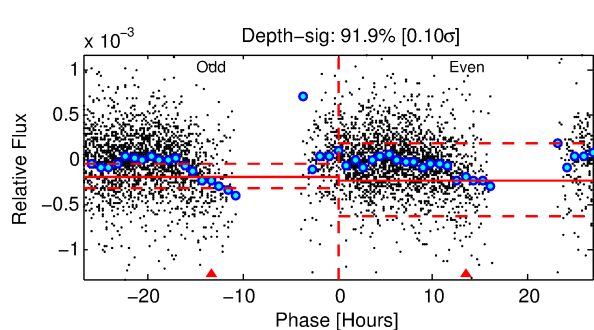
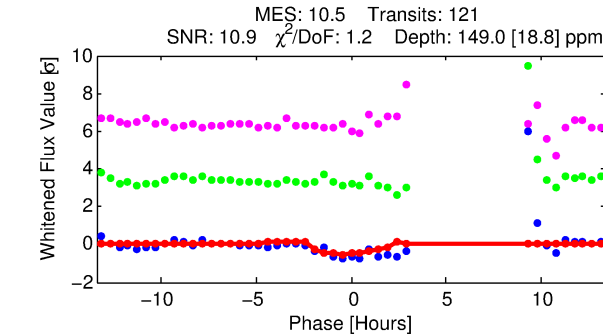
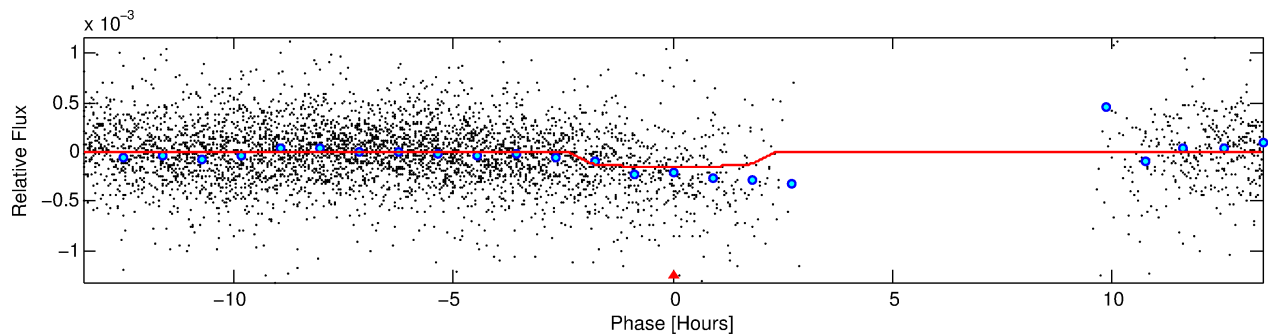
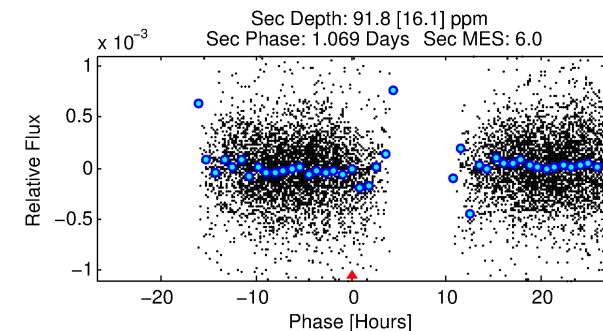
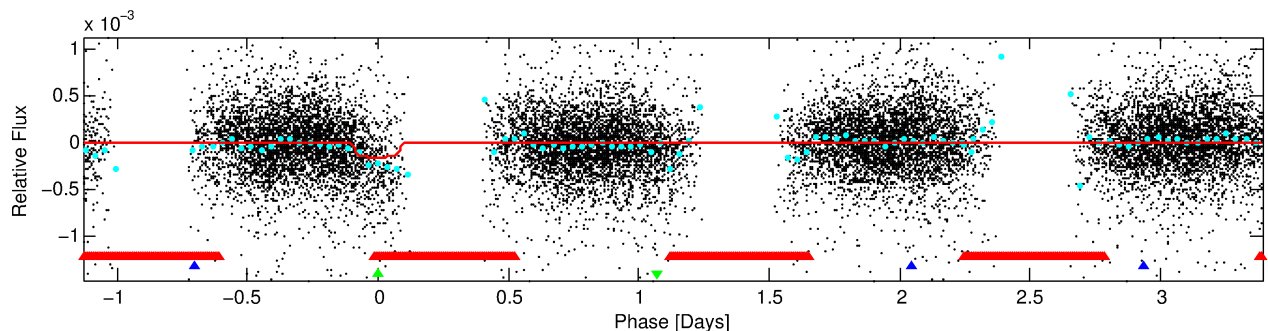
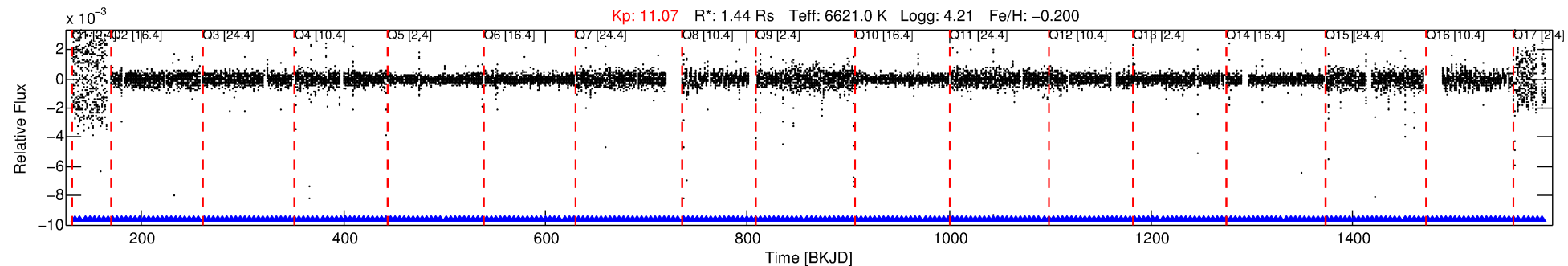
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 007658578-03

No Significant Match Found

DV One-Page Summary

KIC: 7658578 Candidate: 3 of 3 Period: 4.523 d



DV Fit Results:

Period = 4.52323 [0.00004] d
Epoch = 134.8588 [0.0099] BKJD
Rp/R* = 0.0129 [0.0052]
a/R* = 3.97 [8.62]
b = 0.88 [0.60]
Seff = 1082.01 [421.70]
Teq = 1462 [142] K
Rp = 2.02 [1.02] Re
a = 0.0574 [0.0144] AU
Ag = 40.76 [36.62] [1.09σ]
Teffp = 5713 [1196] K [3.53σ]

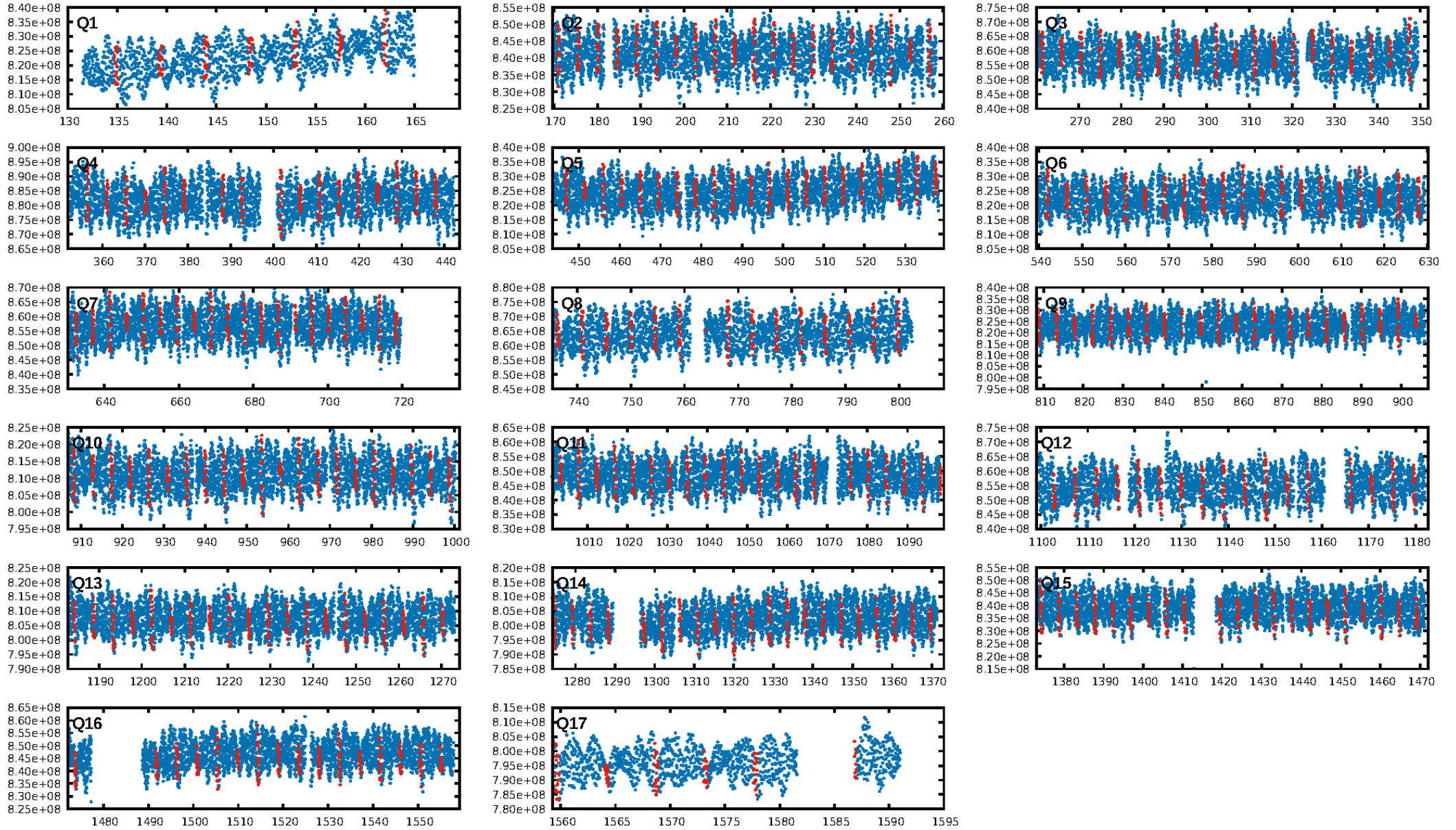
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.64σ]
LongPeriod-sig: 100.0% [2338.20σ]
ModelChiSquare2-sig: 68.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.07e-16
RollingBand-fgt: 1.00 [115/115]
GhostDiagnostic-chr: -1.053
Centroid-sig: 2.7%
Centroid-so: 0.358 arcsec [2.24σ]
OotOffset-rm: 0.125 arcsec [0.72σ]
KicOffset-rm: 0.241 arcsec [1.18σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.24 [4/17]
DiffImageOverlap-fno: 0.00 [0/17]

