

KIC 008608490

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})
008608490-01	OBS	7067.01	1.082801	132.481131	397513.3	2.720	5435.0	5017.0	1.78	5096	126.68	4841.94
008608490-02	OBS	No	1.082809	131.932869	91968.6	1.500	7557.8	-1.0	1.78	5096	53.33	4841.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008608490-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—DEEP_V_SHAPED—HAS_SEC_TCE
008608490-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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 008608490-01

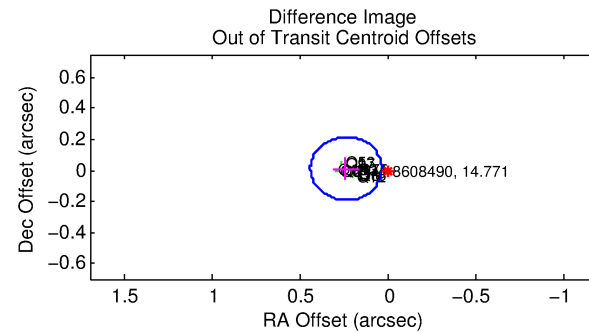
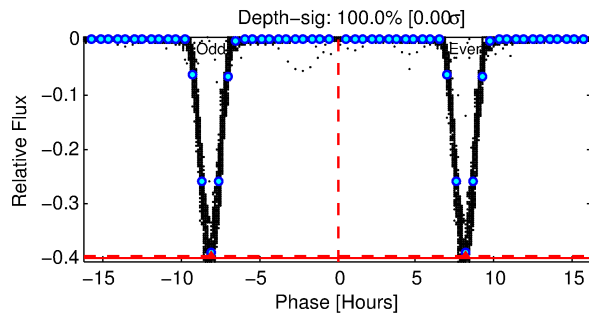
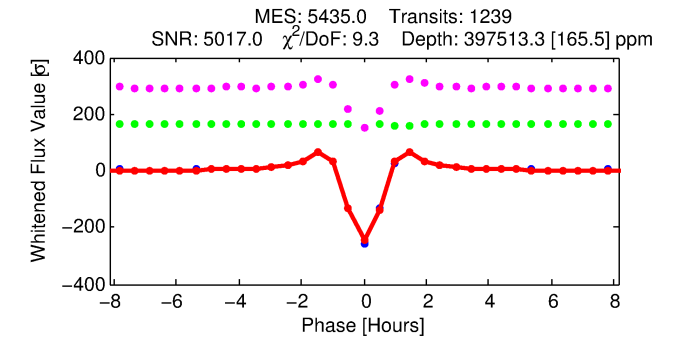
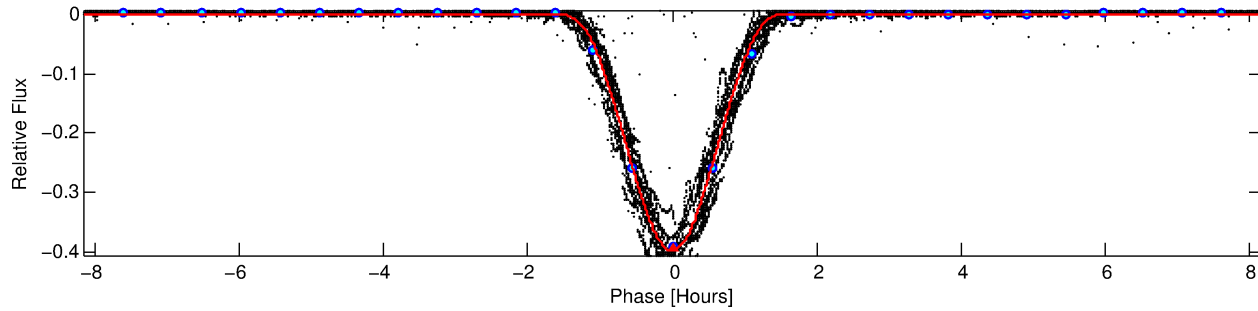
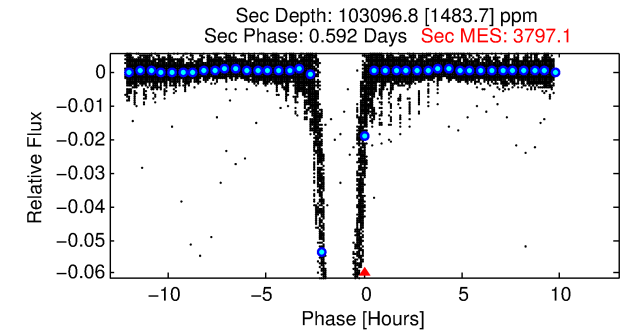
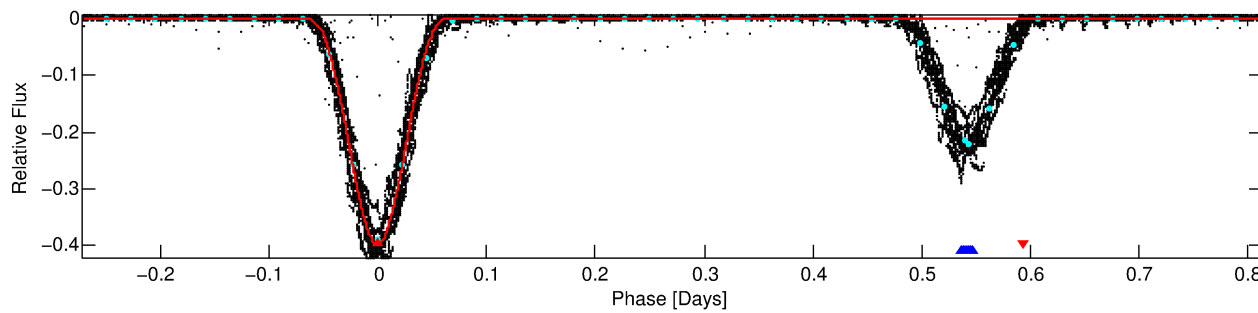
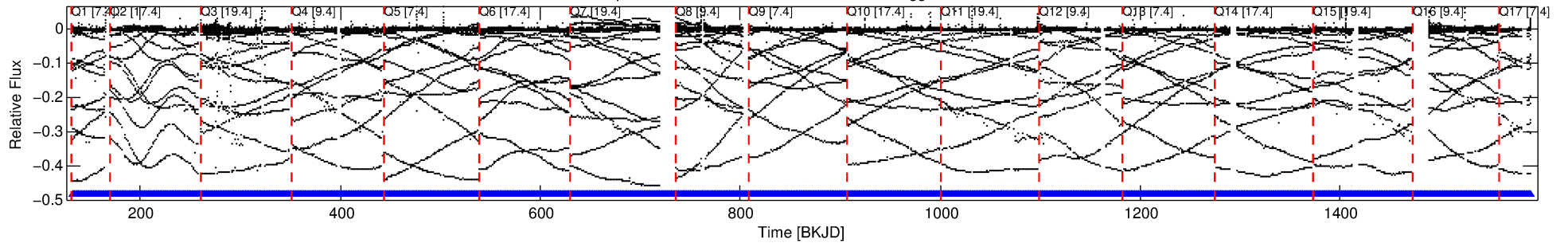
No Significant Match Found

DV One-Page Summary

KIC: 8608490 Candidate: 1 of 2 Period: 1.083 d

KOI: K07067 Corr: No Ephemeris Match

Kp: 14.77 R*: 1.78 Rs Teff: 5096.0 K Logg: 3.89 Fe/H: -0.100



DV Fit Results:

Period = 1.08280 [0.00000] d
Epoch = 132.4811 [0.0000] BKJD
Rp/R* = 0.6515 [0.0086]
a/R* = 4.90 [0.02]
b = 0.50 [0.02]
S_{eff} = 4841.94 [5853.69]
T_{eq} = 2127 [643] K
Rp = 126.68 [78.64] Re
a = 0.0199 [0.0139] AU
Ag = 1.40 [1.68] [0.24σ]
T_{effp} = 3578 [121] K [2.22σ]

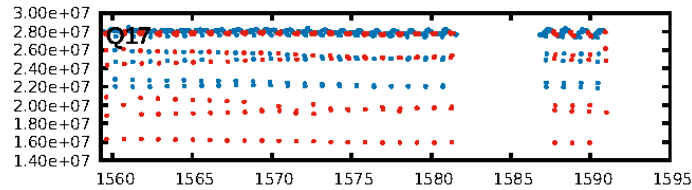
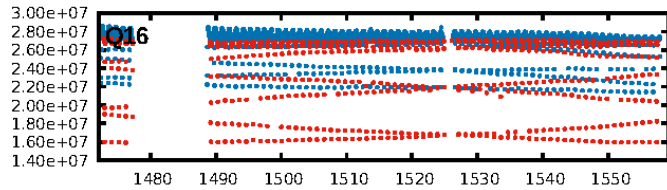
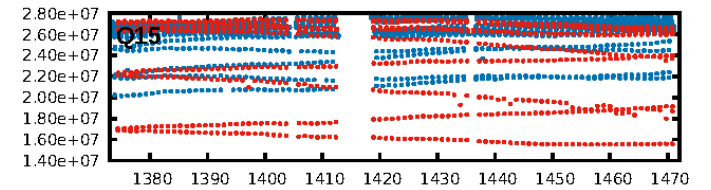
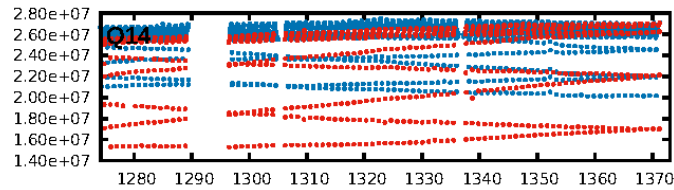
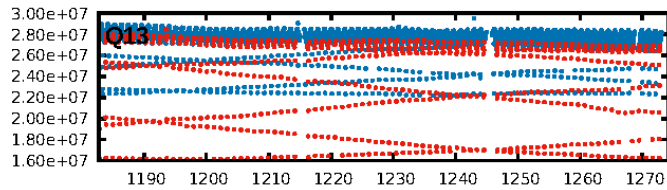
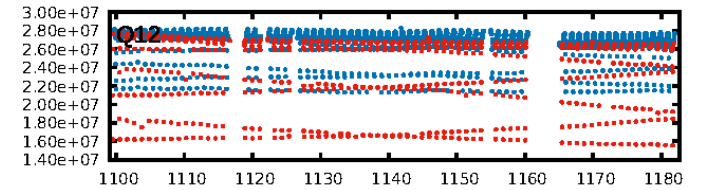
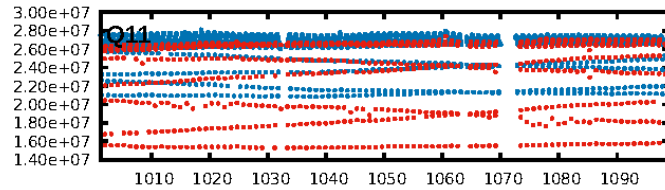
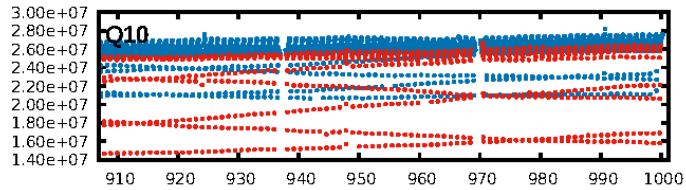
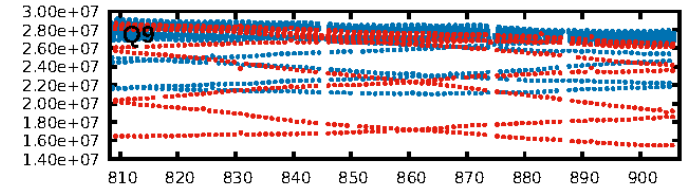
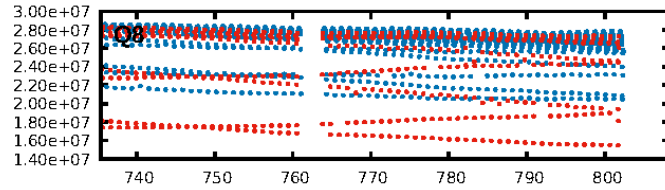
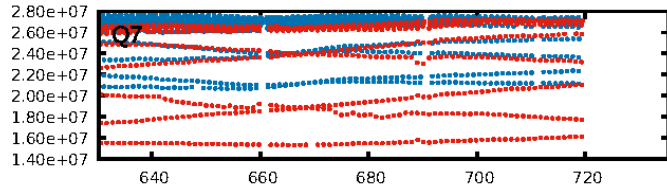
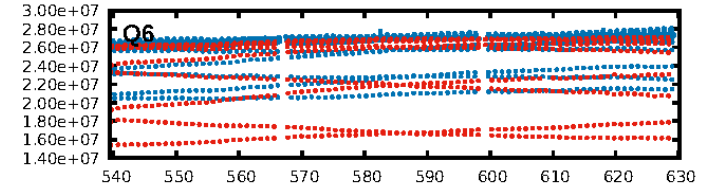
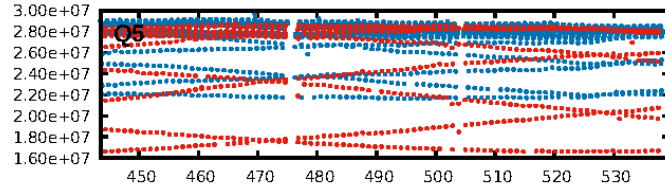
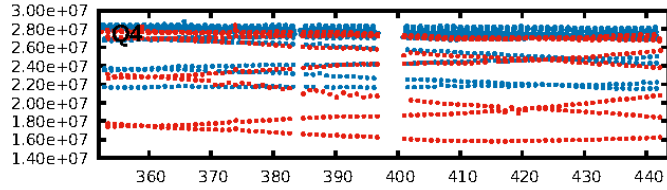
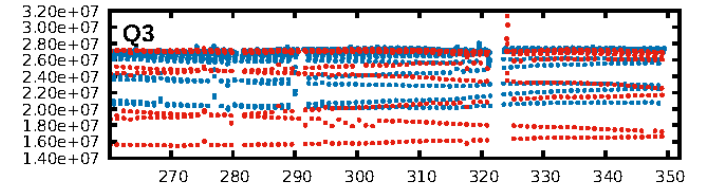
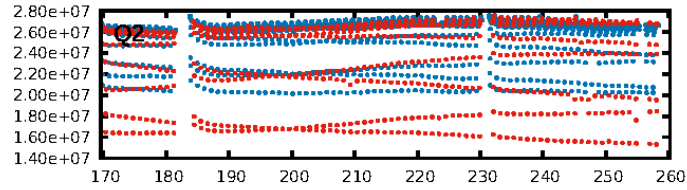
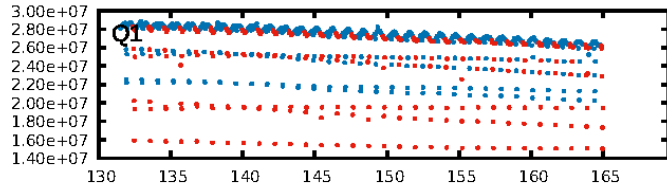
DV Diagnostic Results:

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 [1183/1183]
GhostDiagnostic-chr: 1.262
Centroid-sig: N/A
Centroid-so: 0.260 arcsec [547.99σ]
OotOffset-rm: 0.240 arcsec [3.53σ]
KicOffset-rm: 0.247 arcsec [3.48σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 1.00 [17/17]

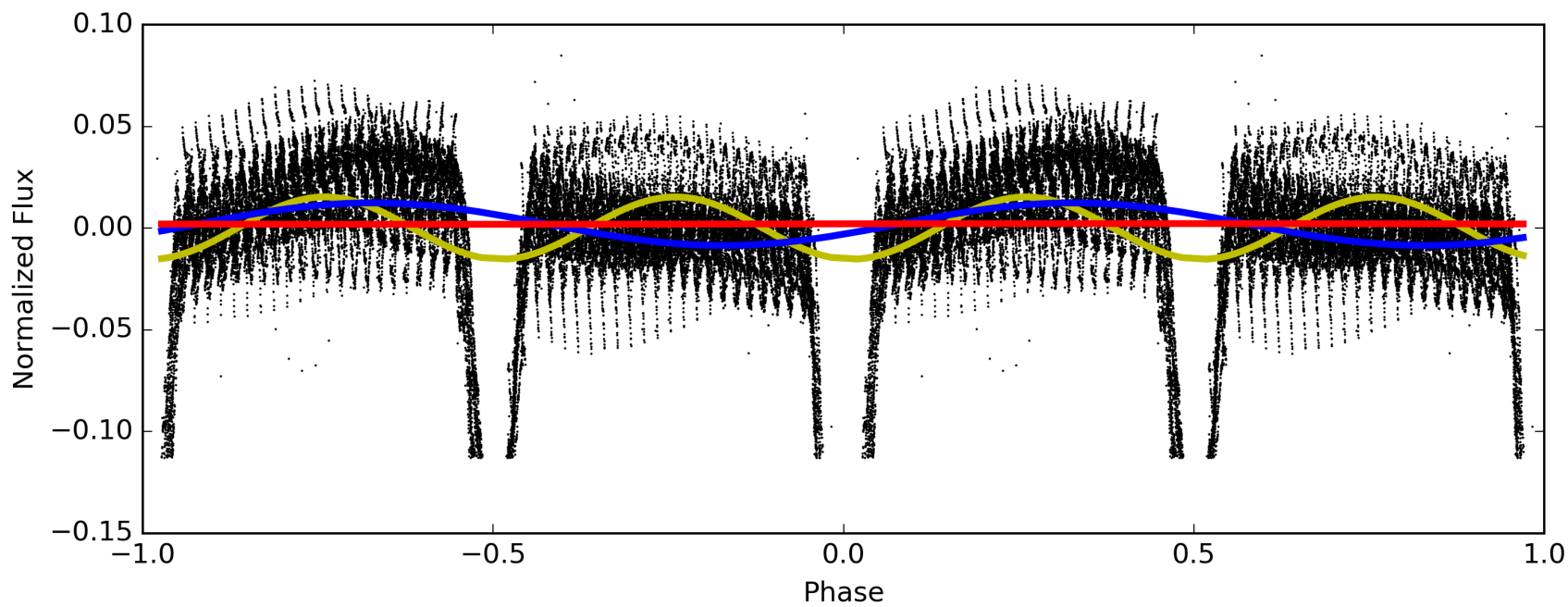
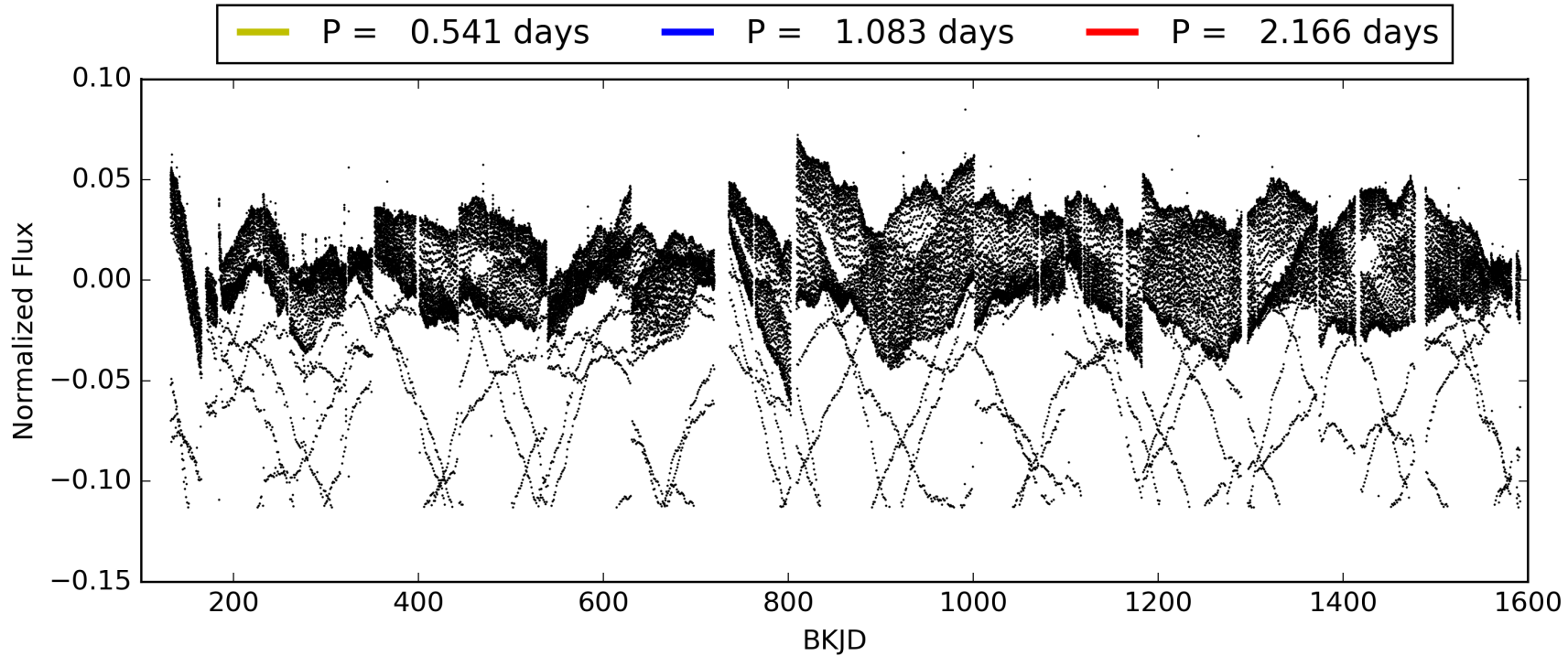
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:21:16 Z

