

KIC 011517719

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})
011517719-01	OBS	1416.01	2.495773	132.842673	24236.5	4.211	1486.8	1491.7	0.99	6039	15.46	930.73
011517719-02	OBS	No	2.495782	131.591539	338.5	4.207	26.2	26.7	0.99	6039	2.15	930.72
011517719-03	OBS	No	57.415534	140.308971	138.9	1.882	8.6	0.9	0.99	6039	1.17	14.22
011517719-04	OBS	No	128.596542	140.173722	69.9	0.678	8.5	0.4	0.99	6039	1.00	4.85
011517719-05	OBS	No	142.287269	140.137565	2742.4	21.932	8.7	6.5	0.99	6039	6.39	4.24
011517719-06	OBS	No	228.796075	197.375531	680.4	5.274	7.9	4.0	0.99	6039	2.83	2.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011517719-01	OBS	PC	0.92	0	1	0	0	MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE
011517719-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011517719-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011517719-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011517719-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011517719-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

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

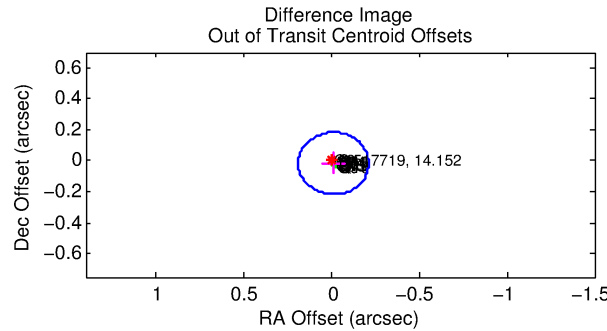
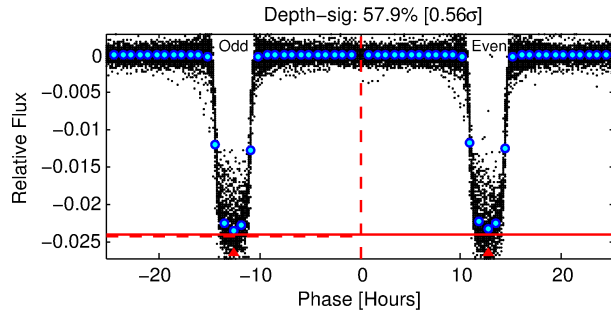
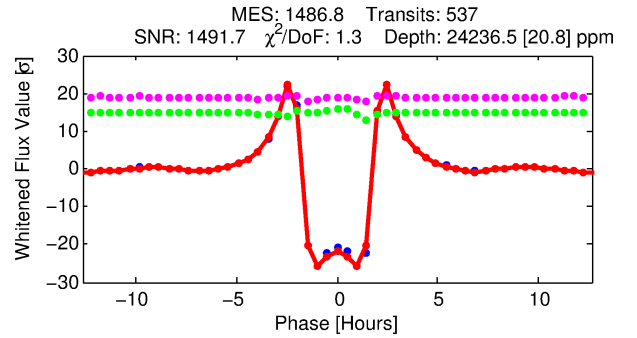
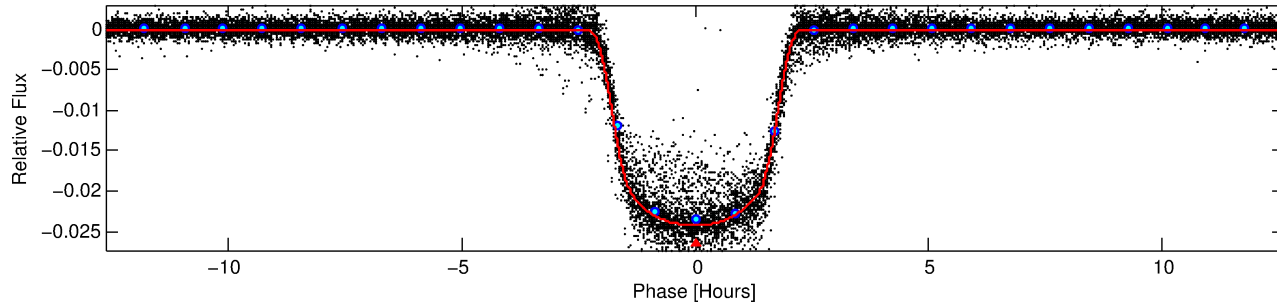
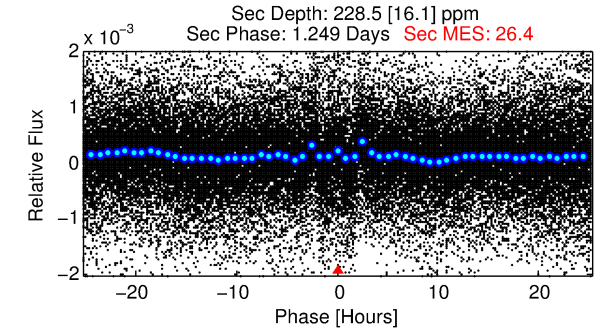
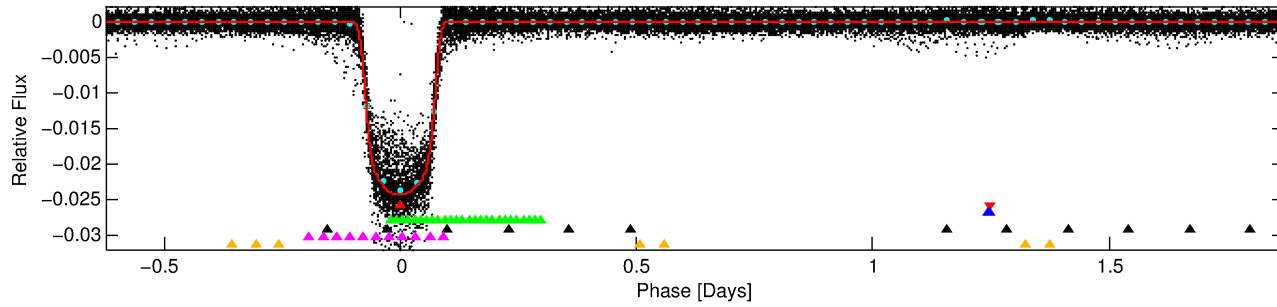
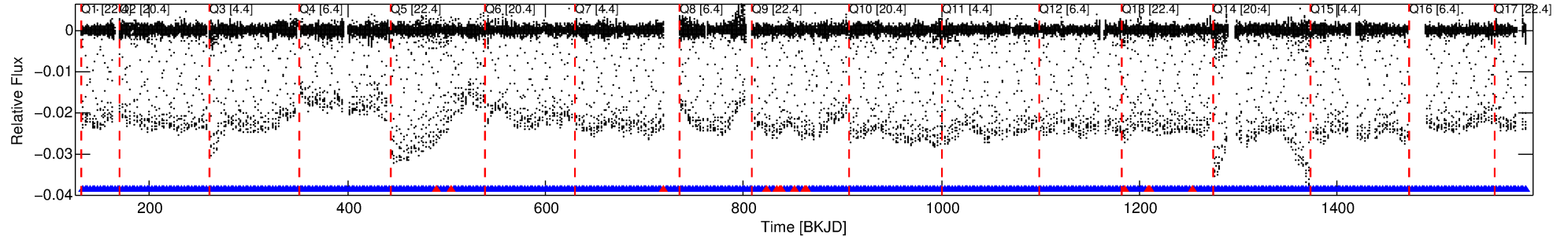
Ephemeris Match Information For 011517719-01

No Significant Match Found

DV One-Page Summary

KIC: 11517719 Candidate: 1 of 6 Period: 2.496 d
KOI: K01416.01 Corr: 0.992

Kp: 14.15 R*: 0.99 Rs Teff: 6039.0 K Logg: 4.43 Fe/H: -0.280



DV Fit Results:

Period = 2.49577 [0.00000] d
Epoch = 132.8427 [0.0000] BKJD
Rp/R* = 0.1428 [0.0001]
a/R* = 5.20 [0.02]
b = 0.09 [0.04]
Seff = 930.73 [361.73]
Teq = 1408 [137] K
Rp = 15.46 [4.61] Re
a = 0.0355 [0.0090] AU
Ag = 0.66 [0.25] [-1.35σ]
Teff = 1965 [68] K [3.64σ]

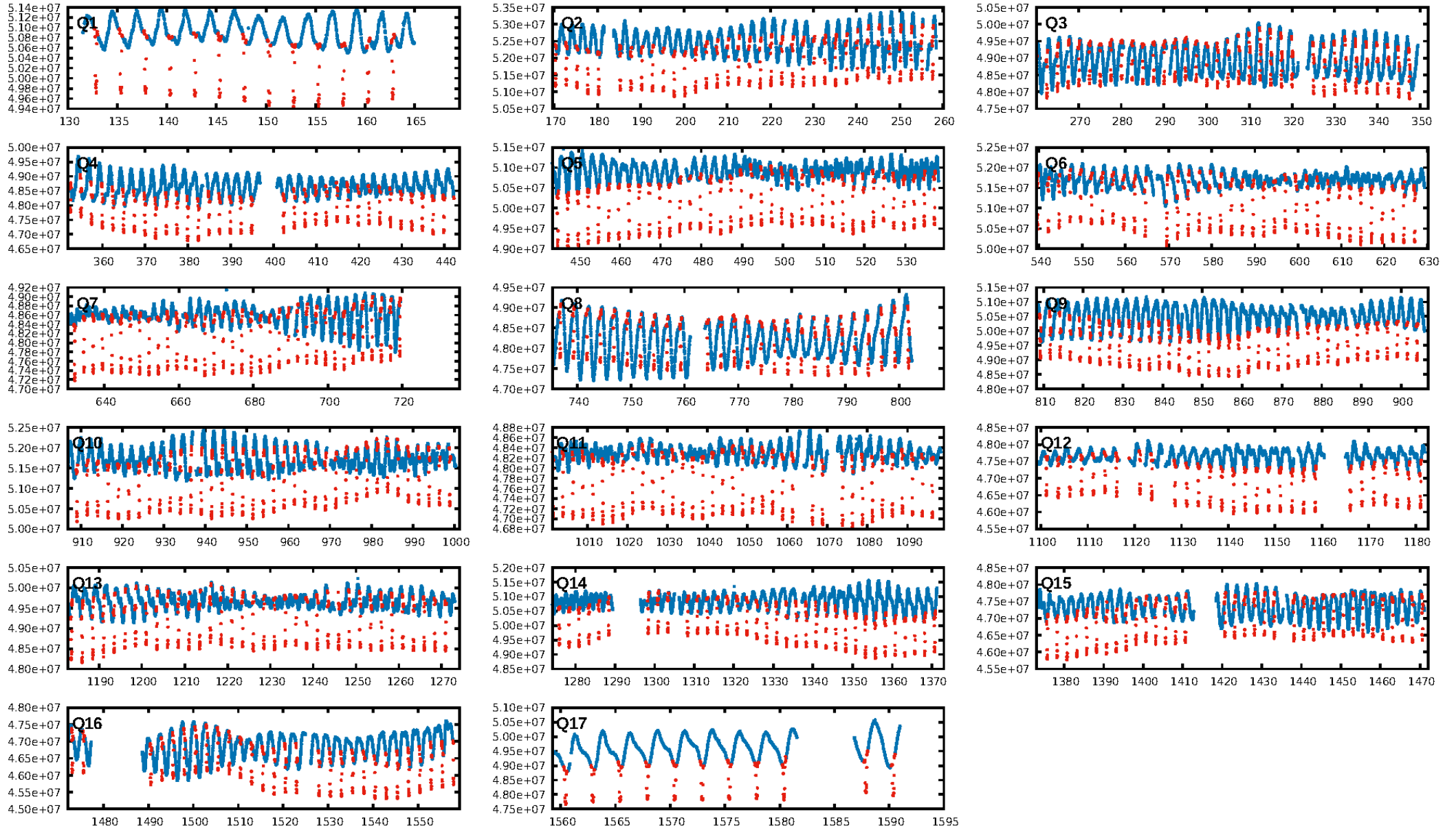
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [499/513]
GhostDiagnostic-chr: 1.854
Centroid-sig: 0.0%
Centroid-so: 0.067 arcsec [22.37σ]
OotOffset-rm: 0.020 arcsec [0.30σ]
KicOffset-rm: 0.106 arcsec [1.57σ]
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]

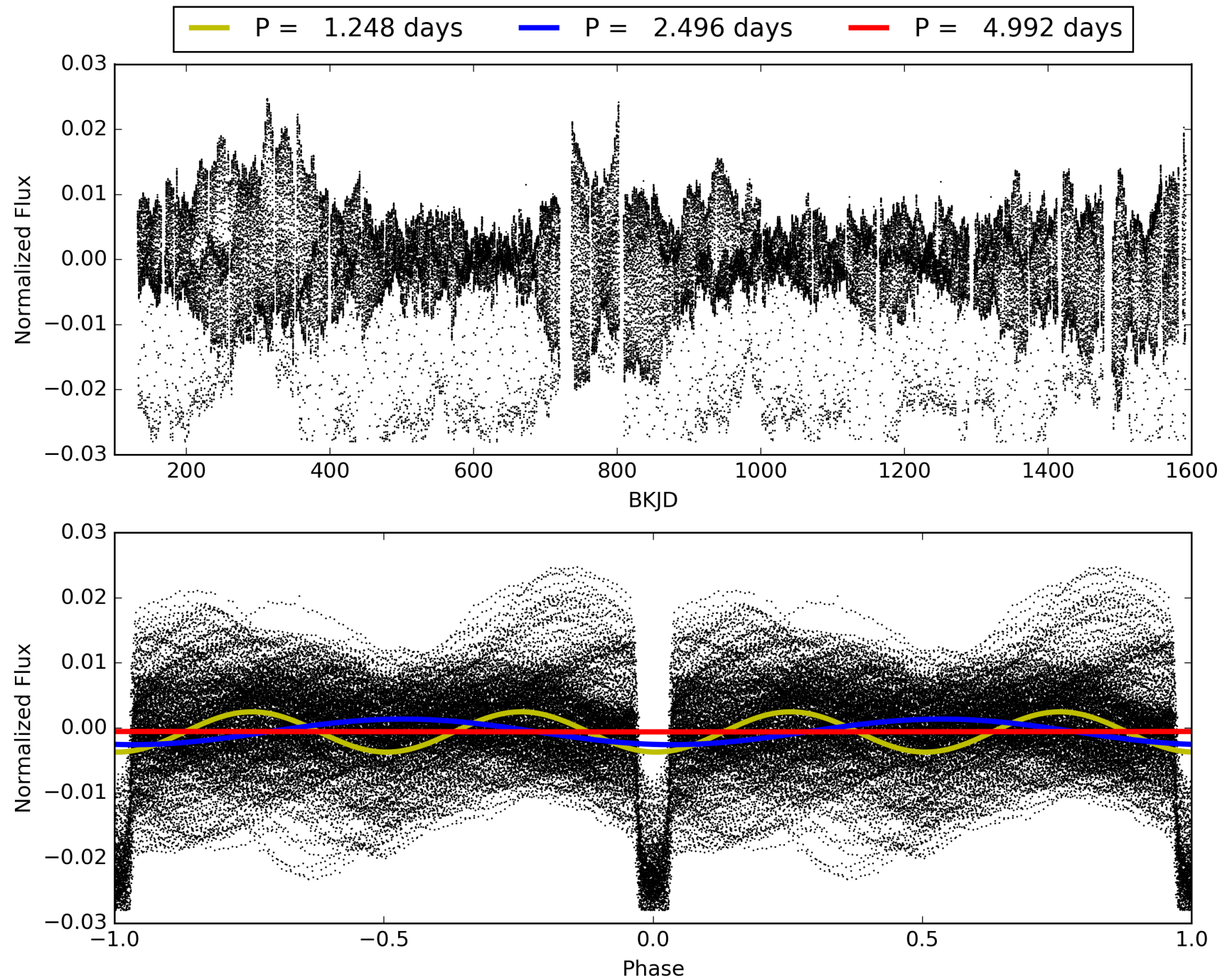
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:46:20 Z

