

KIC 008479386

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})
008479386-01	OBS	7046.01	5.860392	134.838259	343686.7	6.000	37991.0	-1.0	1.16	6267	53.68	476.84
008479386-02	OBS	No	5.860326	135.026288	3910.5	11.637	1963.9	262.8	1.16	6267	7.47	476.84
008479386-04	OBS	No	492.111965	516.480506	951.8	45.584	26.8	5.0	1.16	6267	4.32	1.30
008479386-05	OBS	No	82.081093	186.903055	734.8	4.182	10.4	9.4	1.16	6267	3.20	14.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008479386-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
008479386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
008479386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008479386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_FEW_DIFFS

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.

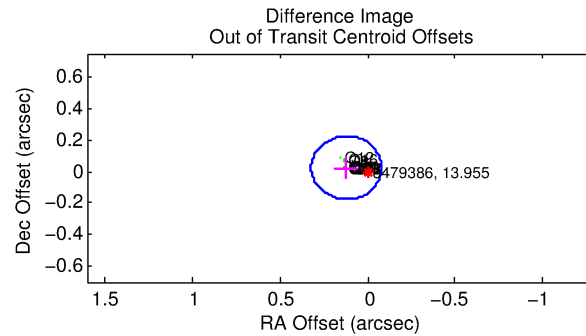
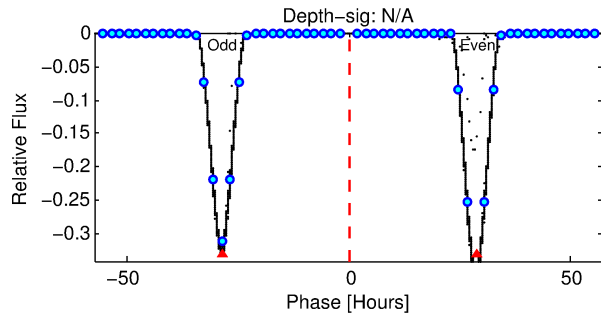
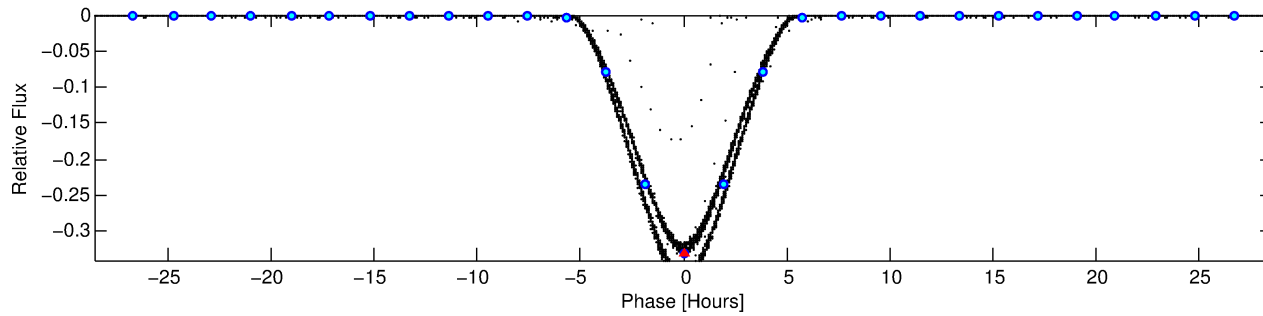
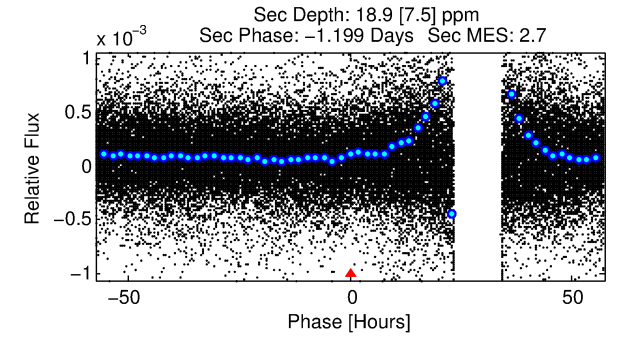
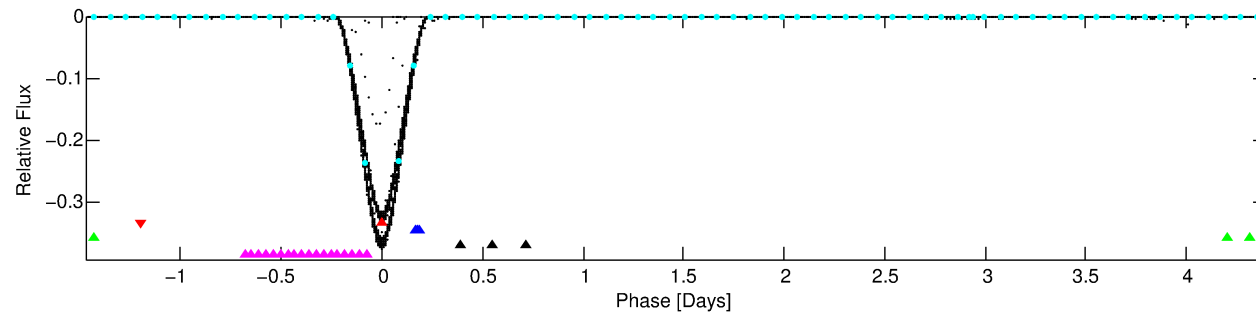
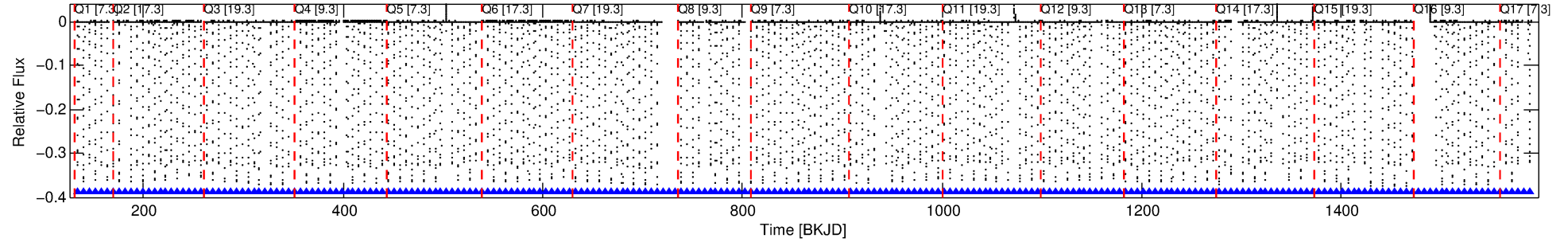
Ephemeris Match Information For 008479386-01

No Significant Match Found

DV One-Page Summary

KIC: 8479386 Candidate: 1 of 5 Period: 5.860 d
KOI: K07046.01 Corr: 0.751

Kp: 13.95 R*: 1.16 Rs Teff: 6267.0 K Logg: 4.28 Fe/H: -0.500



TPS TCE Results:

Period = 5.86039 d
Epoch = 134.8383 BKJD

DV fit results are unavailable

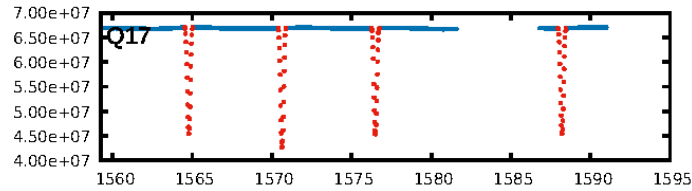
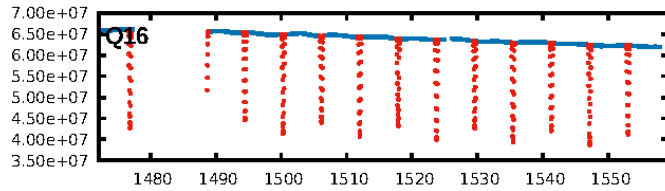
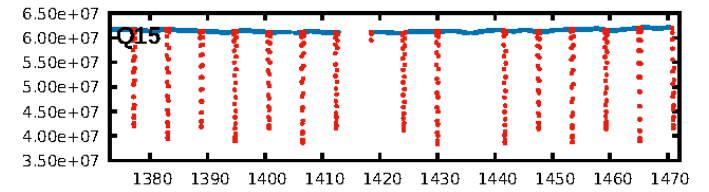
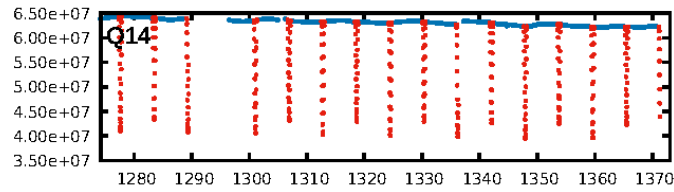
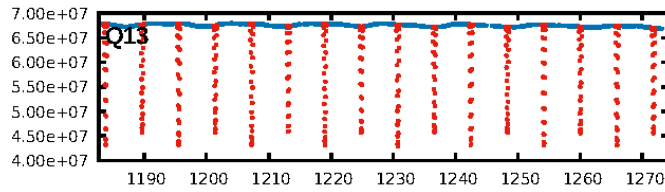
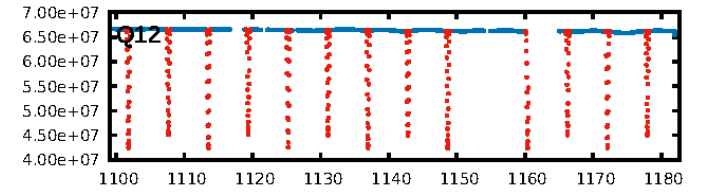
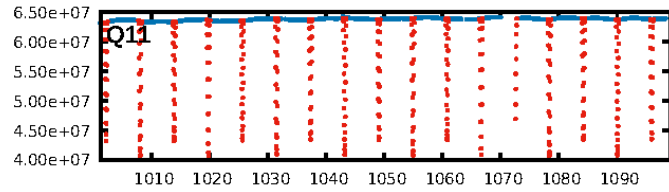
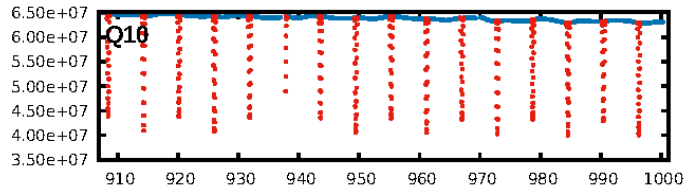
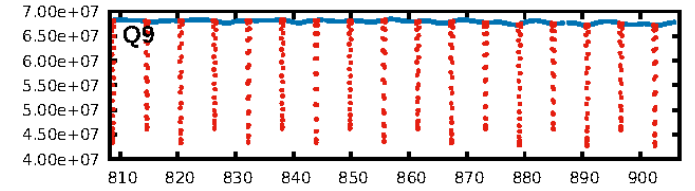
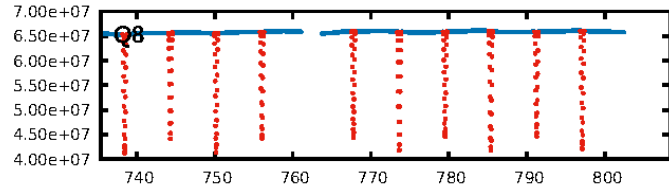
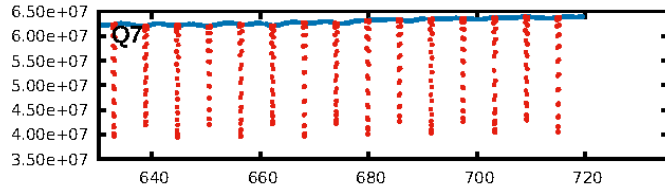
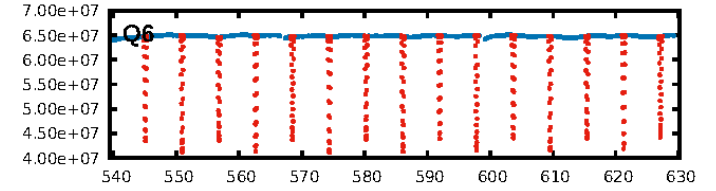
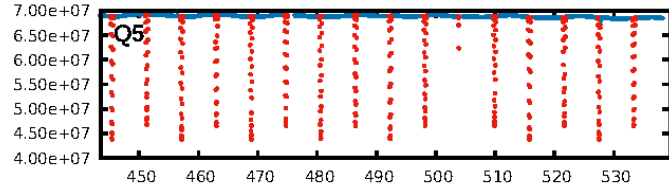
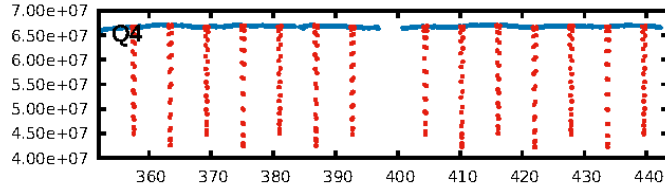
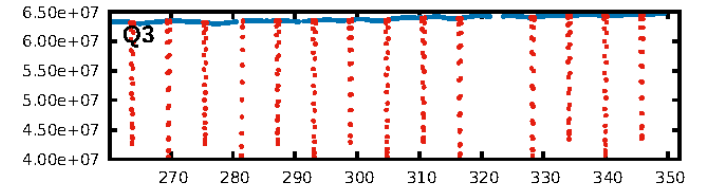
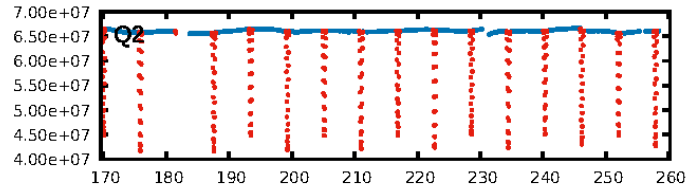
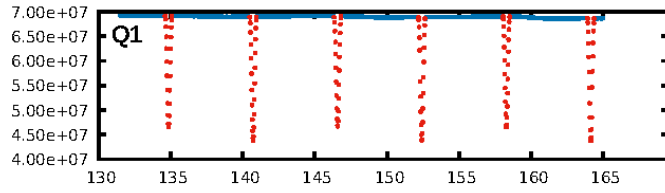
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [250.12 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [222/222]
GhostDiagnostic-chr: 1.166
Centroid-sig: N/A
Centroid-so: 0.269 arcsec [942.86 σ]
OotOffset-rm: 0.124 arcsec [1.86 σ]
KicOffset-rm: 0.246 arcsec [3.66 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

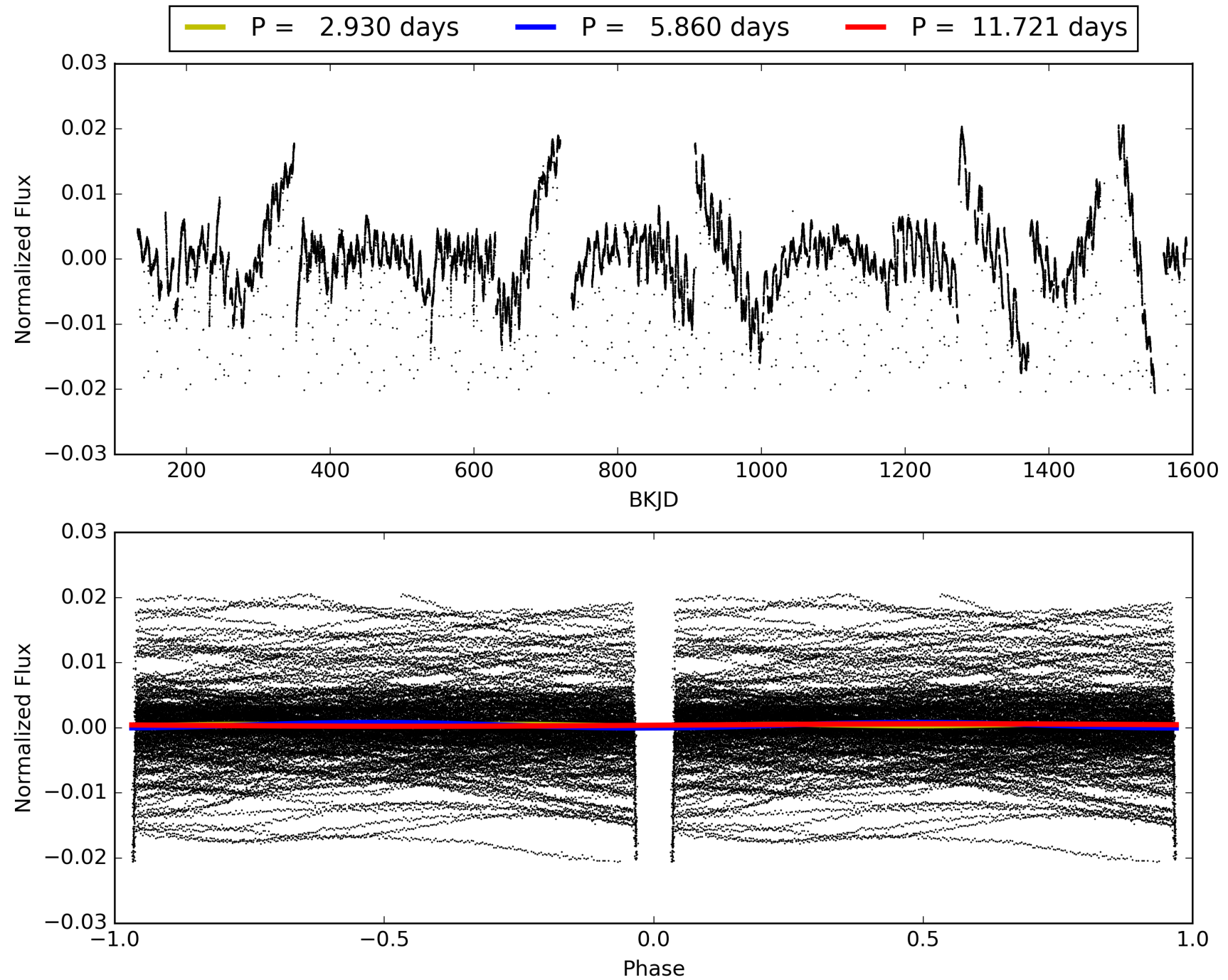
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 05:44:10 Z

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

TCE 008479386-01, PDC Light Curves

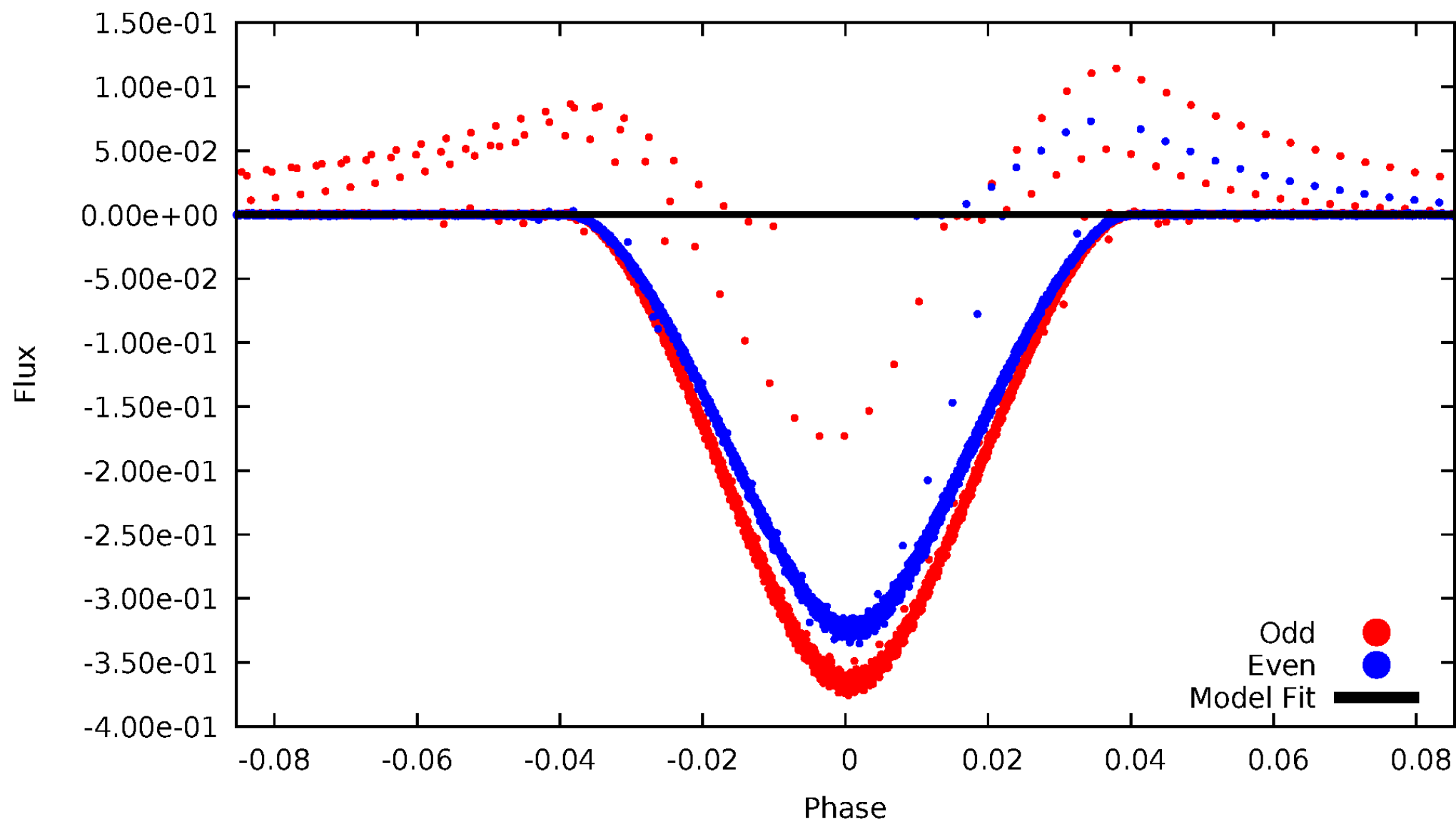


TCE 008479386-01



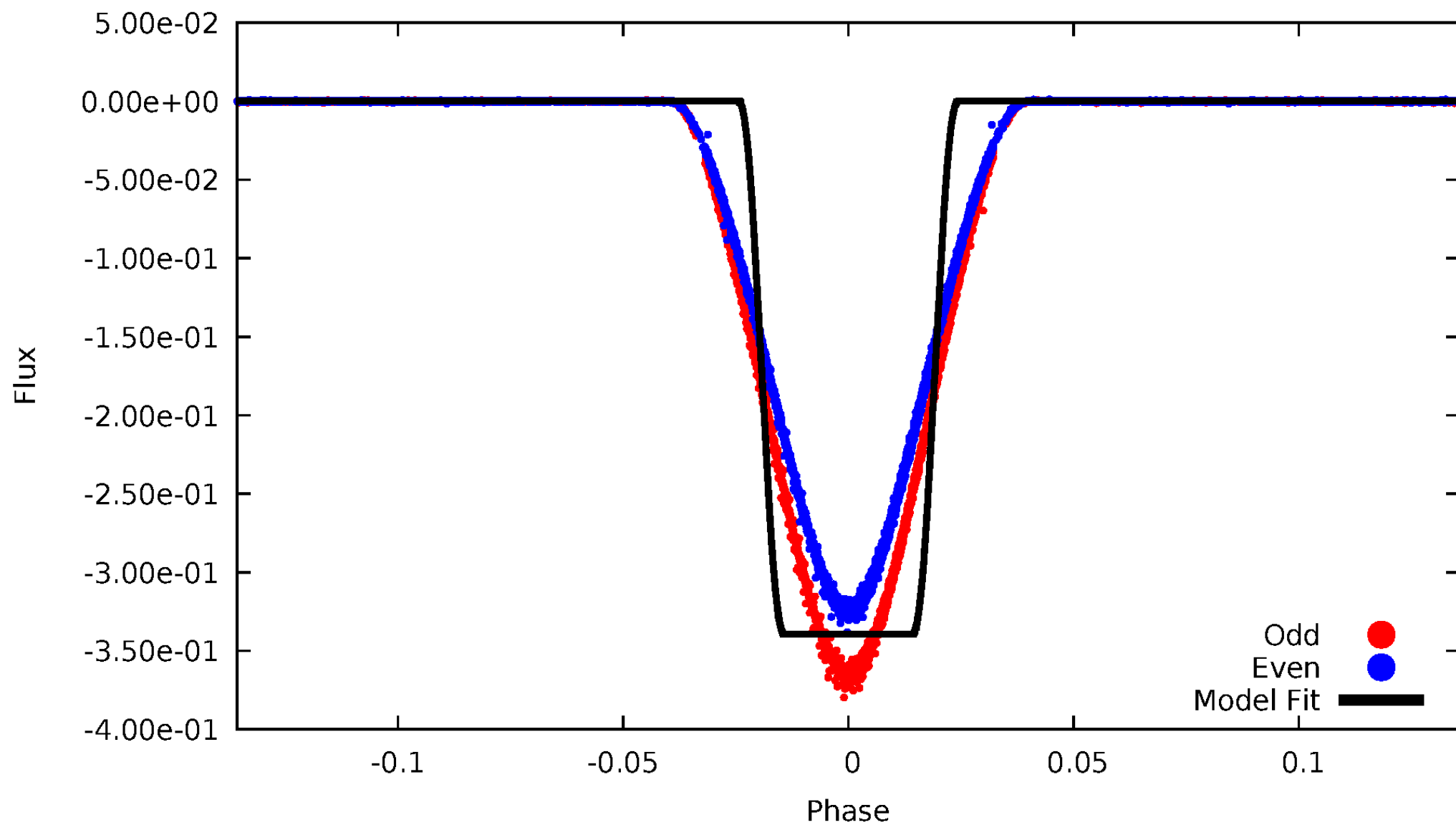
DV Odd/Even

TCE 008479386-01



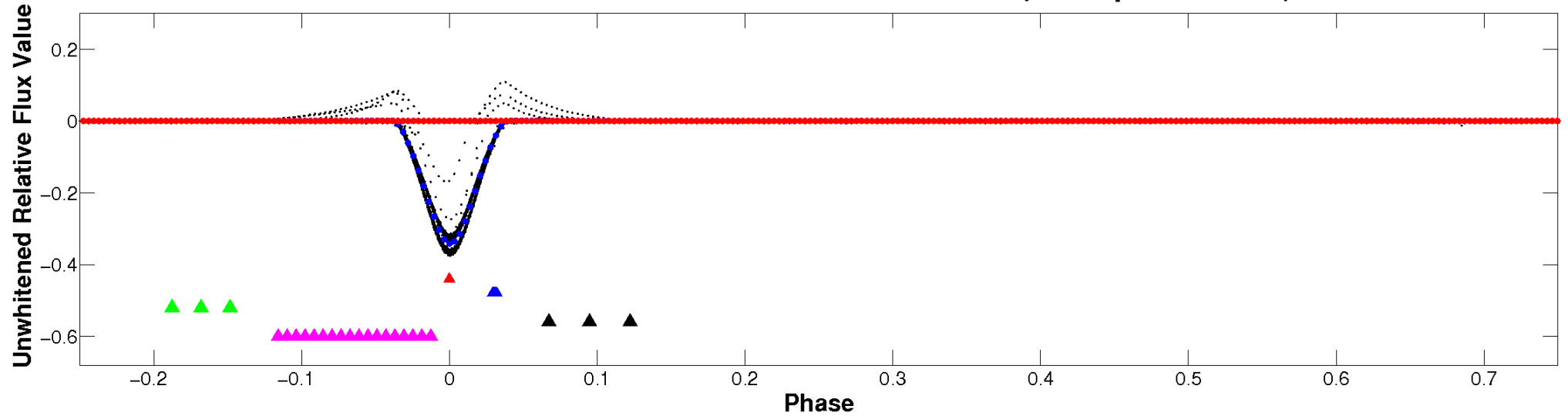
ALT Odd/Even

TCE 008479386-01



Non-Whitened Vs. Whitened Light Curve

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

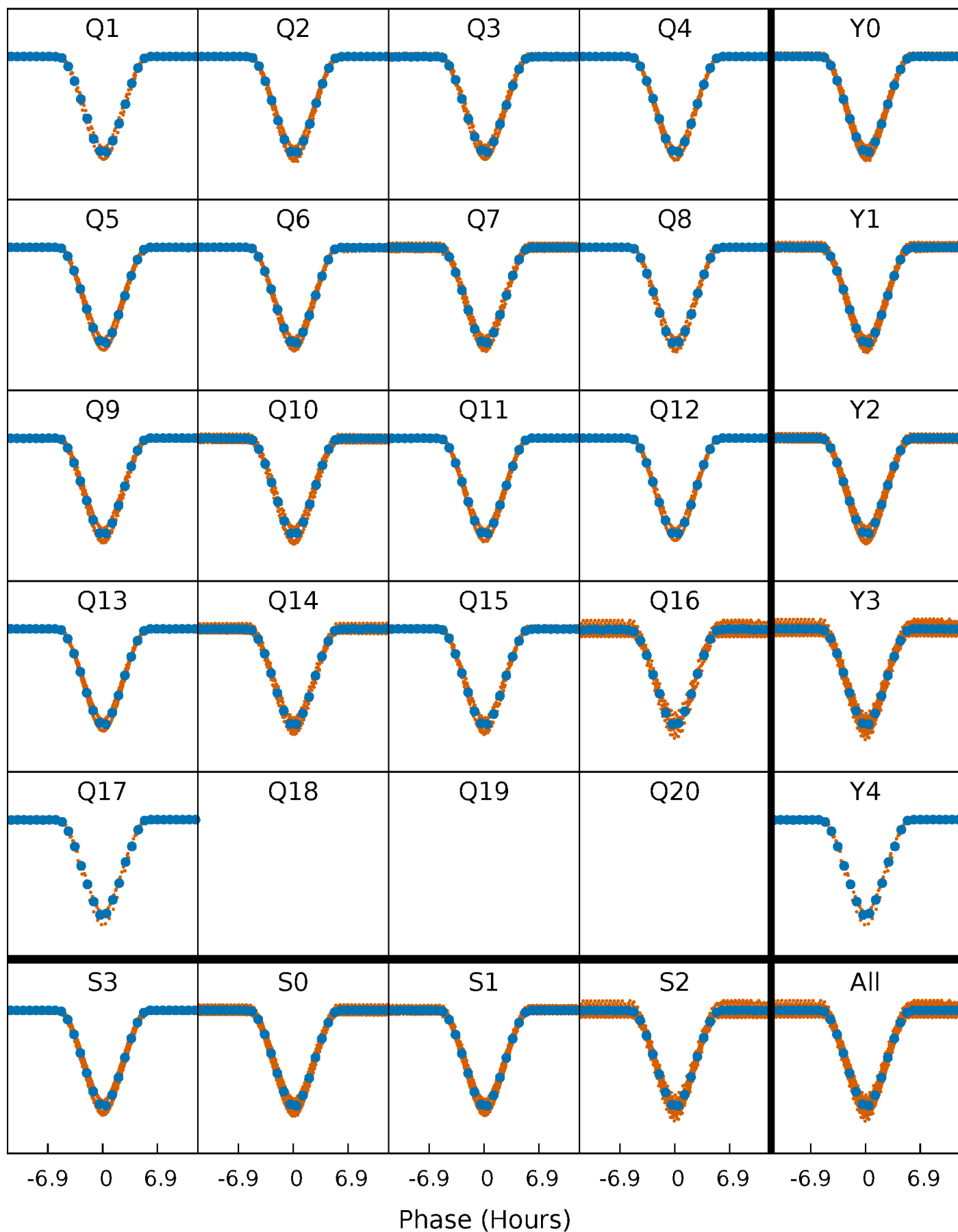


Planet 1 : Phased Whitened Flux Time Series (TPS Epoch/Period)



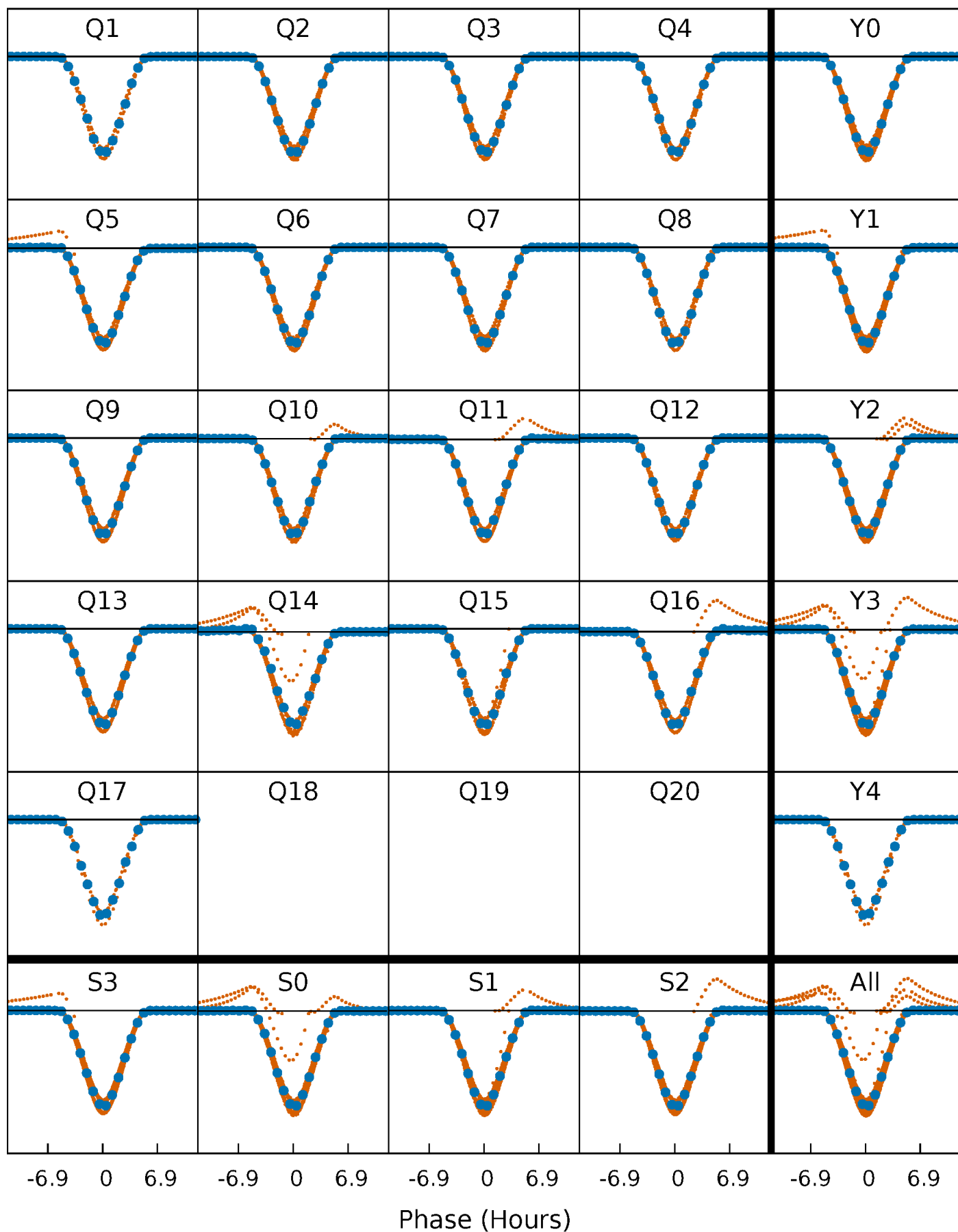
PDC Quarter-Phased Transit Curves

TCE 008479386-01 P= 5.860392 Days $T_0=134.838258$ (BKJD)



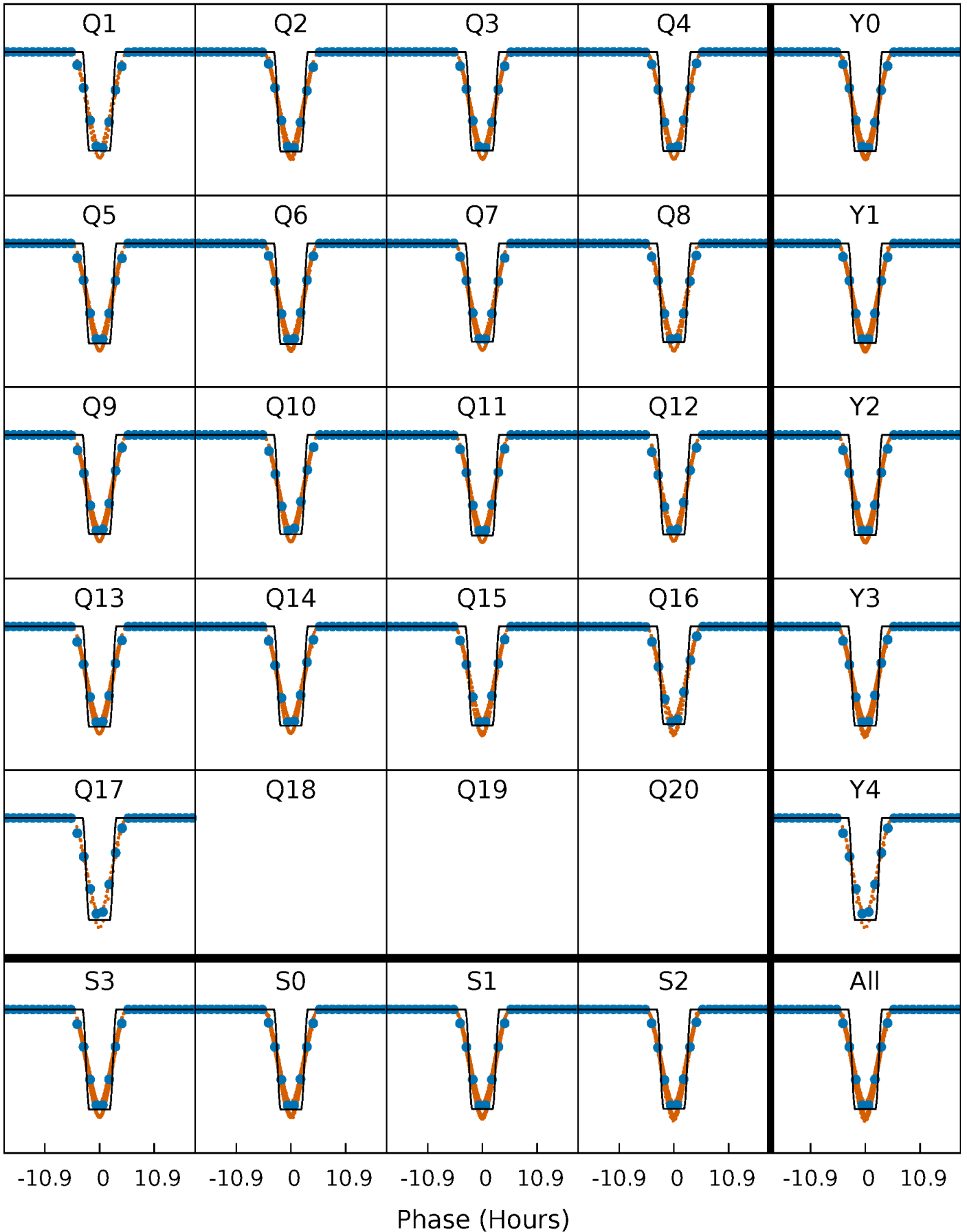
DV Quarter-Phased Transit Curves

TCE 008479386-01 P= 5.860392 Days $T_0=134.838258$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