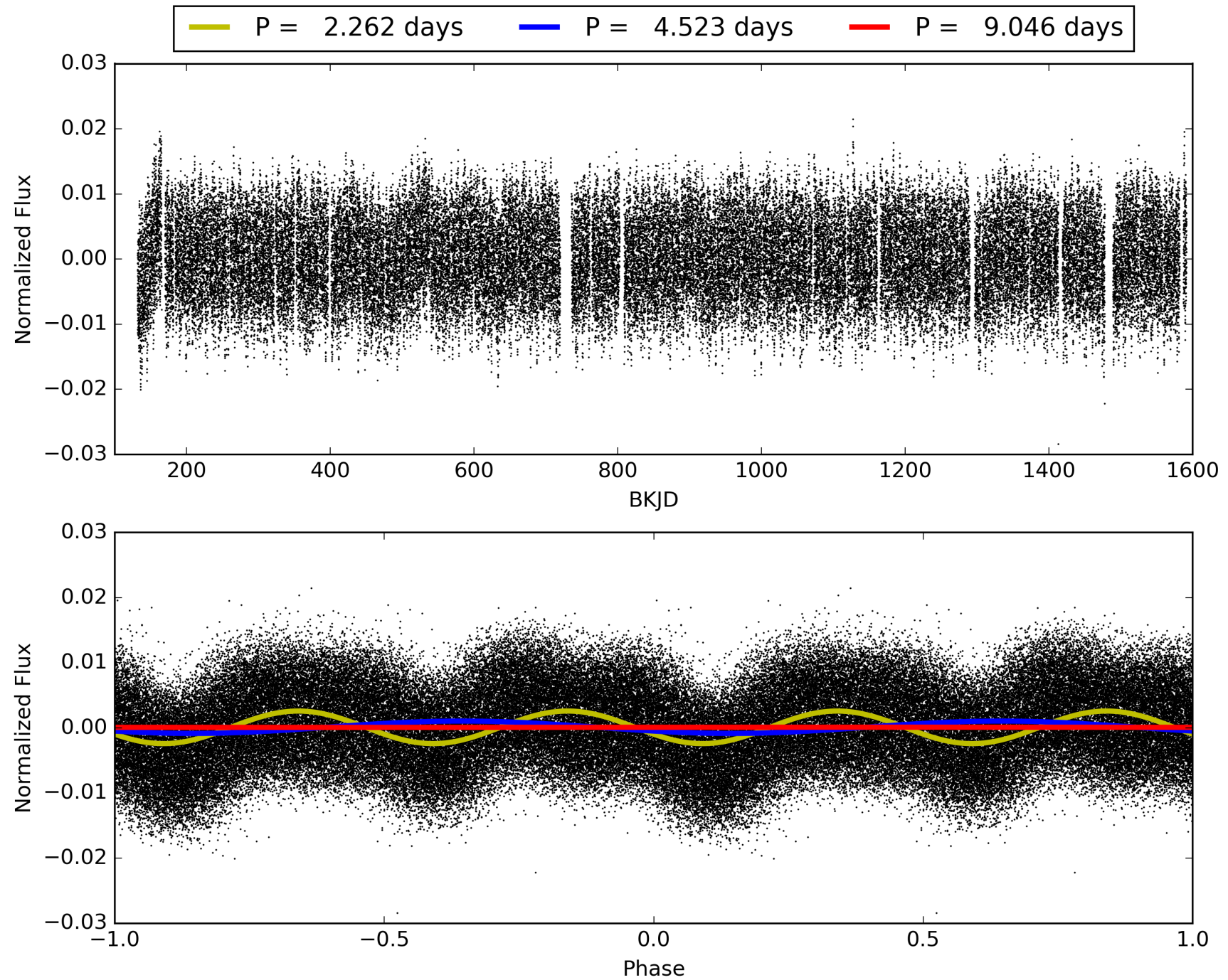
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 13:58:52 Z