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

TCE 008608490-01, PDC Light Curves

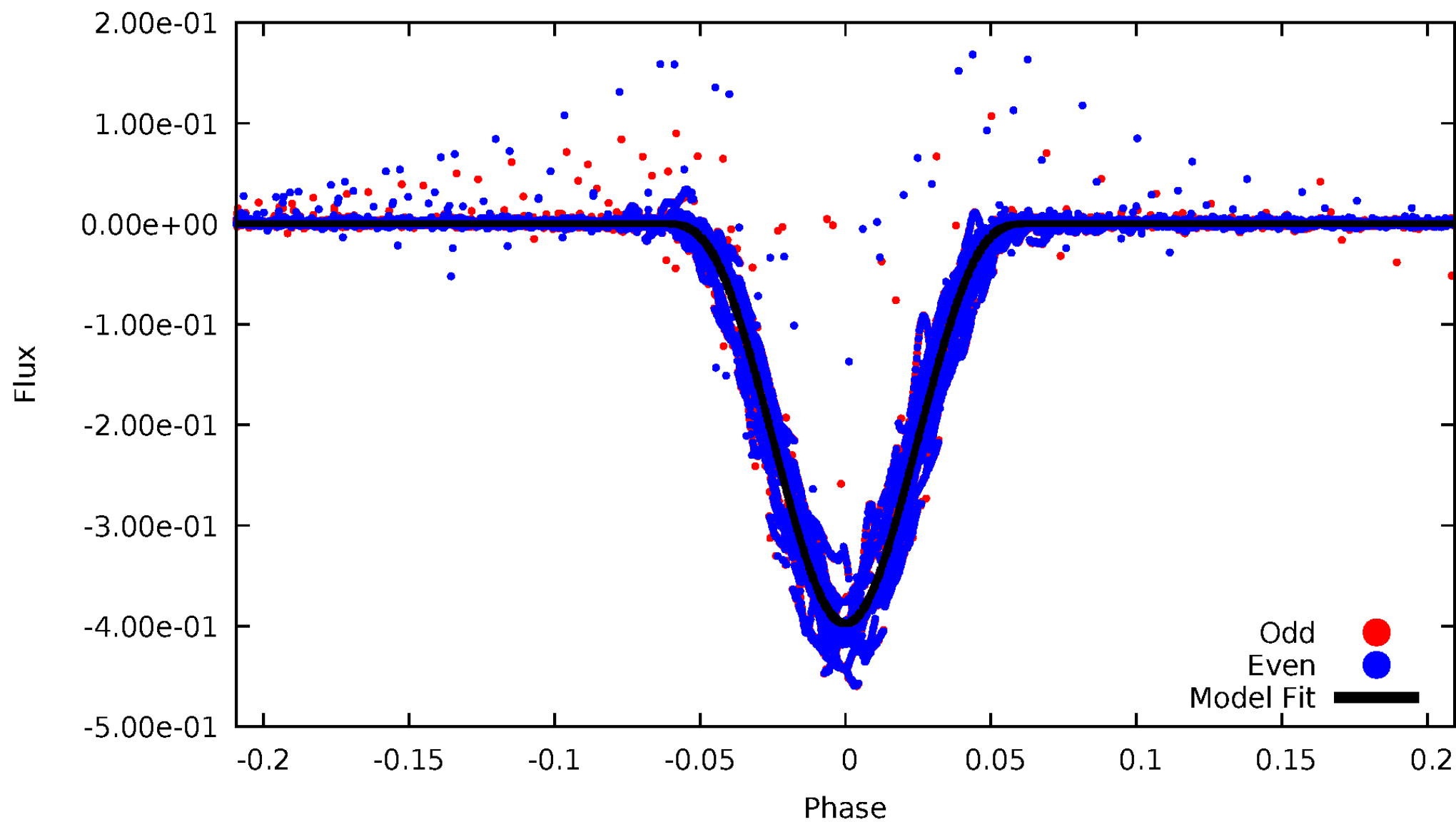


TCE 008608490-01



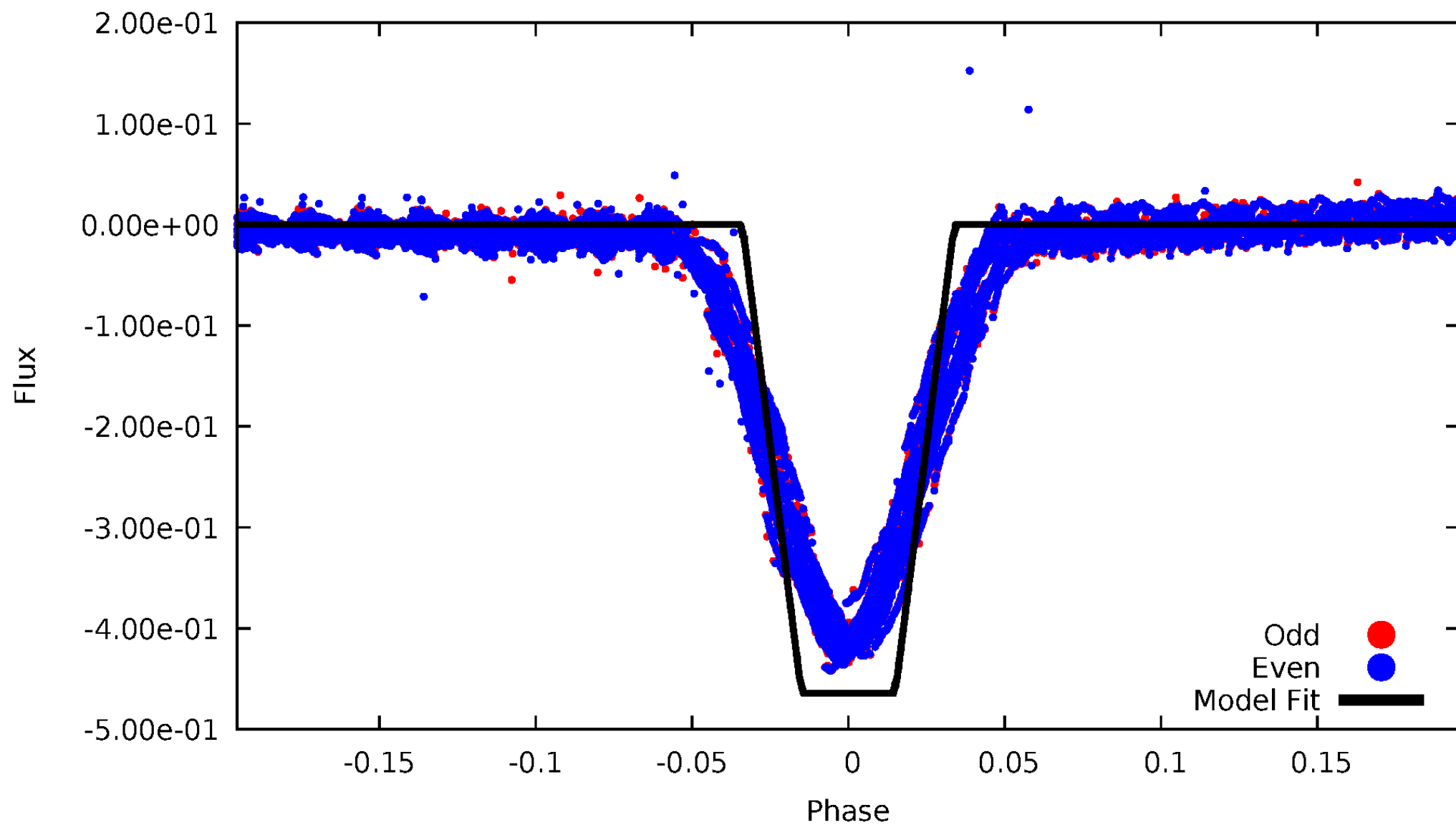
DV Odd/Even

TCE 008608490-01



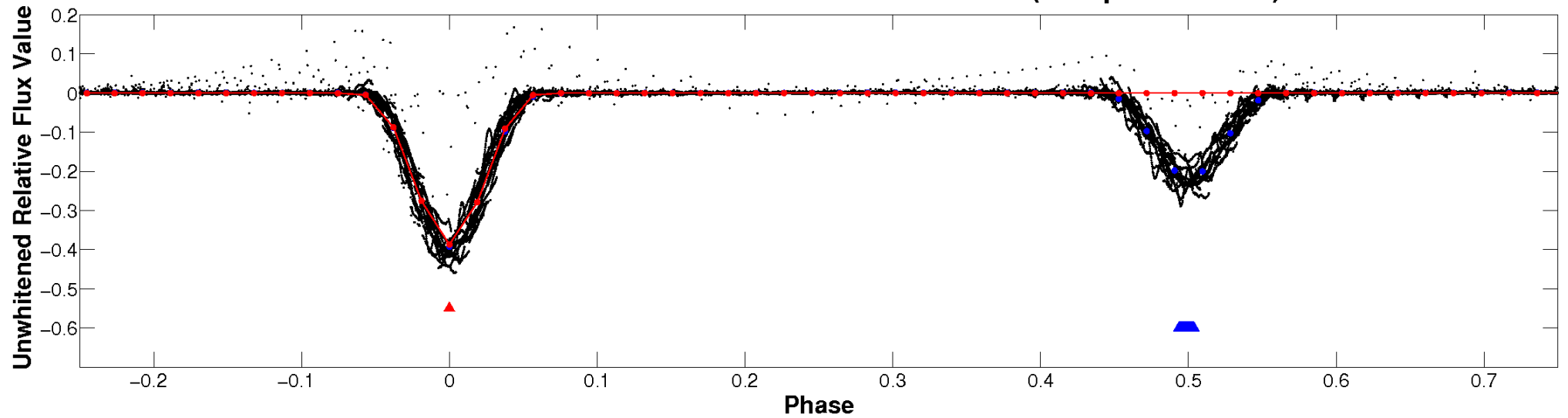
ALT Odd/Even

TCE 008608490-01

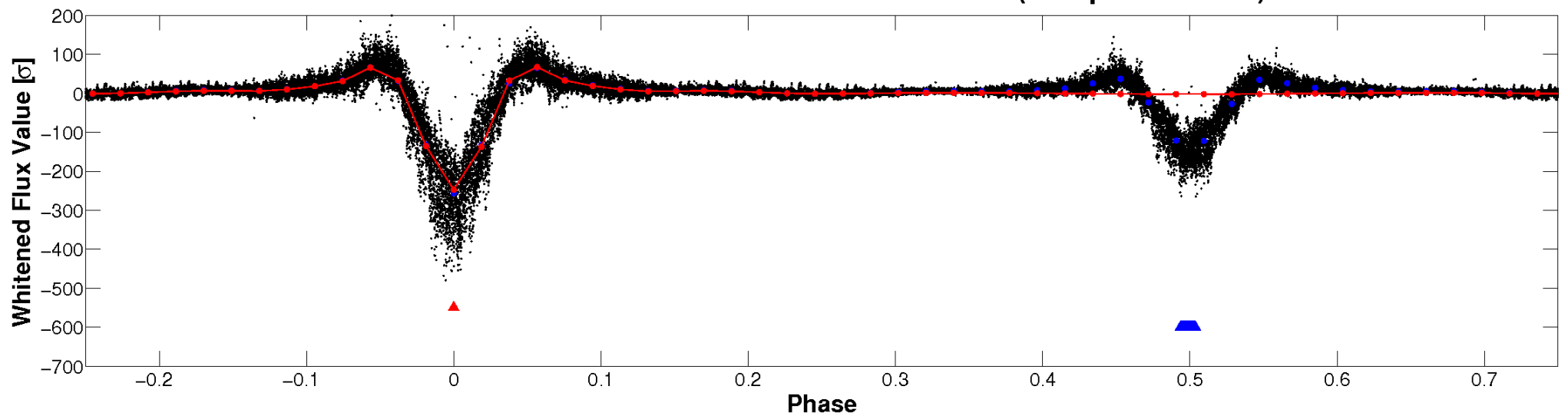


Non-Whitened Vs. Whitened Light Curve

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

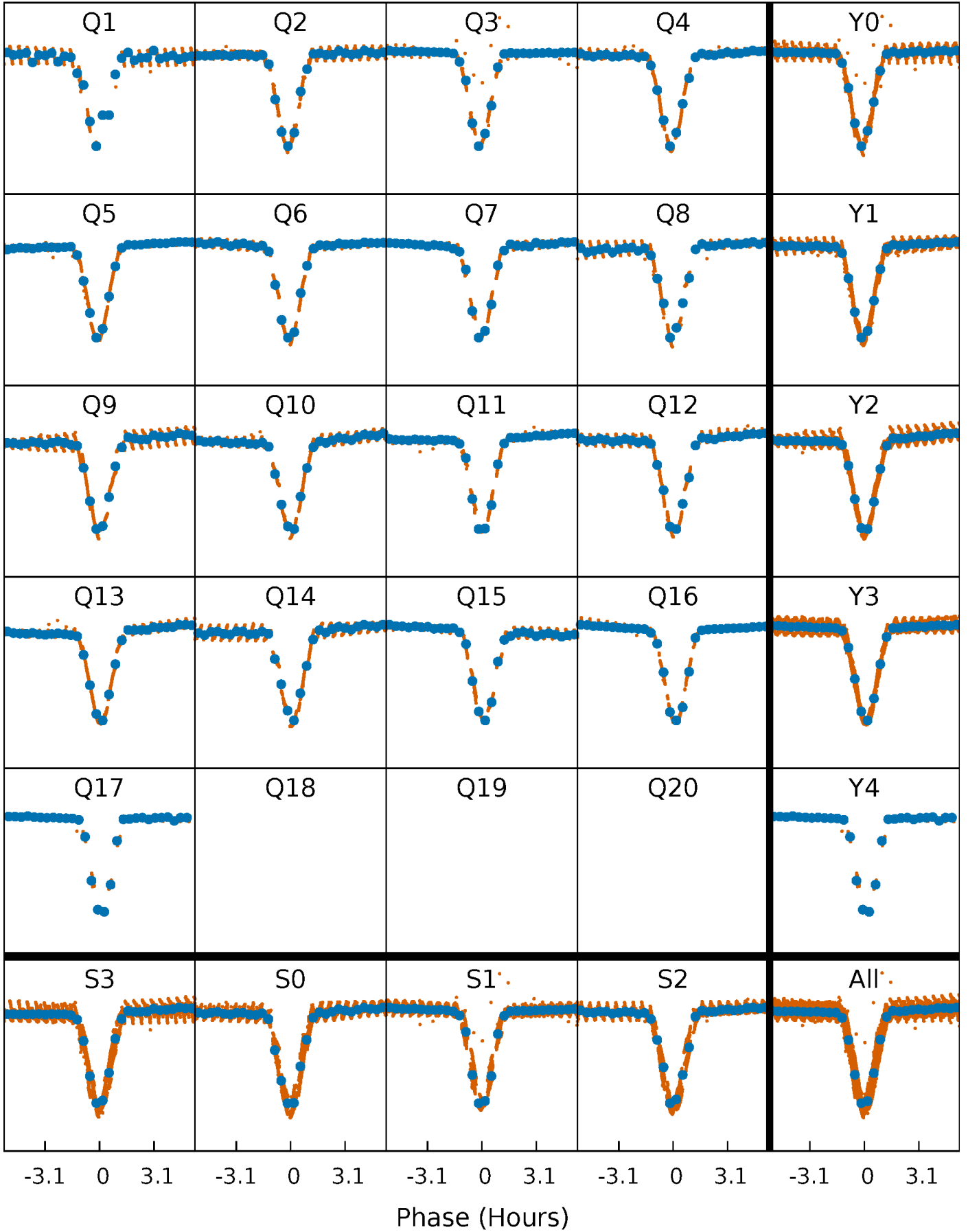


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



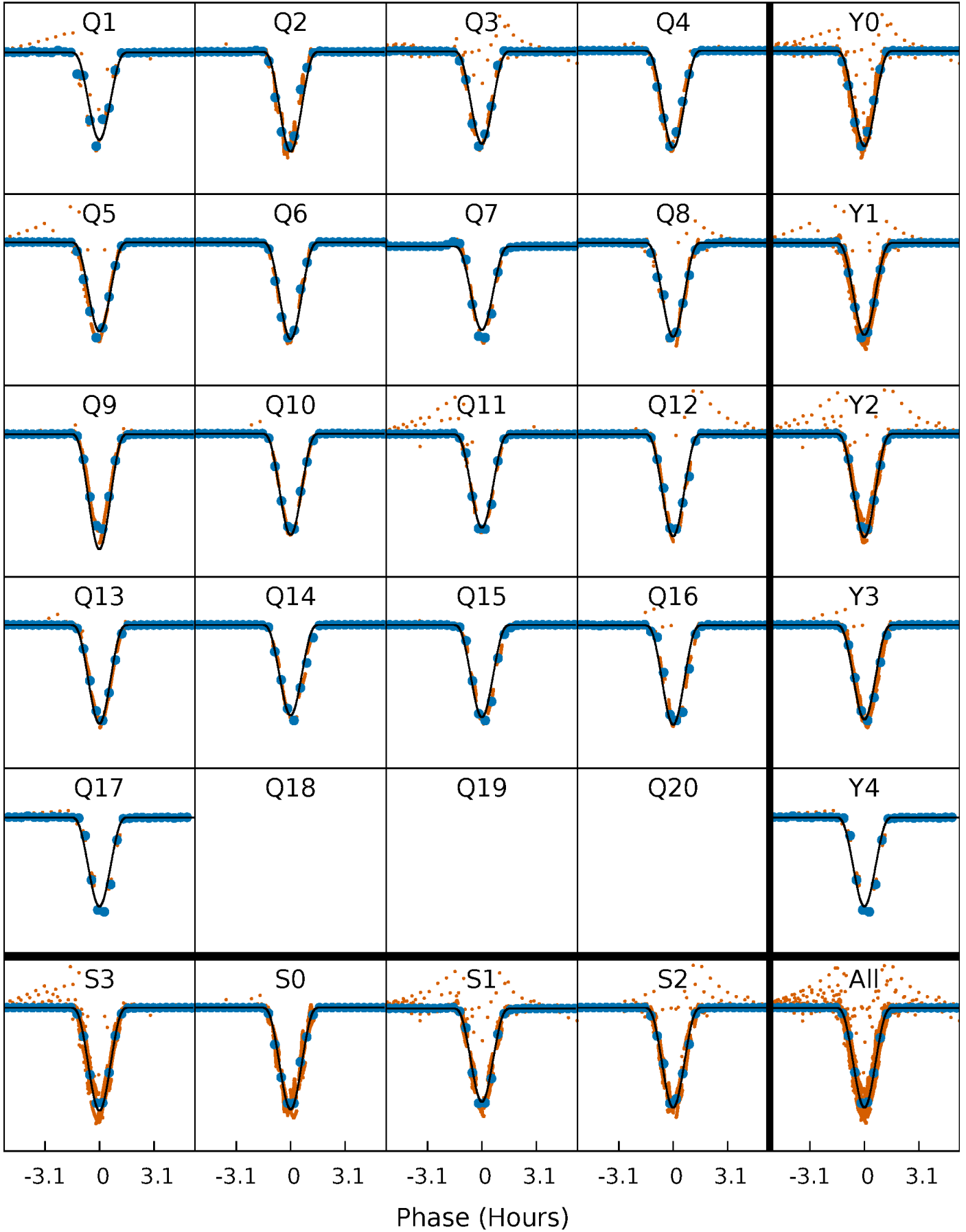
PDC Quarter-Phased Transit Curves

TCE 008608490-01 P= 1.082801 Days $T_0=132.481131$ (BKJD)



