

KIC 009268205

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})
009268205-01	OBS	No	3.413544	133.488584	18.0	11.900	10.6	10.7	1.82	6036	0.92	1660.13
009268205-02	OBS	No	3.413420	131.866940	9.1	20.326	10.9	5.4	1.82	6036	0.55	1660.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009268205-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
009268205-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—HALO_GHOST

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

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

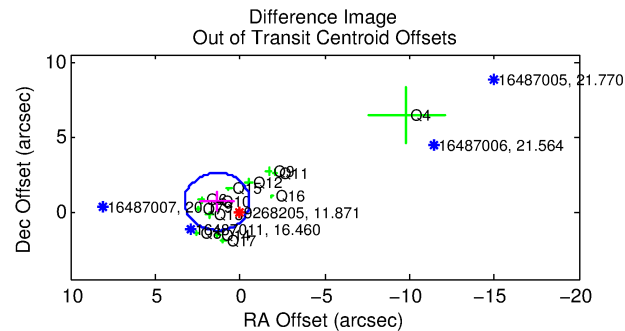
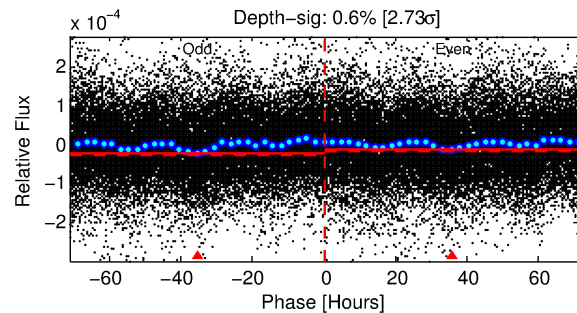
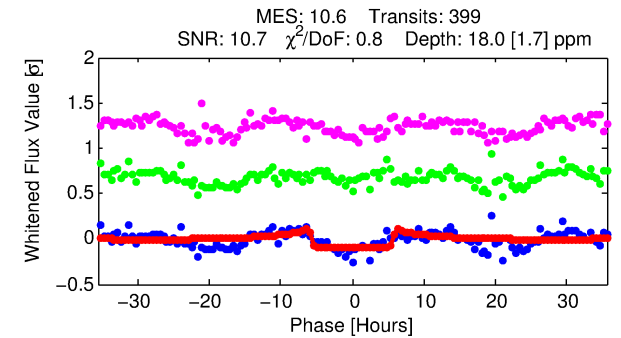
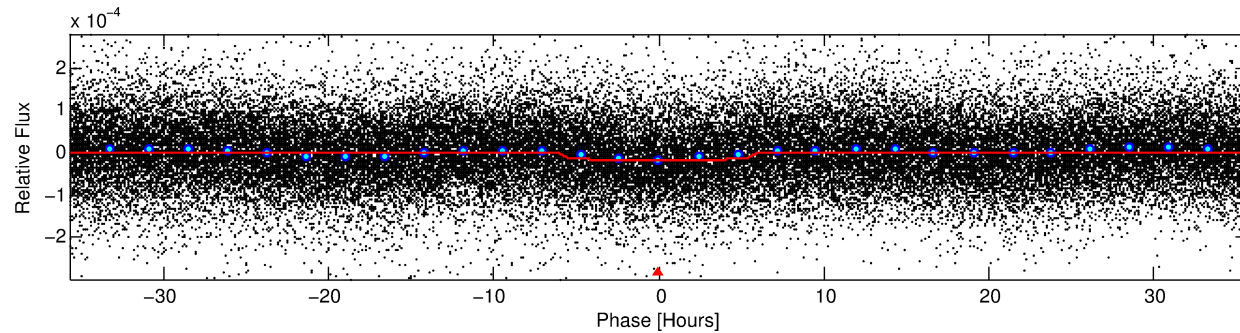
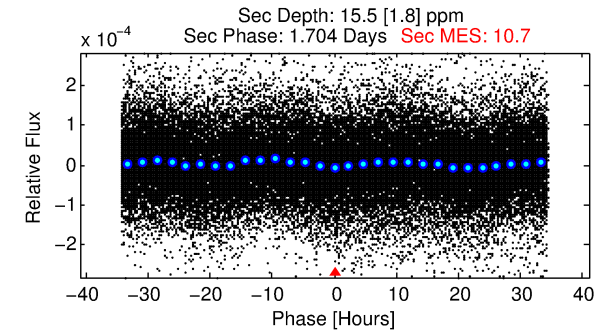
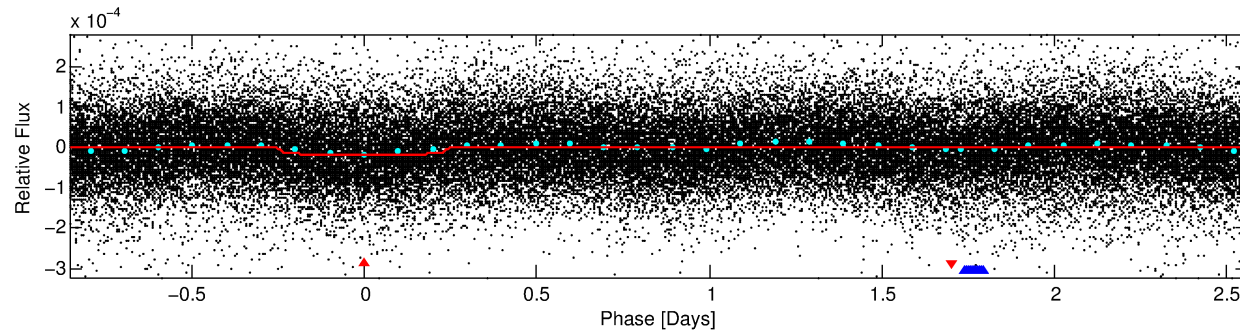
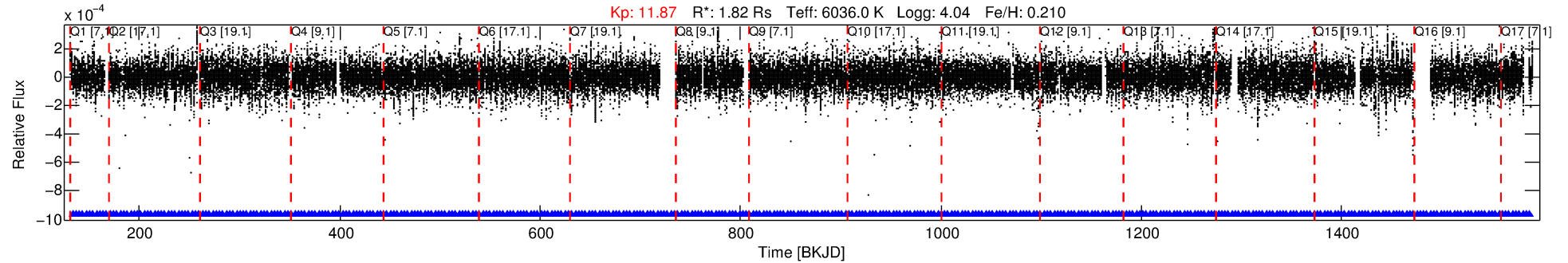
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009268205-01

No Significant Match Found

DV One-Page Summary

KIC: 9268205 Candidate: 1 of 2 Period: 3.414 d



DV Fit Results:

Period = 3.41354 [0.00003] d
Epoch = 133.4886 [0.0049] BKJD
Rp/R* = 0.0046 [0.0006]
a/R* = 1.35 [0.35]
b = 0.90 [0.12]
Seff = 1660.13 [904.53]
Teq = 1628 [222] K
Rp = 0.91 [0.36] Re
a = 0.0488 [0.0166] AU
Ag = 24.24 [14.29] [1.63σ]
Teffp = 5584 [436] K [8.08σ]

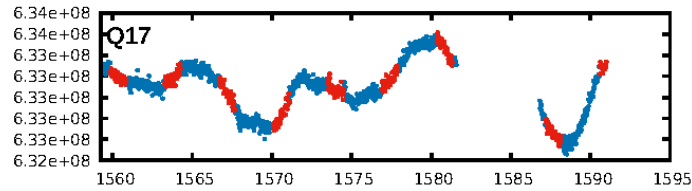
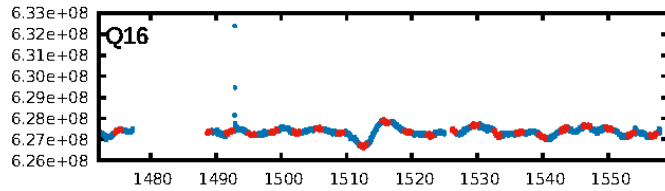
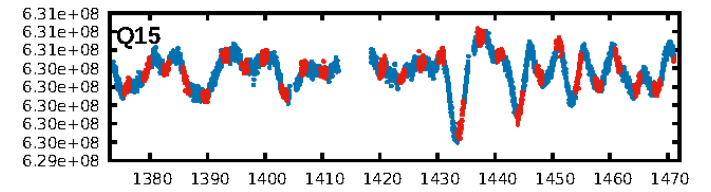
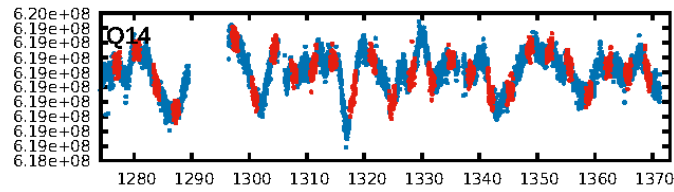
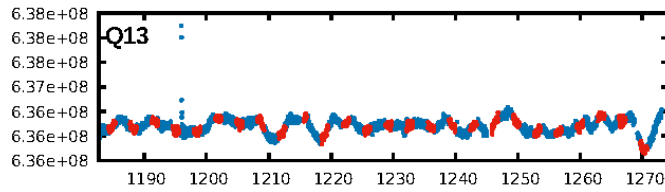
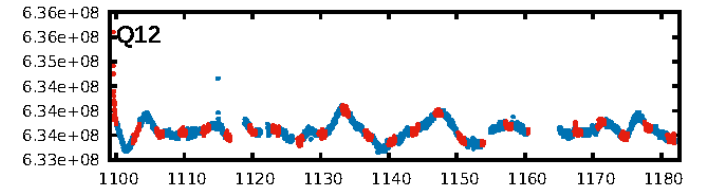
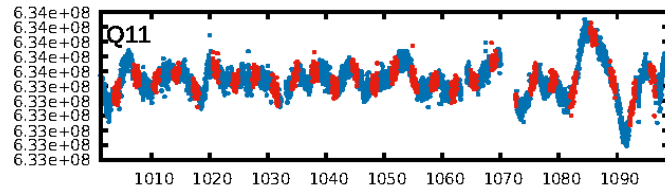
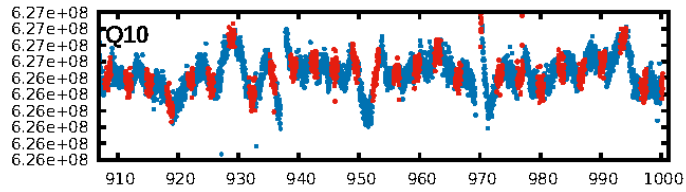
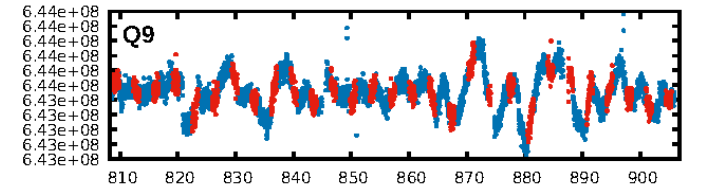
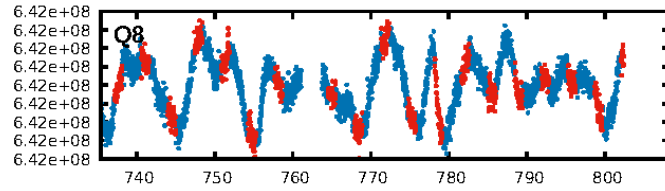
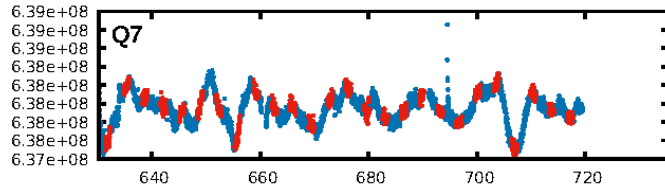
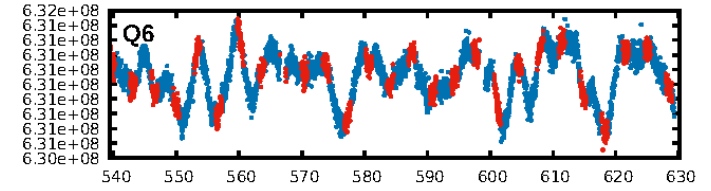
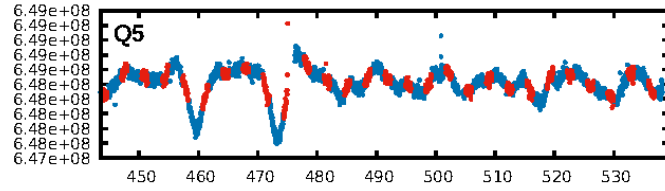
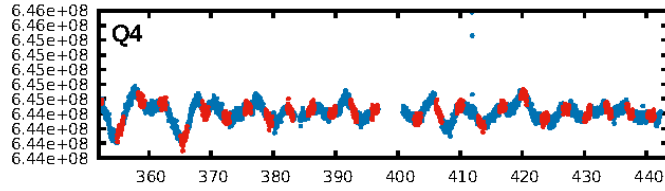
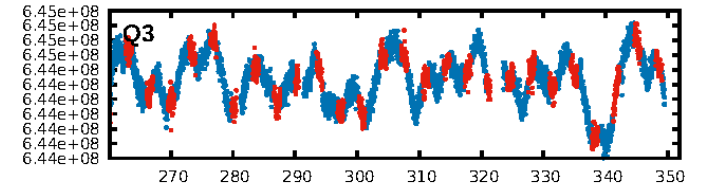
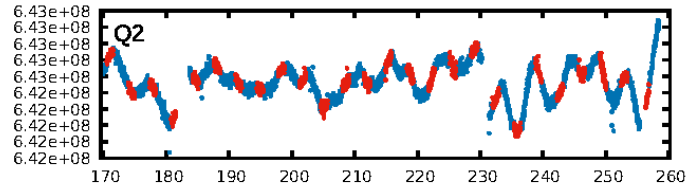
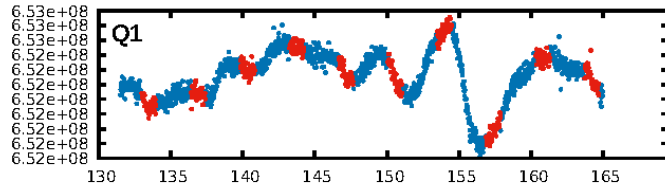
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [380/380]
GhostDiagnostic-chr: 2.264
Centroid-sig: 0.0%
Centroid-so: 1.011 arcsec [2.31σ]
OotOffset-rm: 1.495 arcsec [2.33σ]
KicOffset-rm: 1.491 arcsec [2.67σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.77 [10/13]
DiffImageOverlap-fno: 1.00 [17/17]

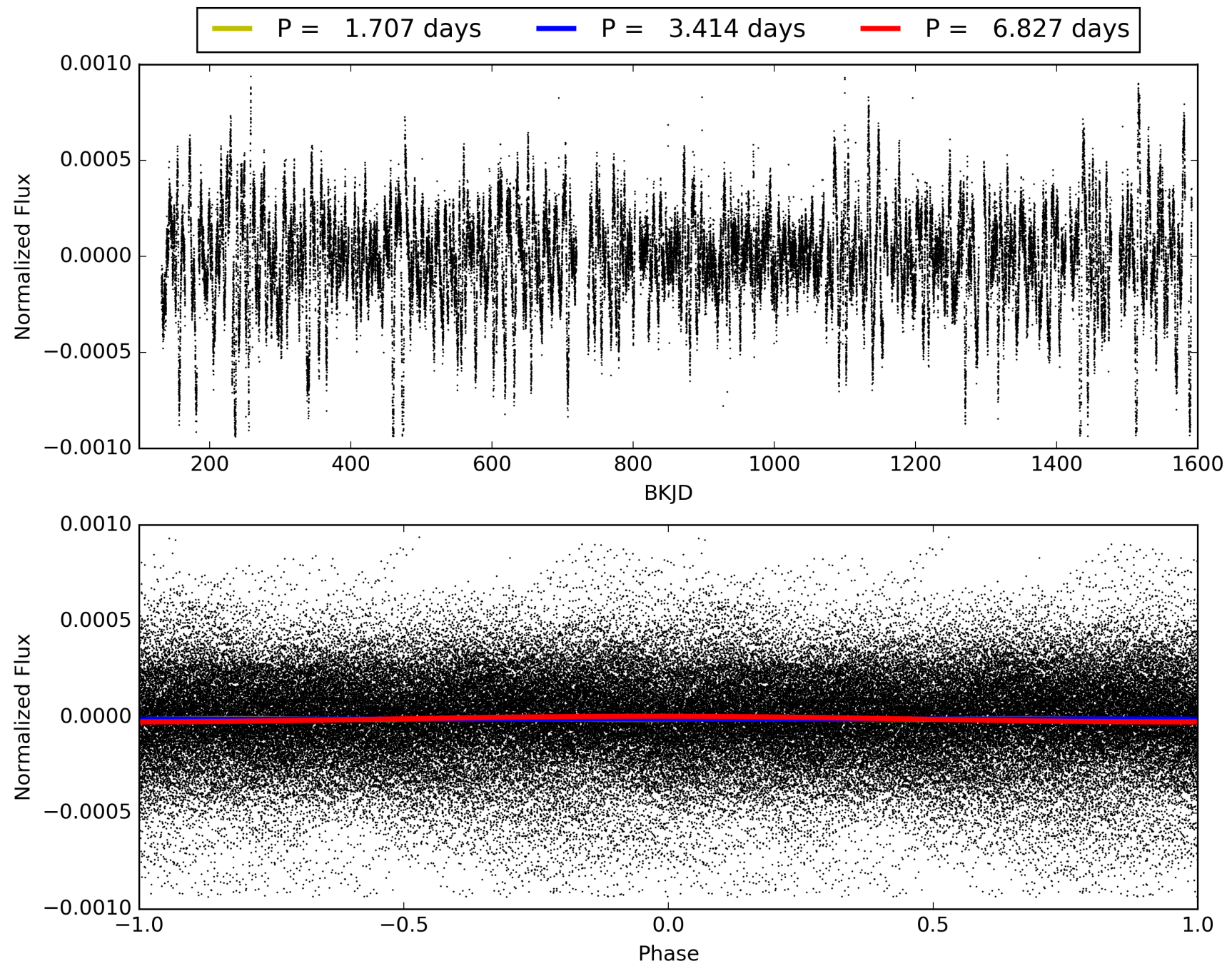
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:05:04 Z