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

TCE 007658578-03, PDC Light Curves

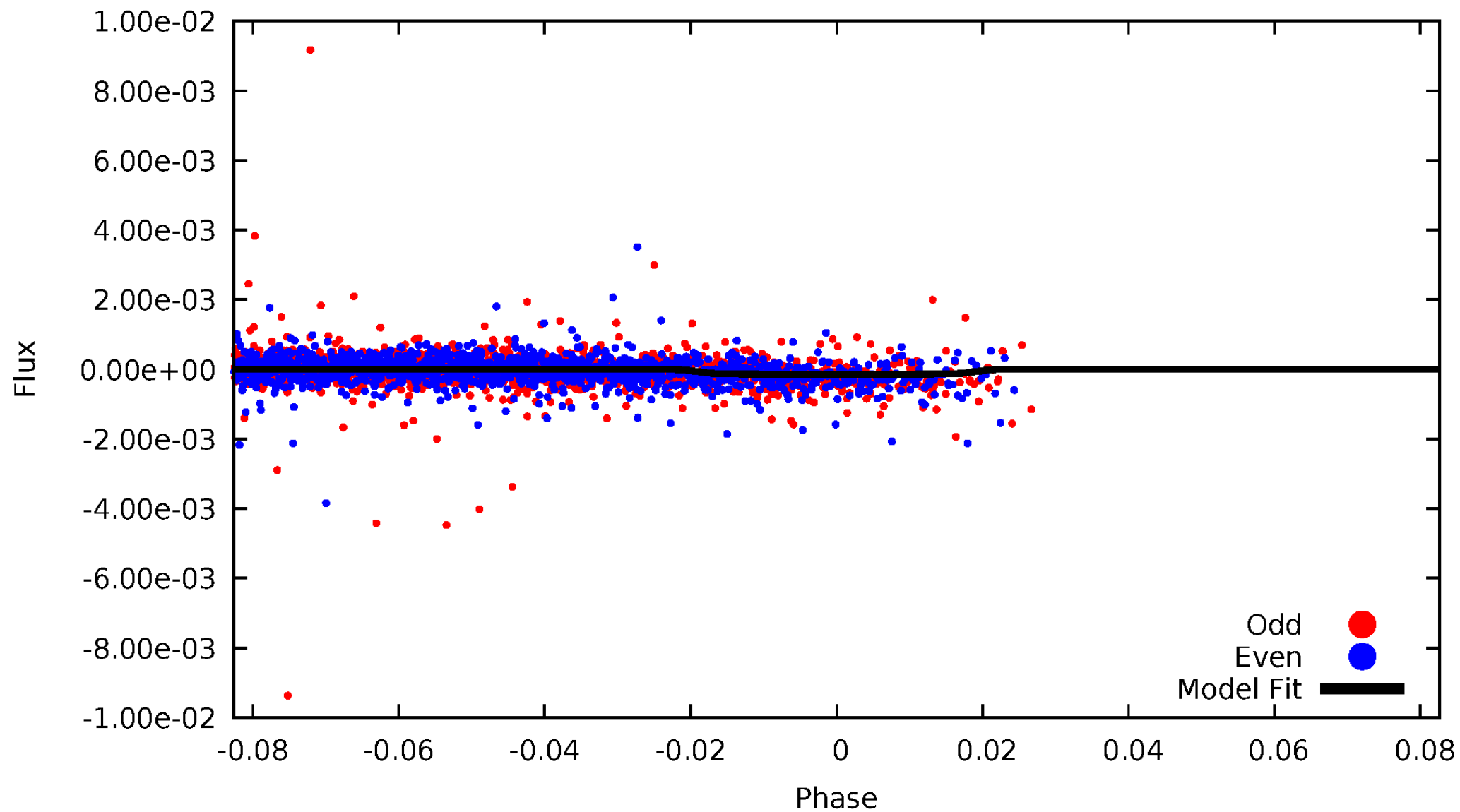


TCE 007658578-03



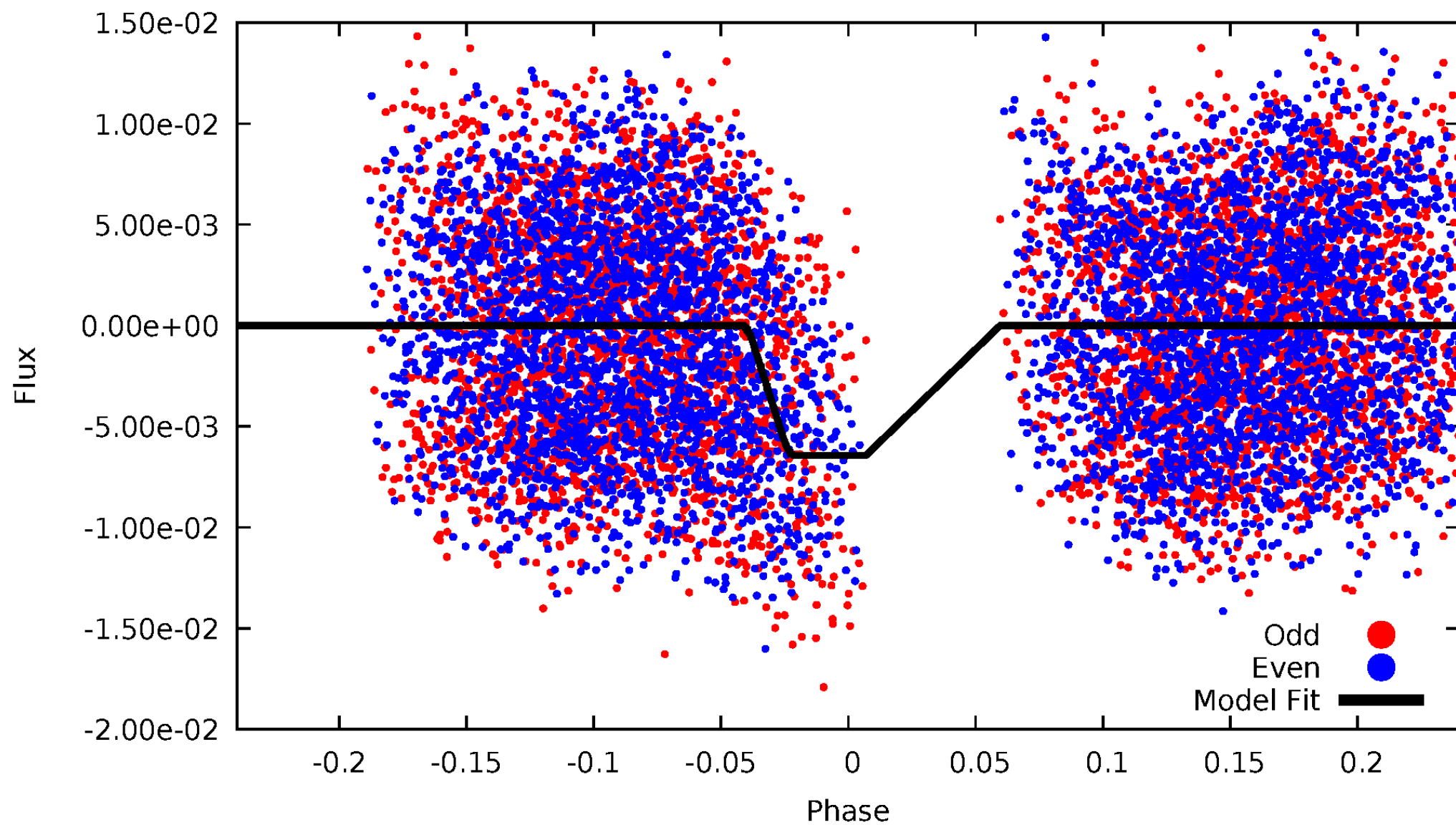
DV Odd/Even

TCE 007658578-03



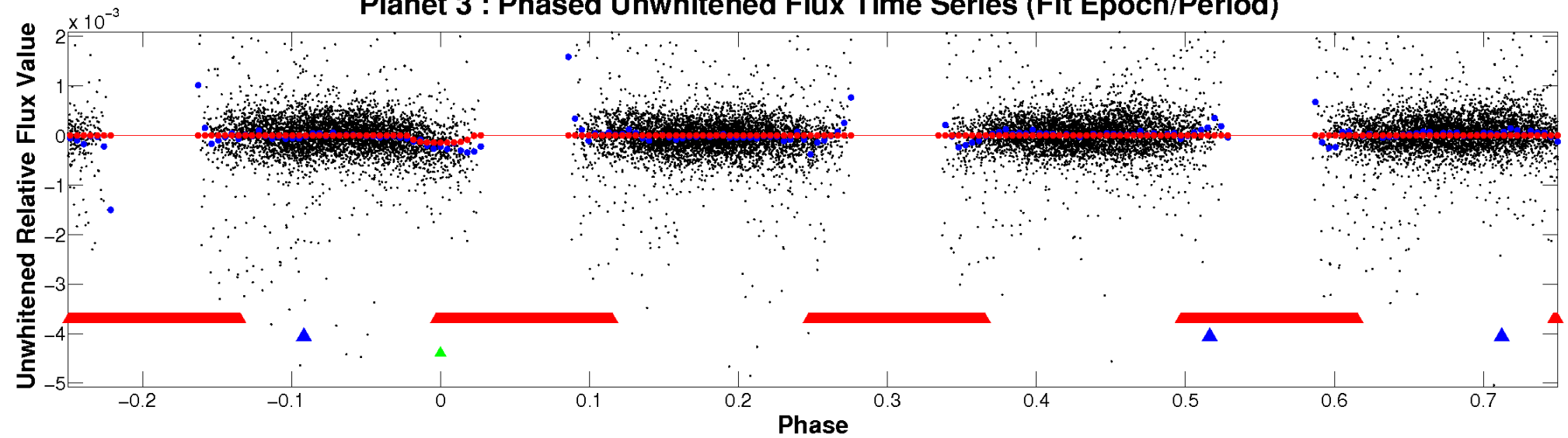
ALT Odd/Even

TCE 007658578-03

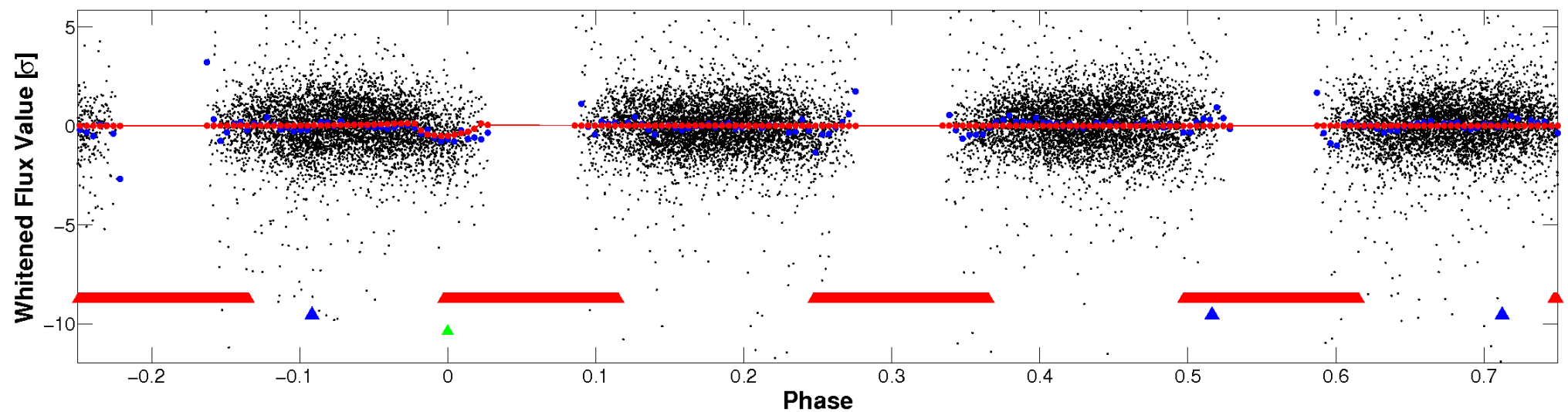


Non-Whitened Vs. Whitened Light Curve

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