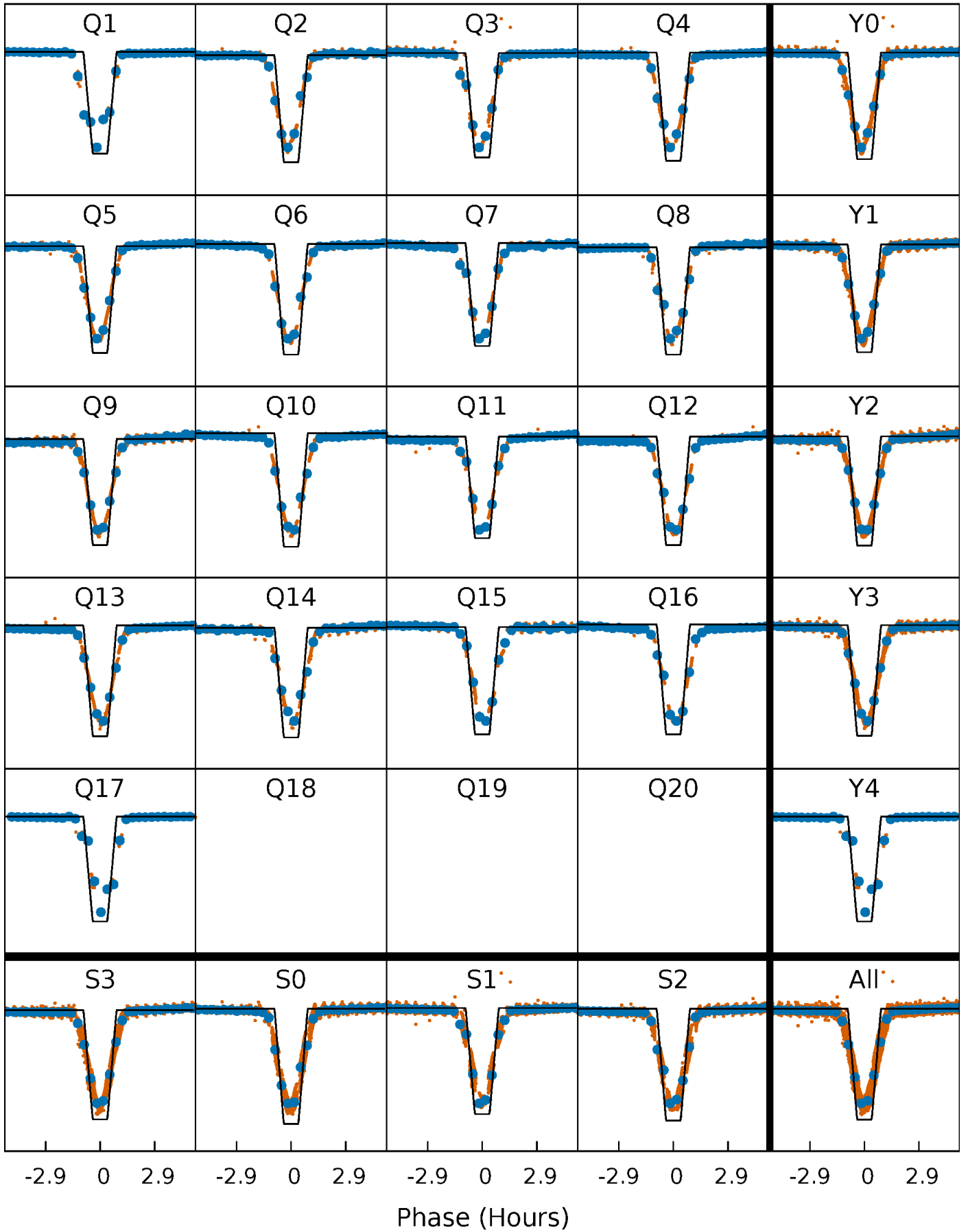
DV Quarter-Phased Transit Curves

TCE 008608490-01 P= 1.082801 Days $T_0=132.481131$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

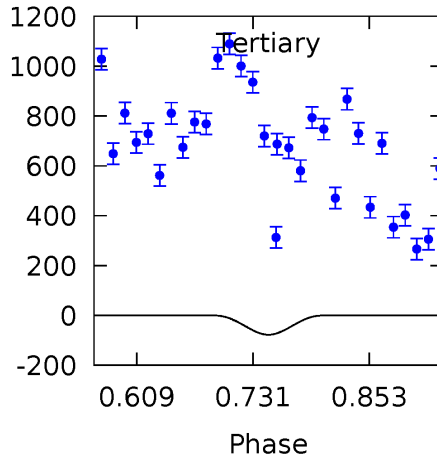
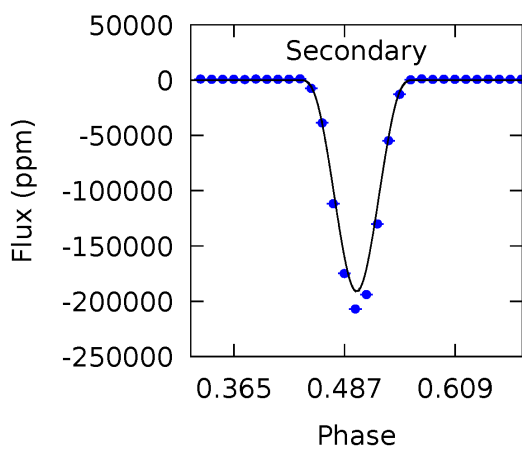
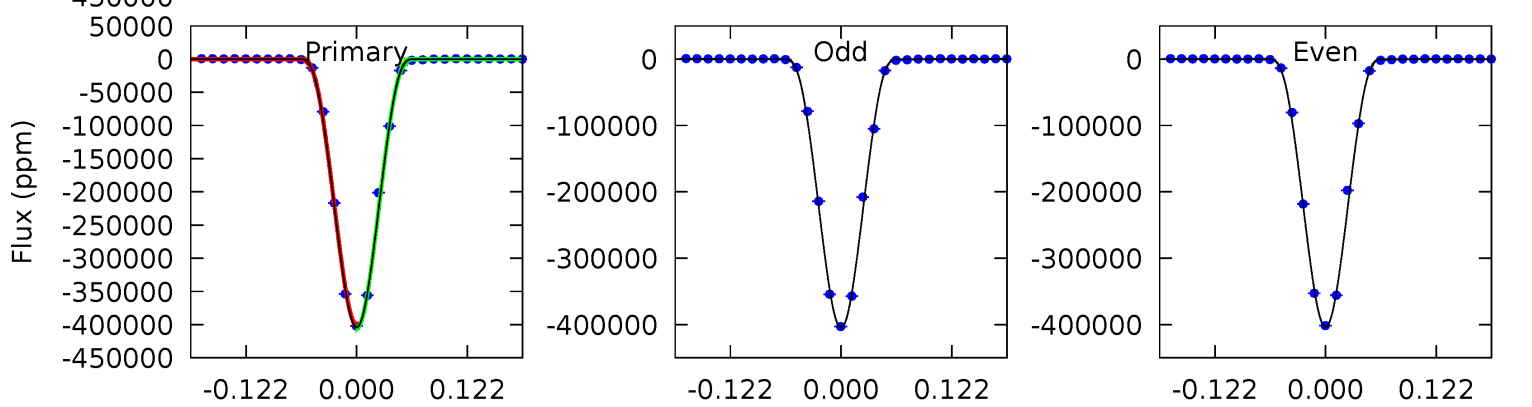
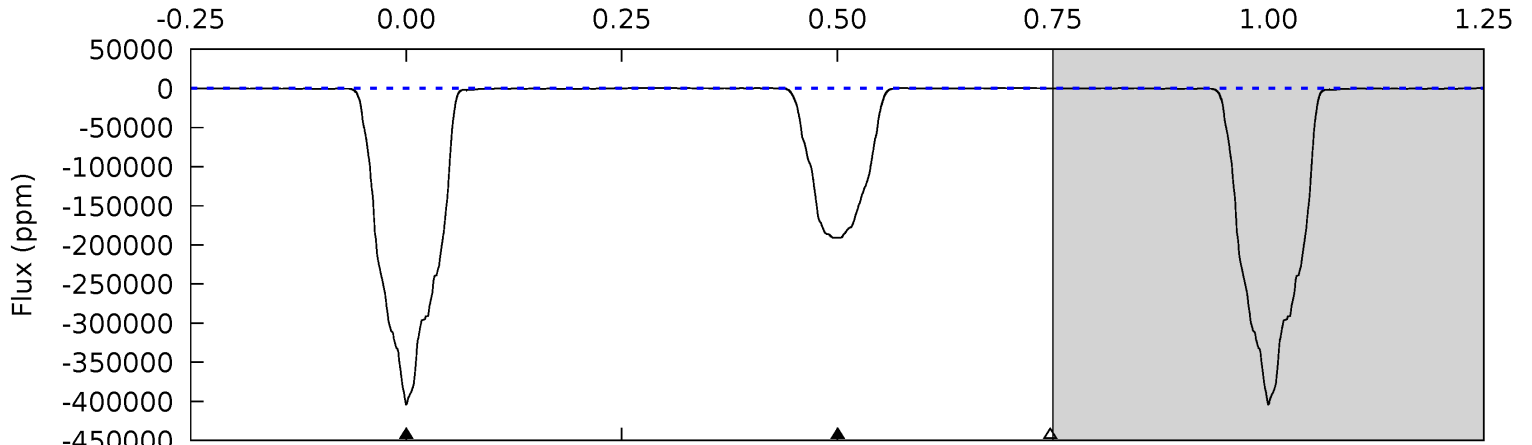
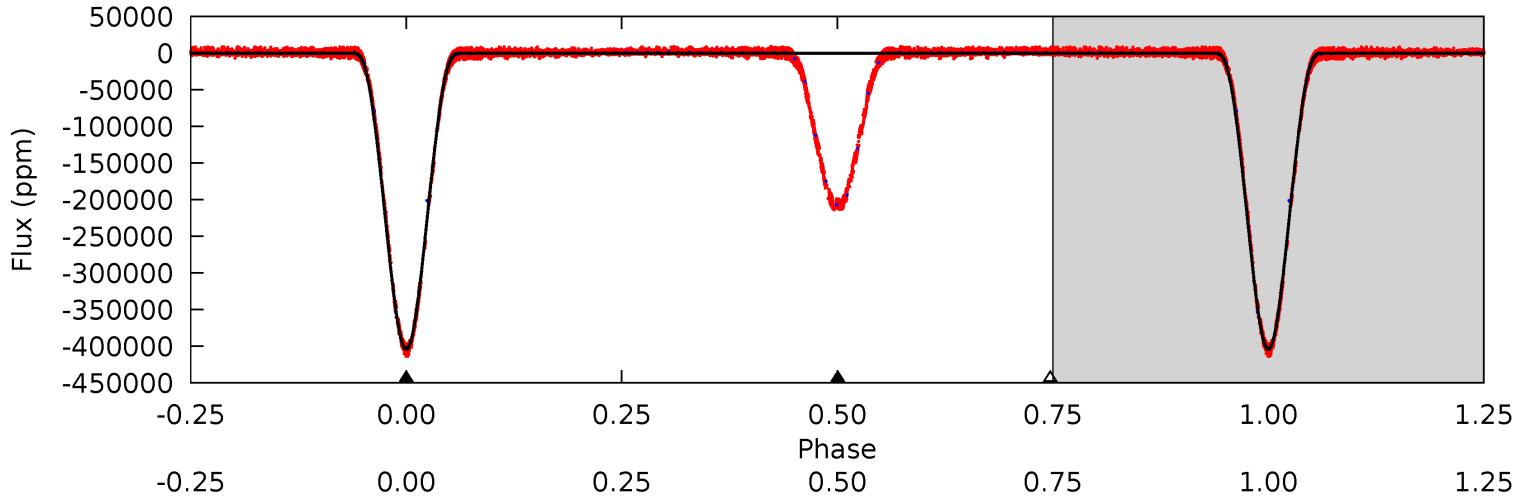
TCE 008608490-01 P= 1.082801 Days $T_0=132.481240$ (BKJD)



DV Model-Shift Uniqueness Test

008608490-01, P = 1.082801 Days, E = 131.398330 Days

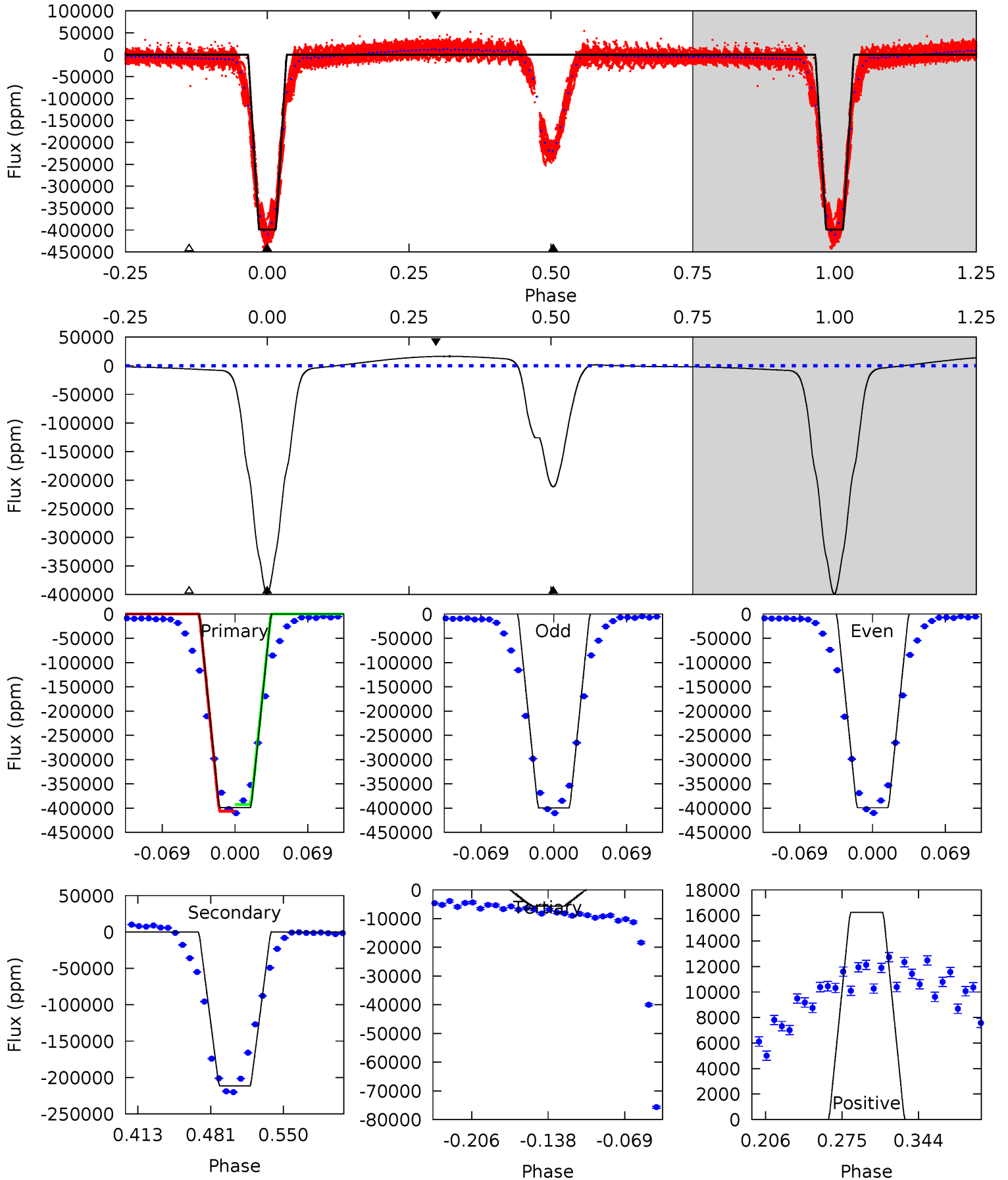
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11707	5531	2.25	0	4.52	1.55	9.49	11705	11707	5529	5531	18.0	0.99	0.00	71.5



Alt Model-Shift Uniqueness Test

008608490-01, P = 1.082801 Days, E = 131.398439 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1961	1040	27.6	79.8	4.64	1.82	40.0	1934	1882	1012	959.8	0.58	1.00	0.04	33.7



Stellar Parameters For KIC 008608490

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5096^{+168}_{-153}	$3.889^{+0.735}_{-0.368}$	$-0.100^{+0.300}_{-0.250}$	$1.782^{+1.106}_{-1.106}$	$0.898^{+0.215}_{-0.144}$	$0.223^{+2.629}_{-0.179}$
	+3%/-3%	+19%/-9%	+300%/-250%	+62%/-62%	+24%/-16%	+1177%/-80%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008608490-01 / KOI 7067.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-190873 ± 35	$124.71^{+46.39}_{-38.50}$	2942^{+495}_{-517}	4436^{+140}_{-154}	$3.369^{+3.716}_{-1.546}$
Alt.	-211470 ± 203	$131.70^{+46.34}_{-41.04}$	2954^{+462}_{-526}	4464^{+132}_{-140}	$3.434^{+3.670}_{-1.545}$