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

TCE 009268205-01, PDC Light Curves

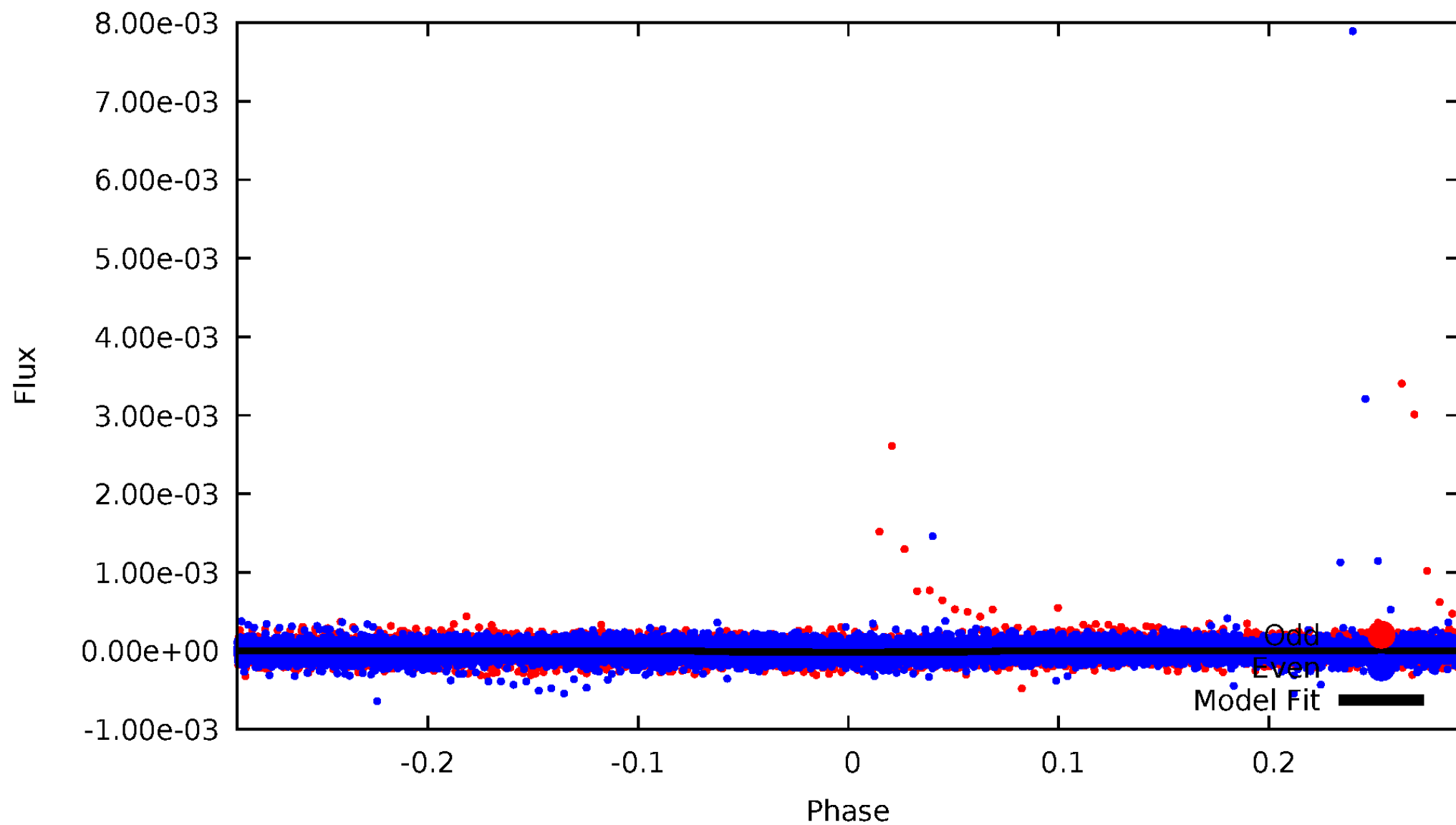


TCE 009268205-01



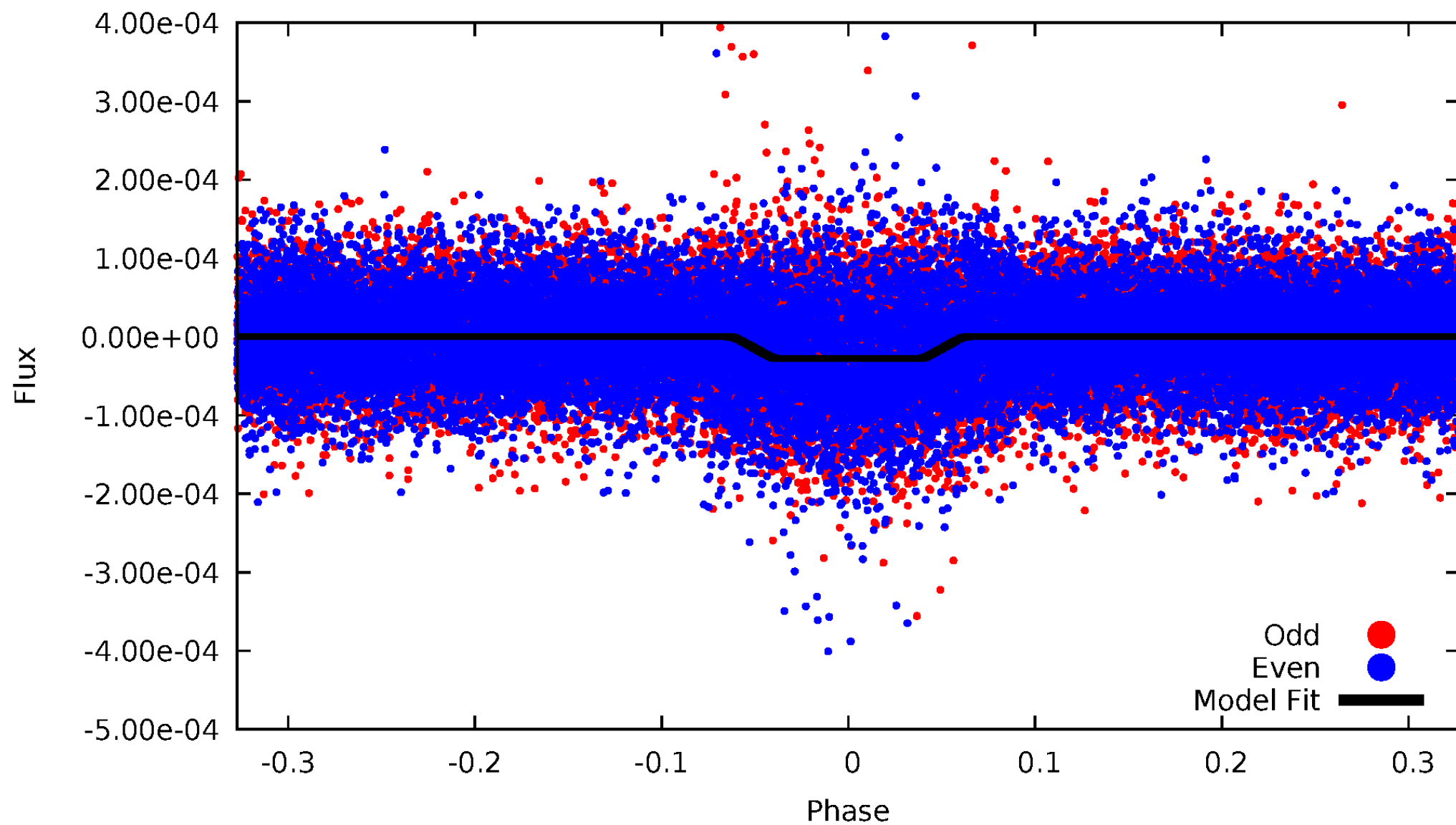
DV Odd/Even

TCE 009268205-01



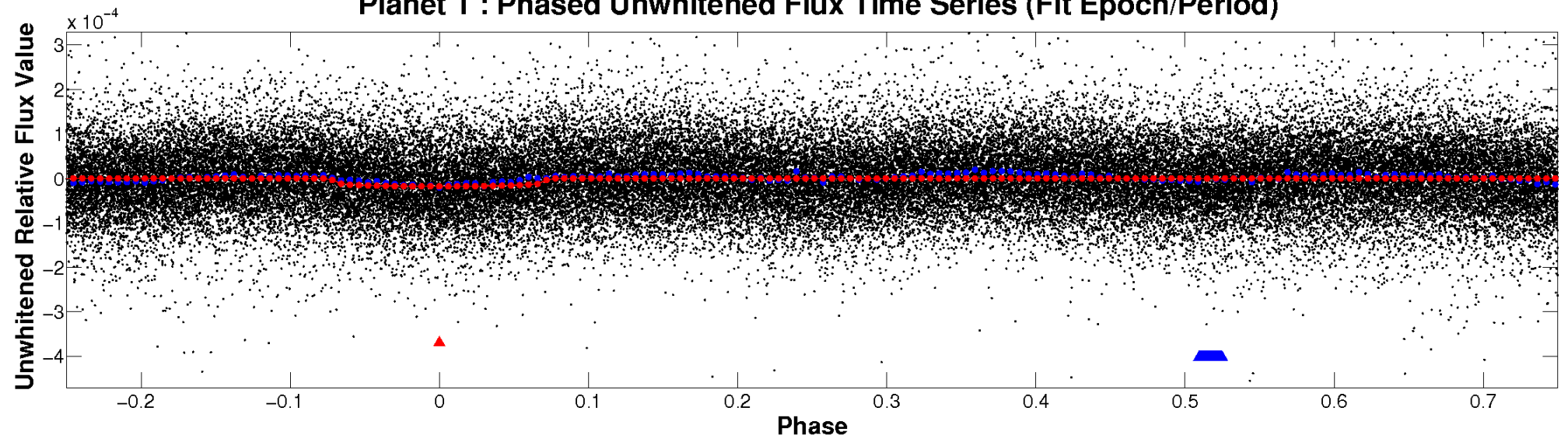
ALT Odd/Even

TCE 009268205-01

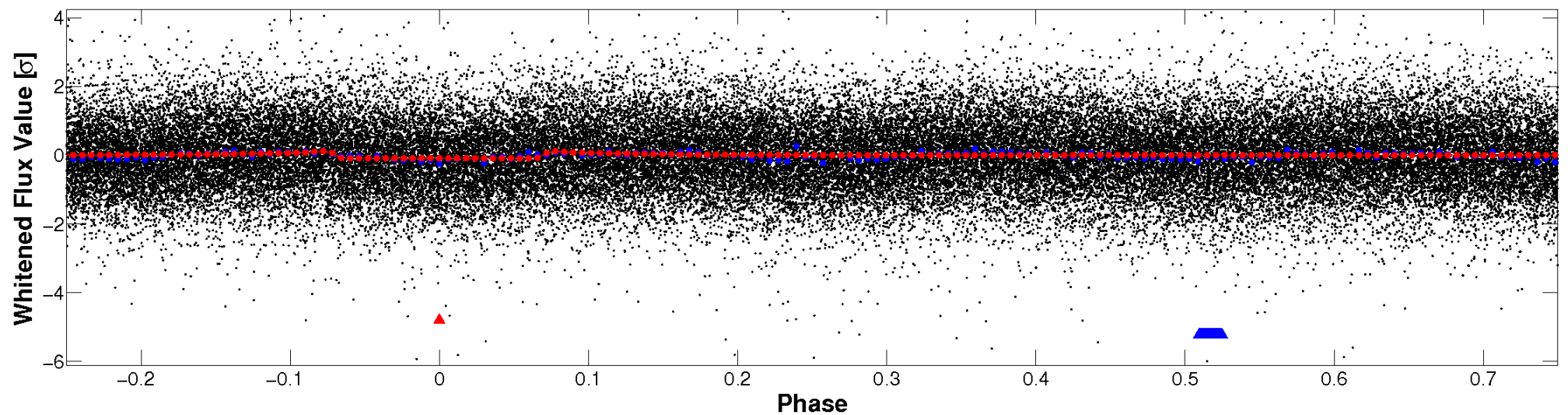


Non-Whitened Vs. Whitened Light Curve

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

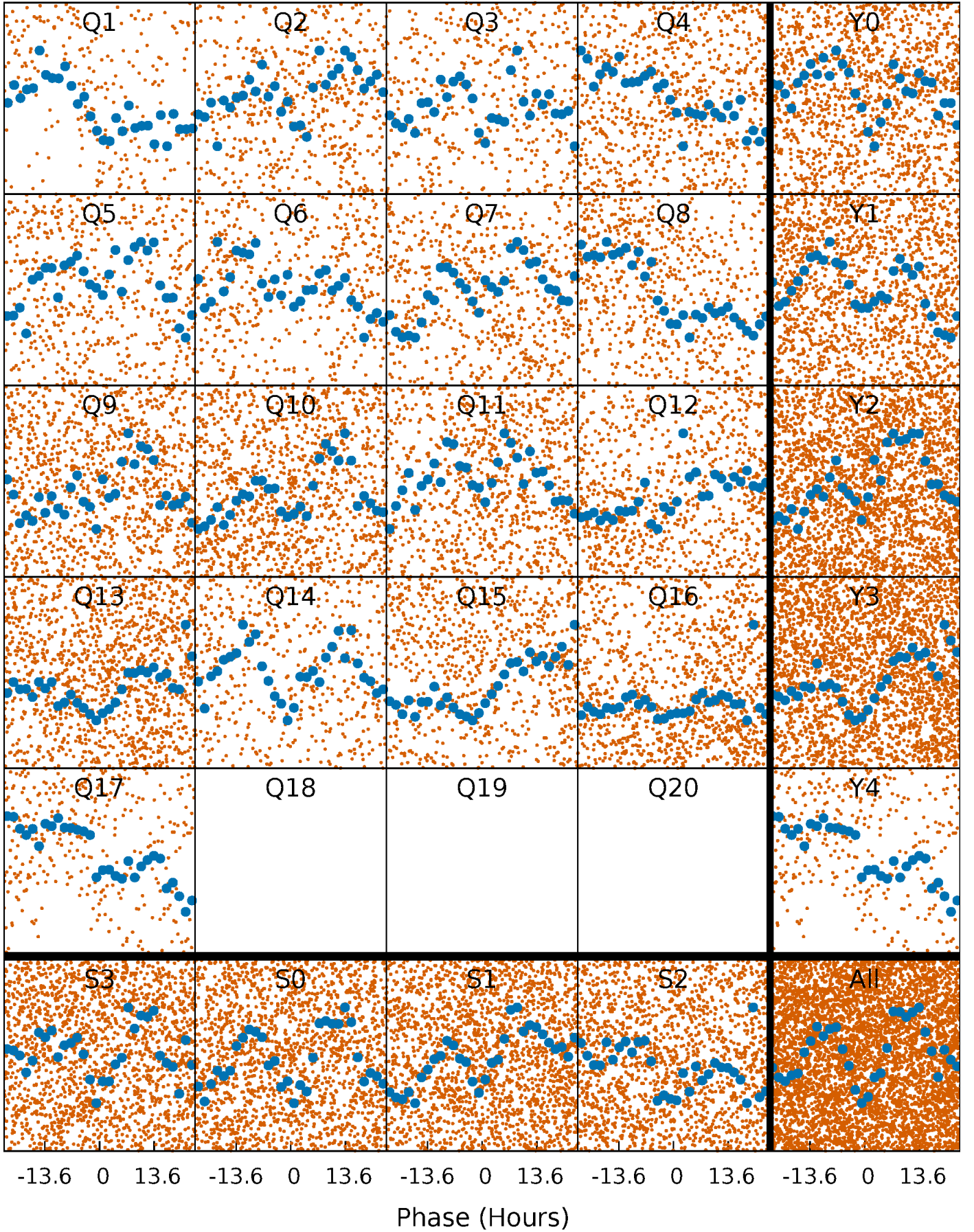


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



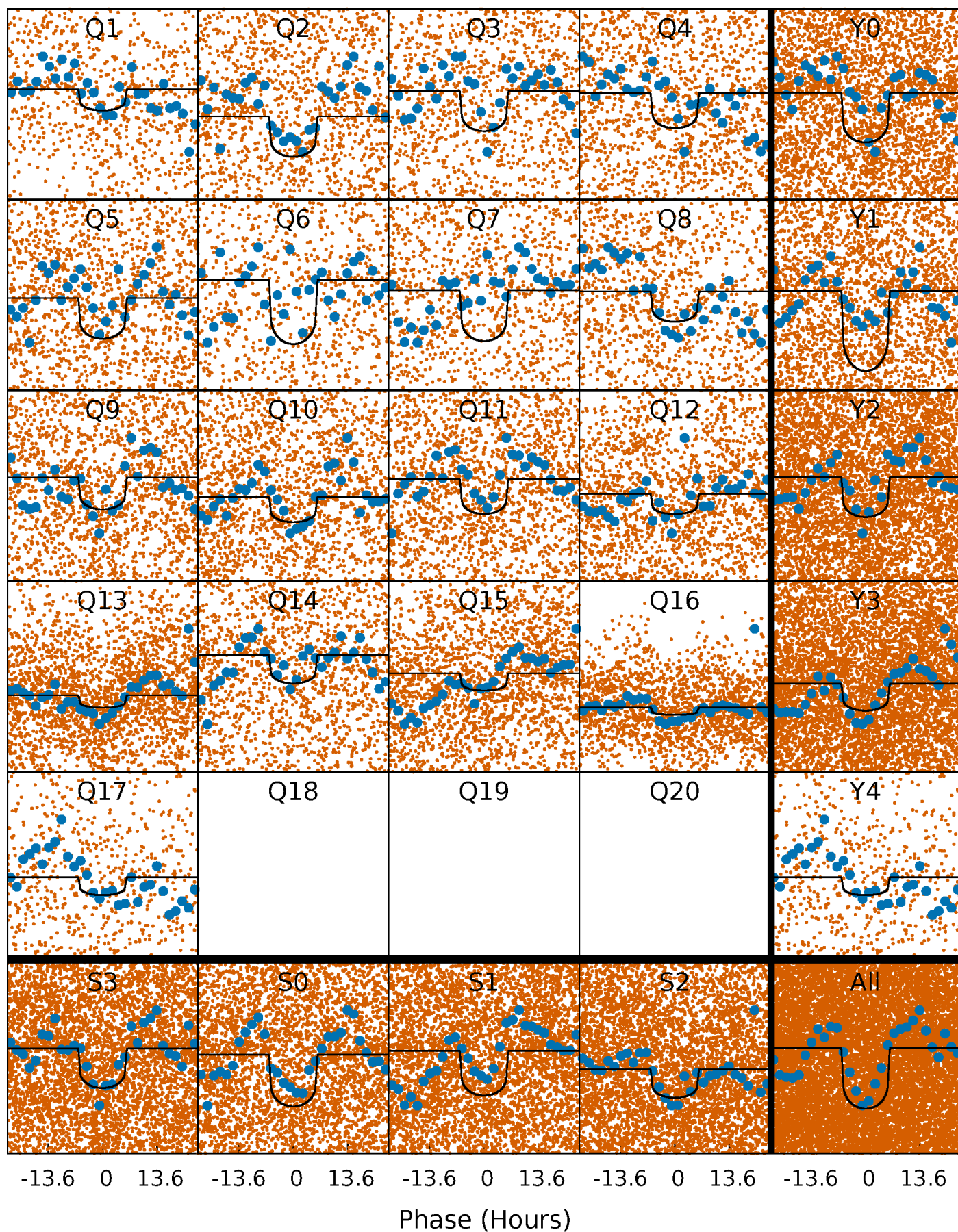
PDC Quarter-Phased Transit Curves

TCE 009268205-01 P= 3.413544 Days $T_0=133.488584$ (BKJD)



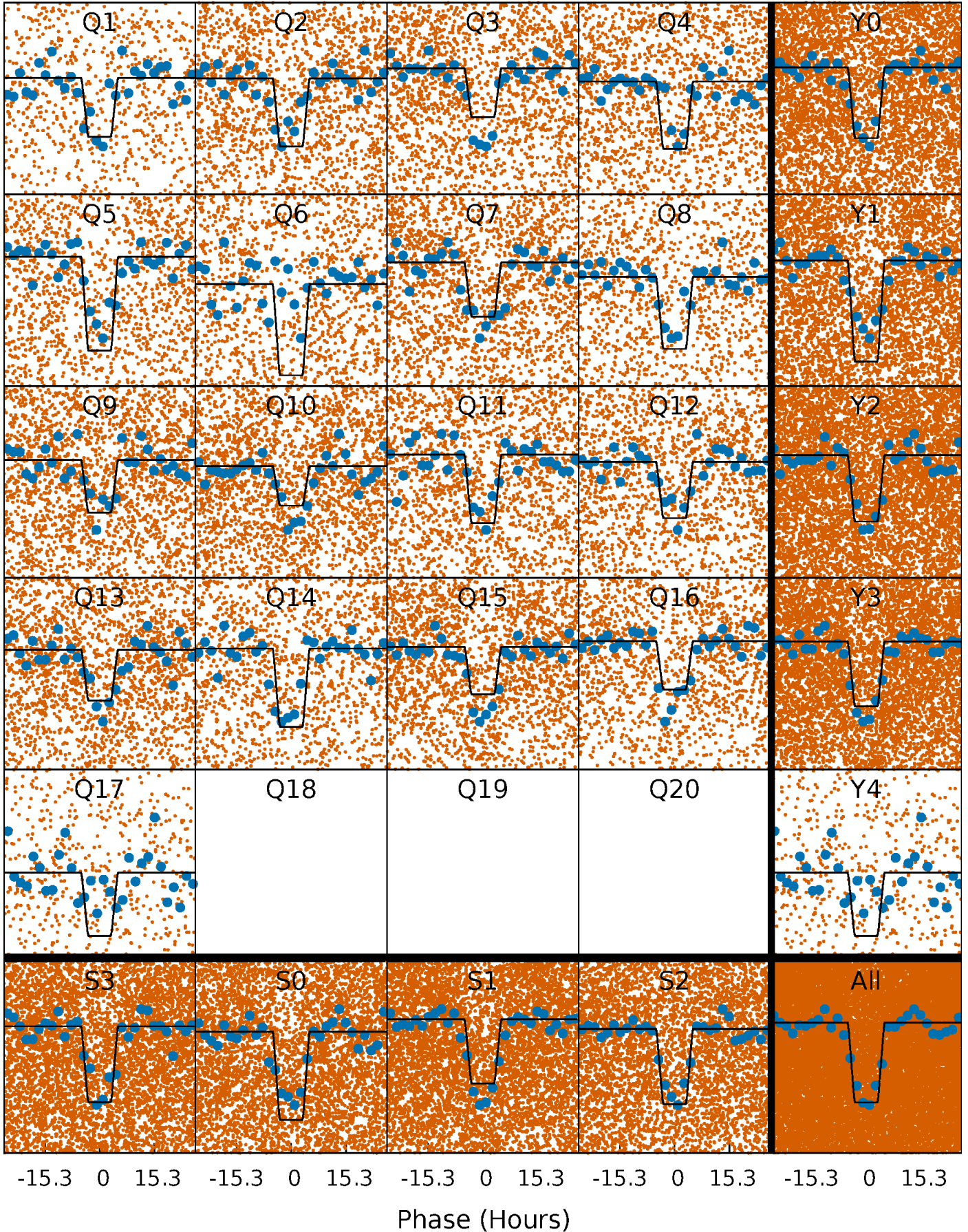
DV Quarter-Phased Transit Curves

TCE 009268205-01 P= 3.413544 Days $T_0=133.488584$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

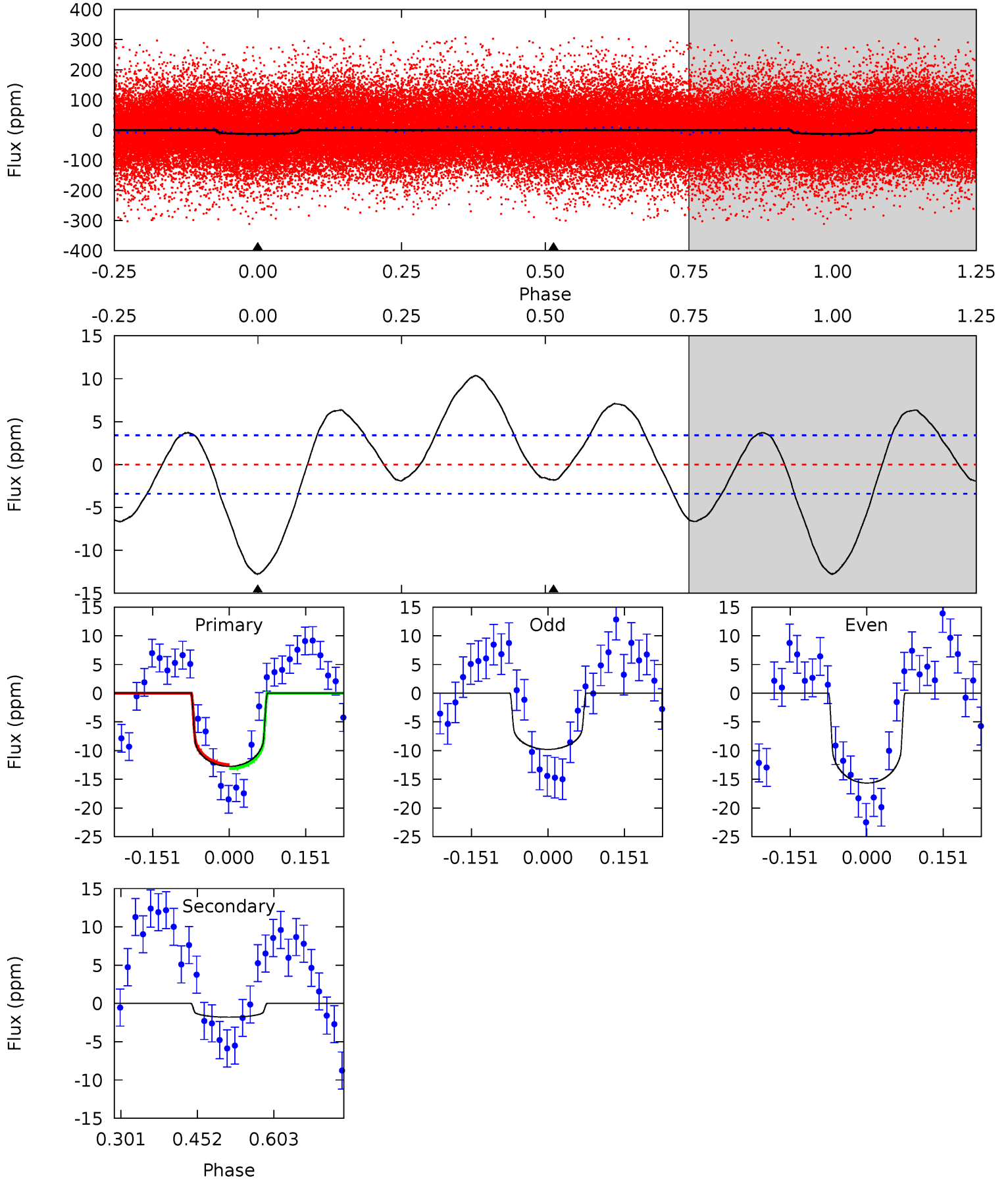
TCE 009268205-01 P= 3.413317 Days $T_0=133.540396$ (BKJD)