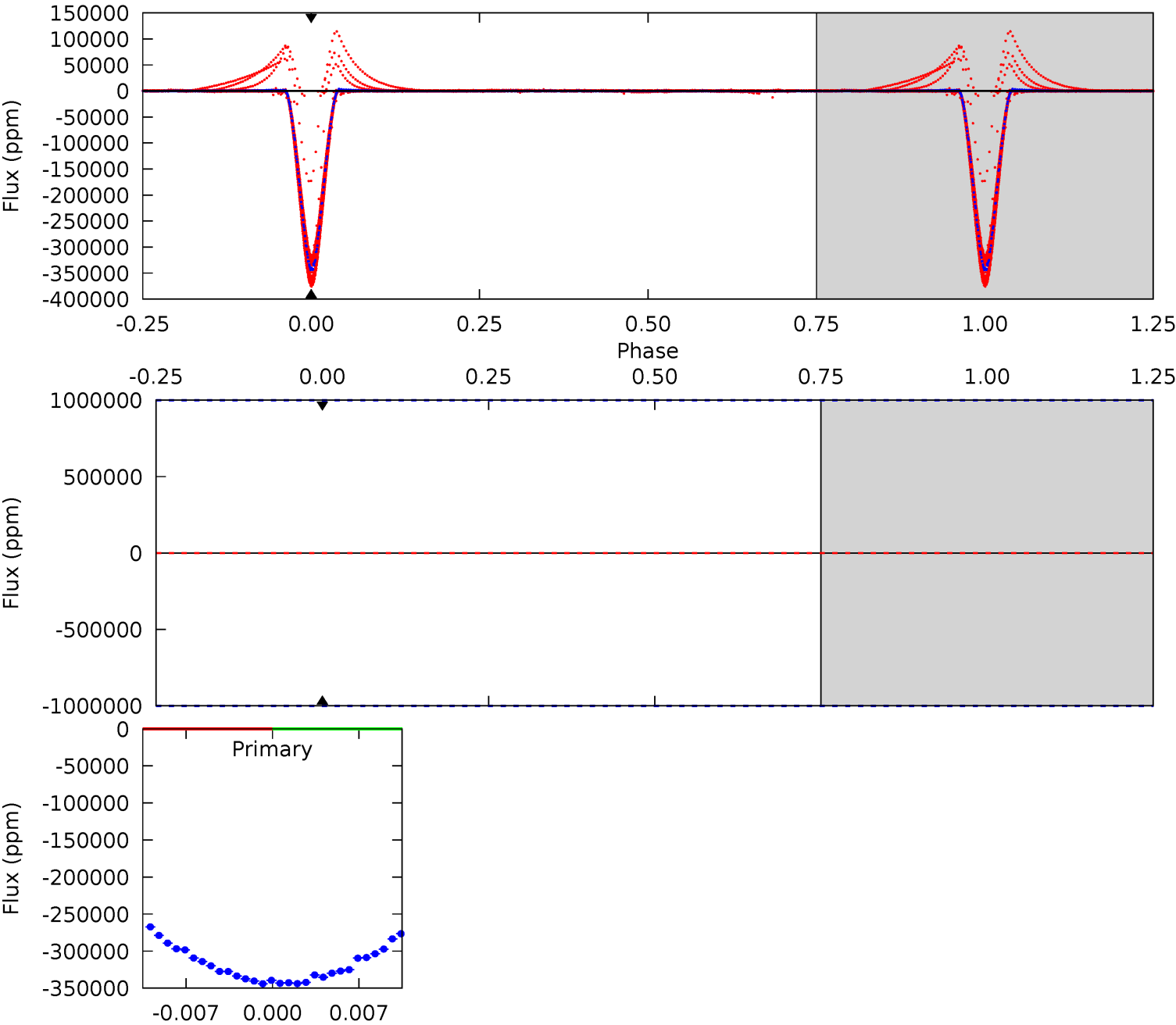
TCE 008479386-01 P= 5.860392 Days $T_0=134.842127$ (BKJD)



DV Model-Shift Uniqueness Test

008479386-01, P = 5.860392 Days, E = 128.977866 Days

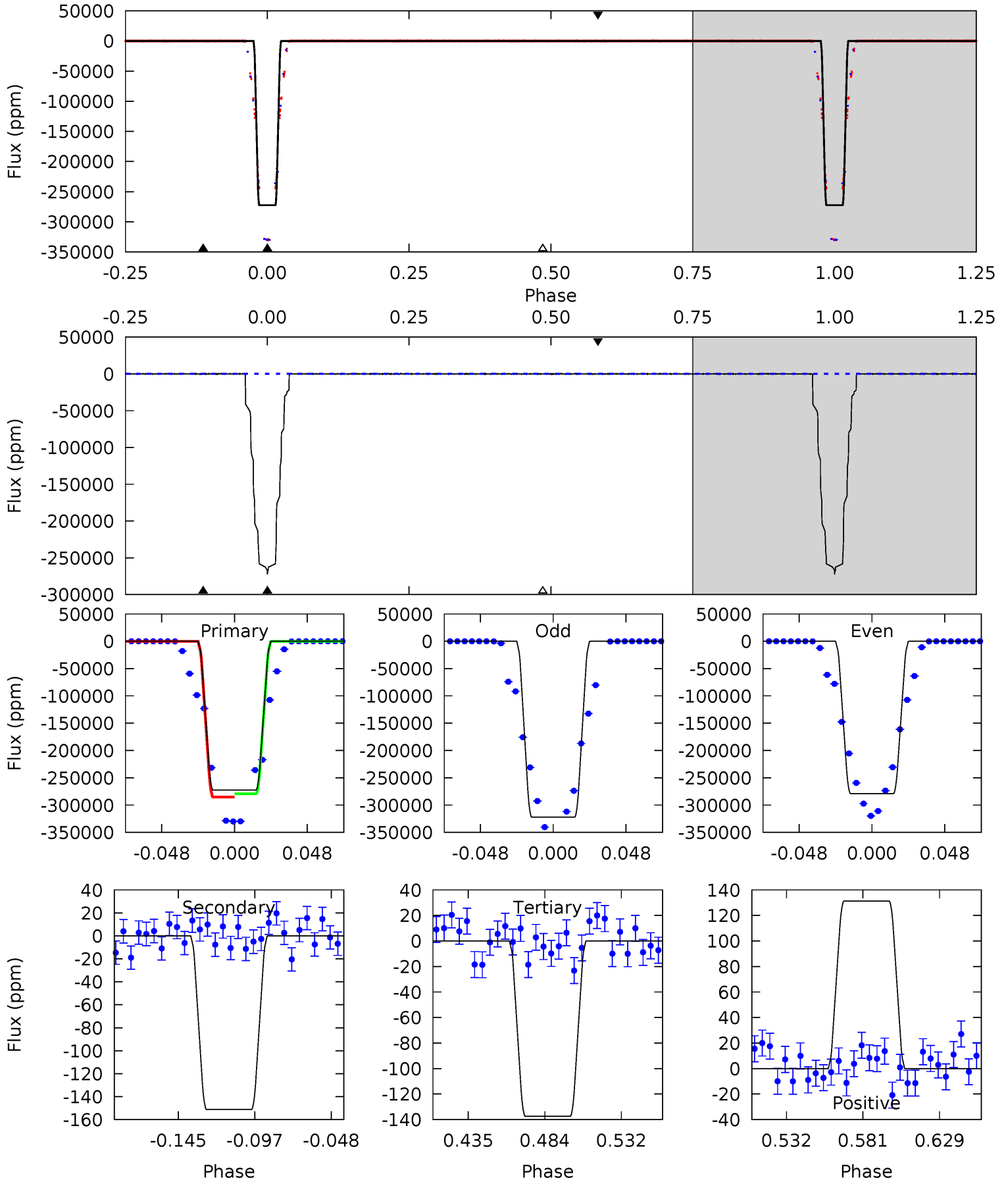
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

008479386-01, P = 5.860392 Days, E = 128.981735 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8894	4.94	4.49	4.29	4.71	1.97	1.24	8890	8890	0.45	0.65	2670	1.05	0.00	0



Stellar Parameters For KIC 008479386

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6267^{+170}_{-189}	$4.284^{+0.198}_{-0.180}$	$-0.500^{+0.300}_{-0.300}$	$1.158^{+0.308}_{-0.224}$	$0.940^{+0.135}_{-0.098}$	$0.852^{+0.756}_{-0.397}$
	+3%/-3%	+5%/-4%	+60%/-60%	+27%/-19%	+14%/-10%	+89%/-47%
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 008479386-01 / KOI 7046.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$54.19^{+14.88}_{-14.46}$	1662^{+122}_{-104}	2352^{+3226}_{-7780}	$0.733^{+86.264}_{-76.842}$
Alt.	-151 ± 31	$73.18^{+17.72}_{-14.77}$	1659^{+131}_{-110}	-2222^{+86}_{-96}	$0.061^{+0.037}_{-0.025}$

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

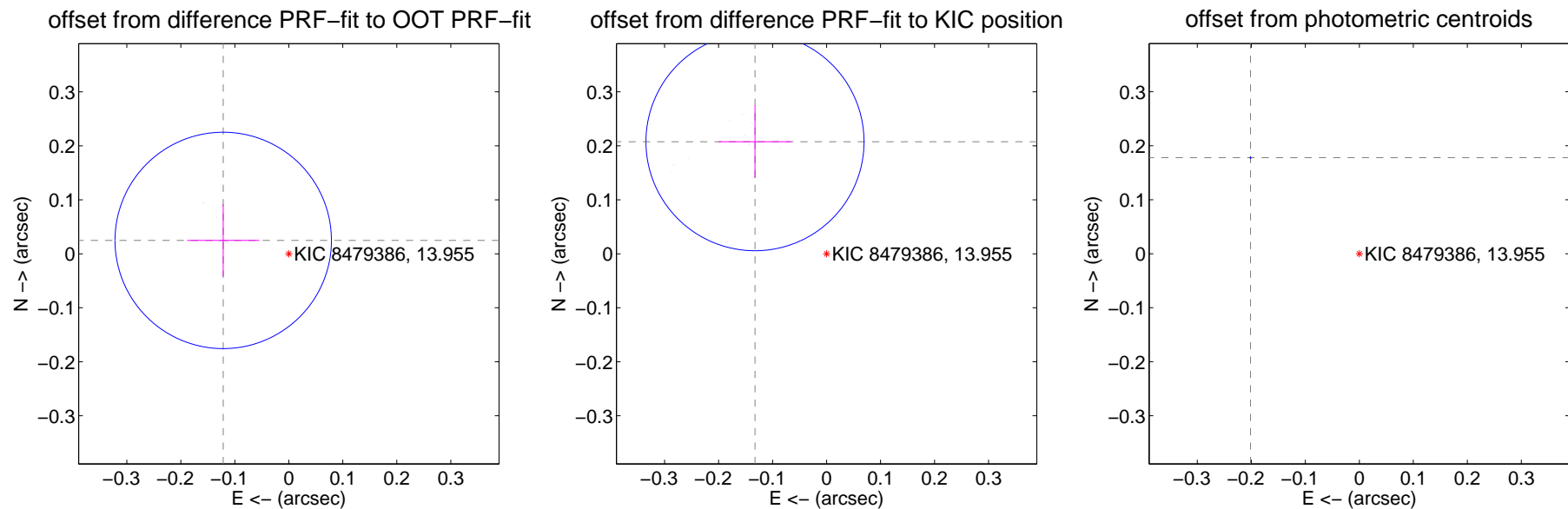
DV Centroid Data

Supplemental centroid analysis for 008479386-01. Kepler magnitude: 13.96. Transit SNR -1.00

There are 17 quarters with good PRF difference image offsets

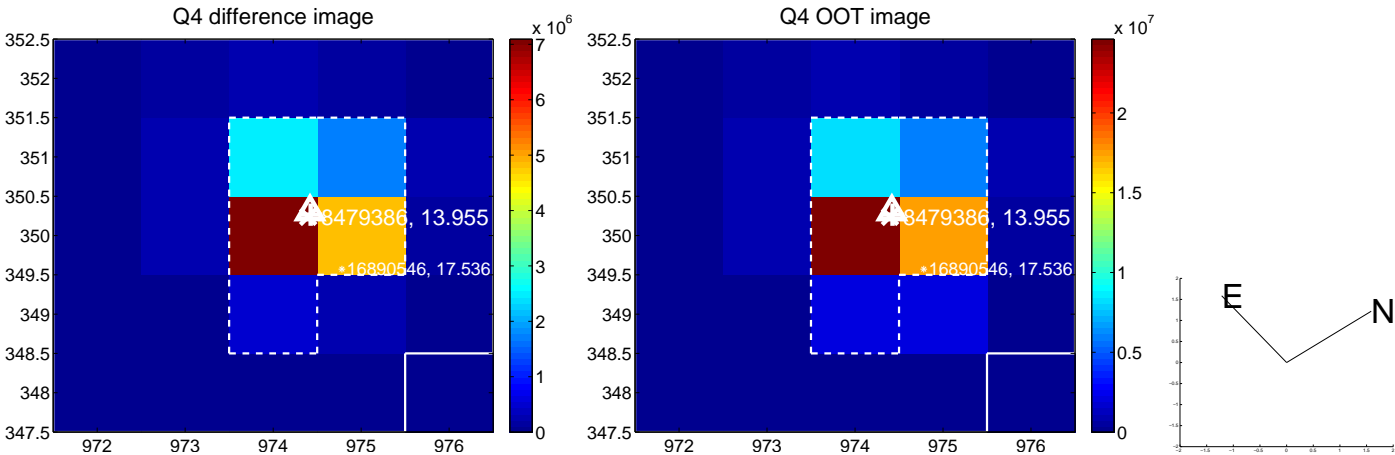
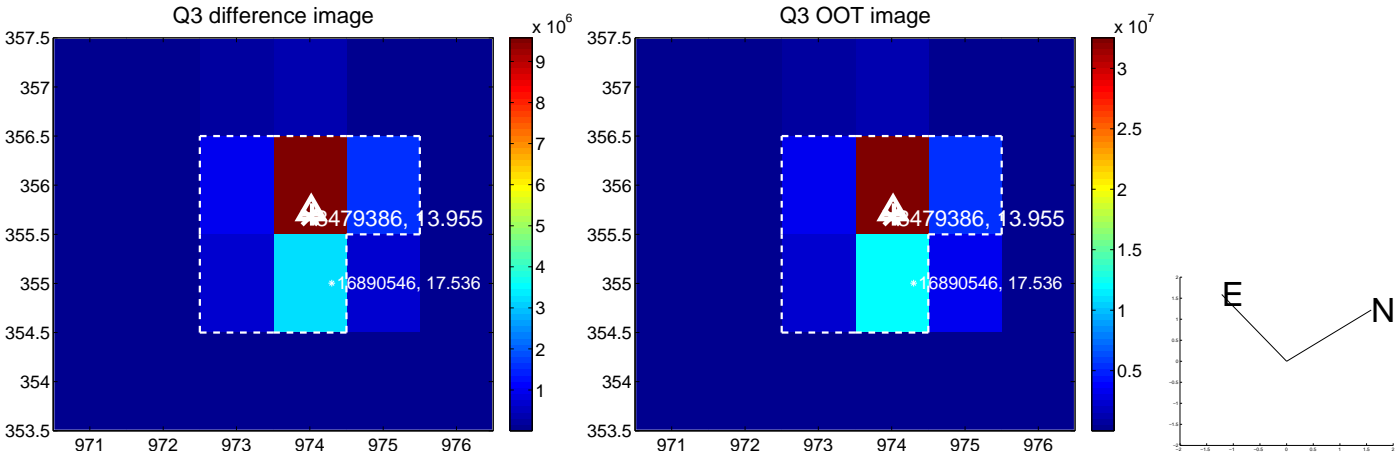
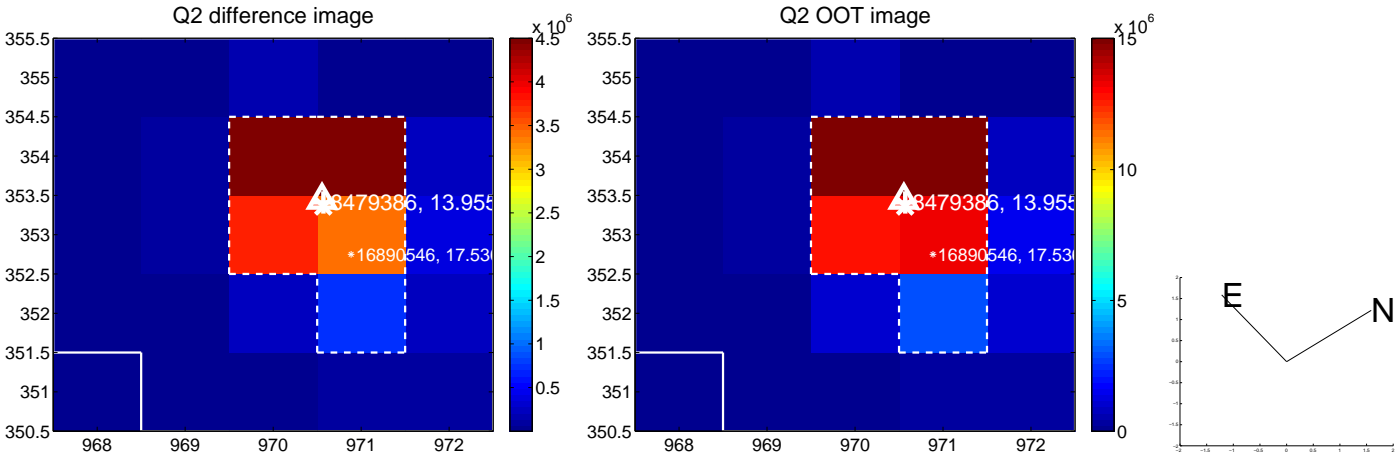
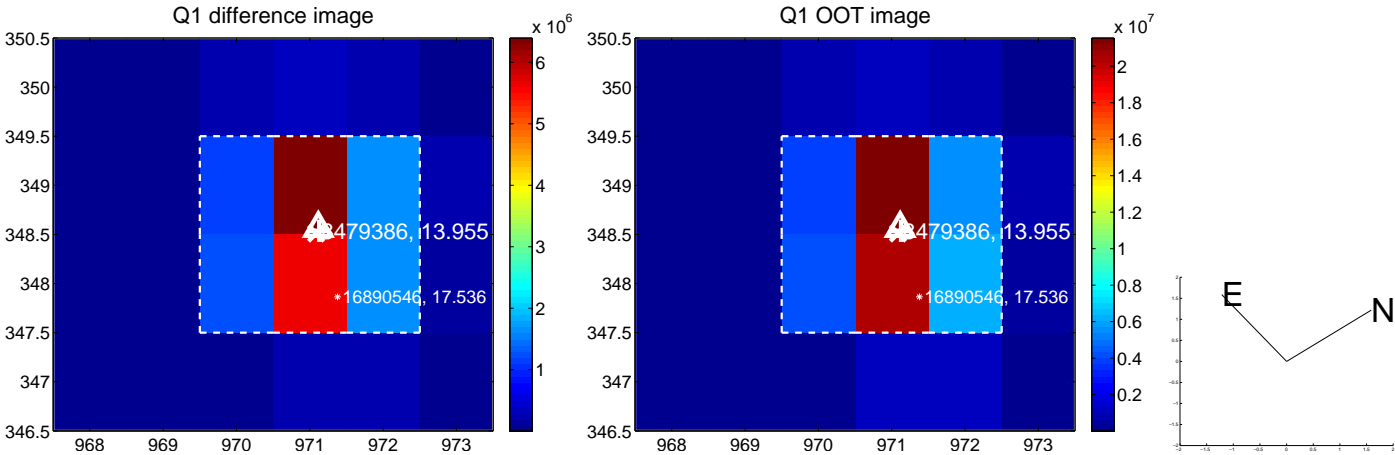
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.124 ± 0.067	1.86	0.121 ± 0.067	0.025 ± 0.067
PRF-fit source offset from KIC position	0.246 ± 0.067	3.66	0.133 ± 0.067	0.208 ± 0.067
photometric centroid source offset	0.27 ± 0.00	942.86	0.20 ± 0.00	0.18 ± 0.00

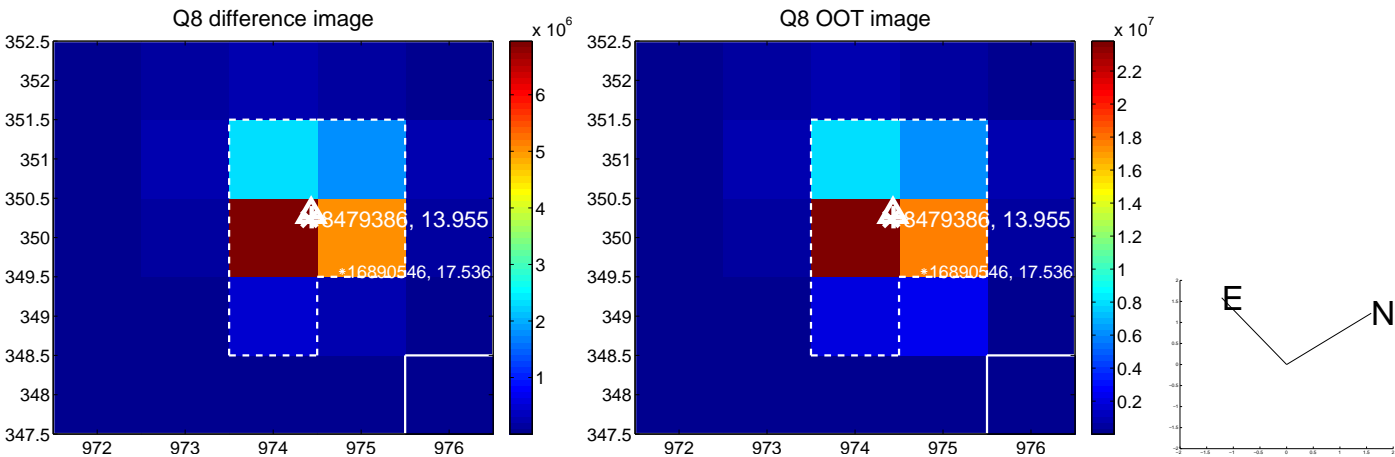
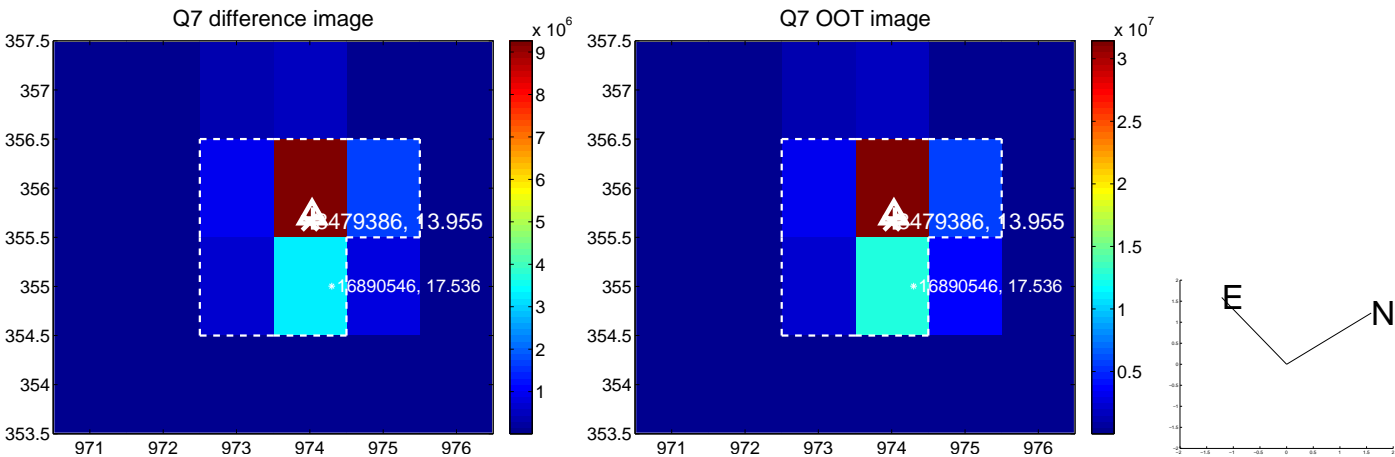
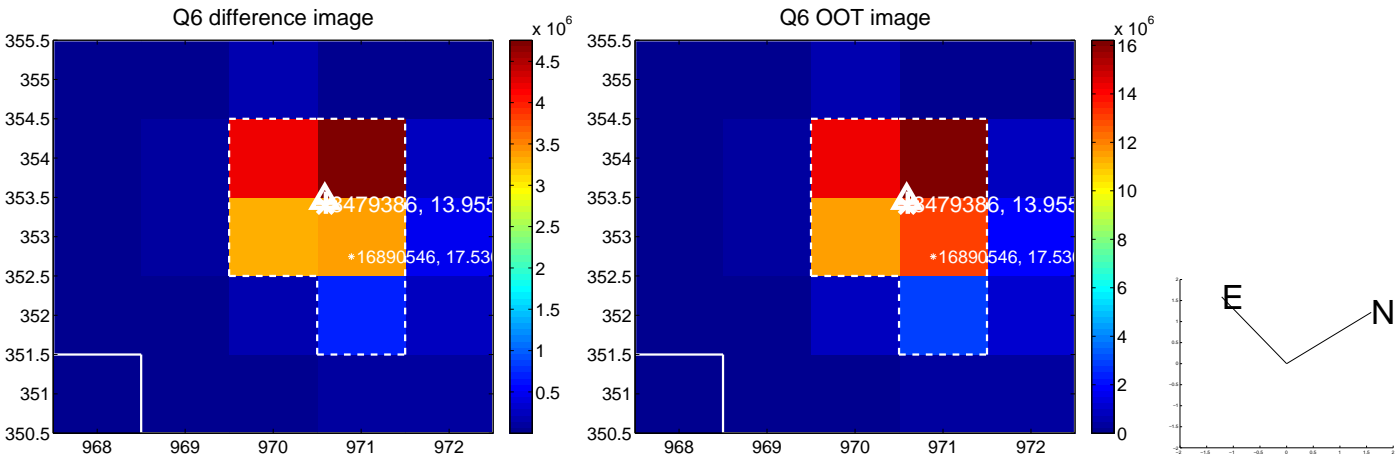
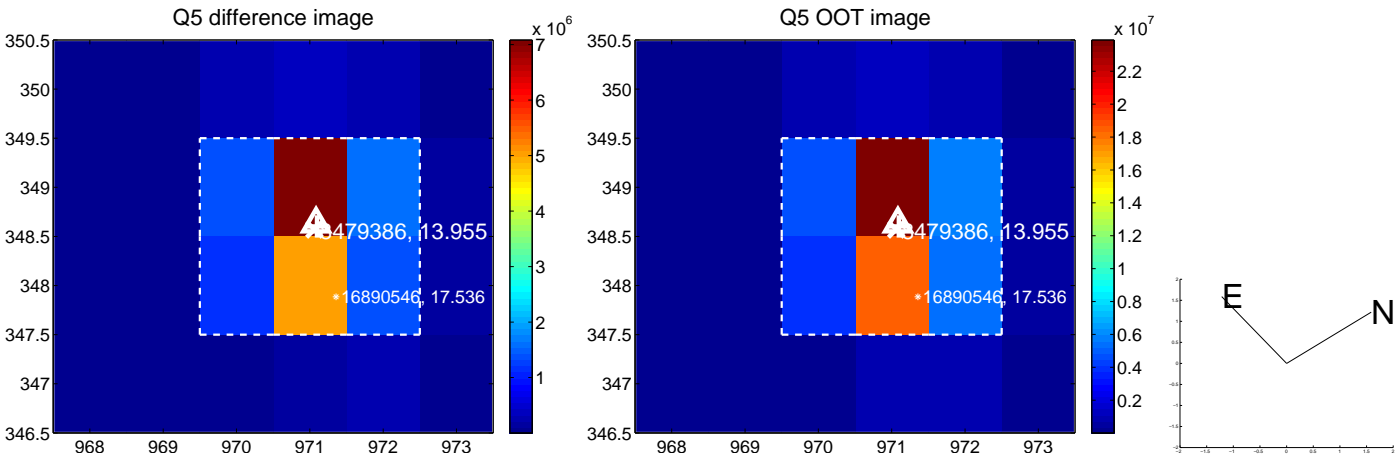


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

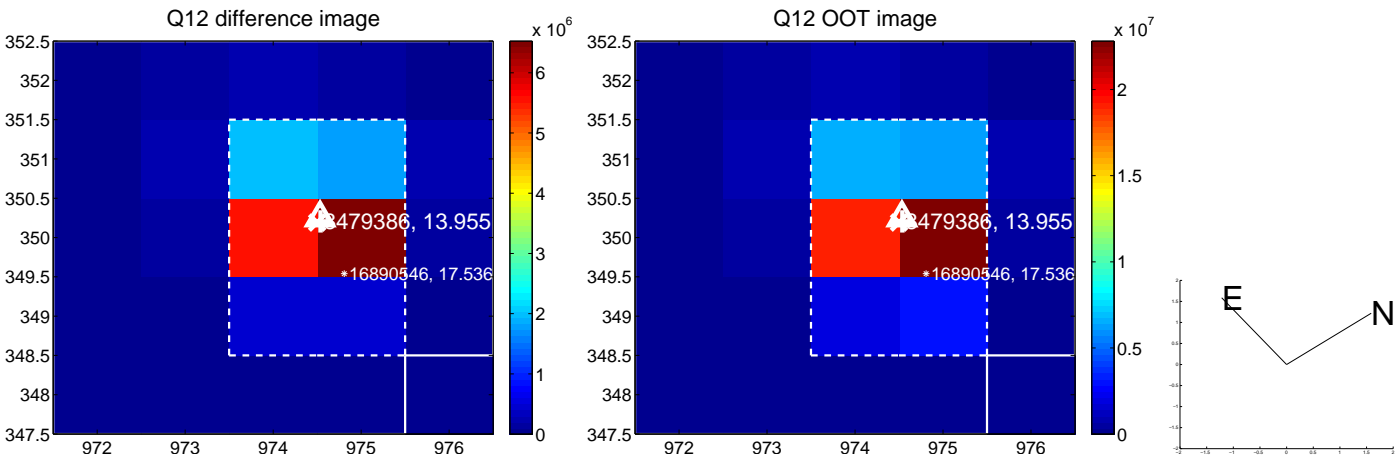
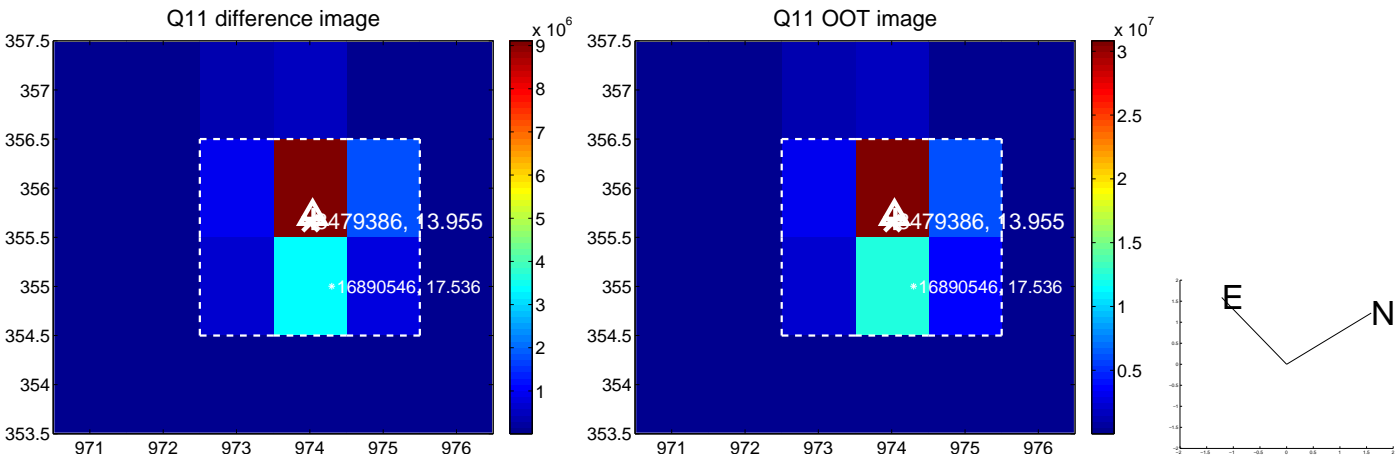
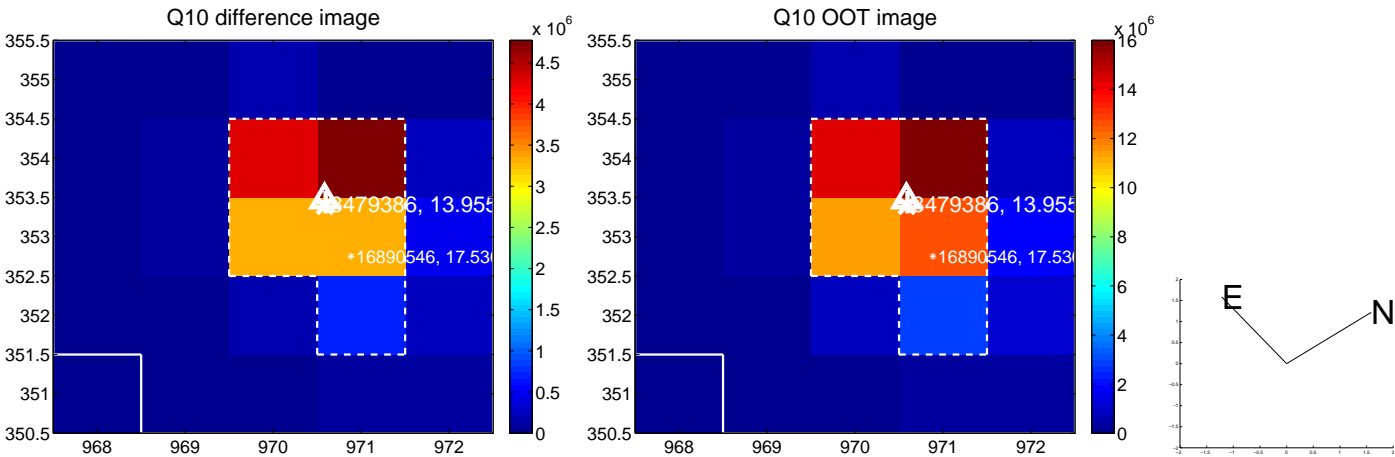
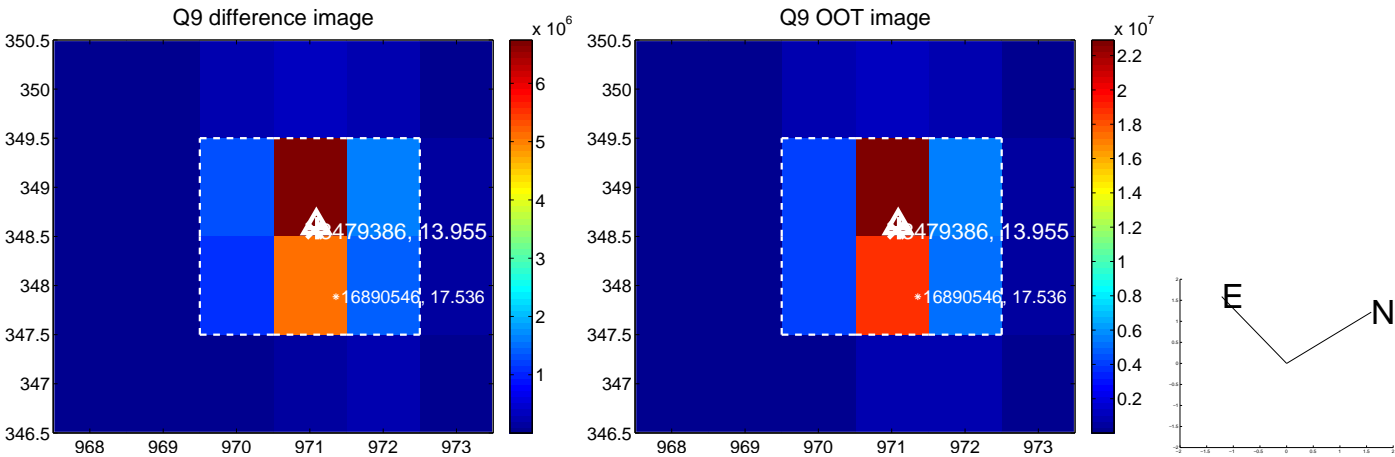
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