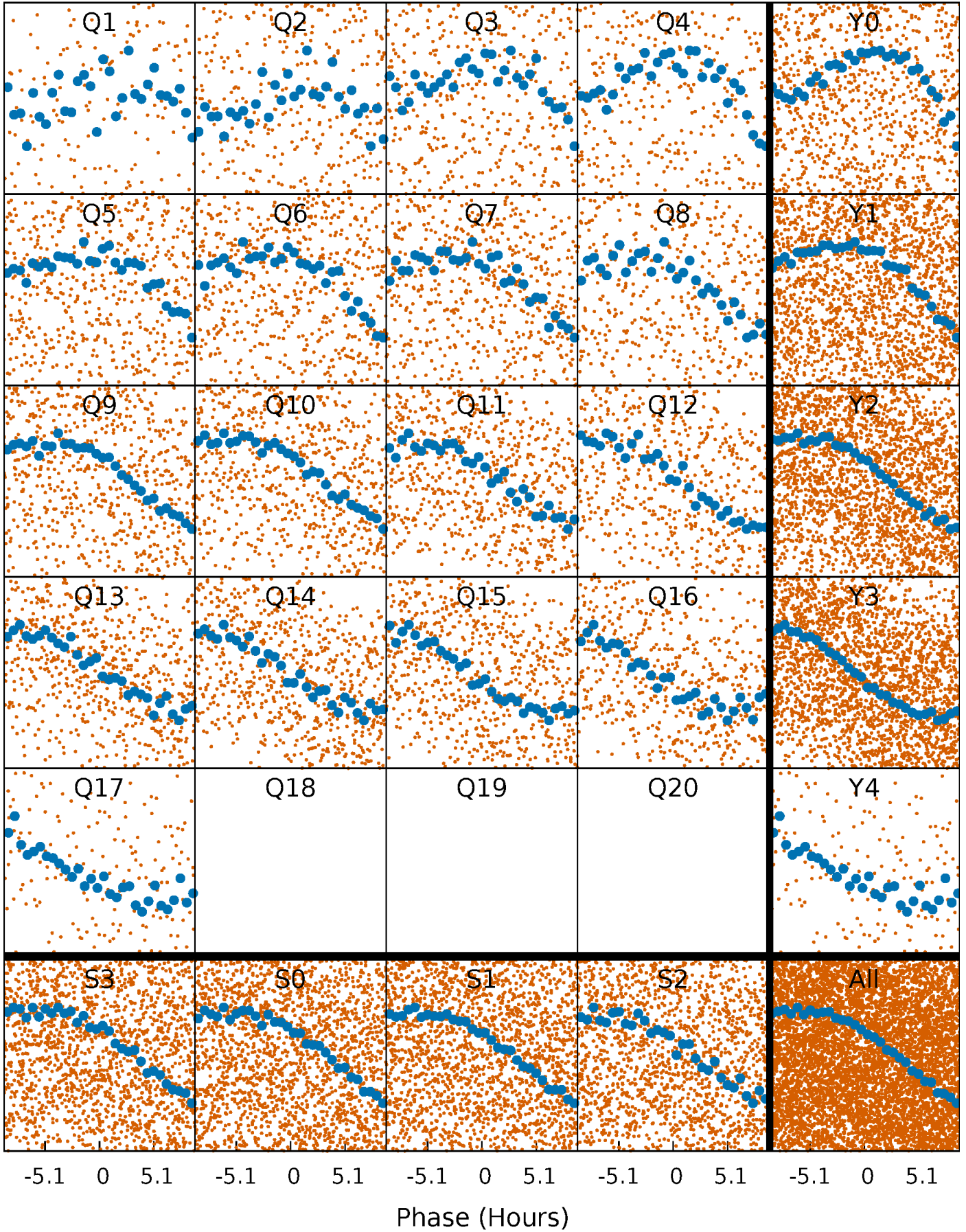


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



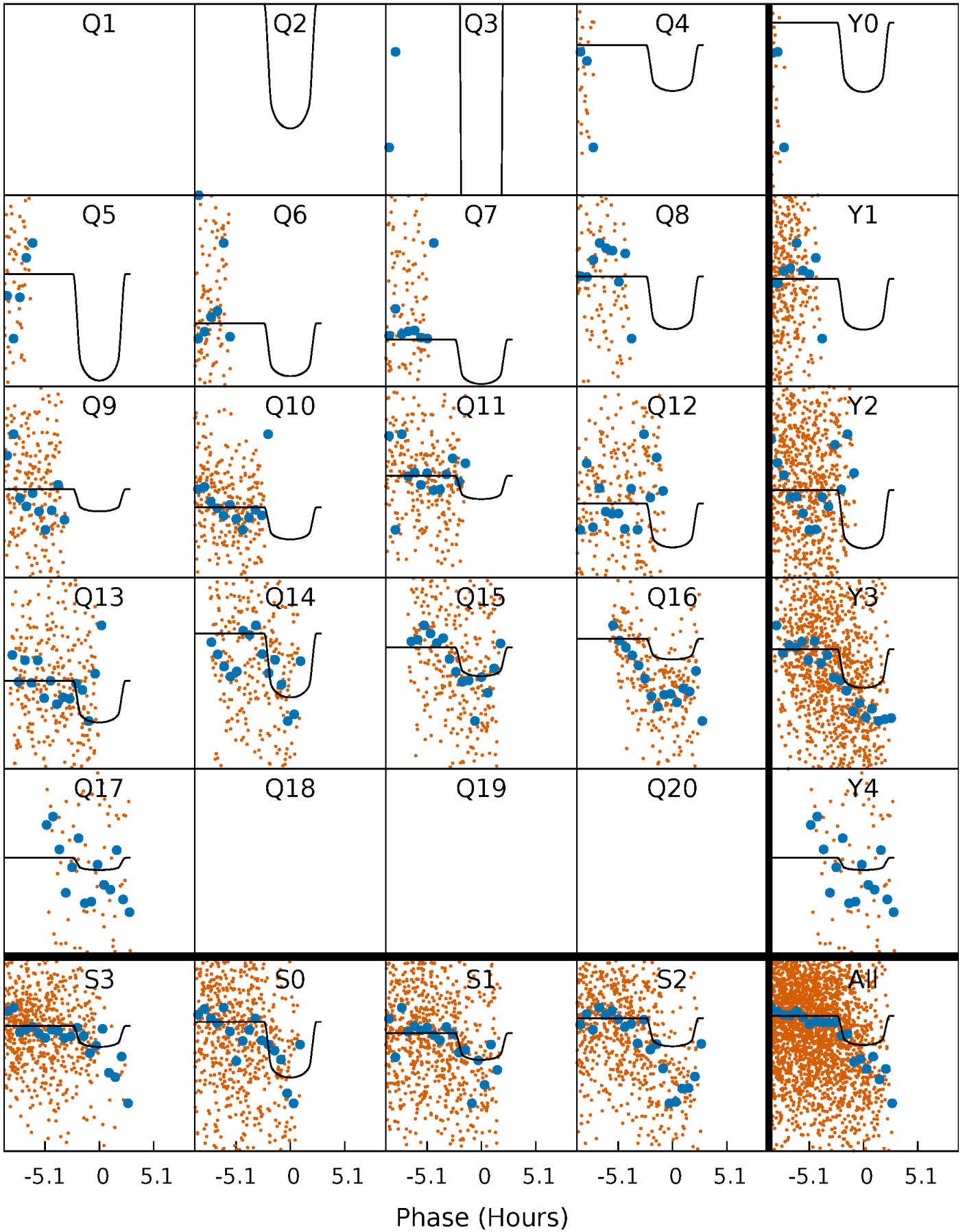
PDC Quarter-Phased Transit Curves

TCE 007658578-03 P= 4.523228 Days $T_0=134.858790$ (BKJD)



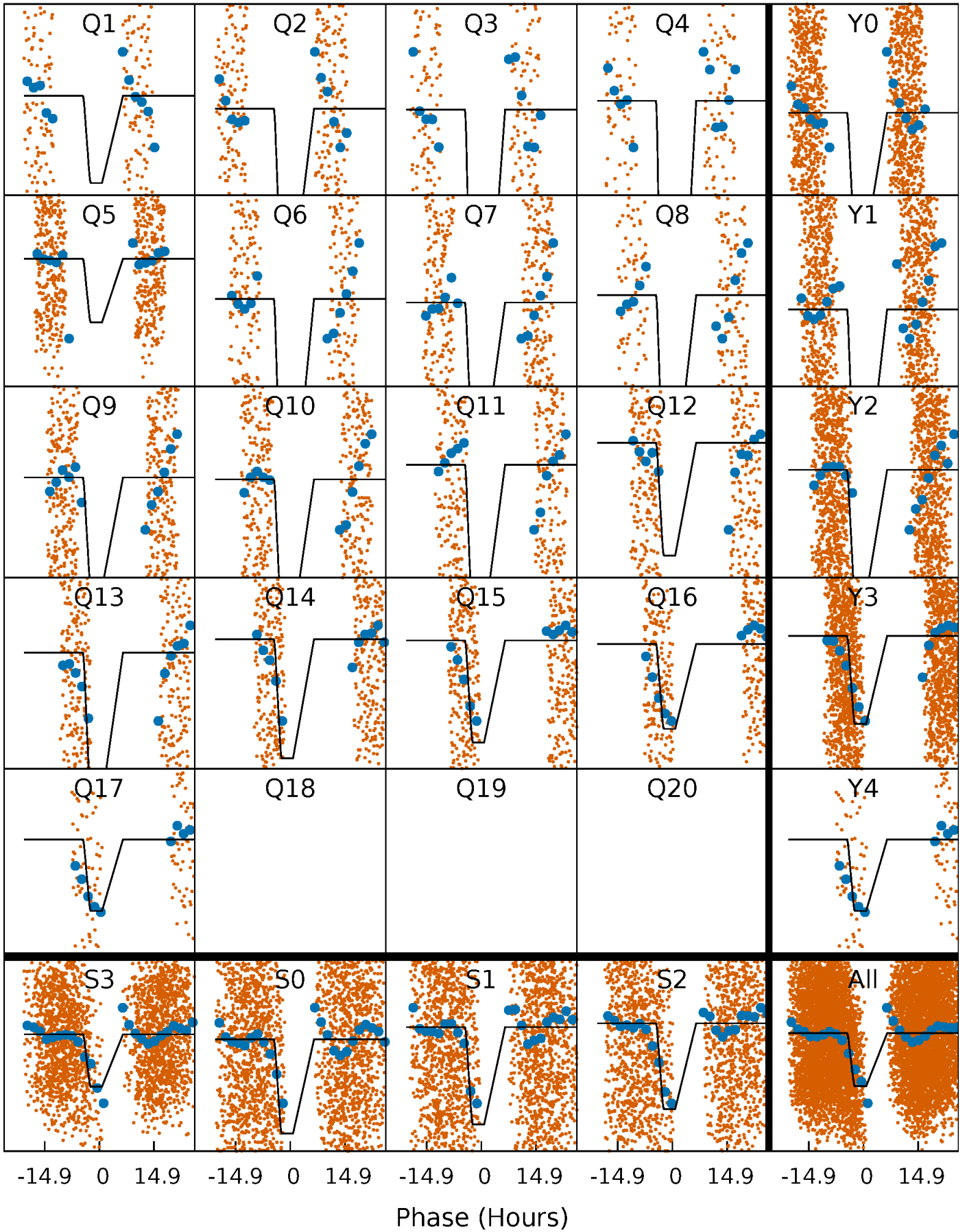
DV Quarter-Phased Transit Curves

TCE 007658578-03 P= 4.523228 Days $T_0=134.858790$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