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

TCE 011517719-01, PDC Light Curves

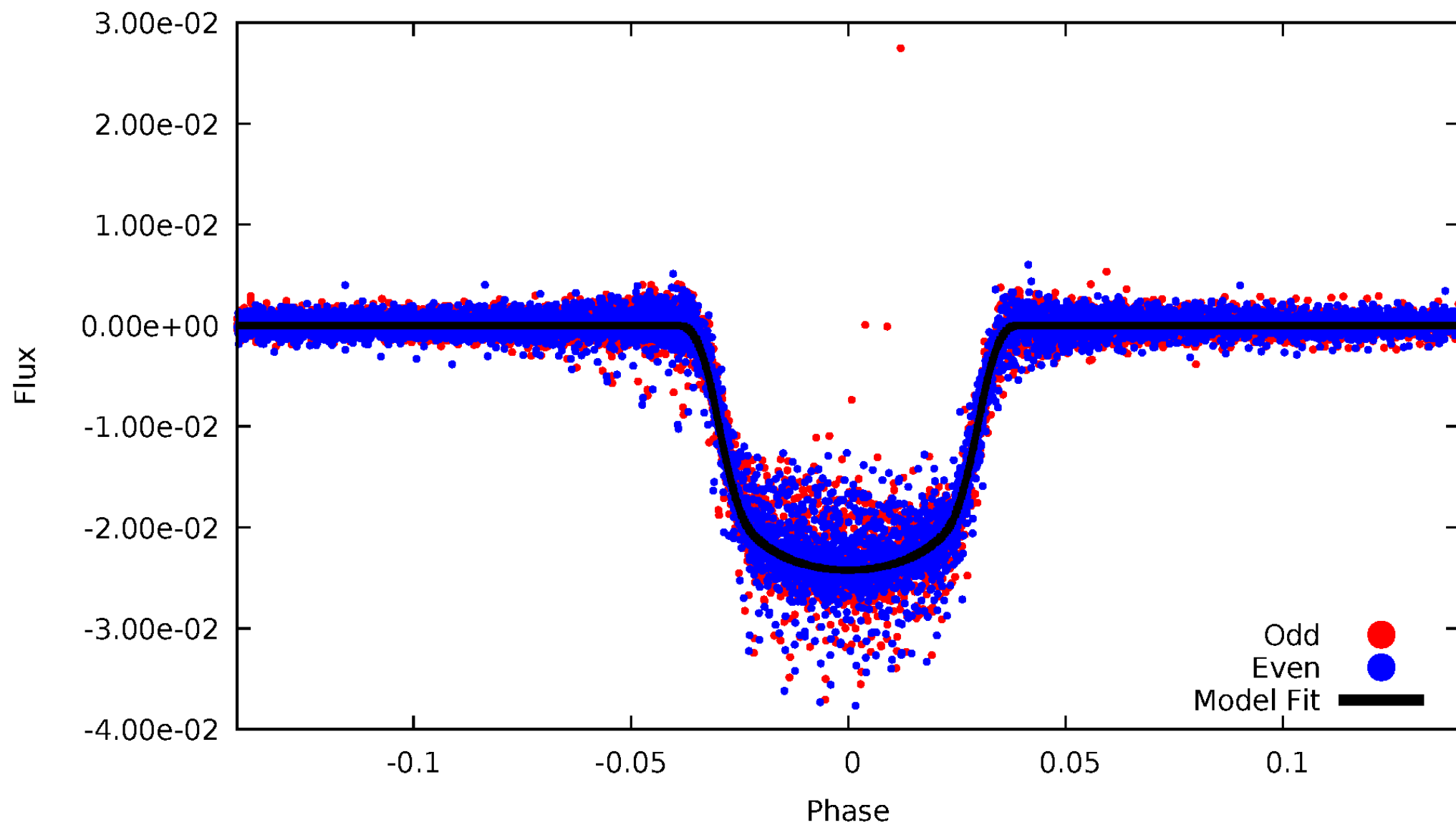


TCE 011517719-01



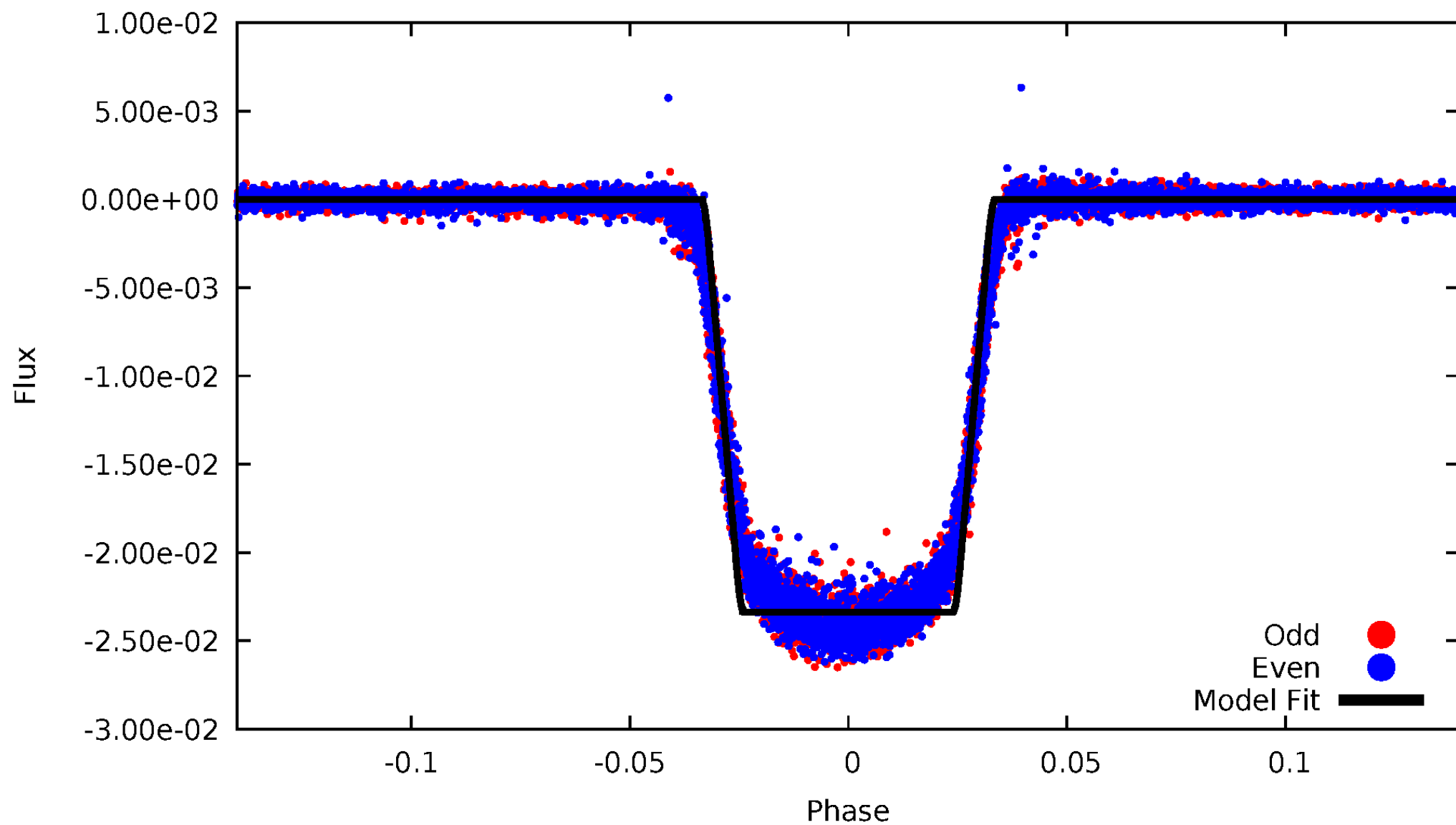
DV Odd/Even

TCE 011517719-01



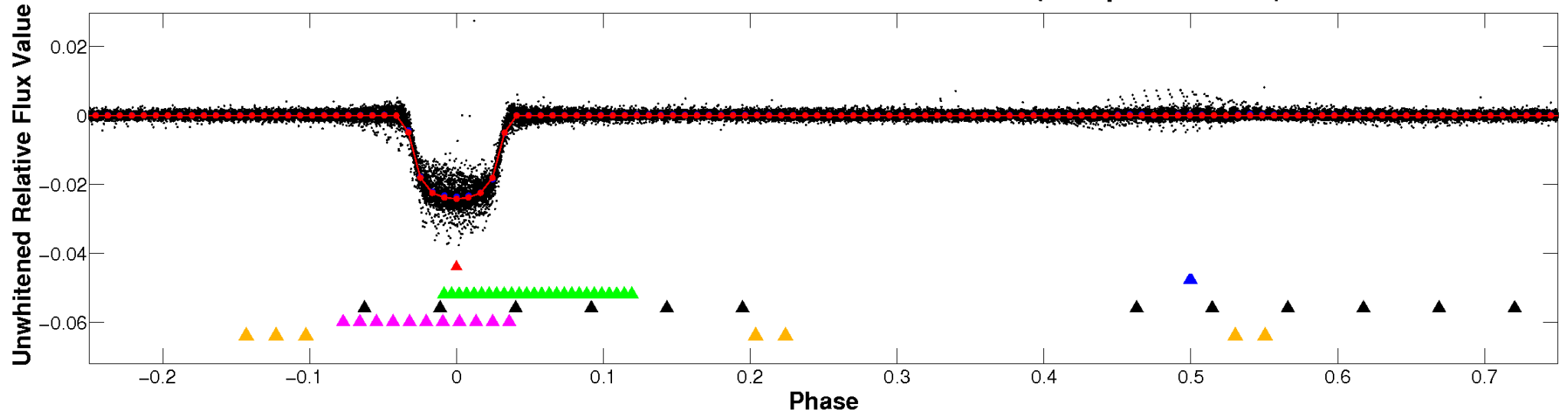
ALT Odd/Even

TCE 011517719-01



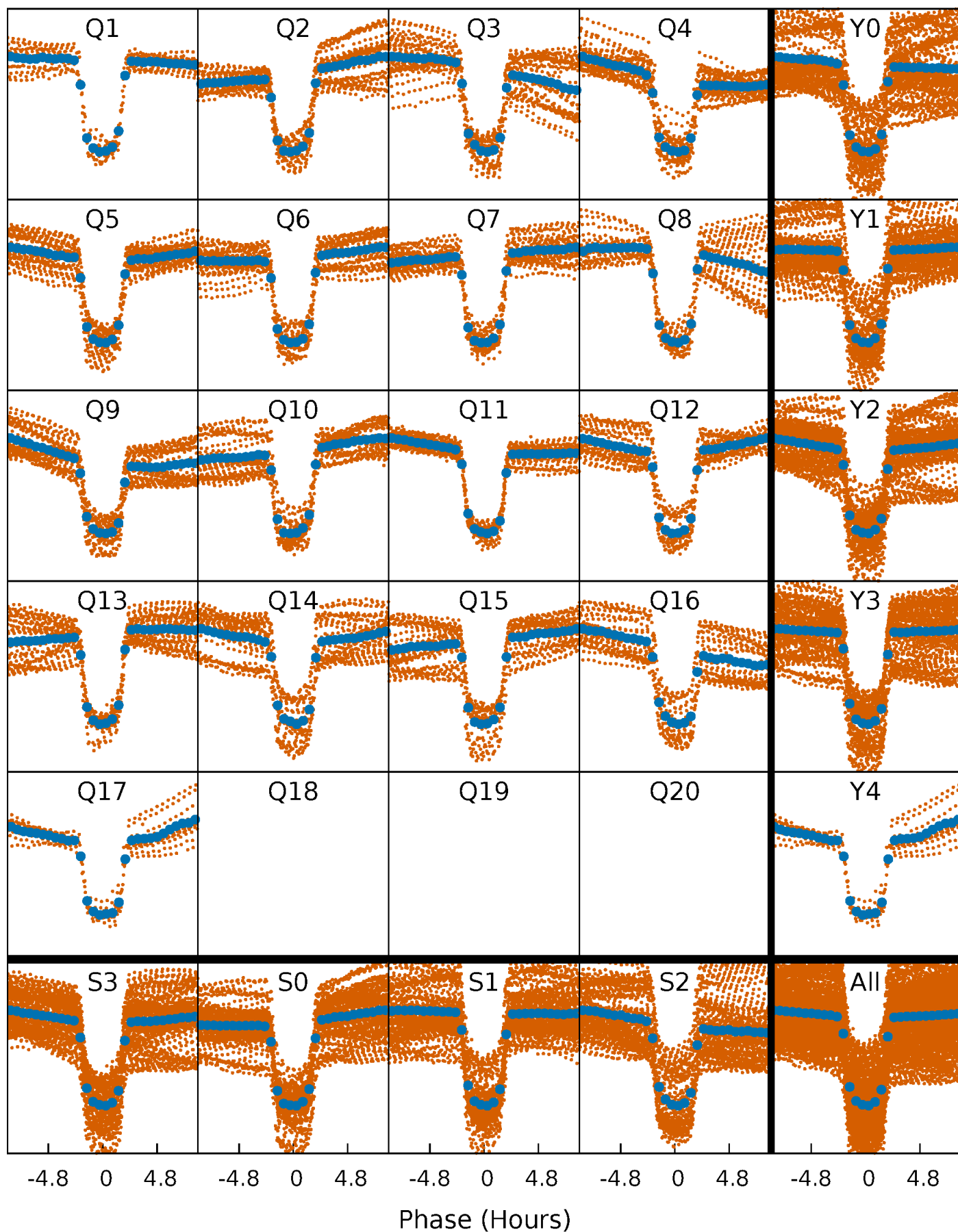
Non-Whitened Vs. Whitened Light Curve

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



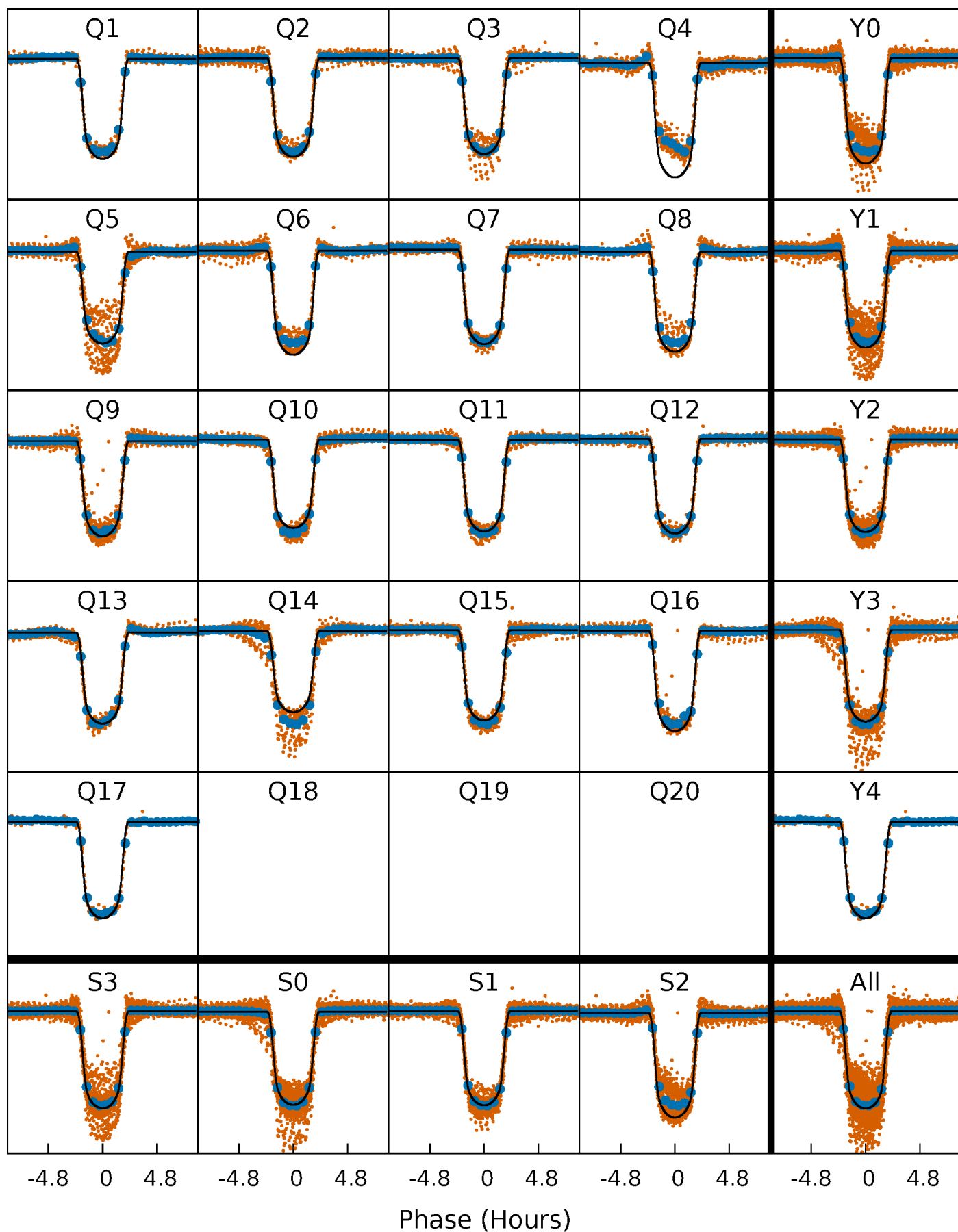
PDC Quarter-Phased Transit Curves

TCE 011517719-01 P= 2.495773 Days $T_0=132.842673$ (BKJD)



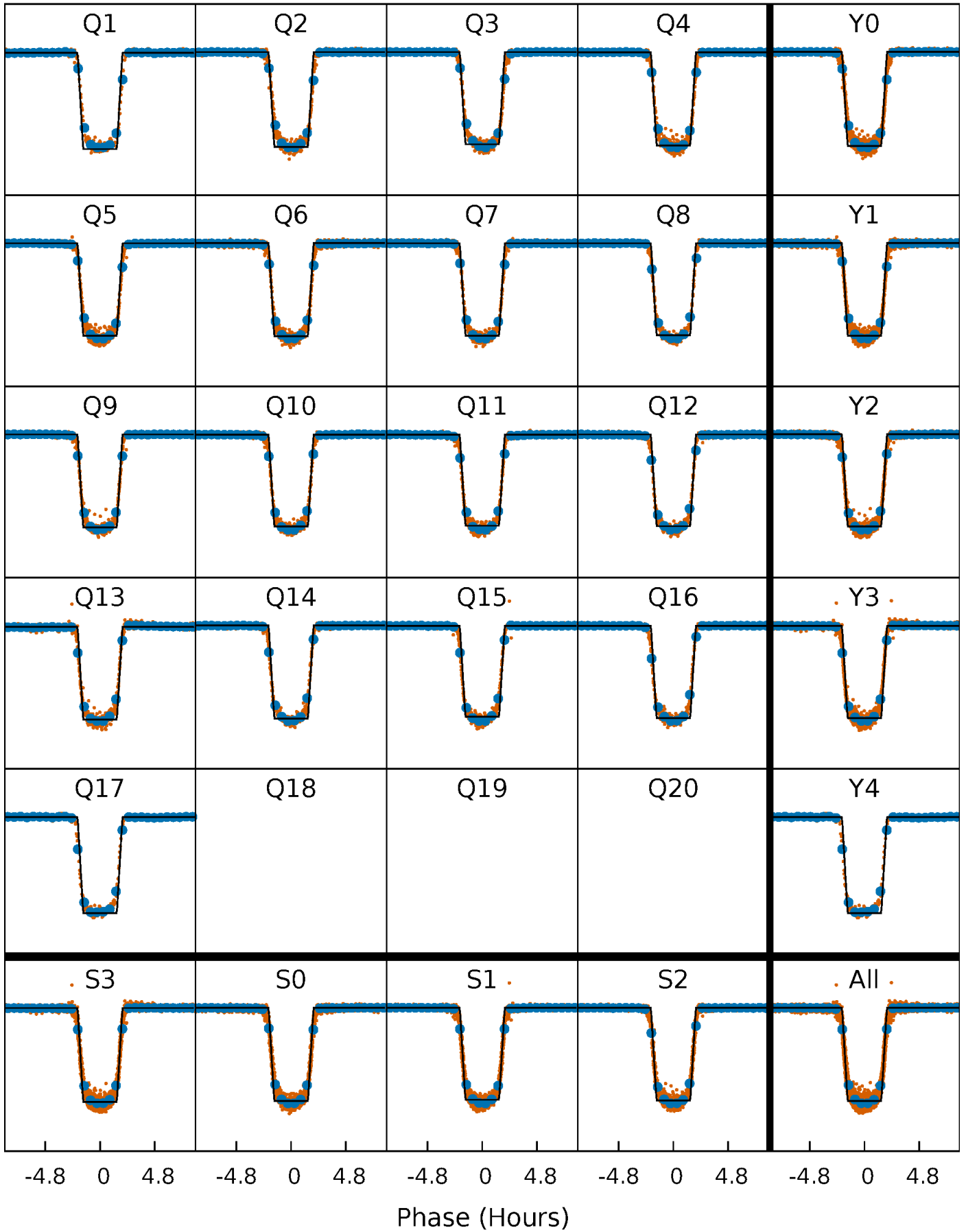
DV Quarter-Phased Transit Curves

TCE 011517719-01 P= 2.495773 Days $T_0=132.842673$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

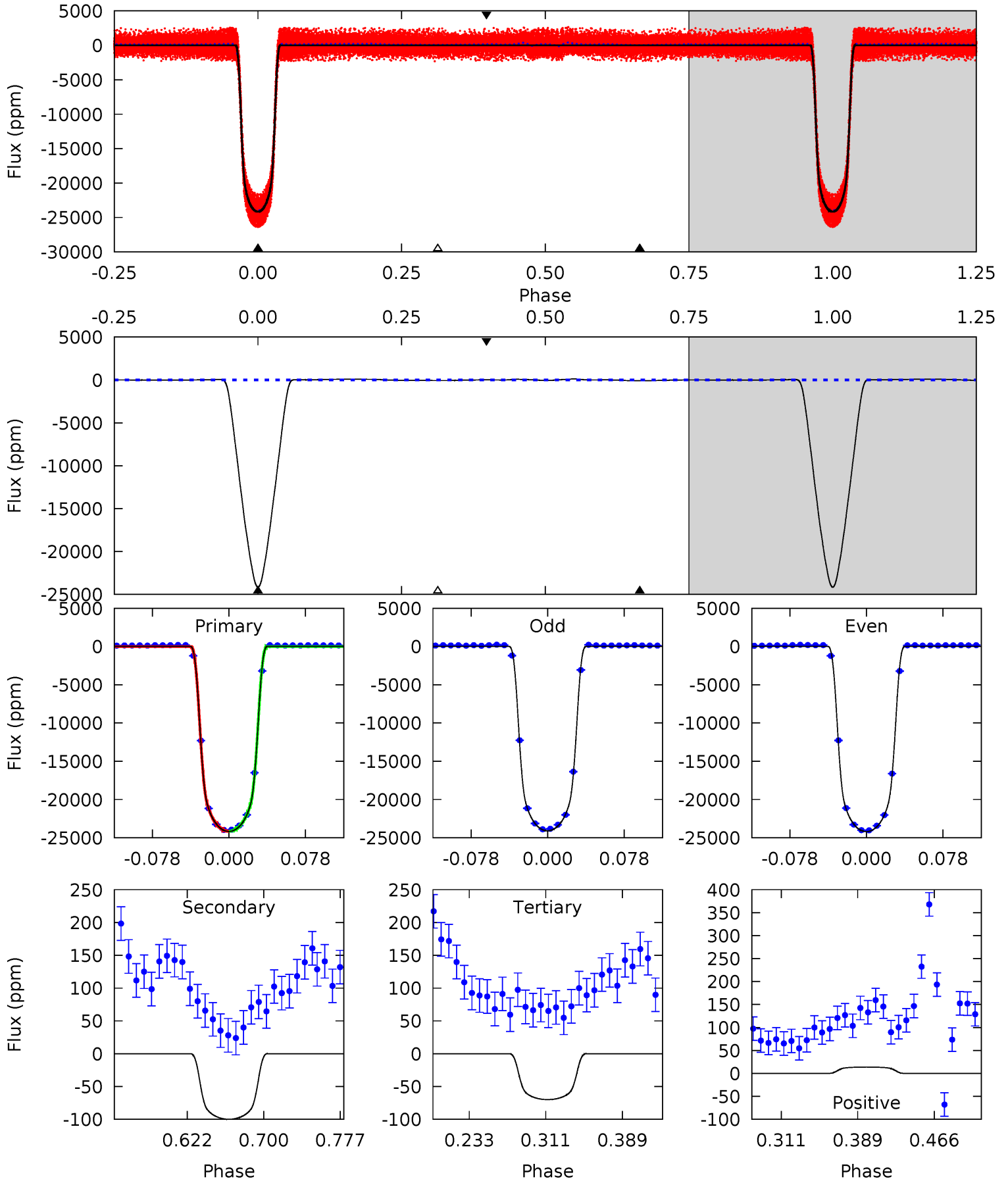
TCE 011517719-01 P= 2.495792 Days $T_0=132.837604$ (BKJD)