DV Model-Shift Uniqueness Test

009268205-01, P = 3.413544 Days, E = 130.075040 Days

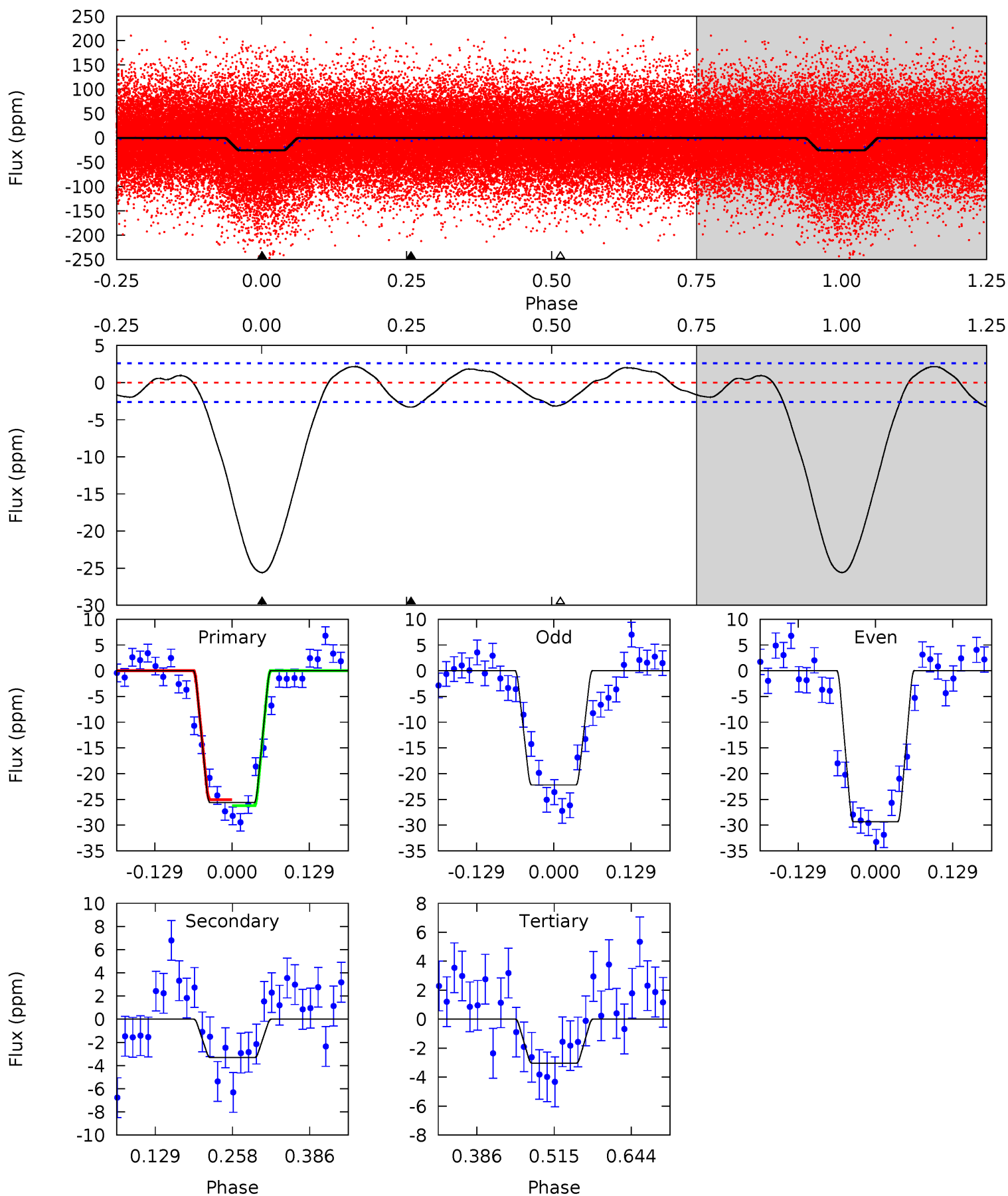
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.8	2.35	0	0	4.48	1.44	5.56	16.8	16.8	2.35	2.35	3.85	0.87	0.45	0.47



Alt Model-Shift Uniqueness Test

009268205-01, P = 3.413317 Days, E = 130.127079 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
44.1	5.69	5.23	0	4.51	1.52	2.58	38.9	44.1	0.47	5.69	6.17	0.97	0.08	0.98



Stellar Parameters For KIC 009268205

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6036^{+190}_{-232}	$4.040^{+0.299}_{-0.138}$	$0.210^{+0.200}_{-0.300}$	$1.823^{+0.456}_{-0.684}$	$1.329^{+0.181}_{-0.272}$	$0.309^{+0.670}_{-0.129}$
	+3%/-4%	+7%/-3%	+95%/-143%	+25%/-38%	+14%/-20%	+217%/-42%
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 009268205-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2 ± 1	$0.87^{+0.19}_{-0.18}$	2243^{+177}_{-217}	3619^{+332}_{-380}	$3.038^{+2.426}_{-1.501}$
Alt.	-3 ± 1	$1.03^{+0.20}_{-0.22}$	2235^{+178}_{-213}	3840^{+209}_{-222}	$4.098^{+2.574}_{-1.289}$

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

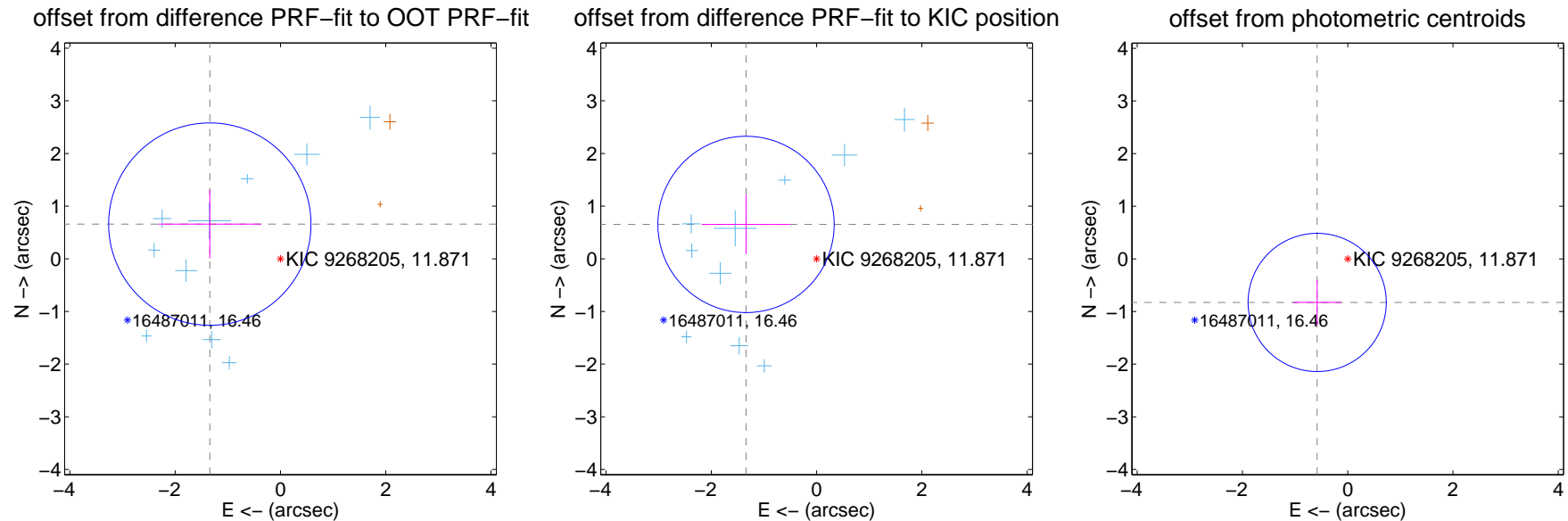
DV Centroid Data

Supplemental centroid analysis for 009268205-01. **Kepler magnitude: 11.87.** Transit SNR 10.65

There are 10 quarters with good PRF difference image offsets

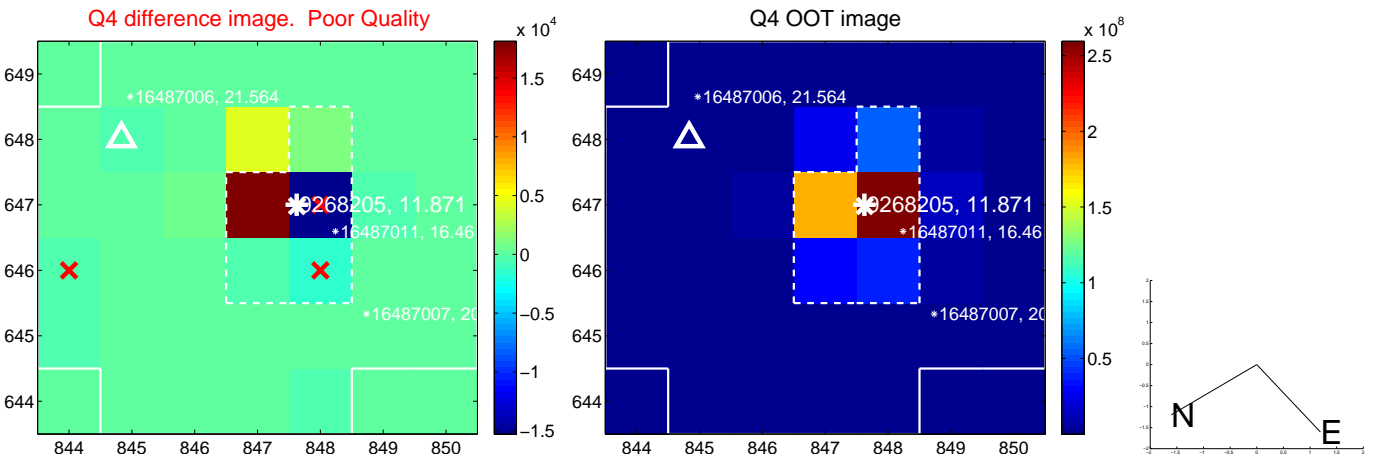
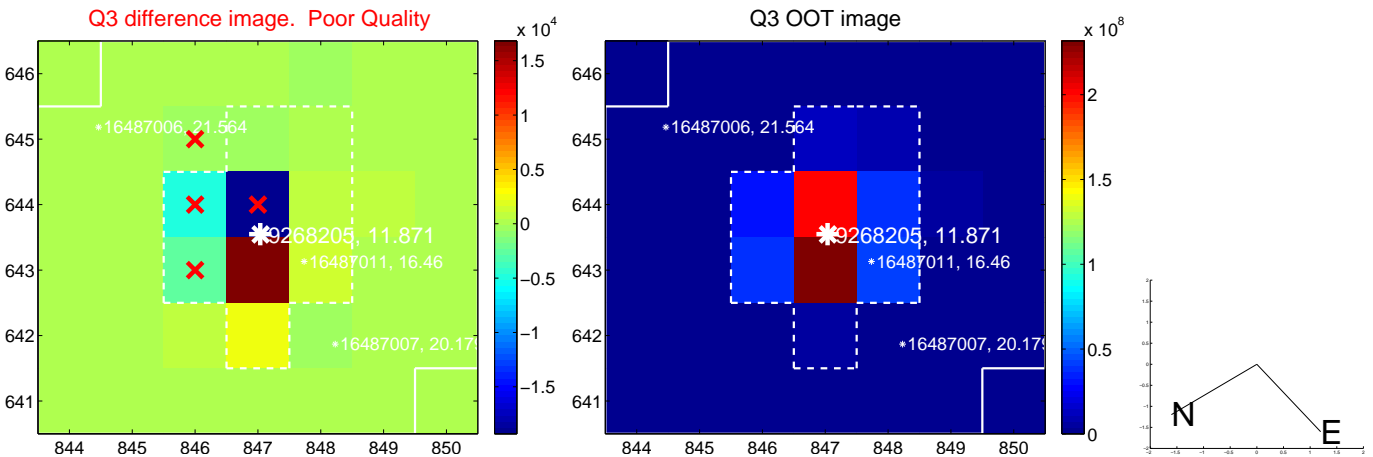
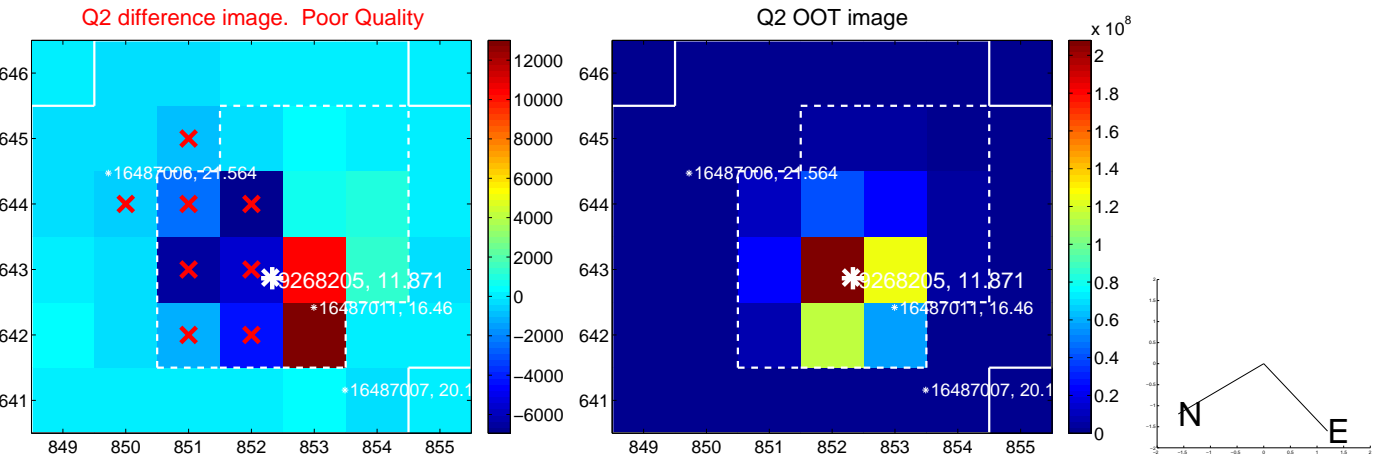
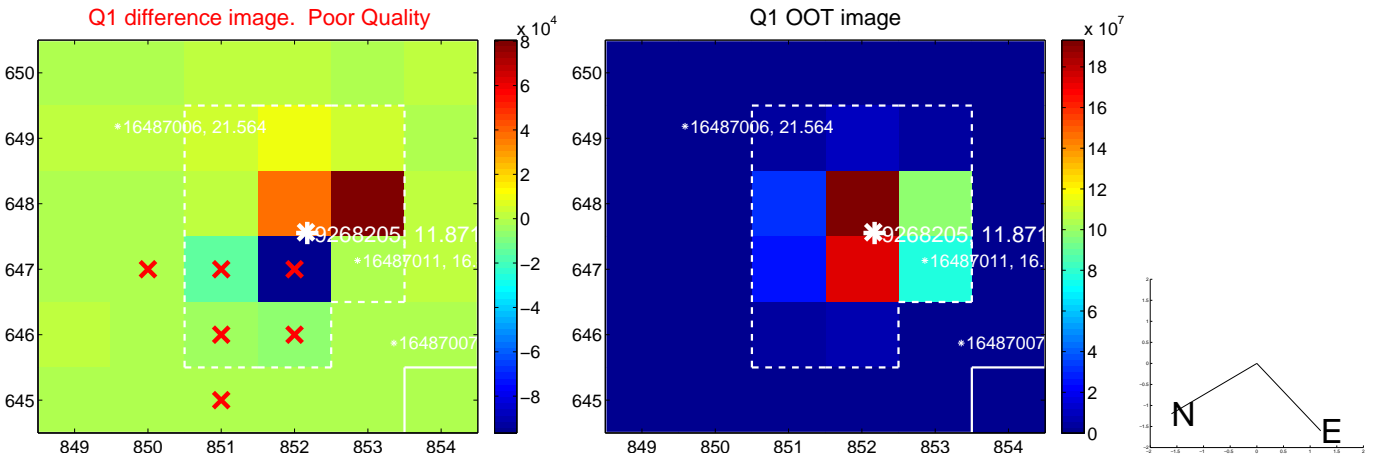
The direct PRF centroid is offset from the target star catalog position by about 0.06 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.495 ± 0.641	2.33	1.342 ± 0.978	0.659 ± 0.651
PRF-fit source offset from KIC position	1.491 ± 0.558	2.67	1.340 ± 0.836	0.653 ± 0.558
photometric centroid source offset	1.01 ± 0.44	2.31	0.58 ± 0.46	-0.83 ± 0.43

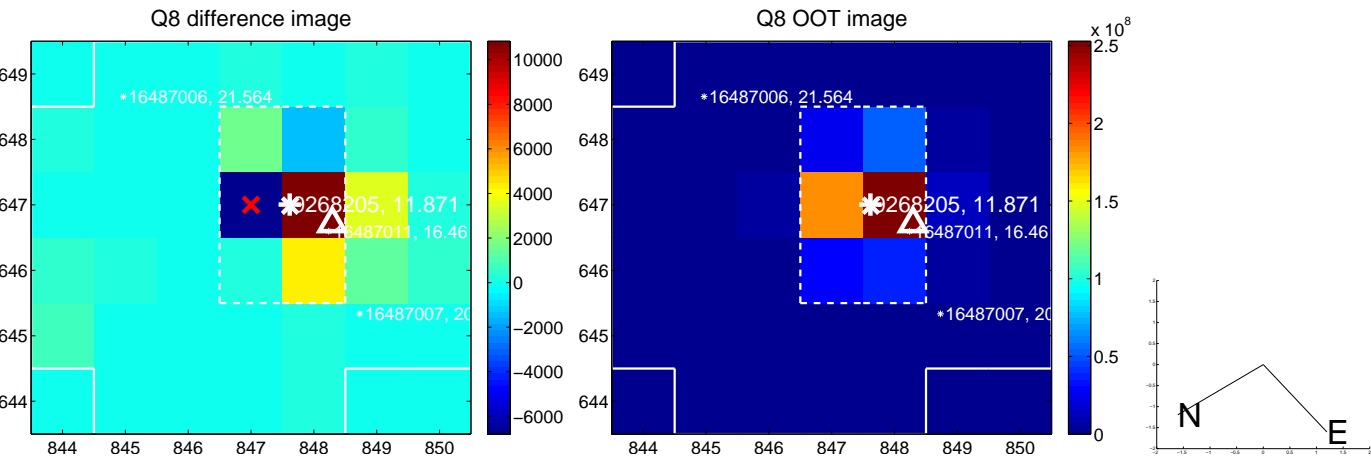
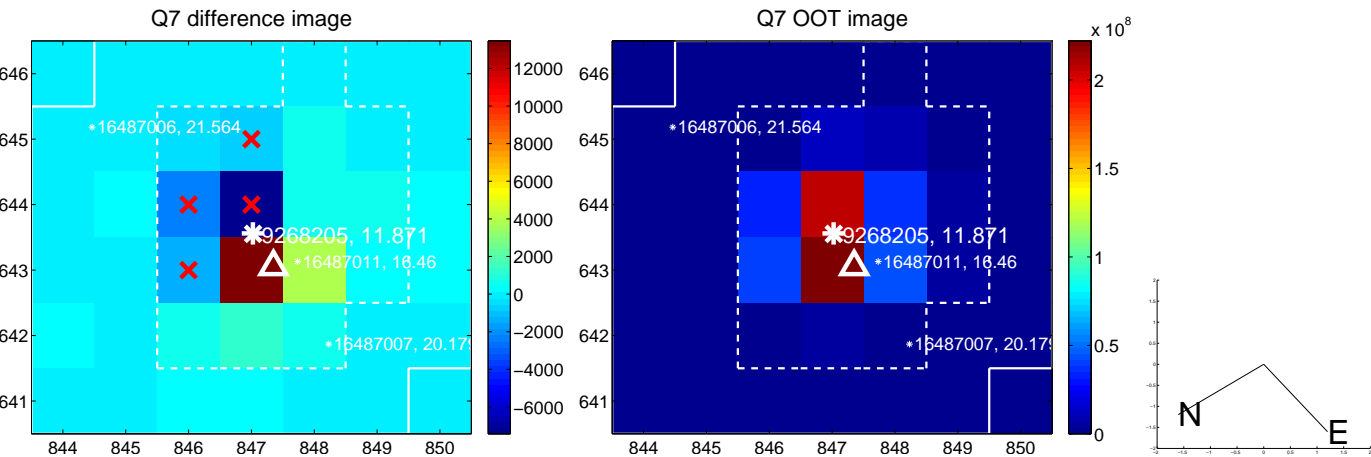
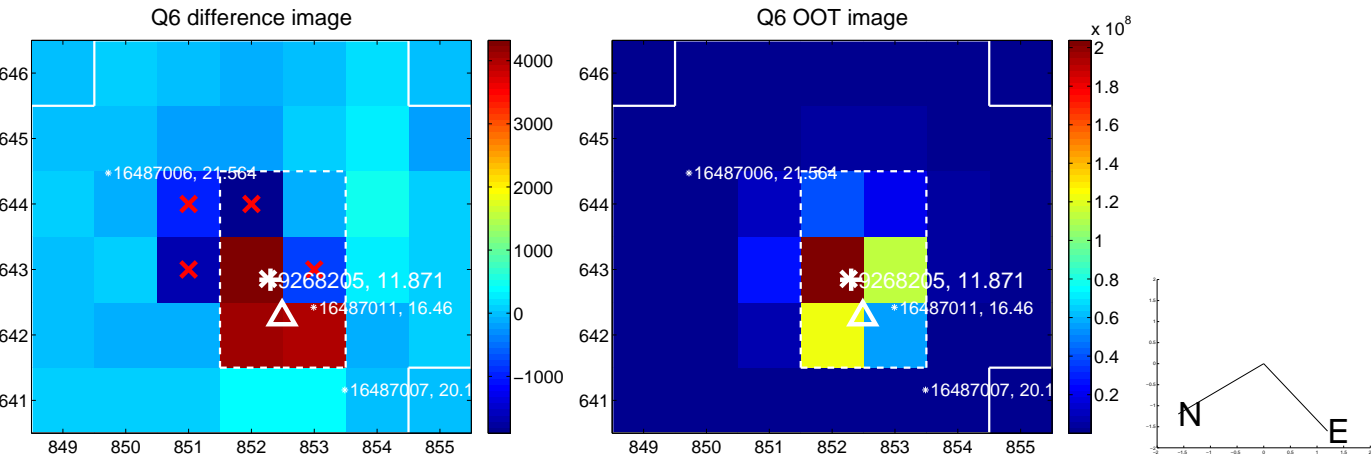
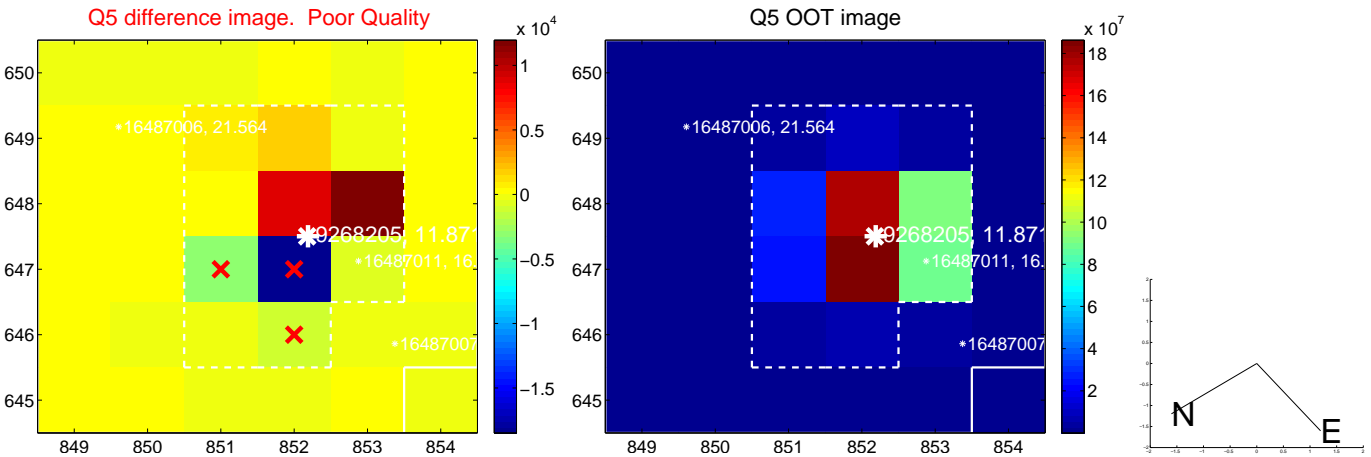