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 $A_{obs} \gg 1.0$

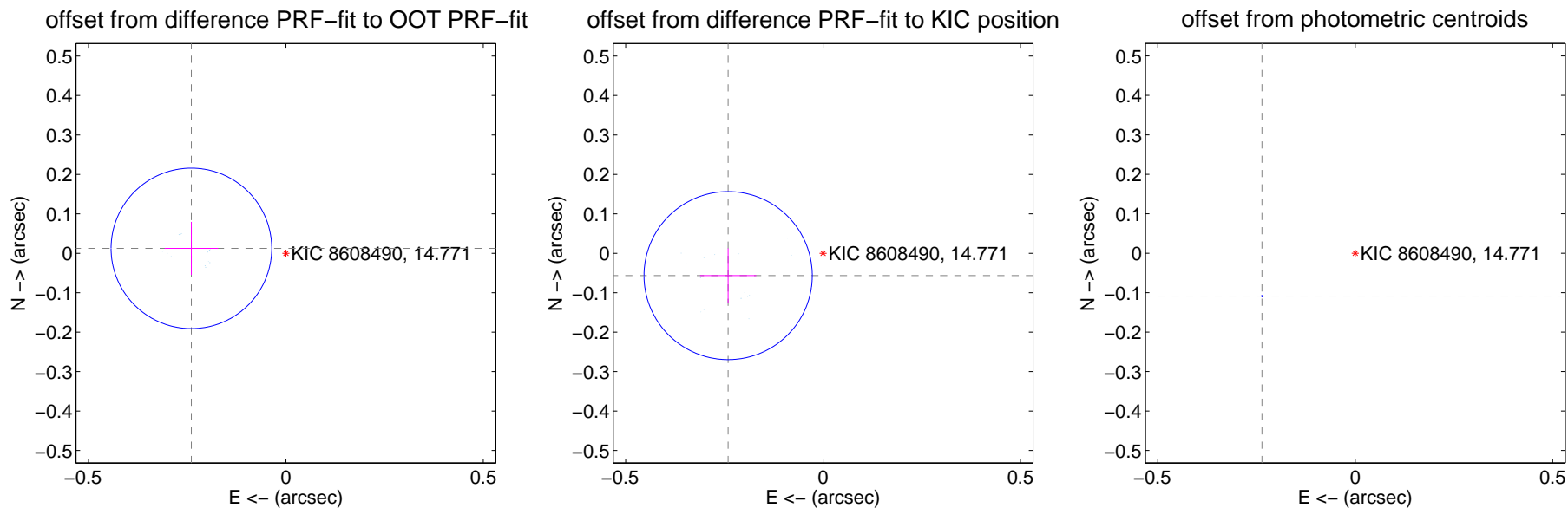
DV Centroid Data

Supplemental centroid analysis for 008608490-01. Kepler magnitude: 14.77. Transit SNR 5017.03

There are 17 quarters with good PRF difference image offsets

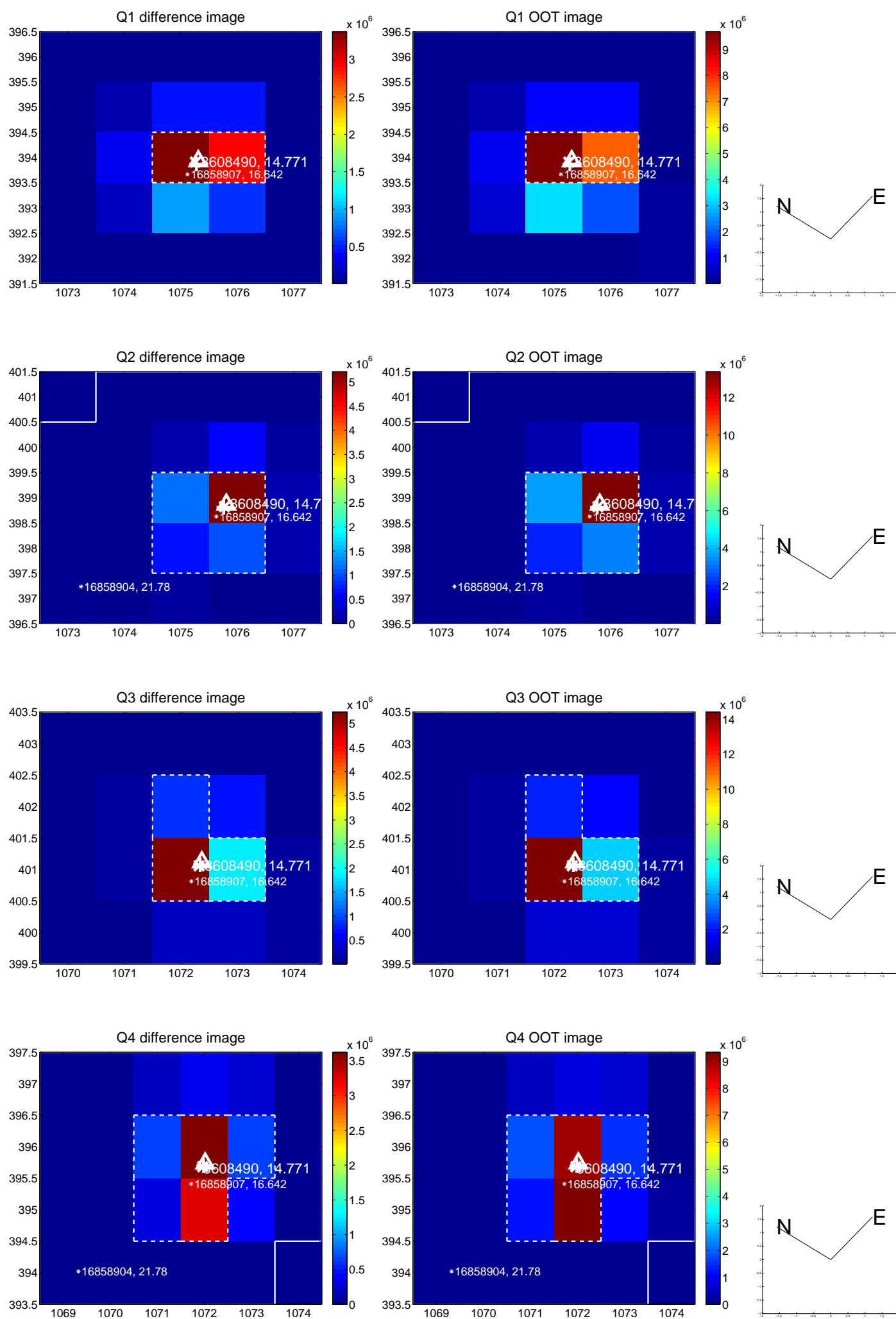
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.240 ± 0.068	3.53	0.239 ± 0.068	0.012 ± 0.067
PRF-fit source offset from KIC position	0.247 ± 0.071	3.48	0.240 ± 0.071	-0.057 ± 0.069
photometric centroid source offset	0.26 ± 0.00	547.99	0.24 ± 0.00	-0.11 ± 0.00

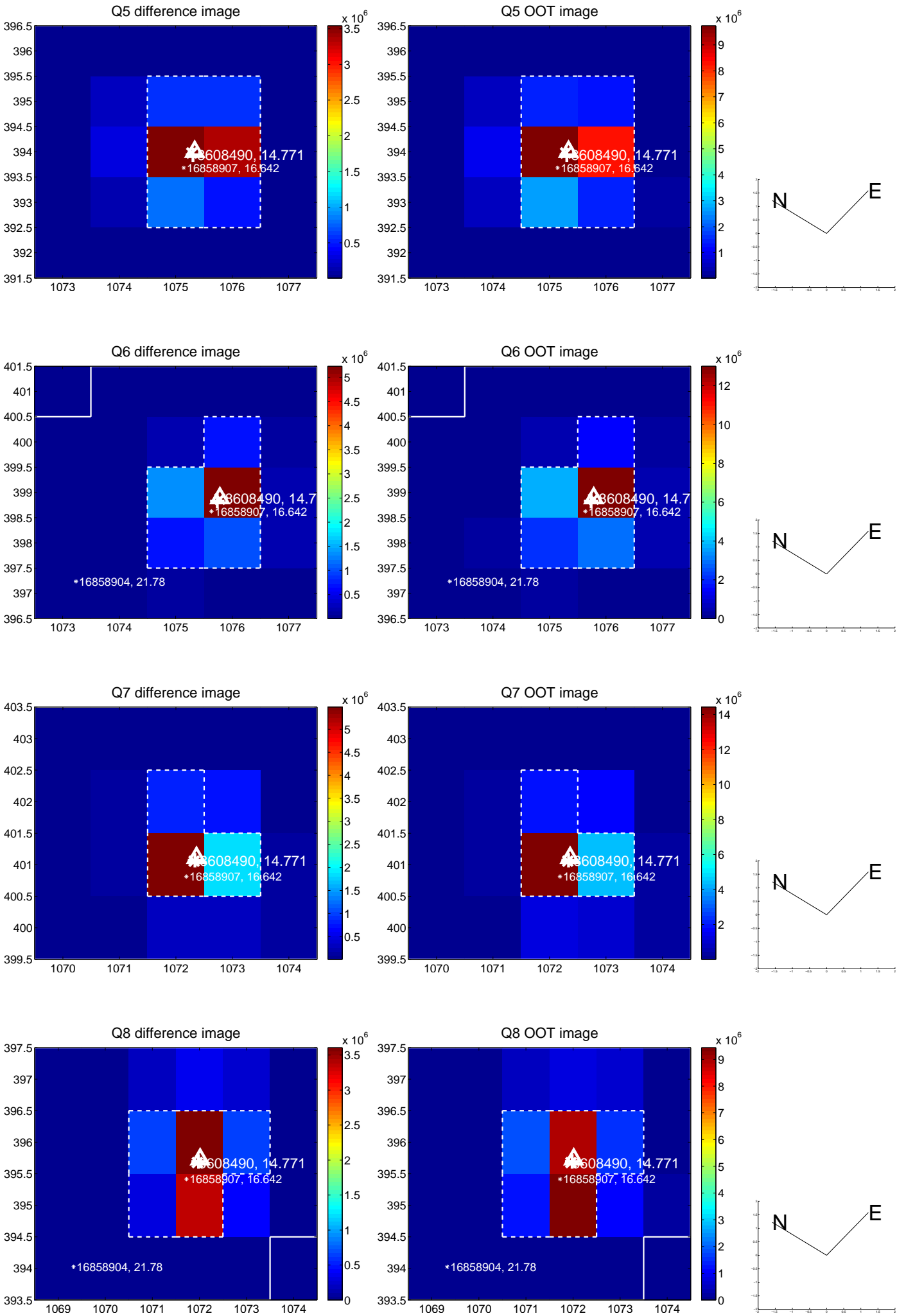


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

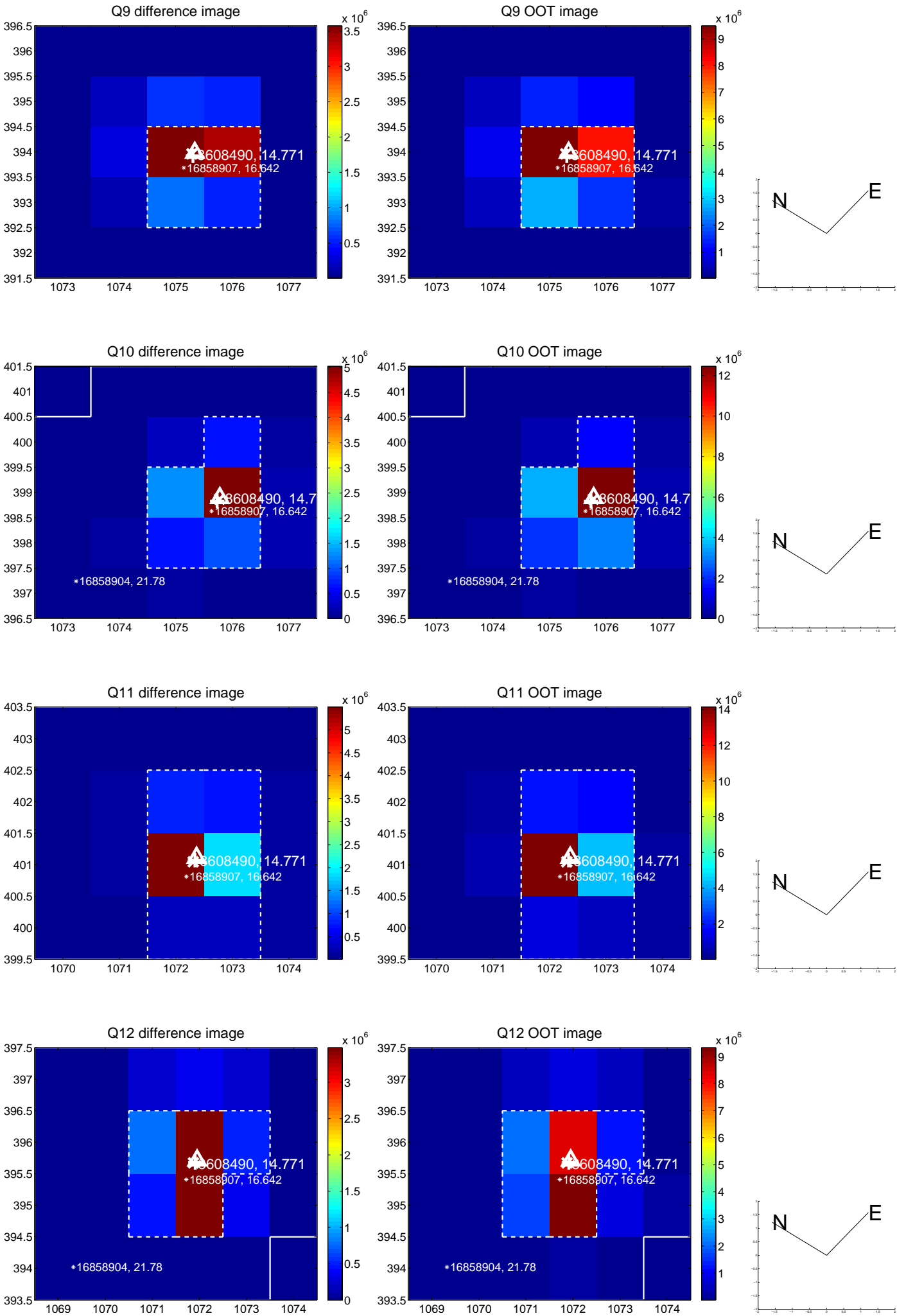
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



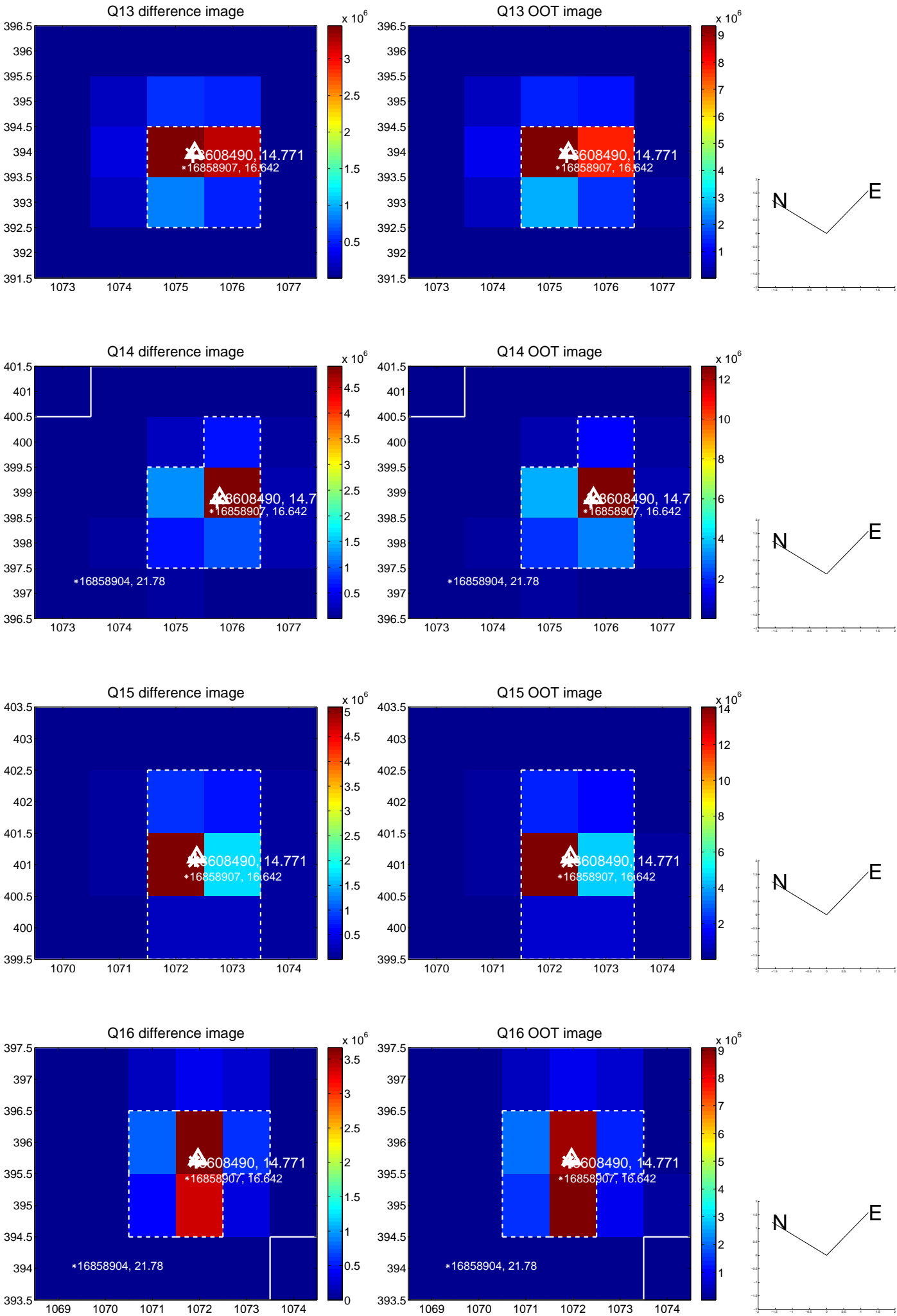
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