DV Model-Shift Uniqueness Test

011517719-01, P = 2.495773 Days, E = 130.346900 Days

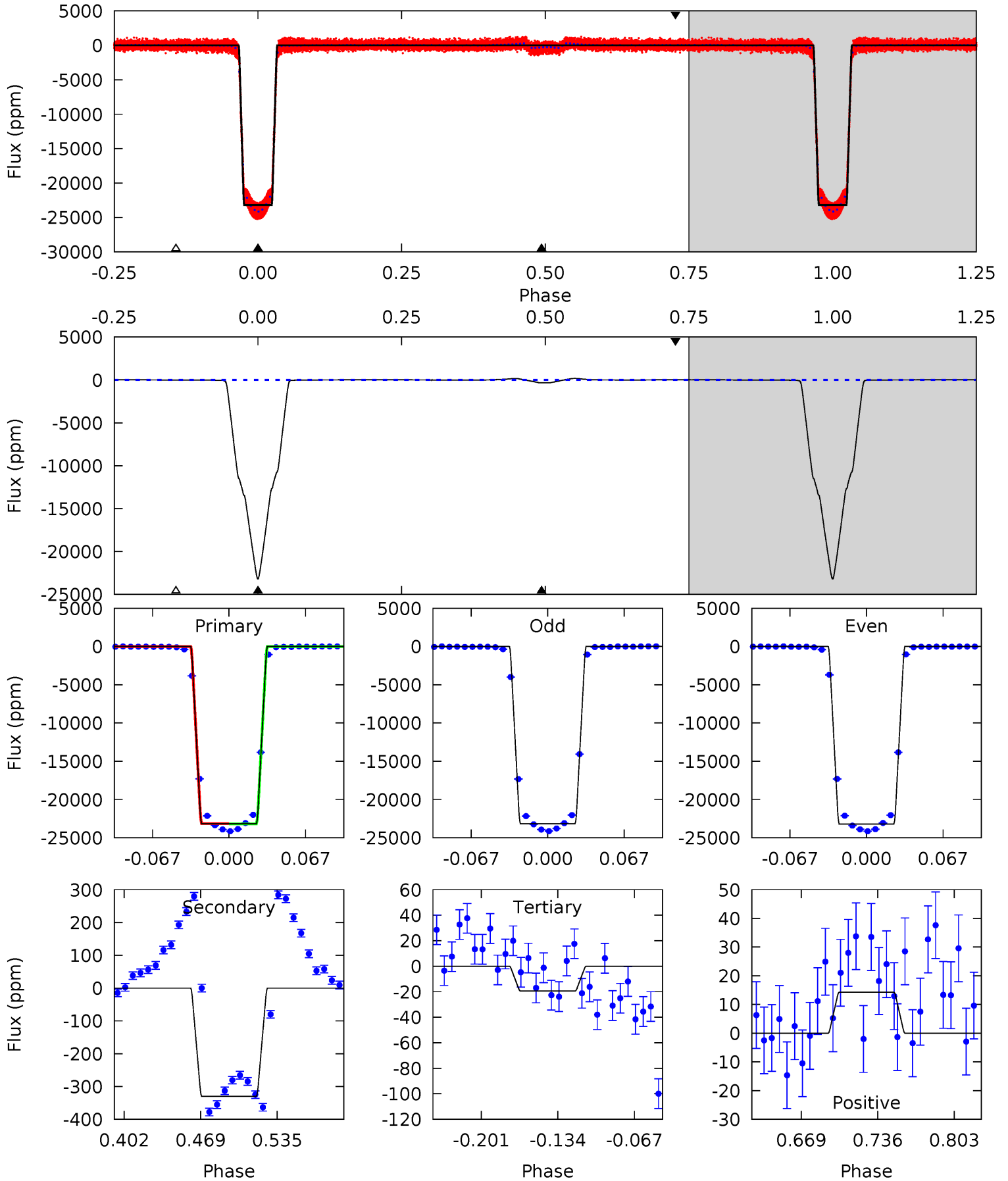
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2283	9.43	6.61	1.31	4.62	1.76	4.16	2276	2281	2.83	8.13	5.08	0.99	0.00	0.21



Alt Model-Shift Uniqueness Test

011517719-01, P = 2.495792 Days, E = 130.341812 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4862	69.2	4.08	3.00	4.65	1.83	4.15	4858	4859	65.1	66.2	3.55	1.00	0.01	0



Stellar Parameters For KIC 011517719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6039^{+163}_{-181}	$4.426^{+0.087}_{-0.203}$	$-0.280^{+0.300}_{-0.300}$	$0.992^{+0.296}_{-0.127}$	$0.959^{+0.130}_{-0.117}$	$1.384^{+0.611}_{-0.677}$
	+3%/-3%	+2%/-5%	+107%/-107%	+30%/-13%	+14%/-12%	+44%/-49%
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 011517719-01 / KOI 1416.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-100 ± 11	$15.60^{+2.72}_{-1.34}$	1991^{+131}_{-100}	-1898^{+3857}_{-334}	$0.275^{+0.065}_{-0.067}$
Alt.	-330 ± 5	$16.73^{+3.01}_{-1.33}$	2000^{+137}_{-117}	2643^{+56}_{-75}	$0.803^{+0.144}_{-0.196}$

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 $A_{obs} \gg 1.0$

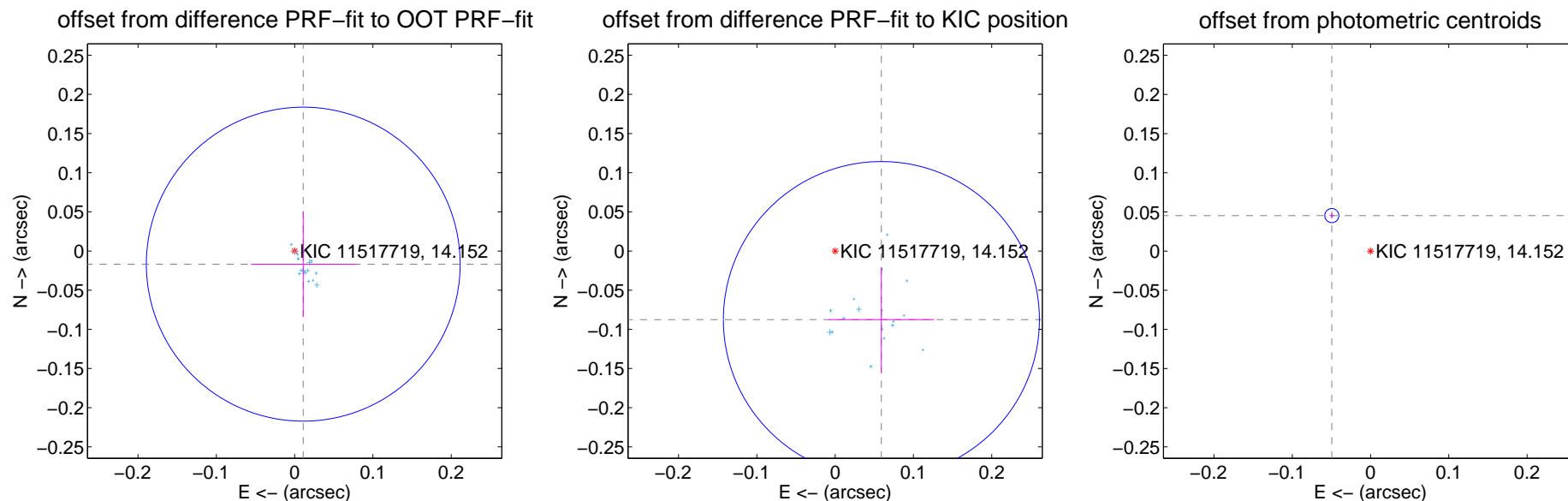
DV Centroid Data

Supplemental centroid analysis for 011517719-01. Kepler magnitude: 14.15. Transit SNR 1491.71

There are 17 quarters with good PRF difference image offsets

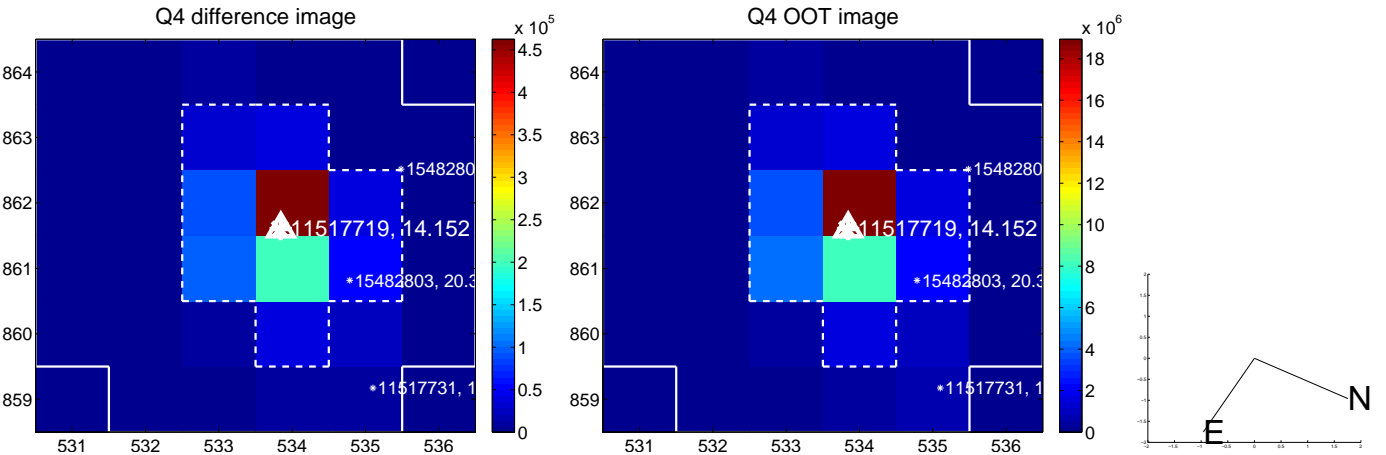
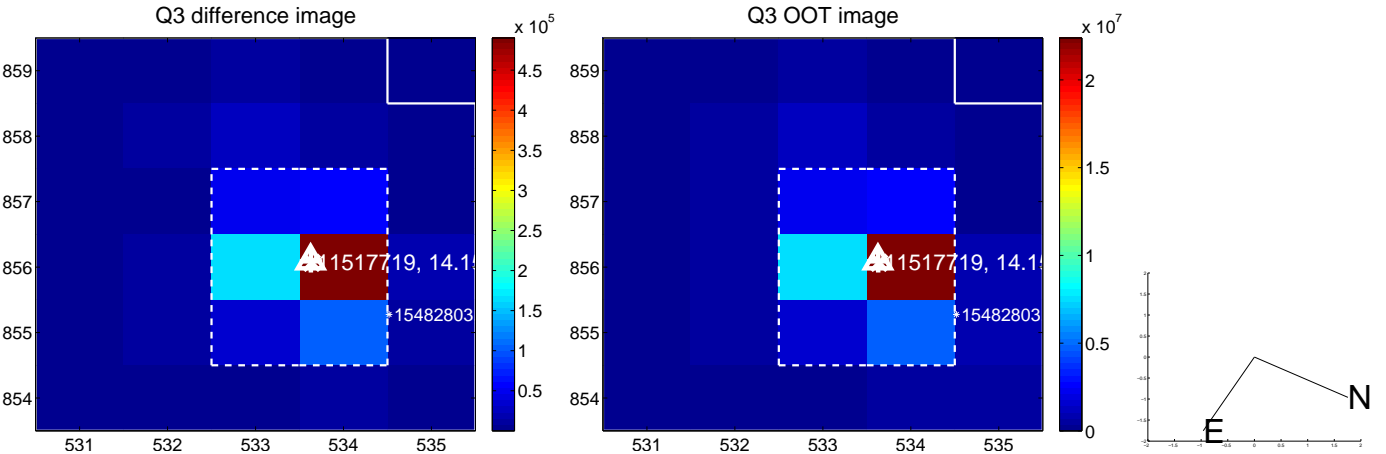
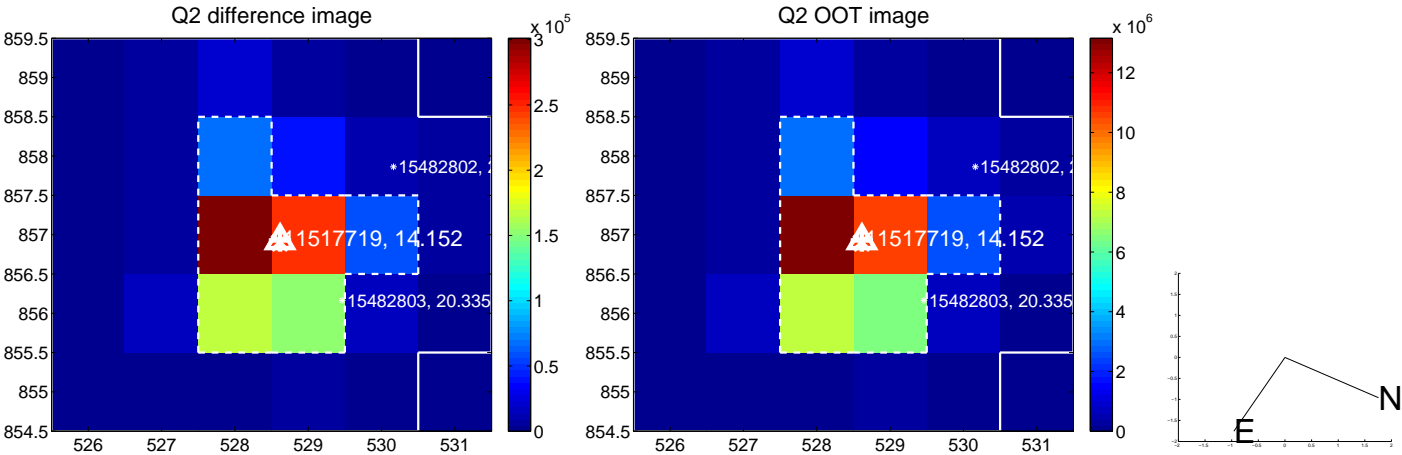
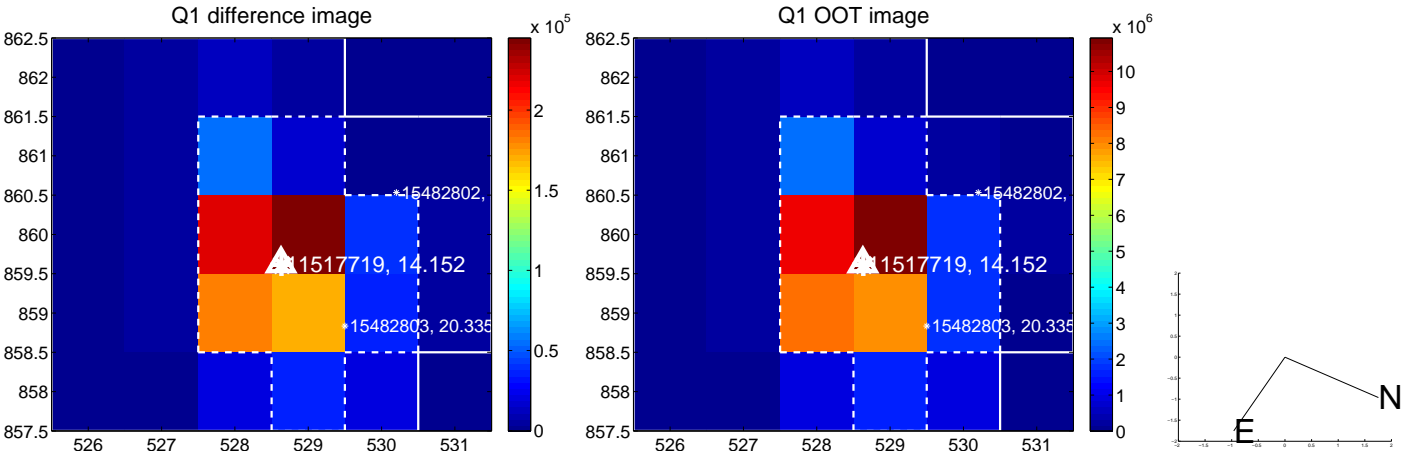
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.020 ± 0.067	0.30	-0.011 ± 0.067	-0.017 ± 0.067
PRF-fit source offset from KIC position	0.106 ± 0.067	1.57	-0.059 ± 0.067	-0.088 ± 0.067
photometric centroid source offset	0.07 ± 0.00	22.37	0.05 ± 0.00	0.05 ± 0.00