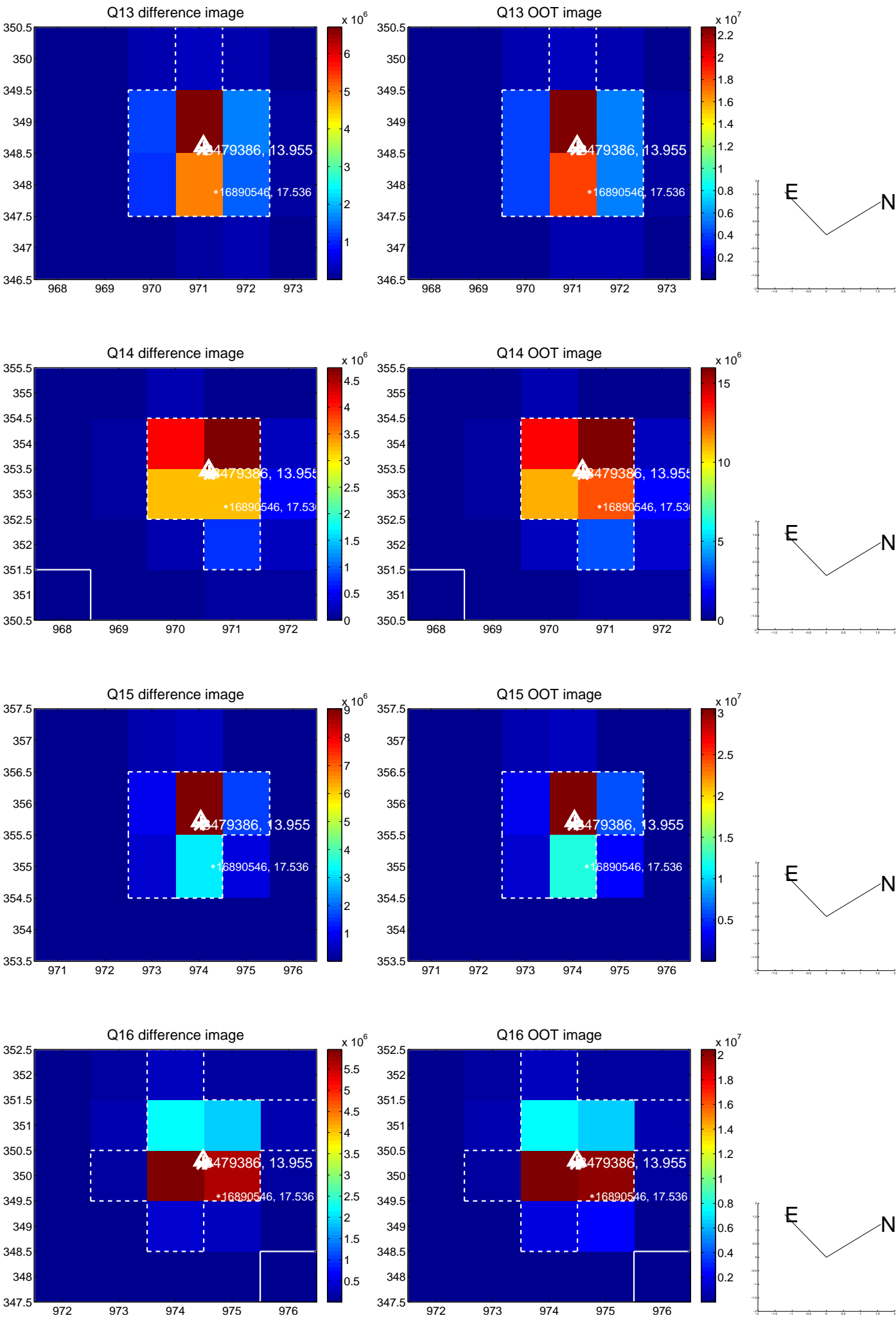
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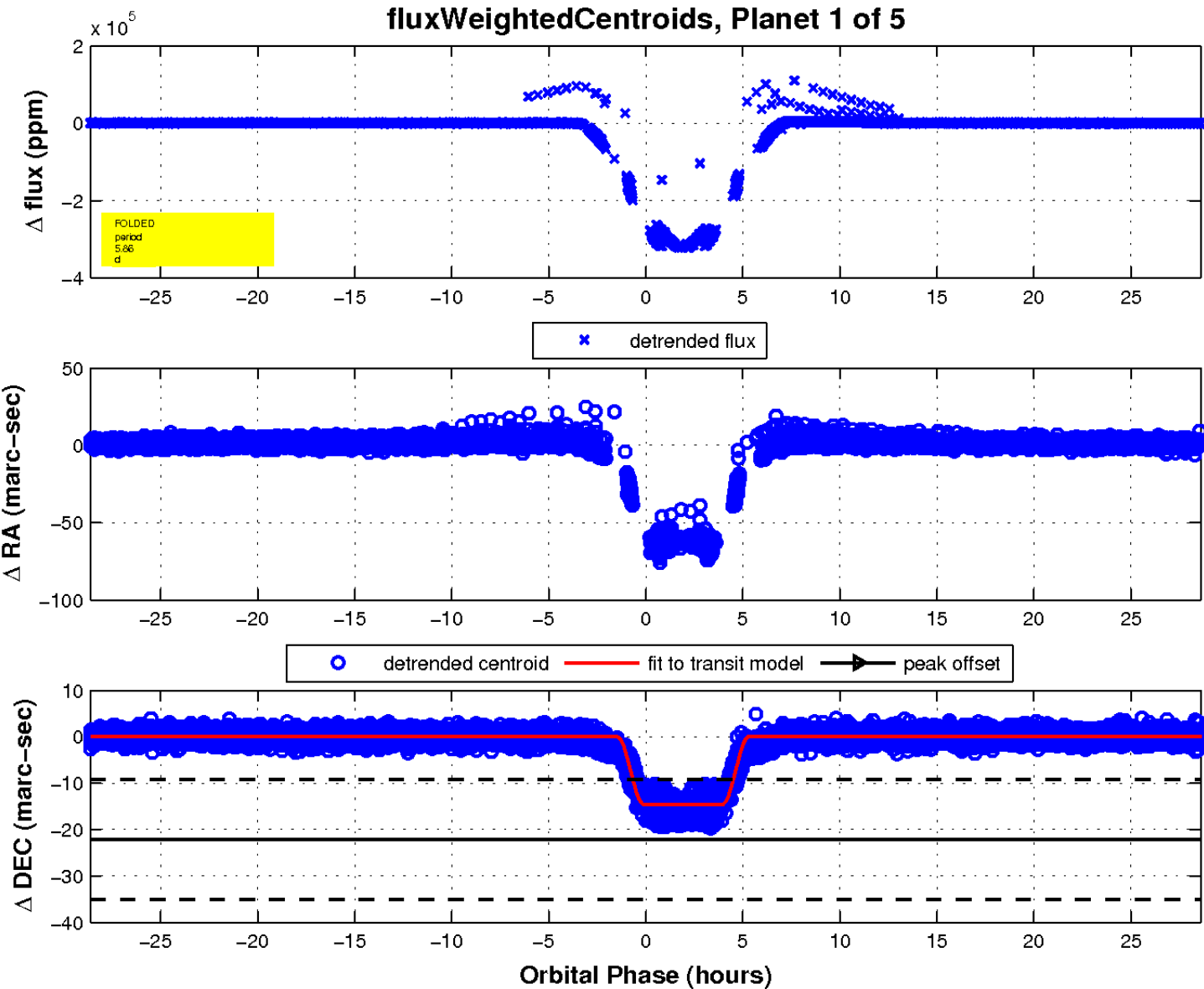
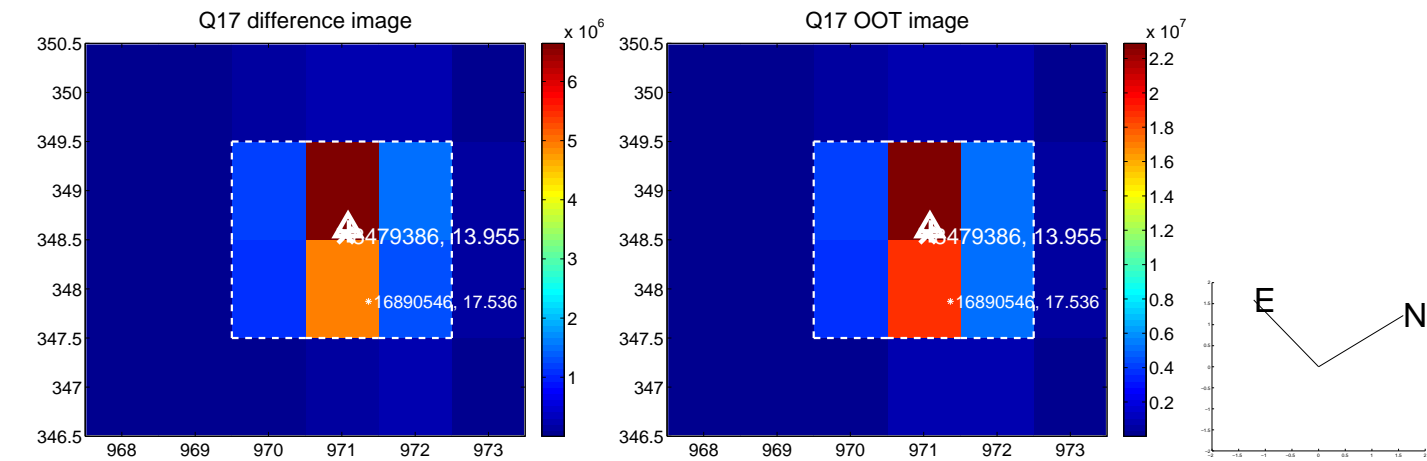
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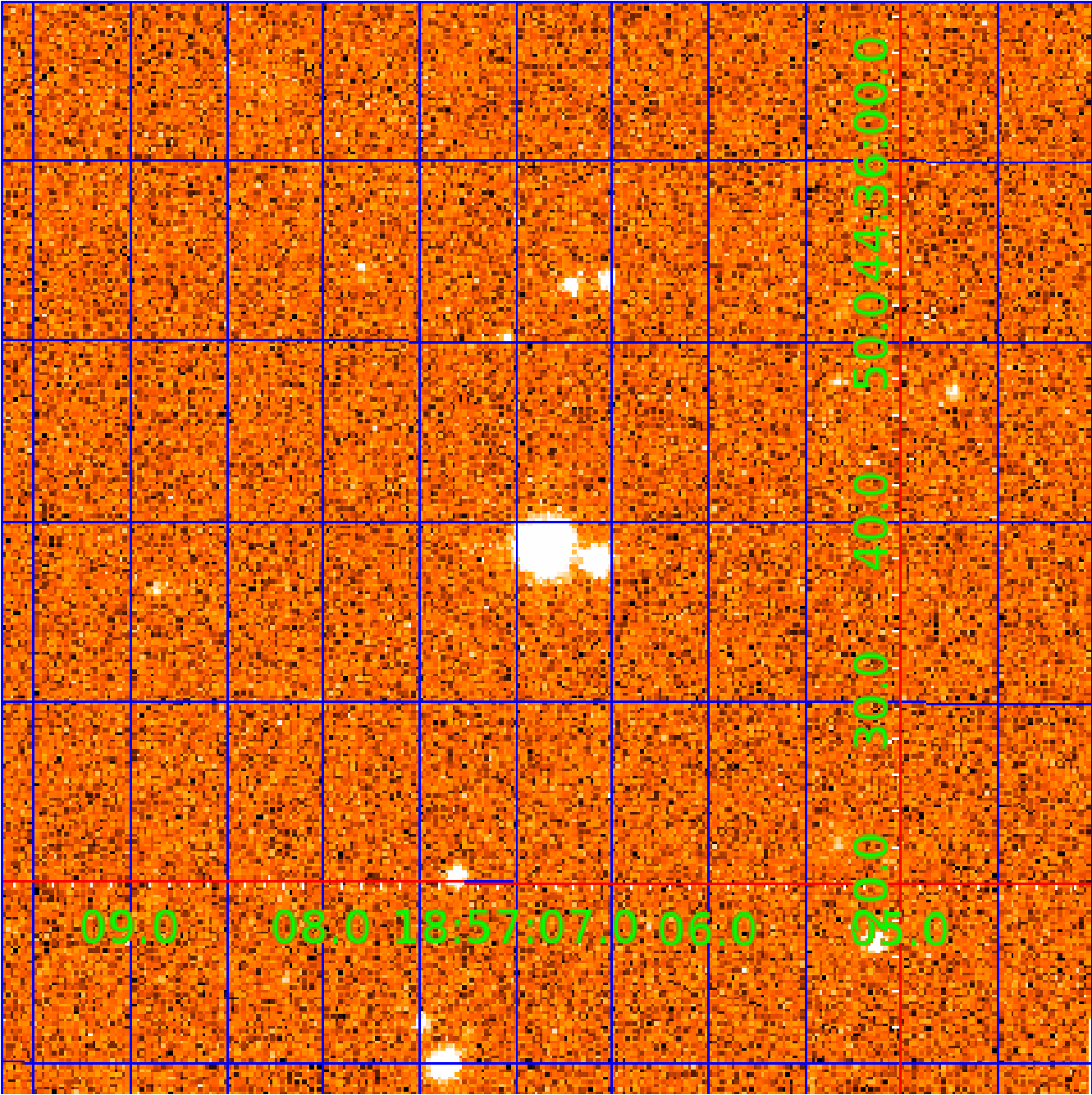


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008479386

Q1-17 DR25 TCE Parameters

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Robovetter Results

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008479386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
008479386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008479386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_FEW_DIFFS

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

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

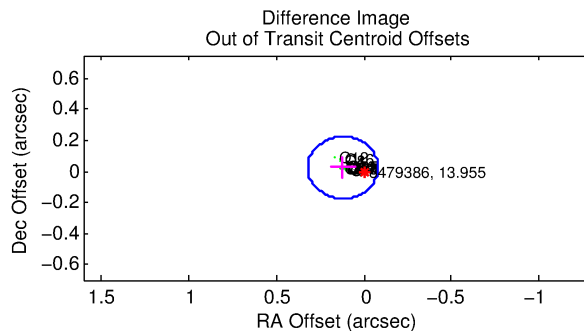
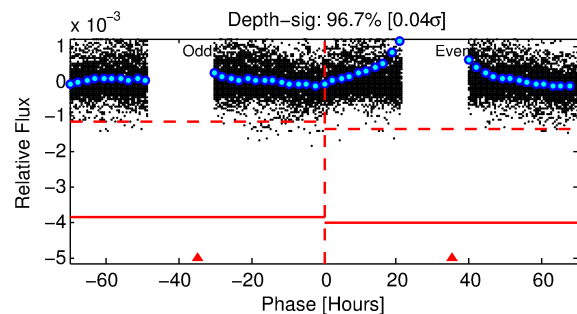
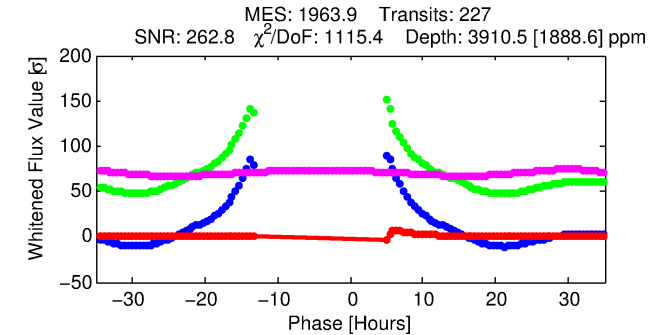
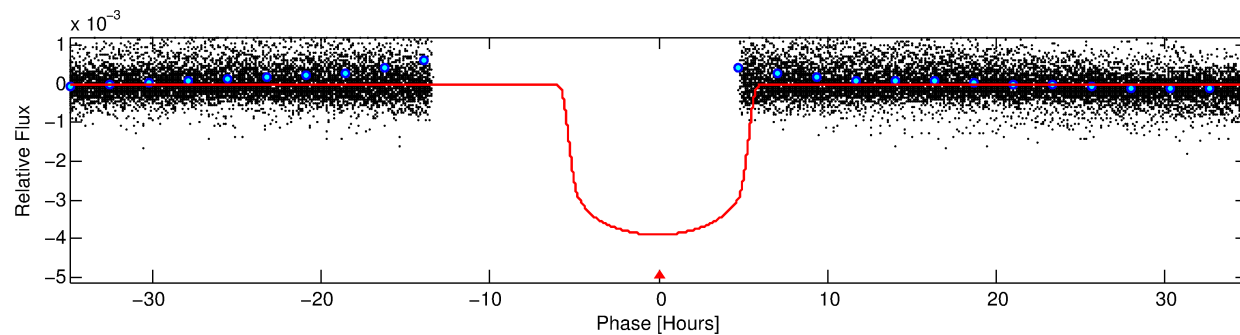
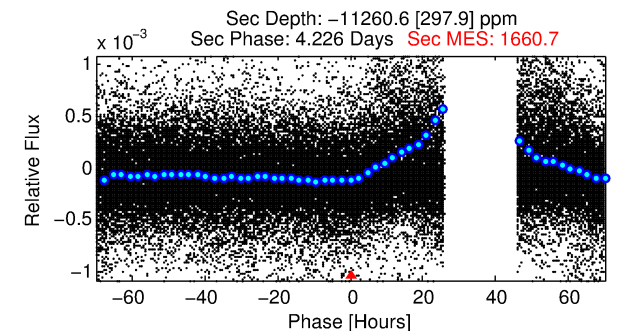
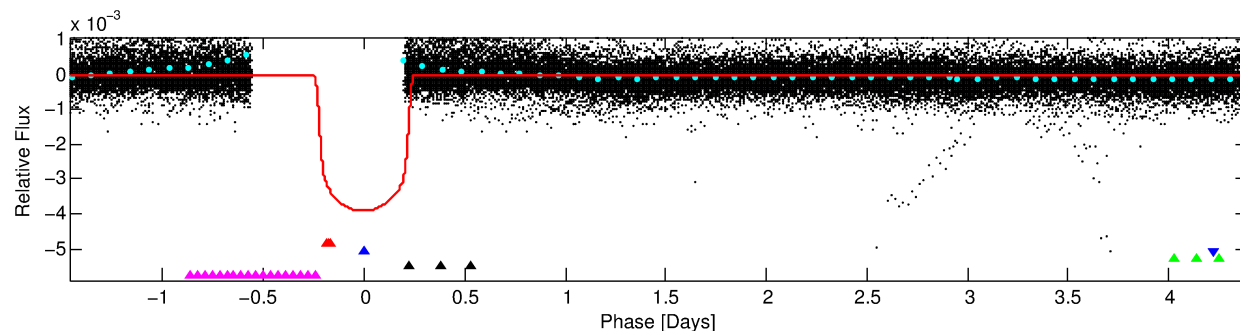
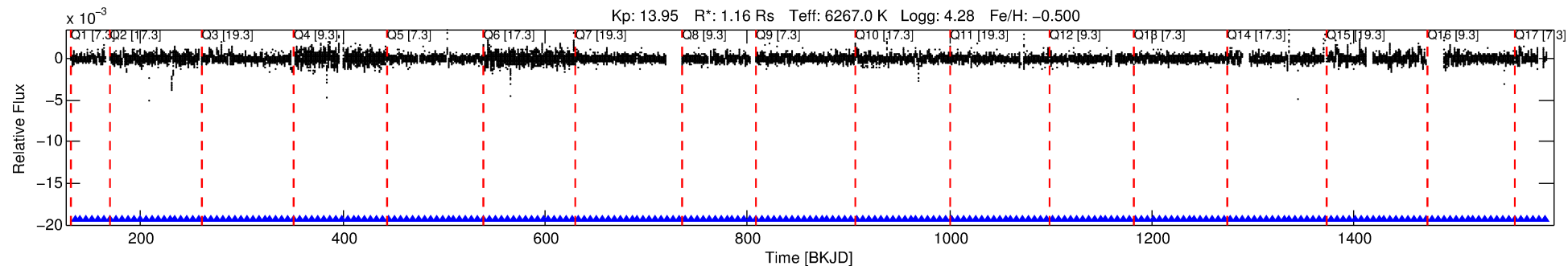
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 008479386-02

No Significant Match Found

DV One-Page Summary

KIC: 8479386 Candidate: 2 of 5 Period: 5.860 d
KOI: K07046 Corr: No Ephemeris Match



DV Fit Results:

Period = 5.86033 [0.00032] d
Epoch = 135.0263 [0.1027] BKJD
Rp/R* = 0.0591 [0.0387]
a/R* = 3.67 [11.04]
b = 0.50 [3.64]
Seff = 476.84 [177.38]
Teq = 1192 [111] K
Rp = 7.47 [5.28] Re
a = 0.0623 [0.0146] AU
Ag = N/A
Teffp = N/A

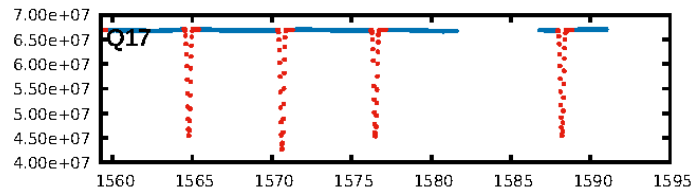
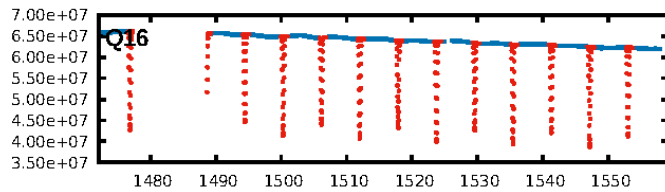
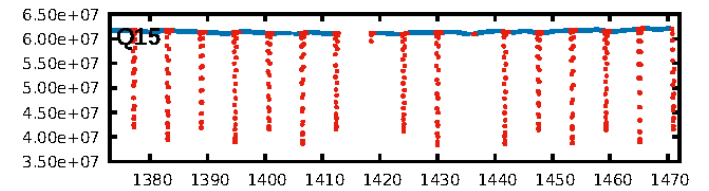
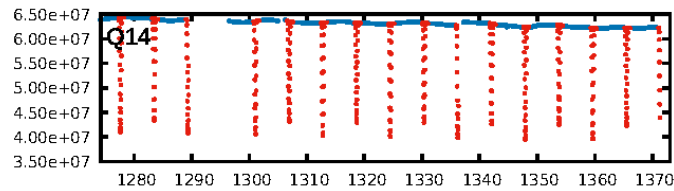
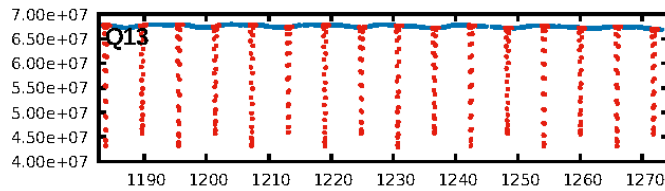
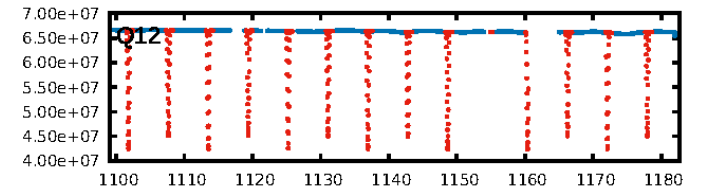
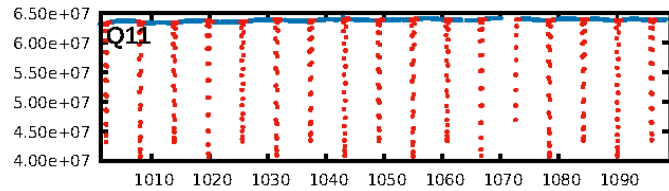
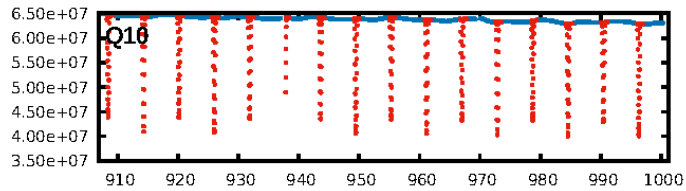
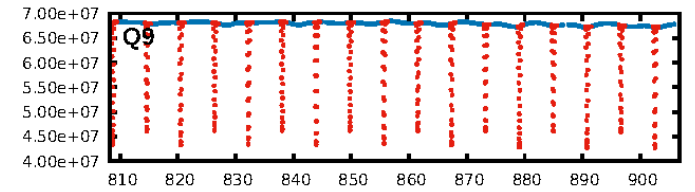
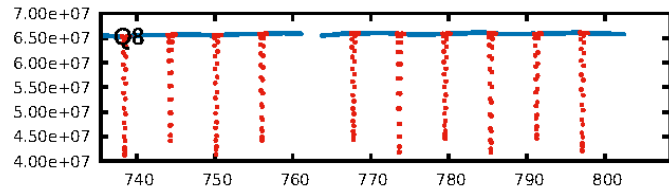
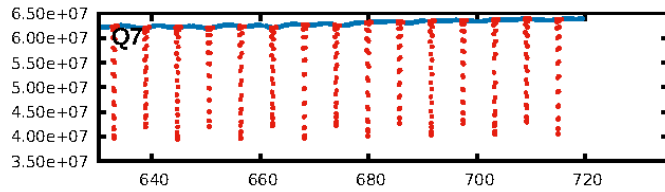
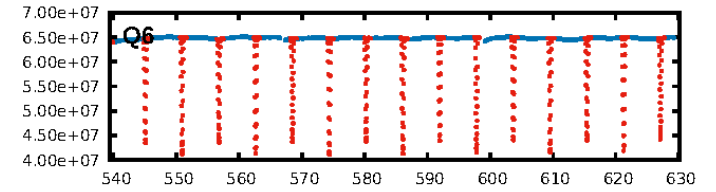
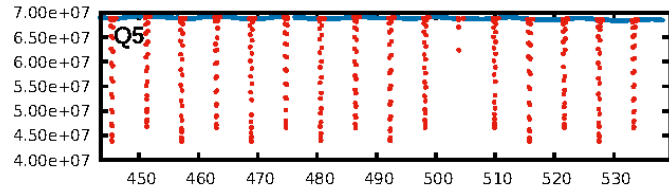
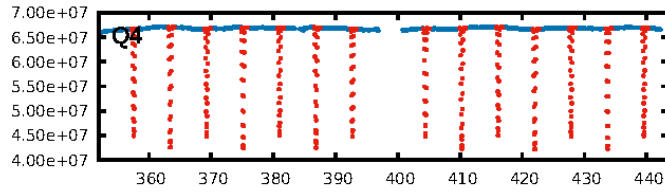
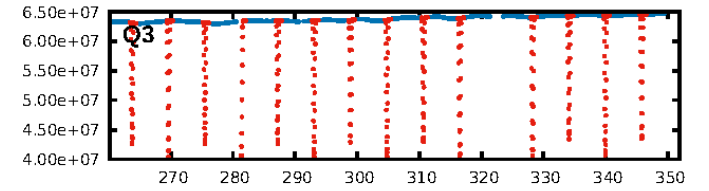
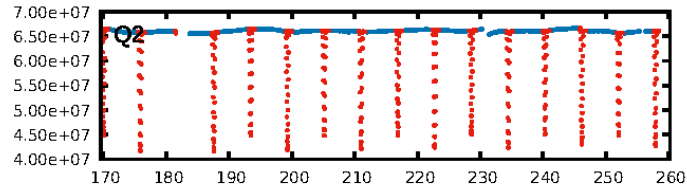
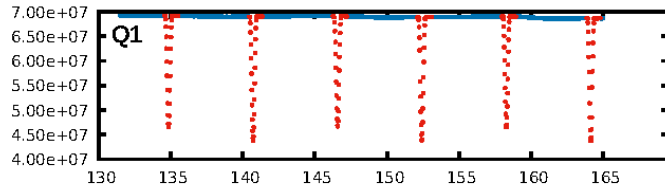
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 0.00e+00
RollingBand-fgt: 1.00 [216/216]
GhostDiagnostic-chr: 2.458
Centroid-sig: N/A
Centroid-so: 0.155 arcsec [13.72σ]
OotOffset-rm: 0.122 arcsec [1.83σ]
KicOffset-rm: 0.260 arcsec [3.83σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 1.00 [17/17]
DiffImageOverlap-fno: 0.00 [0/17]

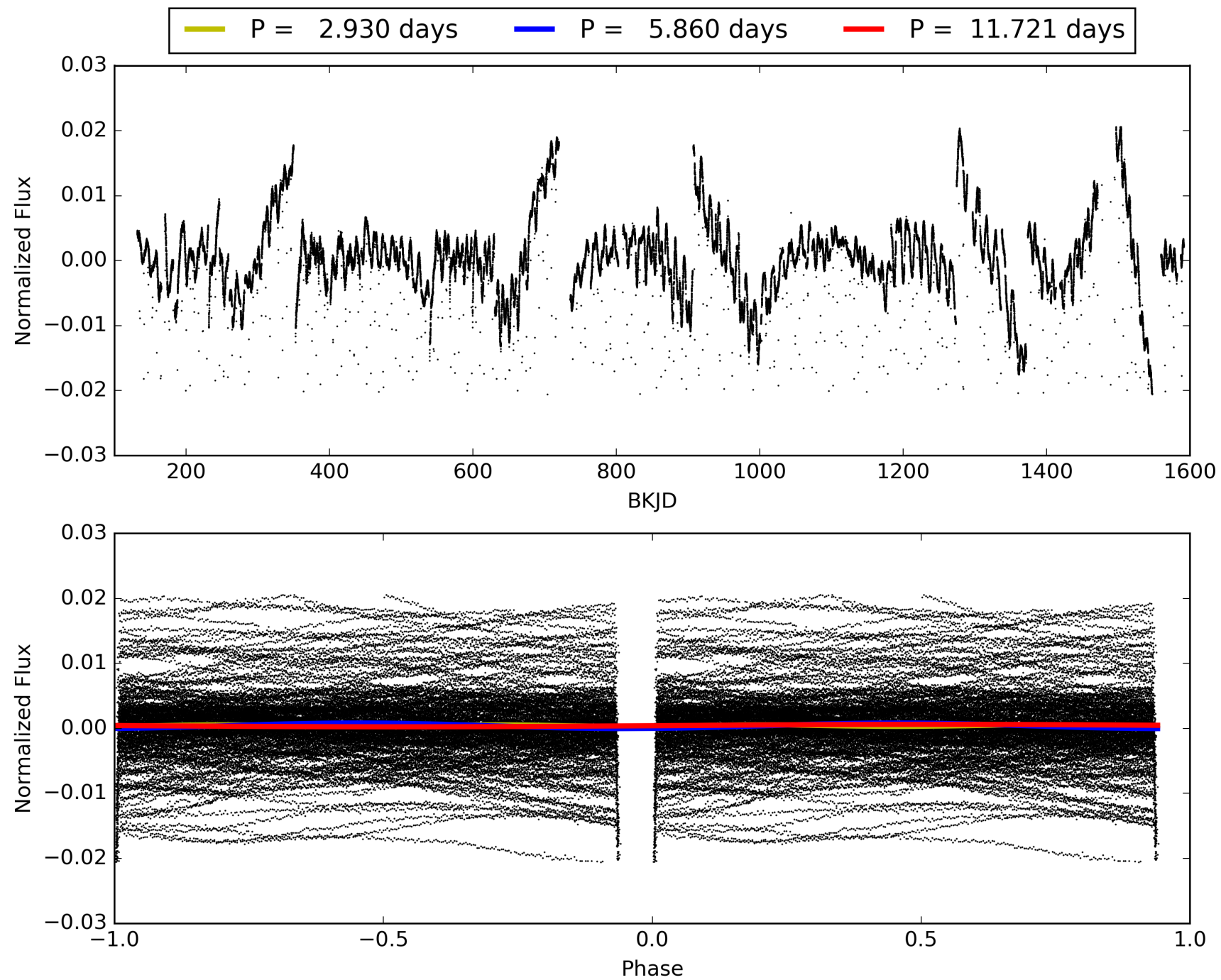
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 05:44:16 Z