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

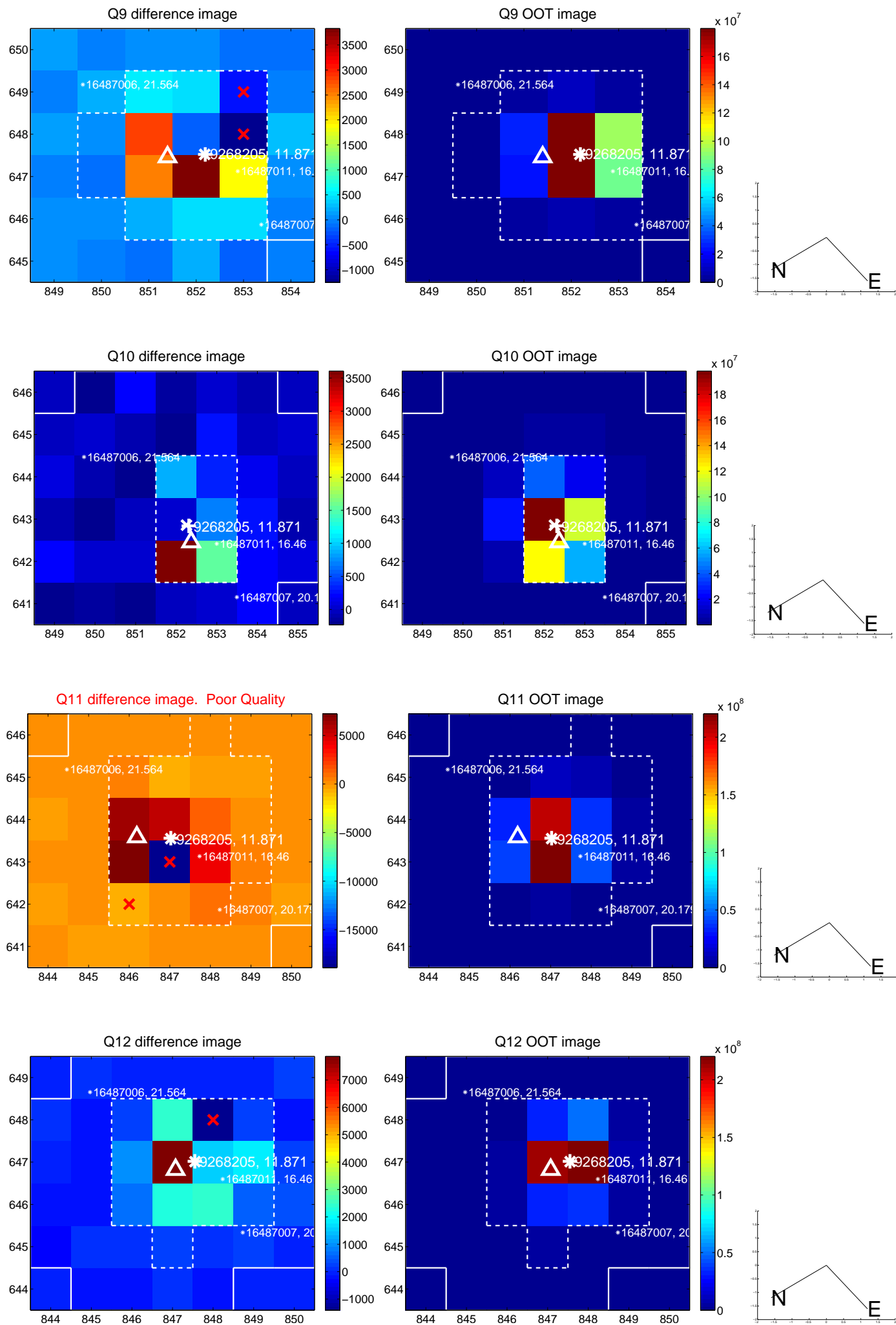
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



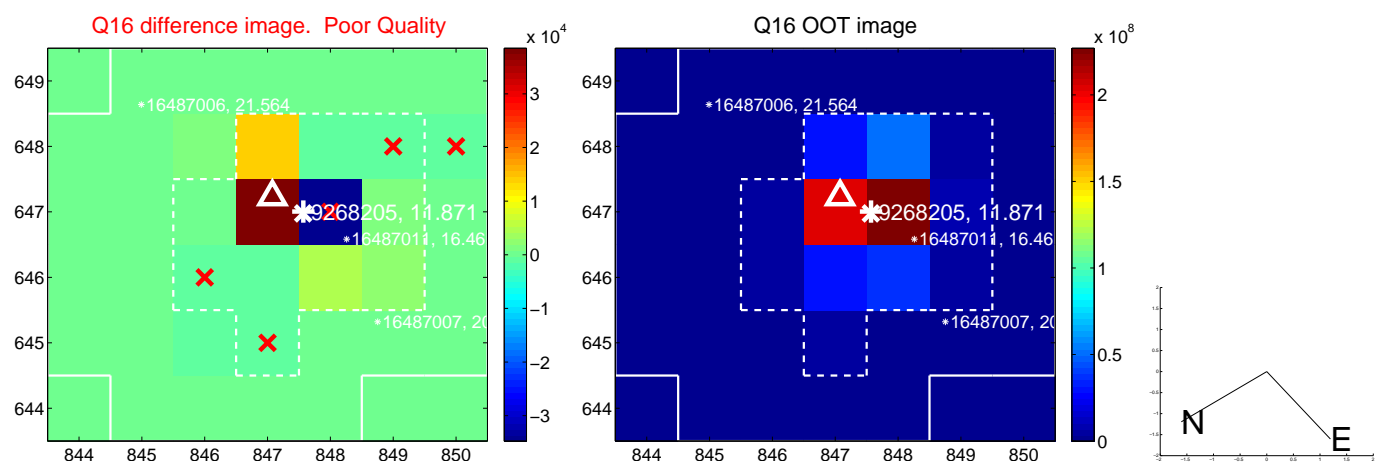
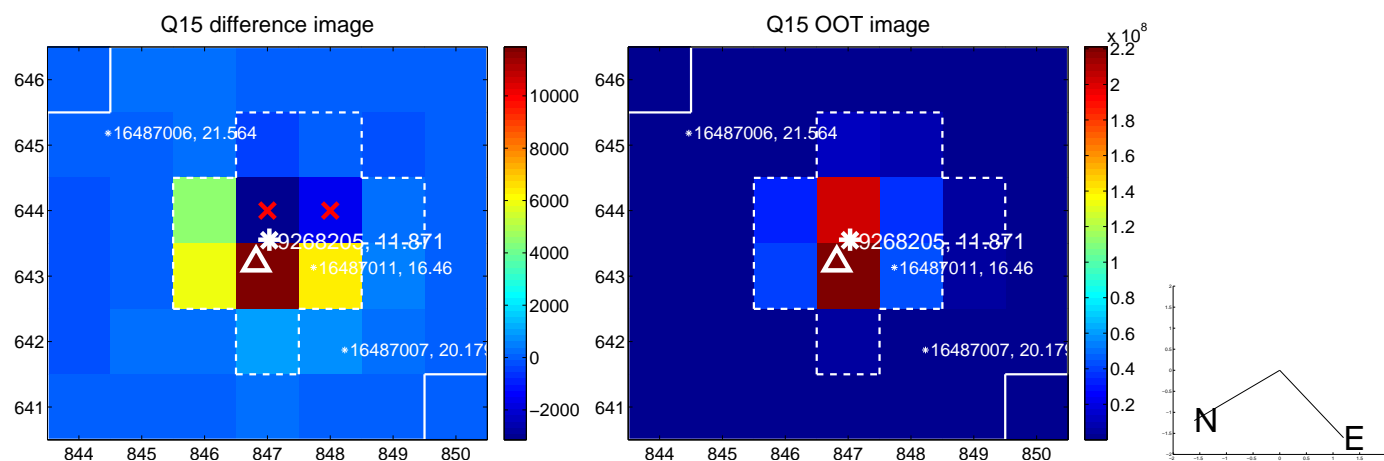
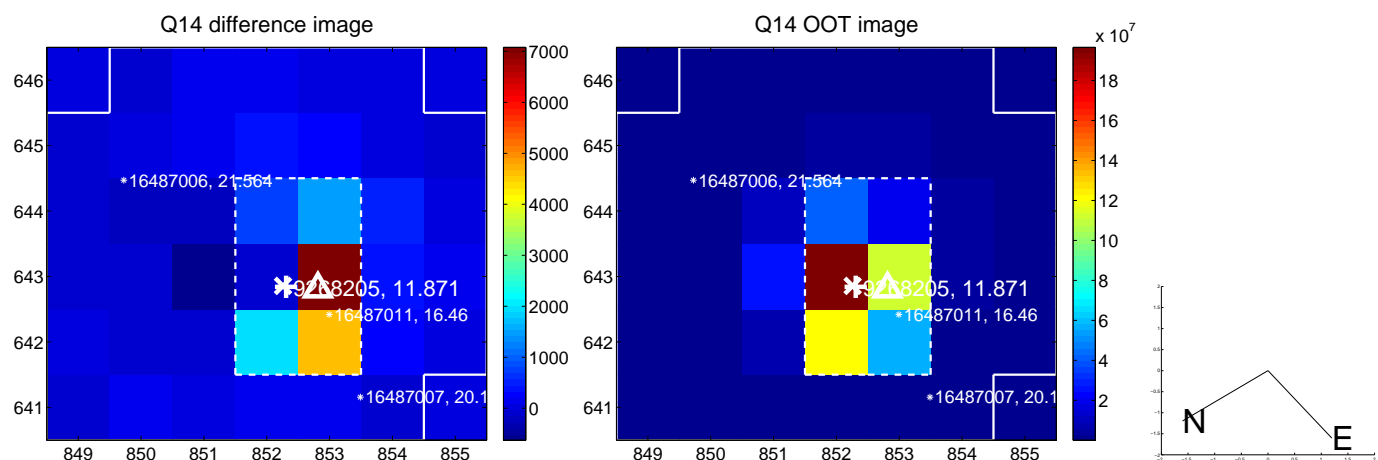
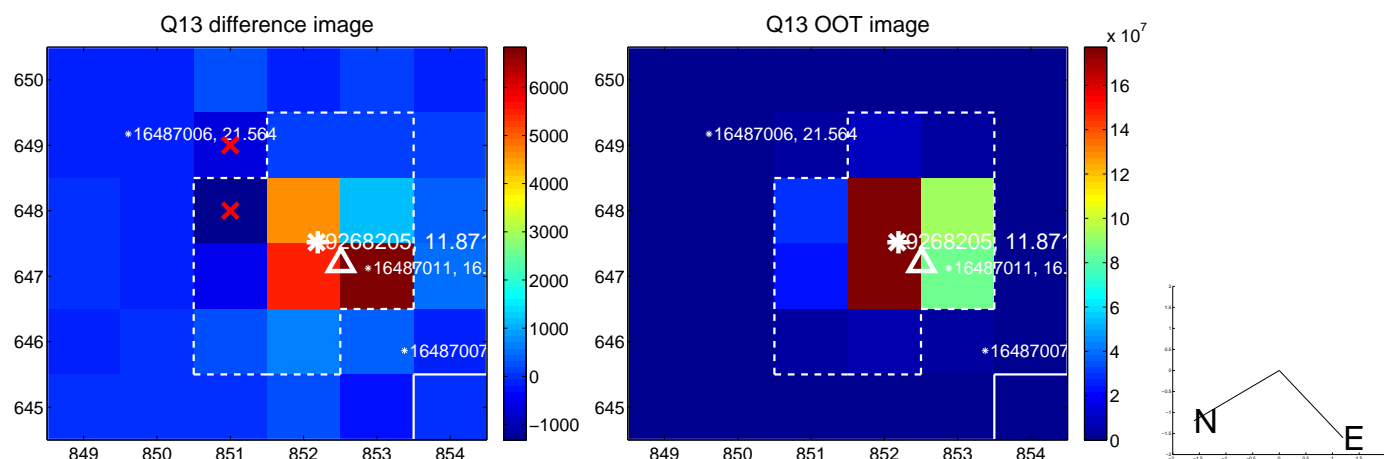
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



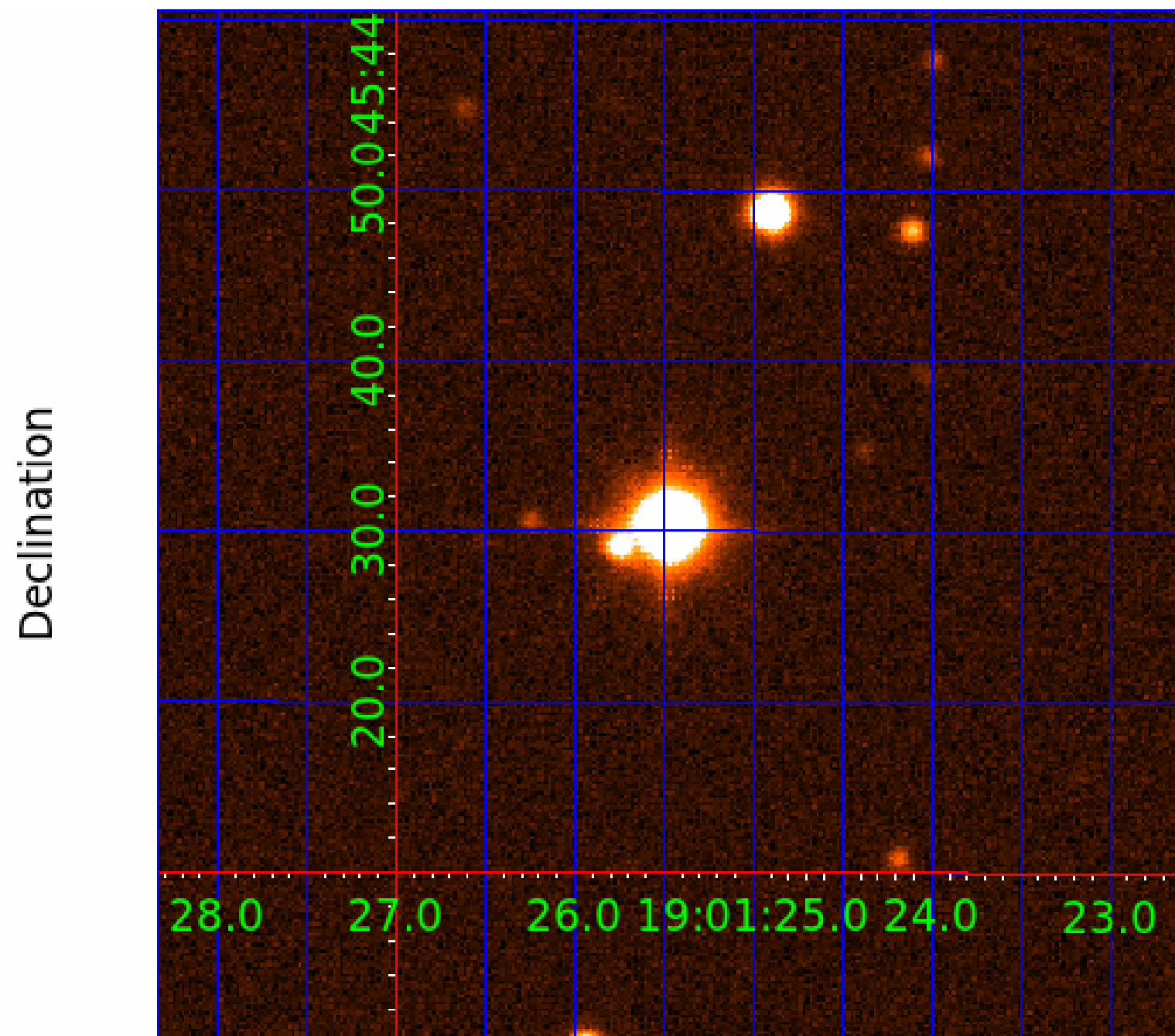
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 009268205

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})
009268205-01	OBS	No	3.413544	133.488584	18.0	11.900	10.6	10.7	1.82	6036	0.92	1660.13
009268205-02	OBS	No	3.413420	131.866940	9.1	20.326	10.9	5.4	1.82	6036	0.55	1660.21

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009268205-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV
009268205-02	OBS	FP	0.00	1	0	1	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—SAME_NTL_PERIOD—HALO_GHOST