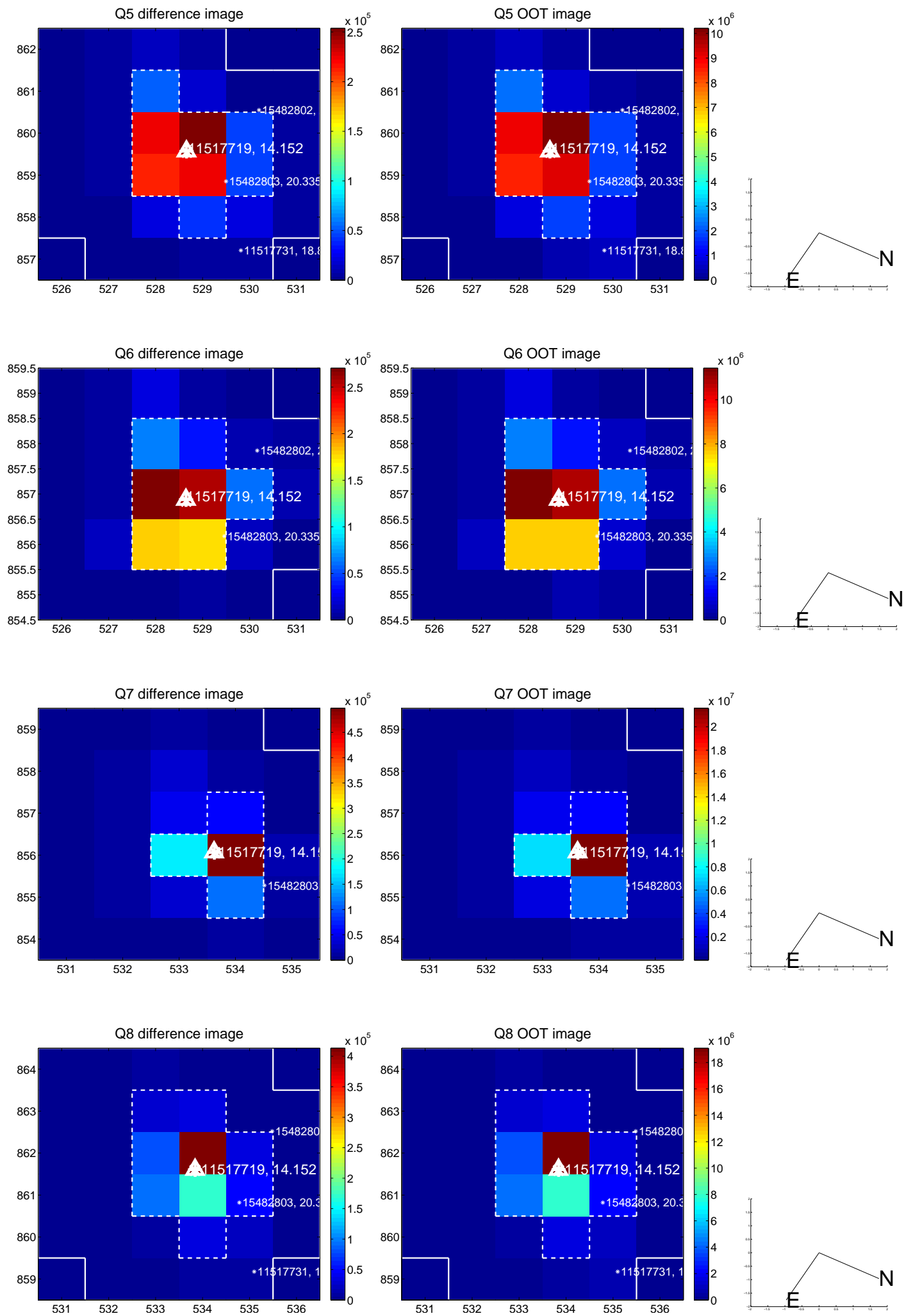


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

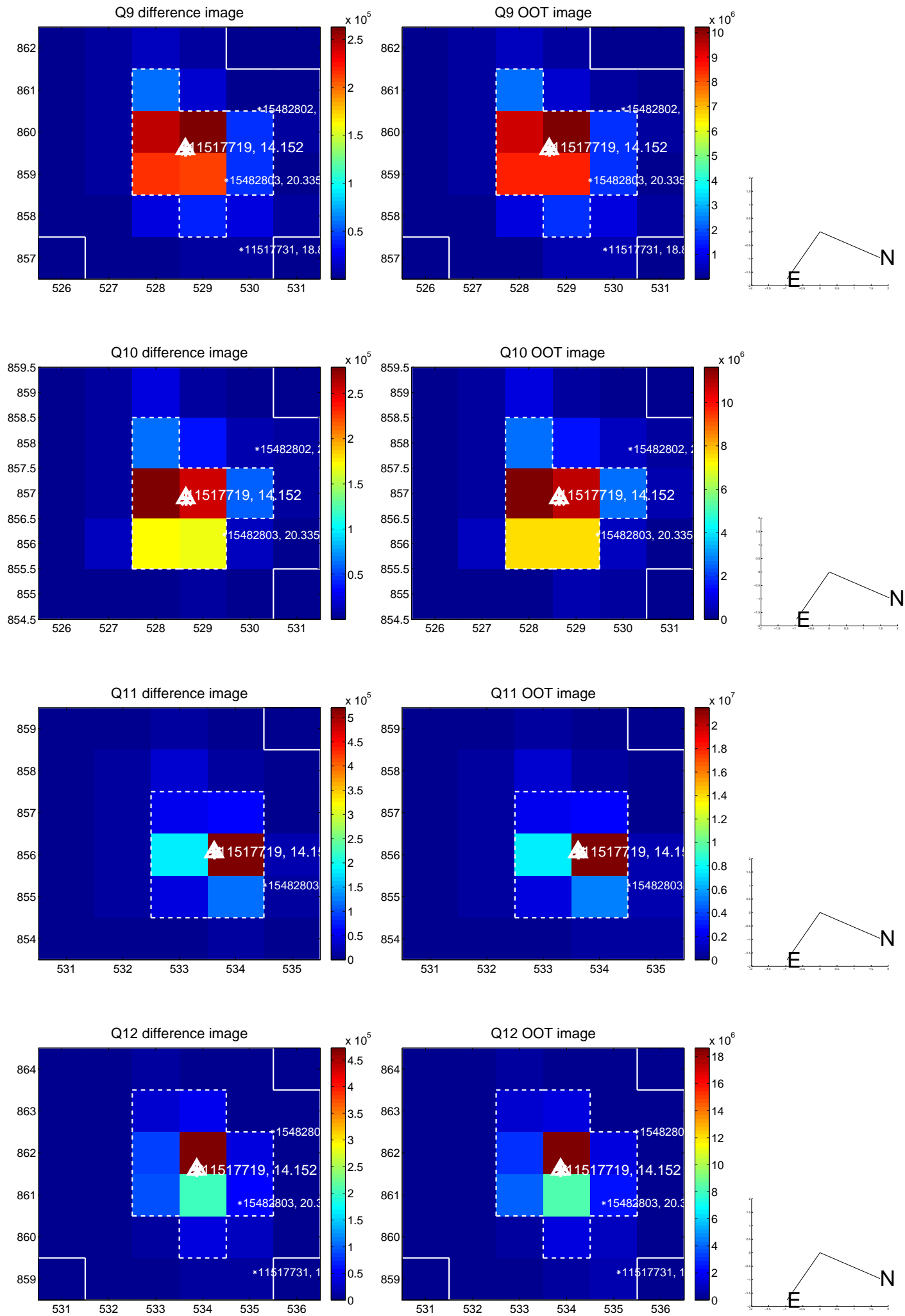
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



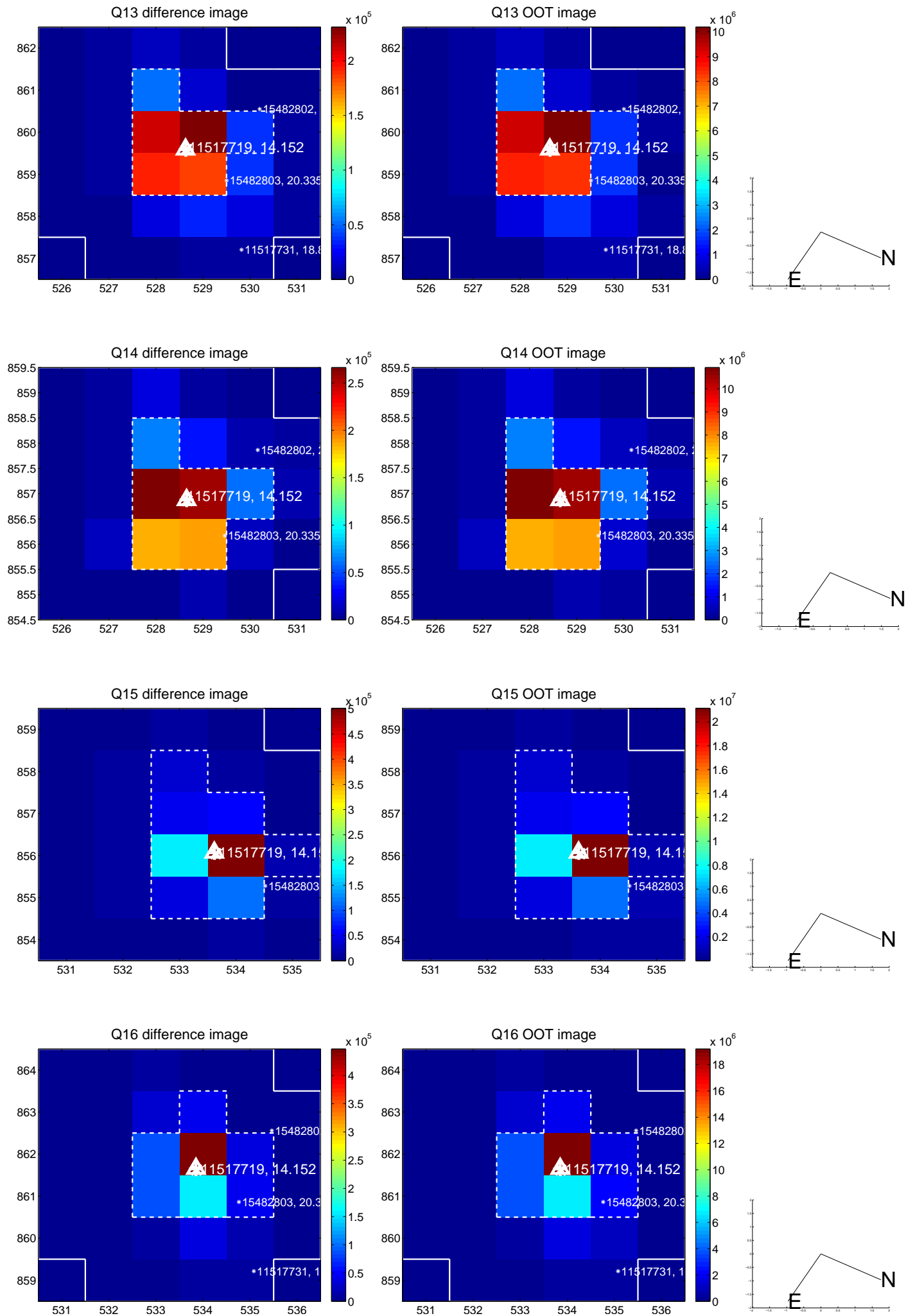
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



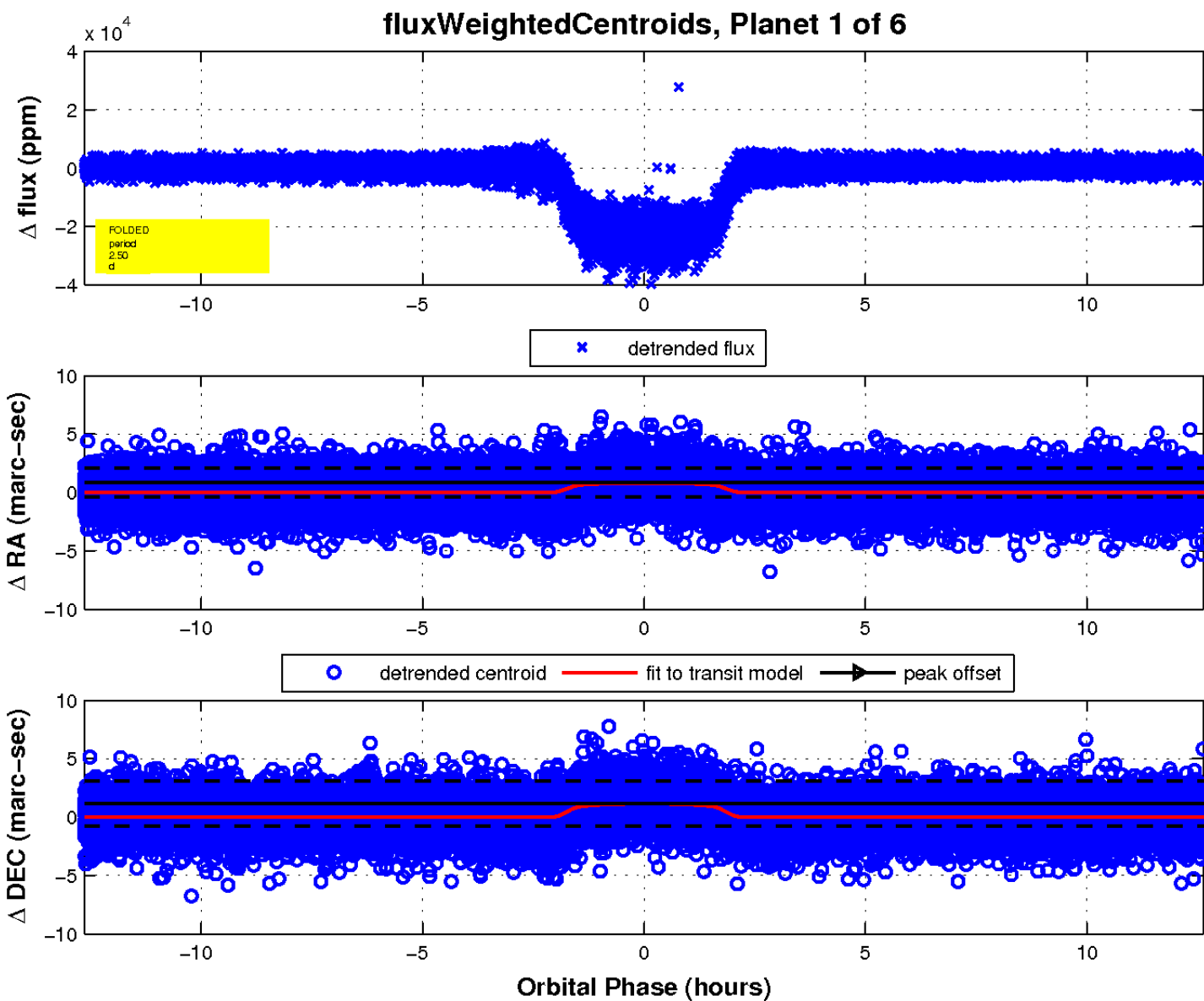
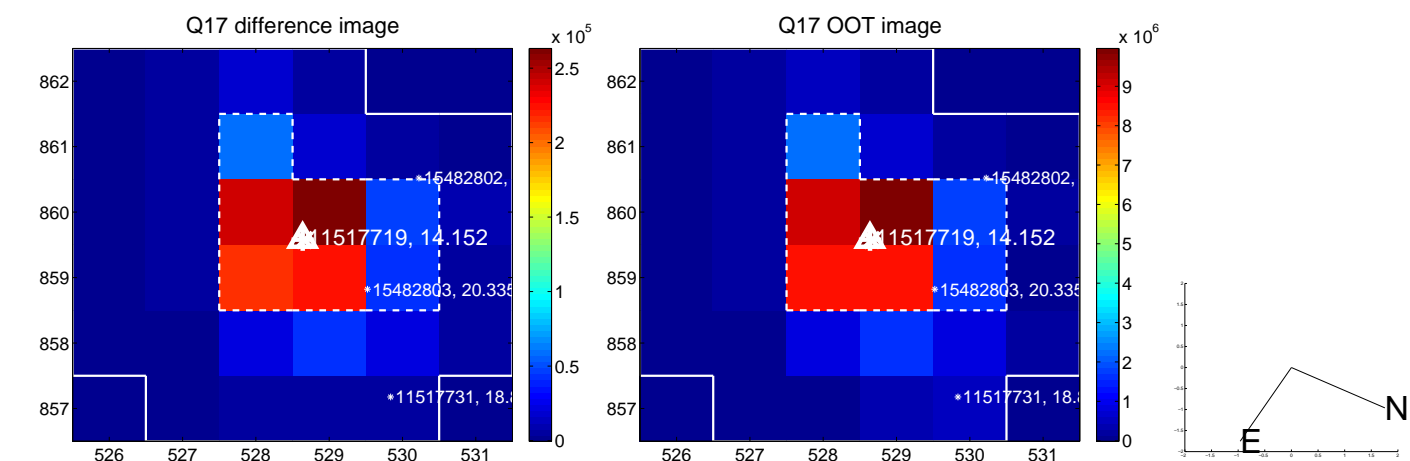
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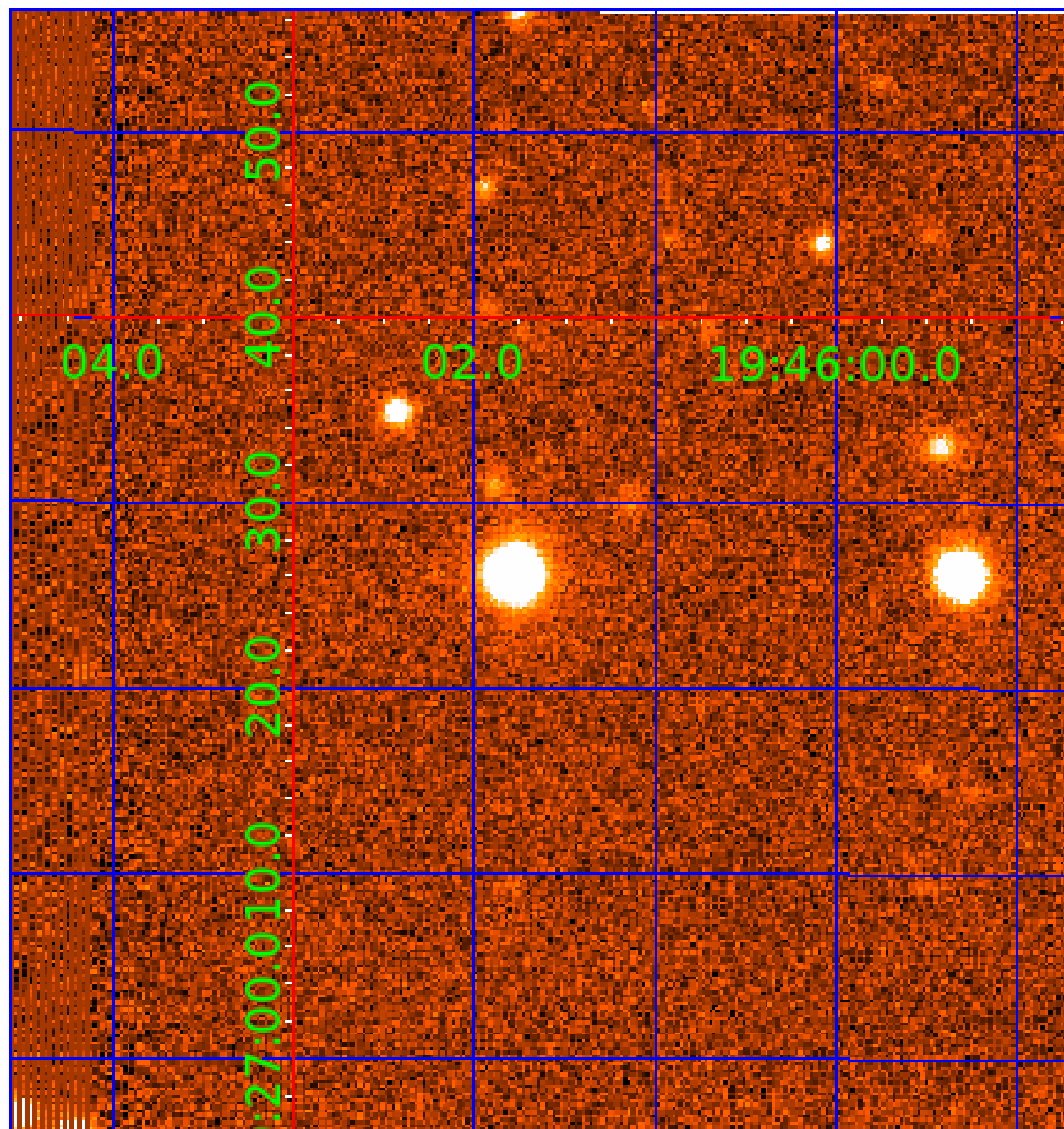


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011517719

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})
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
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011517719-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011517719-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011517719-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011517719-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011517719-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

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

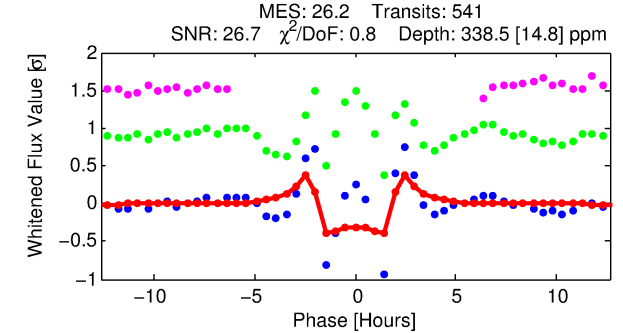
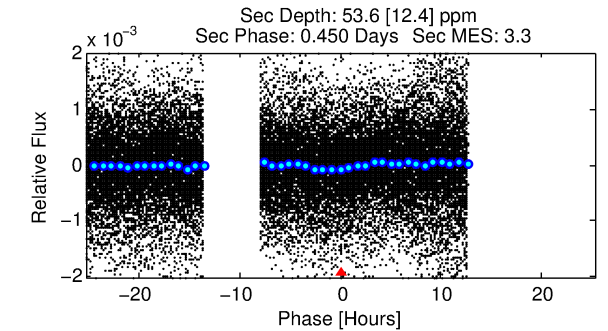
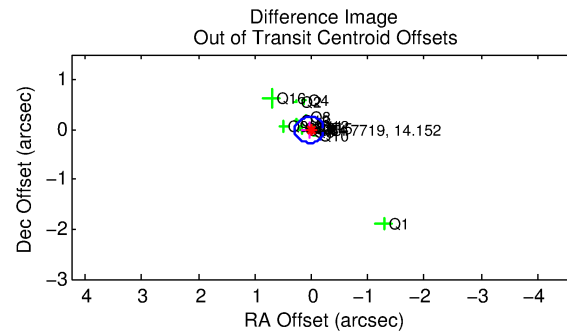
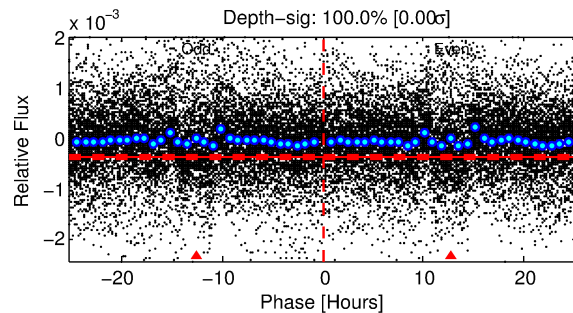
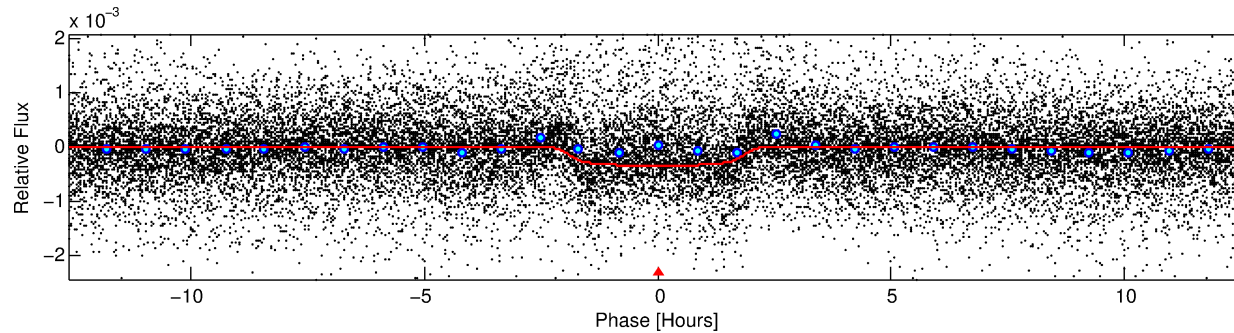
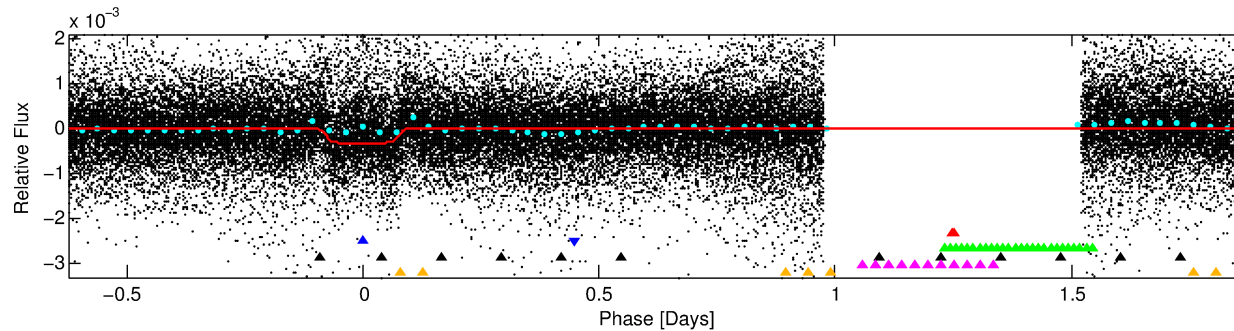
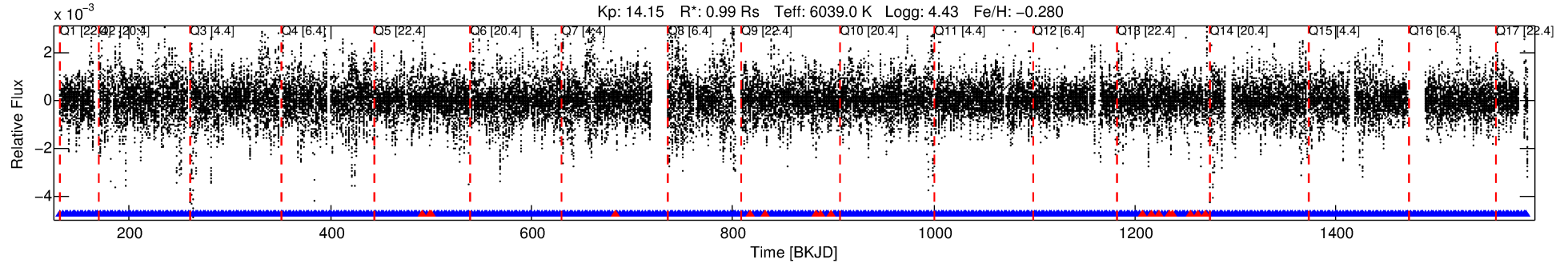
Ephemeris Match Information For 011517719-02