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

TCE 008479386-02, PDC Light Curves

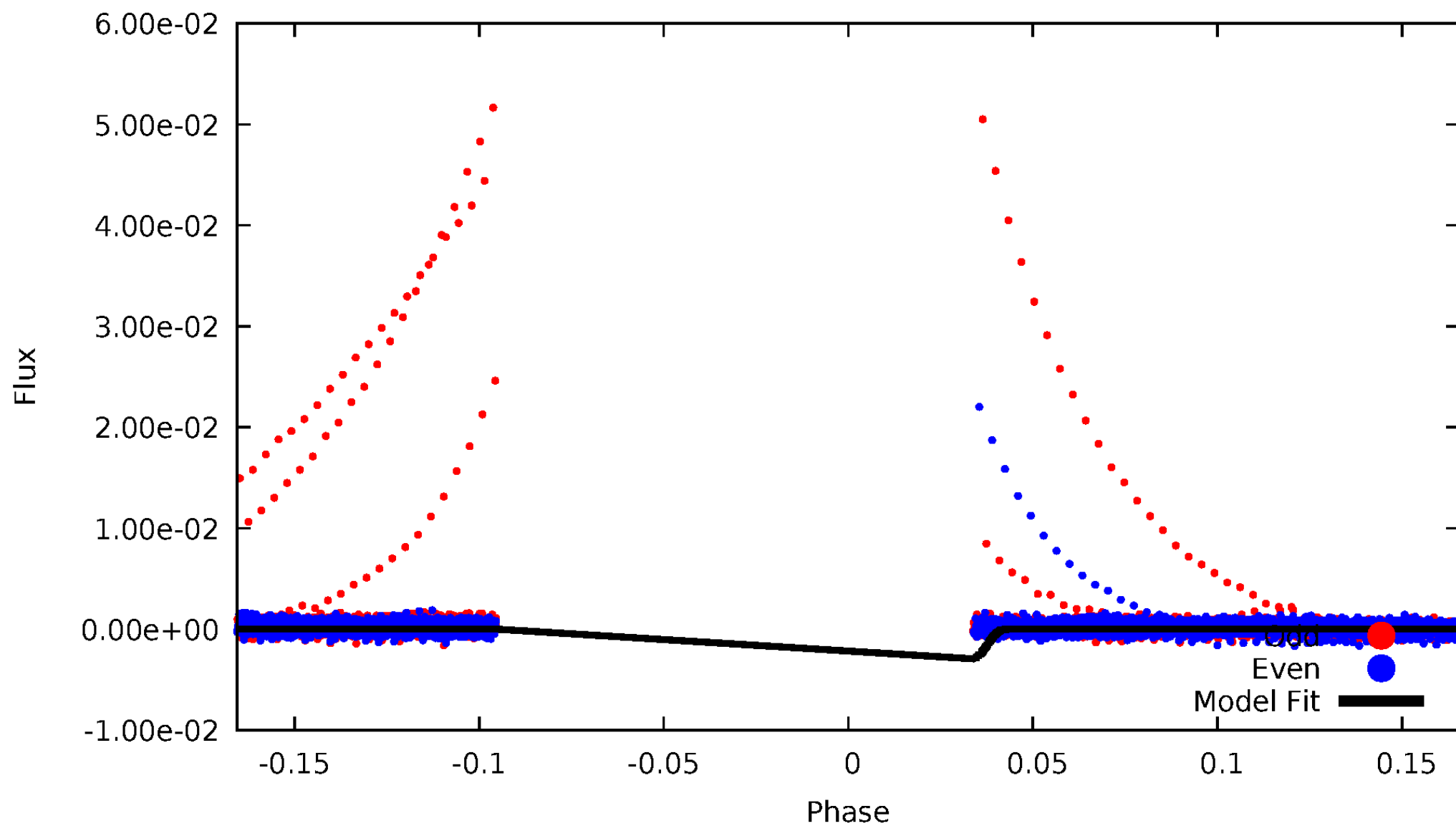


TCE 008479386-02



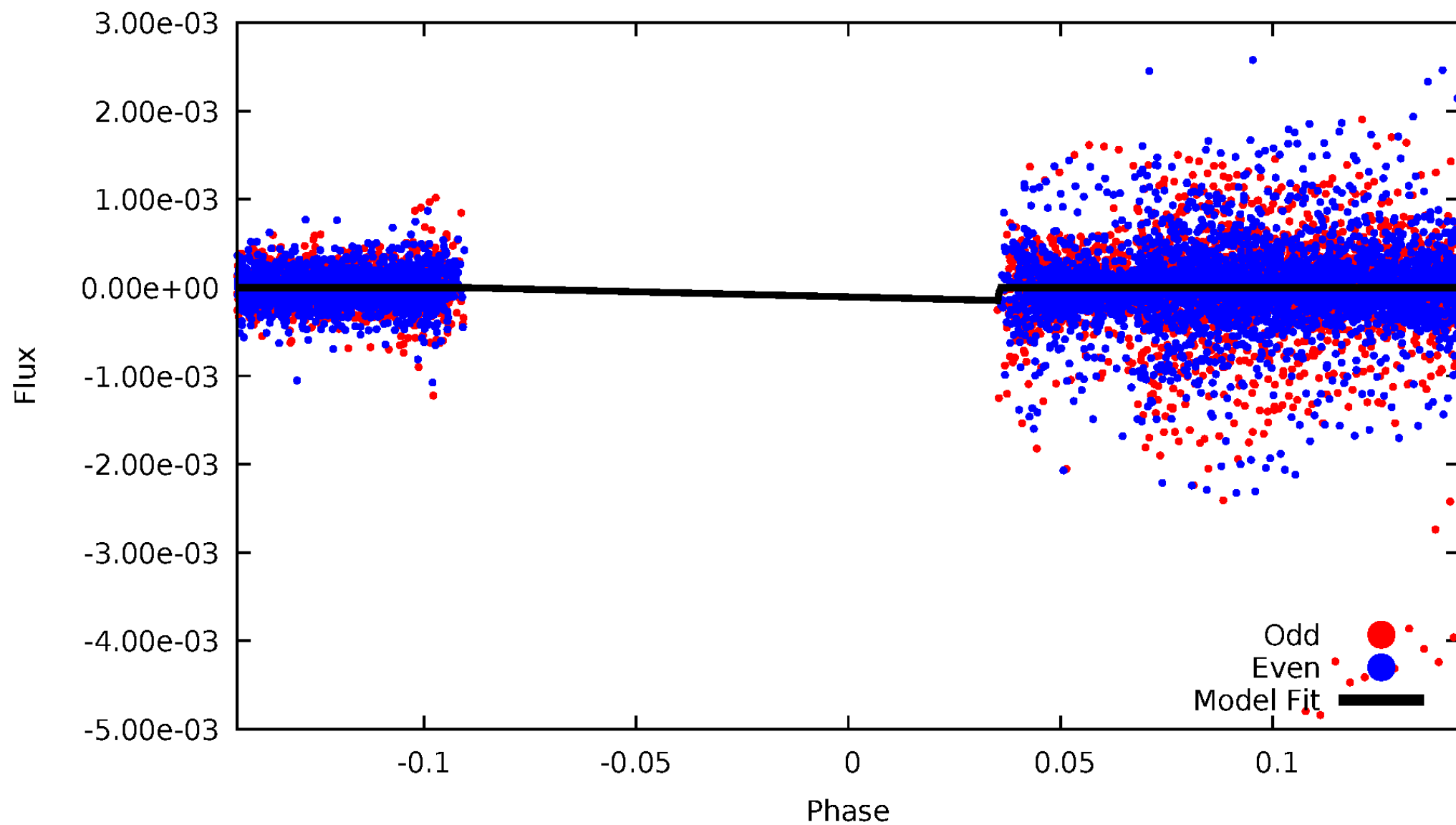
DV Odd/Even

TCE 008479386-02



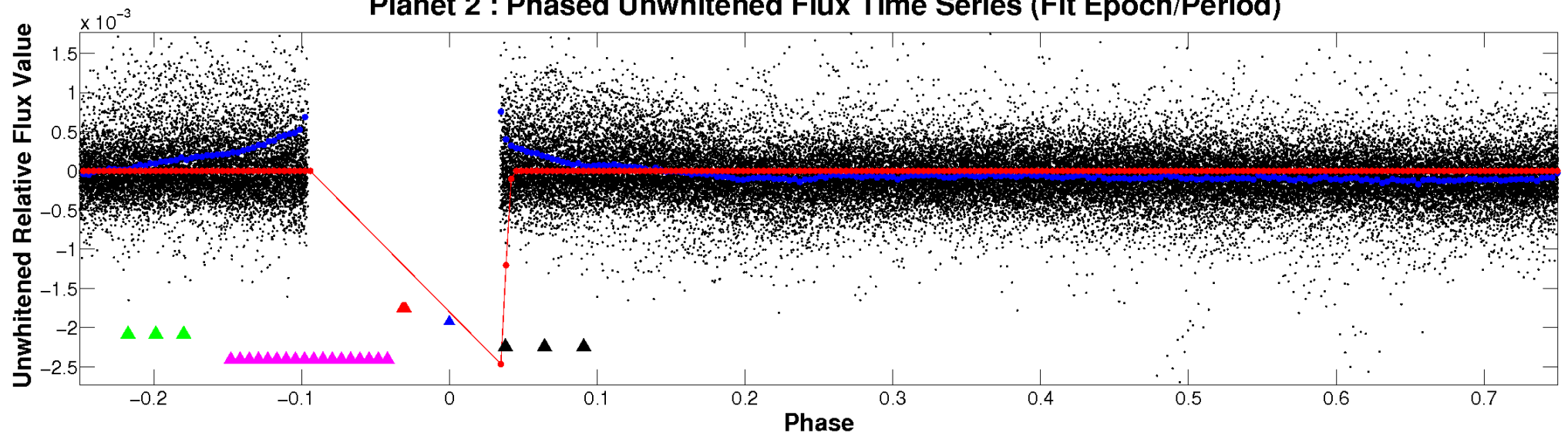
ALT Odd/Even

TCE 008479386-02

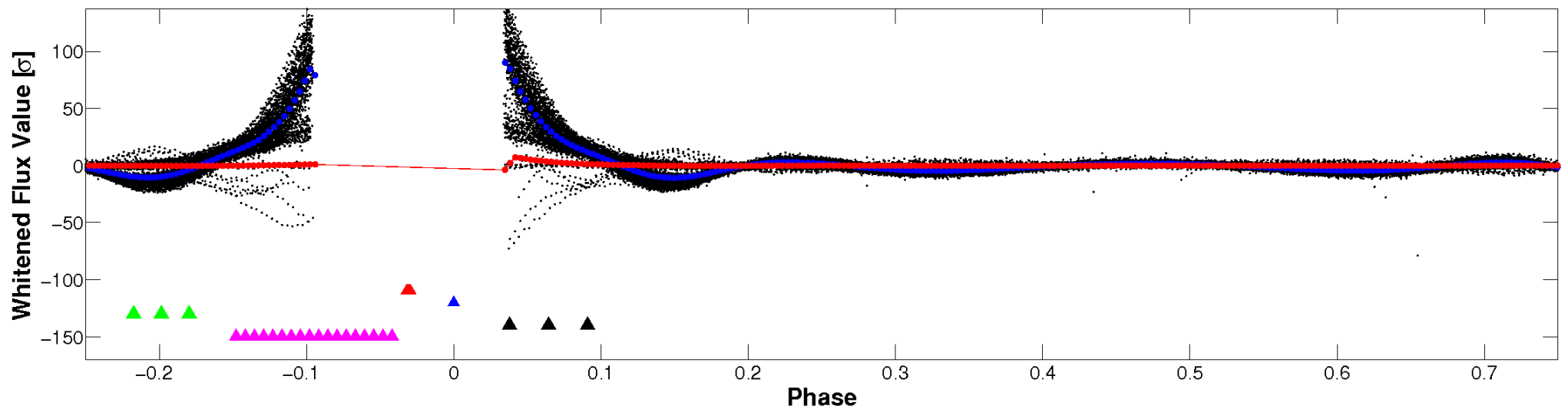


Non-Whitened Vs. Whitened Light Curve

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

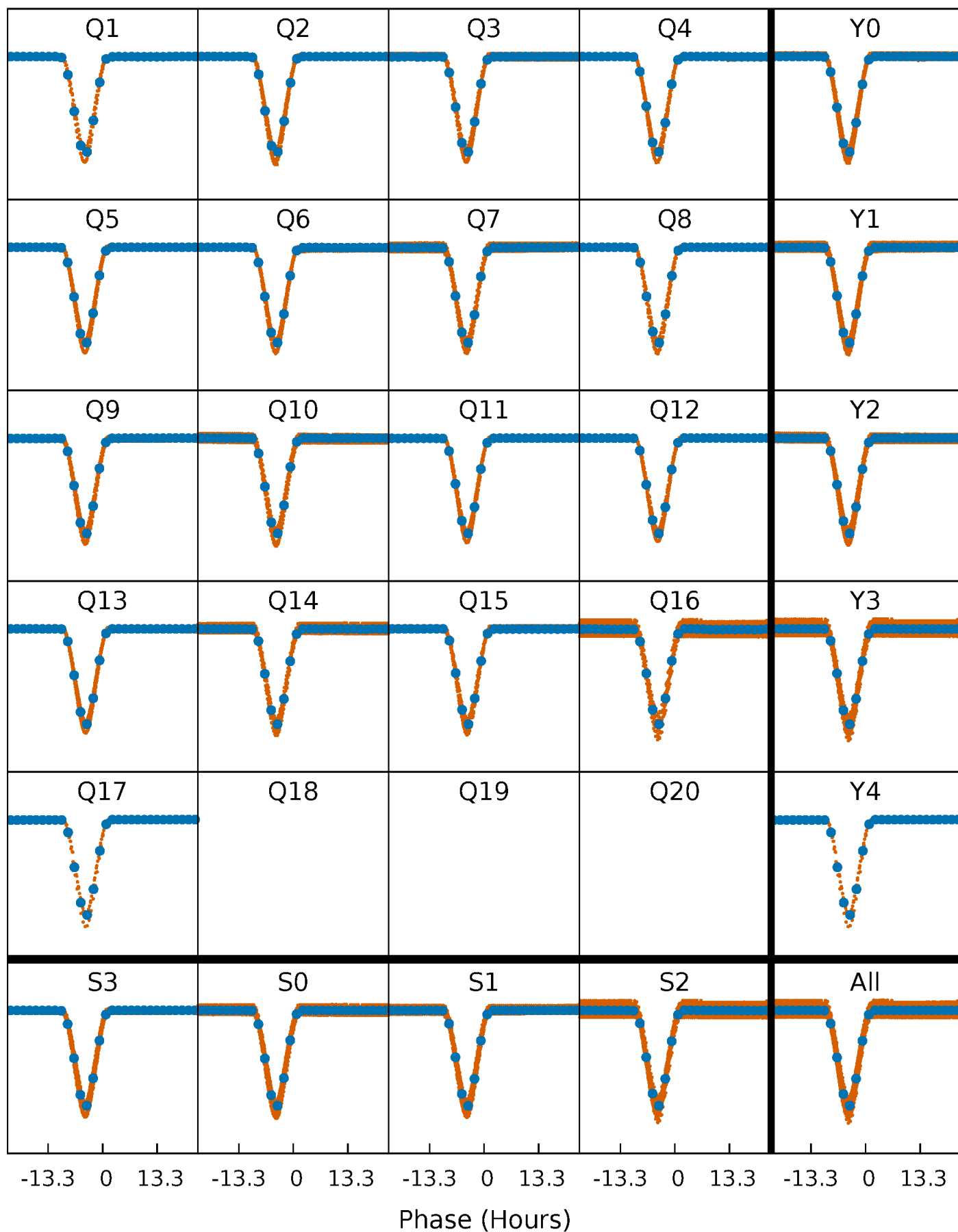


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



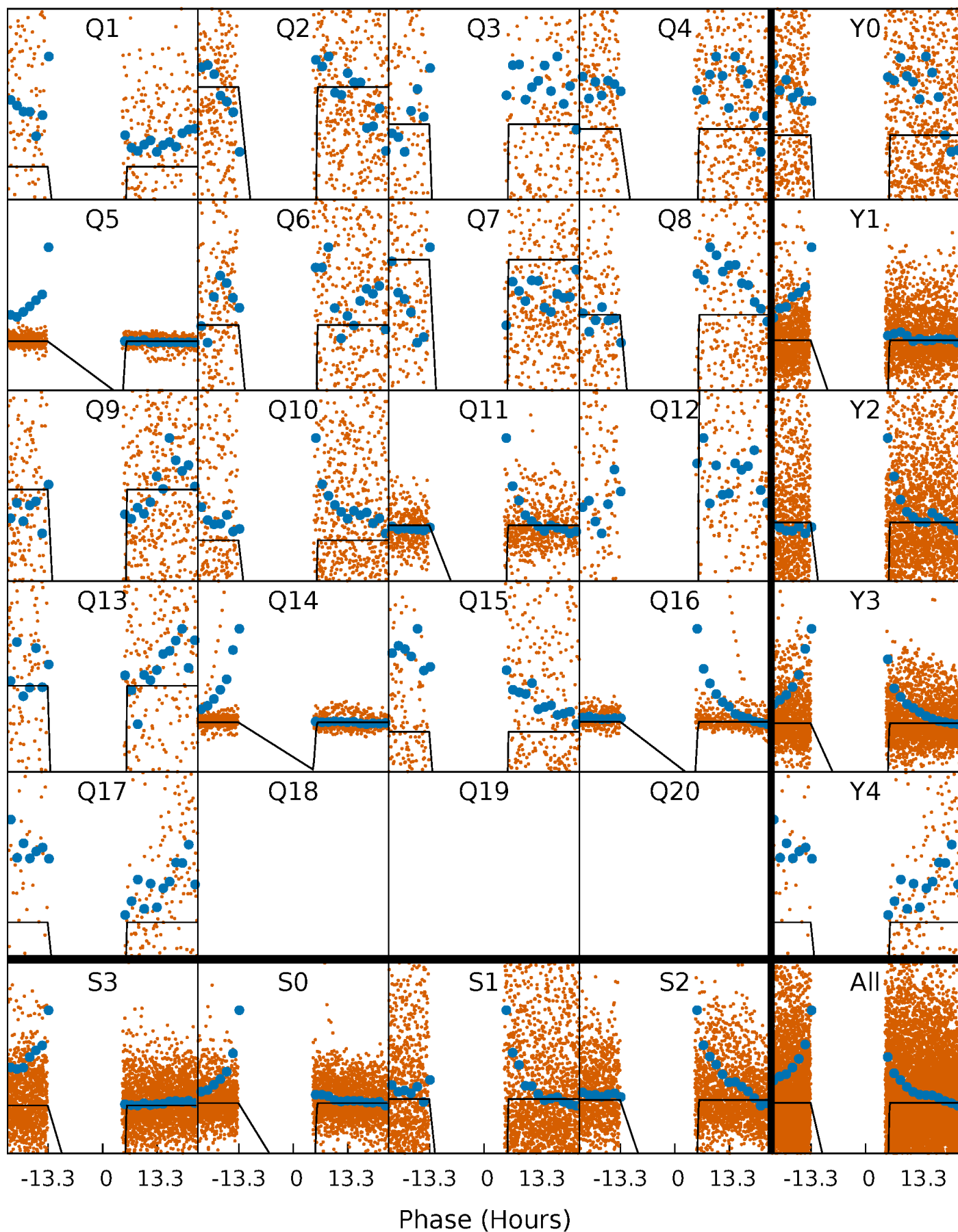
PDC Quarter-Phased Transit Curves

TCE 008479386-02 $P = 5.860326$ Days $T_0 = 135.026288$ (BKJD)



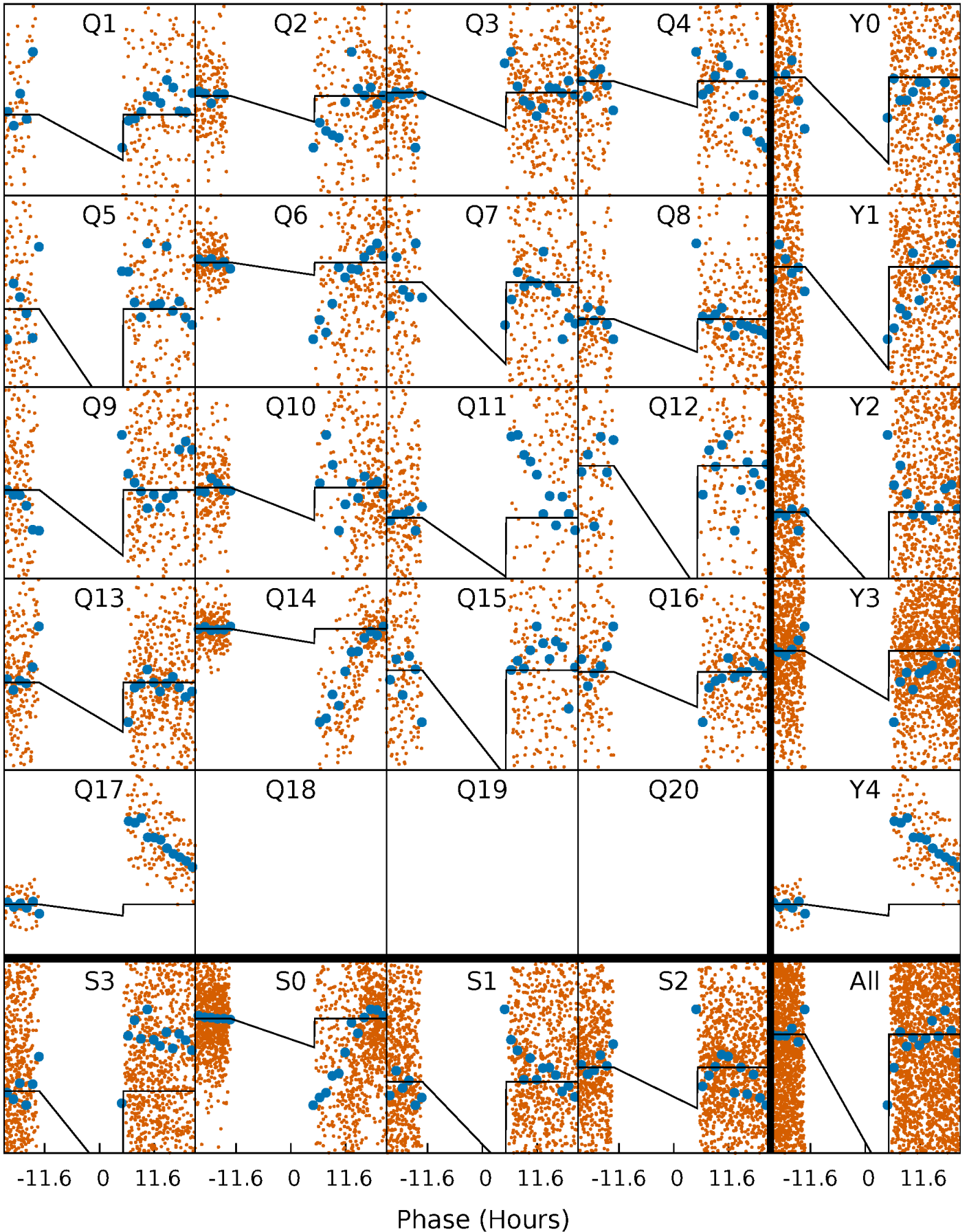
DV Quarter-Phased Transit Curves

TCE 008479386-02 P= 5.860326 Days $T_0=135.026288$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

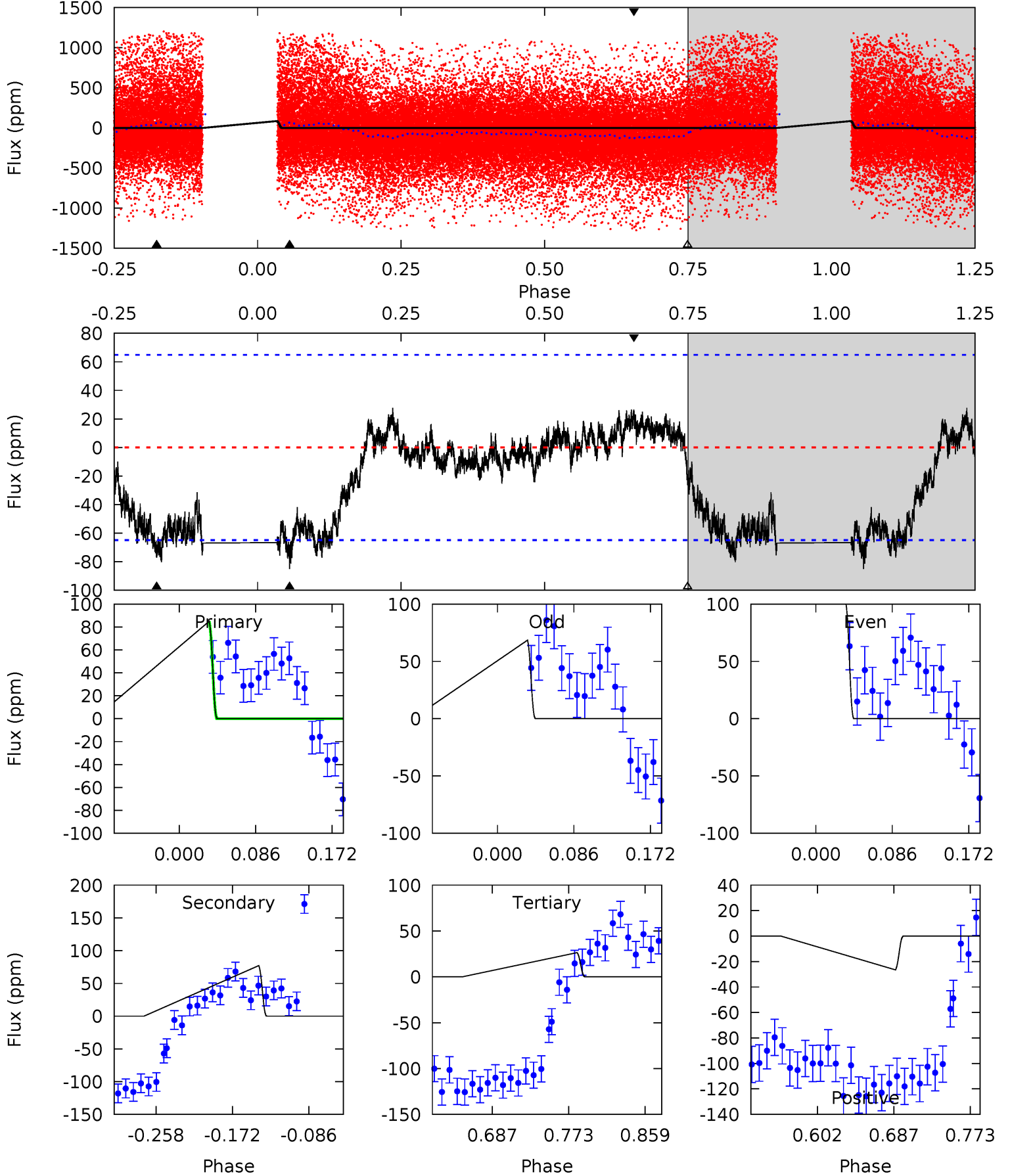
TCE 008479386-02 P= 5.860244 Days $T_0=135.018291$ (BKJD)



DV Model-Shift Uniqueness Test

008479386-02, P = 5.860326 Days, E = 129.165962 Days

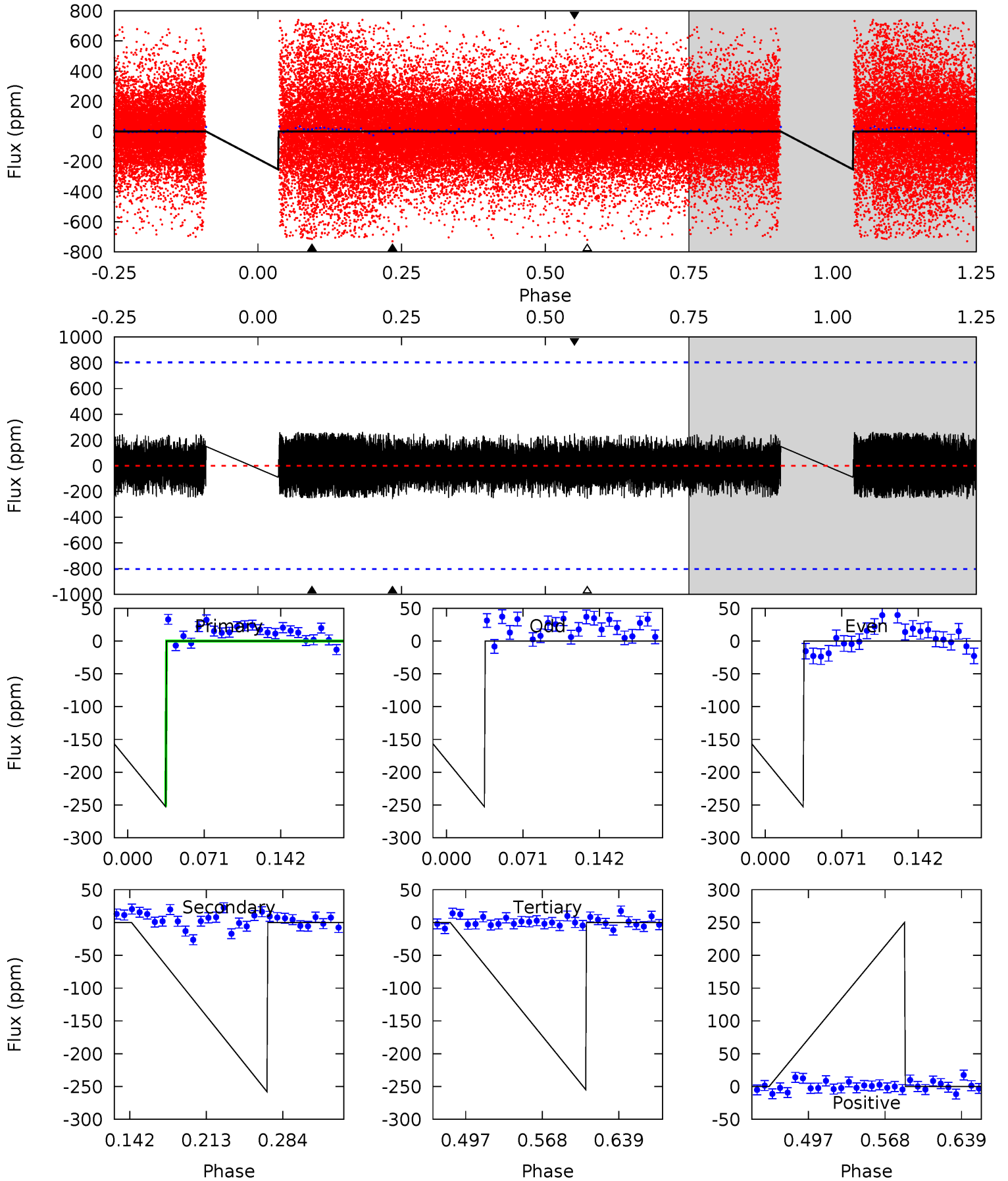
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.02	5.47	1.87	1.88	4.60	1.72	0.88	4.15	4.14	3.60	3.59	1.15	24.1	0.25	0



Alt Model-Shift Uniqueness Test

008479386-02, P = 5.860244 Days, E = 129.158047 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
1.46	1.49	1.47	1.44	4.64	1.81	0.35	-0.01	0.02	0.02	0.05	0	0	0.50	0



Stellar Parameters For KIC 008479386

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6267^{+170}_{-189}	$4.284^{+0.198}_{-0.180}$	$-0.500^{+0.300}_{-0.300}$	$1.158^{+0.308}_{-0.224}$	$0.940^{+0.135}_{-0.098}$	$0.852^{+0.756}_{-0.397}$
	+3%/-3%	+5%/-4%	+60%/-60%	+27%/-19%	+14%/-10%	+89%/-47%
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 008479386-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-77 ± 14	$7.69^{+5.23}_{-4.05}$	1660^{+126}_{-108}	2968^{+835}_{-449}	$2.744^{+10.324}_{-1.790}$
Alt.	-258 ± 173	$7.59^{+4.82}_{-4.32}$	1665^{+140}_{-115}	3608^{+1479}_{-759}	$8.356^{+43.564}_{-6.366}$

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

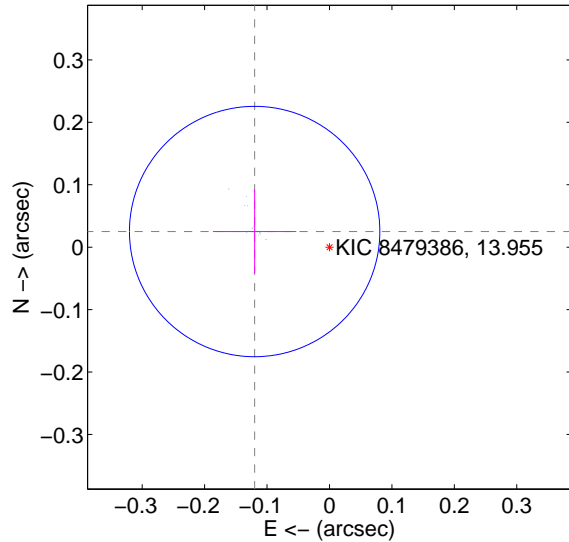
Supplemental centroid analysis for 008479386-02. Kepler magnitude: 13.96. Transit SNR 262.83

There are 17 quarters with good PRF difference image offsets

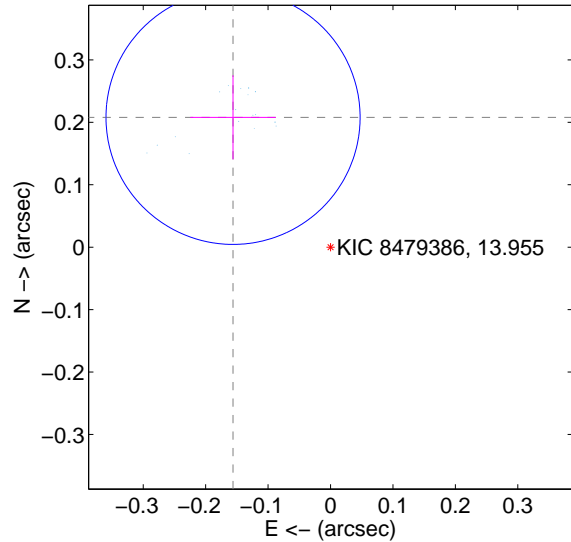
The direct PRF centroid is offset from the target star catalog position by about 0.23 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.122 ± 0.067	1.83	0.120 ± 0.067	0.025 ± 0.067
PRF-fit source offset from KIC position	0.260 ± 0.068	3.83	0.156 ± 0.069	0.208 ± 0.067
photometric centroid source offset	0.16 ± 0.01	13.72	0.08 ± 0.01	0.13 ± 0.01

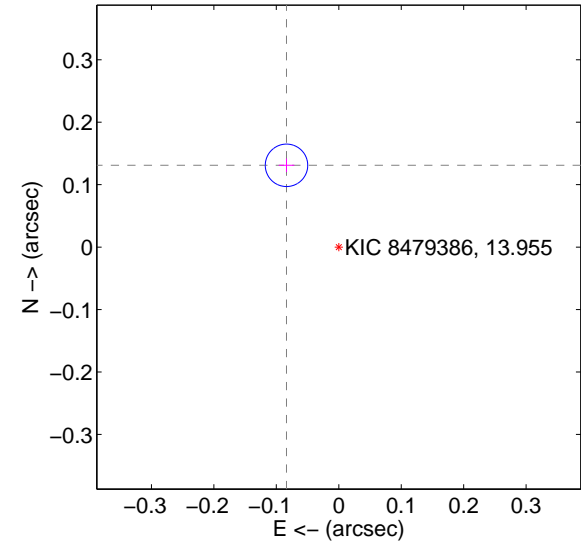
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

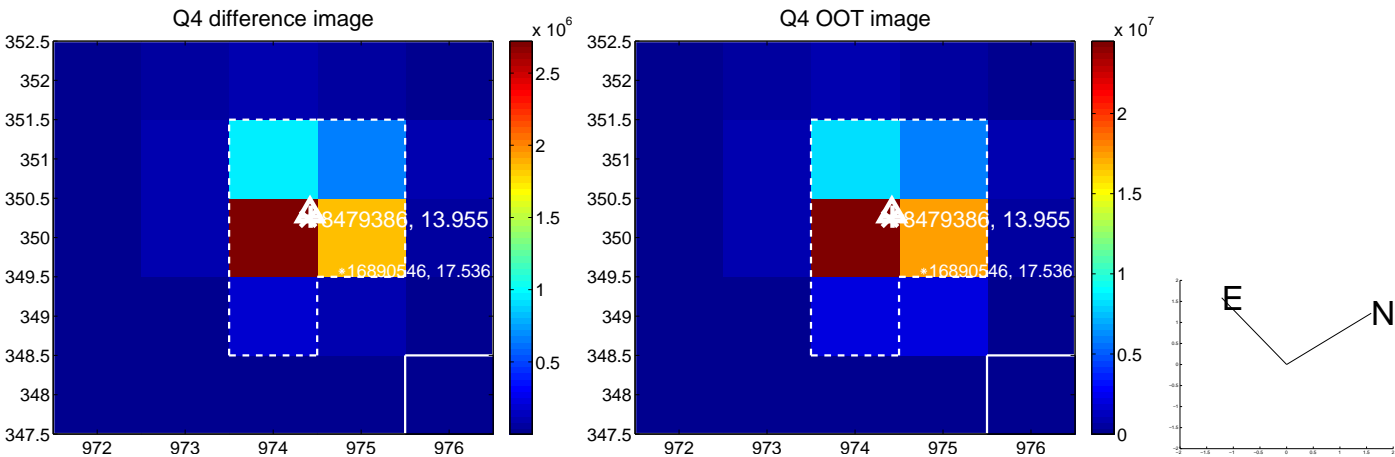
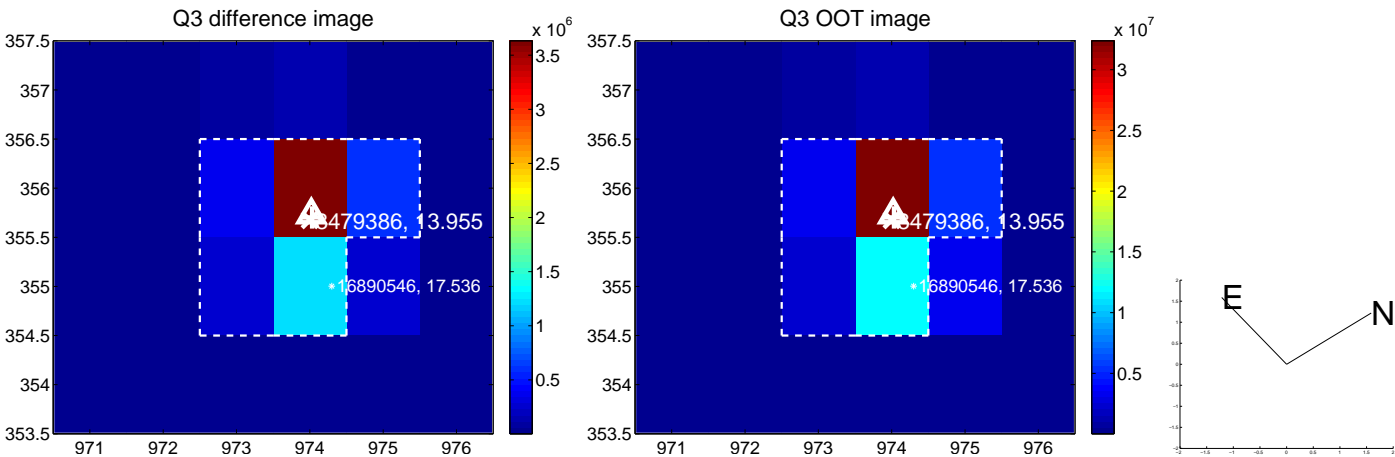
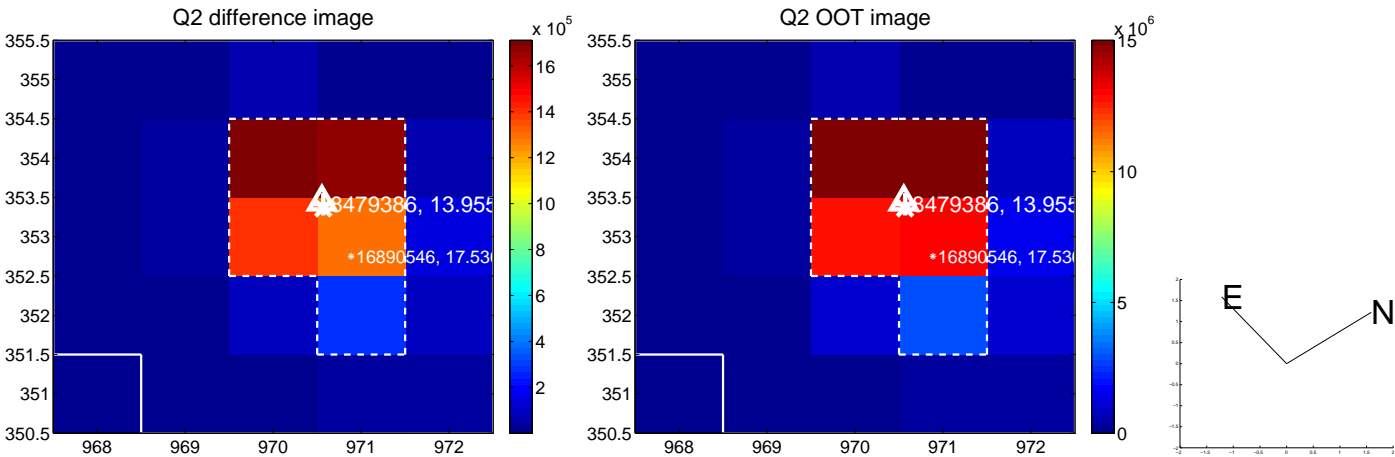
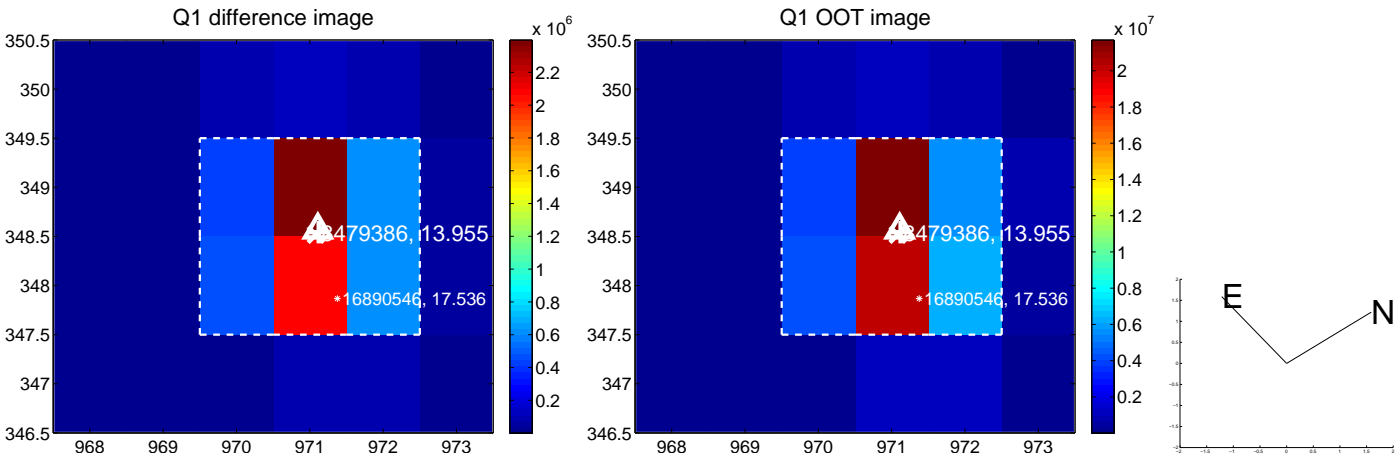


offset from photometric centroids

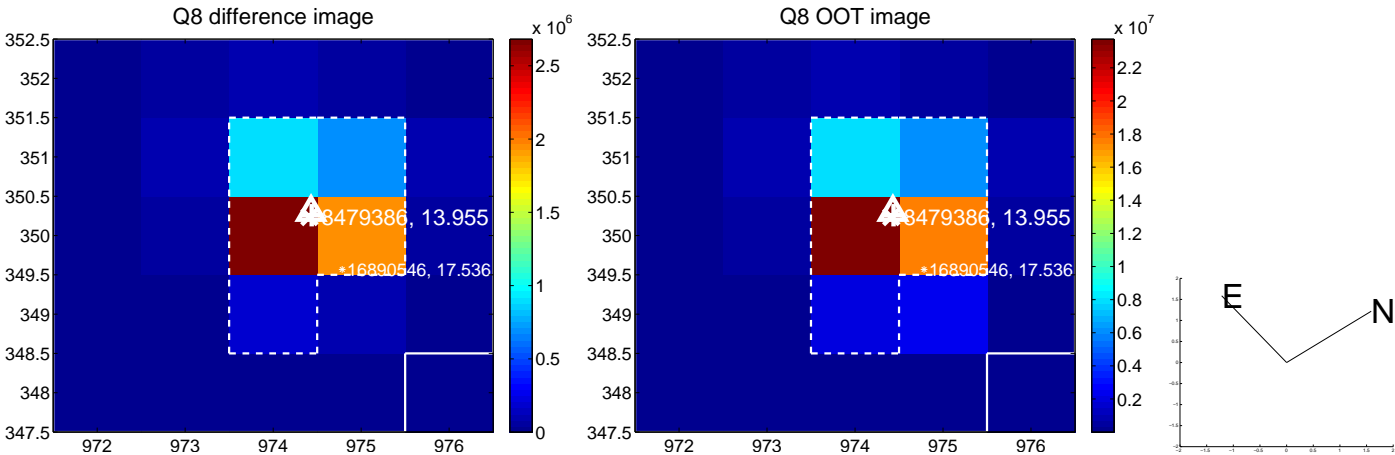
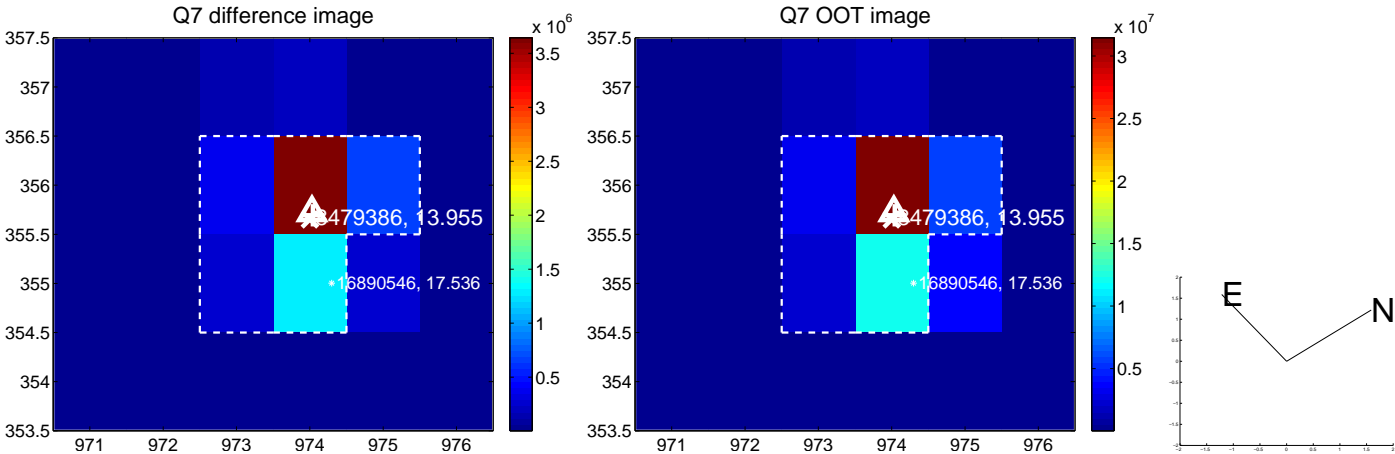
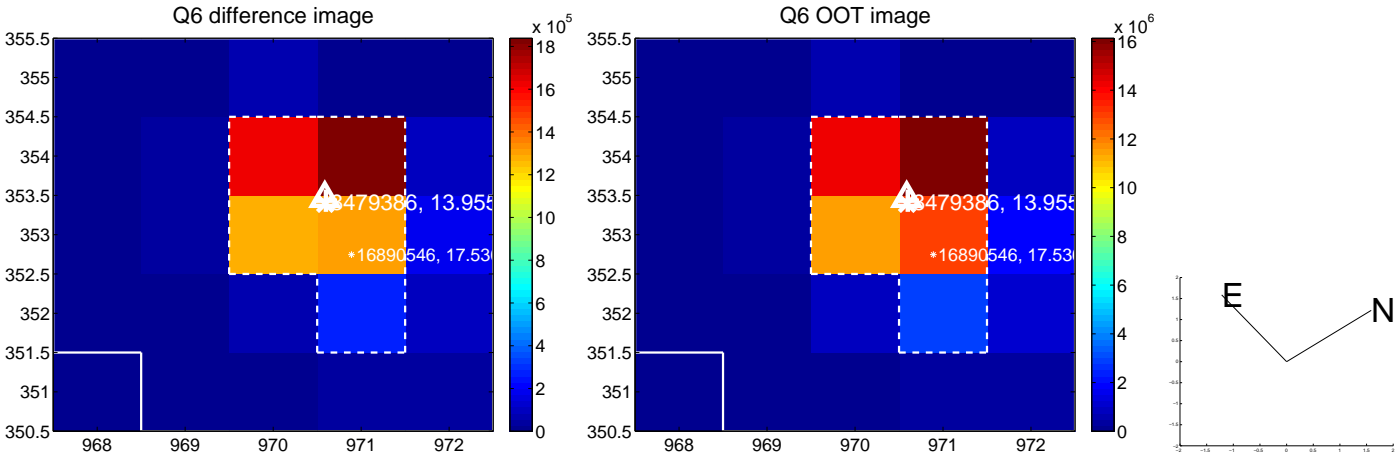
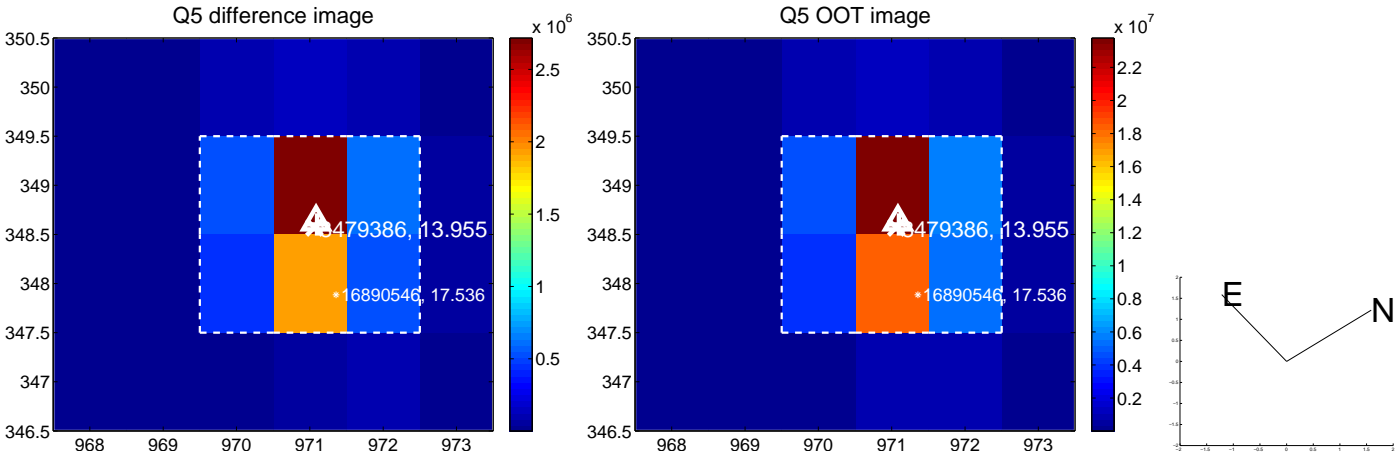