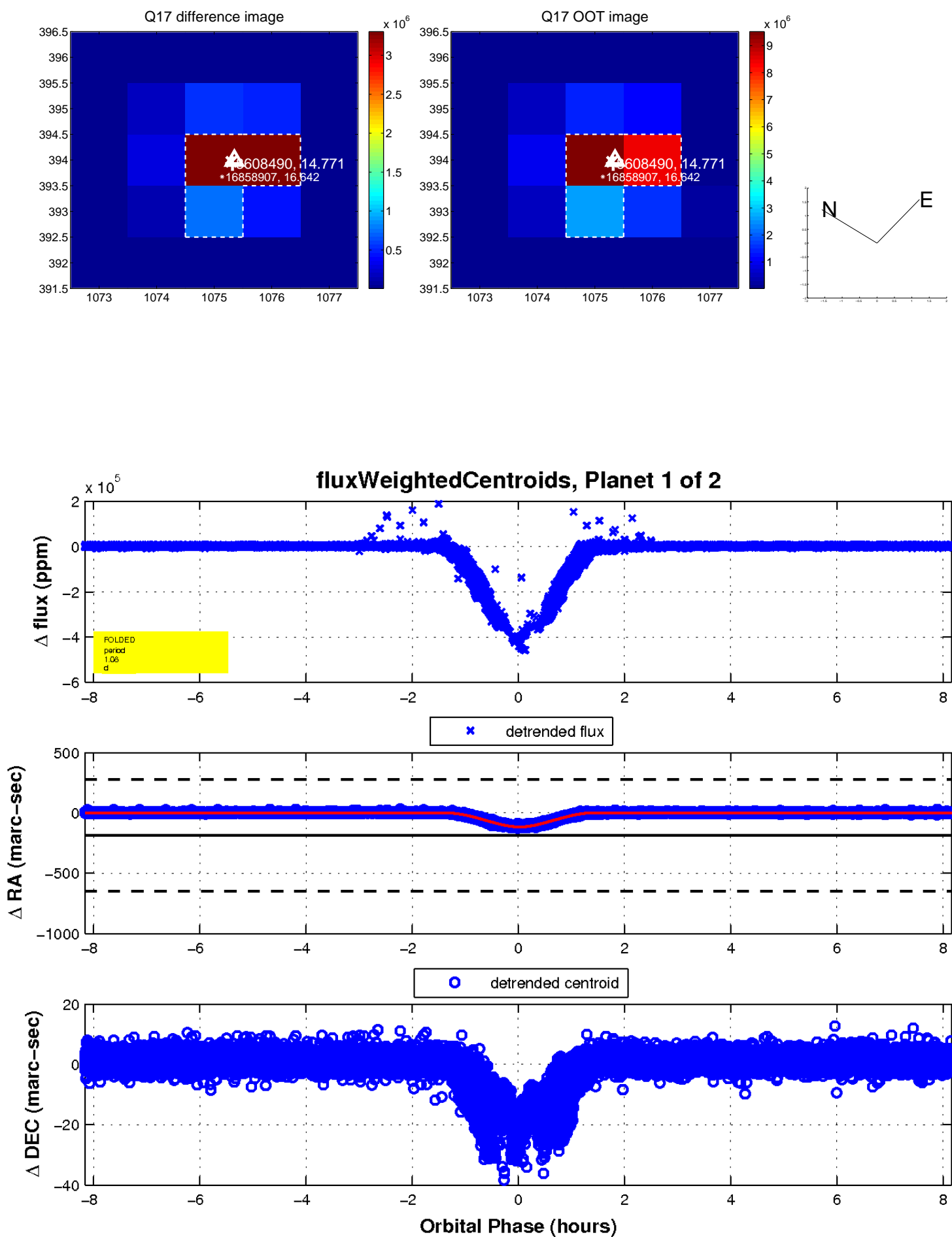
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

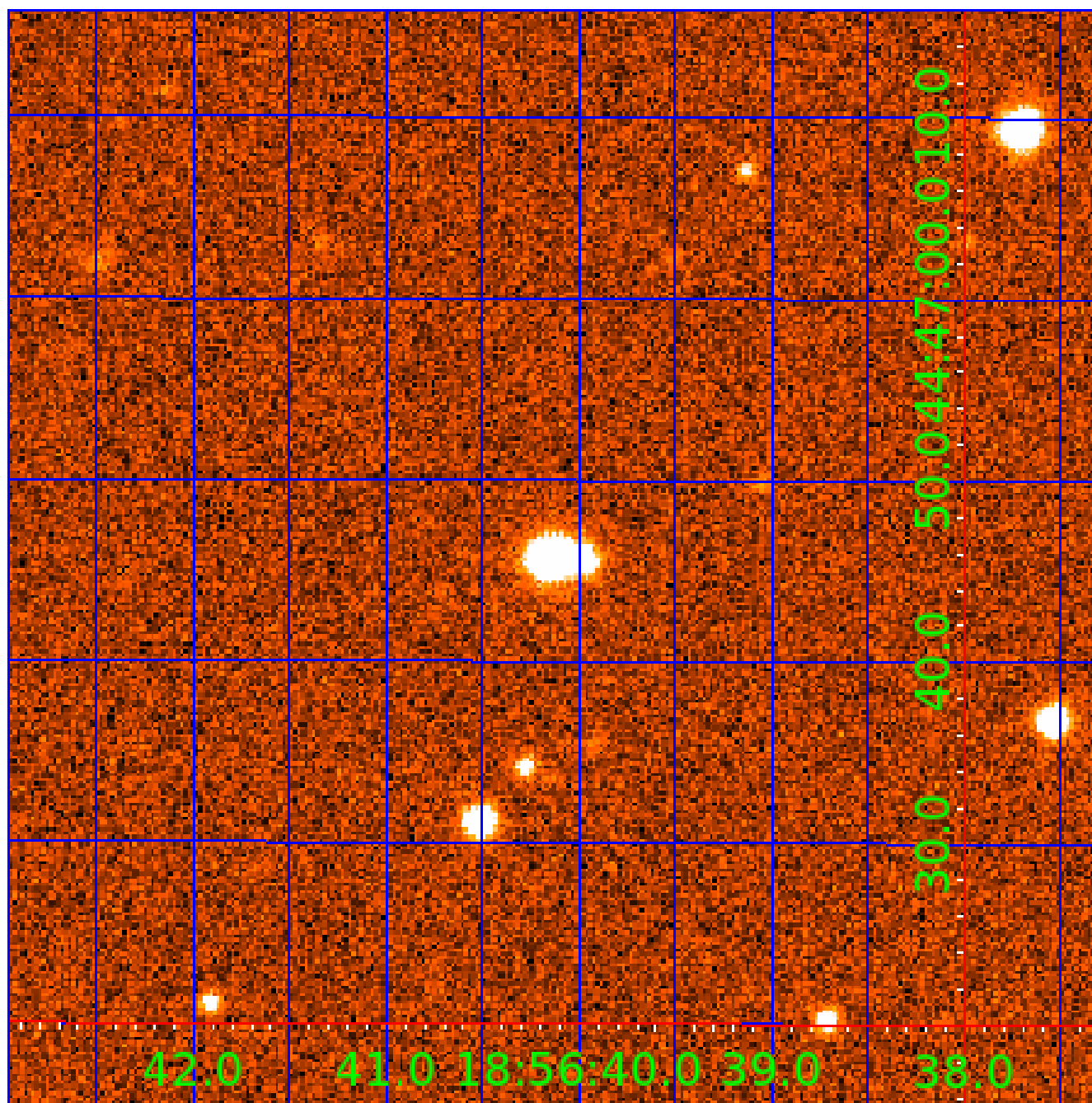


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008608490

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})
008608490-01	OBS	7067.01	1.082801	132.481131	397513.3	2.720	5435.0	5017.0	1.78	5096	126.68	4841.94
008608490-02	OBS	No	1.082809	131.932869	91968.6	1.500	7557.8	-1.0	1.78	5096	53.33	4841.89

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008608490-01	OBS	FP	0.00	0	1	0	0	SWEET_EB—MOD_SEC_DV—MOD_SEC_ALT—MOD_ODDEVEN_DV—DEEP_V_SHAPED—HAS_SEC_TCE
008608490-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE—CENT_NOFITS

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 008608490-02

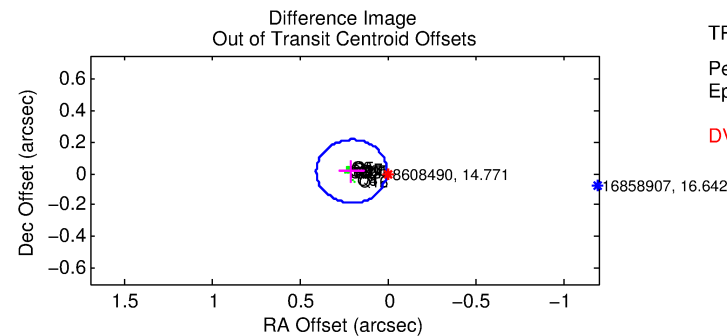
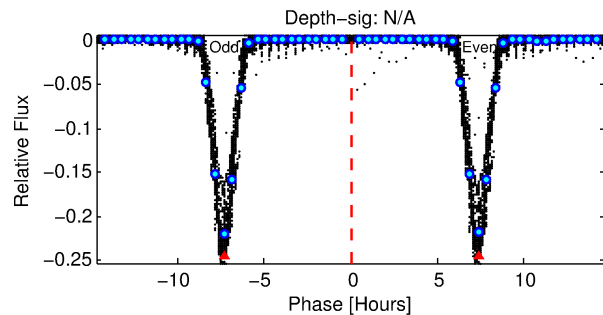
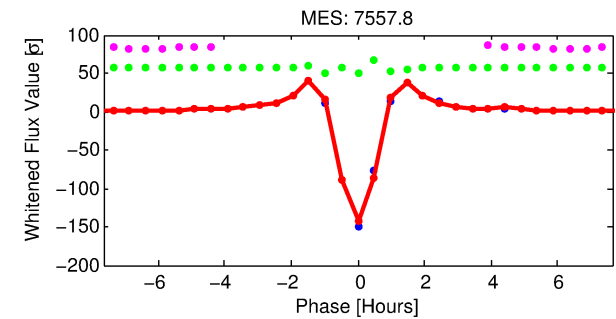
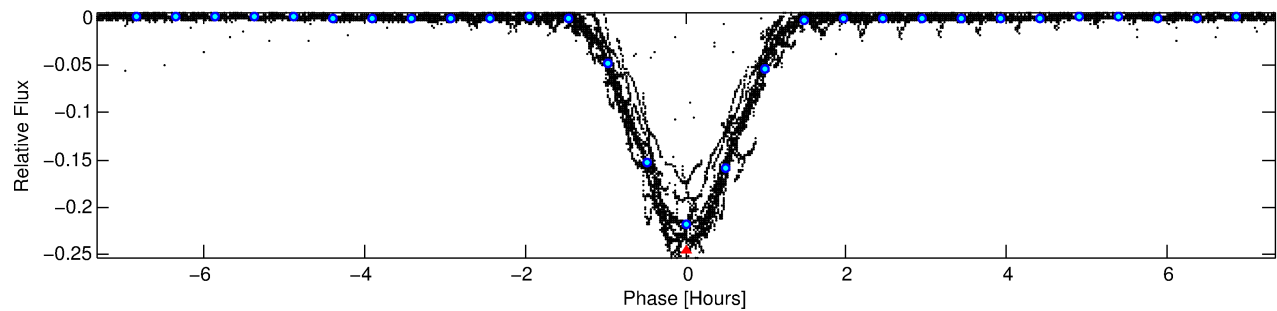
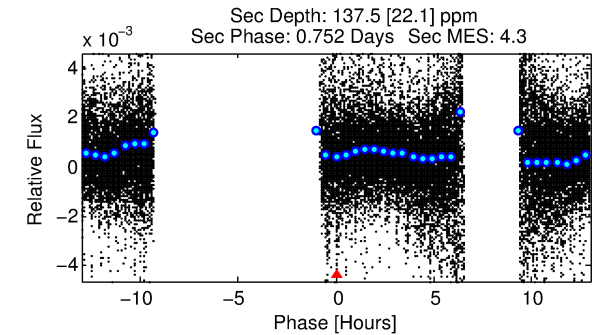
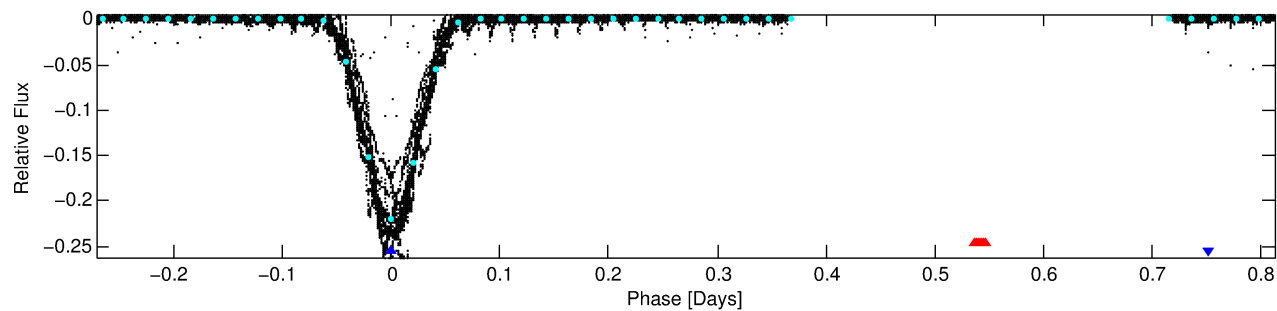
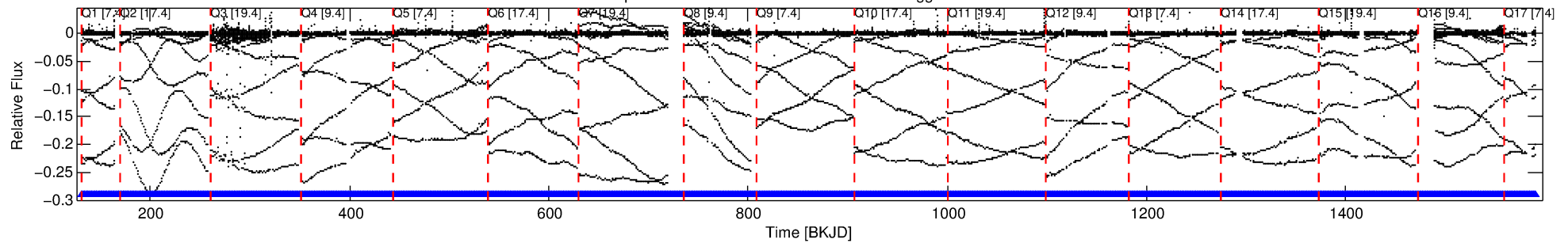
No Significant Match Found

DV One-Page Summary

KIC: 8608490 Candidate: 2 of 2 Period: 1.083 d

KOI: K07067 Corr: No Ephemeris Match

Kp: 14.77 R*: 1.78 Rs Teff: 5096.0 K Logg: 3.89 Fe/H: -0.100



TPS TCE Results:

Period = 1.08281 d
Epoch = 131.9329 BKJD

DV fit results are unavailable

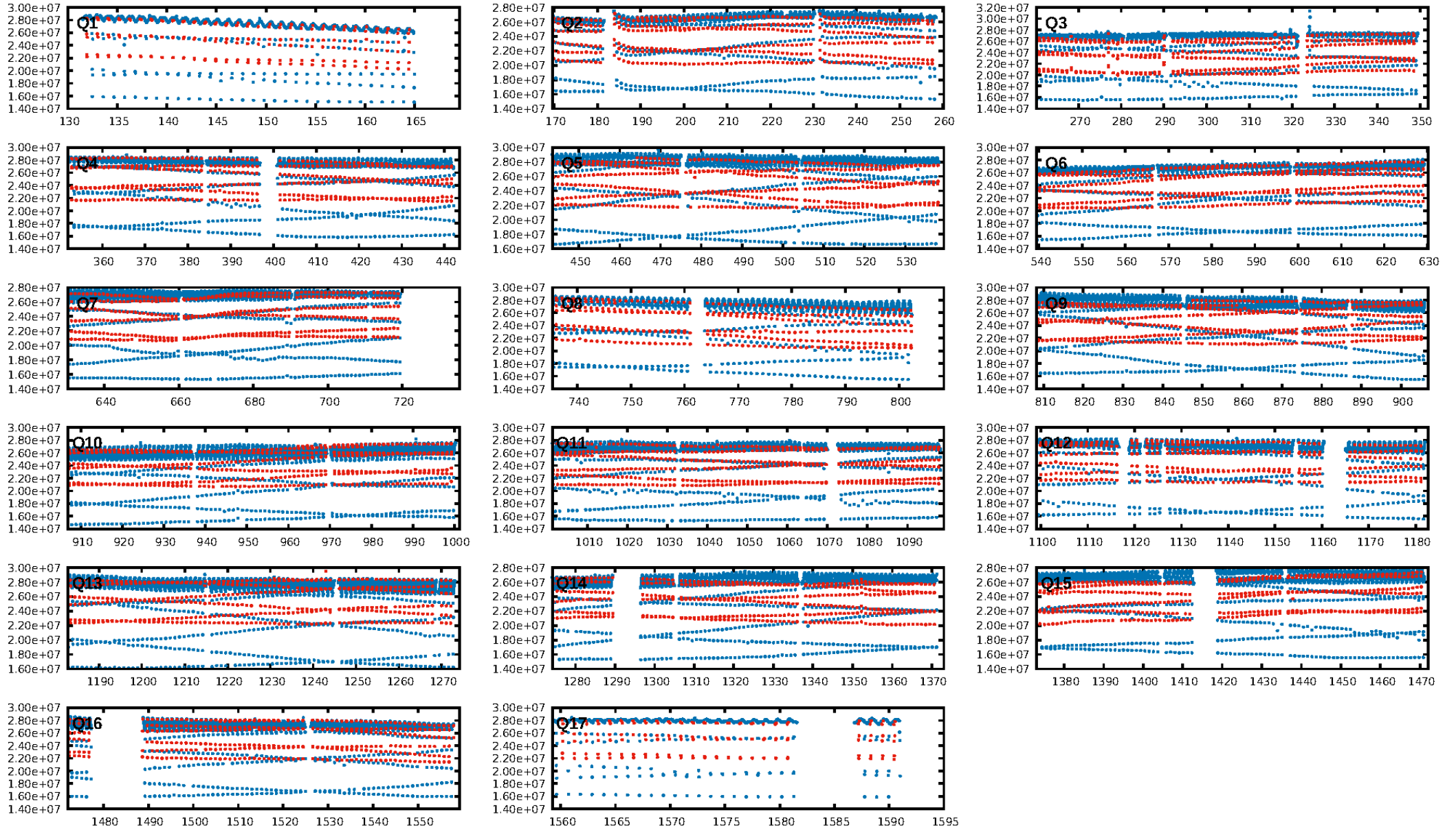
DV Diagnostic Results:

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 [1178/1178]
GhostDiagnostic-chr: 1.283
Centroid-sig: N/A
Centroid-so: 0.196 arcsec [360.44σ]
OotOffset-rm: 0.210 arcsec [3.13σ]
KicOffset-rm: 0.223 arcsec [2.99σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
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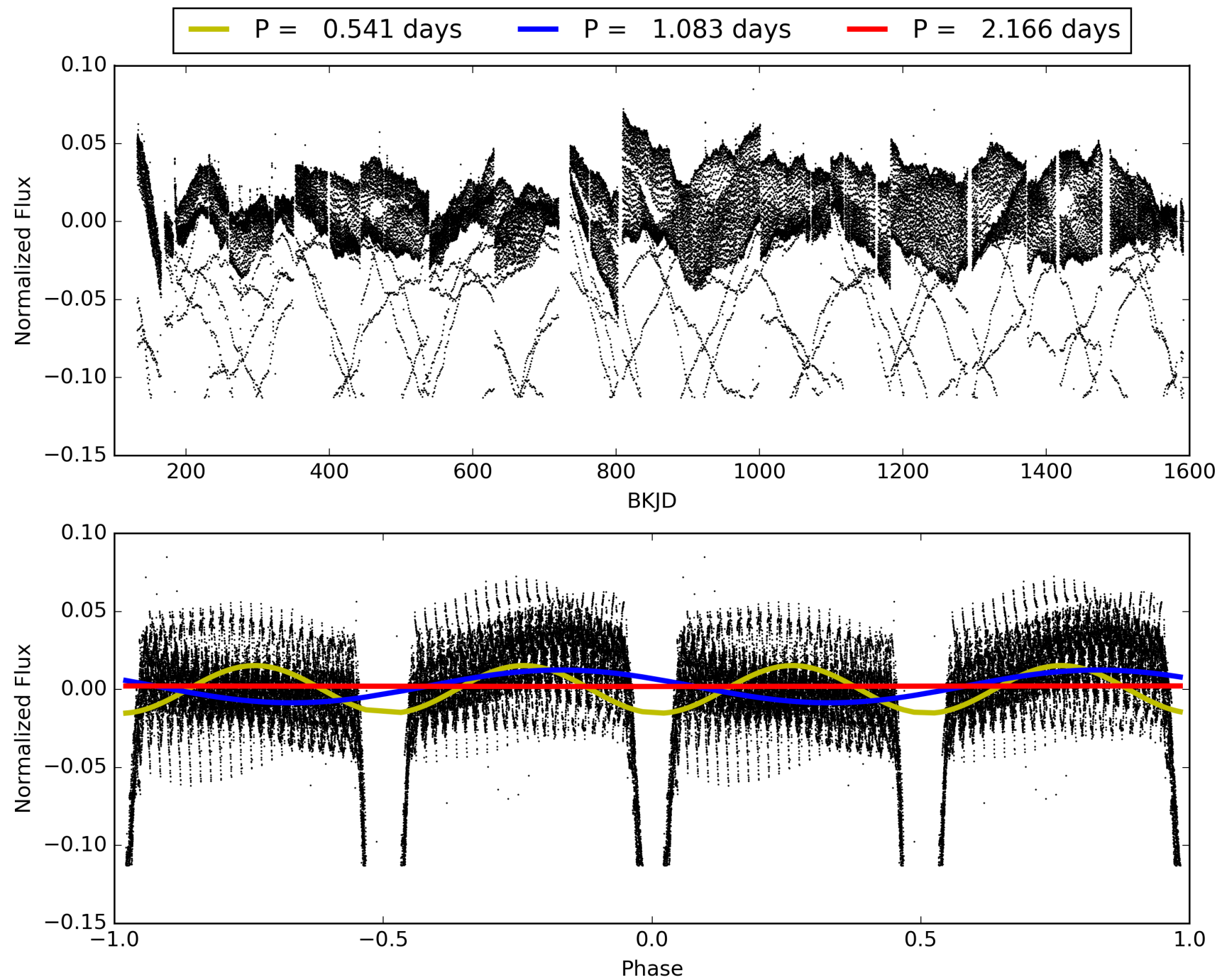
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 09:21:24 Z

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

TCE 008608490-02, PDC Light Curves

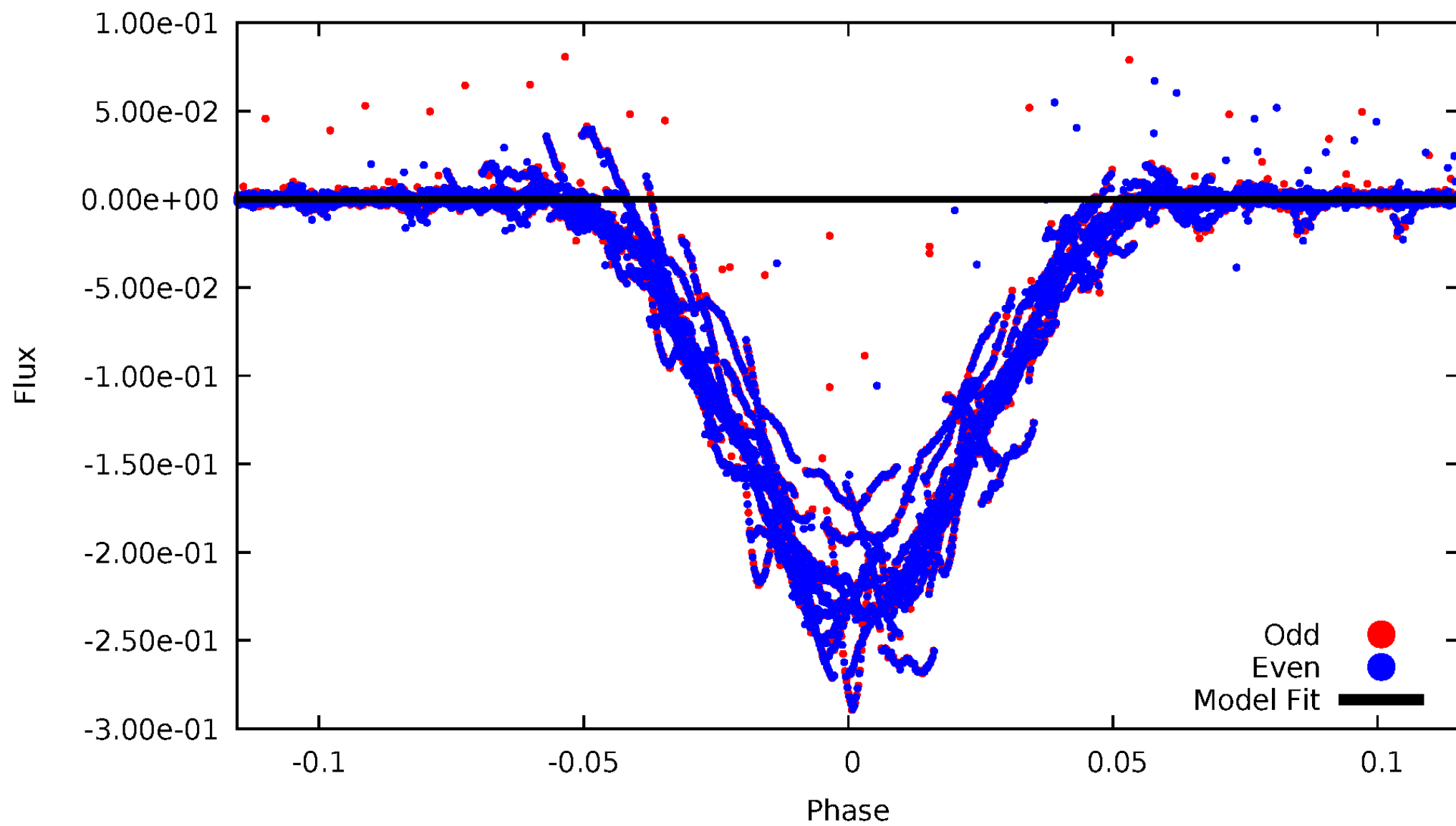


TCE 008608490-02



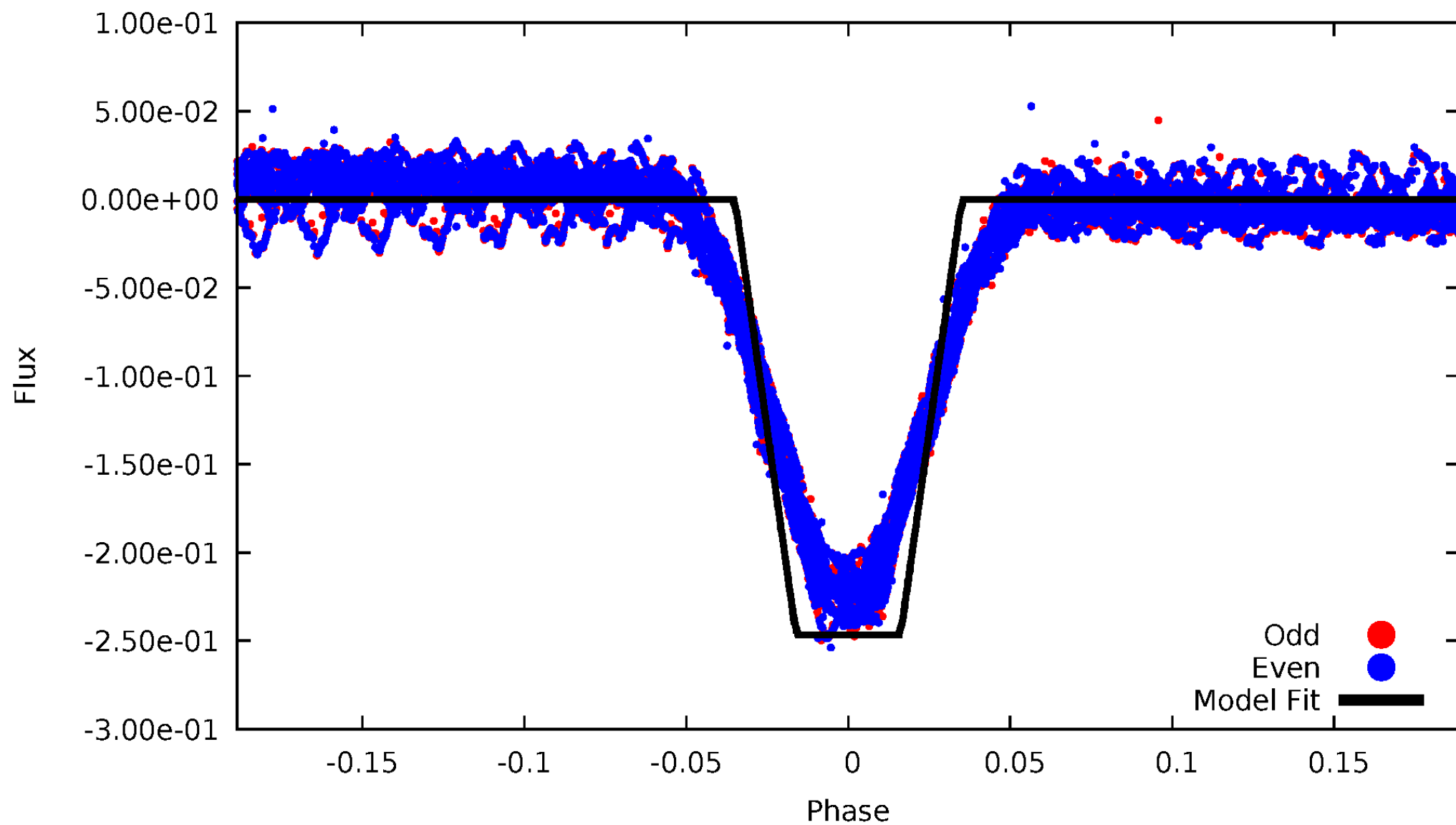
DV Odd/Even

TCE 008608490-02



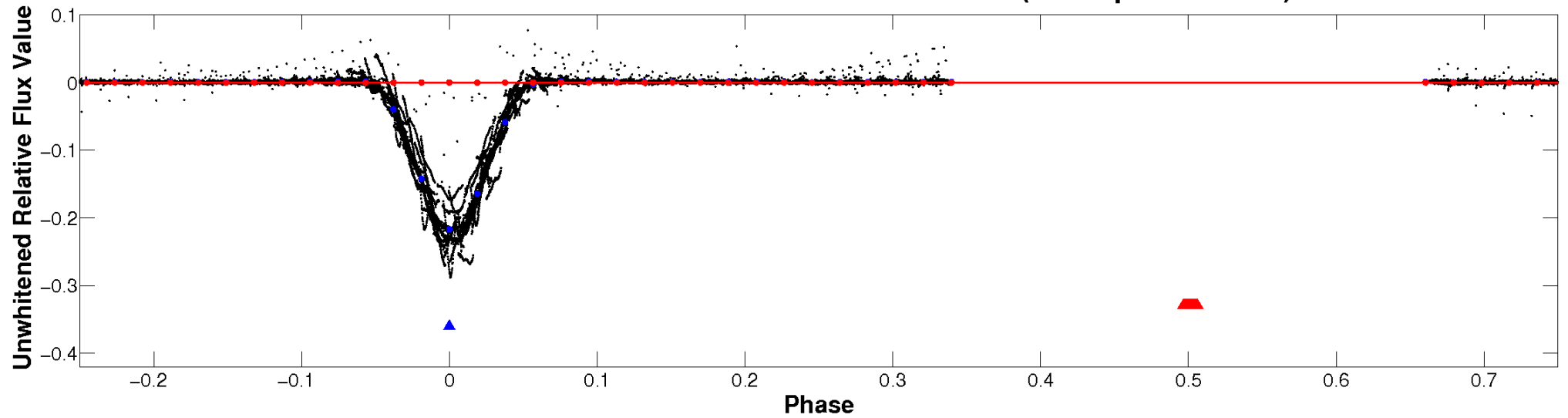
ALT Odd/Even

TCE 008608490-02

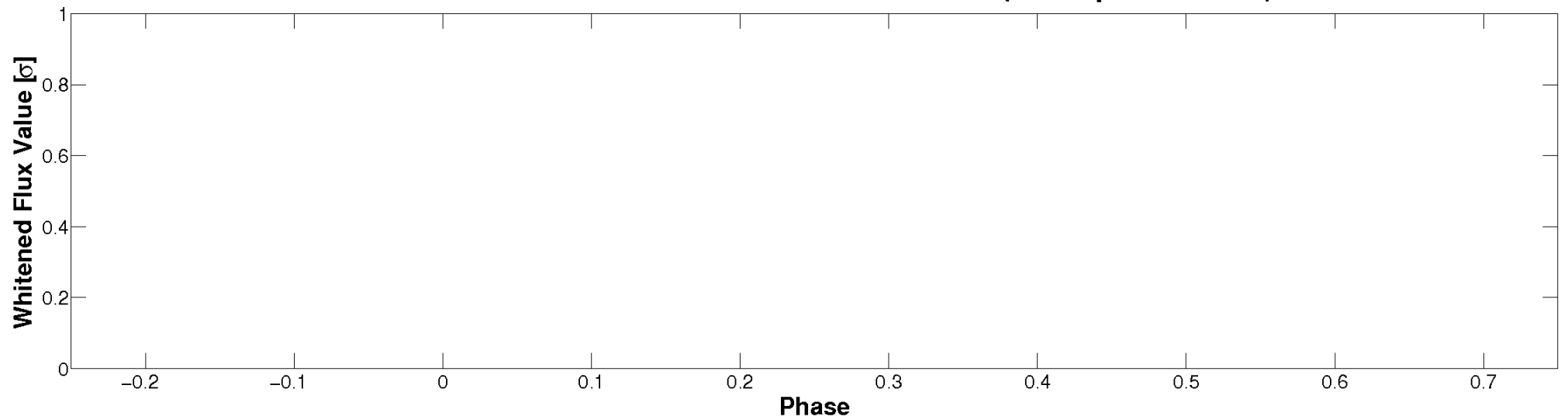


Non-Whitened Vs. Whitened Light Curve

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

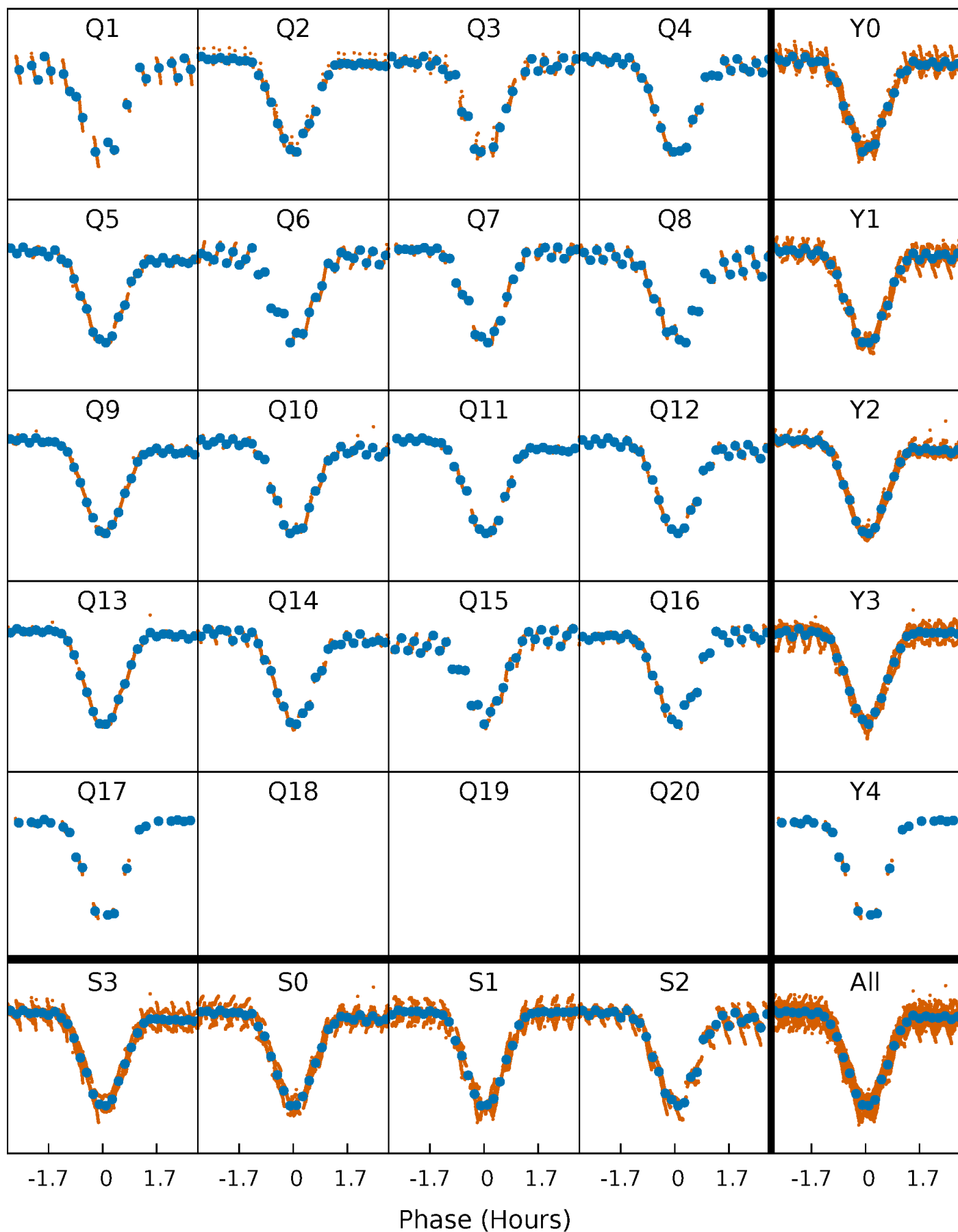


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



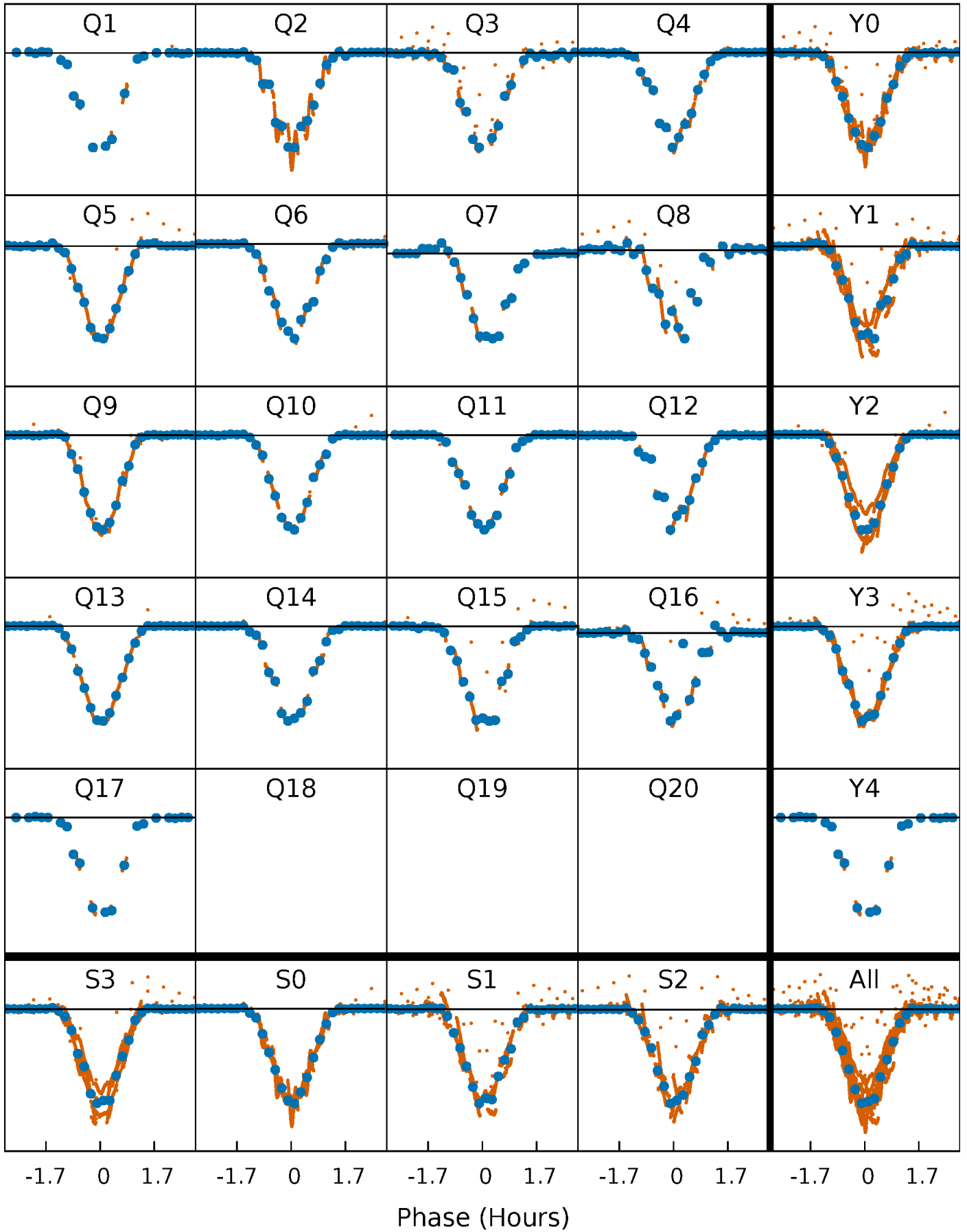
PDC Quarter-Phased Transit Curves

TCE 008608490-02 P= 1.082809 Days $T_0=131.932869$ (BKJD)