No Significant Match Found

DV One-Page Summary

KIC: 11517719 Candidate: 2 of 6 Period: 2.496 d
KOI: K01416 Corr: No Ephemeris Match

Kp: 14.15 R*: 0.99 Rs Teff: 6039.0 K Logg: 4.43 Fe/H: -0.280



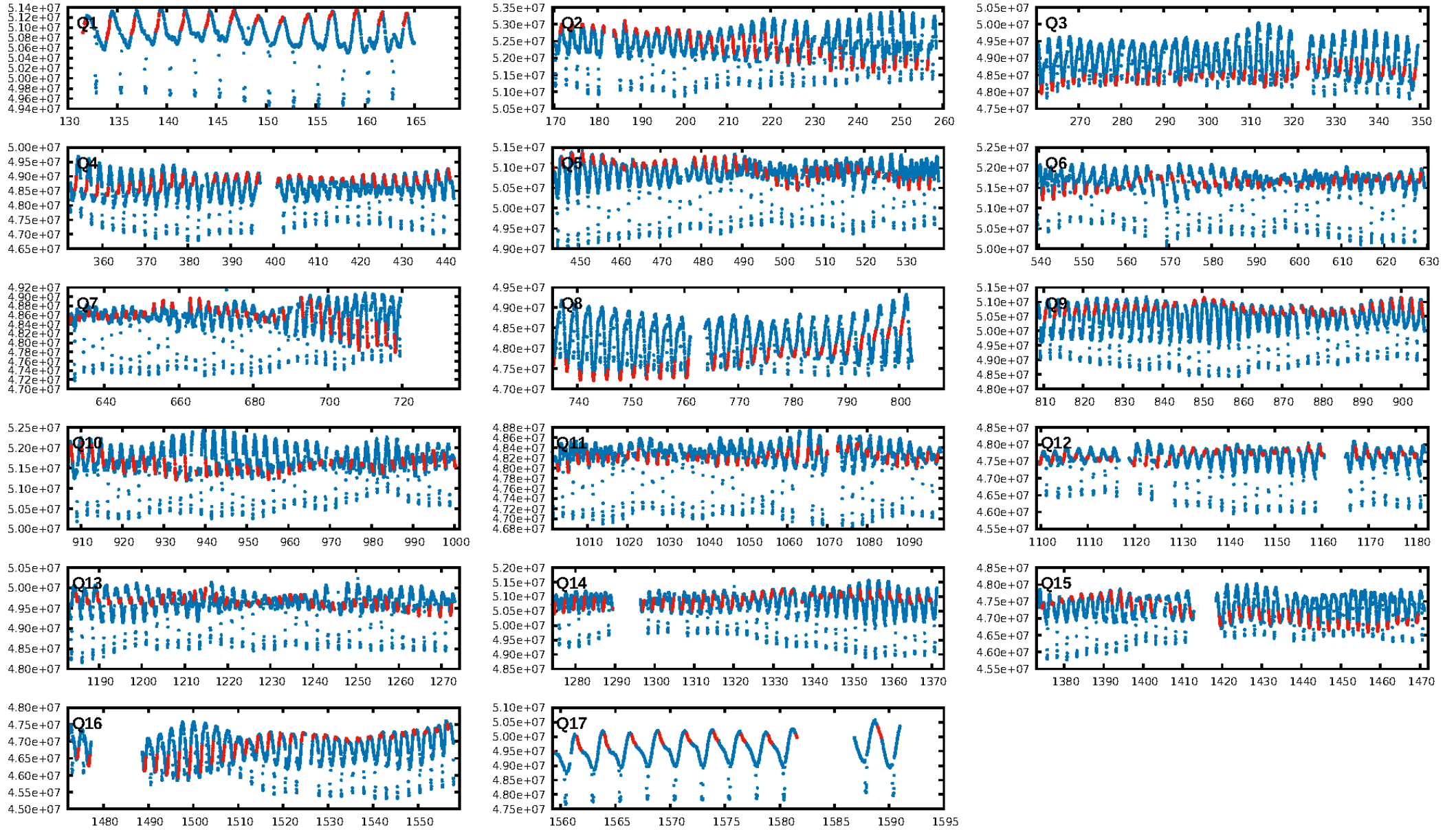
DV Fit Results:

Period = 2.49578 [0.00000] d
Epoch = 131.5915 [0.0009] BKJD
Rp/R* = 0.0198 [0.0009]
a/R* = 2.37 [0.39]
b = 0.90 [0.04]
Seff = 930.72 [361.73]
Teff = 1408 [137] K
Rp = 2.15 [0.65] Re
a = 0.0355 [0.0090] AU
Ag = 8.06 [3.60] [1.96 σ]
Teffp = 3669 [255] K [7.82 σ]

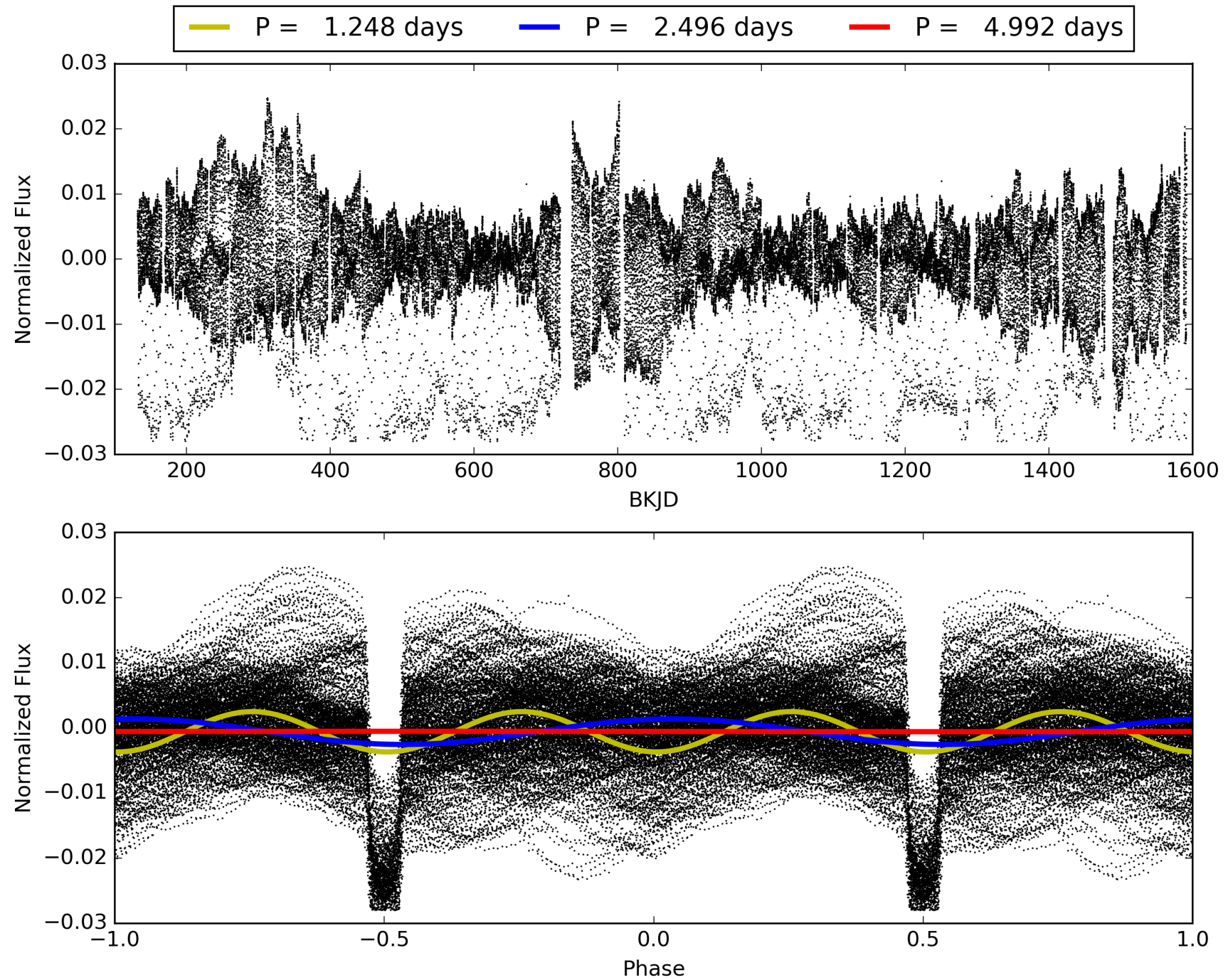
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00 σ]
LongPeriod-sig: 100.0% [286.01 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 0.97 [499/516]
GhostDiagnostic-chr: 1.862
Centroid-sig: 0.0%
Centroid-so: 0.697 arcsec [3.26 σ]
OotOffset-rm: 0.039 arcsec [0.46 σ]
KicOffset-rm: 0.092 arcsec [0.61 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.94 [16/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 011517719-02, PDC Light Curves