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

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

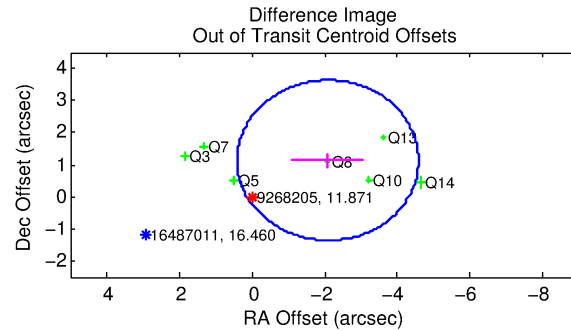
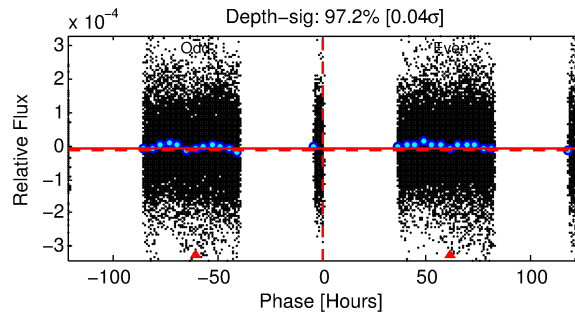
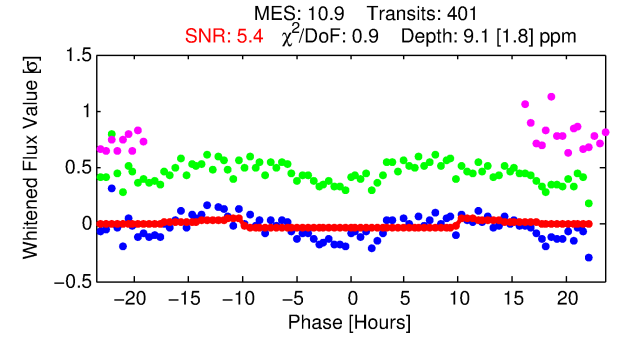
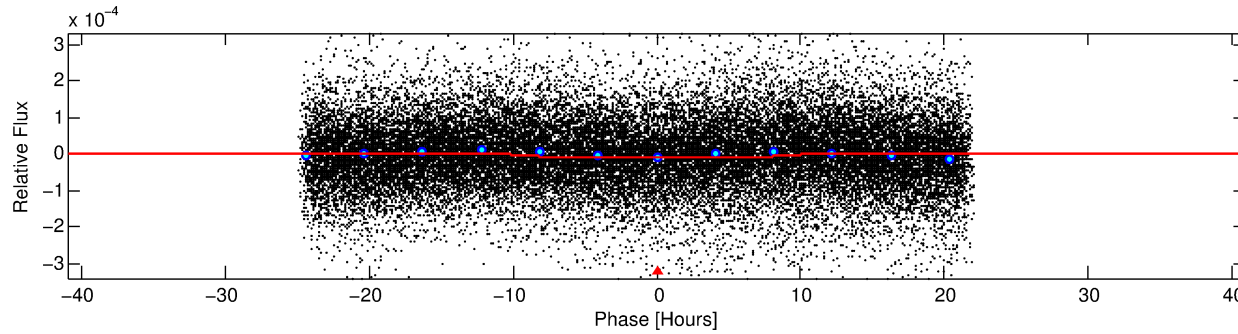
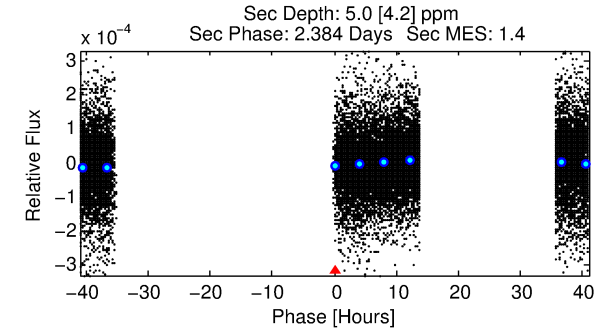
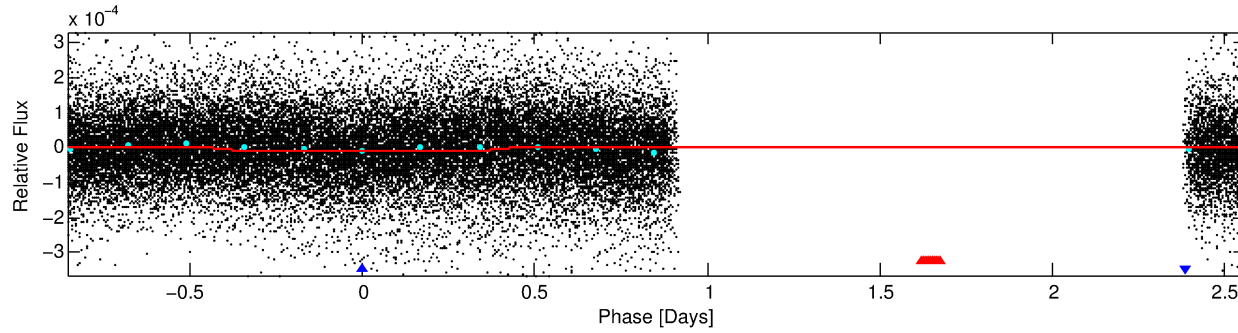
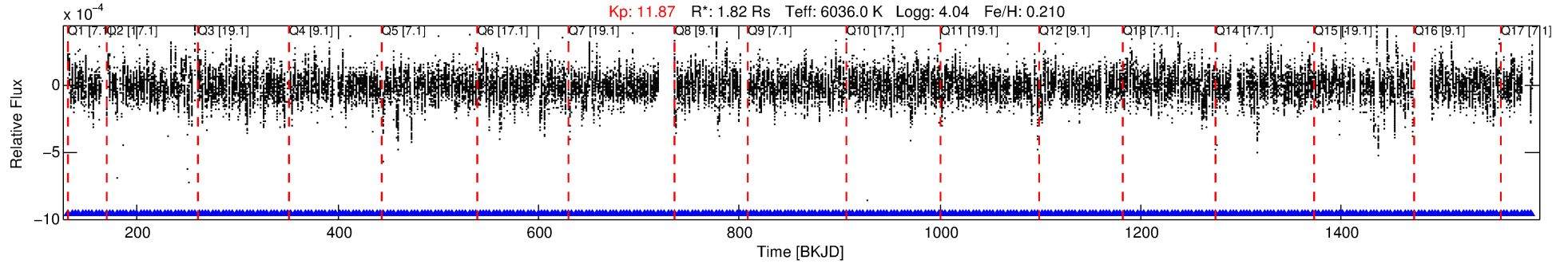
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009268205-02

No Significant Match Found

DV One-Page Summary

KIC: 9268205 Candidate: 2 of 2 Period: 3.413 d



DV Fit Results:

Period = 3.41342 [0.00006] d
Epoch = 131.8669 [0.0115] BKJD
Rp/R* = 0.0028 [0.0019]
a/R* = 1.39 [2.12]
b = 0.30 [9.49]
Seff = 1660.21 [904.58]
Teq = 1628 [222] K
Rp = 0.55 [0.42] Re
a = 0.0488 [0.0166] AU
Ag = 21.54 [35.77] [0.57σ]
Teffp = 5421 [2146] K [1.76σ]

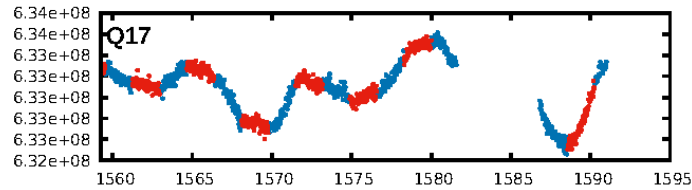
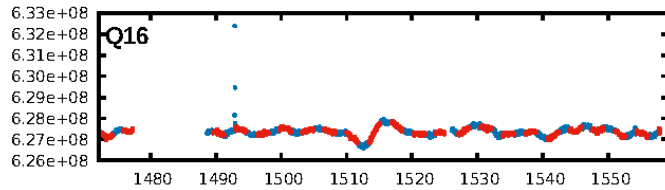
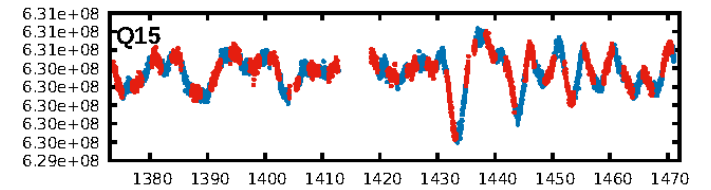
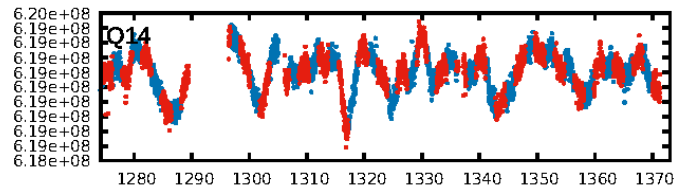
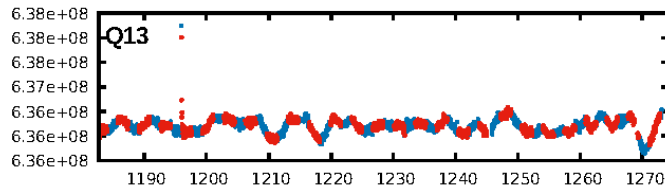
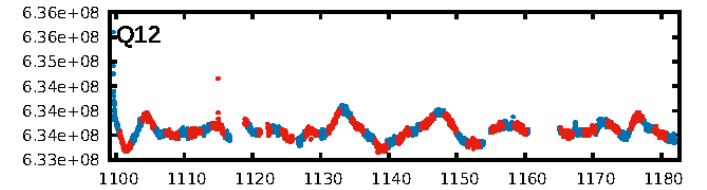
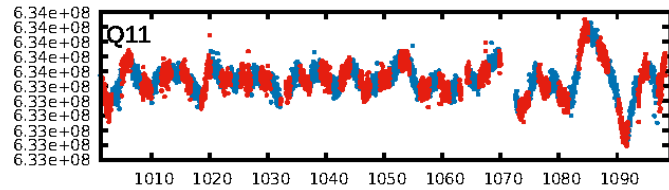
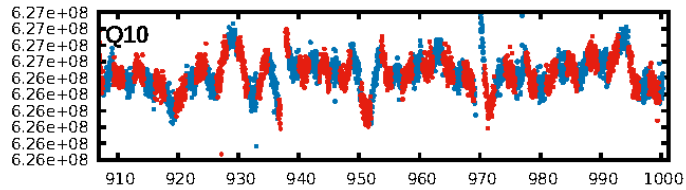
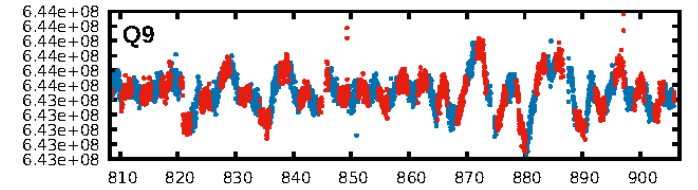
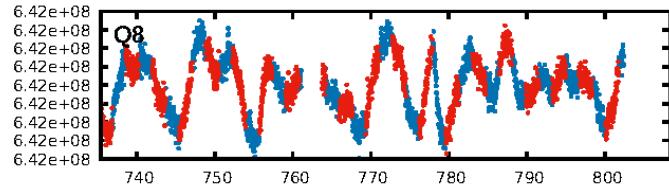
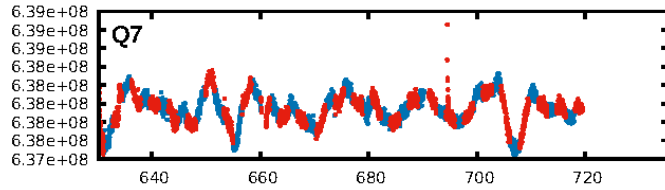
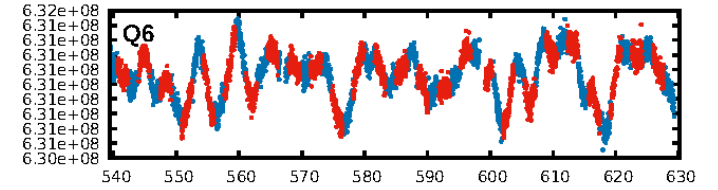
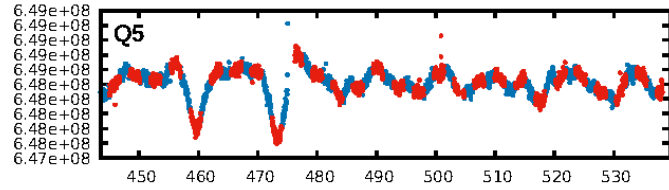
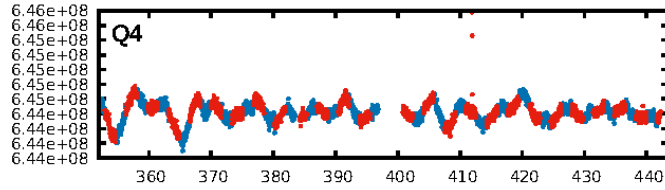
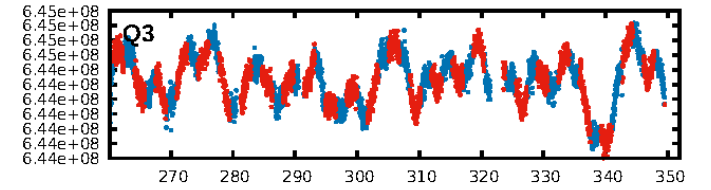
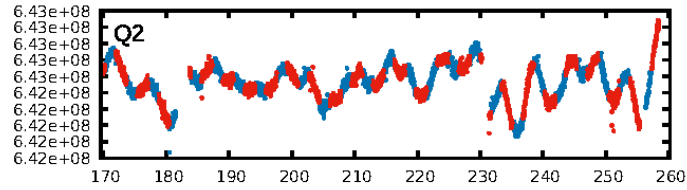
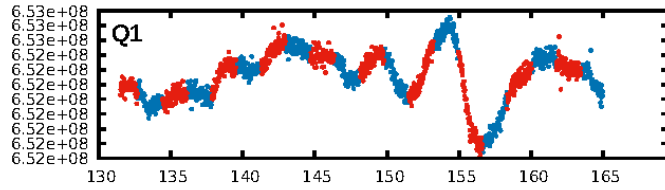
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [384/384]
GhostDiagnostic-chr: -0.1507
Centroid-sig: 0.2%
Centroid-so: 1.366 arcsec [1.92σ]
OotOffset-rm: 2.376 arcsec [2.85σ]
KicOffset-rm: 2.360 arcsec [3.09σ]
OotOffset-st: 2/2/1/2 [7]
KicOffset-st: 2/2/1/2 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 0.65 [11/17]

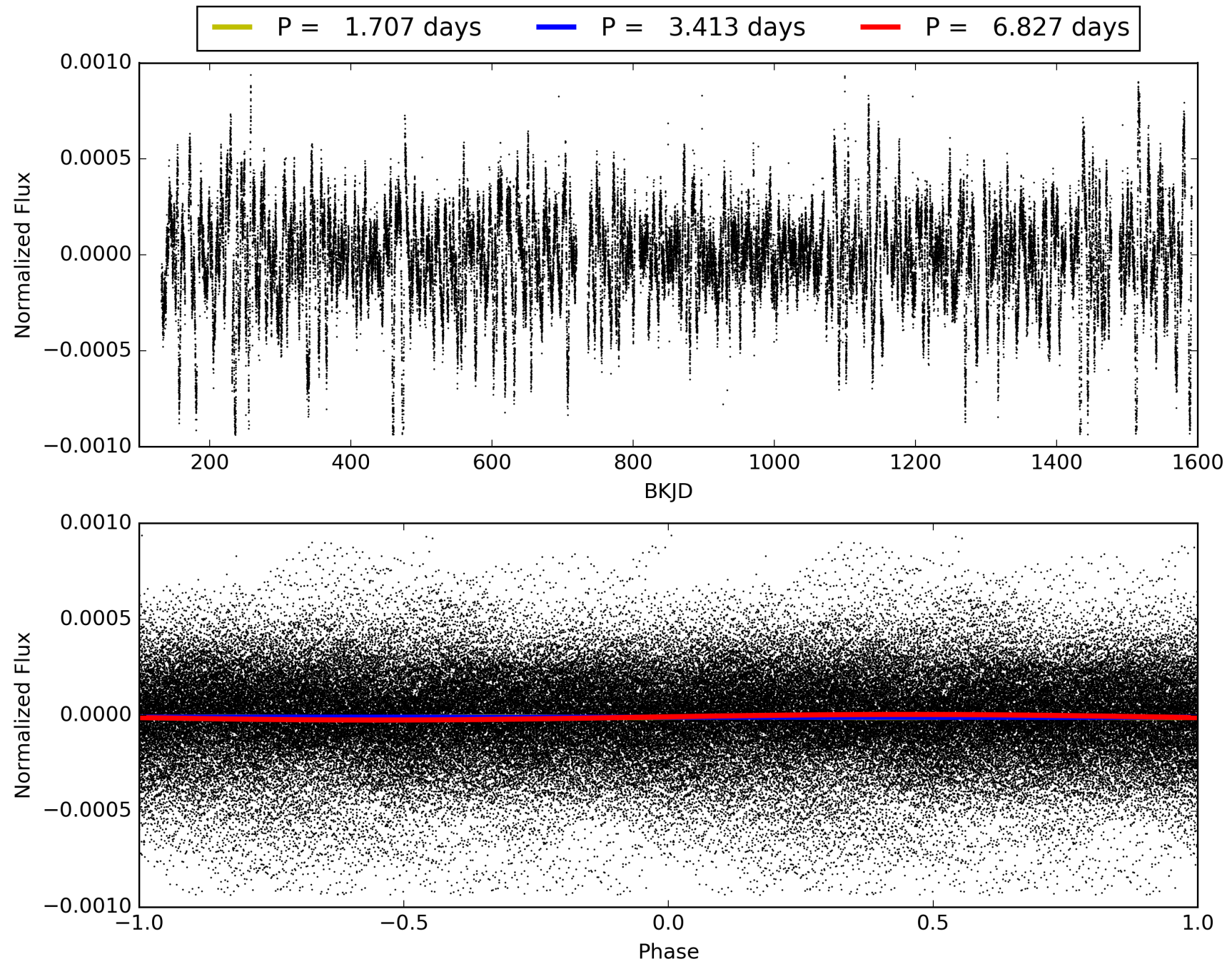
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 04:05:18 Z