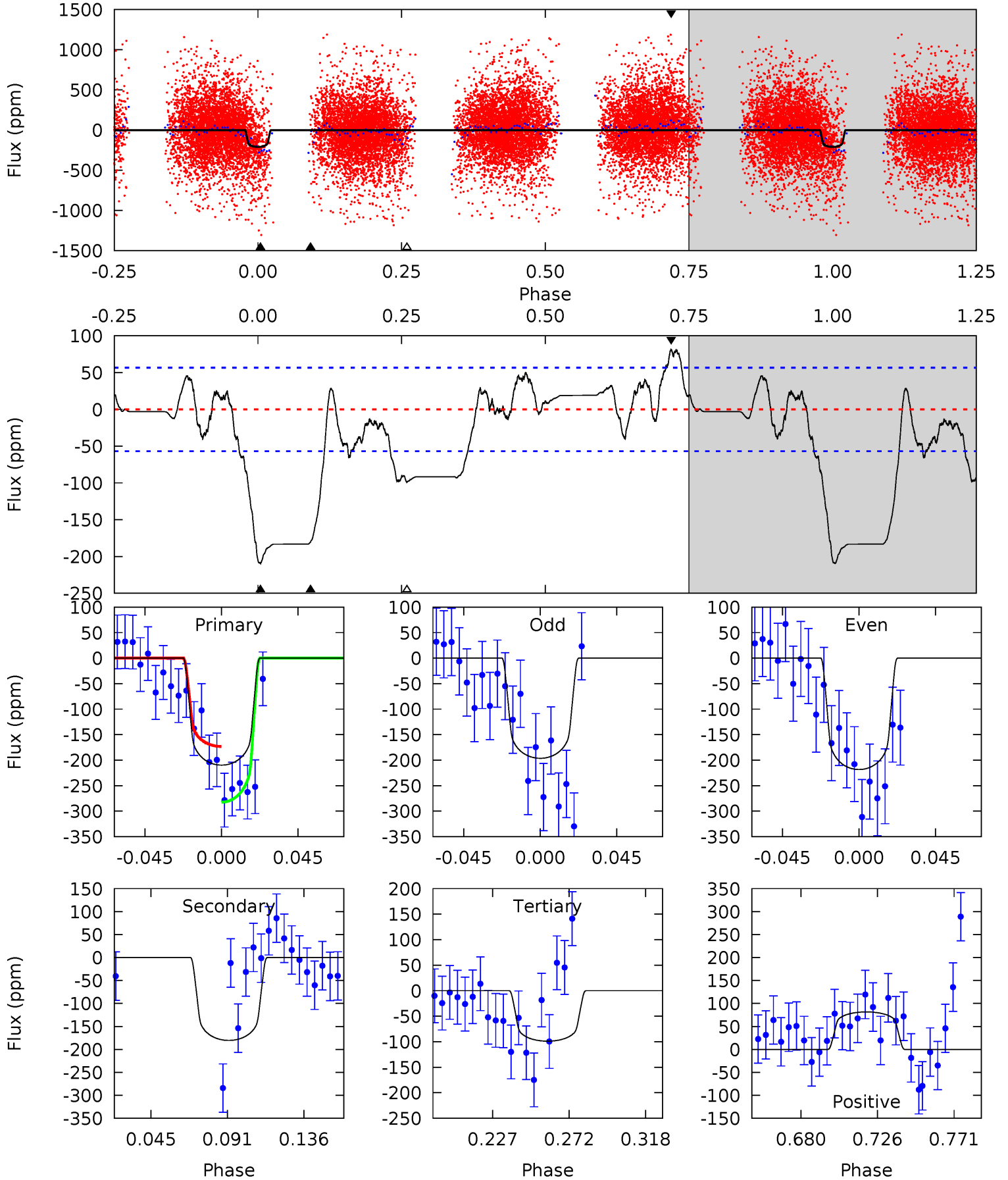
TCE 007658578-03 P= 4.523142 Days $T_0=134.975645$ (BKJD)



DV Model-Shift Uniqueness Test

007658578-03, P = 4.523228 Days, E = 130.335562 Days

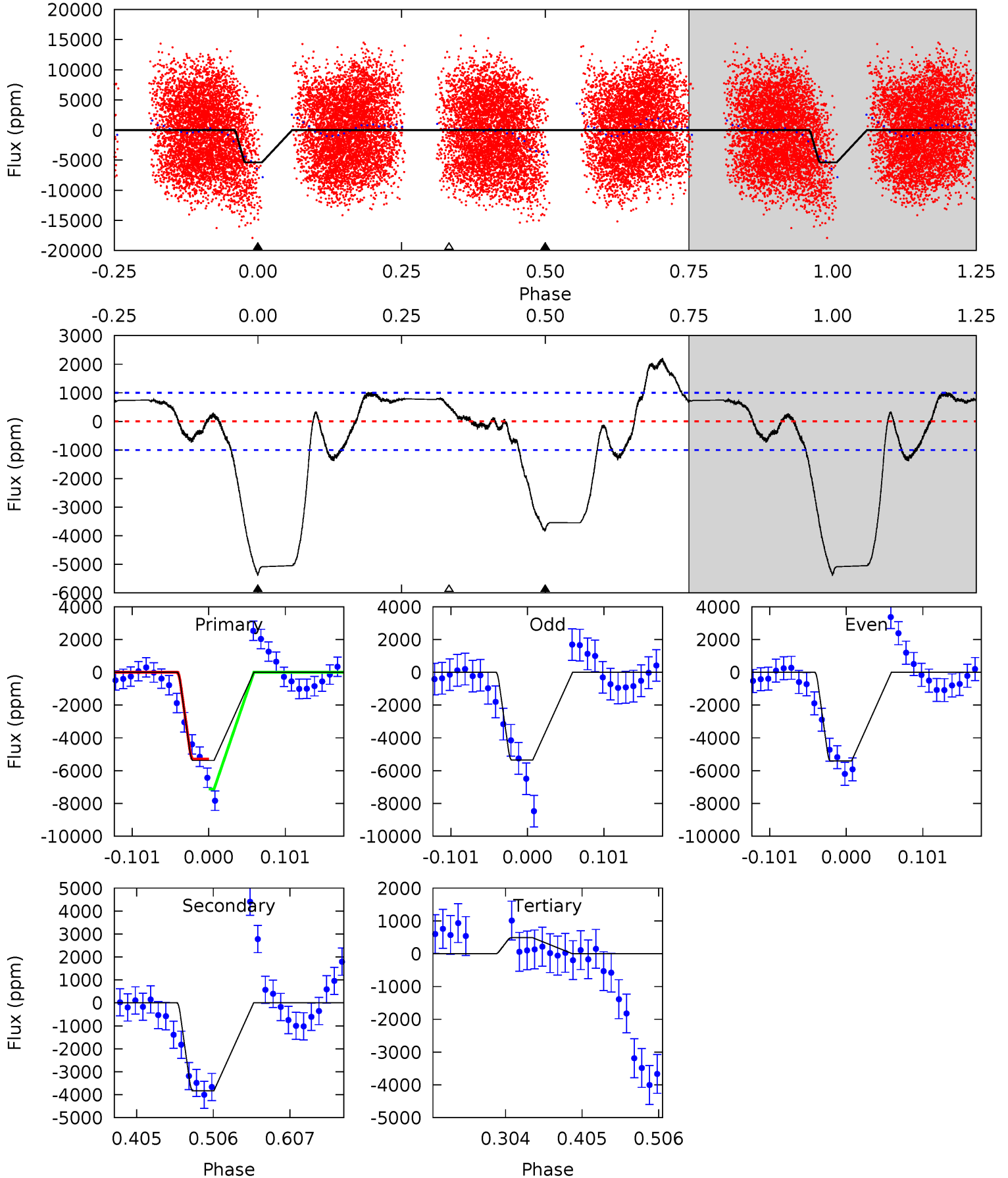
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.5	15.0	8.24	6.79	4.73	2.00	3.03	9.24	10.7	6.79	8.24	0.92	0.95	0.28	4.23



Alt Model-Shift Uniqueness Test

007658578-03, P = 4.523142 Days, E = 130.452503 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.5	17.4	-2.21	0	4.56	1.64	4.02	26.7	24.5	19.6	17.4	0.14	0.94	0.29	1.33



Stellar Parameters For KIC 007658578

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6621^{+181}_{-250}	$4.213^{+0.158}_{-0.193}$	$-0.200^{+0.250}_{-0.300}$	$1.440^{+0.439}_{-0.293}$	$1.240^{+0.181}_{-0.201}$	$0.585^{+0.464}_{-0.299}$
	+3%/-4%	+4%/-5%	+125%/-150%	+30%/-20%	+15%/-16%	+79%/-51%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 007658578-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-180 ± 12	$2.01^{+0.91}_{-0.90}$	2048^{+168}_{-138}	6831^{+2806}_{-1151}	81^{+171}_{-43}
Alt.	-3829 ± 220	$12.68^{+2.01}_{-1.88}$	2051^{+151}_{-145}	5785^{+289}_{-260}	43^{+13}_{-11}

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

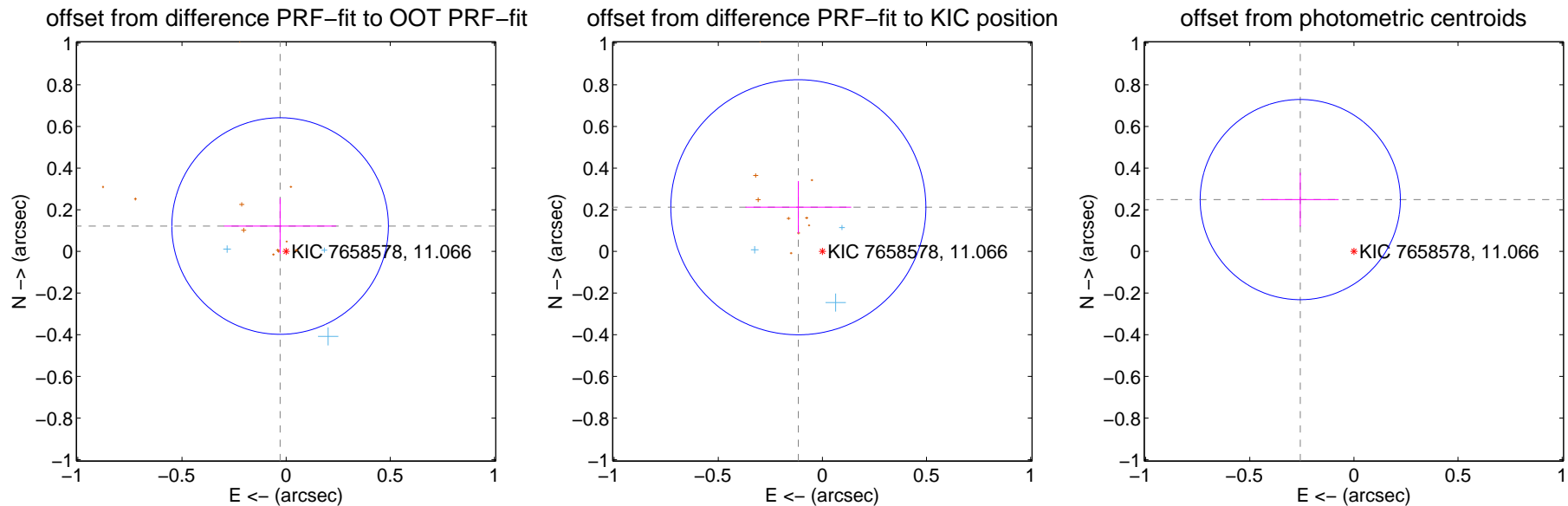
DV Centroid Data

Supplemental centroid analysis for 007658578-03. **Kepler magnitude: 11.07.** Transit SNR 10.94