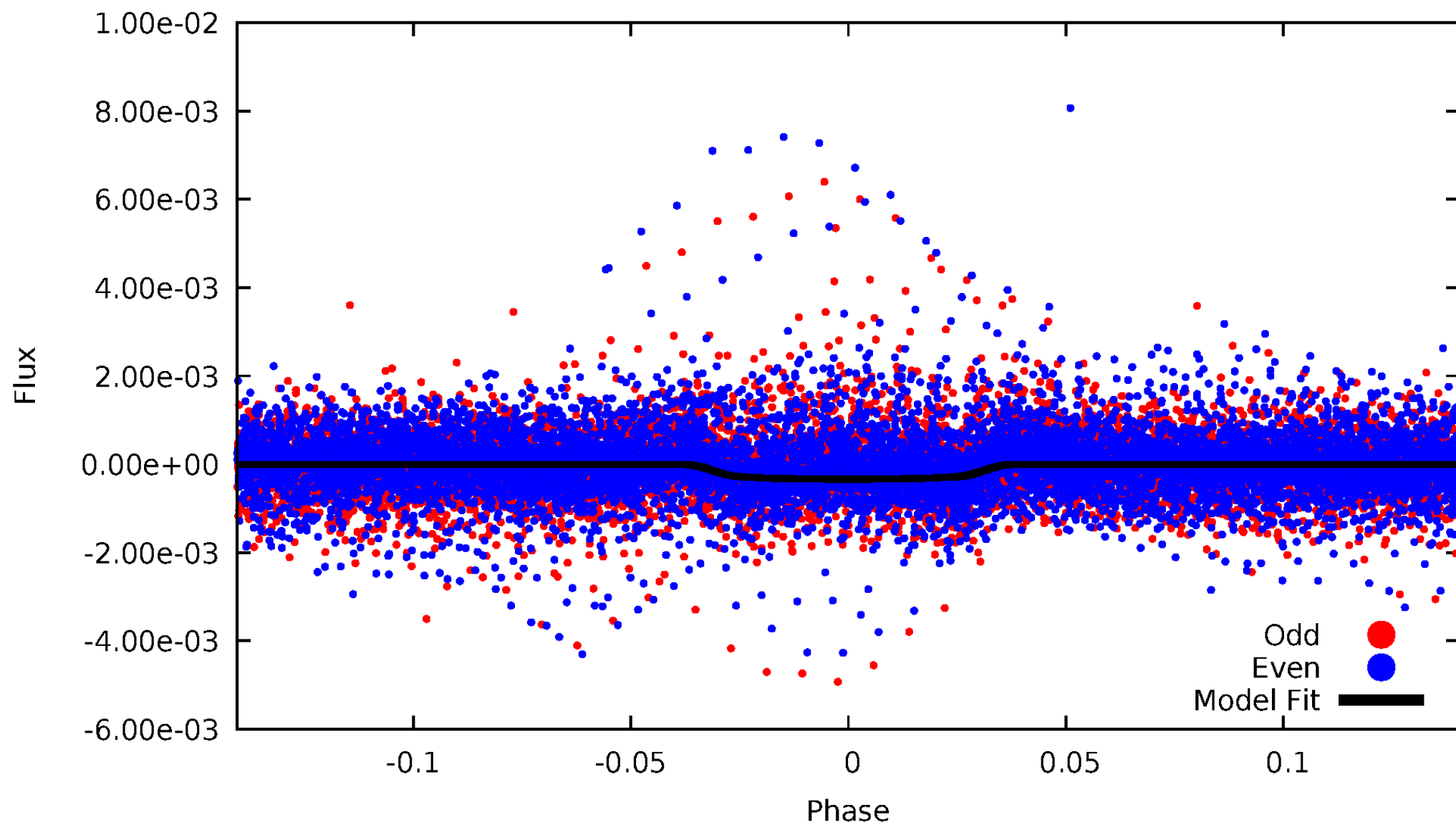


TCE 011517719-02



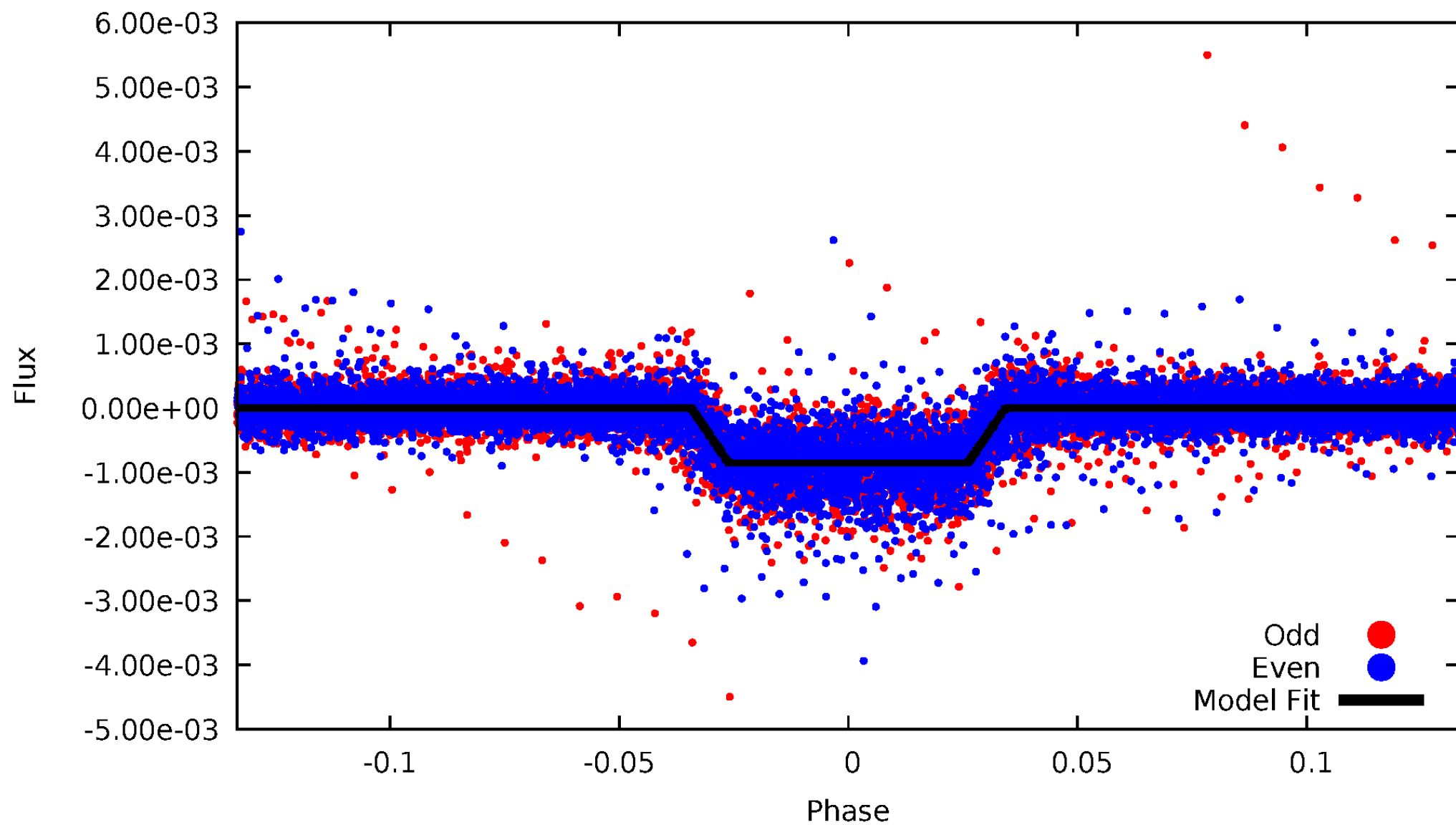
DV Odd/Even

TCE 011517719-02



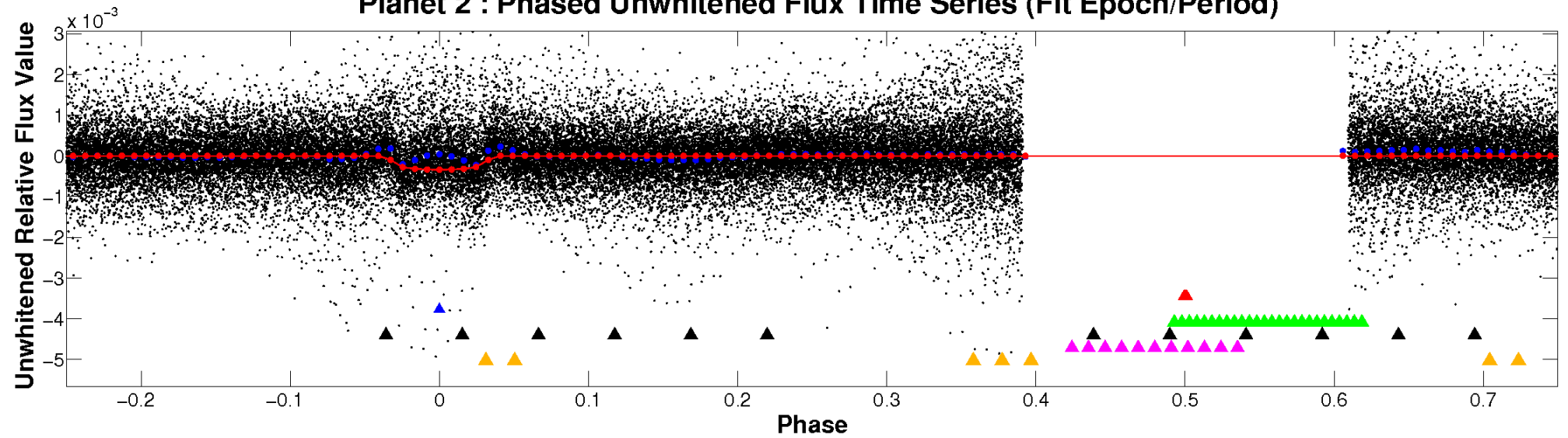
ALT Odd/Even

TCE 011517719-02

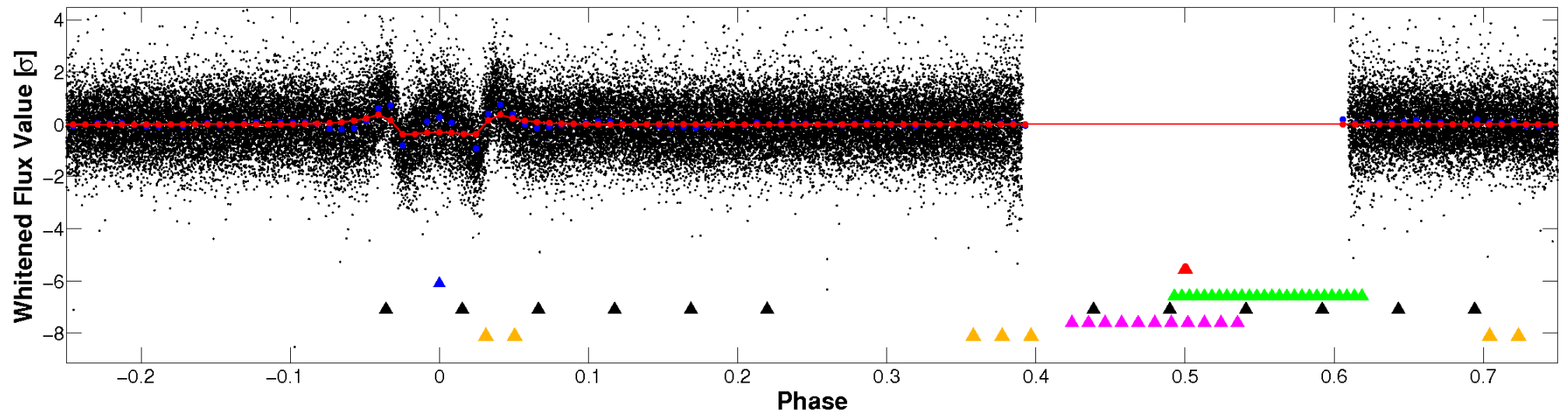


Non-Whitened Vs. Whitened Light Curve

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

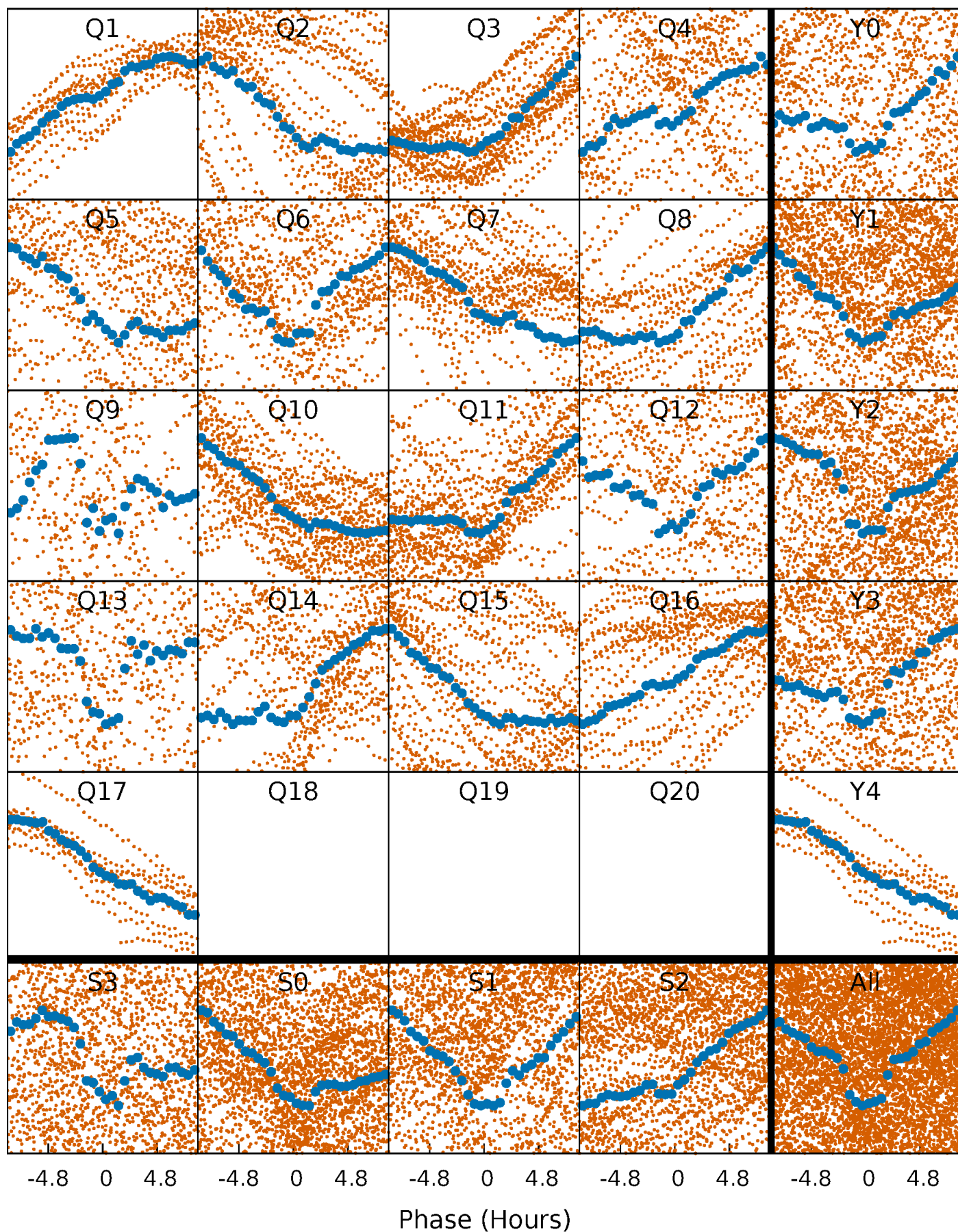


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



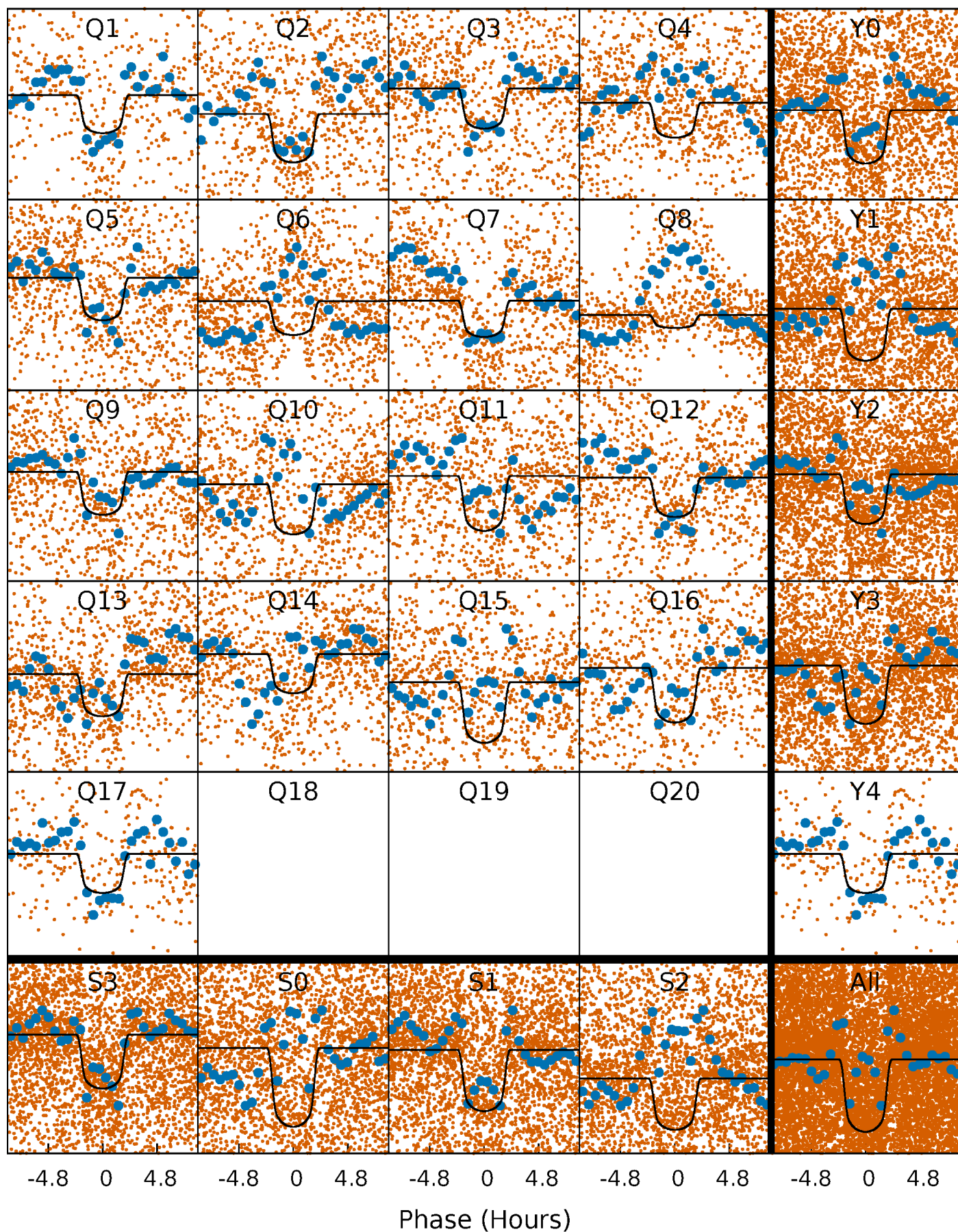
PDC Quarter-Phased Transit Curves

TCE 011517719-02 P= 2.495782 Days $T_0=131.591539$ (BKJD)



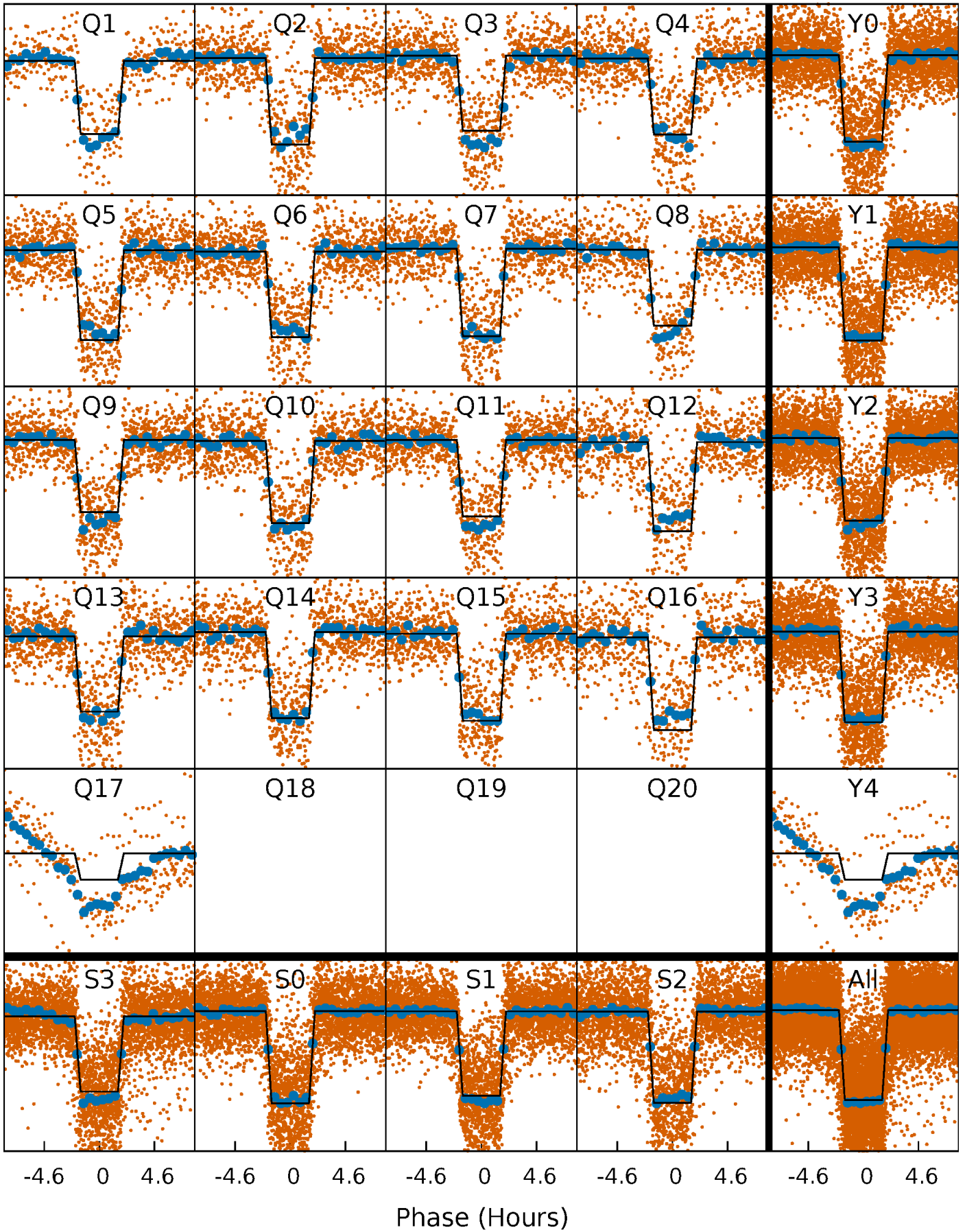
DV Quarter-Phased Transit Curves

TCE 011517719-02 P= 2.495782 Days $T_0=131.591539$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

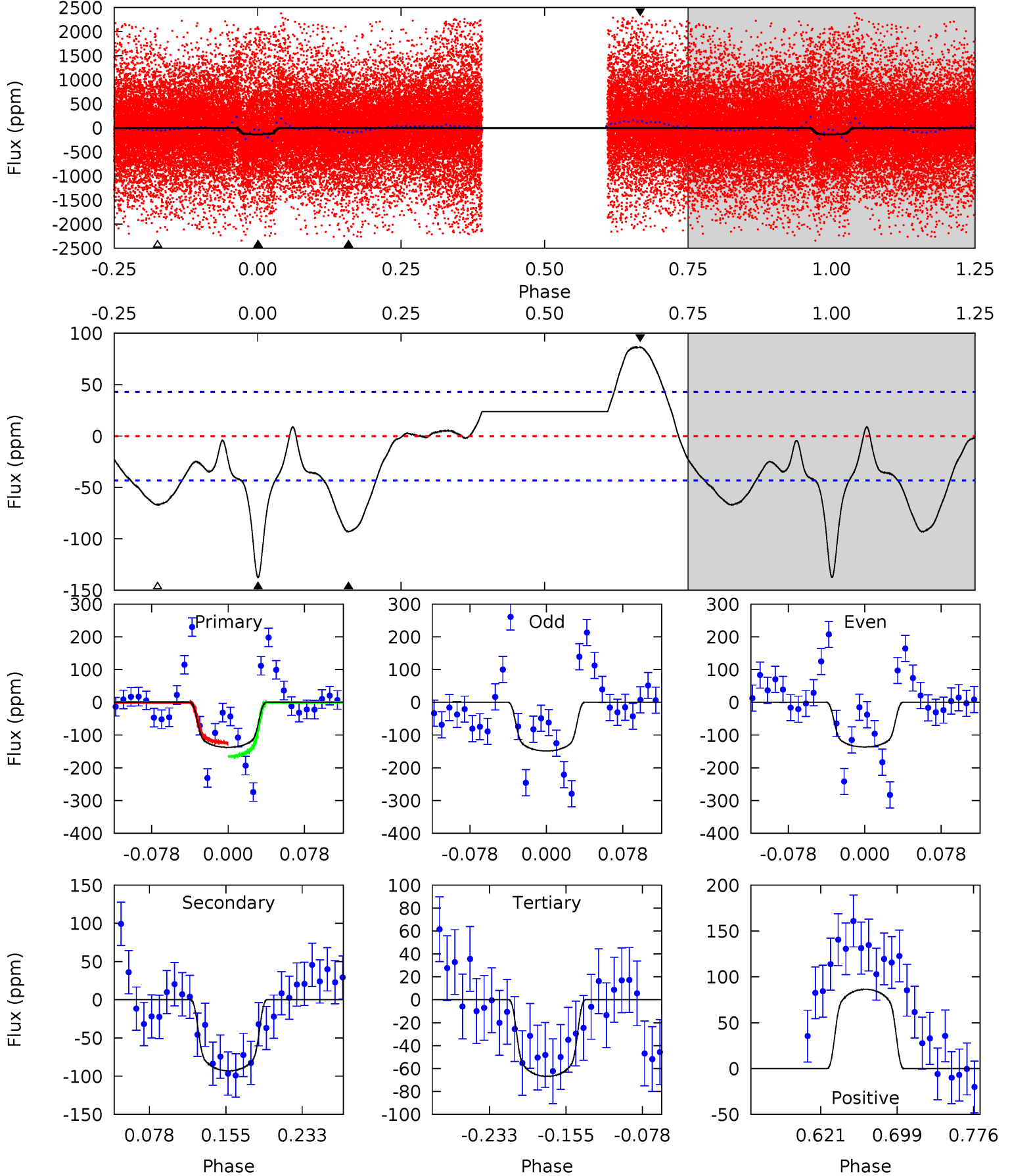
TCE 011517719-02 P= 2.495792 Days $T_0=131.590186$ (BKJD)



DV Model-Shift Uniqueness Test

011517719-02, P = 2.495782 Days, E = 129.095757 Days

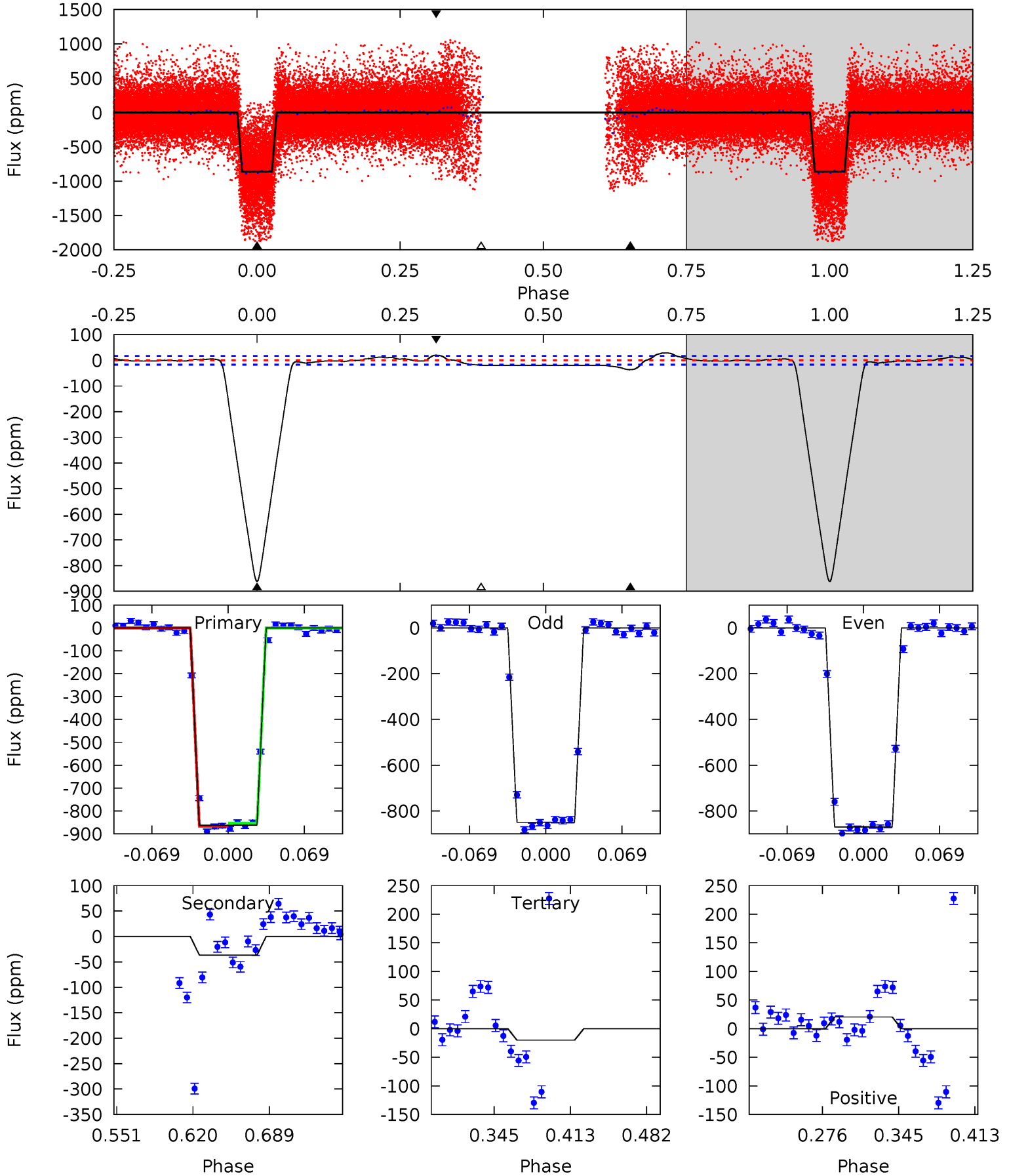
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	9.97	7.16	9.26	4.62	1.76	4.70	7.58	5.48	2.80	0.71	0.66	0.36	0.39	2.40