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

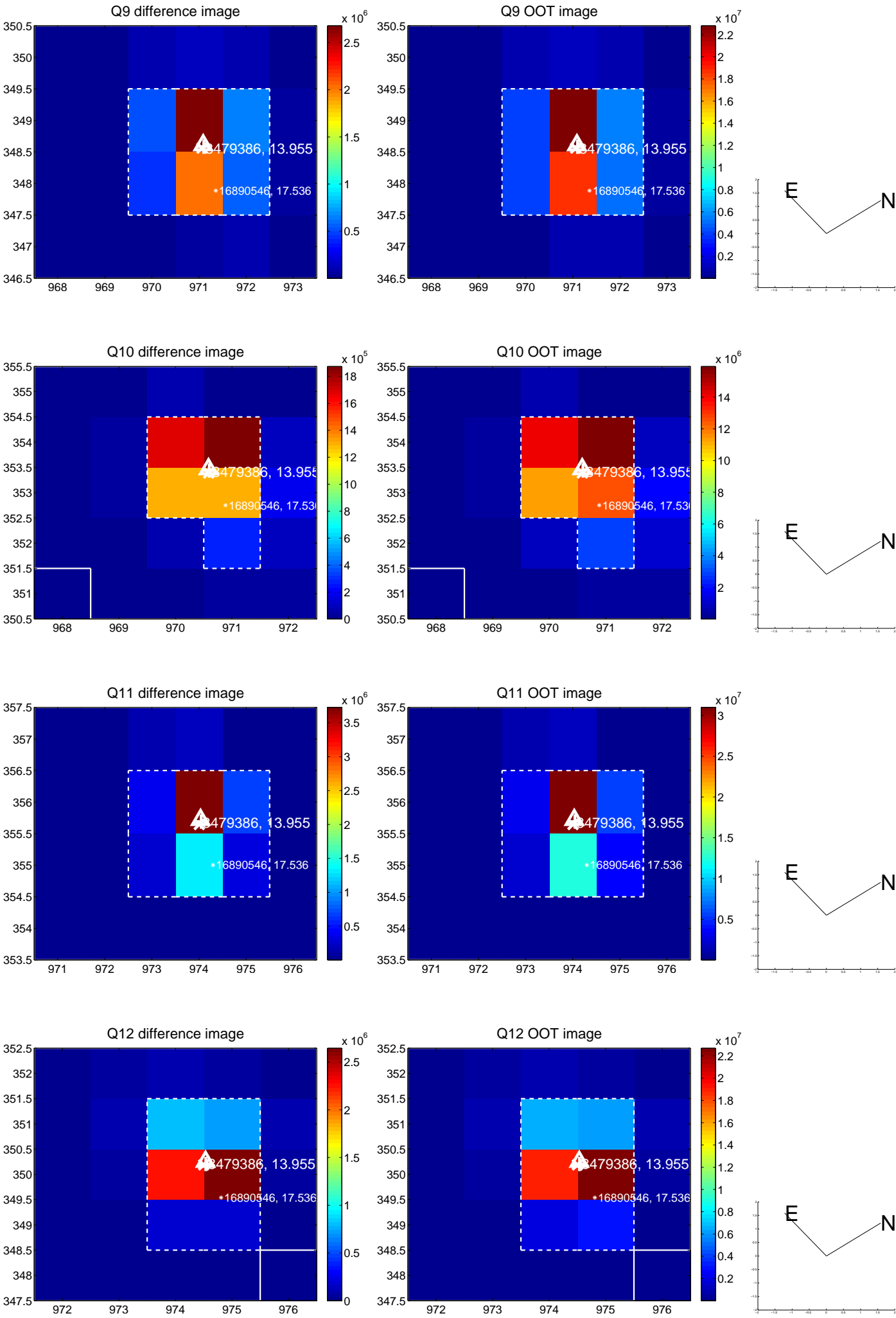
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



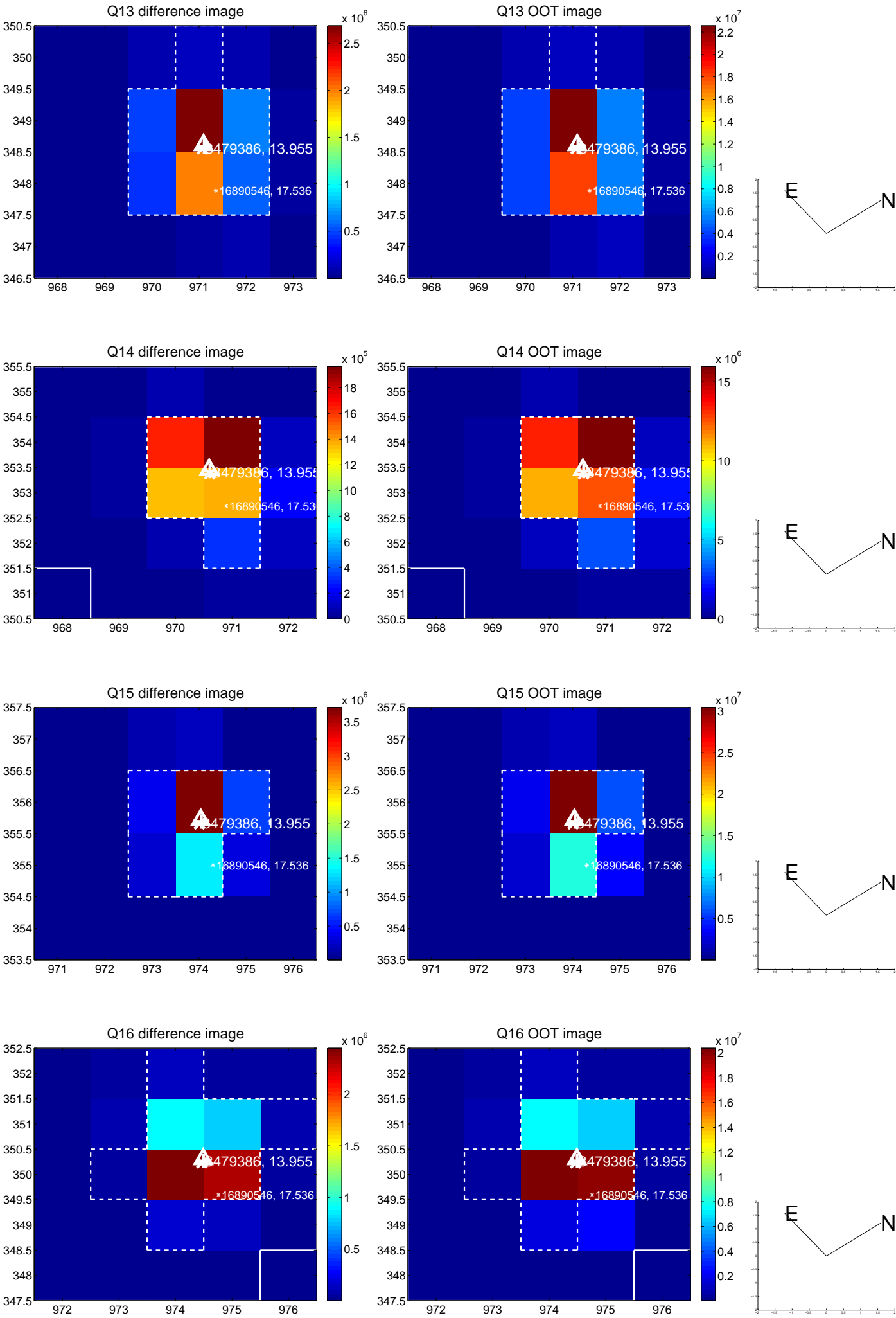
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



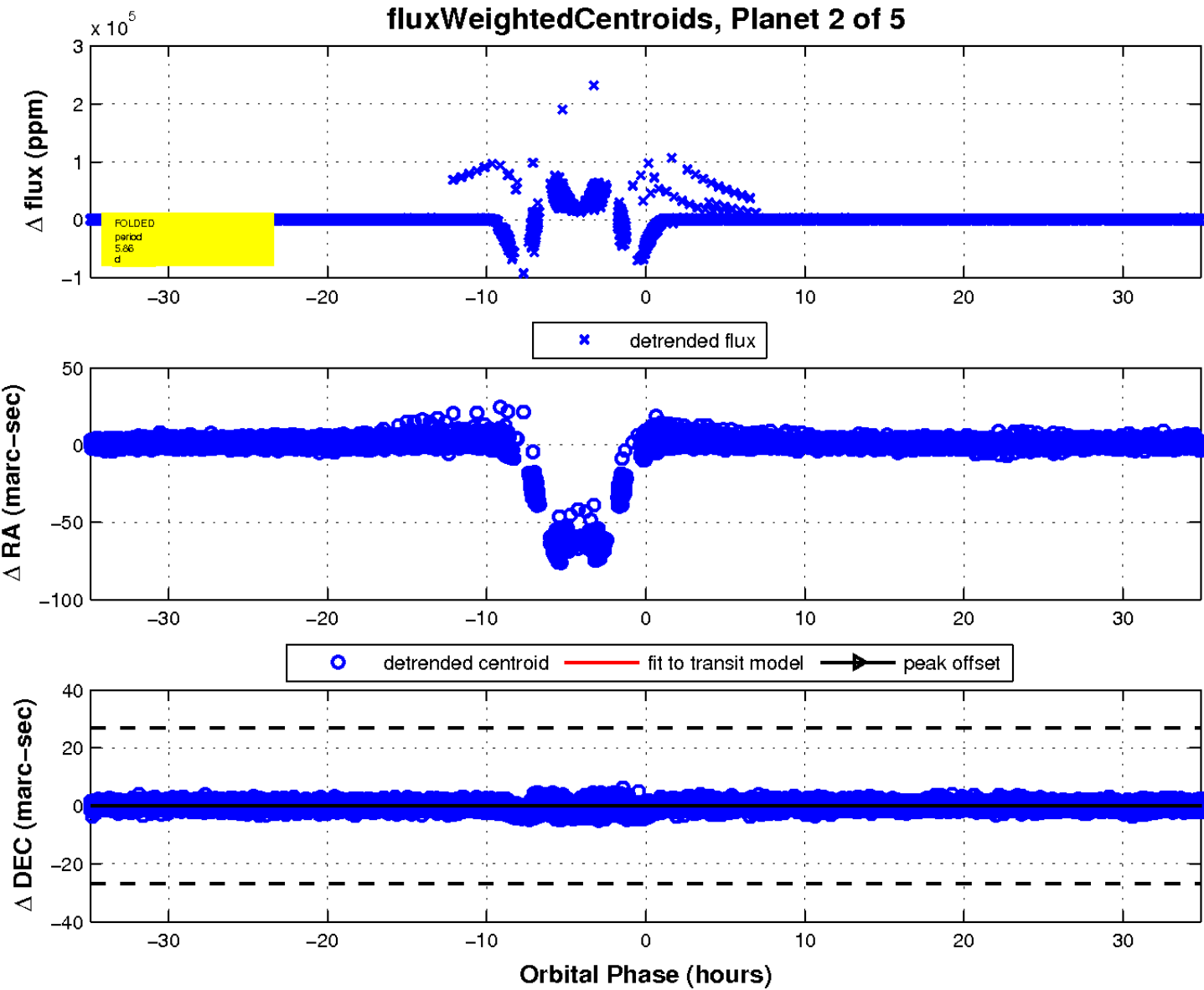
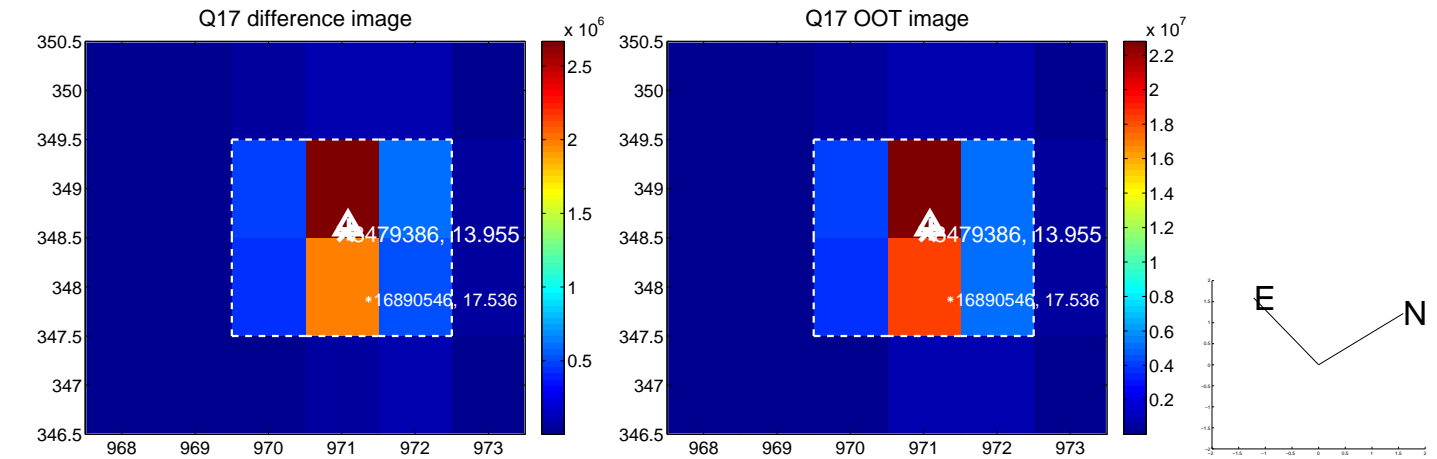
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

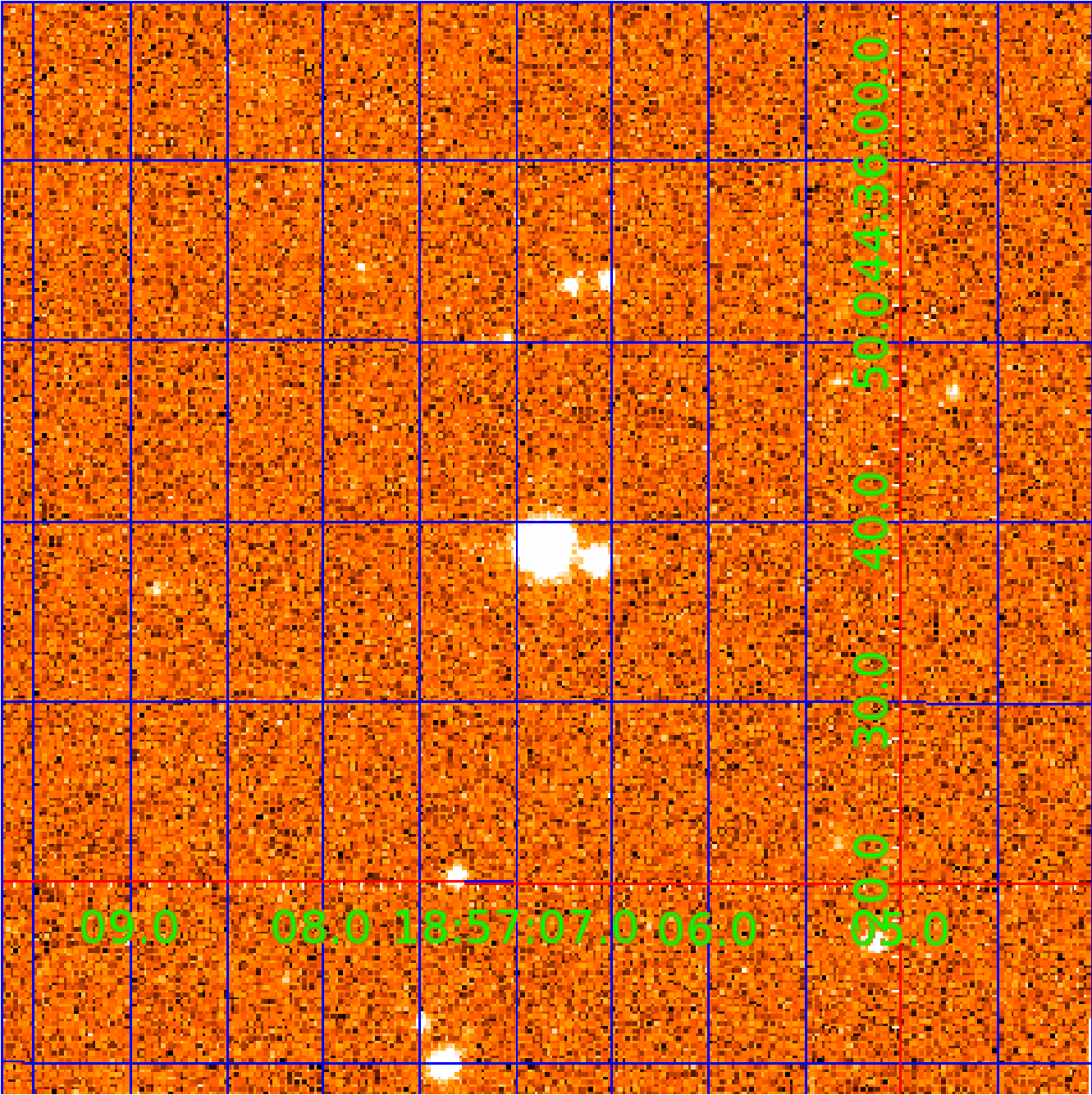


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008479386

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})
008479386-01	OBS	7046.01	5.860392	134.838259	343686.7	6.000	37991.0	-1.0	1.16	6267	53.68	476.84
008479386-02	OBS	No	5.860326	135.026288	3910.5	11.637	1963.9	262.8	1.16	6267	7.47	476.84
008479386-04	OBS	No	492.111965	516.480506	951.8	45.584	26.8	5.0	1.16	6267	4.32	1.30
008479386-05	OBS	No	82.081093	186.903055	734.8	4.182	10.4	9.4	1.16	6267	3.20	14.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008479386-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
008479386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
008479386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008479386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_FEW_DIFFS

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.

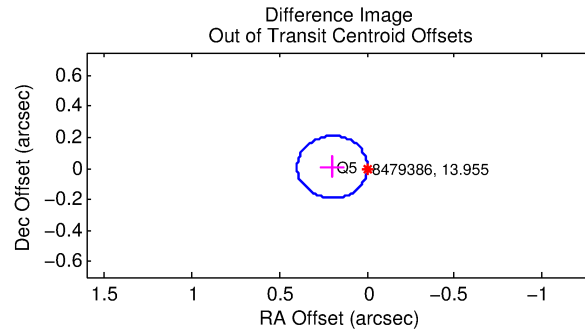
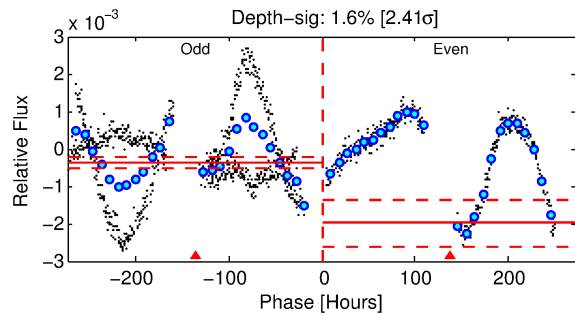
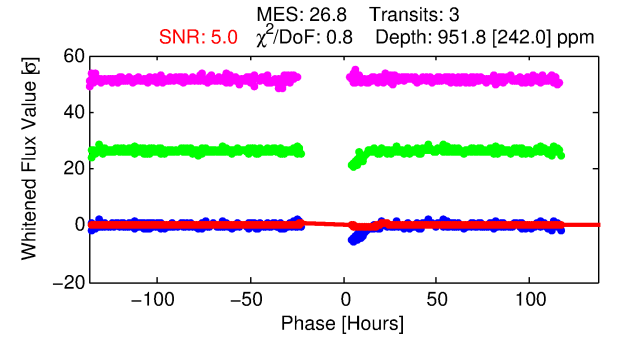
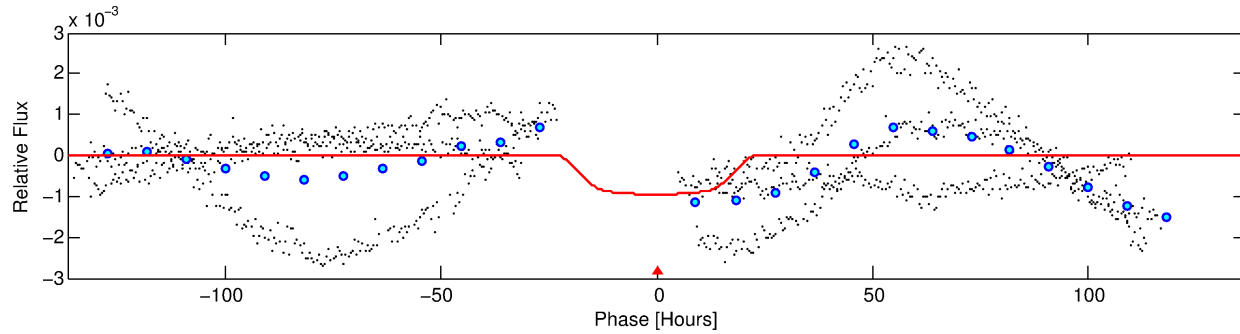
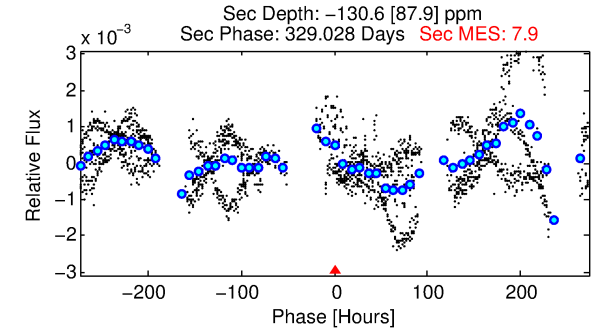
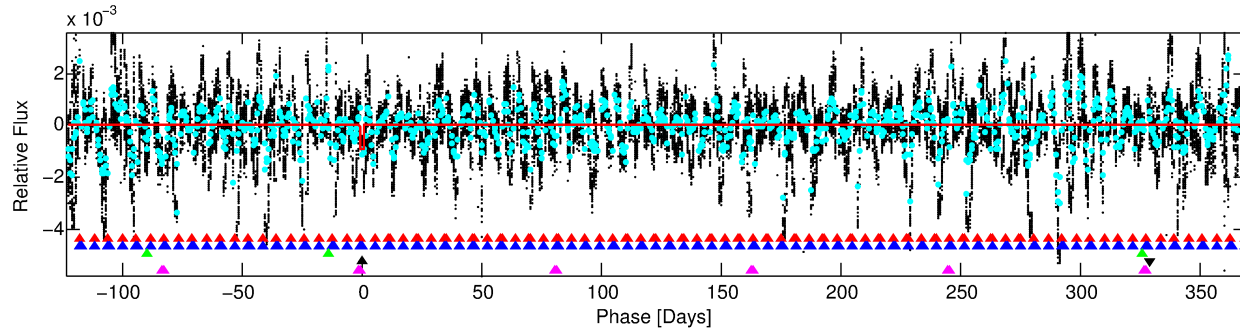
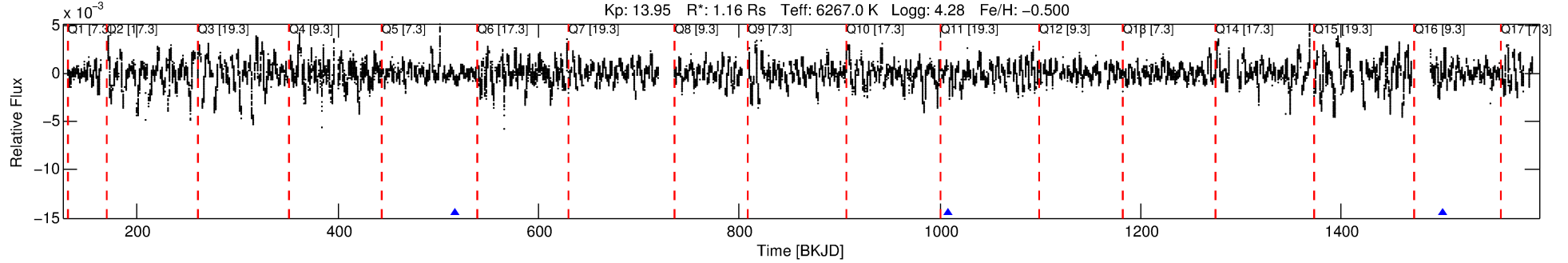
Ephemeris Match Information For 008479386-04

No Significant Match Found

DV One-Page Summary

KIC: 8479386 Candidate: 4 of 5 Period: 492.112 d
KOI: K07046 Corr: No Ephemeris Match

Kp: 13.95 R*: 1.16 Rs Teff: 6267.0 K Logg: 4.28 Fe/H: -0.500



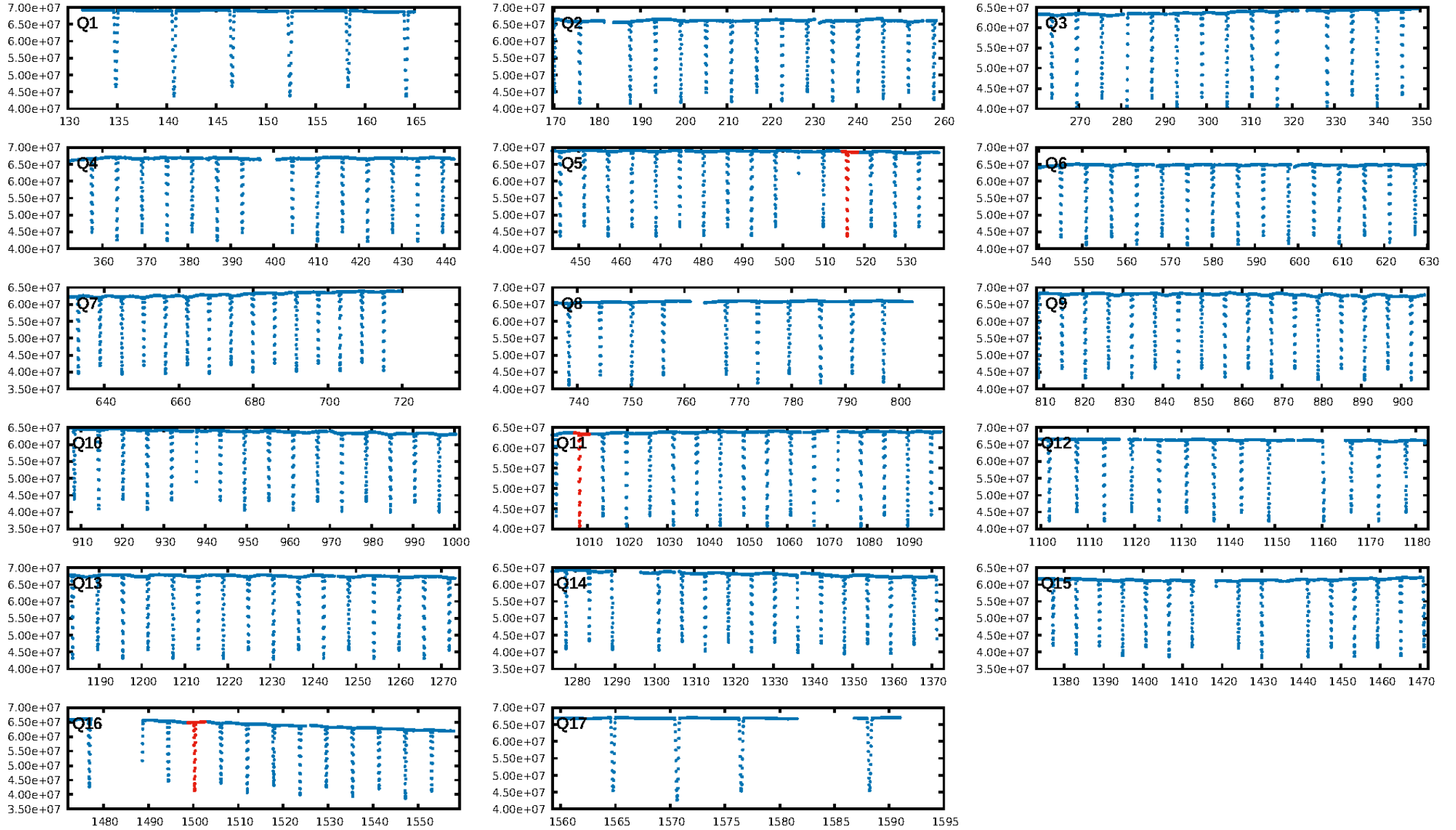
DV Fit Results:

Period = 492.11197 [0.03326] d
Epoch = 516.4805 [0.0690] BKJD
Rp/R* = 0.0342 [0.0046]
a/R* = 36.98 [3.52]
b = 0.93 [0.02]
Seff = 1.30 [0.48]
Teq = 272 [25] K
Rp = 4.32 [1.29] Re
a = 1.1955 [0.2792] AU
Ag = N/A
Teffp = N/A

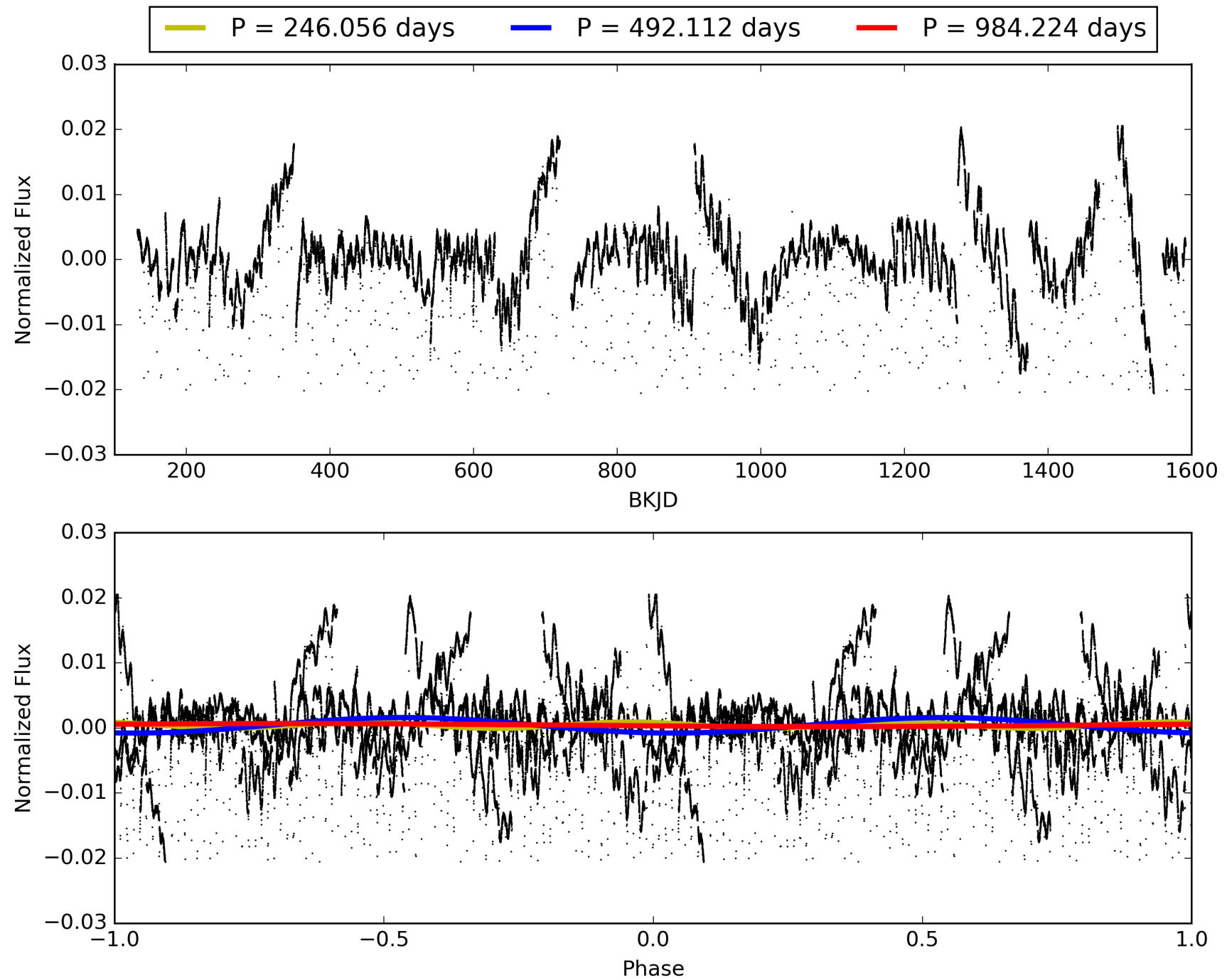
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [38.77 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 15.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.23e-11
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -8.855
Centroid-sig: N/A
Centroid-so: 2.287 arcsec [4.65 σ]
OotOffset-rm: 0.198 arcsec [2.97 σ]
KicOffset-rm: 0.303 arcsec [4.54 σ]
OotOffset-st: 0/0/0/1 [1]
KicOffset-st: 0/0/0/1 [1]
DiffImageQuality-fgm: 1.00 [1/1]
DiffImageOverlap-fno: 0.00 [0/1]