There are 4 quarters with good PRF difference image offsets

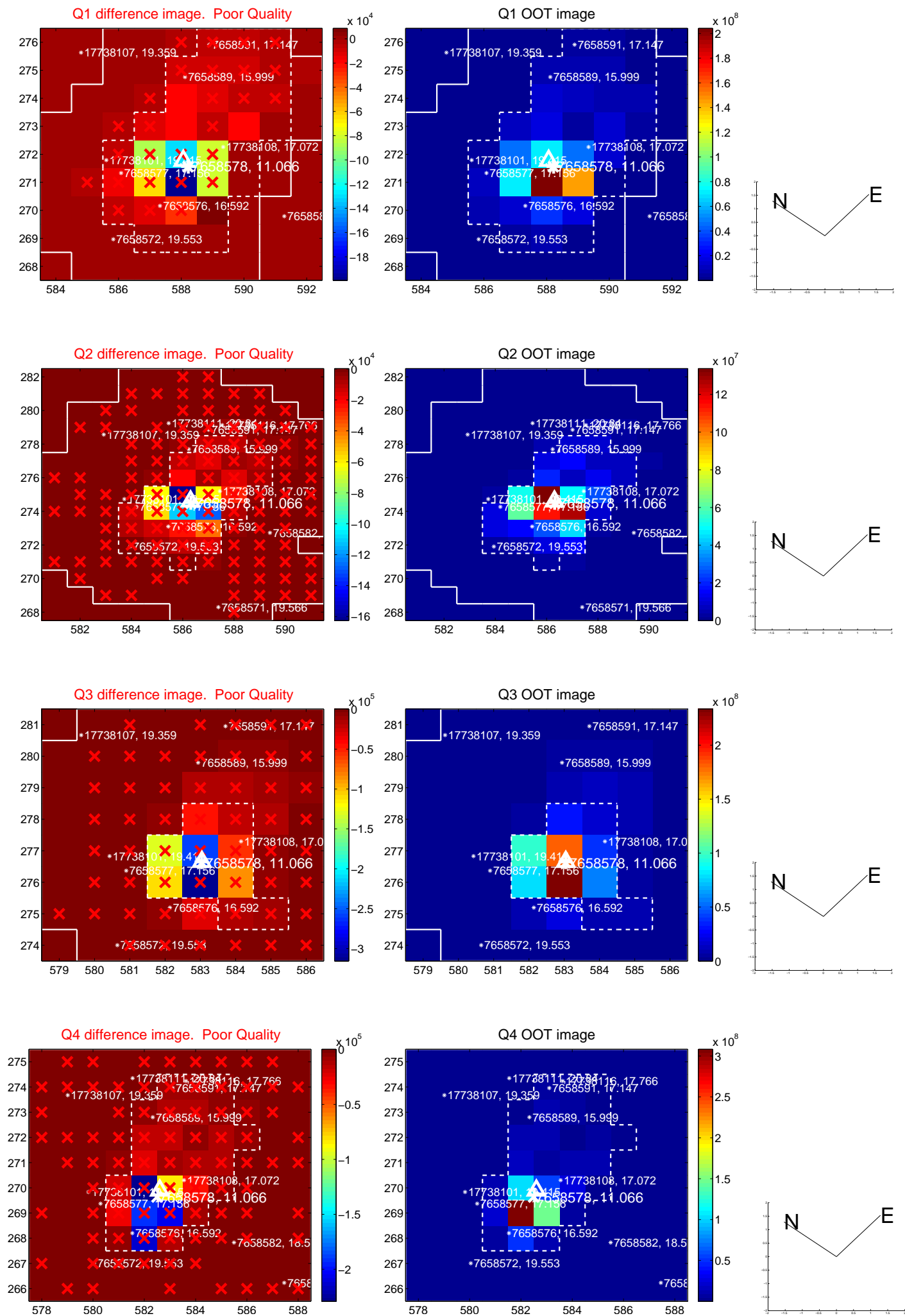
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.125 ± 0.173	0.72	0.029 ± 0.269	0.122 ± 0.133
PRF-fit source offset from KIC position	0.241 ± 0.204	1.18	0.115 ± 0.254	0.212 ± 0.126
photometric centroid source offset	0.36 ± 0.16	2.24	0.26 ± 0.18	0.25 ± 0.13