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

TCE 009268205-02, PDC Light Curves

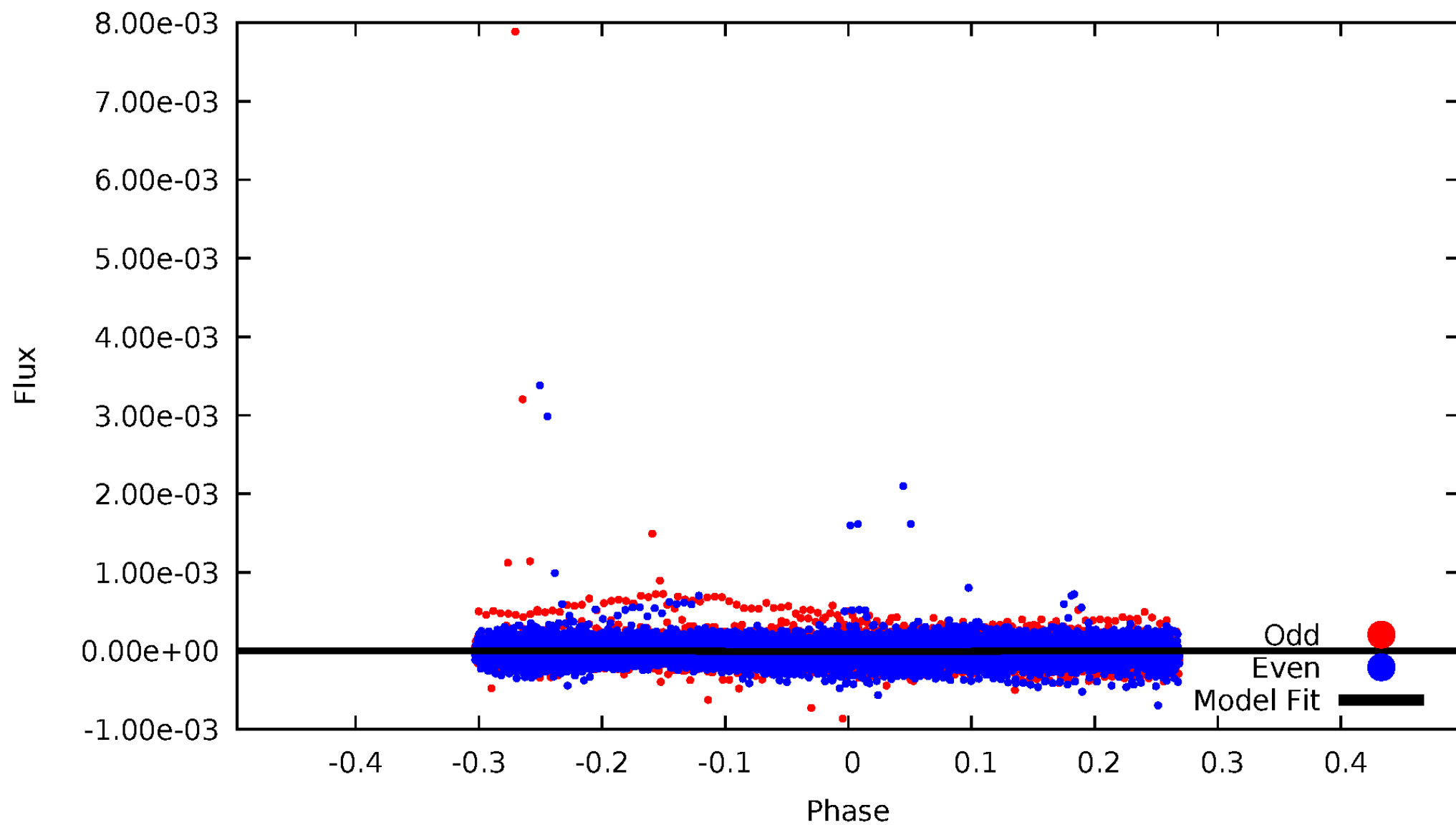


TCE 009268205-02



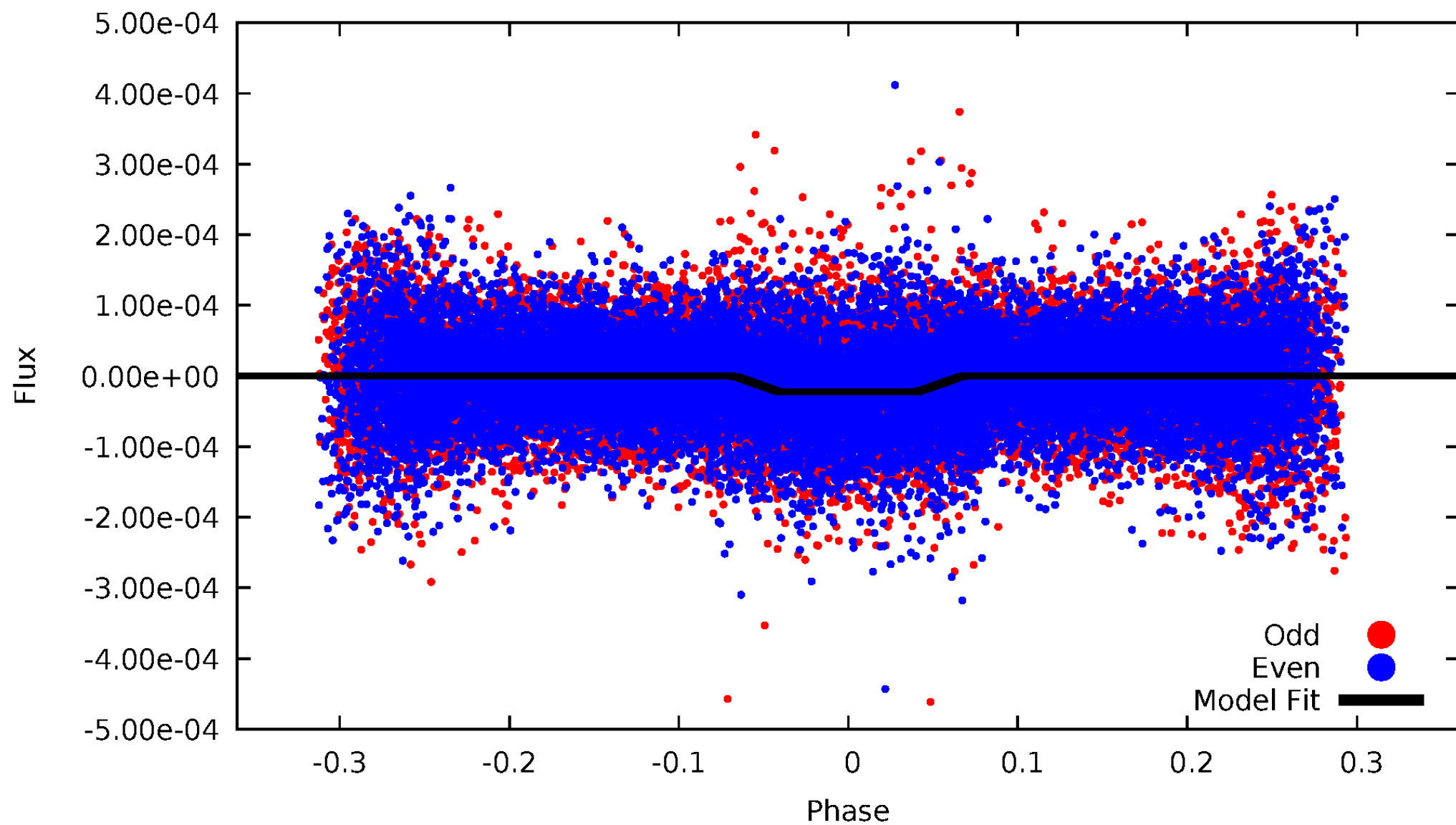
DV Odd/Even

TCE 009268205-02



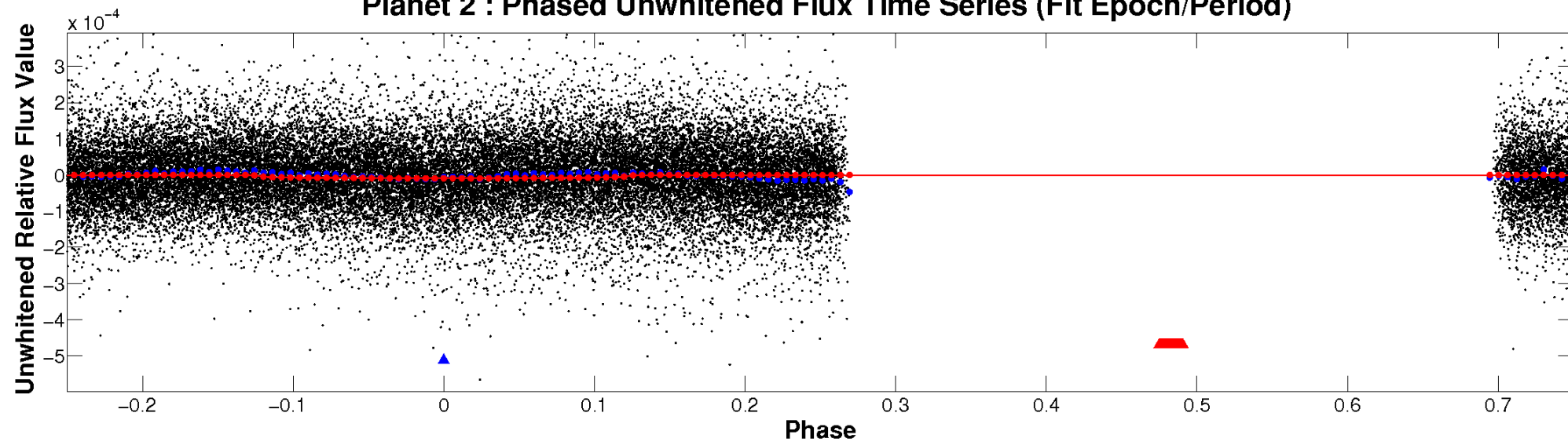
ALT Odd/Even

TCE 009268205-02

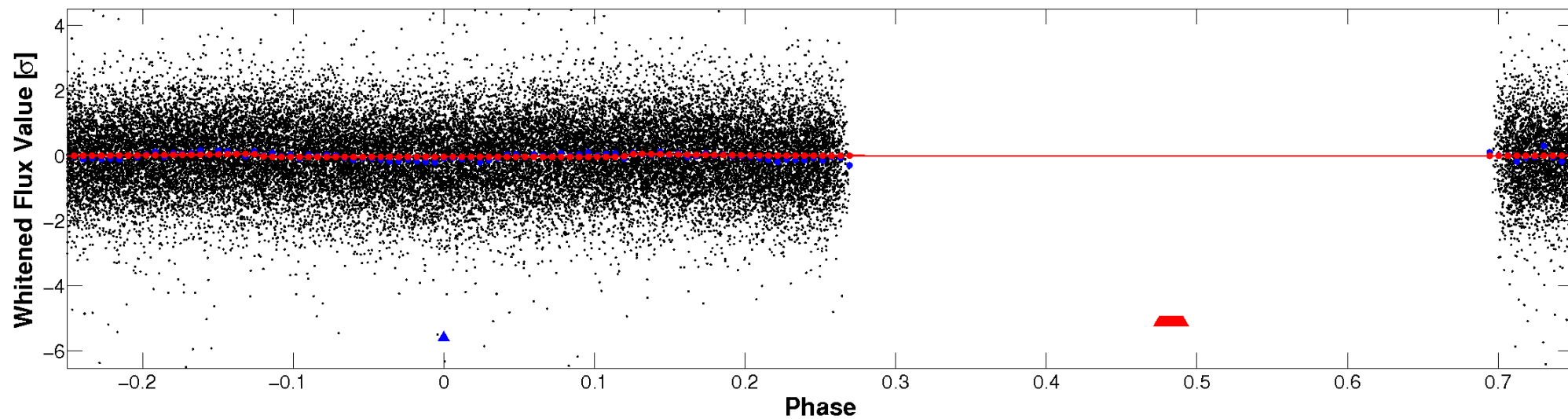


Non-Whitened Vs. Whitened Light Curve

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

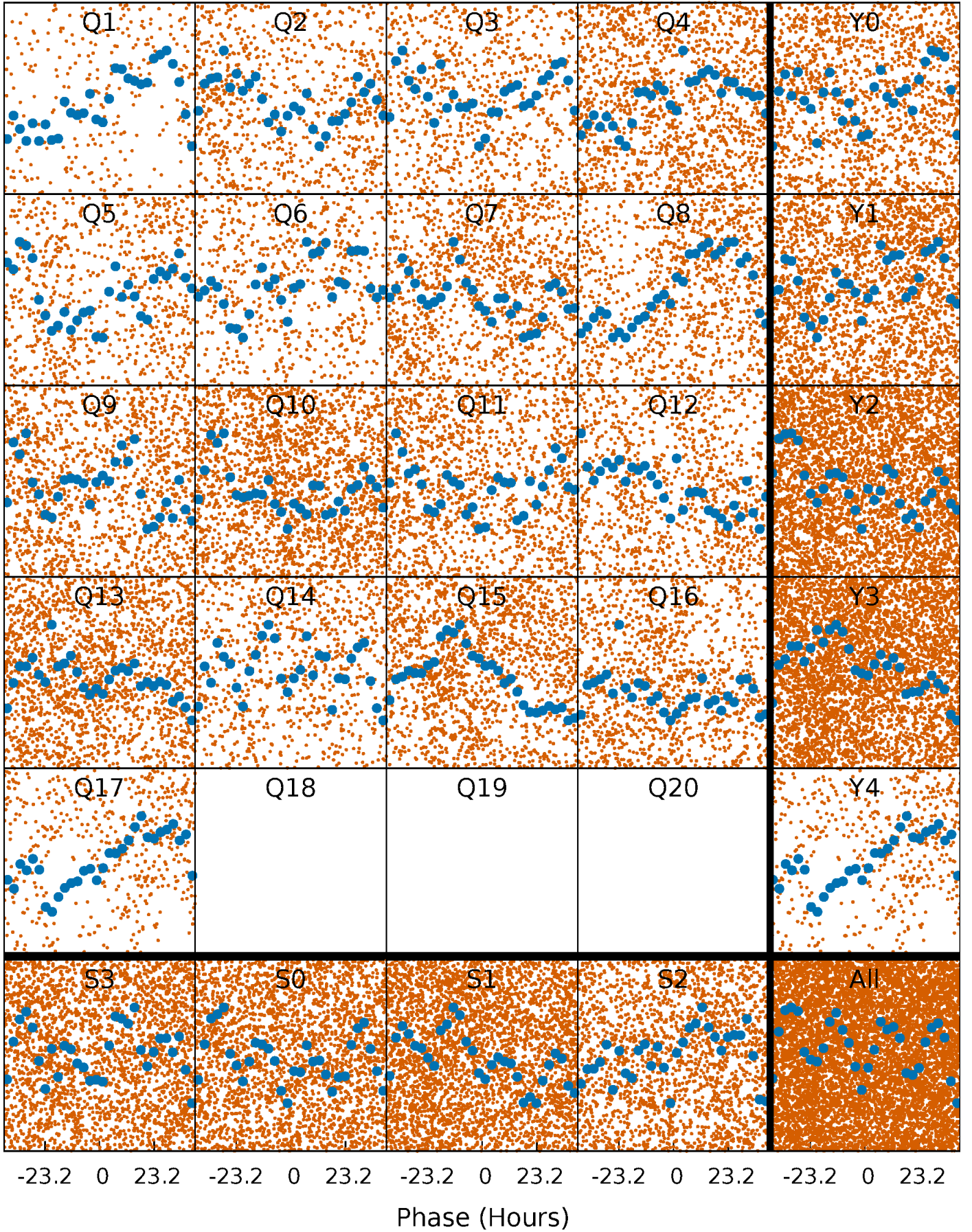


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



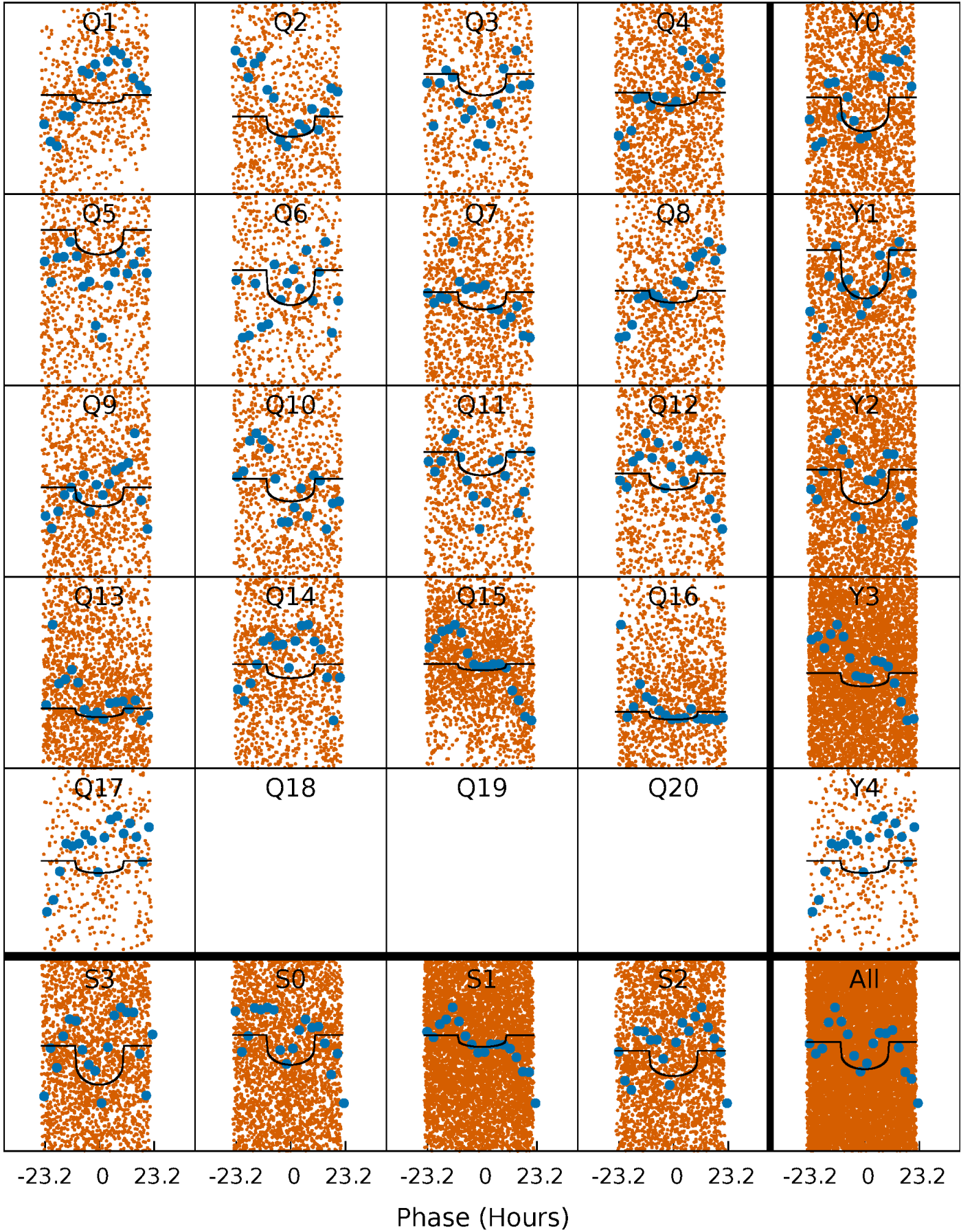
PDC Quarter-Phased Transit Curves

TCE 009268205-02 $P = 3.413420$ Days $T_0 = 131.866940$ (BKJD)



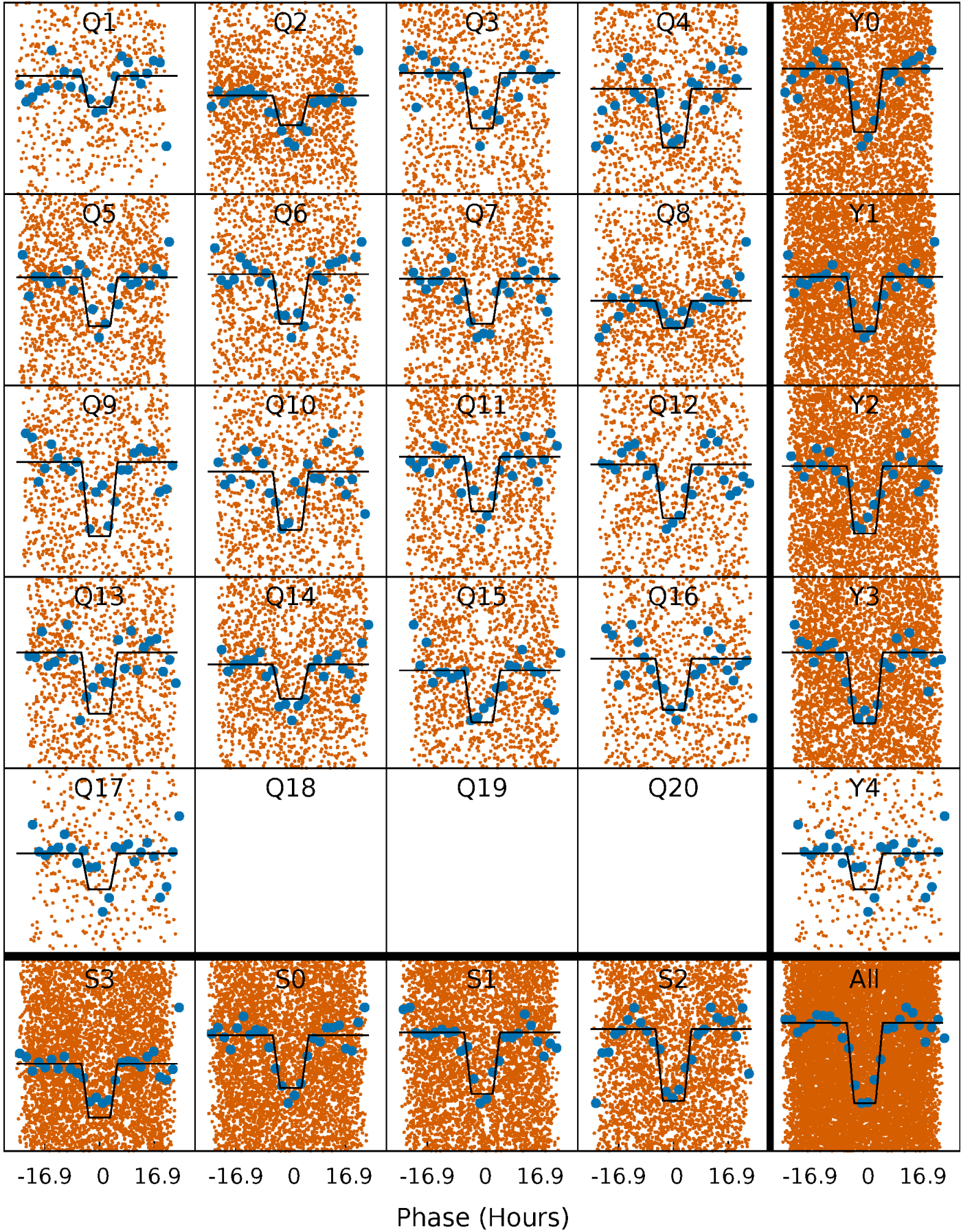
DV Quarter-Phased Transit Curves

TCE 009268205-02 P= 3.413420 Days $T_0=131.866940$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

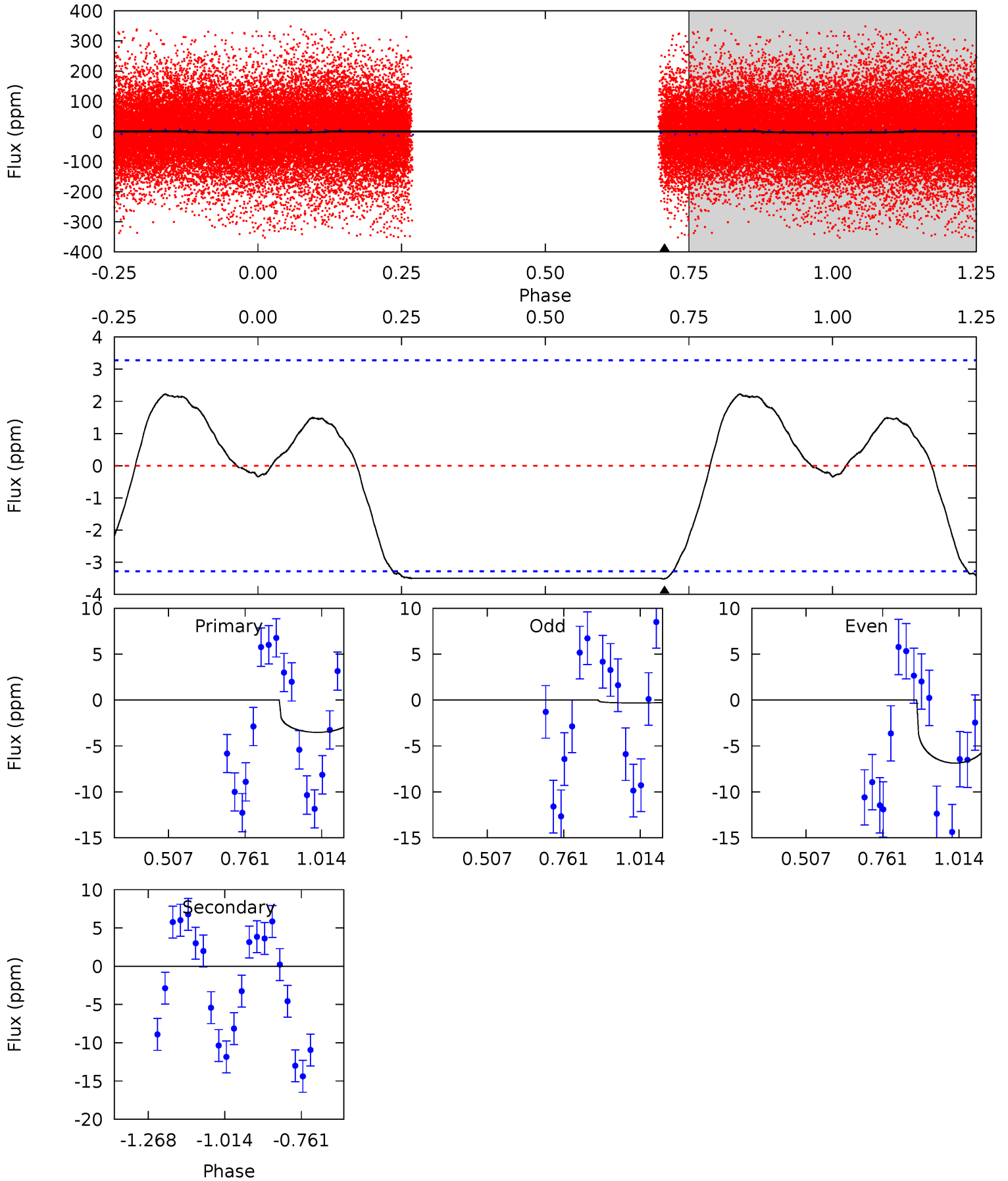
TCE 009268205-02 P= 3.413142 Days $T_0=131.900143$ (BKJD)