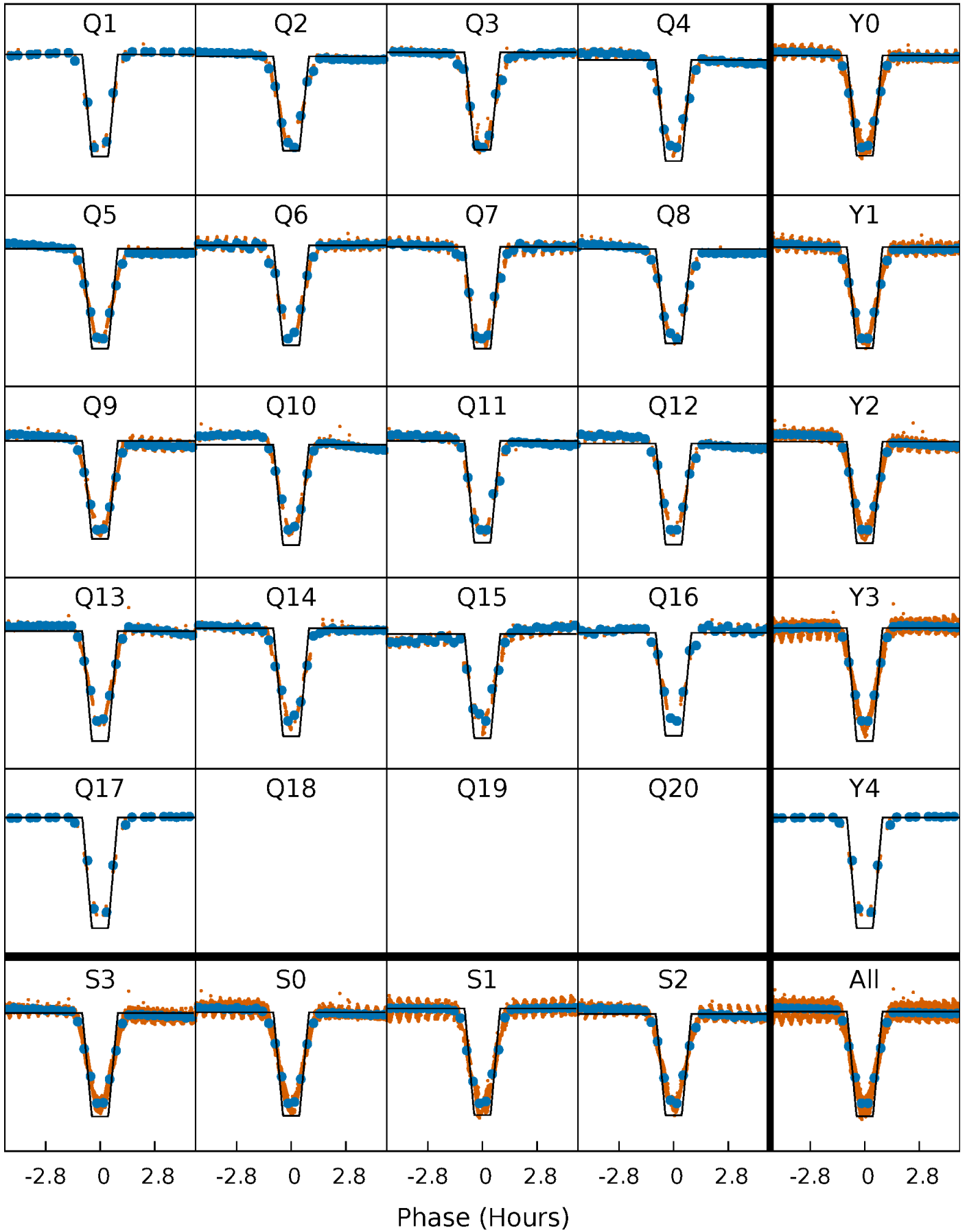
DV Quarter-Phased Transit Curves

TCE 008608490-02 P= 1.082809 Days $T_0=131.932869$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

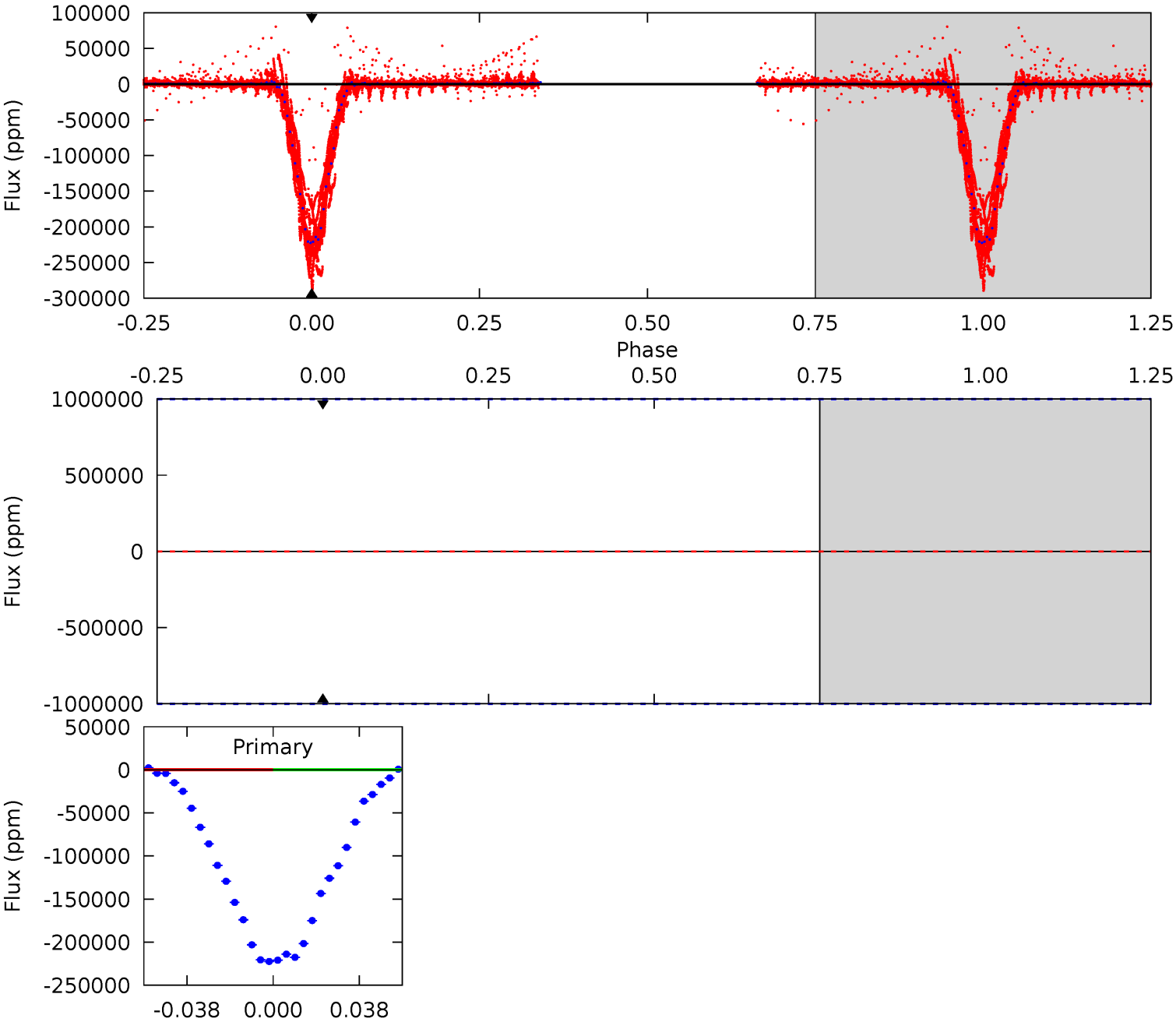
TCE 008608490-02 P= 1.082809 Days $T_0=131.934214$ (BKJD)



DV Model-Shift Uniqueness Test

008608490-02, P = 1.082809 Days, E = 130.850060 Days

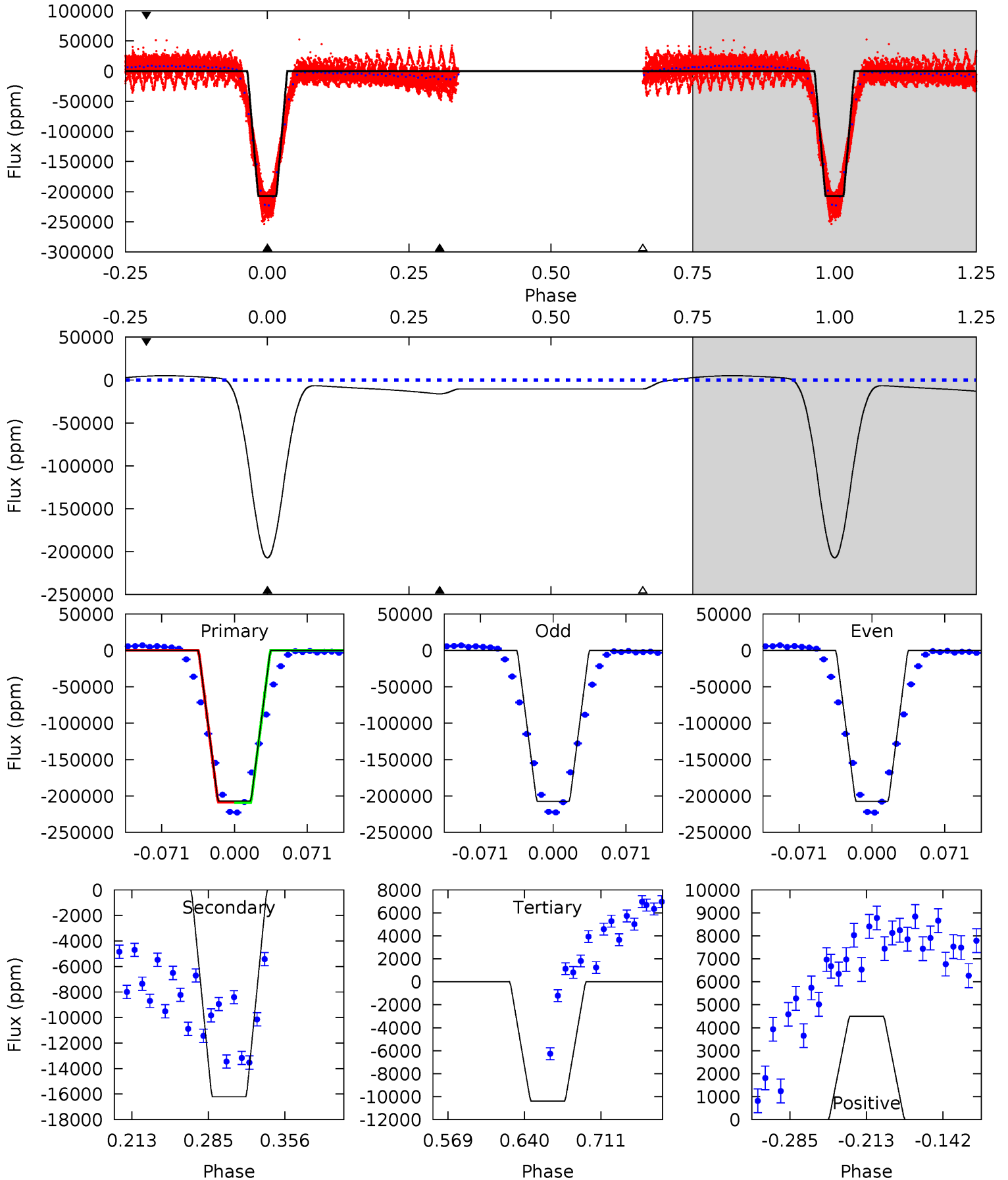
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008608490-02, P = 1.082809 Days, E = 130.851405 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1128	88.3	56.6	24.5	4.64	1.80	33.6	1072	1104	31.7	63.8	0.13	1.00	0.02	2.18



Stellar Parameters For KIC 008608490

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$\rho_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5096^{+168}_{-153}	$3.889^{+0.735}_{-0.368}$	$-0.100^{+0.300}_{-0.250}$	$1.782^{+1.106}_{-1.106}$	$0.898^{+0.215}_{-0.144}$	$0.223^{+2.629}_{-0.179}$
	+3%/-3%	+19%/-9%	+300%/-250%	+62%/-62%	+24%/-16%	+1177%/-80%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 008608490-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$50.54^{+31.91}_{-23.72}$	2958^{+509}_{-507}	-2944^{+8663}_{-2641}	$0.068^{+12.099}_{-9.866}$
Alt.	-16212 ± 184	$95.43^{+40.85}_{-32.42}$	2967^{+471}_{-507}	2585^{+523}_{-5374}	$0.395^{+0.518}_{-0.204}$

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

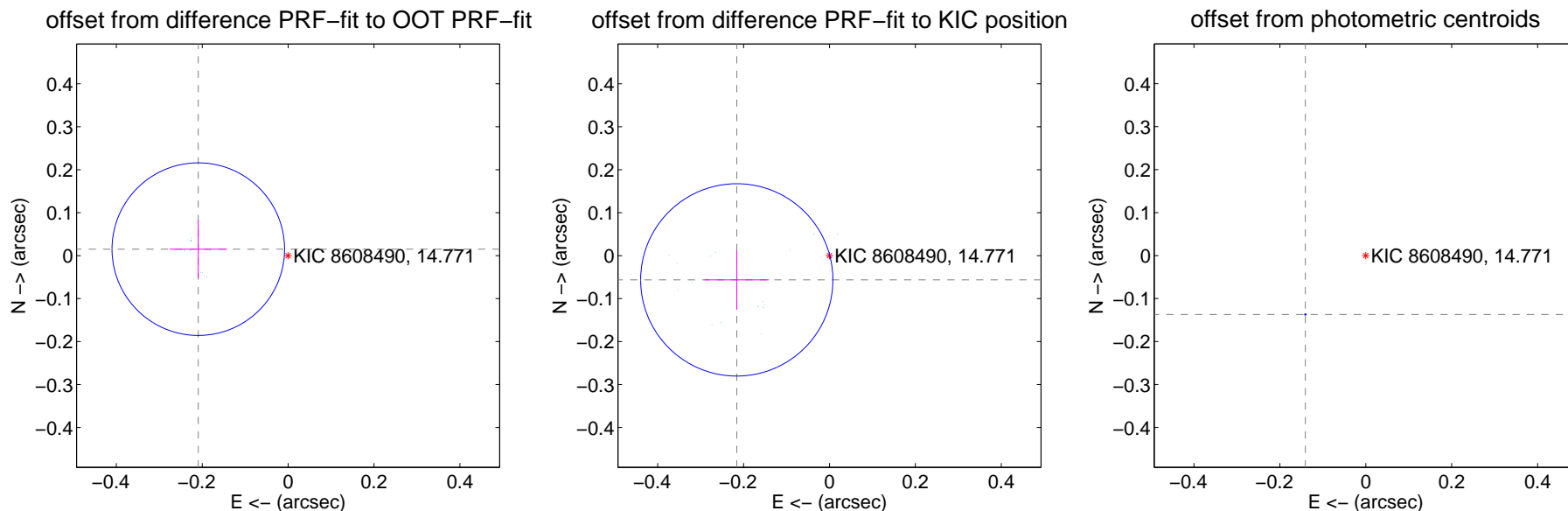
DV Centroid Data

Supplemental centroid analysis for 008608490-02. Kepler magnitude: 14.77. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