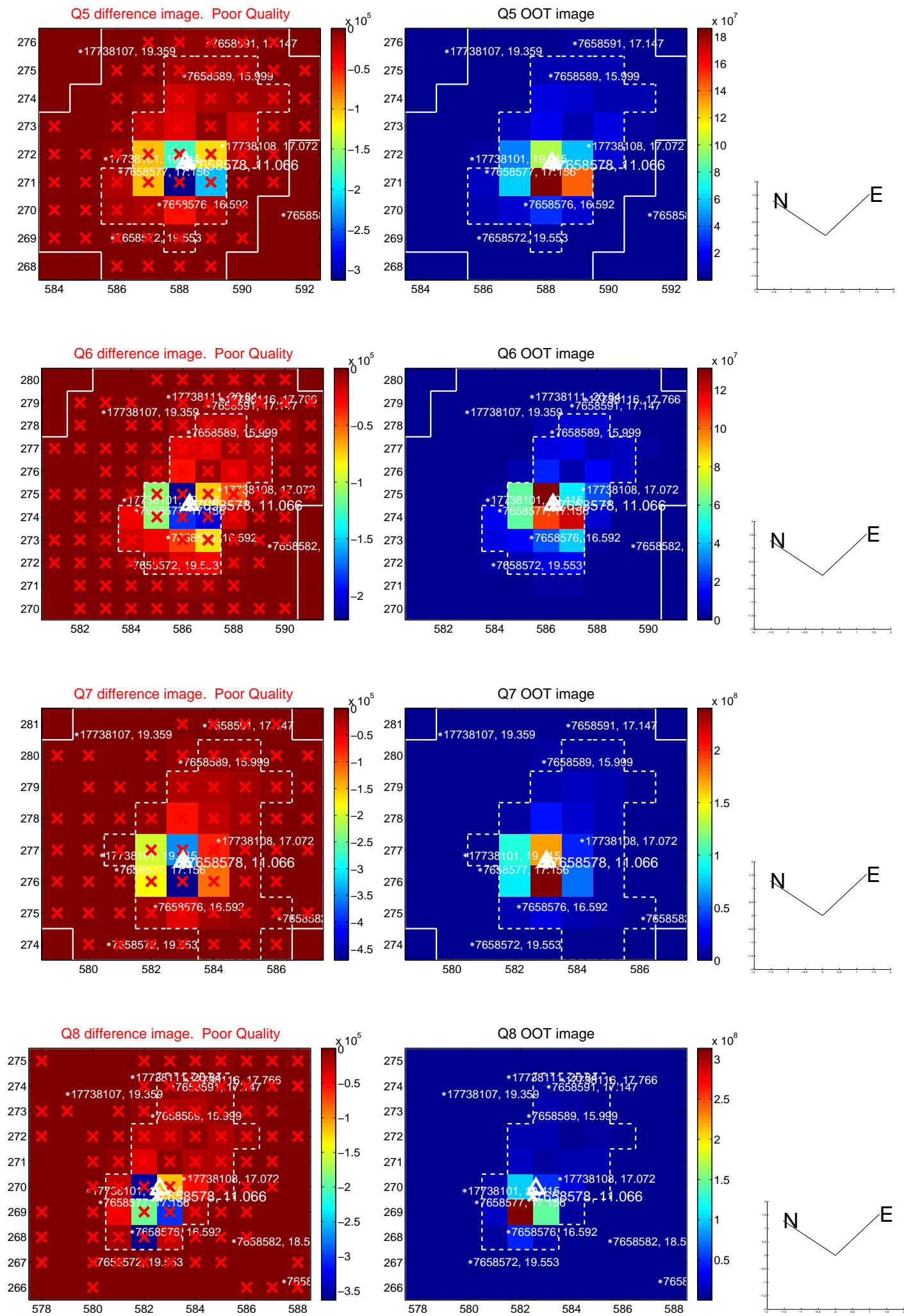


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

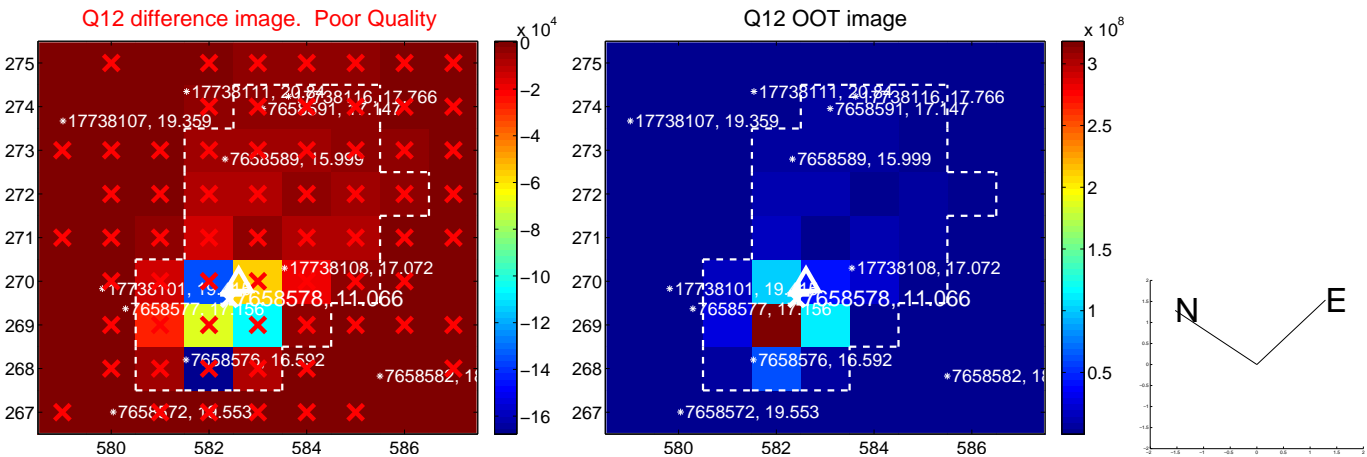
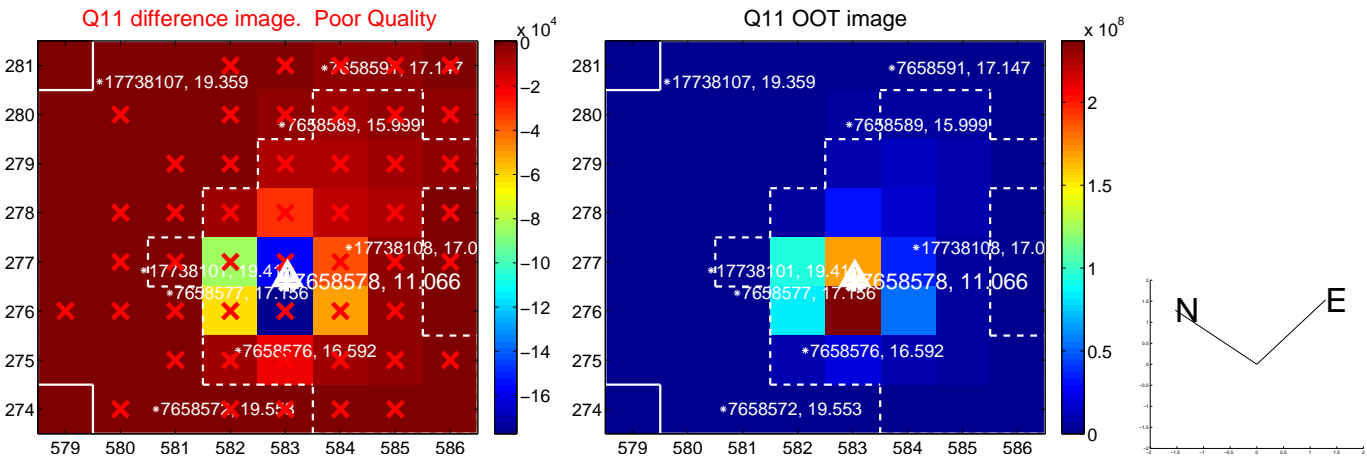
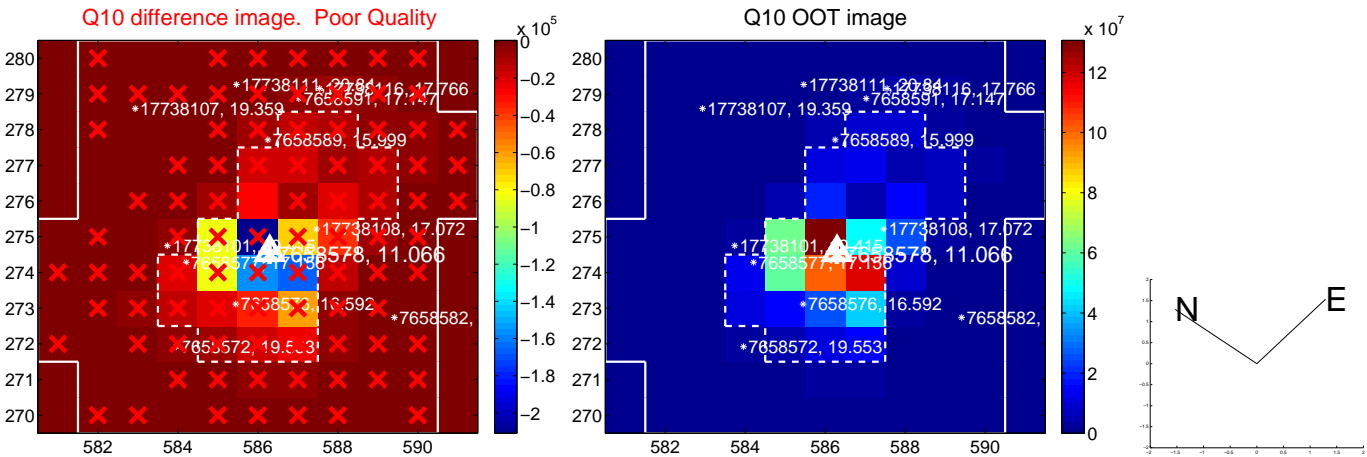
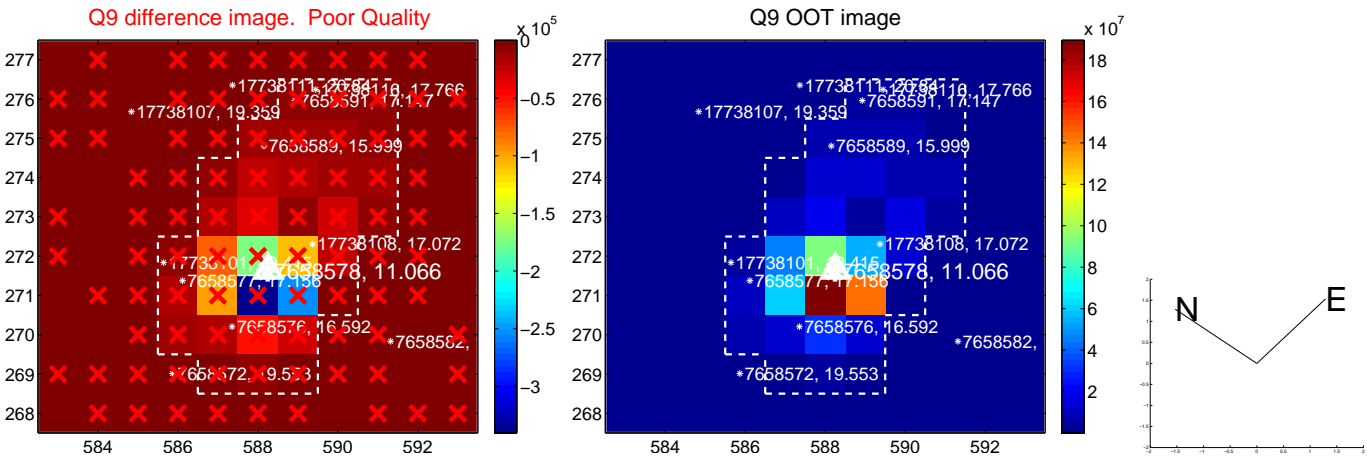
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



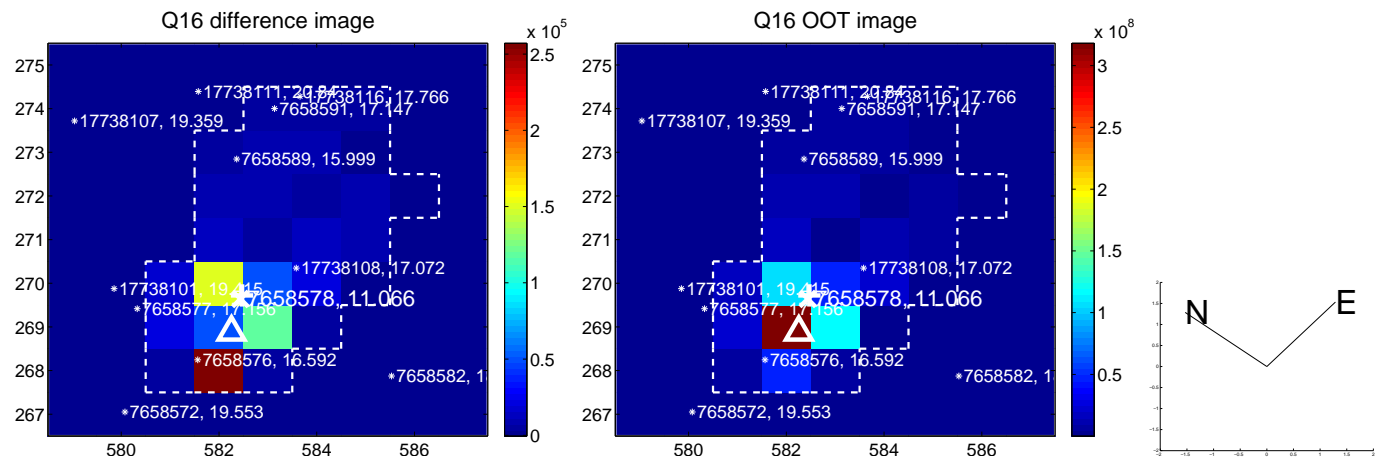
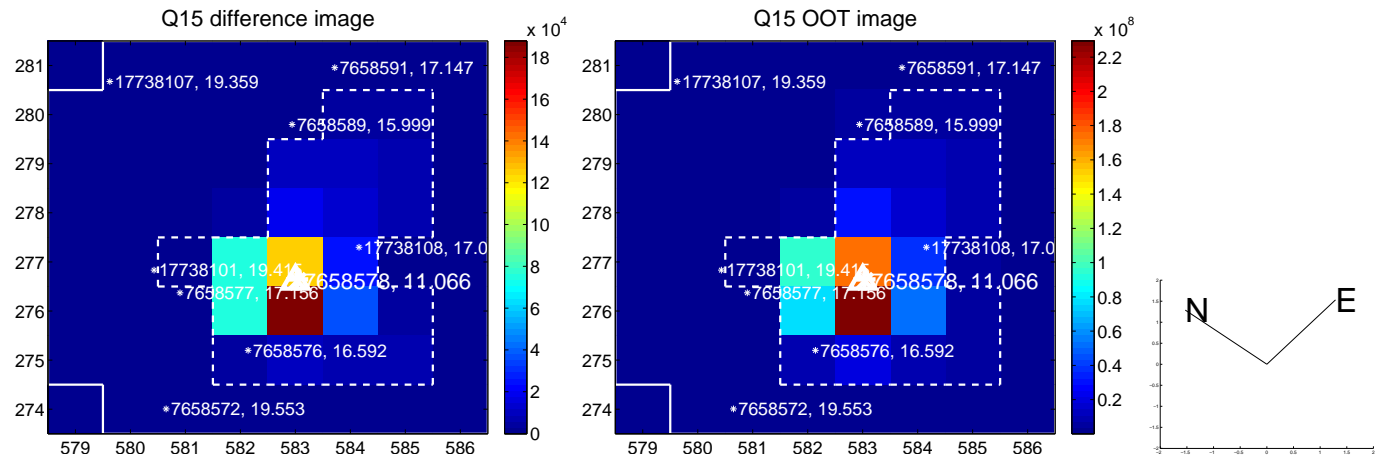
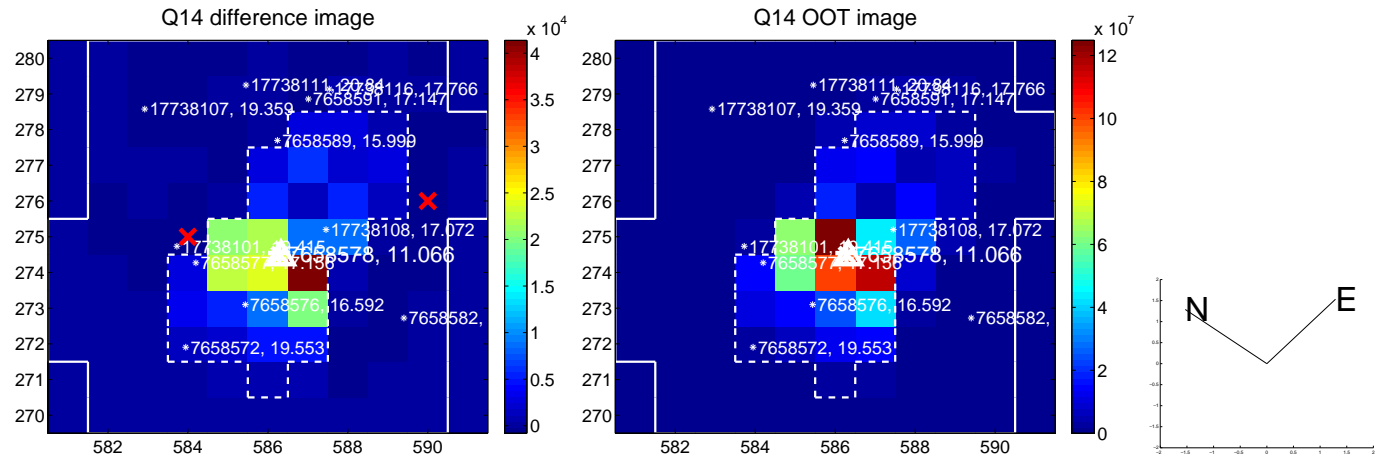
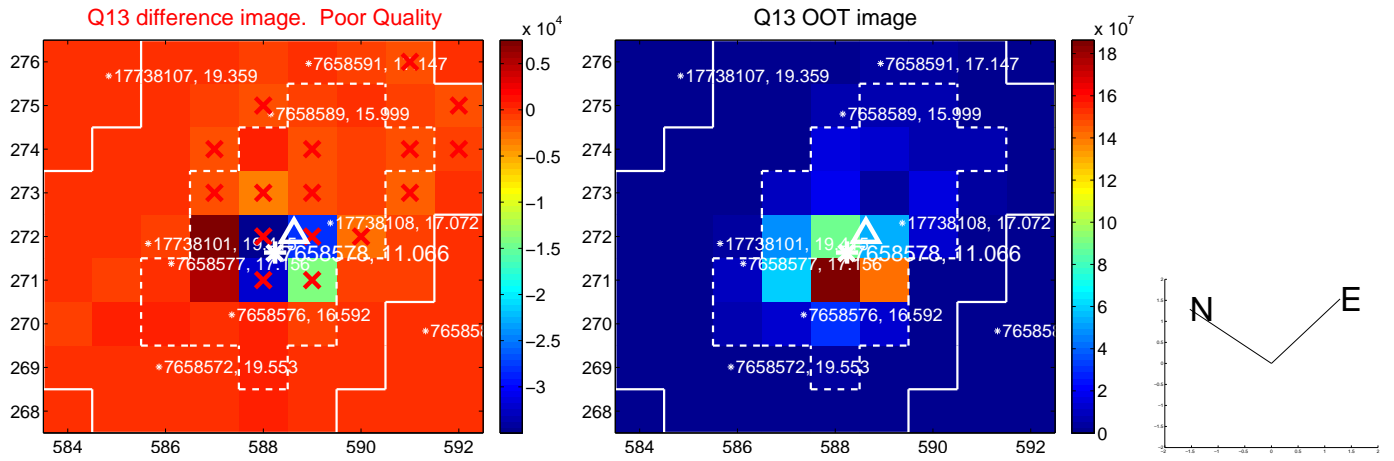
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