DV Model-Shift Uniqueness Test

009268205-02, P = 3.413420 Days, E = 128.453520 Days

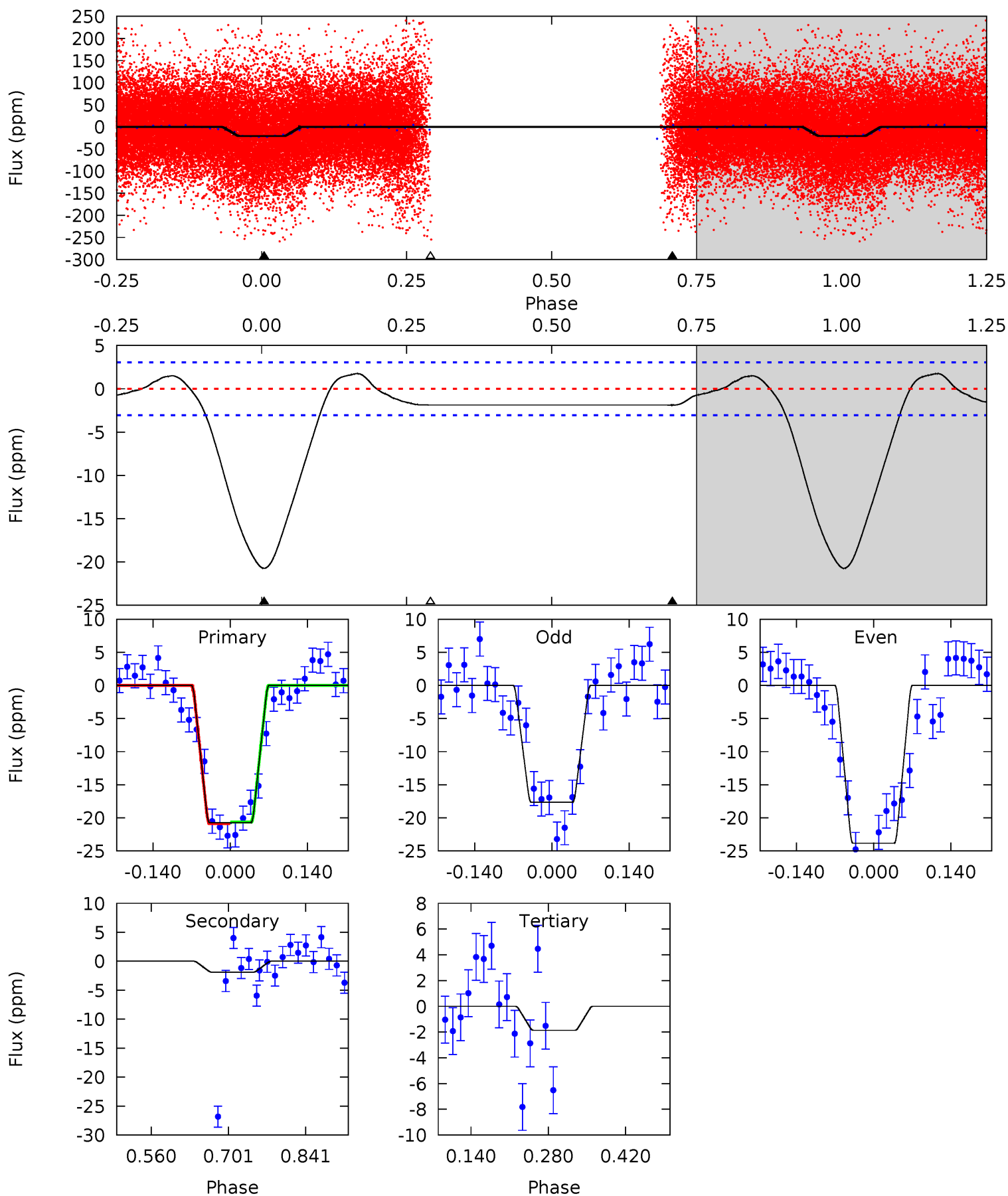
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.69	0	0	0	4.37	1.14	2.06	4.69	4.69	0	0	4.38	0.53	0.39	2.92



Alt Model-Shift Uniqueness Test

009268205-02, P = 3.413142 Days, E = 128.487001 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
30.6	2.78	2.75	0	4.49	1.48	1.91	27.8	30.6	0.03	2.78	4.66	0.91	0.08	0.19



Stellar Parameters For KIC 009268205

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6036^{+190}_{-232}	$4.040^{+0.299}_{-0.138}$	$0.210^{+0.200}_{-0.300}$	$1.823^{+0.456}_{-0.684}$	$1.329^{+0.181}_{-0.272}$	$0.309^{+0.670}_{-0.129}$
	+3%/-4%	+7%/-3%	+95%/-143%	+25%/-38%	+14%/-20%	+217%/-42%
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 009268205-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1	$0.56^{+0.36}_{-0.33}$	2249^{+164}_{-217}	-2650^{+6498}_{-1347}	$0.012^{+4.631}_{-4.514}$
Alt.	-2 ± 1	$0.89^{+0.38}_{-0.36}$	2232^{+177}_{-200}	3619^{+746}_{-500}	$3.082^{+6.188}_{-1.786}$

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 $A_{obs} \gg 1.0$

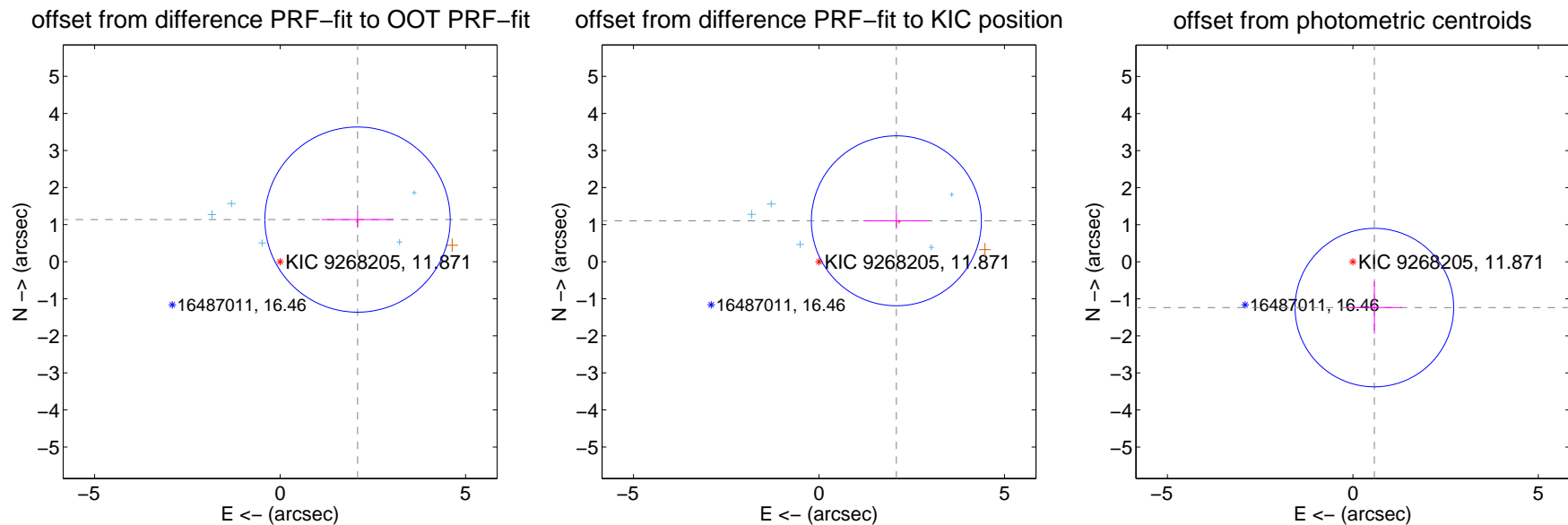
DV Centroid Data

Supplemental centroid analysis for 009268205-02. **Kepler magnitude: 11.87.** Transit SNR 5.38

There are 5 quarters with good PRF difference image offsets

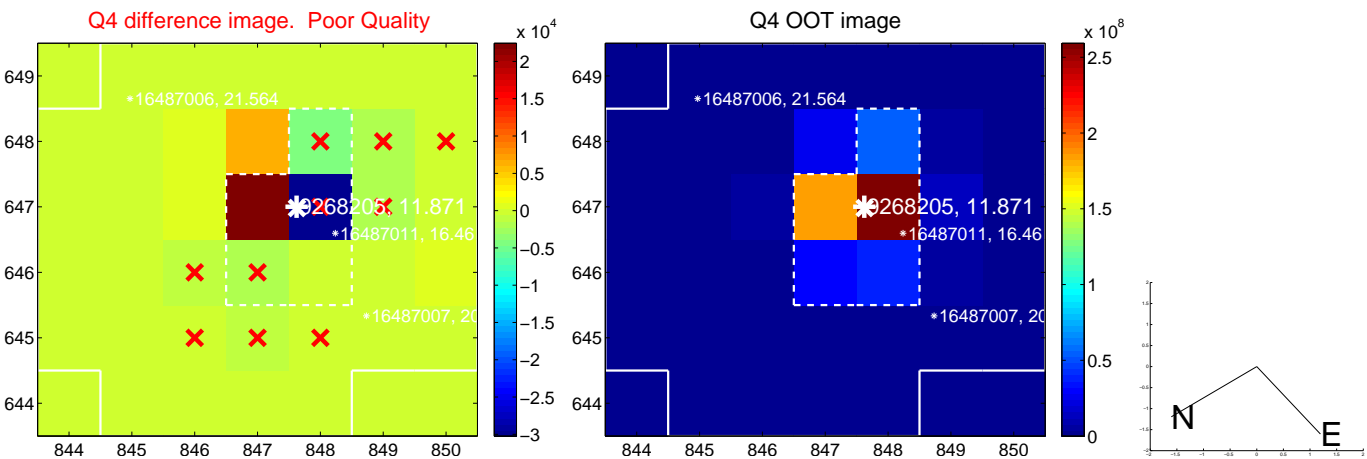
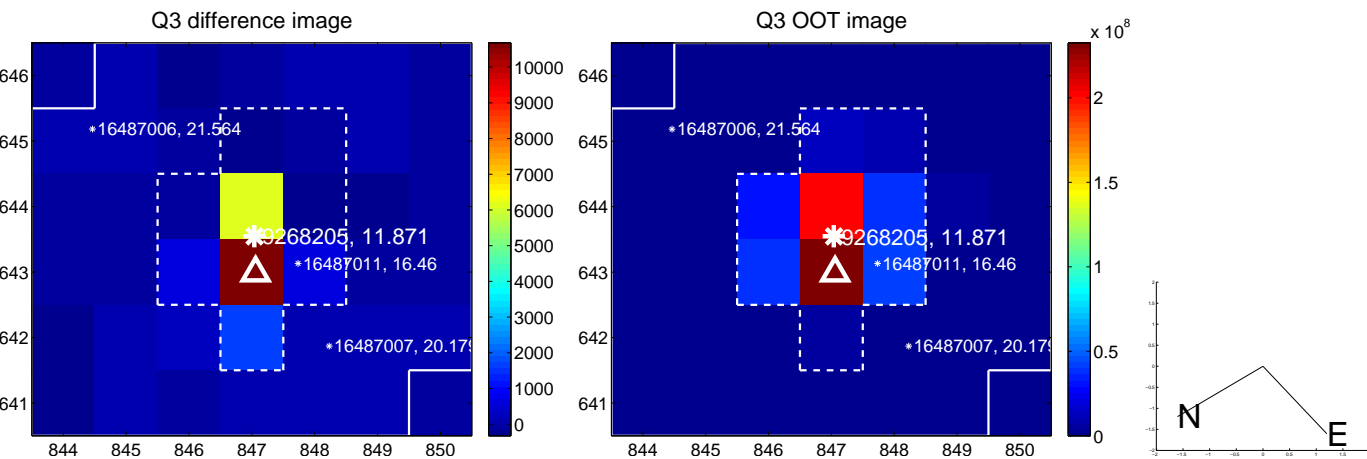
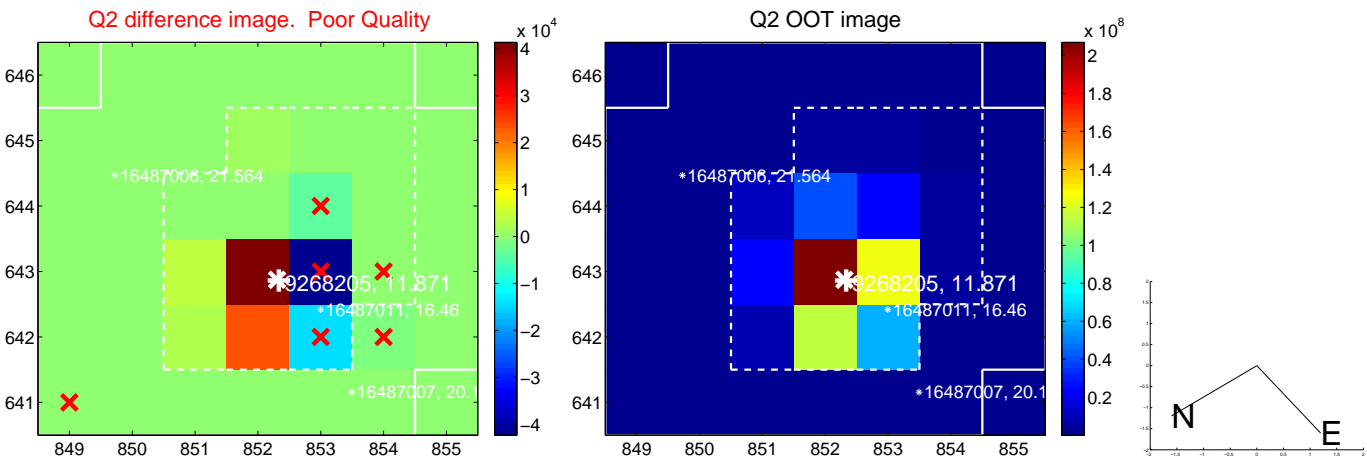
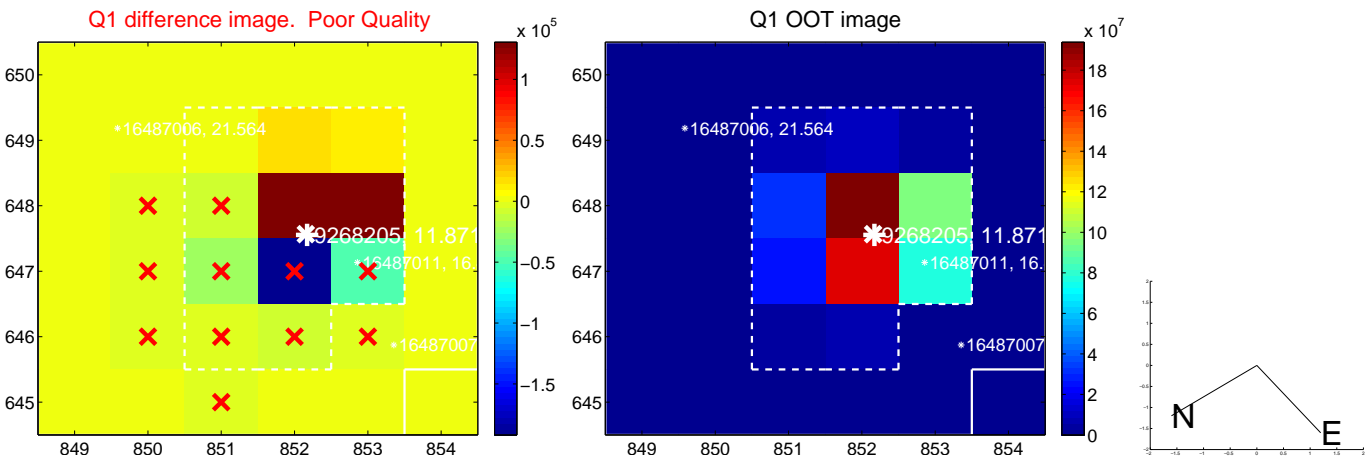
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.376 ± 0.833	2.85	-2.088 ± 0.972	1.136 ± 0.212
PRF-fit source offset from KIC position	2.360 ± 0.764	3.09	-2.087 ± 0.889	1.103 ± 0.216
photometric centroid source offset	1.37 ± 0.71	1.92	-0.58 ± 0.75	-1.24 ± 0.71

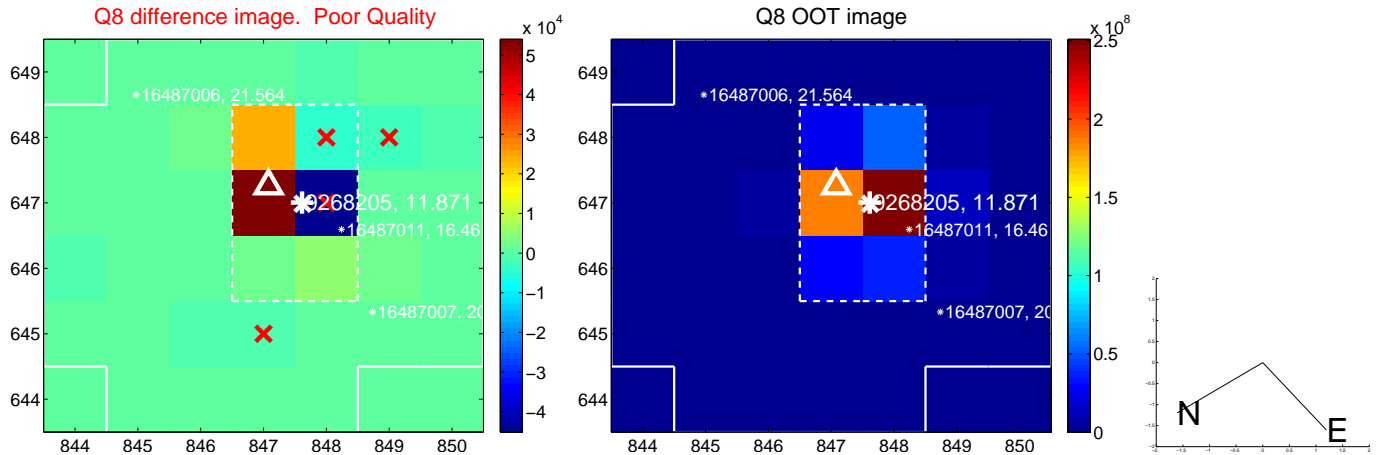
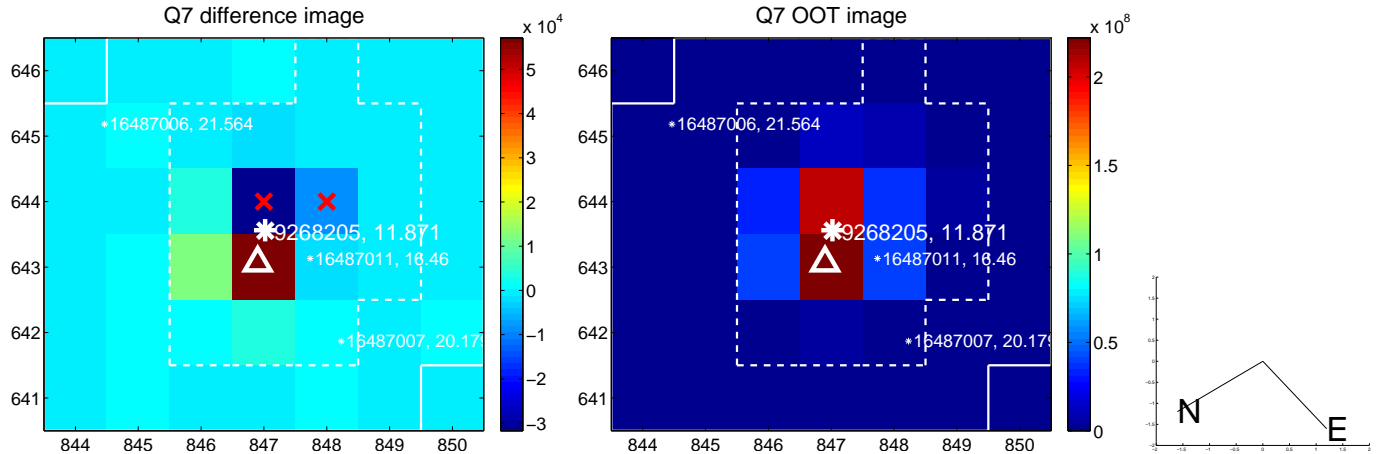
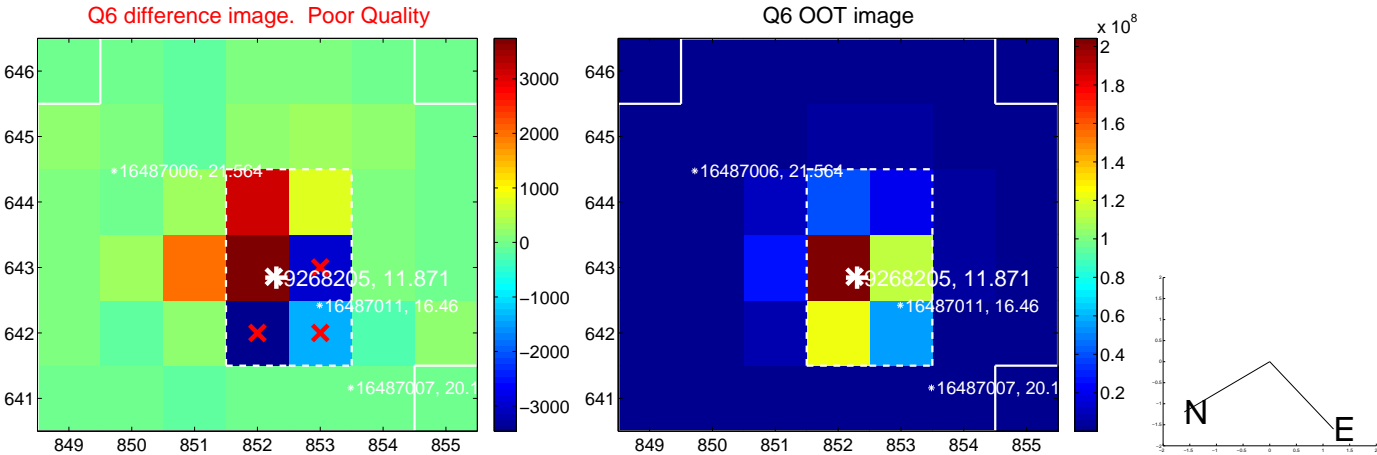
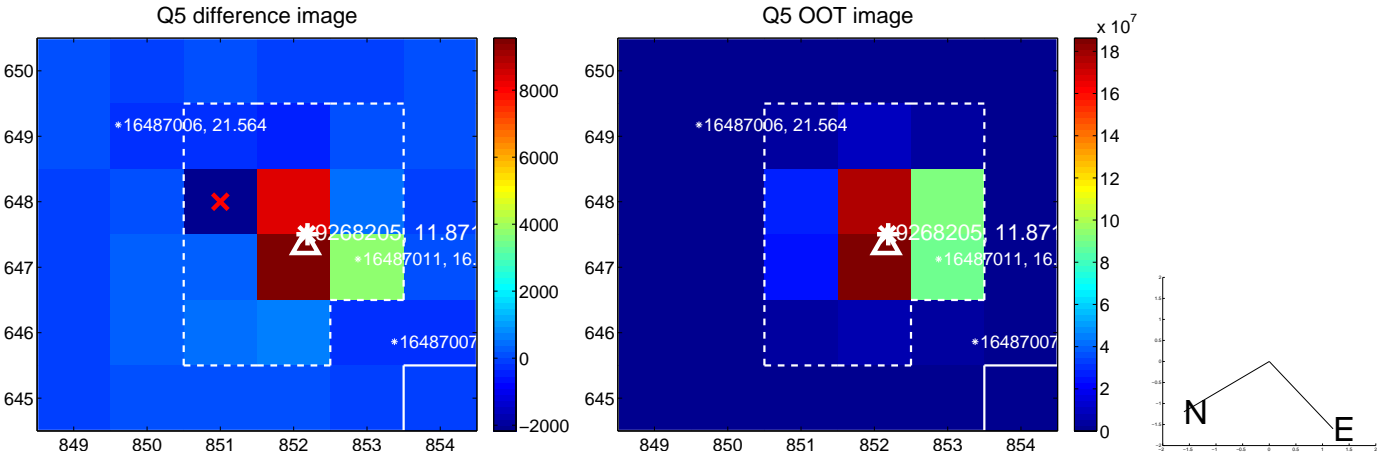