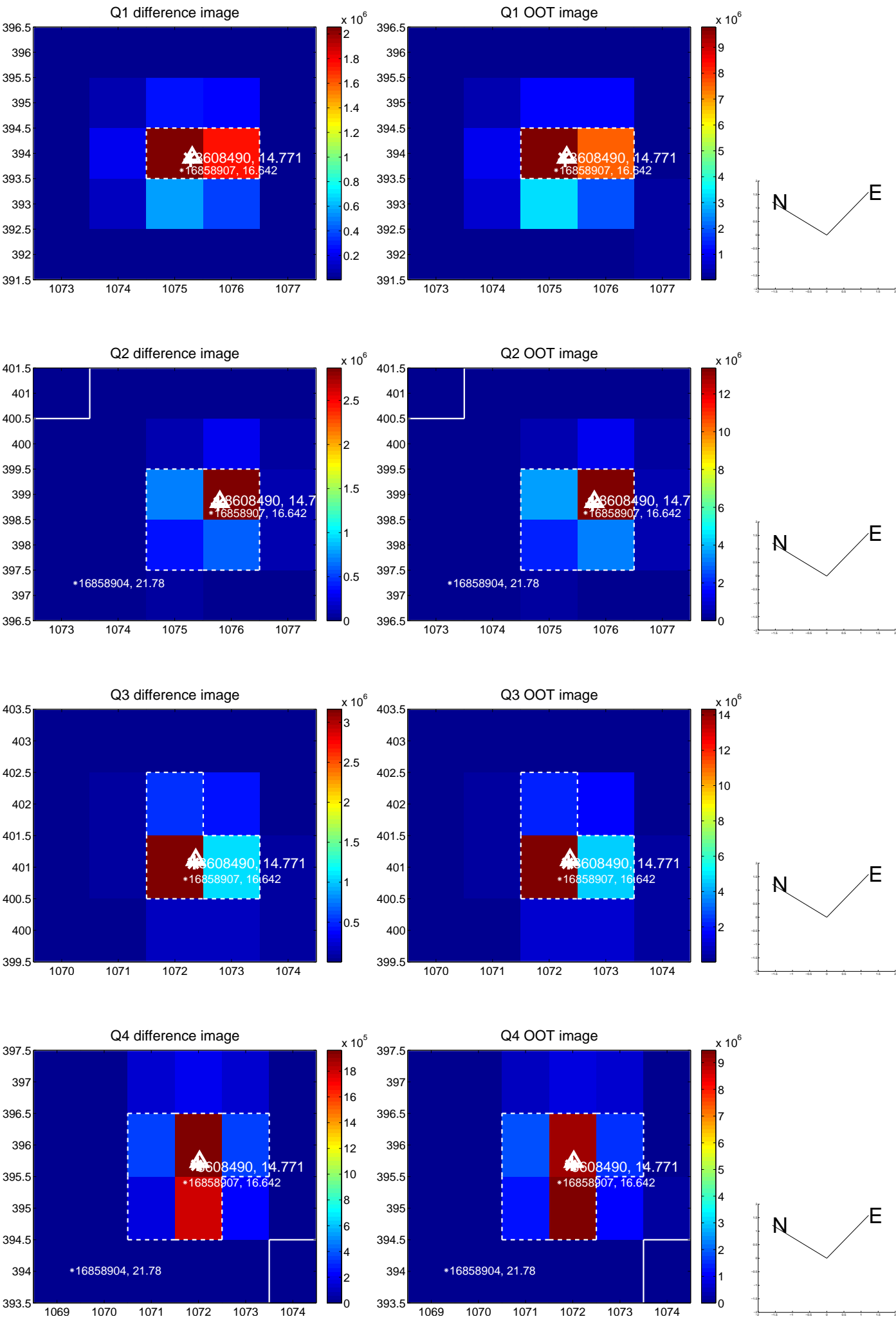
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.210 \pm 0.067	3.13	0.209 \pm 0.067	0.015 \pm 0.067
PRF-fit source offset from KIC position	0.223 \pm 0.075	2.99	0.216 \pm 0.075	-0.056 \pm 0.070
photometric centroid source offset	0.20 \pm 0.00	360.44	0.14 \pm 0.00	-0.14 \pm 0.00

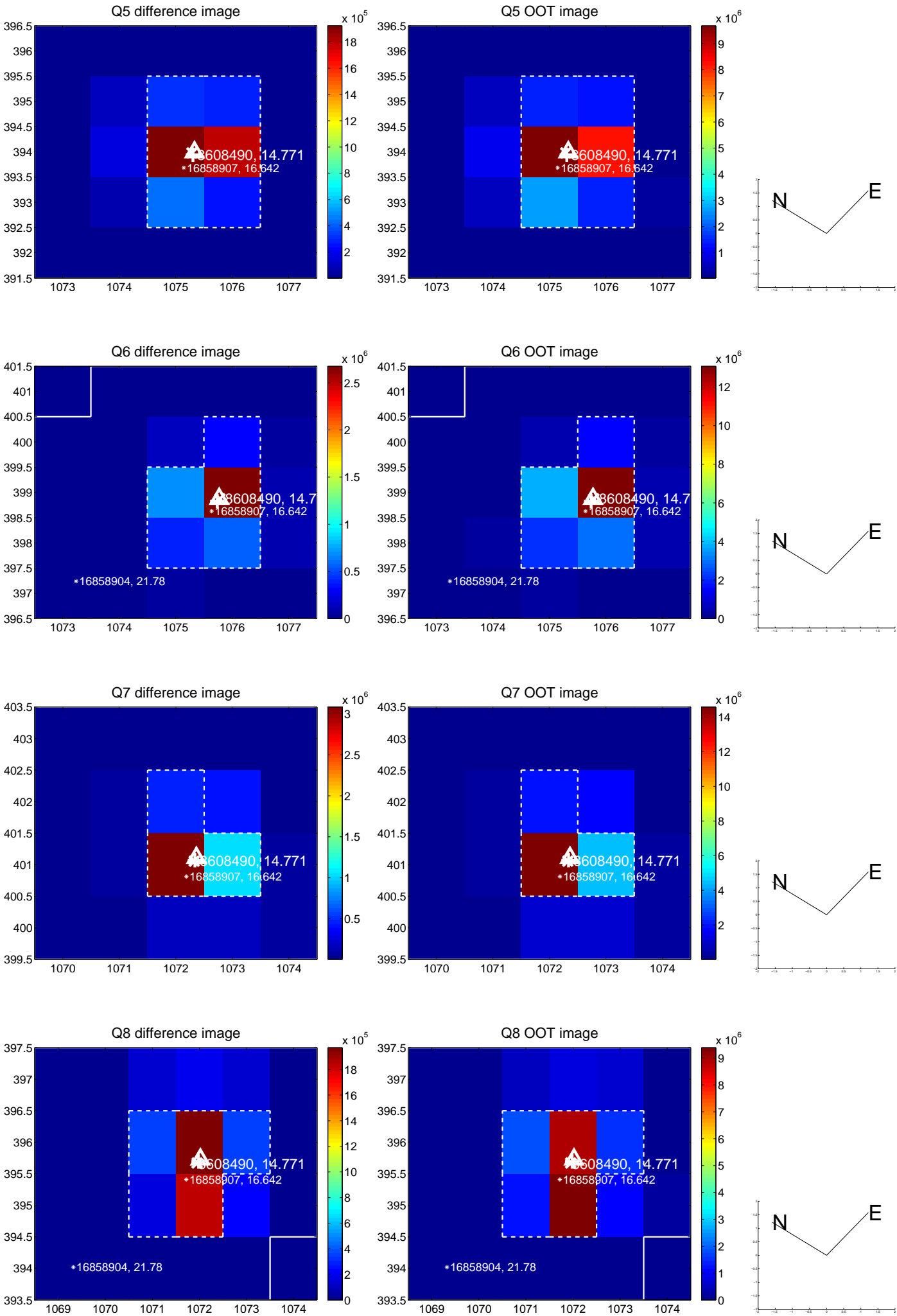


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

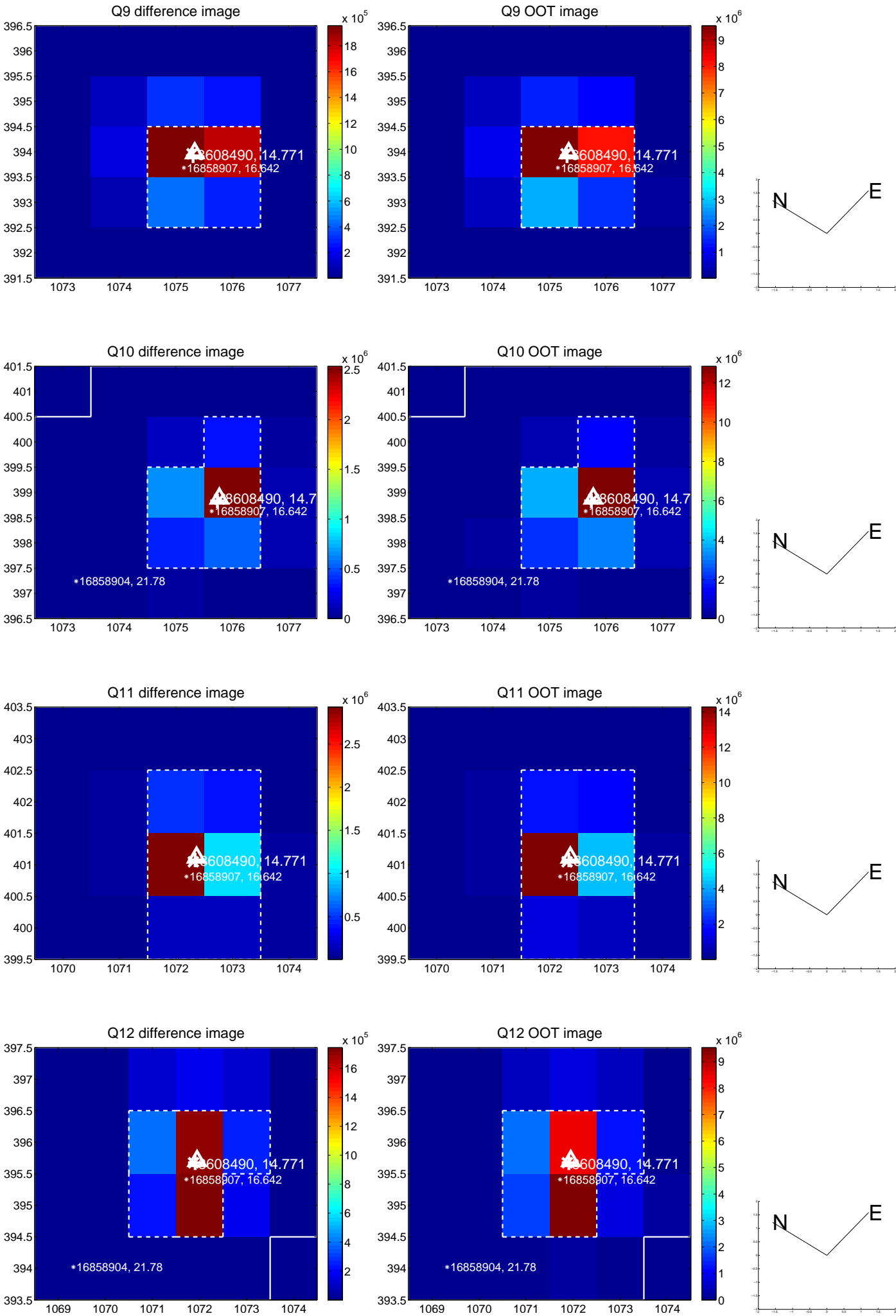
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



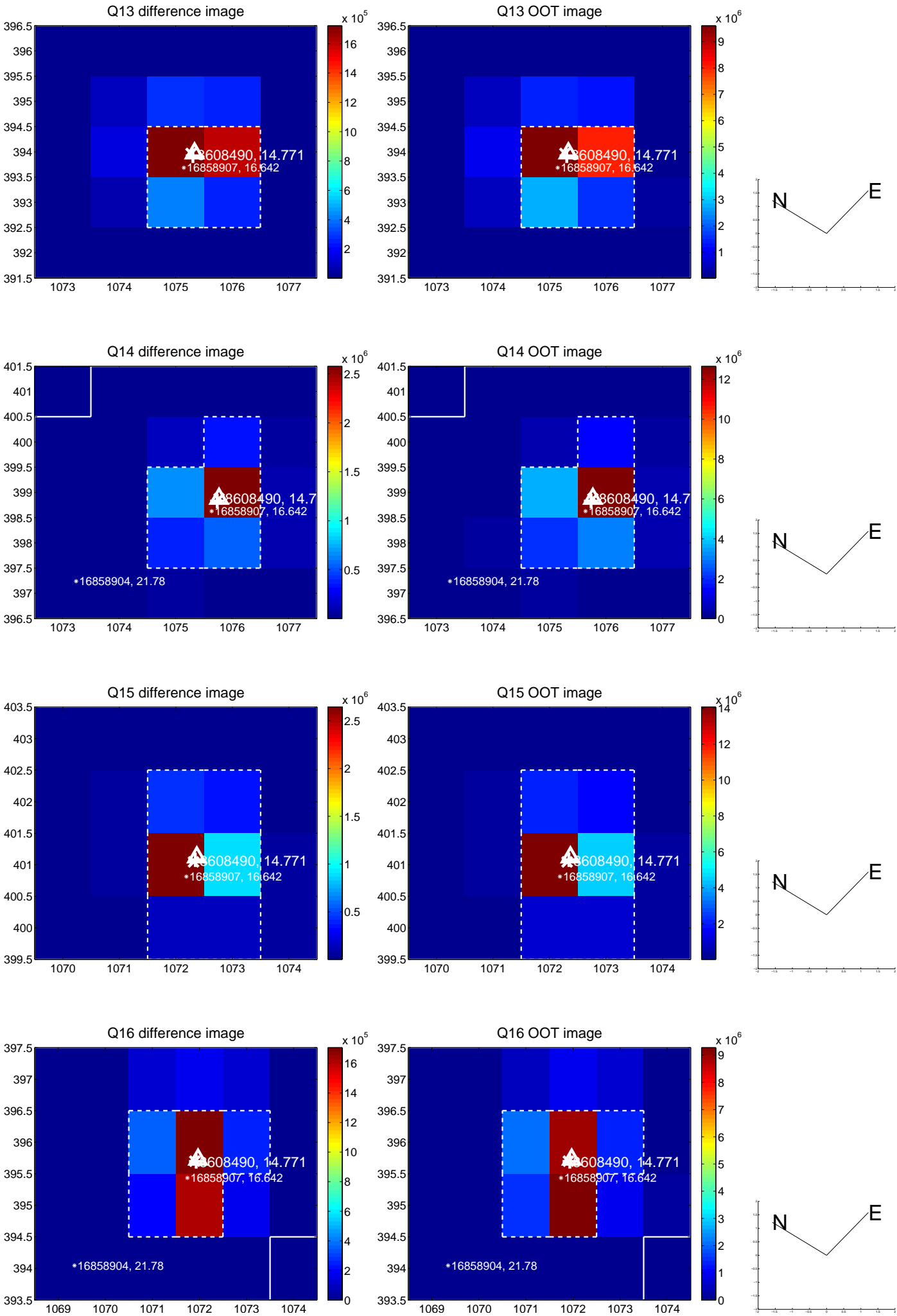
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



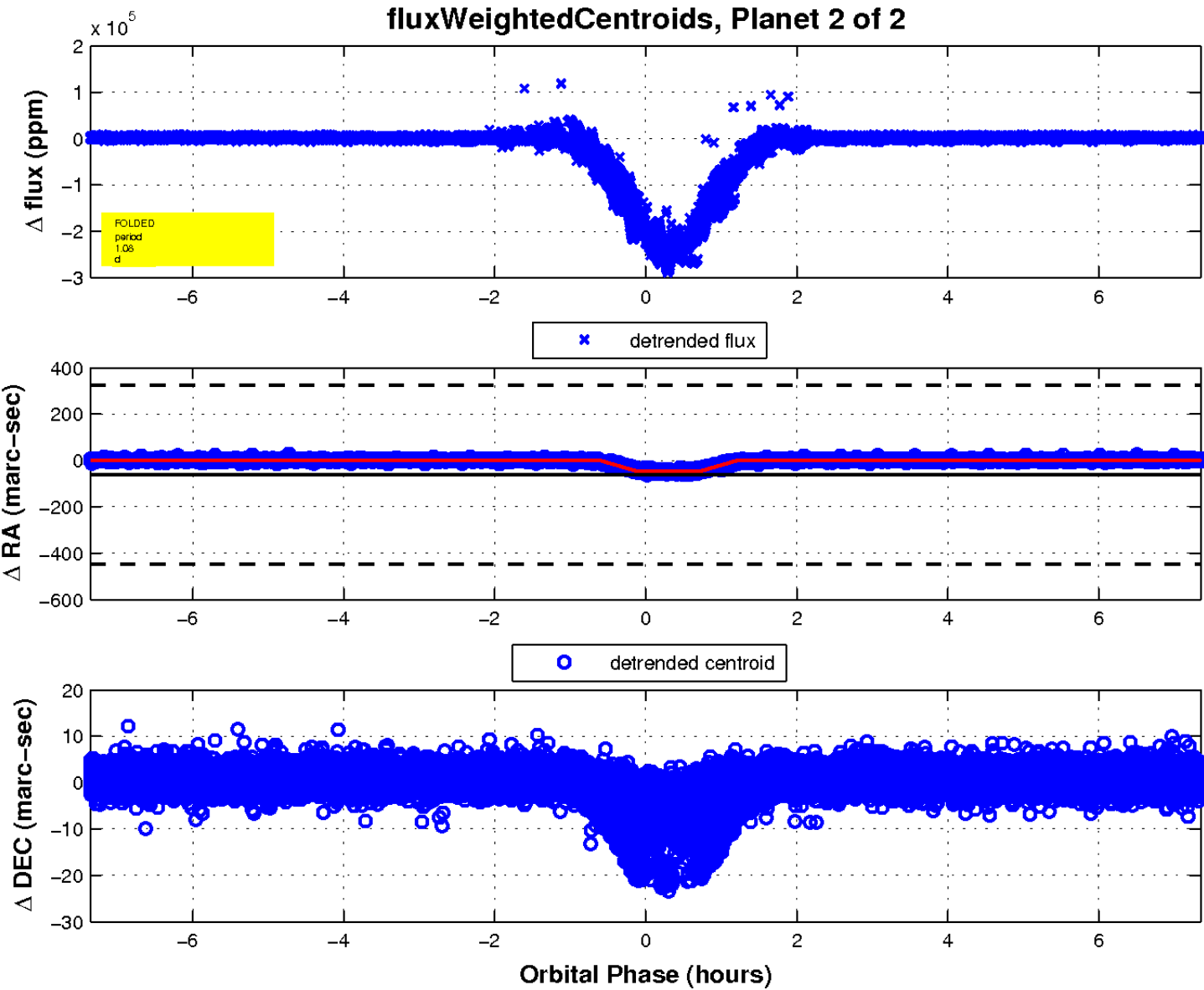
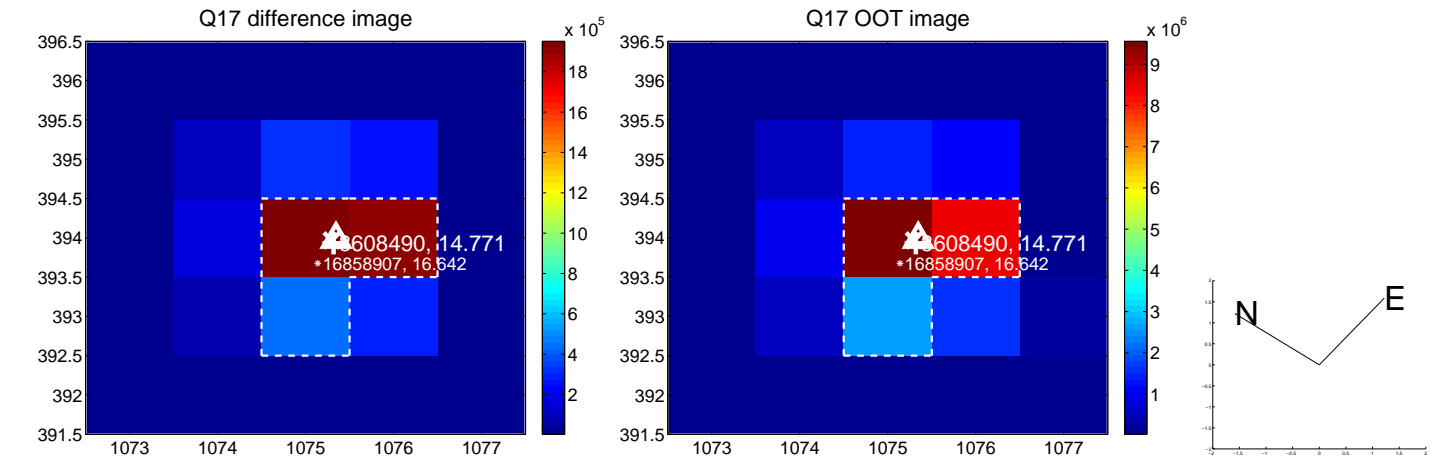
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