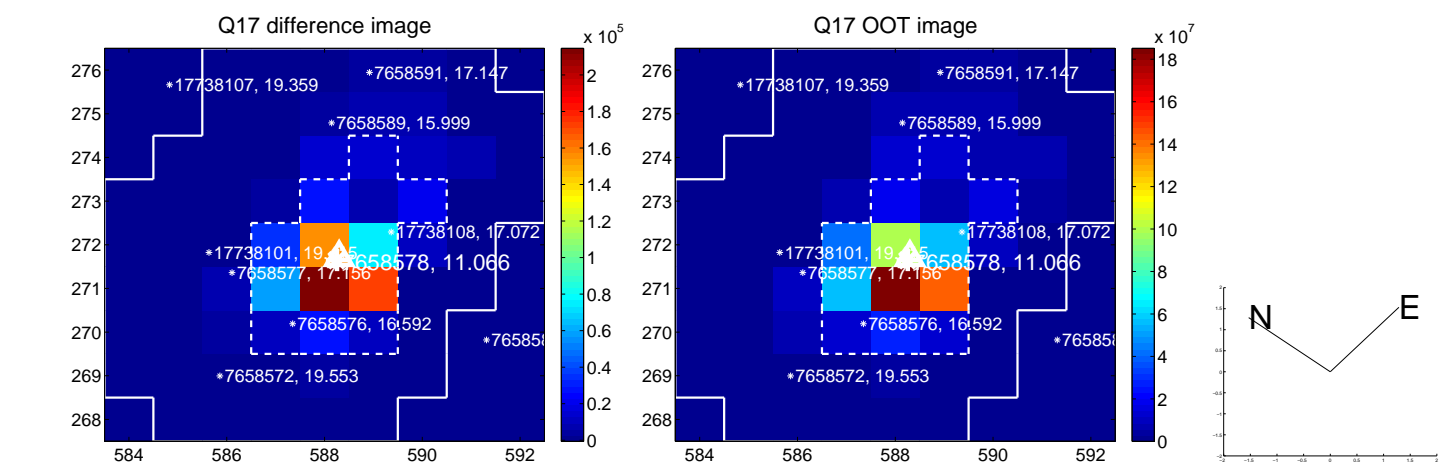
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



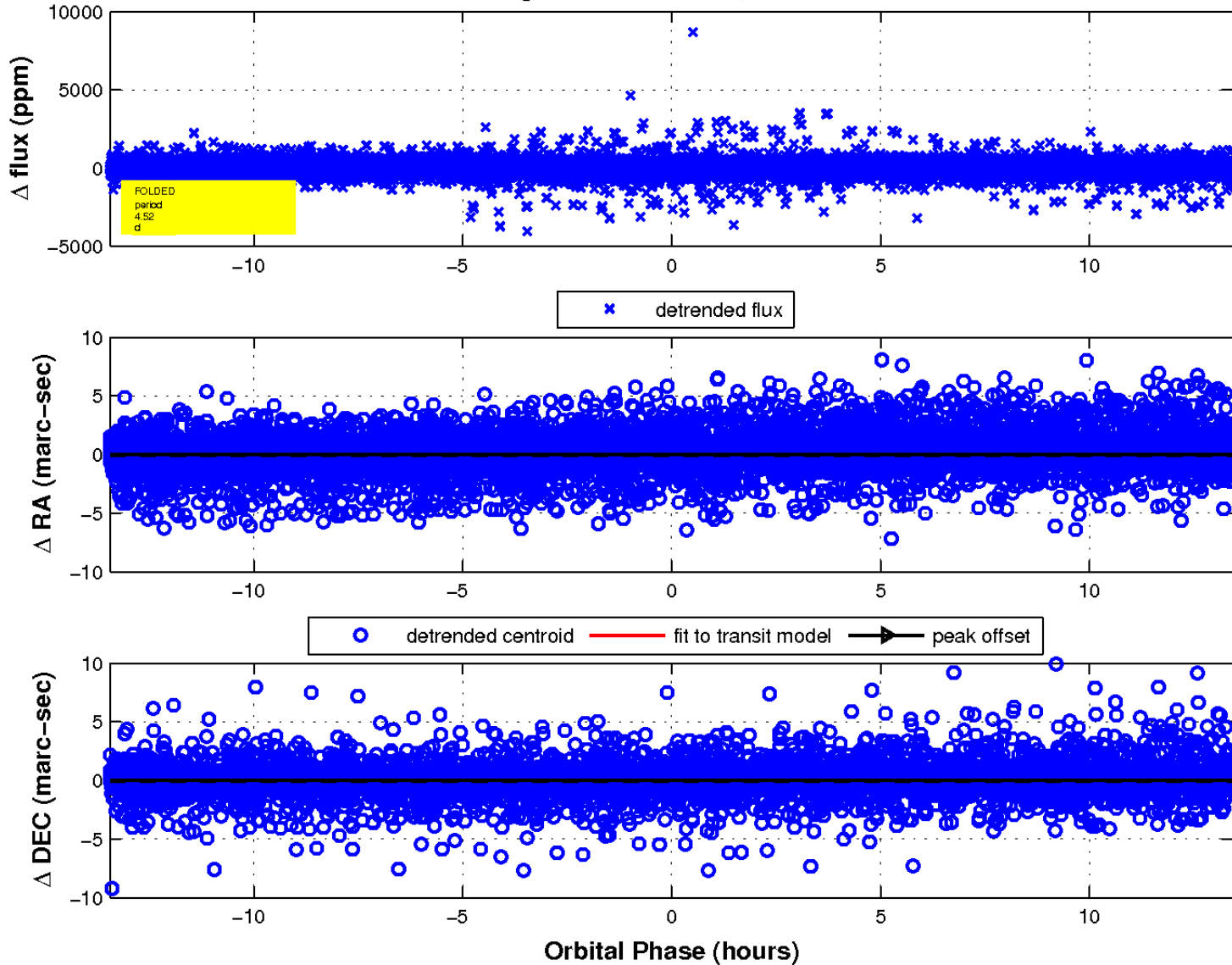
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 3 of 3



UKIRT Image

Declination