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

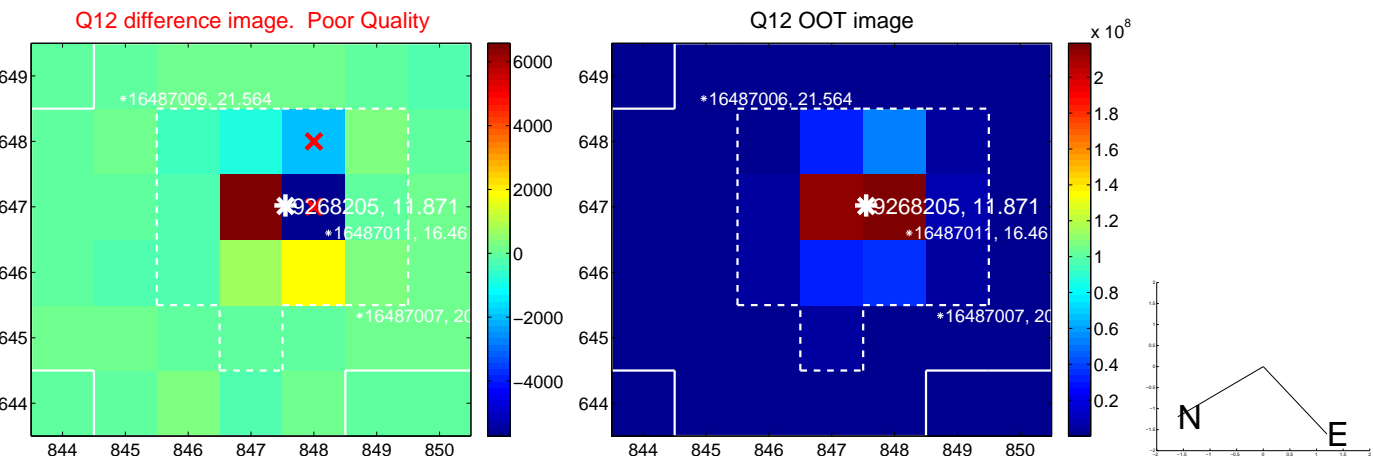
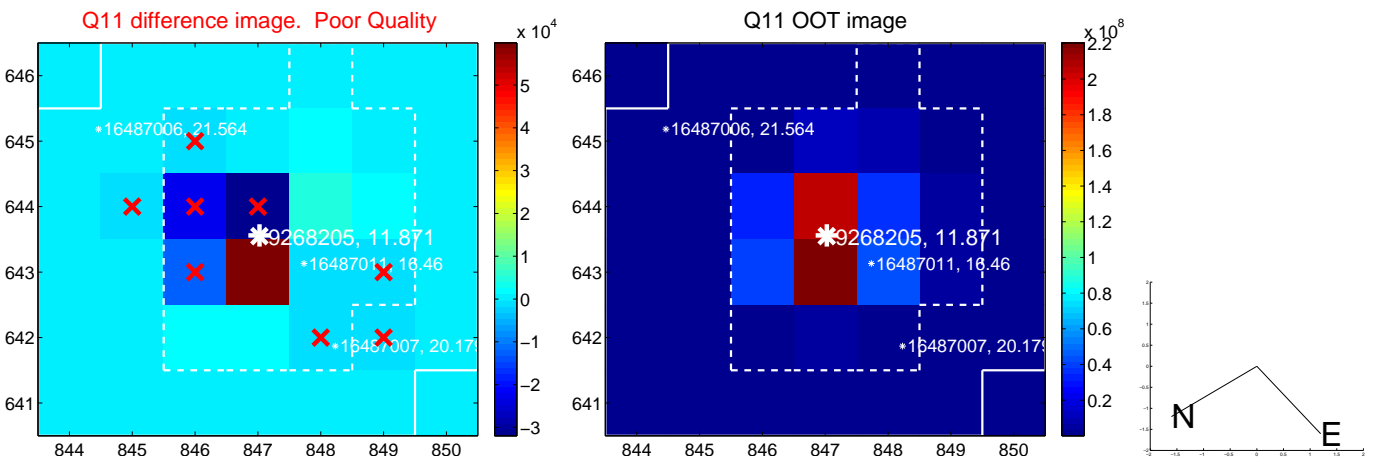
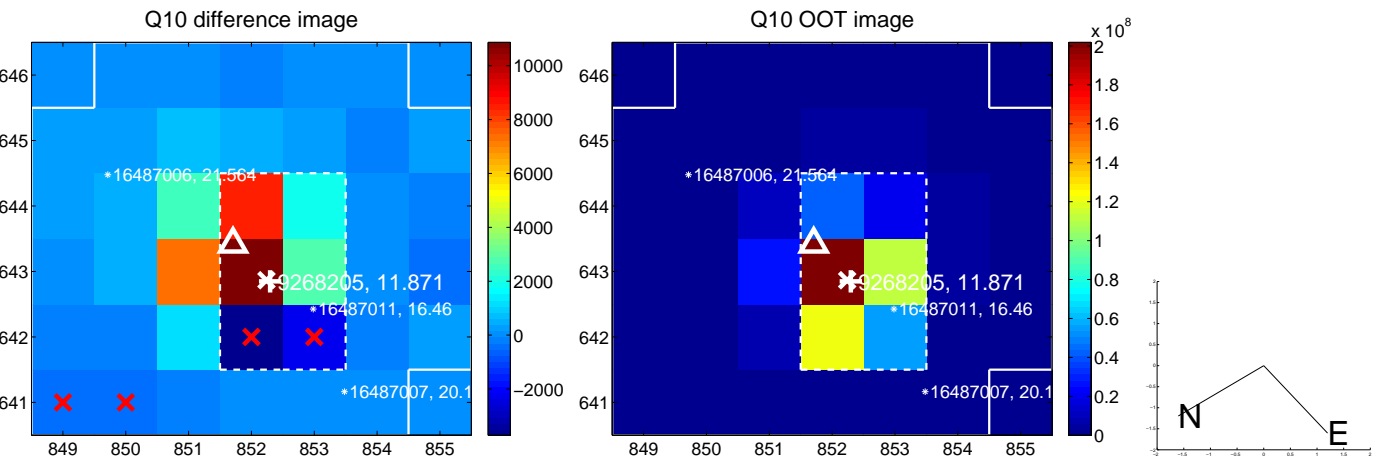
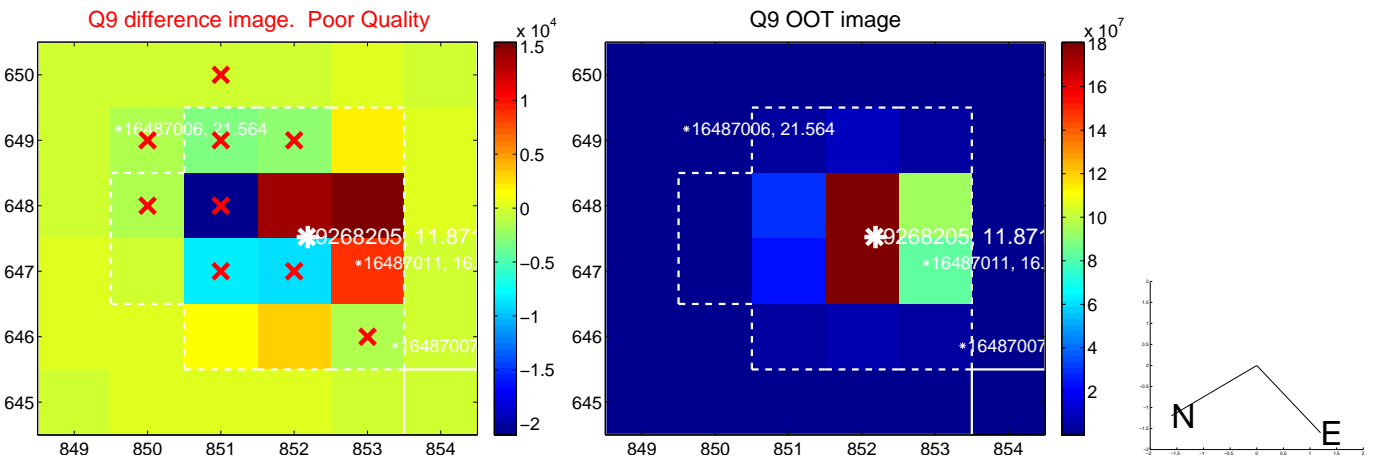
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



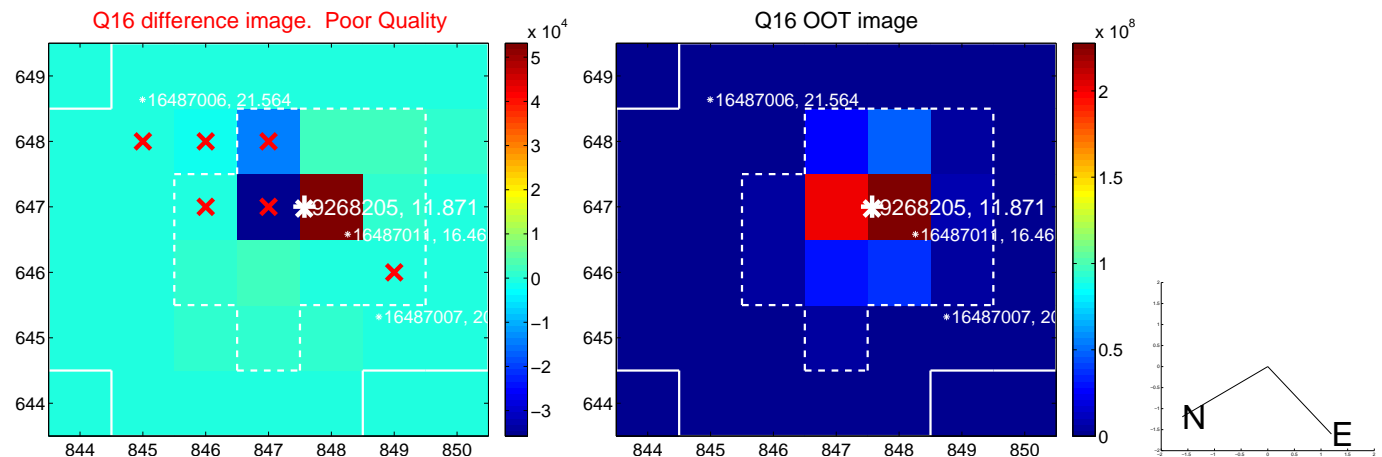
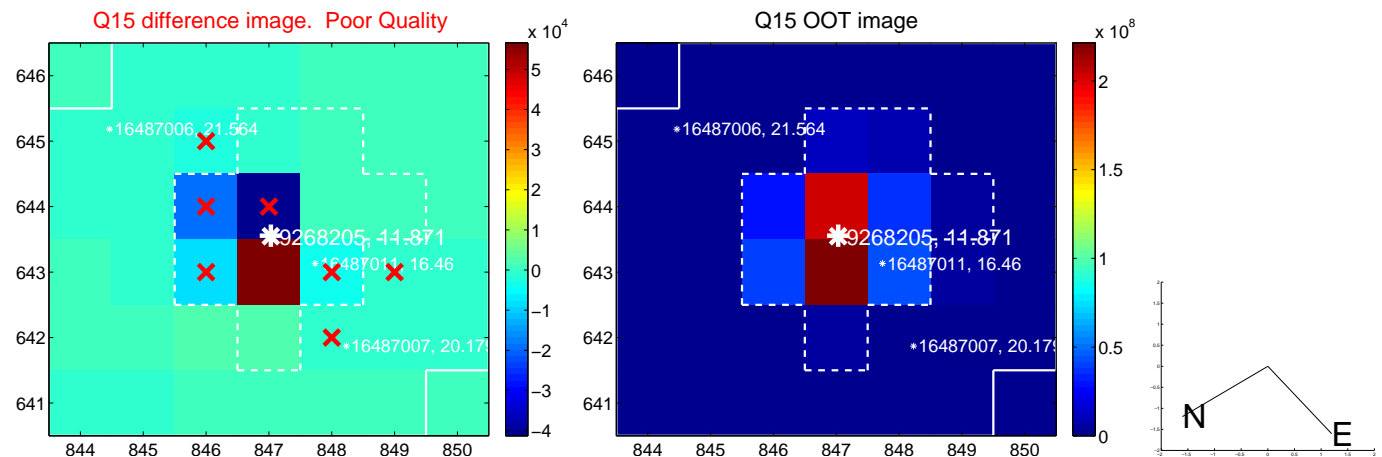
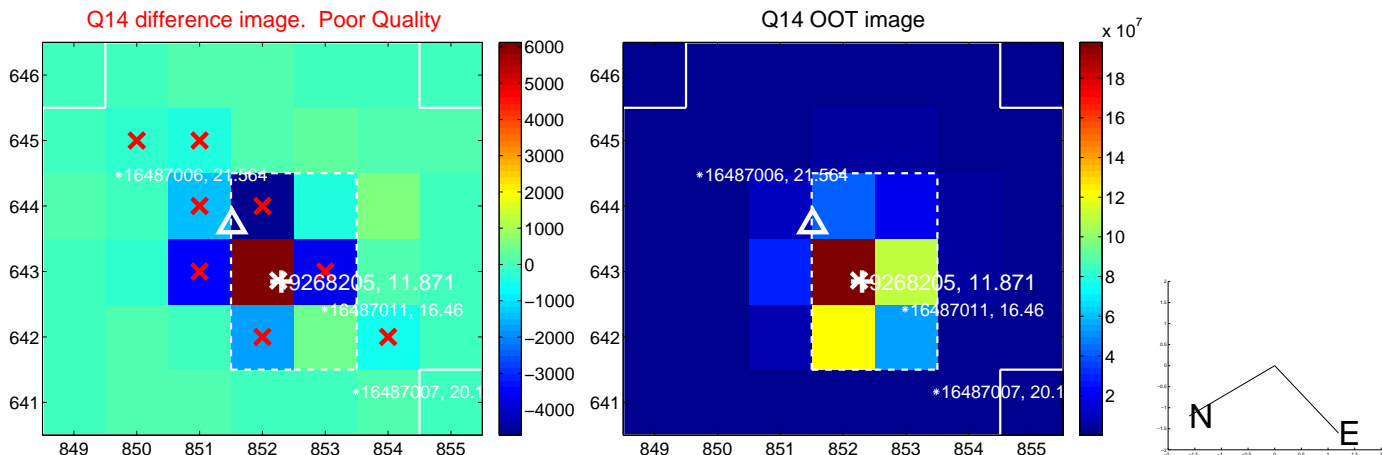
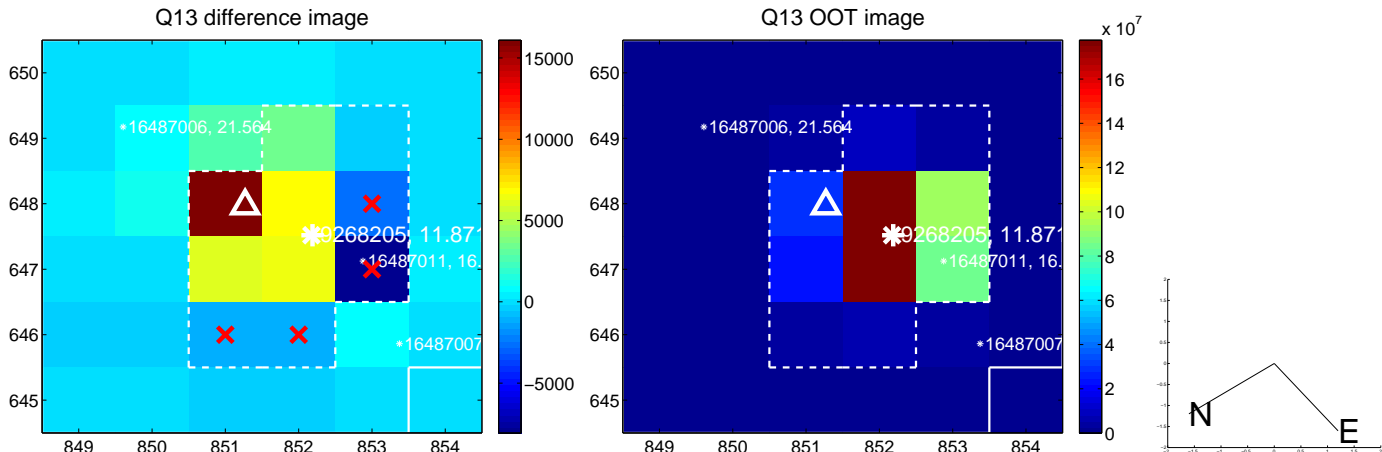
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



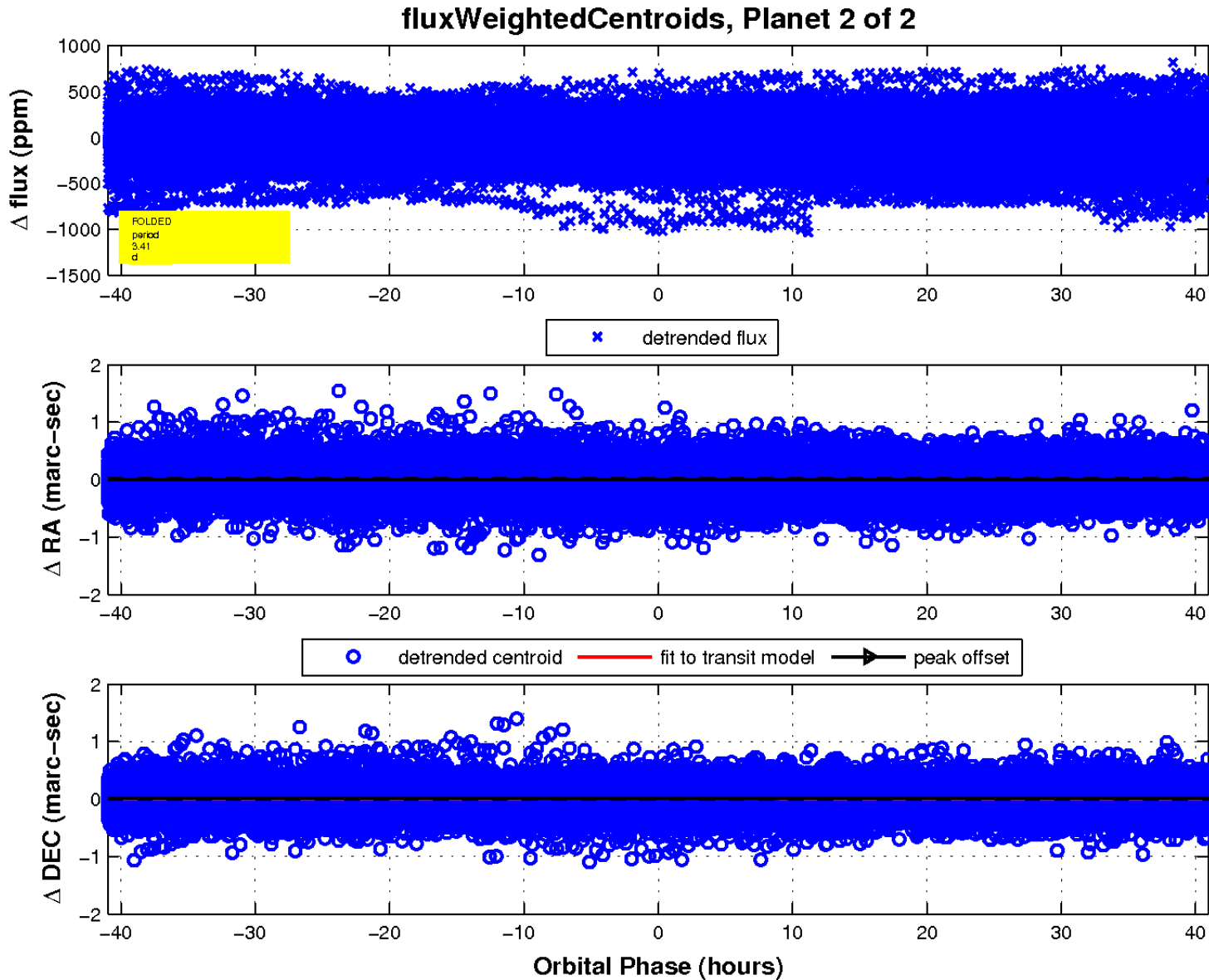
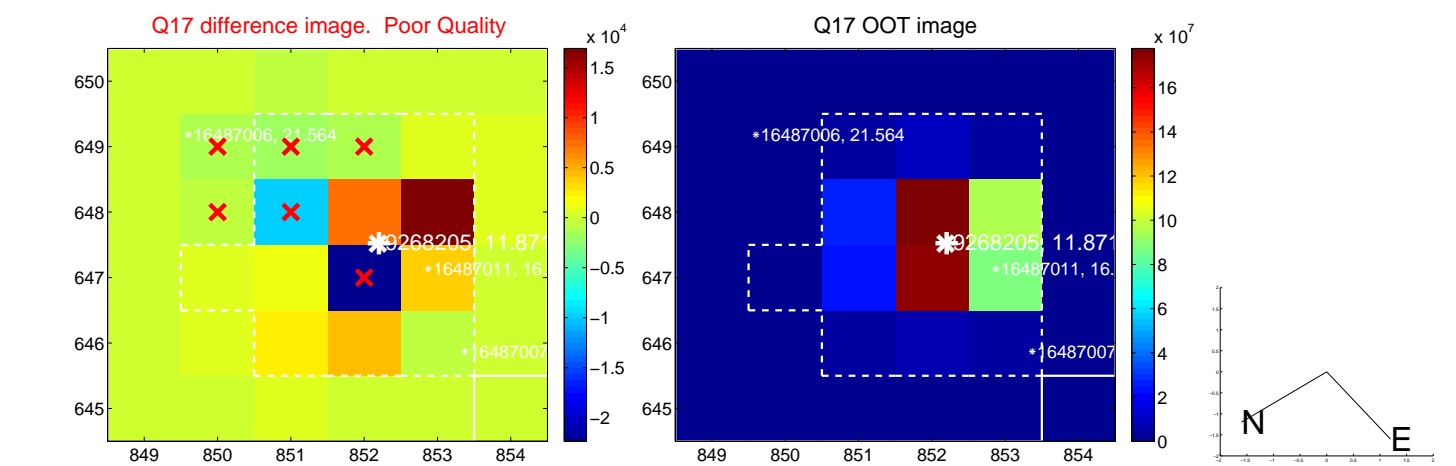
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