Alt Model-Shift Uniqueness Test

011517719-02, P = 2.495792 Days, E = 129.094394 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
232.9	9.87	5.42	5.48	4.64	1.82	2.00	227.4	227.4	4.45	4.38	2.82	1.03	0.03	2.06



Stellar Parameters For KIC 011517719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6039^{+163}_{-181}	$4.426^{+0.087}_{-0.203}$	$-0.280^{+0.300}_{-0.300}$	$0.992^{+0.296}_{-0.127}$	$0.959^{+0.130}_{-0.117}$	$1.384^{+0.611}_{-0.677}$
	+3%/-3%	+2%/-5%	+107%/-107%	+30%/-13%	+14%/-12%	+44%/-49%
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 011517719-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-93 ± 9	$2.17^{+0.38}_{-0.21}$	1989^{+150}_{-104}	4392^{+164}_{-148}	13^{+4}_{-3}
Alt.	-37 ± 4	$3.20^{+0.54}_{-0.28}$	1986^{+151}_{-96}	3228^{+93}_{-86}	$2.416^{+0.549}_{-0.634}$

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

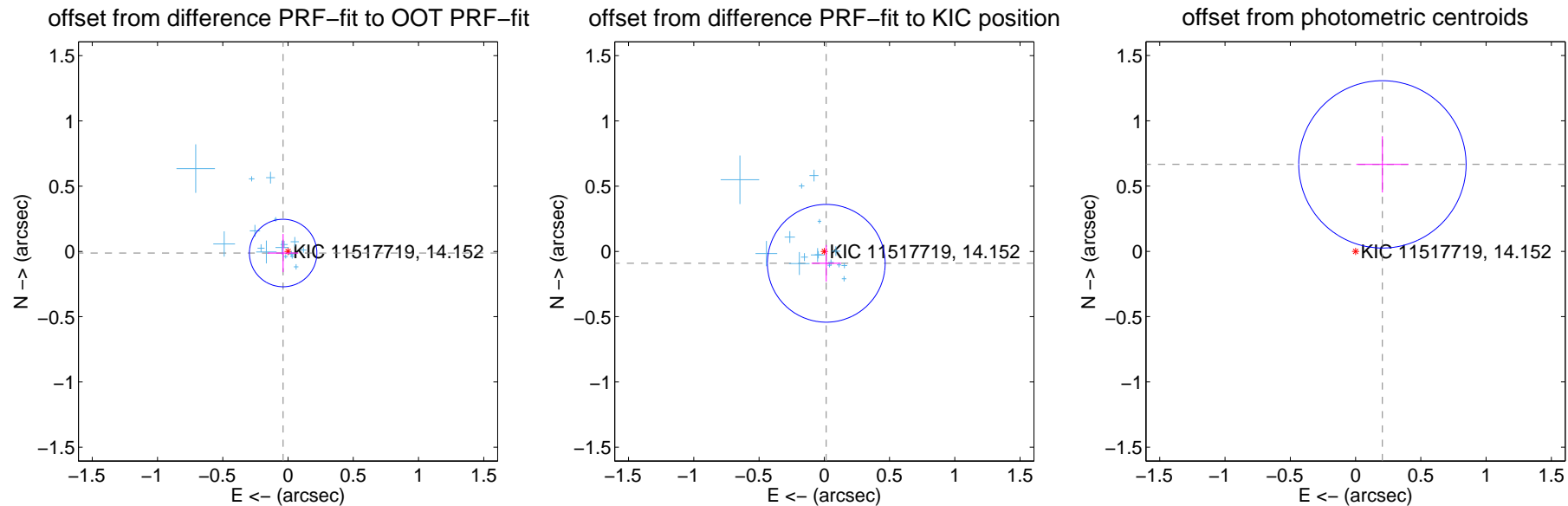
DV Centroid Data

Supplemental centroid analysis for 011517719-02. Kepler magnitude: 14.15. Transit SNR 26.74

There are 16 quarters with good PRF difference image offsets

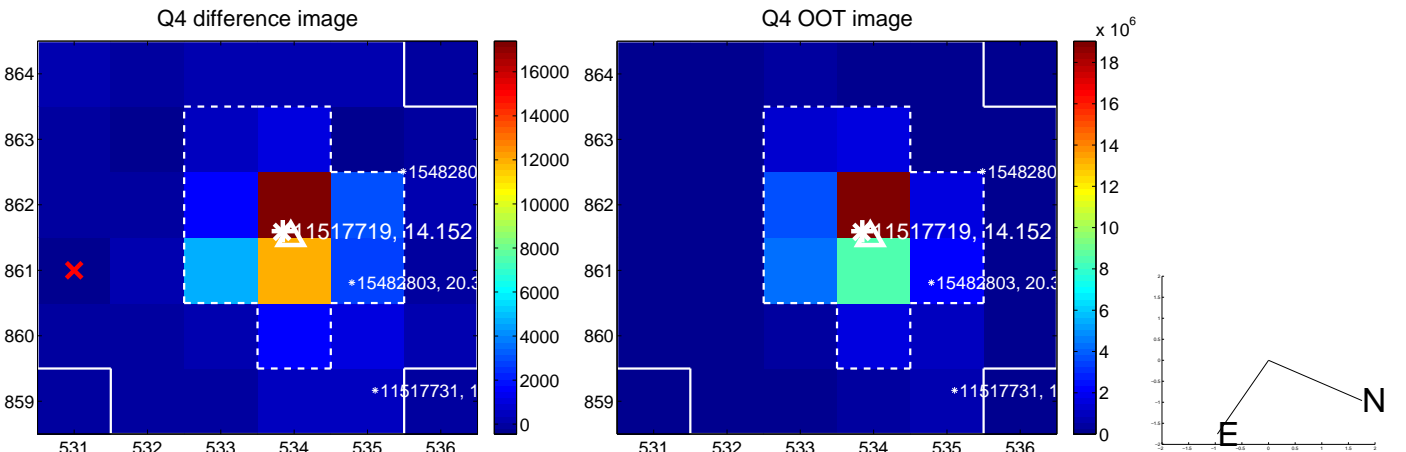
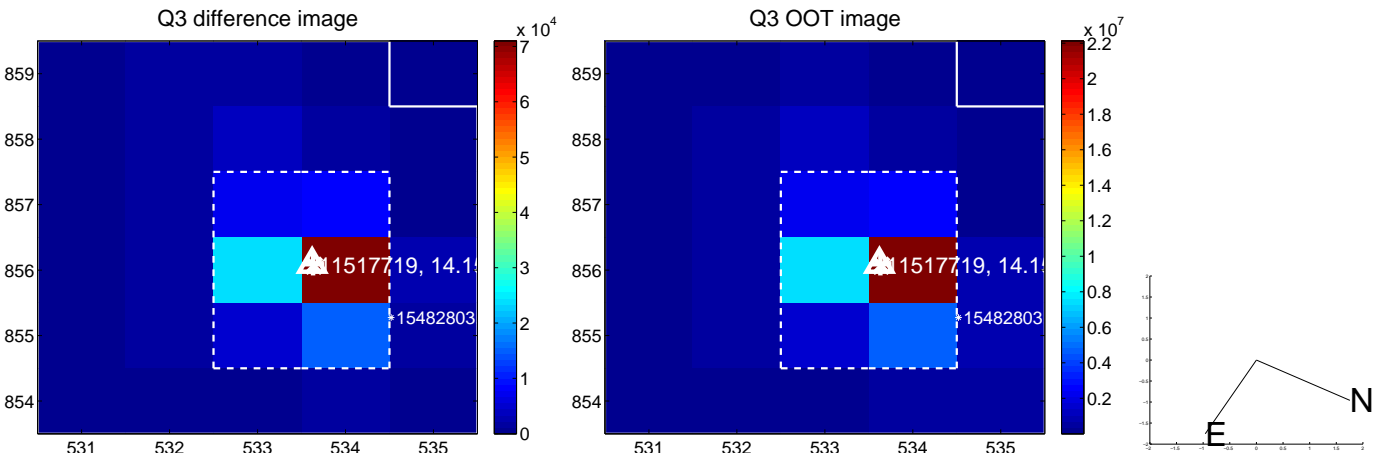
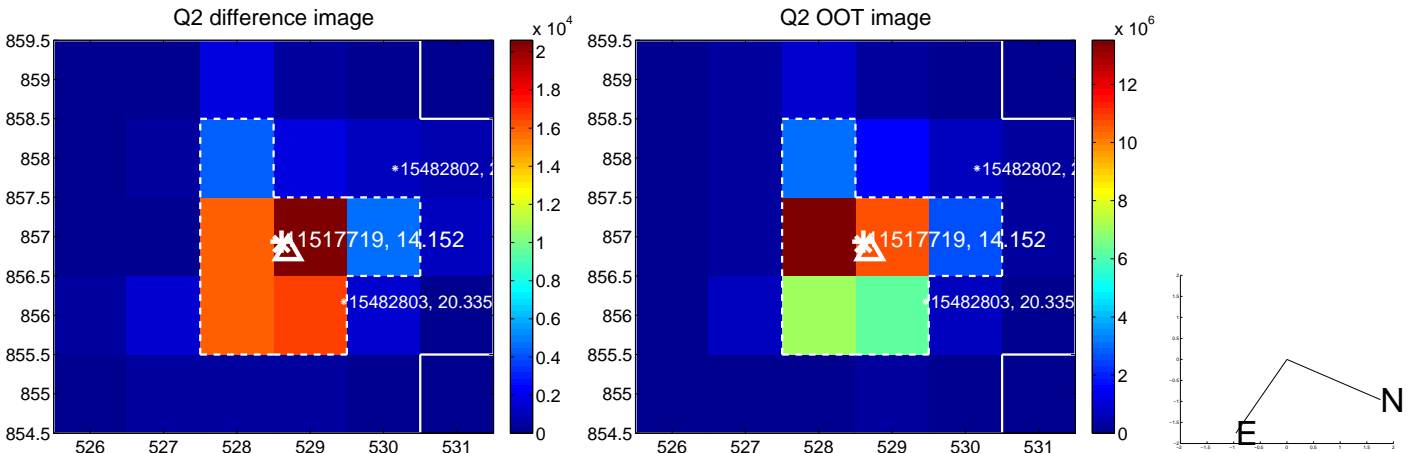
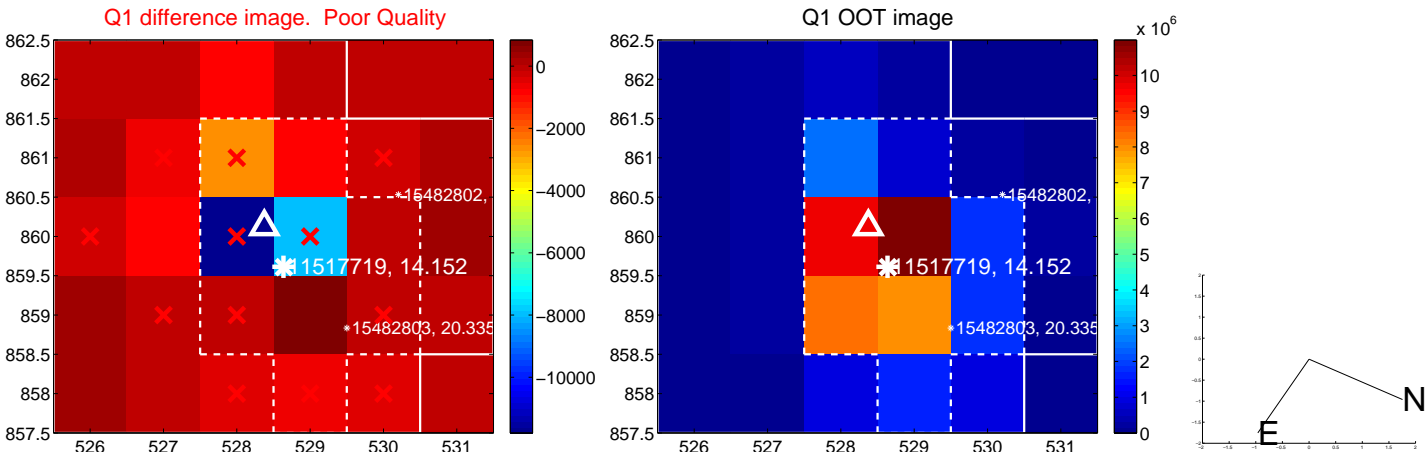
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.039 ± 0.086	0.46	0.037 ± 0.115	-0.012 ± 0.146
PRF-fit source offset from KIC position	0.092 ± 0.150	0.61	-0.015 ± 0.113	-0.091 ± 0.140
photometric centroid source offset	0.70 ± 0.21	3.26	-0.21 ± 0.20	0.67 ± 0.21

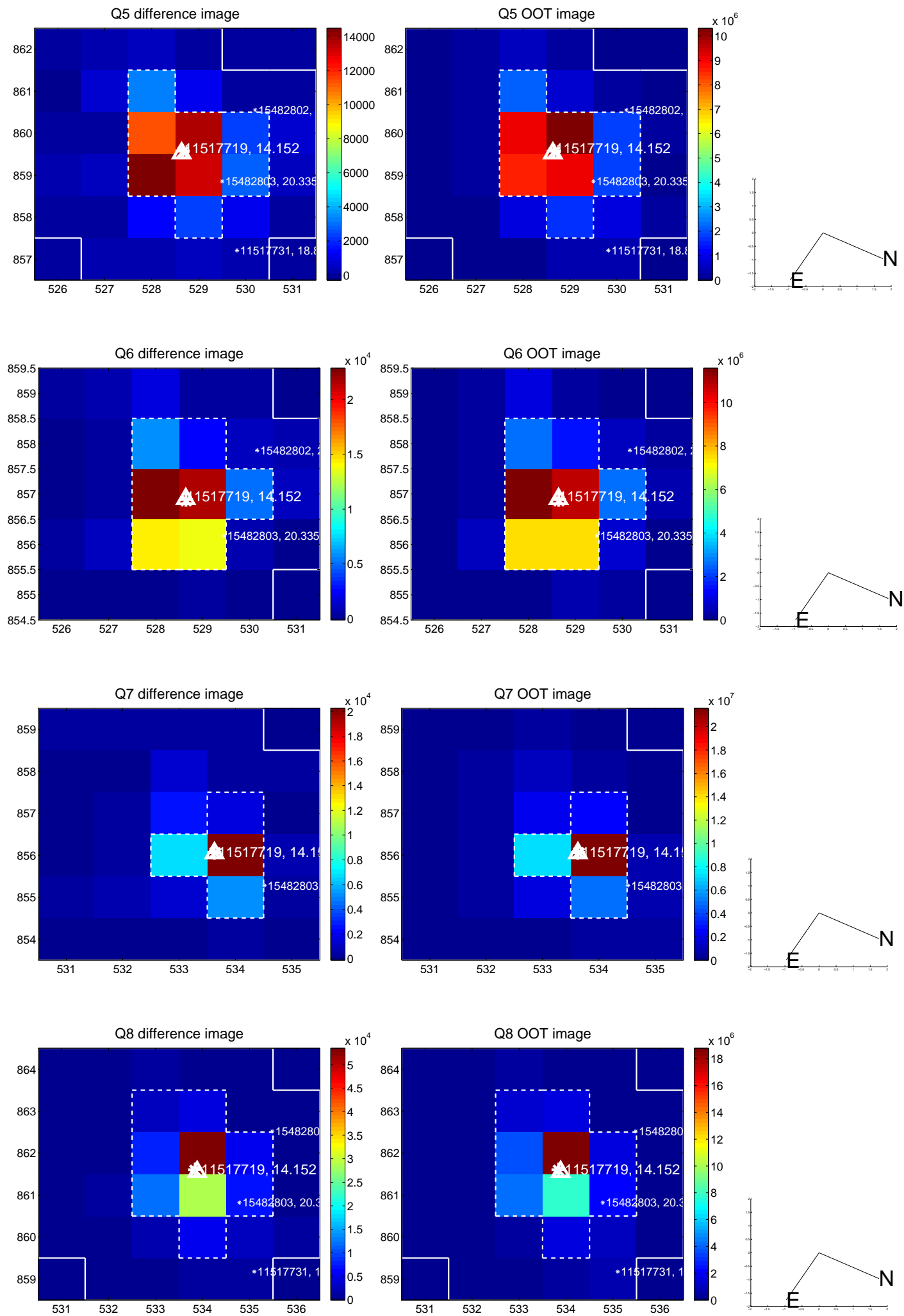


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

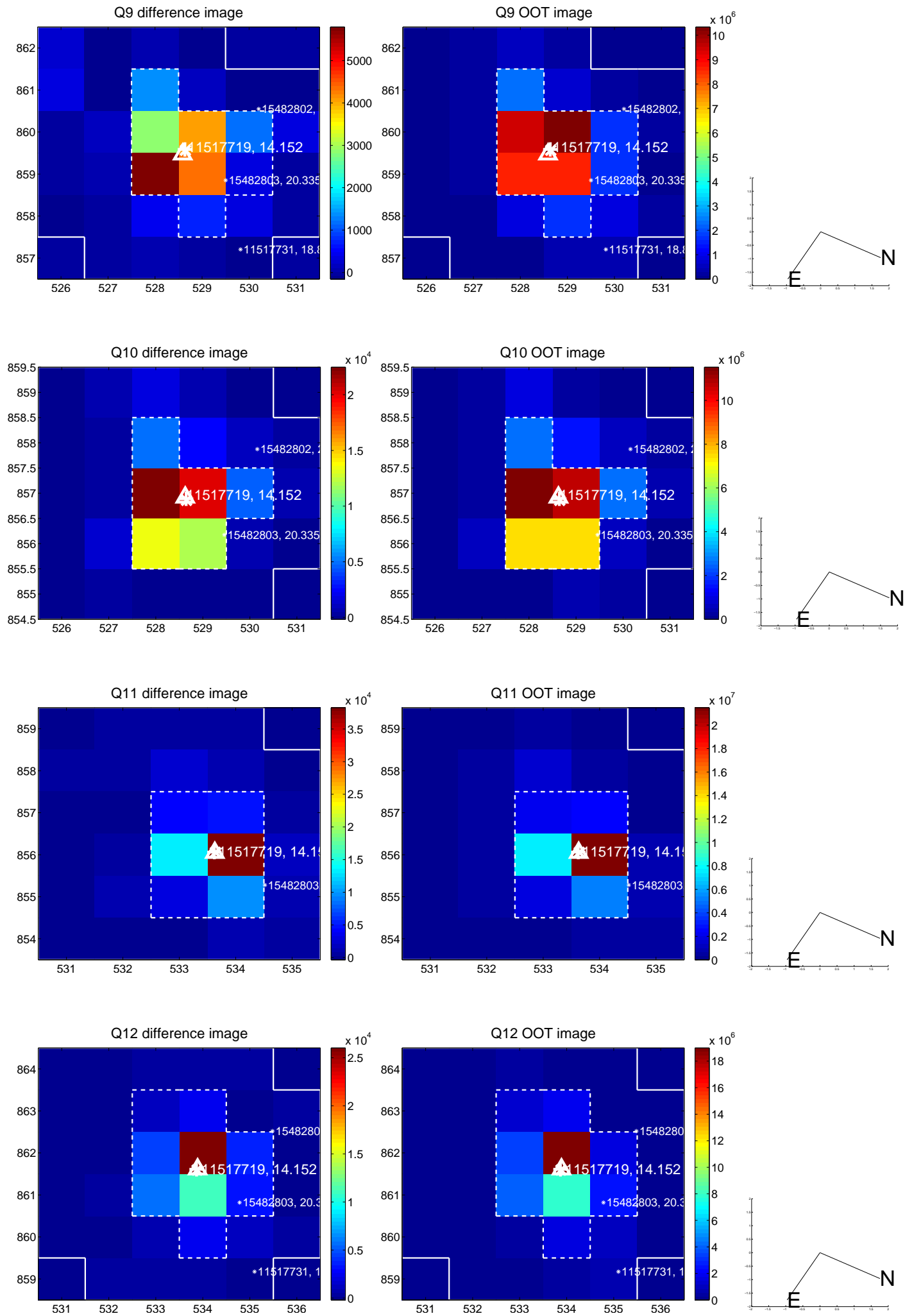
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