TCE 008479386-04, PDC Light Curves

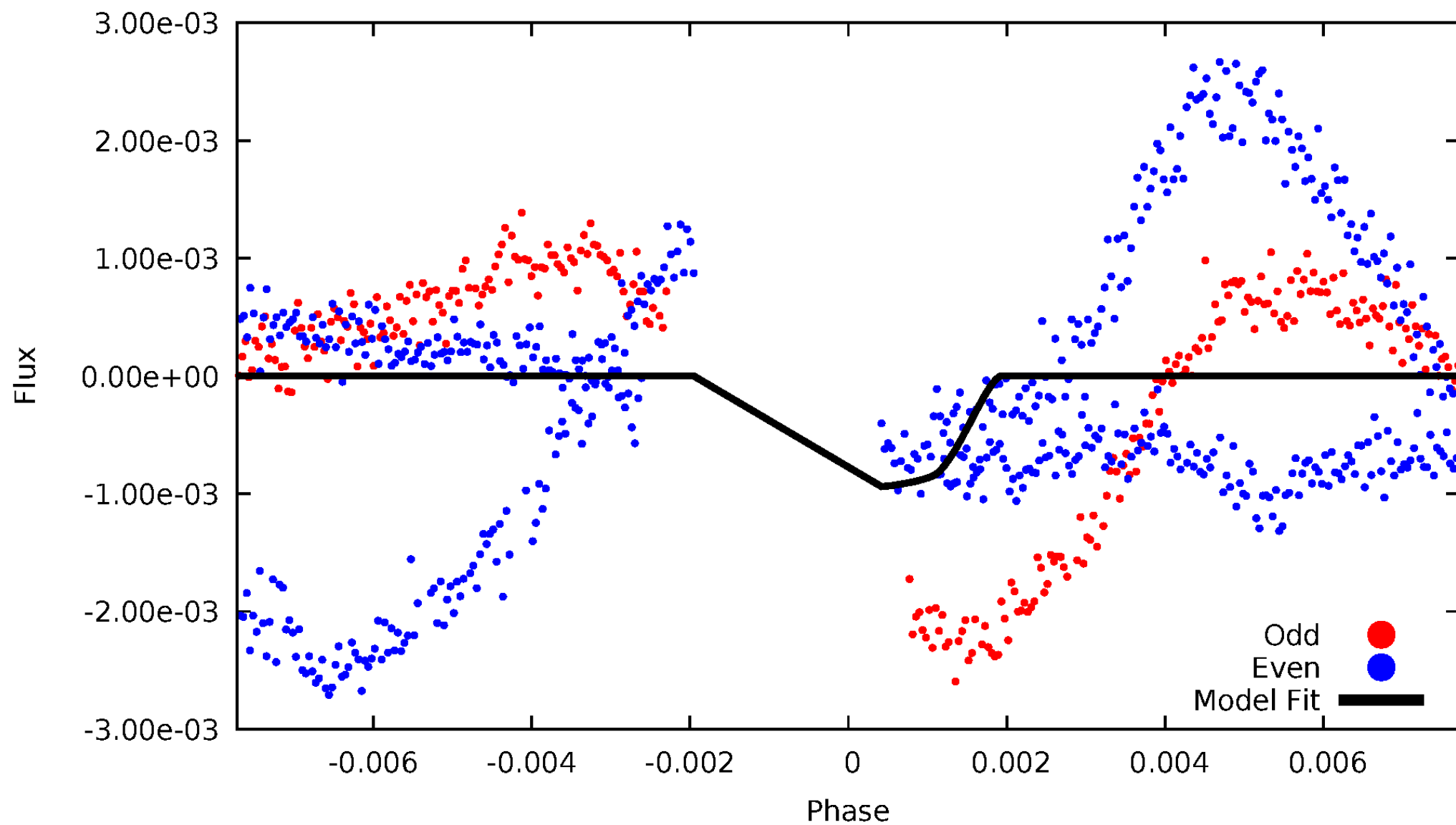


TCE 008479386-04



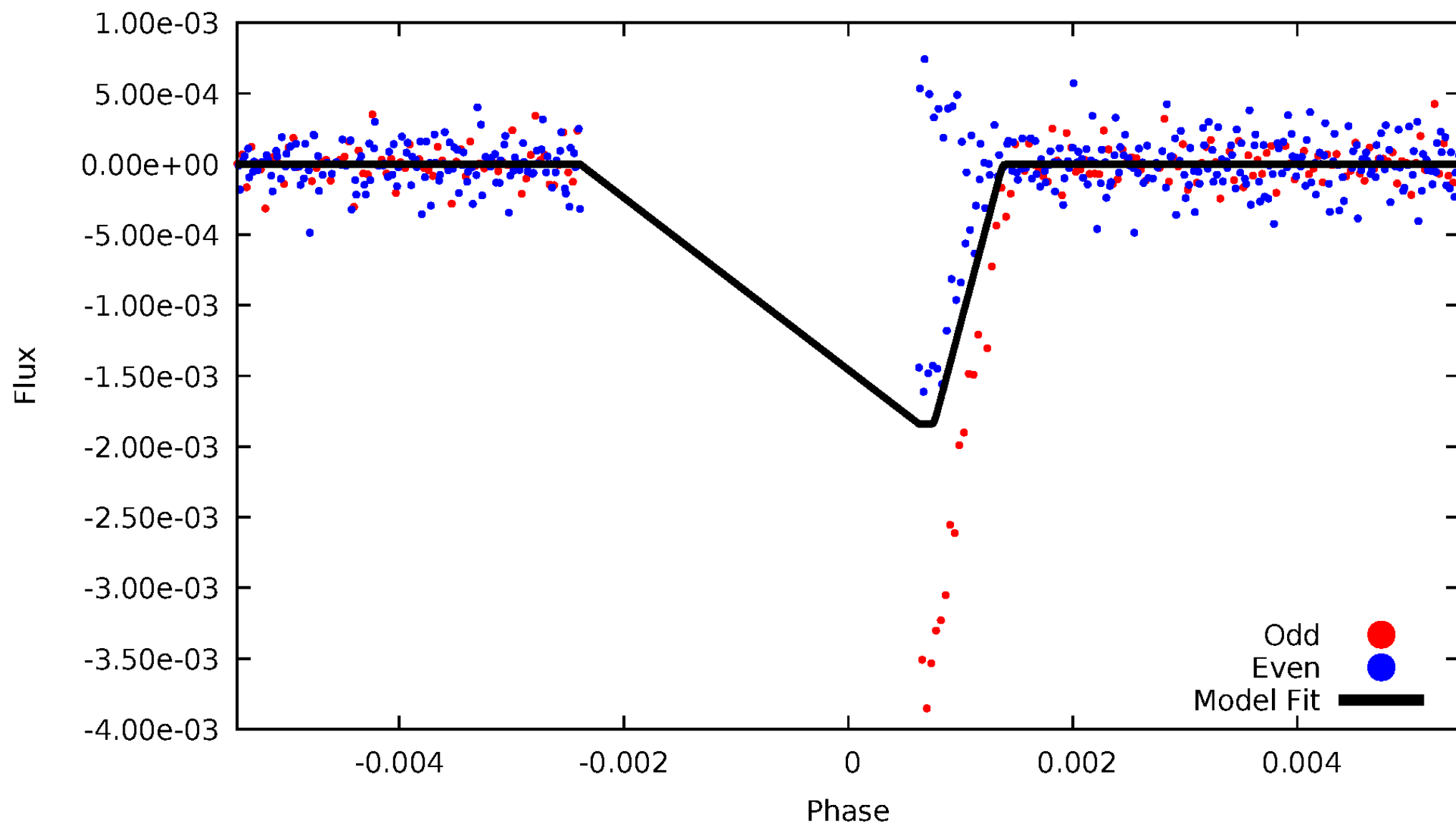
DV Odd/Even

TCE 008479386-04



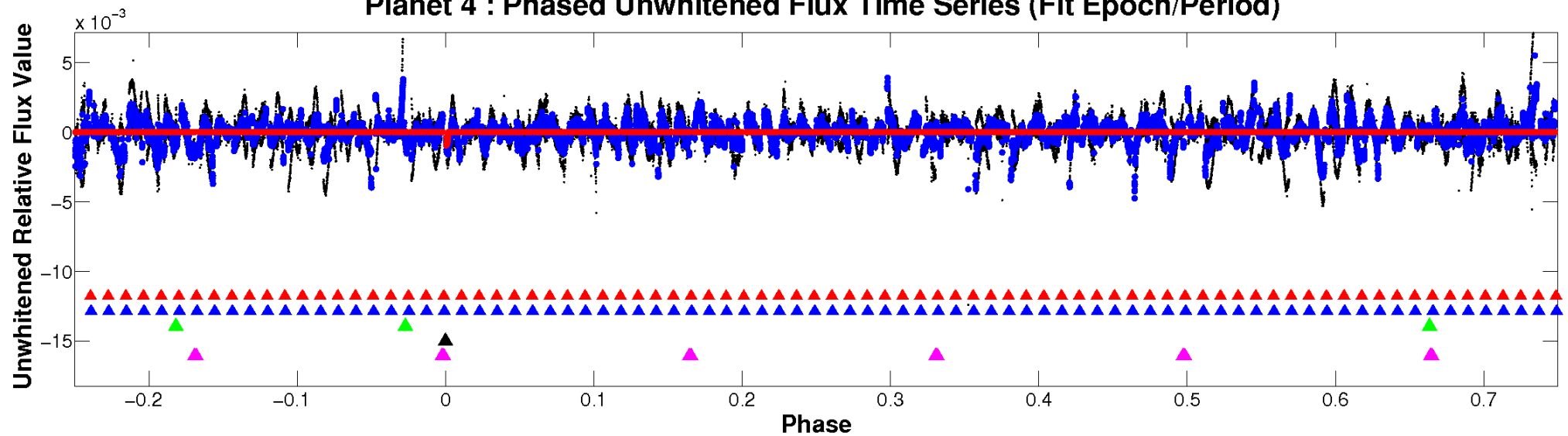
ALT Odd/Even

TCE 008479386-04

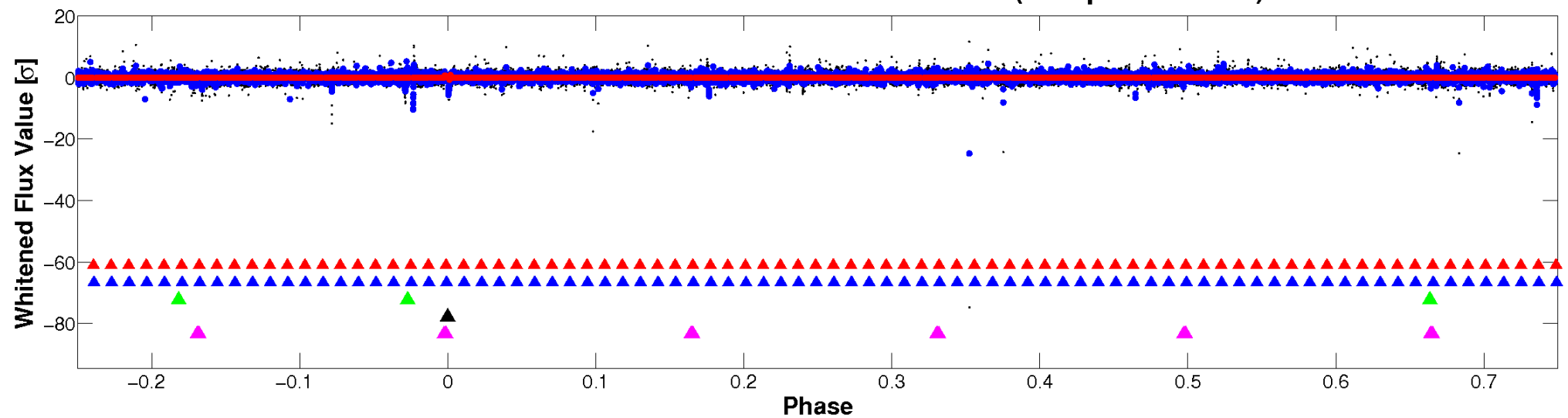


Non-Whitened Vs. Whitened Light Curve

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

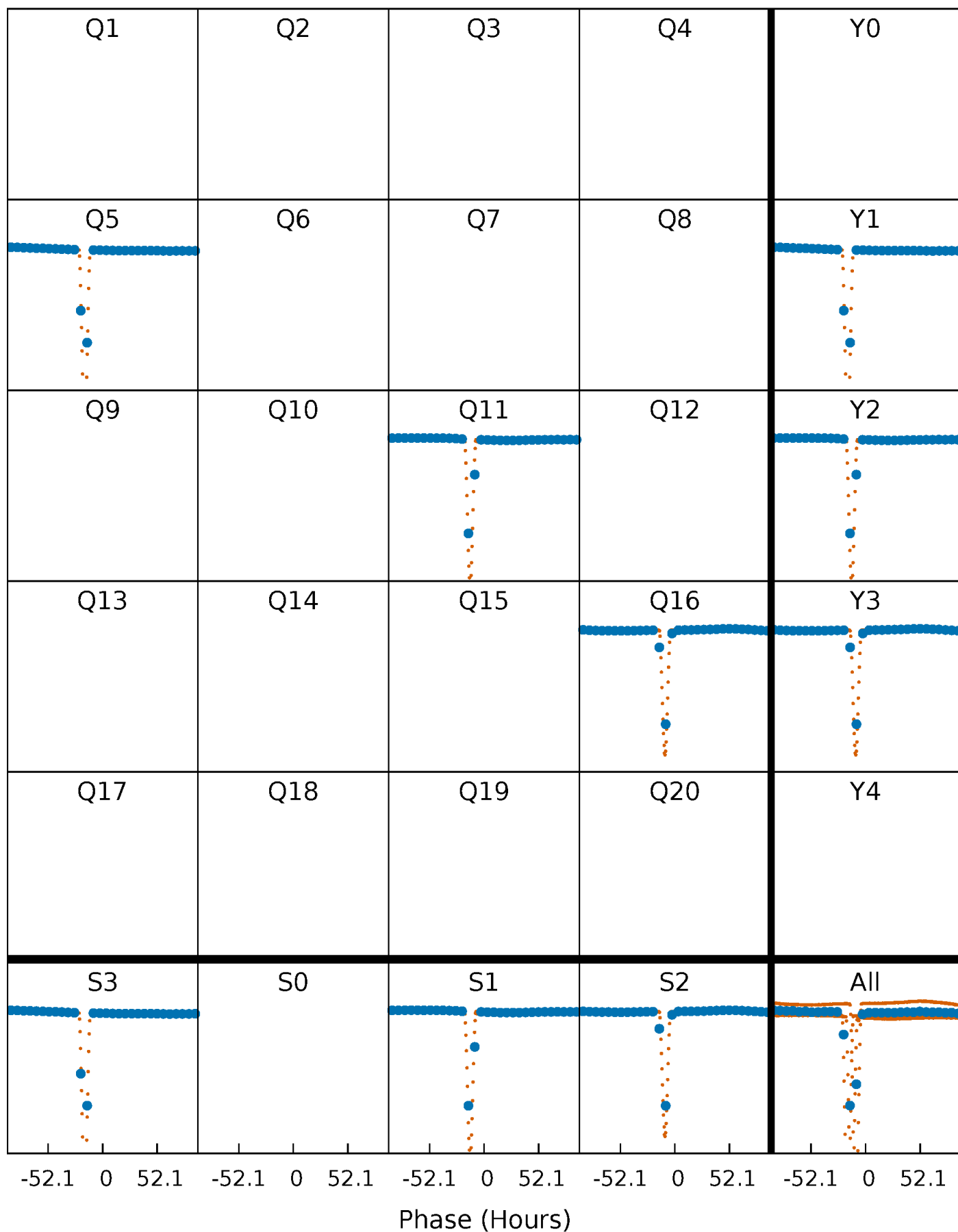


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



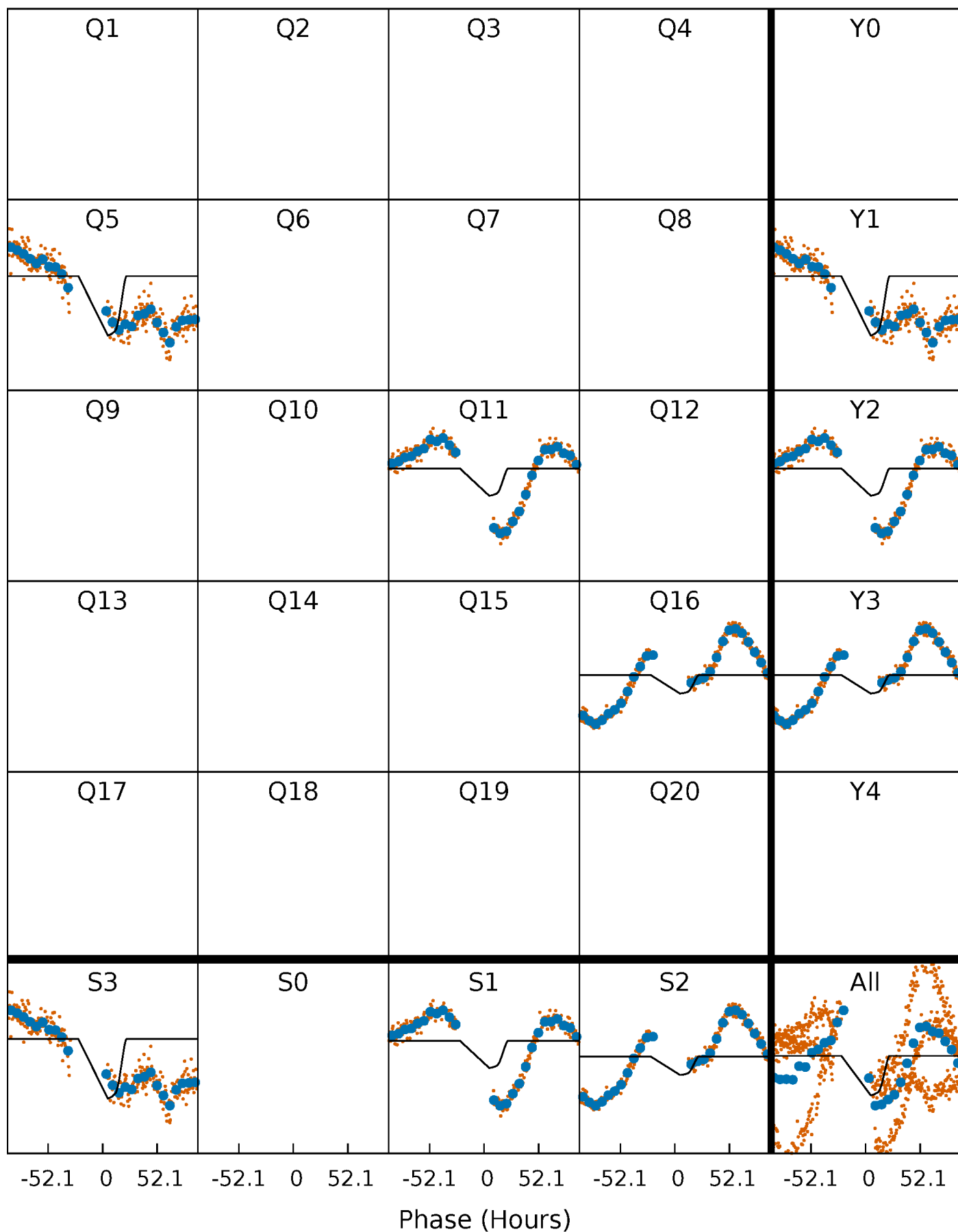
PDC Quarter-Phased Transit Curves

TCE 008479386-04 P=492.111965 Days $T_0=516.480506$ (BKJD)



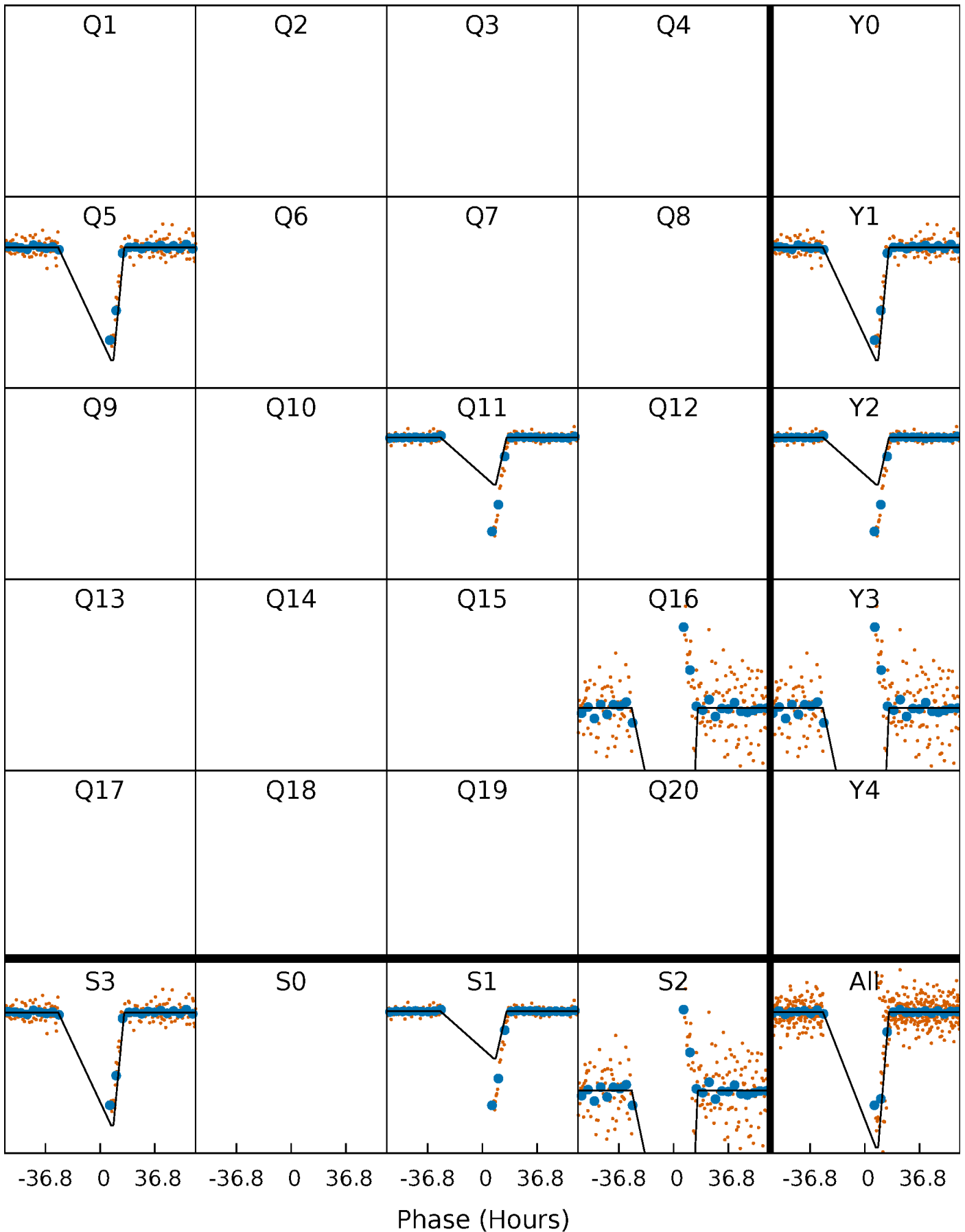
DV Quarter-Phased Transit Curves

TCE 008479386-04 P=492.111965 Days $T_0=516.480506$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

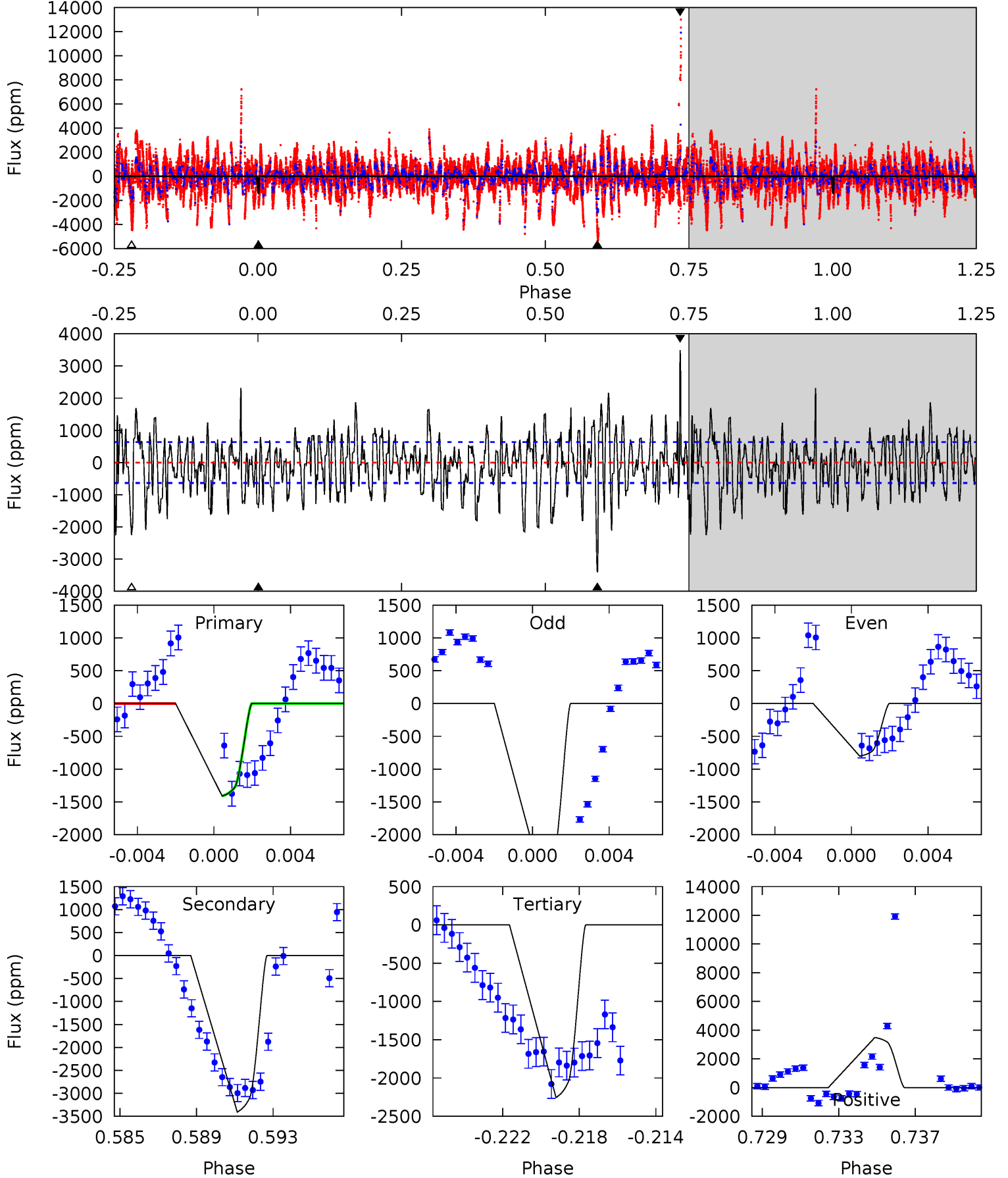
TCE 008479386-04 $P=492.271705$ Days $T_0=516.377012$ (BKJD)



DV Model-Shift Uniqueness Test

008479386-04, P = 492.111965 Days, E = 24.368541 Days

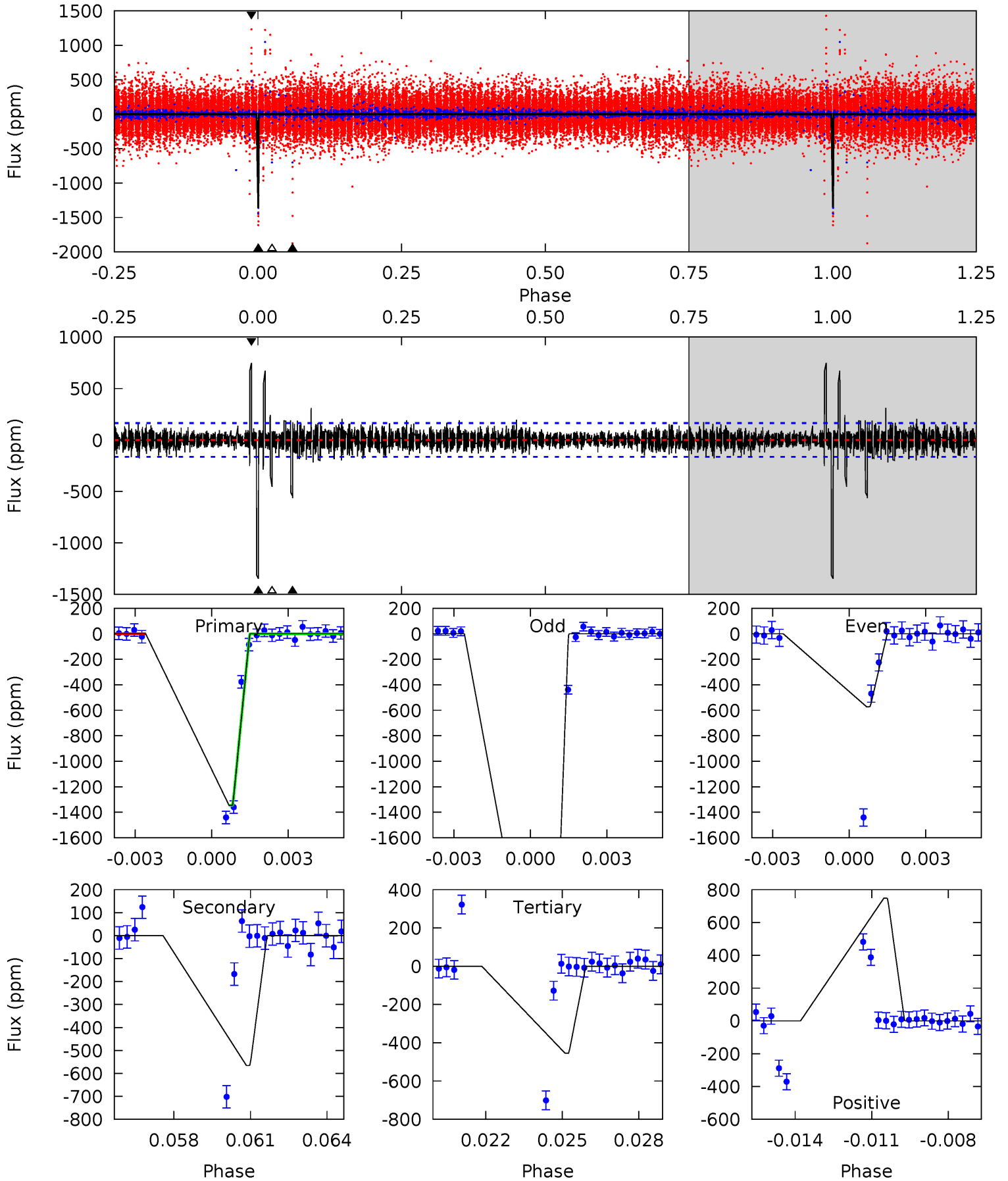
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.5	27.9	18.4	28.6	5.20	2.89	6.03	-6.89	-17.0	9.44	-0.68	7.14	1.59	0.51	0



Alt Model-Shift Uniqueness Test

008479386-04, P = 492.271705 Days, E = 24.105307 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
43.2	18.2	14.6	24.0	5.27	2.99	1.47	28.6	19.2	3.55	-5.87	61.7	1.07	0.36	0



Stellar Parameters For KIC 008479386

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6267^{+170}_{-189}	$4.284^{+0.198}_{-0.180}$	$-0.500^{+0.300}_{-0.300}$	$1.158^{+0.308}_{-0.224}$	$0.940^{+0.135}_{-0.098}$	$0.852^{+0.756}_{-0.397}$
	+3%/-3%	+5%/-4%	+60%/-60%	+27%/-19%	+14%/-10%	+89%/-47%
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 008479386-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3407 ± 122	$4.25^{+0.93}_{-0.73}$	378^{+29}_{-24}	8526^{+941}_{-683}	146698^{+69893}_{-45749}
Alt.	-566 ± 31	$5.42^{+1.11}_{-0.93}$	379^{+31}_{-26}	4788^{+248}_{-224}	15147^{+7057}_{-4646}

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

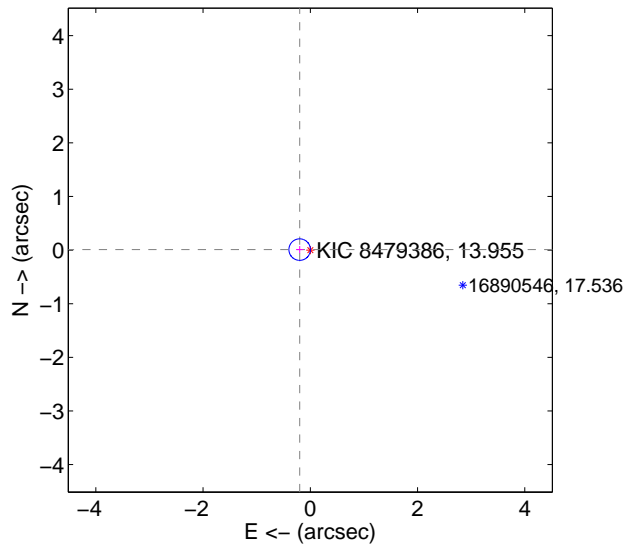
Supplemental centroid analysis for 008479386-04. Kepler magnitude: 13.96. Transit SNR 4.99

There are 1 quarters with good PRF difference image offsets

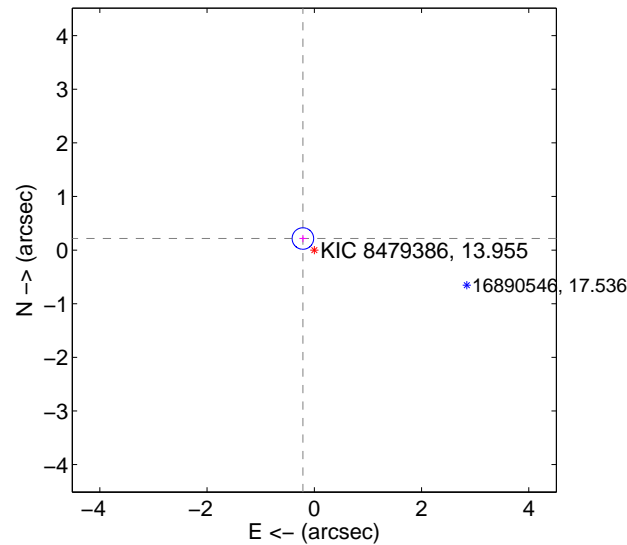
The direct PRF centroid is offset from the target star catalog position by about 0.21 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.198 ± 0.067	2.97	0.198 ± 0.067	0.009 ± 0.067
PRF-fit source offset from KIC position	0.303 ± 0.067	4.54	0.213 ± 0.067	0.216 ± 0.067
photometric centroid source offset	2.29 ± 0.49	4.65	-2.26 ± 0.50	-0.33 ± 0.26

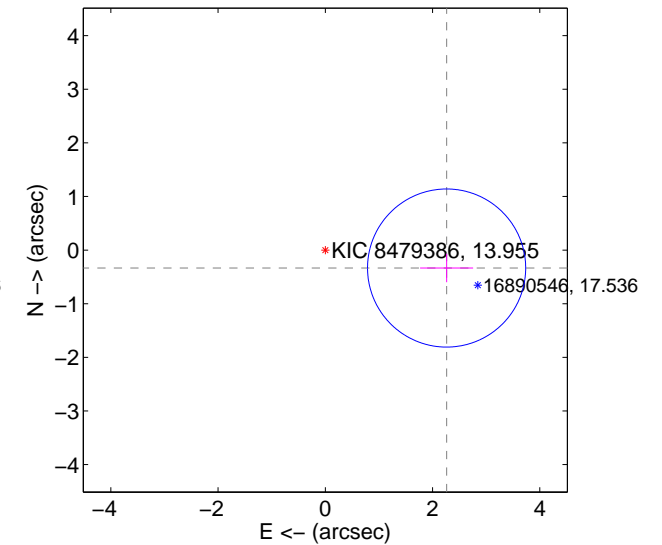
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position



offset from photometric centroids

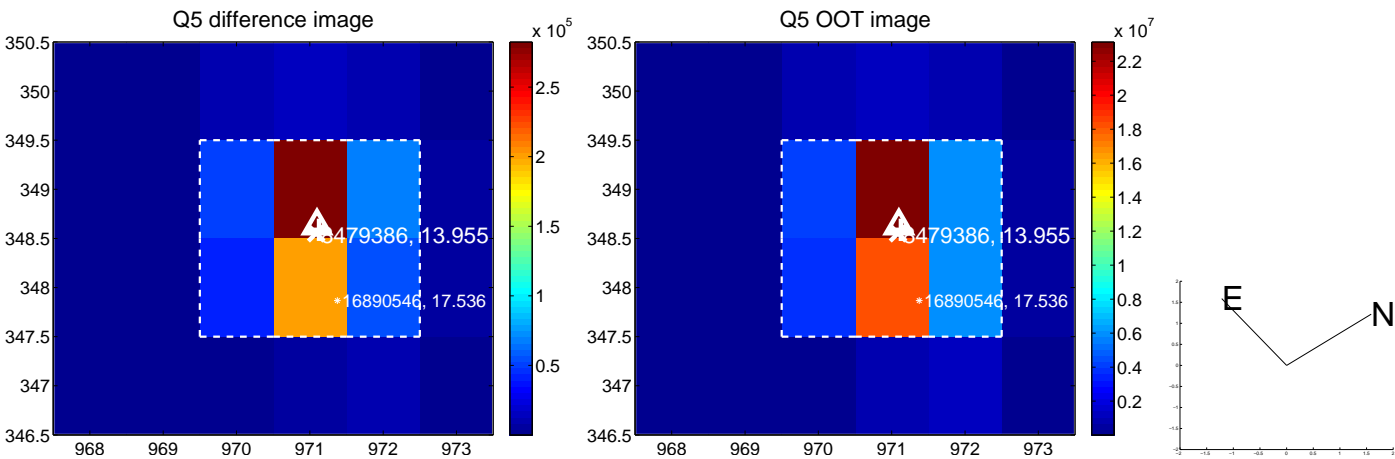


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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



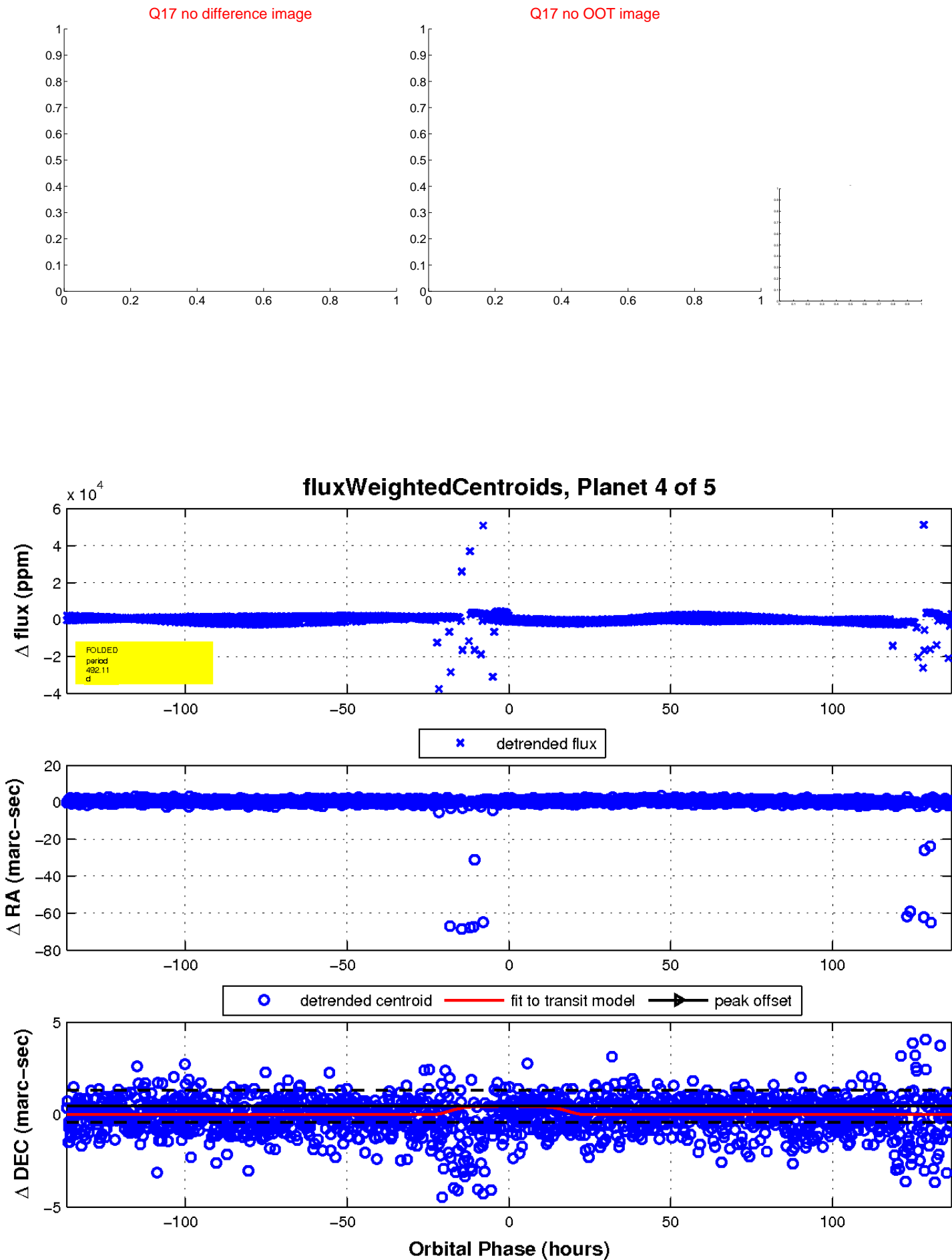
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

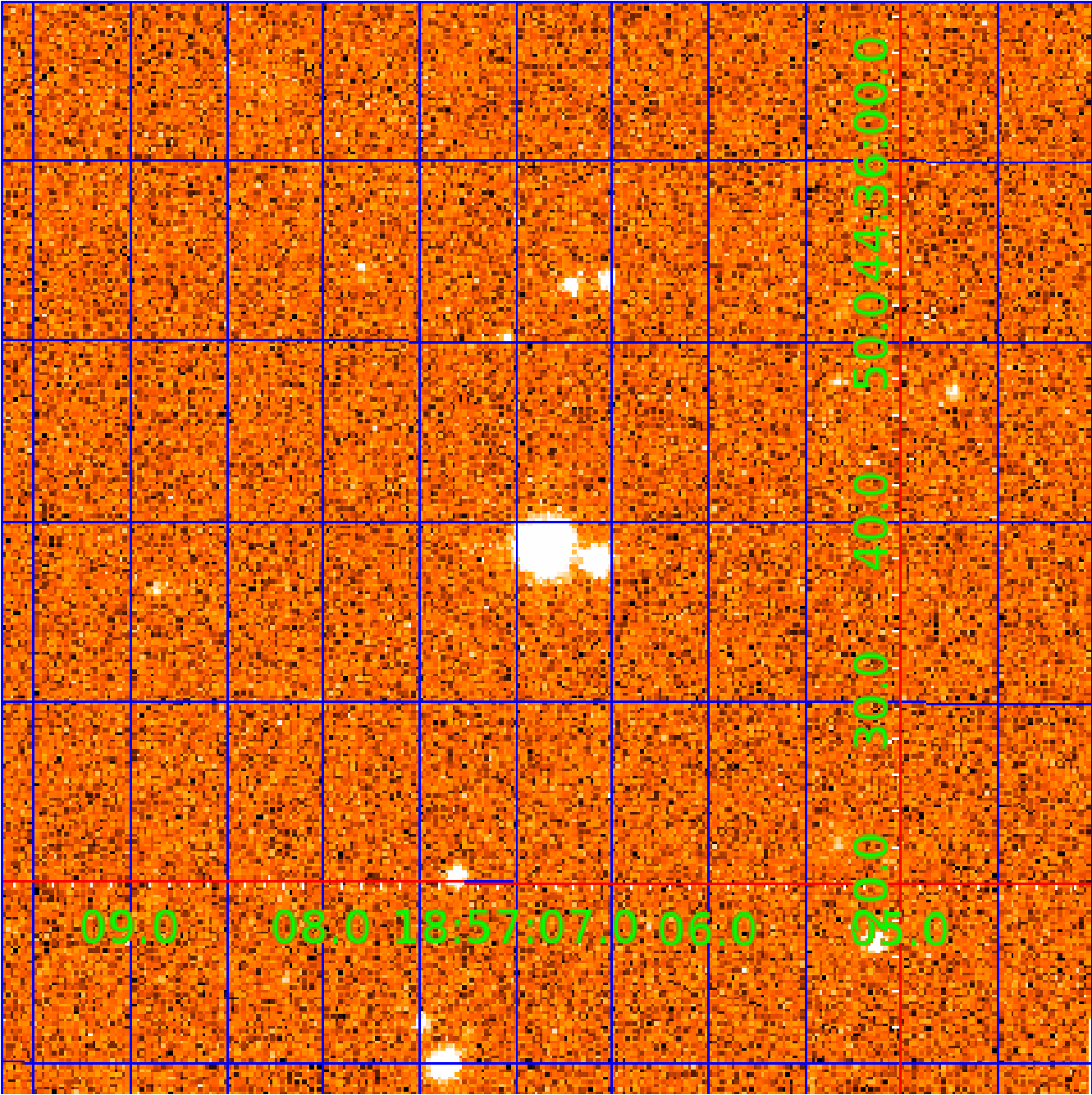


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 008479386

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})
008479386-01	OBS	7046.01	5.860392	134.838259	343686.7	6.000	37991.0	-1.0	1.16	6267	53.68	476.84
008479386-02	OBS	No	5.860326	135.026288	3910.5	11.637	1963.9	262.8	1.16	6267	7.47	476.84
008479386-04	OBS	No	492.111965	516.480506	951.8	45.584	26.8	5.0	1.16	6267	4.32	1.30
008479386-05	OBS	No	82.081093	186.903055	734.8	4.182	10.4	9.4	1.16	6267	3.20	14.12

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008479386-01	OBS	FP	0.00	0	1	0	0	DEPTH_ODDEVEN_DV—DEPTH_ODDEVEN_ALT—MOD_ODDEVEN_ALT—CENT_NOFITS
008479386-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—RESIDUAL_TCE—CENT_NOFITS
008479386-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_FEW_DIFFS
008479386-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—ALL_TRANS_CHASES—CENT_FEW_DIFFS

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.

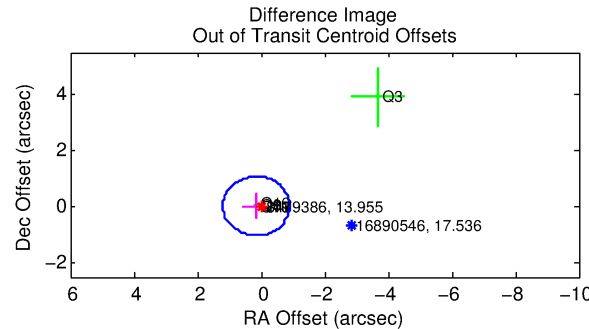
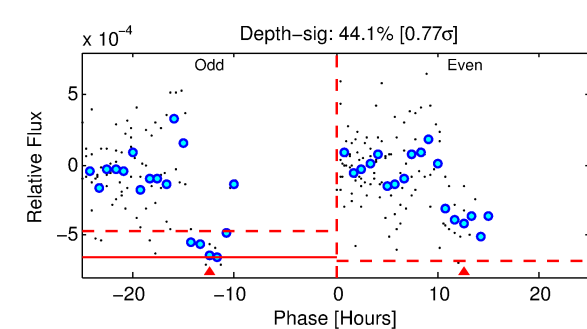
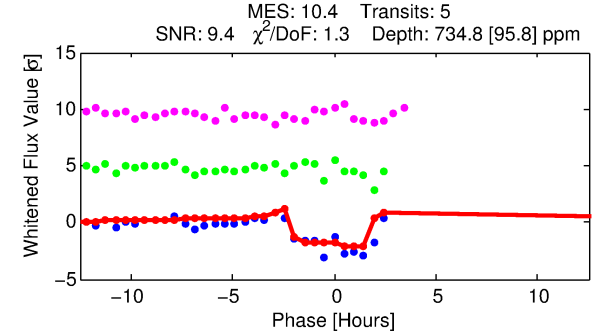
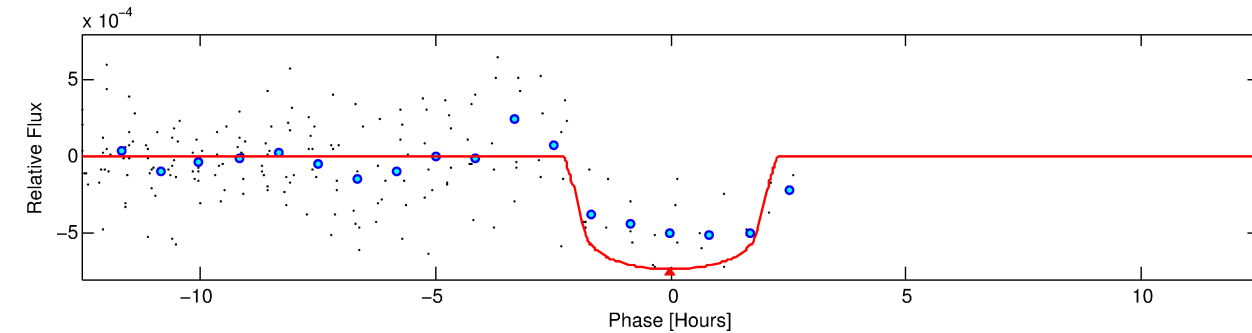
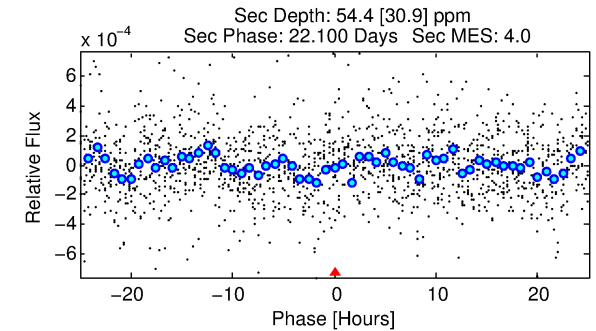
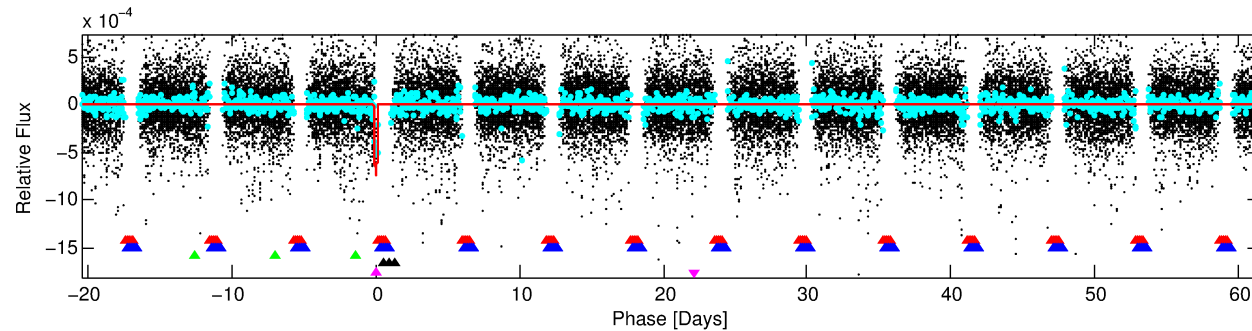
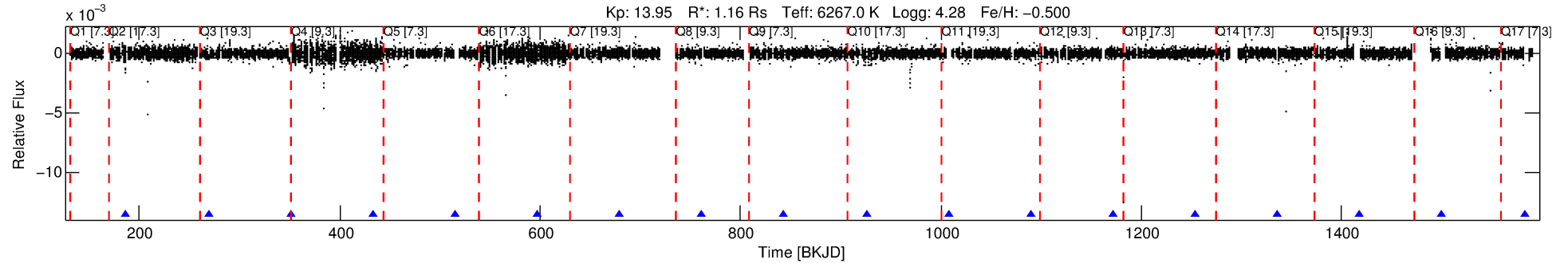
Ephemeris Match Information For 008479386-05

No Significant Match Found

DV One-Page Summary

KIC: 8479386 Candidate: 5 of 5 Period: 82.081 d

KOI: K07046 Corr: No Ephemeris Match



DV Fit Results:

Period = 82.08109 [0.00289] d
Epoch = 186.9031 [0.0050] BKJD
Rp/R* = 0.0253 [0.0248]
a/R* = 143.72 [732.86]
b = 0.36 [12.20]
Seff = 14.12 [5.25]
Teq = 494 [46] K
Rp = 3.20 [3.25] Re
a = 0.3622 [0.0846] AU
Ag = 384.58 [798.21] [0.48σ]
Teffp = 3385 [1734] K [1.67σ]

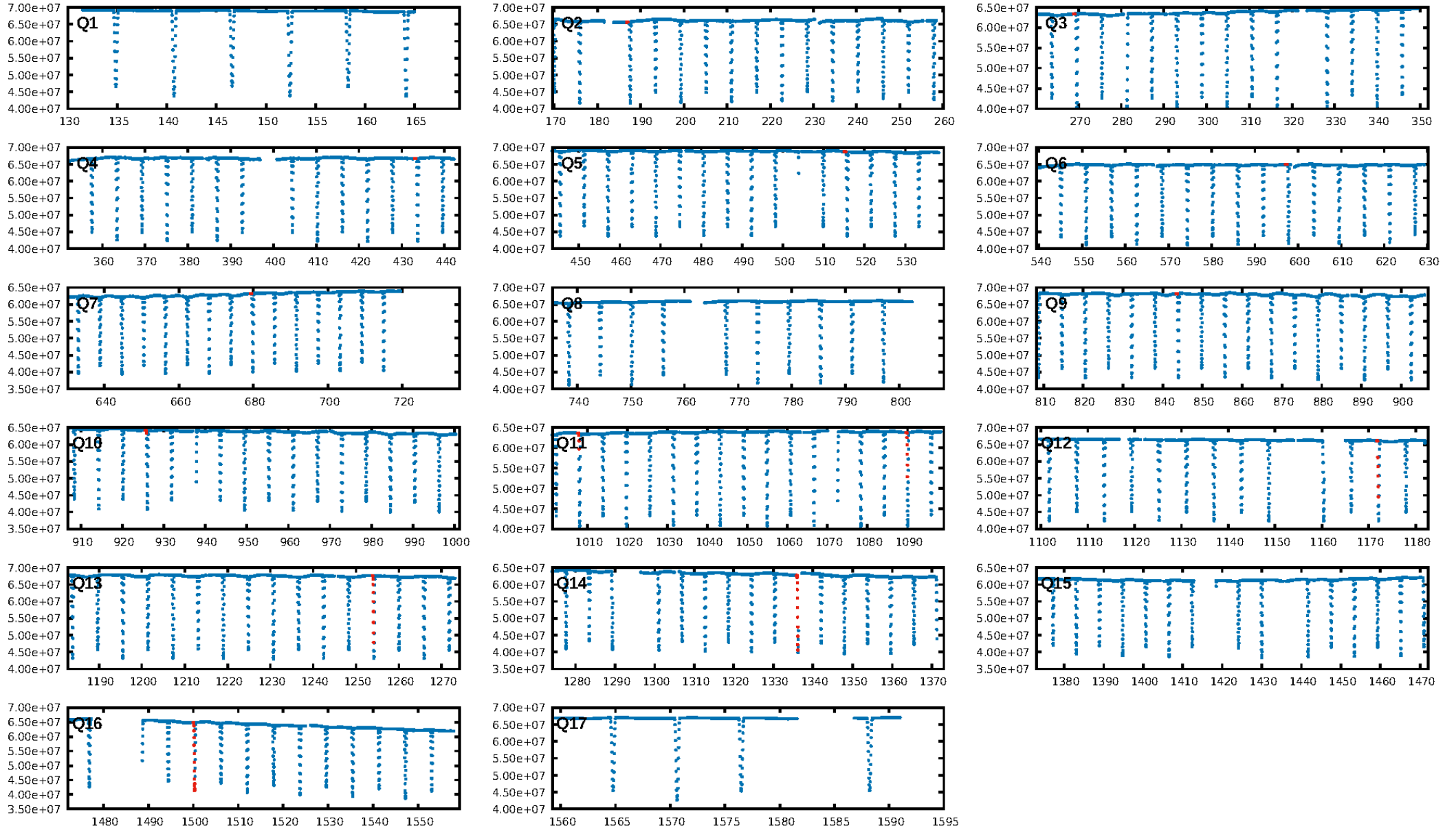
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [250.12σ]
LongPeriod-sig: 100.0% [630.59σ]
ModelChiSquare2-sig: 14.3%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.13e-11
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.8892
Centroid-sig: N/A
Centroid-so: 0.446 arcsec [1.26σ]
OotOffset-rm: 0.154 arcsec [0.44σ]
KicOffset-rm: 0.282 arcsec [2.08σ]
OotOffset-st: 2/3/1/2 [8]
KicOffset-st: 2/3/1/2 [8]
DiffImageQuality-fgm: 0.12 [1/8]
DiffImageOverlap-fno: 0.18 [2/11]

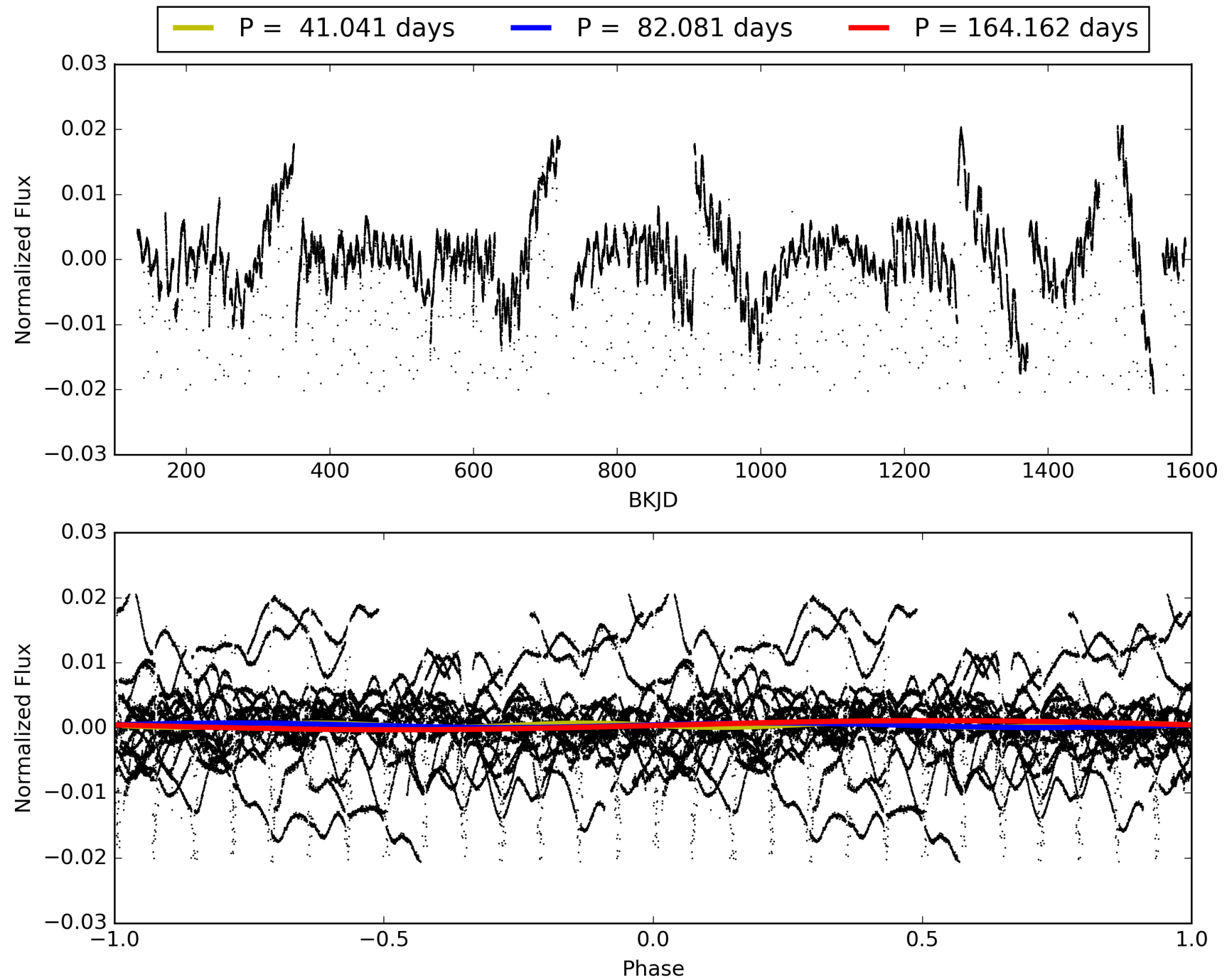
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 02-Feb-2016 05:44:41 Z

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

TCE 008479386-05, PDC Light Curves

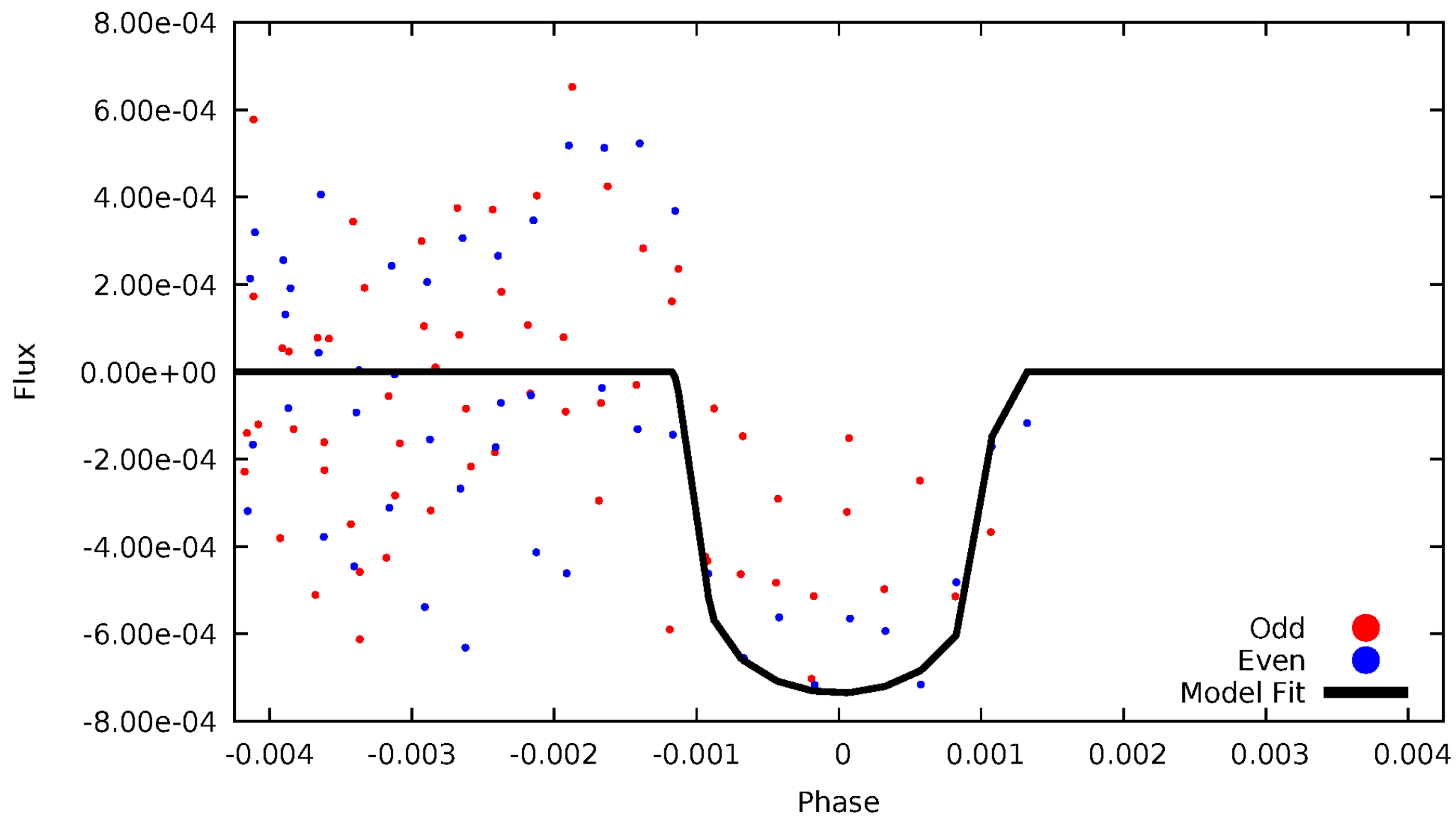


TCE 008479386-05



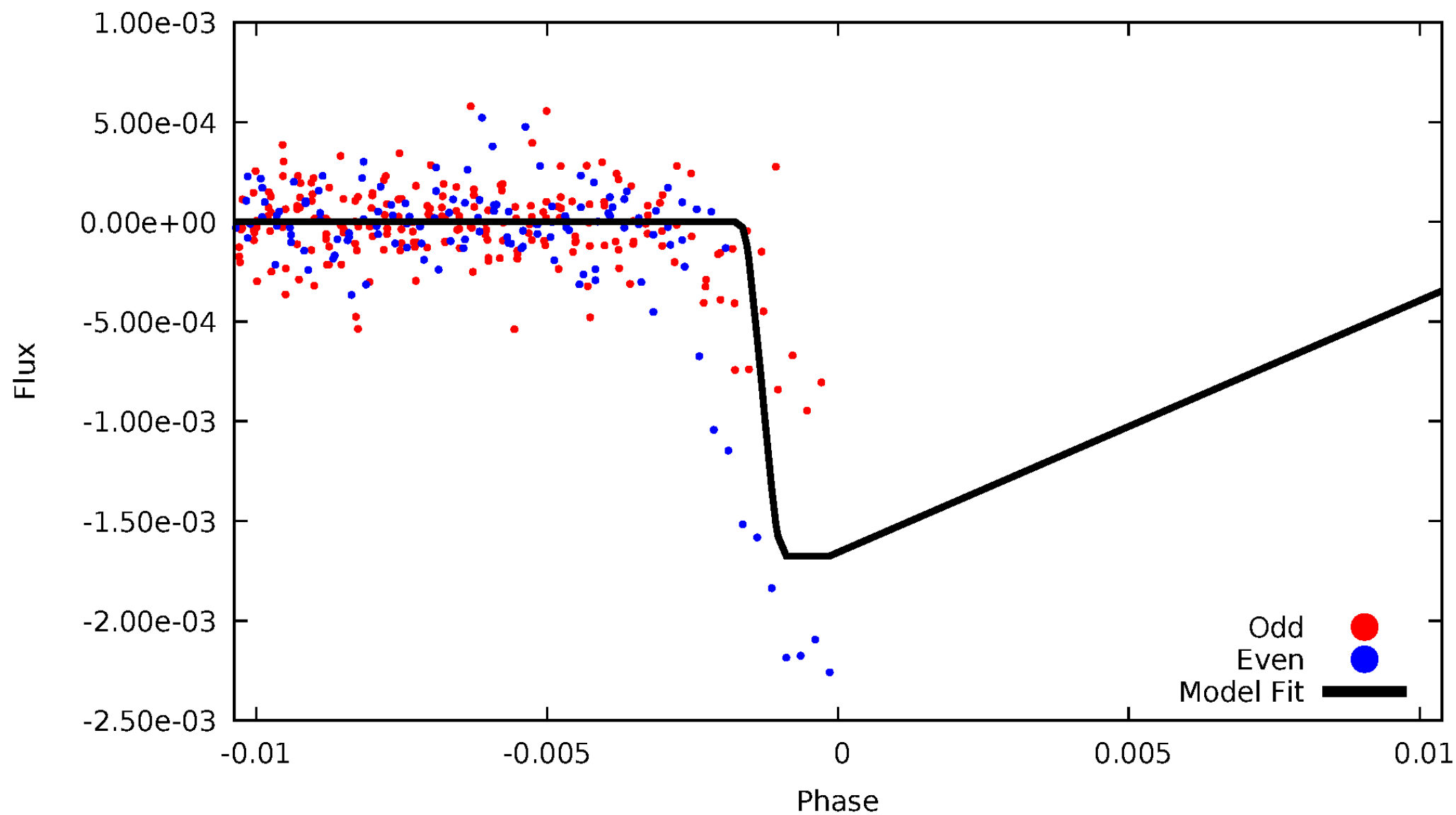
DV Odd/Even

TCE 008479386-05



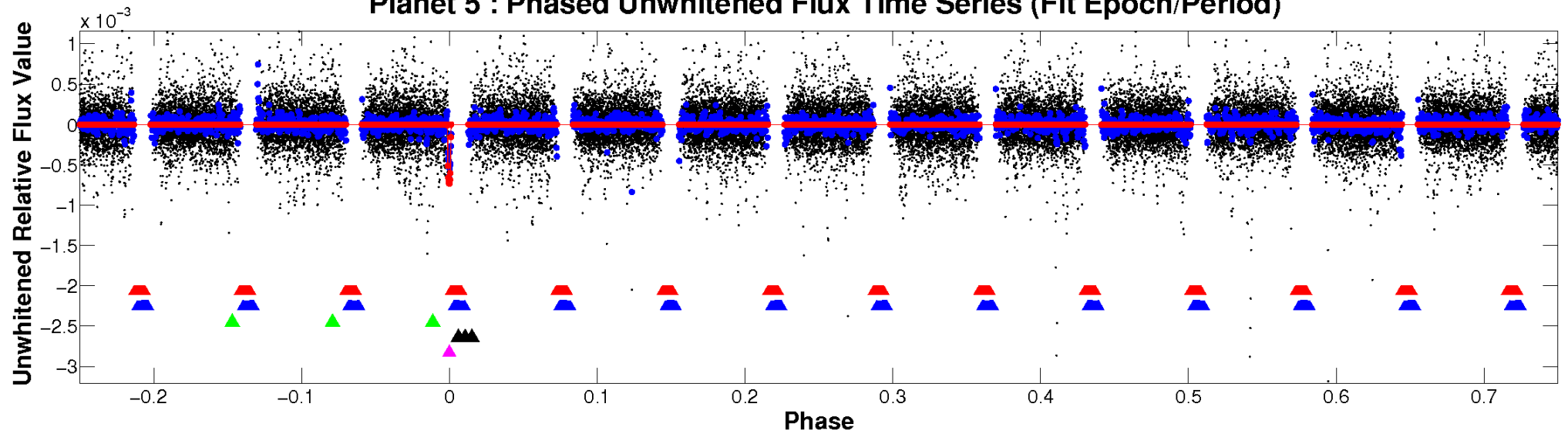
ALT Odd/Even

TCE 008479386-05

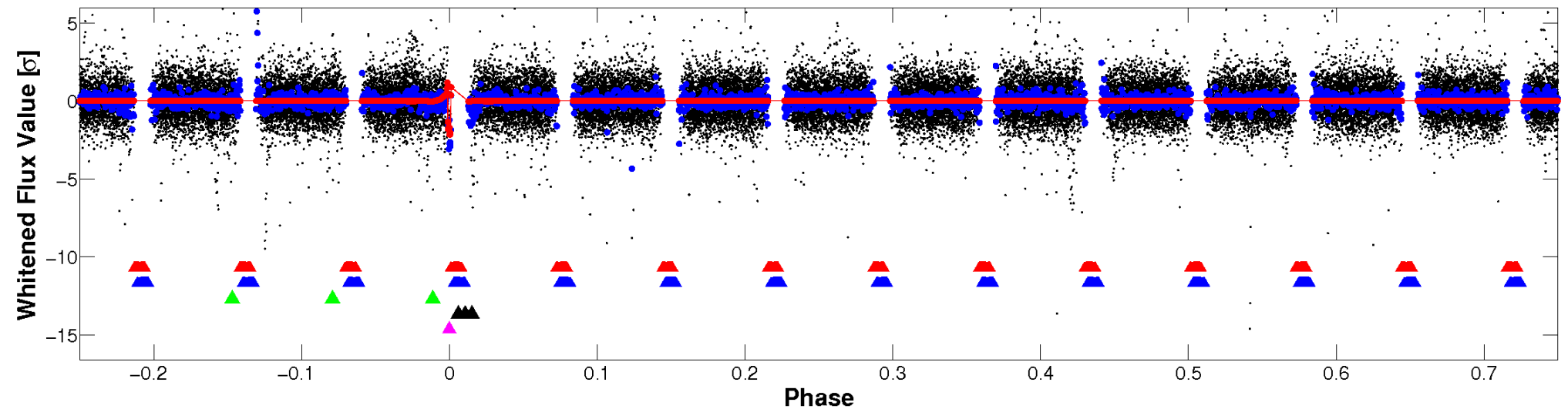


Non-Whitened Vs. Whitened Light Curve

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

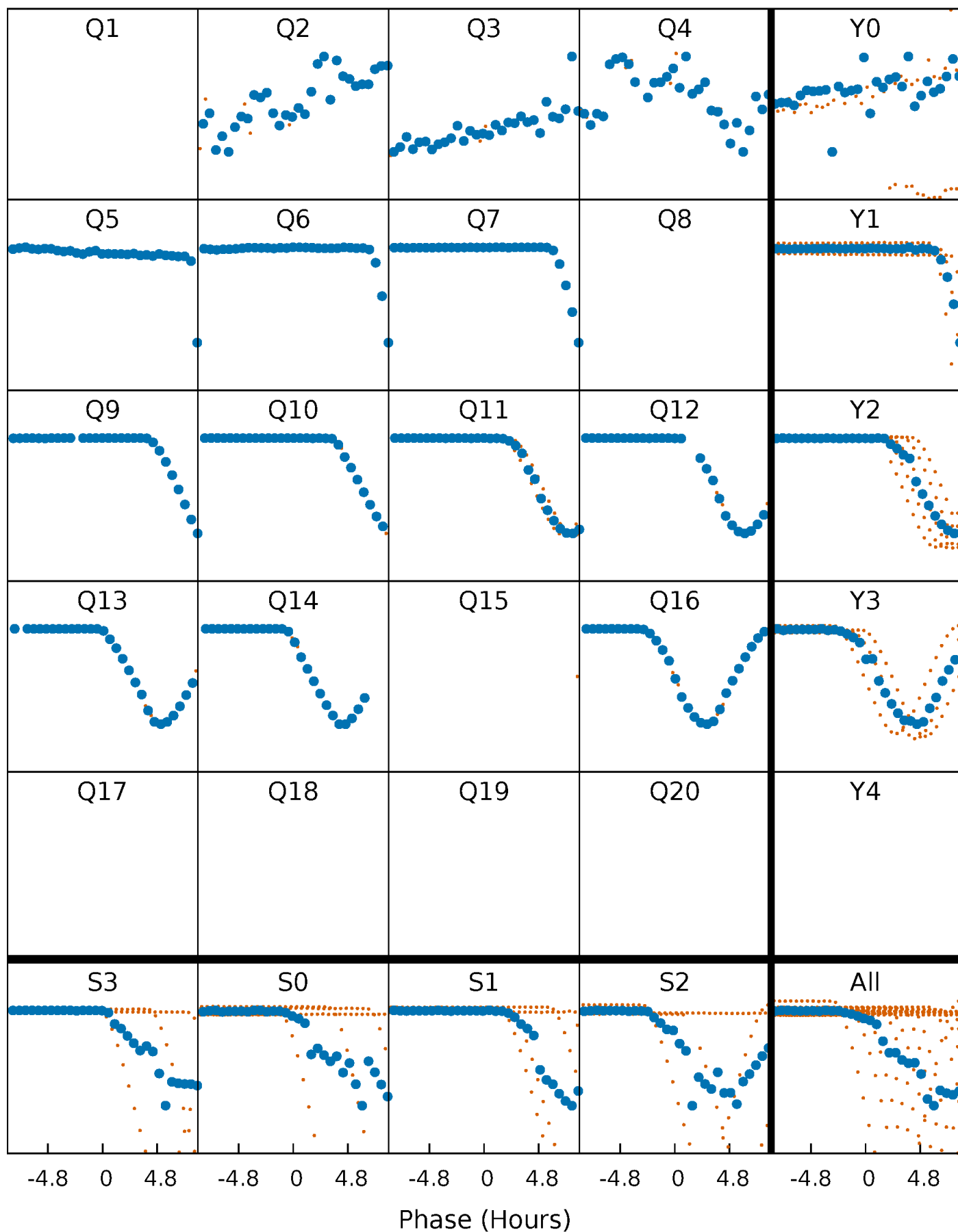


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



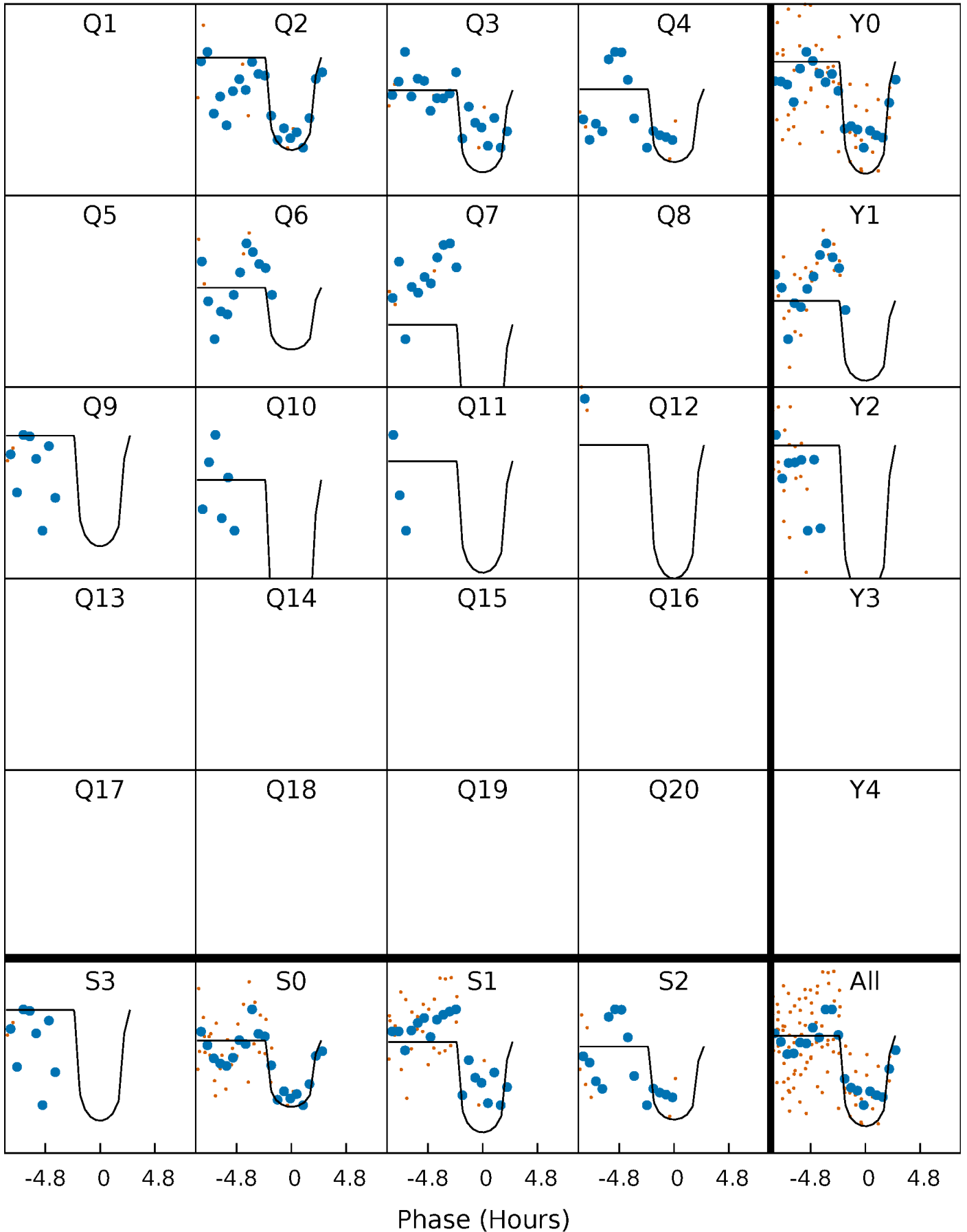
PDC Quarter-Phased Transit Curves

TCE 008479386-05 $P = 82.081093$ Days $T_0 = 186.903054$ (BKJD)



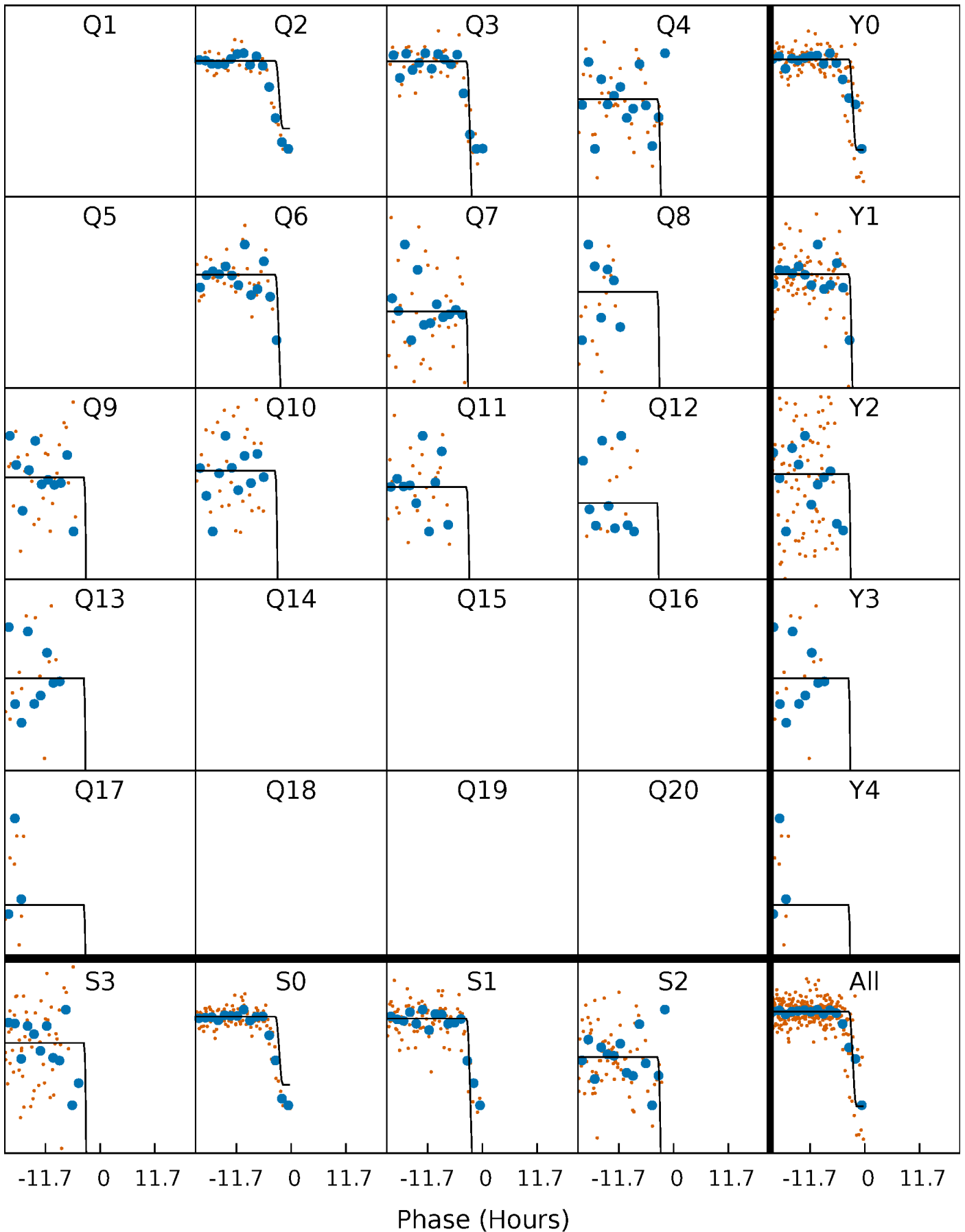
DV Quarter-Phased Transit Curves

TCE 008479386-05 $P = 82.081093$ Days $T_0 = 186.903054$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

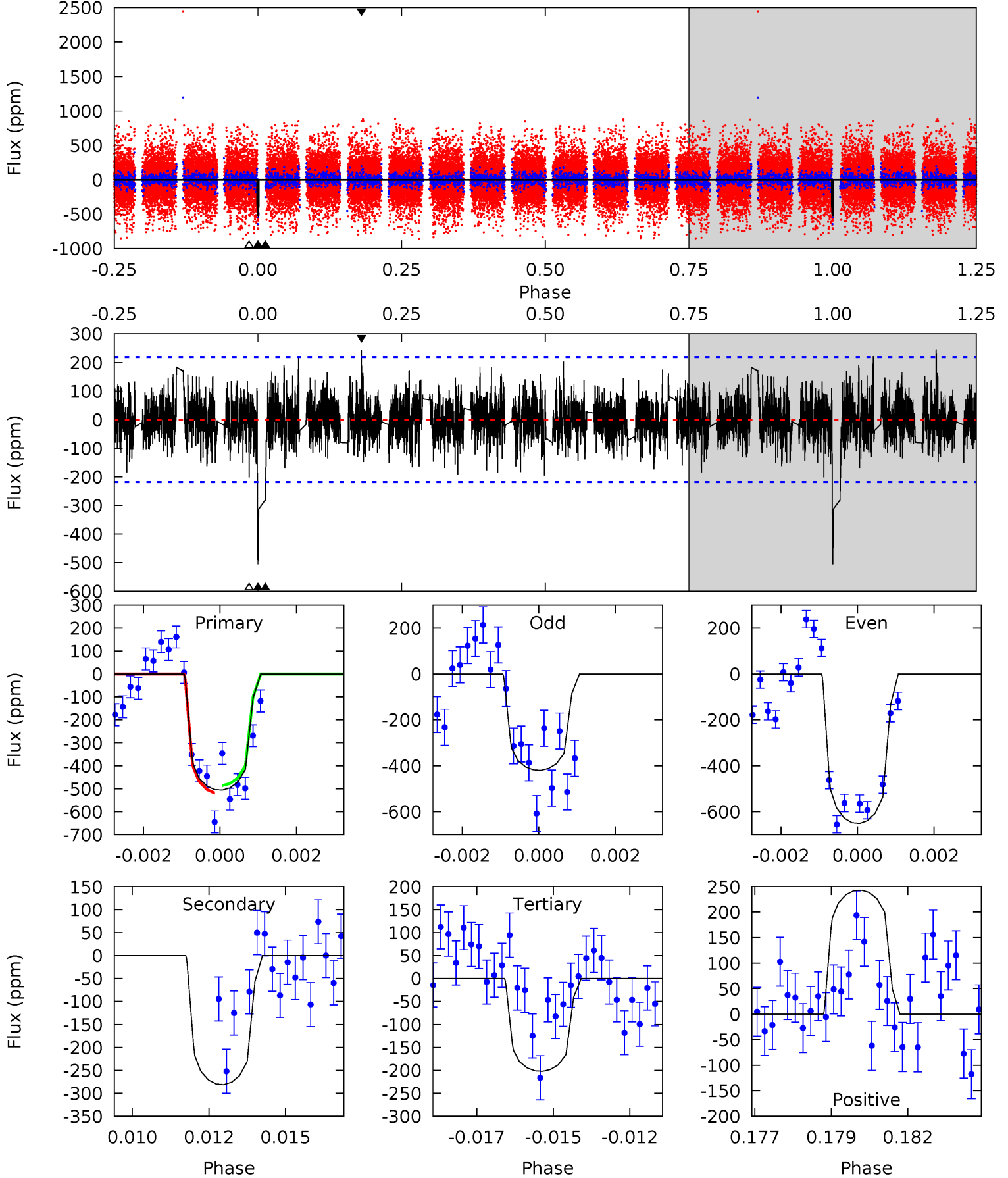
TCE 008479386-05 P= 82.071682 Days $T_0=187.023482$ (BKJD)



DV Model-Shift Uniqueness Test

008479386-05, P = 82.081093 Days, E = 104.821961 Days

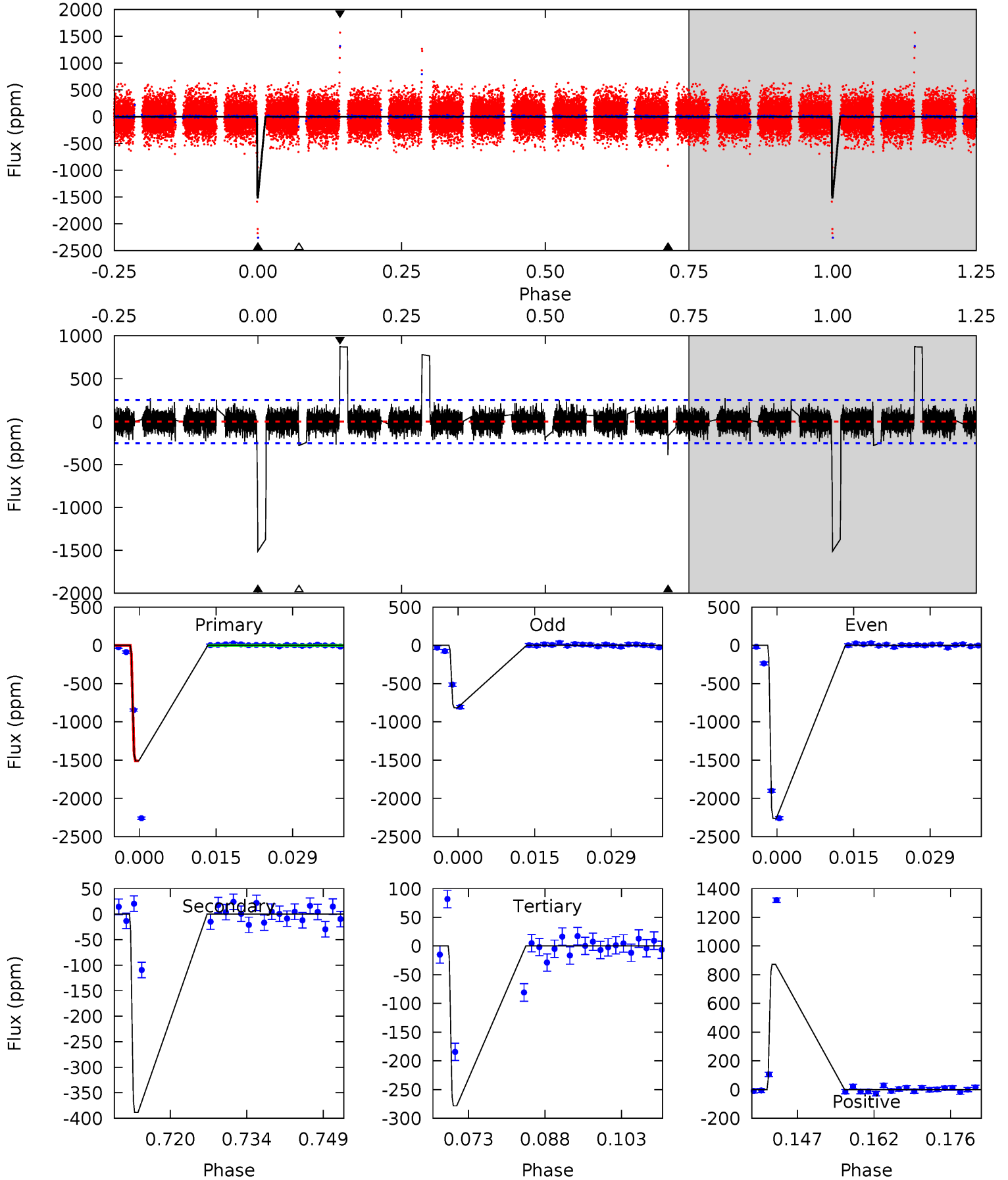
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	6.80	4.89	5.88	5.29	3.02	1.29	7.35	6.35	1.91	0.92	2.74	0.90	0.32	0.39



Alt Model-Shift Uniqueness Test

008479386-05, P = 82.071682 Days, E = 104.951800 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
29.5	7.58	5.43	17.0	4.95	2.44	1.26	24.0	12.4	2.15	-9.44	16.0	0	0.37	0



Stellar Parameters For KIC 008479386

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6267^{+170}_{-189}	$4.284^{+0.198}_{-0.180}$	$-0.500^{+0.300}_{-0.300}$	$1.158^{+0.308}_{-0.224}$	$0.940^{+0.135}_{-0.098}$	$0.852^{+0.756}_{-0.397}$
	+3%/-3%	+5%/-4%	+60%/-60%	+27%/-19%	+14%/-10%	+89%/-47%
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 008479386-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-281 ± 41	$3.79^{+2.72}_{-2.27}$	691^{+44}_{-43}	4772^{+2780}_{-851}	1438^{+7583}_{-968}
Alt.	-388 ± 51	$5.22^{+3.30}_{-2.50}$	688^{+52}_{-50}	4514^{+1482}_{-730}	1041^{+2868}_{-656}

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

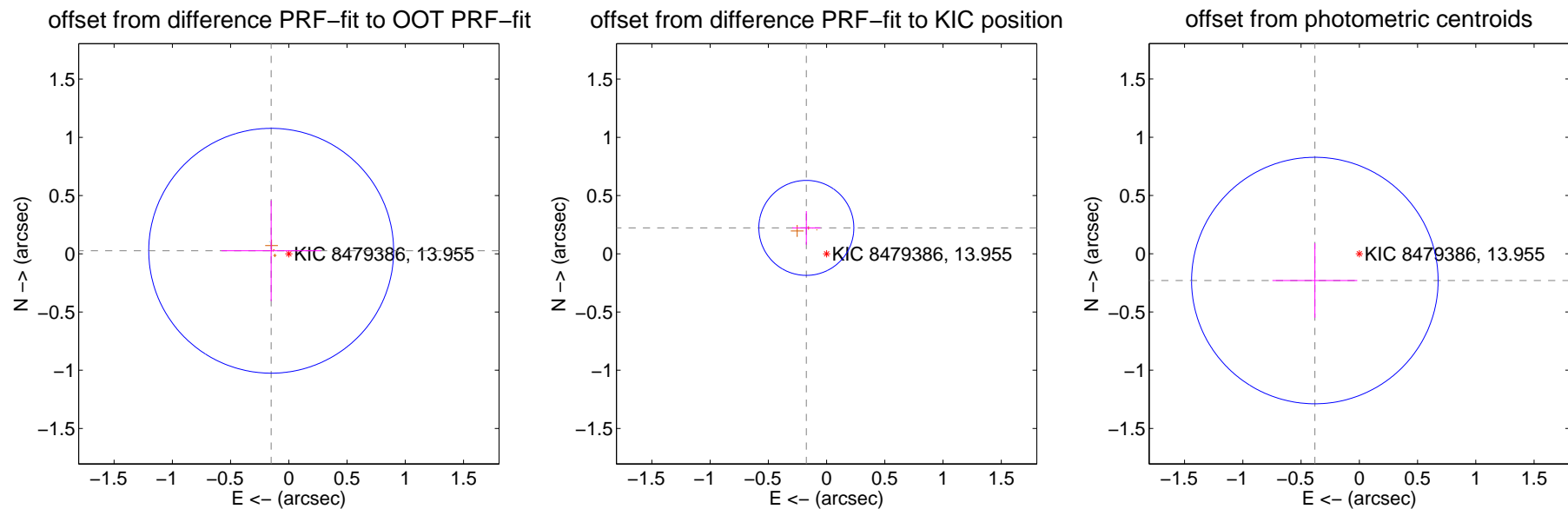
DV Centroid Data

Supplemental centroid analysis for 008479386-05. Kepler magnitude: 13.96. Transit SNR 9.38

There are 1 quarters with good PRF difference image offsets

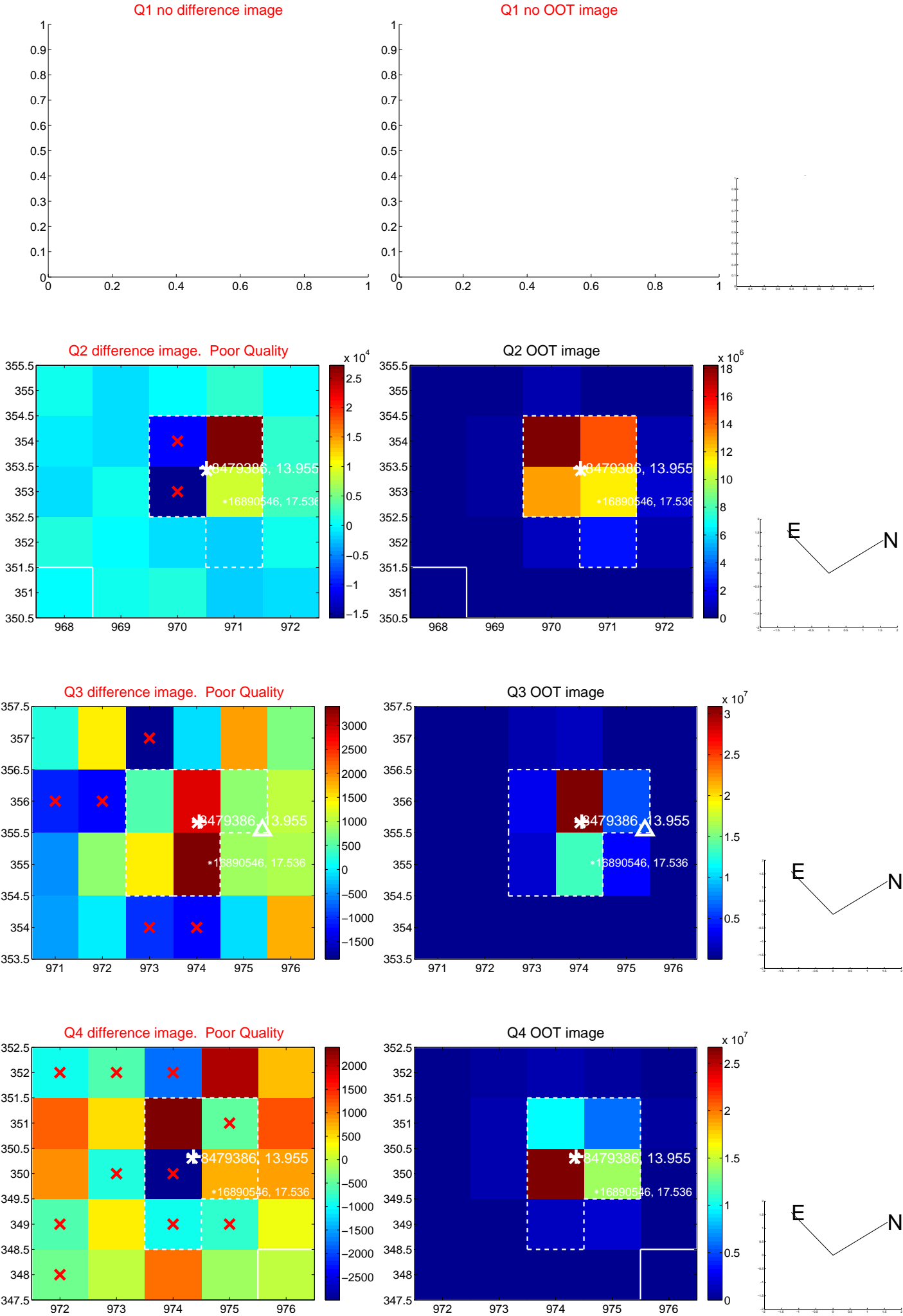
The direct PRF centroid is offset from the target star catalog position by about 0.13 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.154 ± 0.350	0.44	0.151 ± 0.427	0.026 ± 0.432
PRF-fit source offset from KIC position	0.282 ± 0.136	2.08	0.174 ± 0.121	0.222 ± 0.144
photometric centroid source offset	0.45 ± 0.35	1.26	0.38 ± 0.36	-0.23 ± 0.32

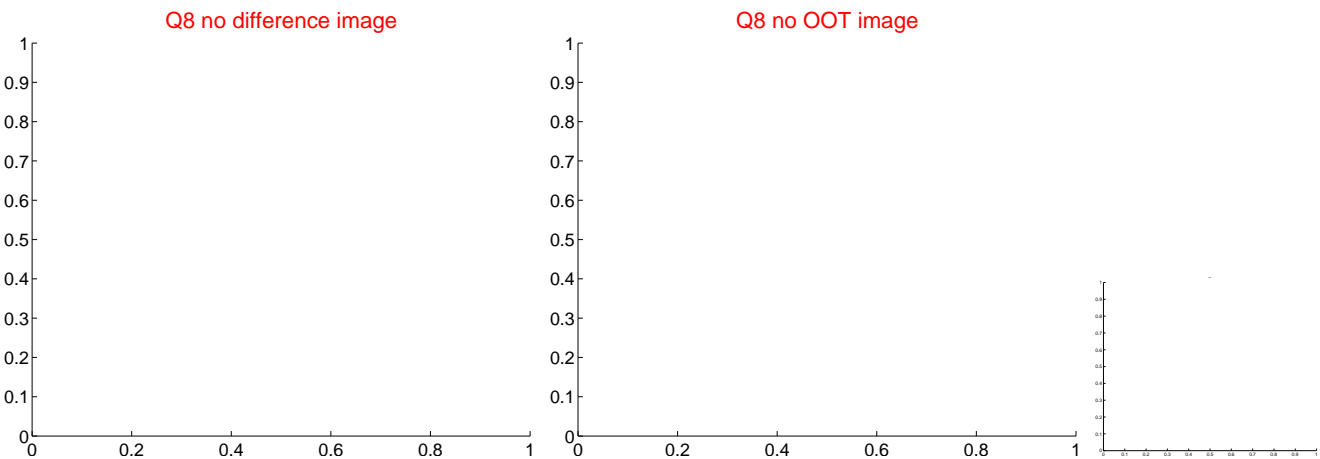
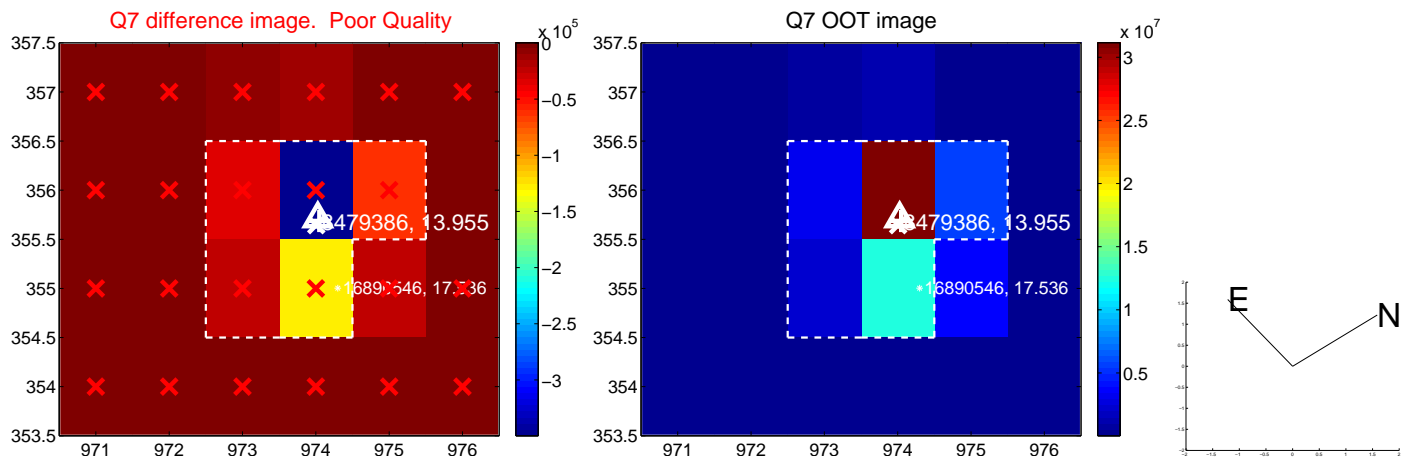
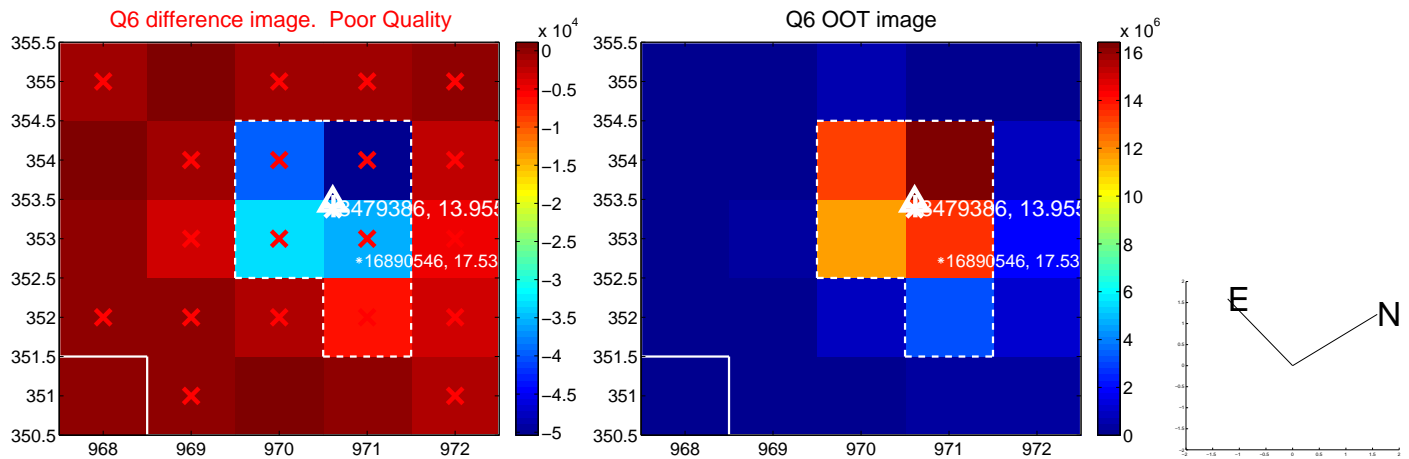
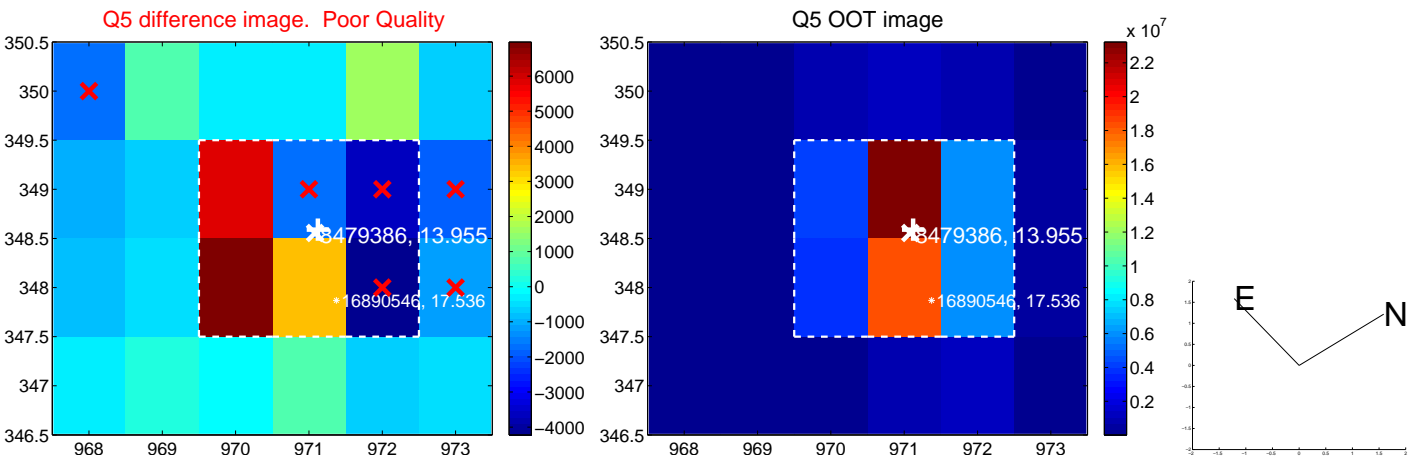


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . Red *: target star. Blue *: Other stars. Text next to a star gives its KIC ID and kepmag. KIC IDs > 15,000,000 are from the UKIRT catalog.

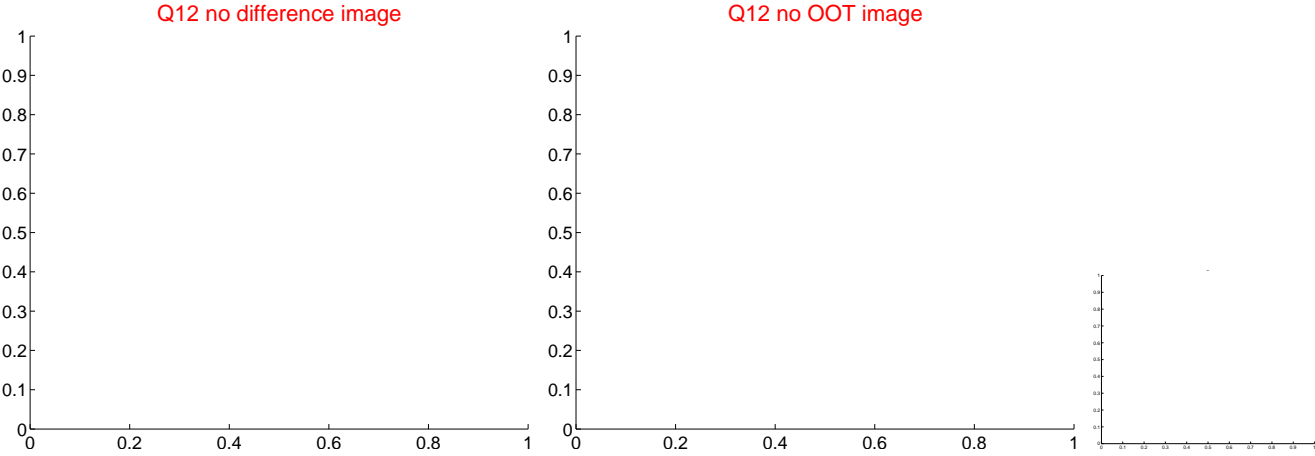
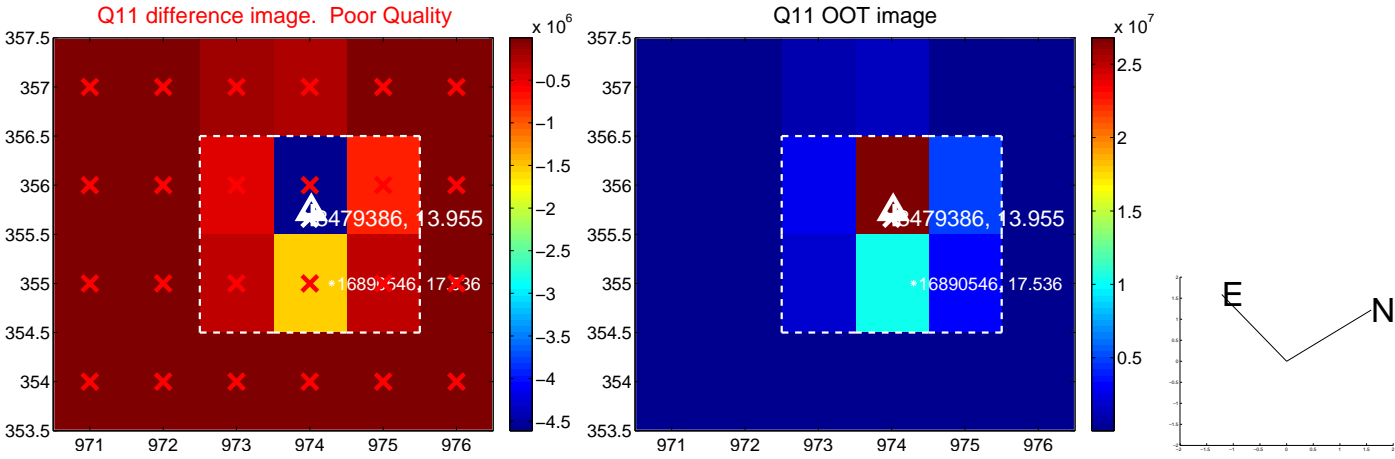
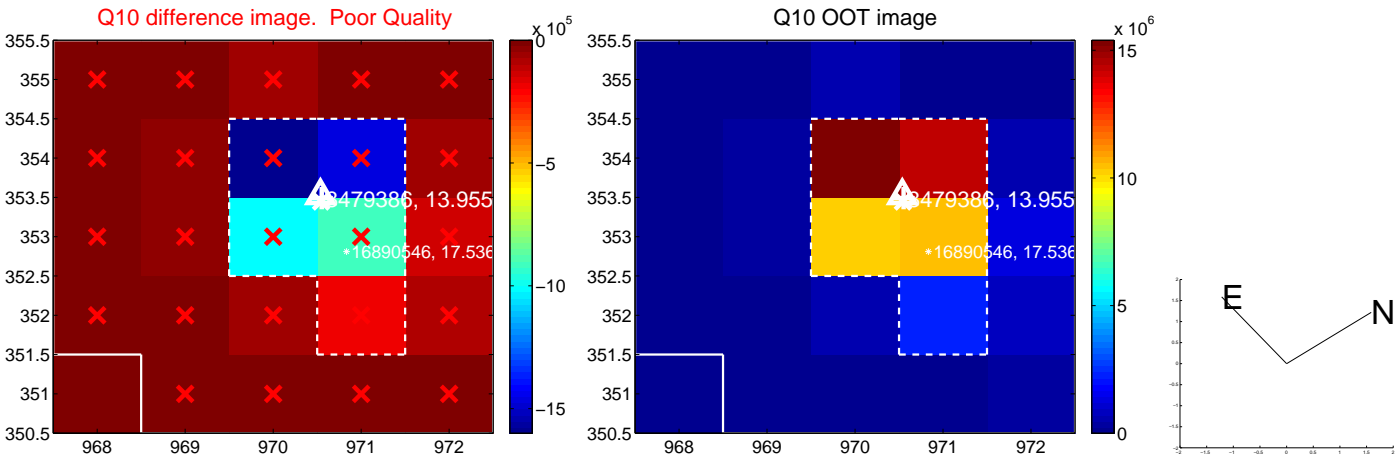
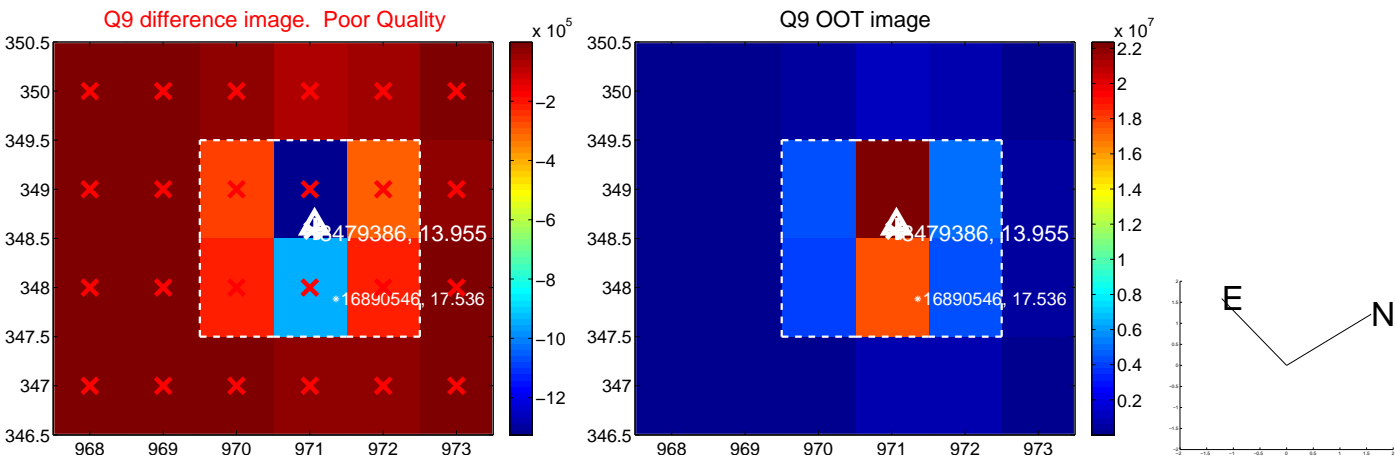
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



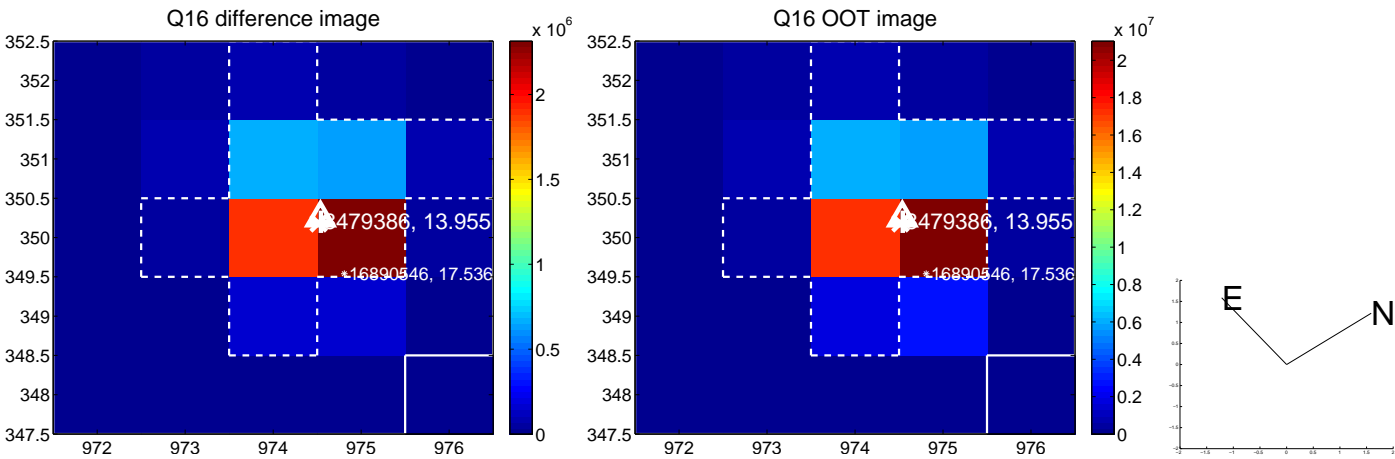
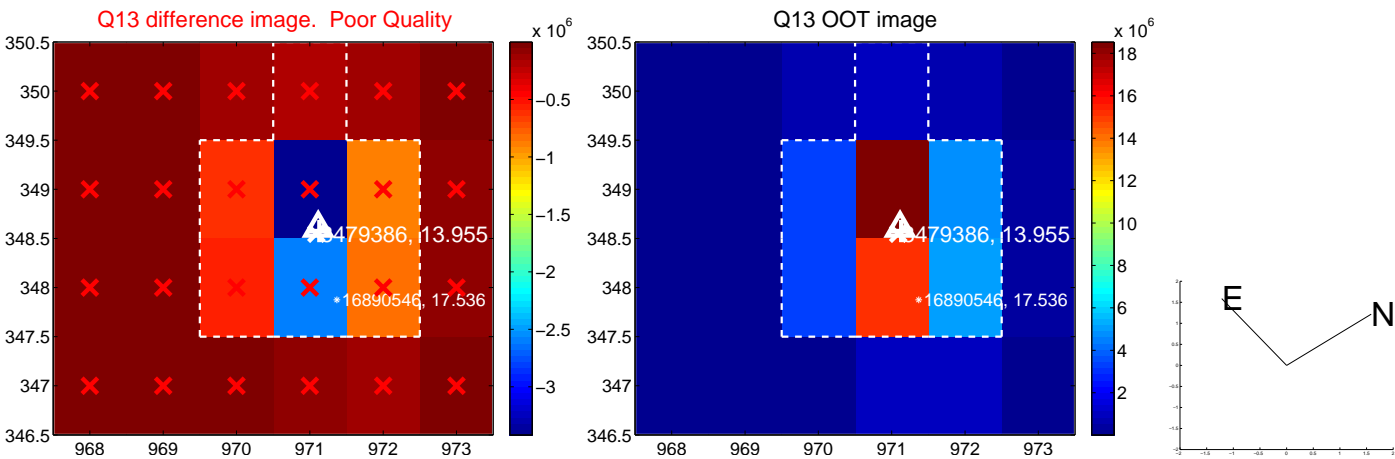
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



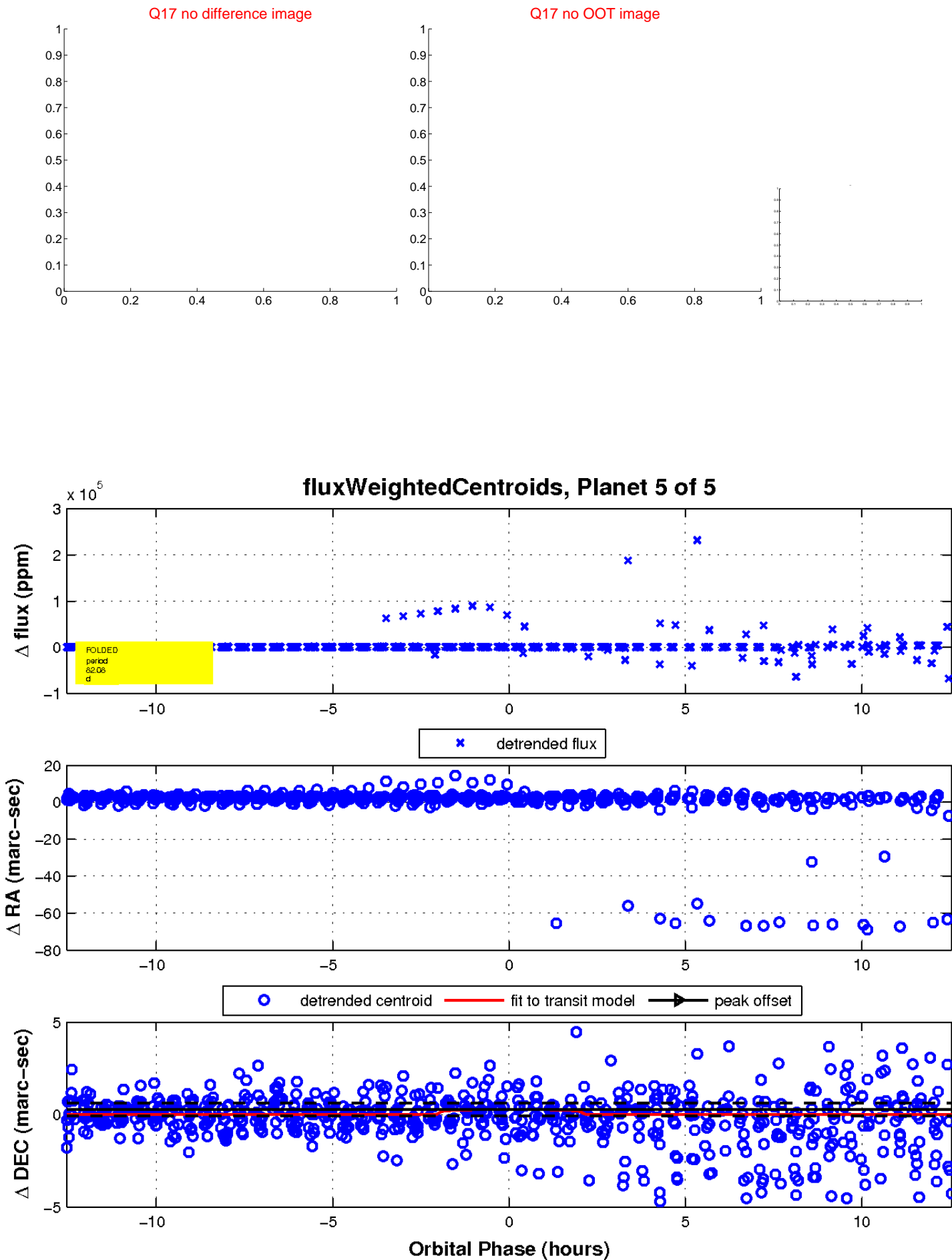
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