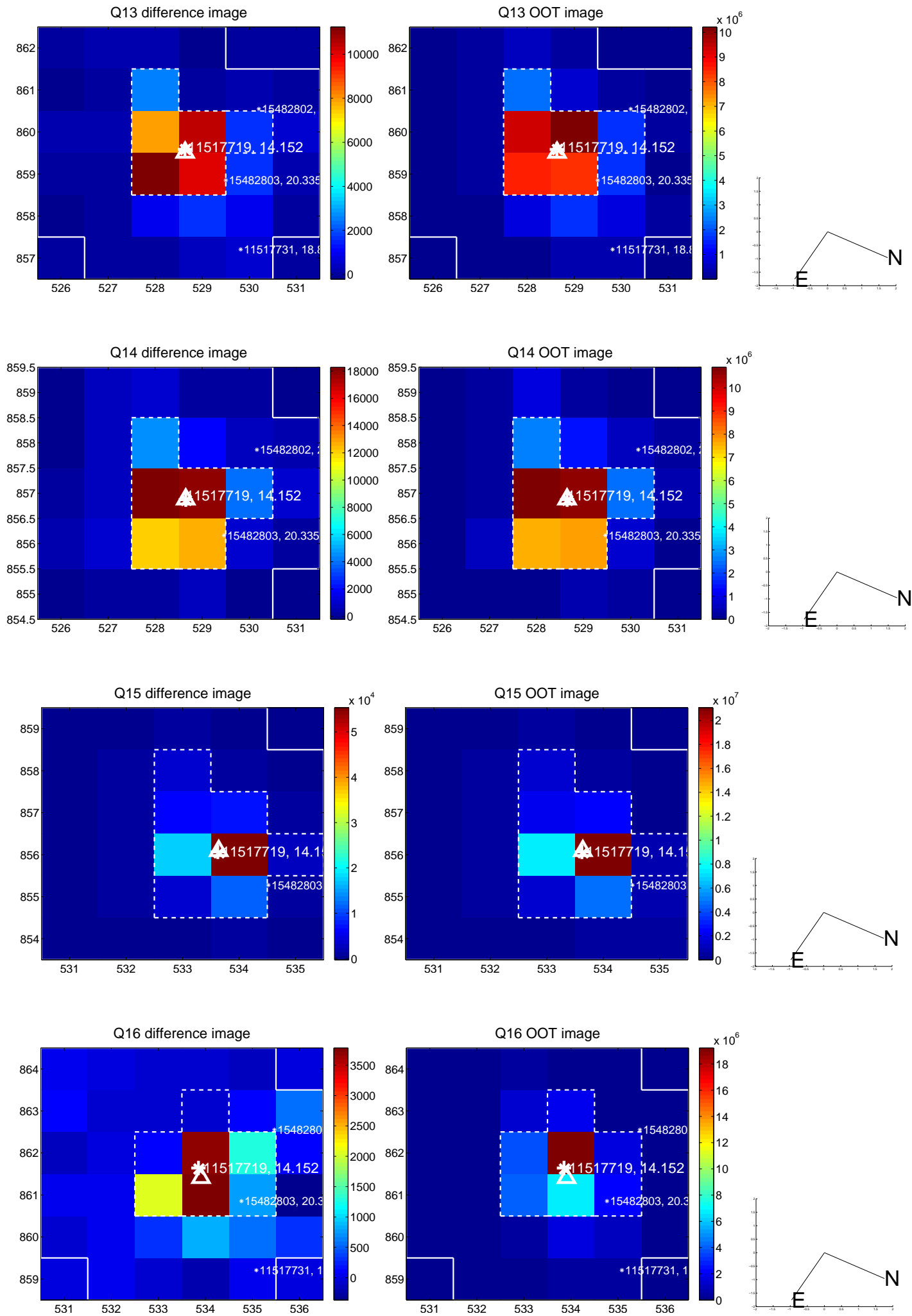
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



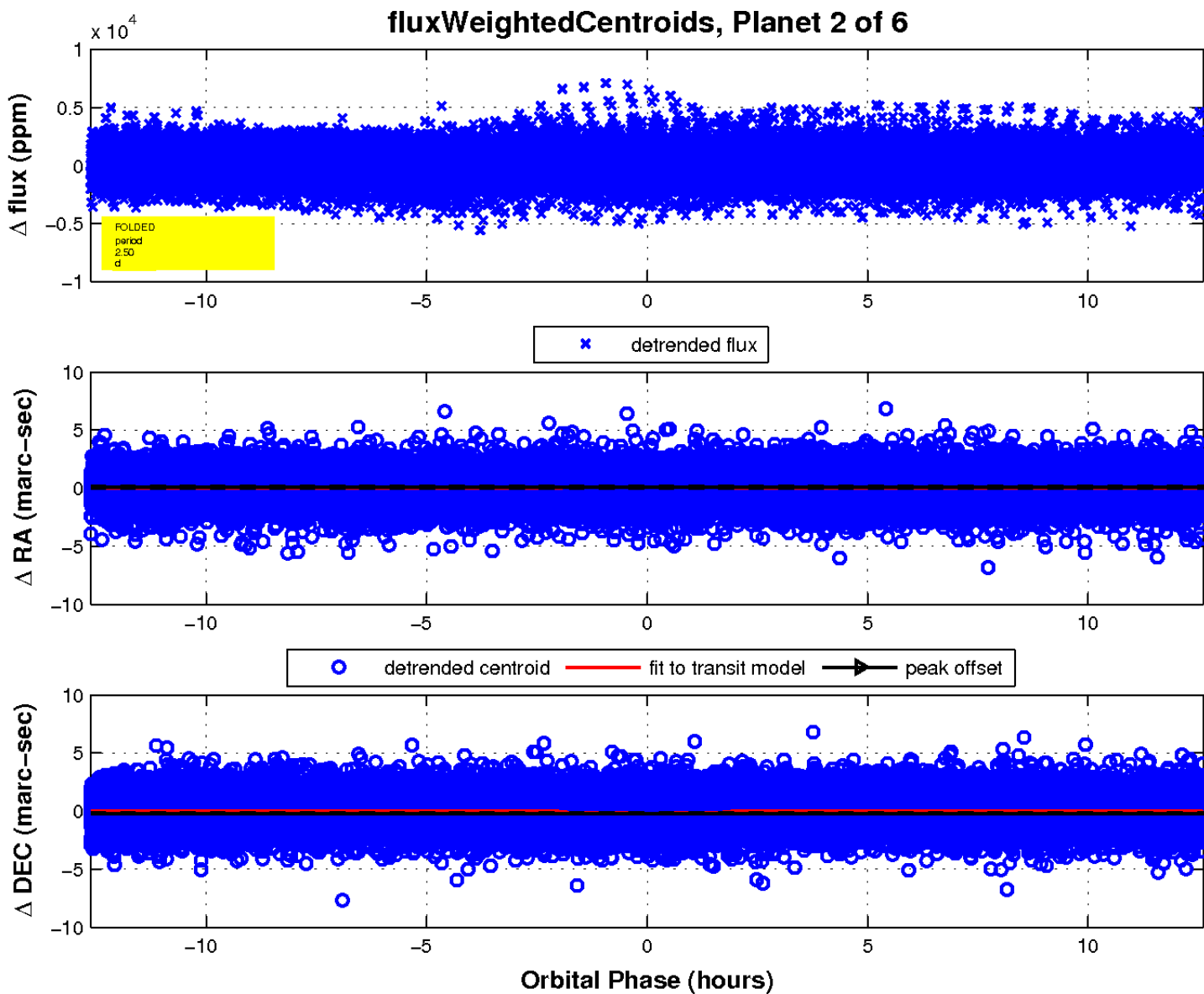
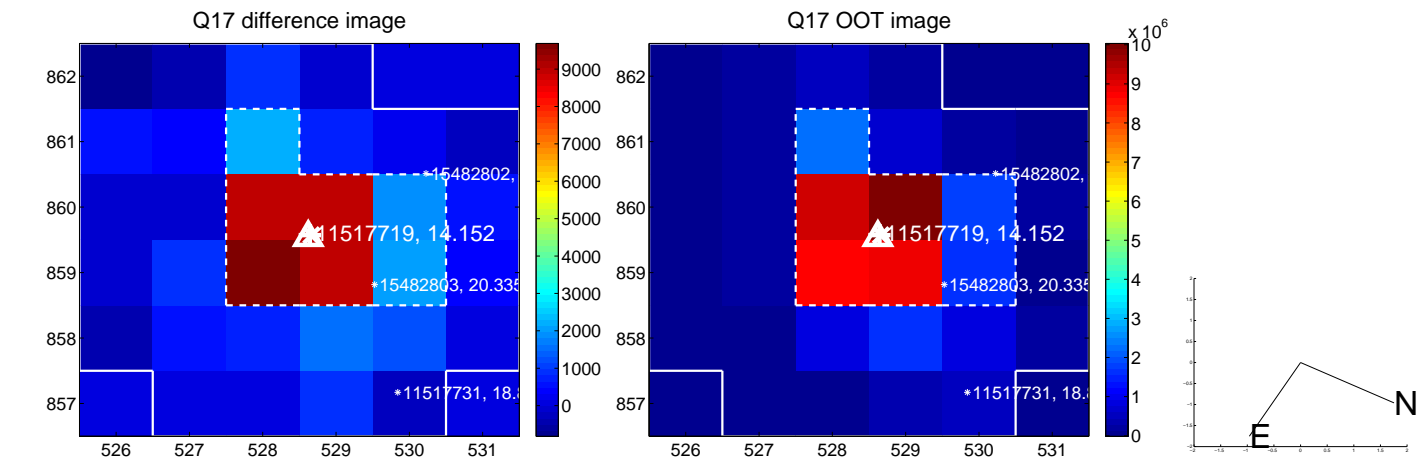
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

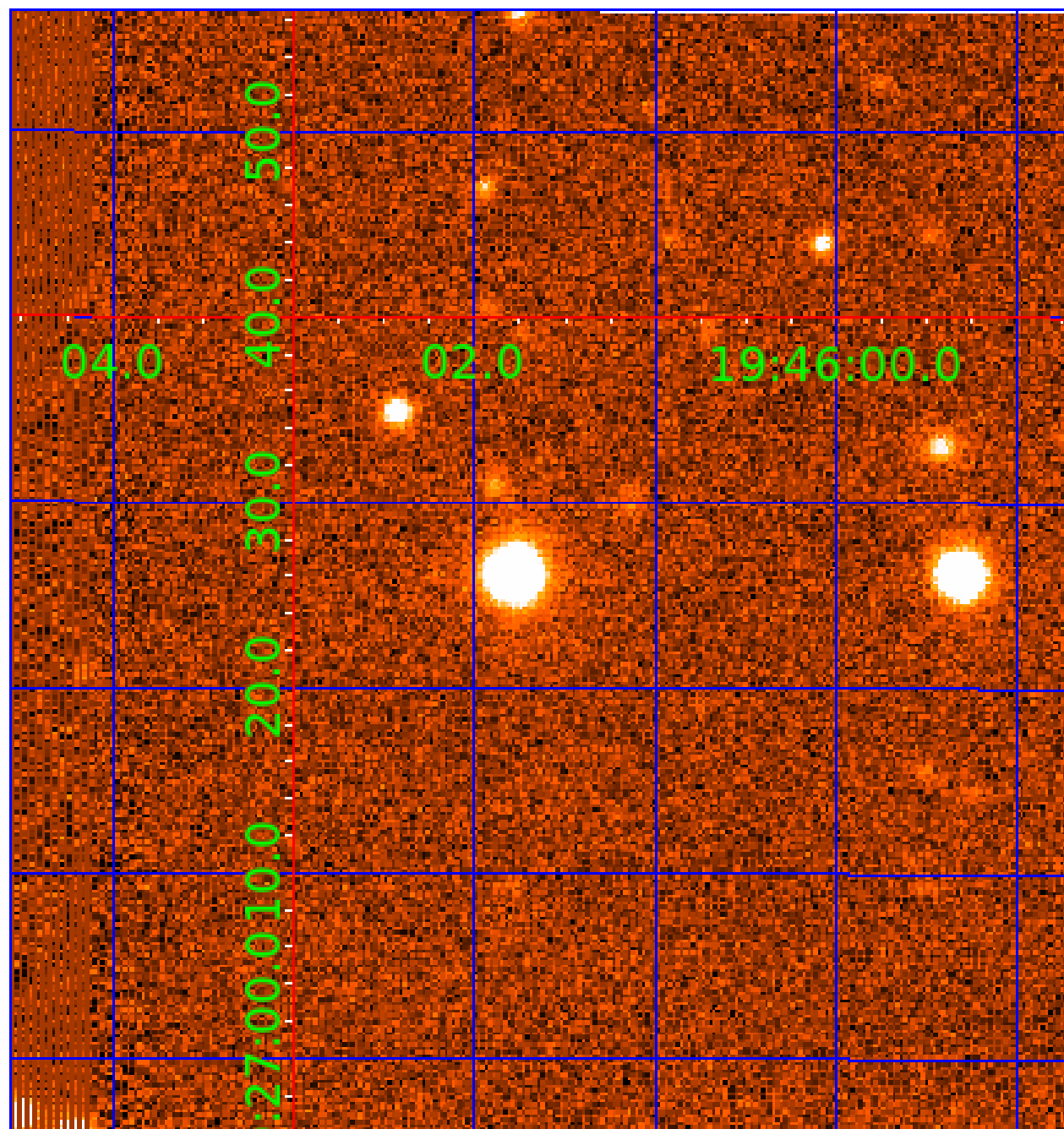


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011517719

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})
011517719-01	OBS	1416.01	2.495773	132.842673	24236.5	4.211	1486.8	1491.7	0.99	6039	15.46	930.73
011517719-02	OBS	No	2.495782	131.591539	338.5	4.207	26.2	26.7	0.99	6039	2.15	930.72
011517719-03	OBS	No	57.415534	140.308971	138.9	1.882	8.6	0.9	0.99	6039	1.17	14.22
011517719-04	OBS	No	128.596542	140.173722	69.9	0.678	8.5	0.4	0.99	6039	1.00	4.85
011517719-05	OBS	No	142.287269	140.137565	2742.4	21.932	8.7	6.5	0.99	6039	6.39	4.24
011517719-06	OBS	No	228.796075	197.375531	680.4	5.274	7.9	4.0	0.99	6039	2.83	2.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011517719-01	OBS	PC	0.92	0	1	0	0	MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE
011517719-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011517719-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011517719-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011517719-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011517719-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

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

Ephemeris Match Information For 011517719-03

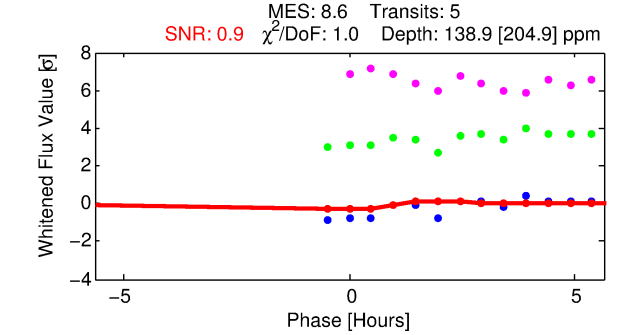
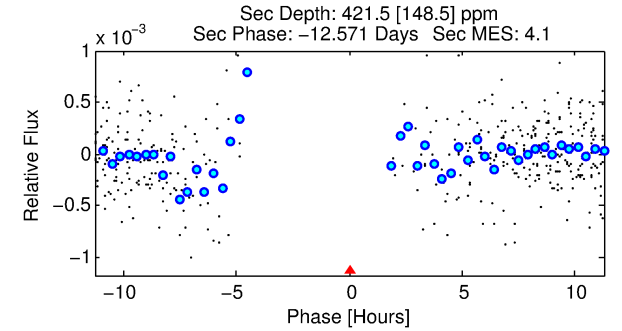
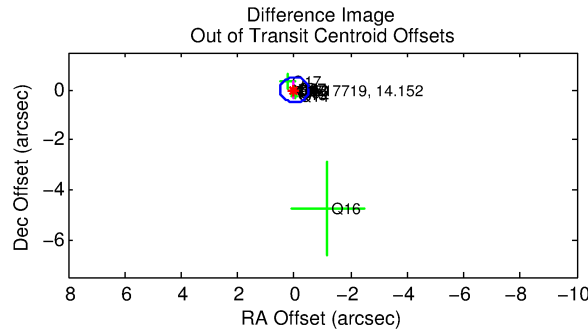
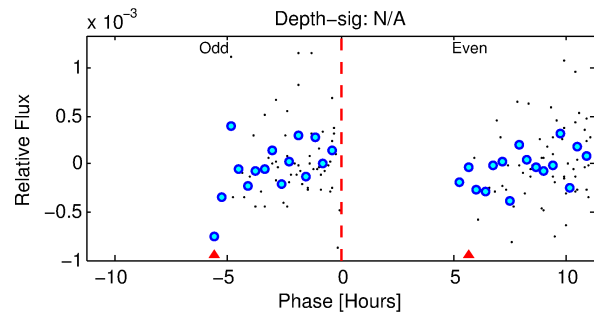
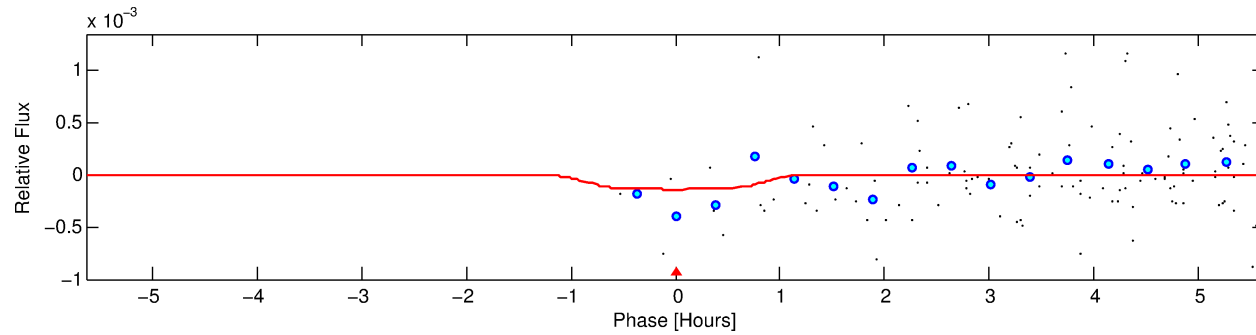
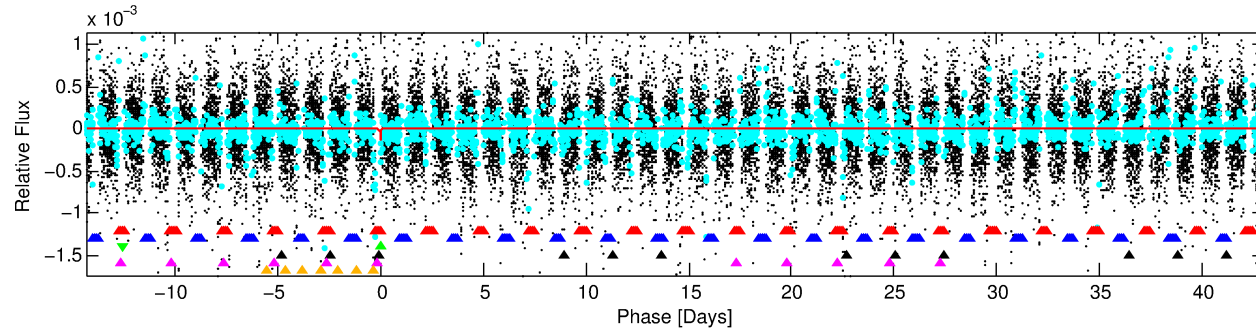
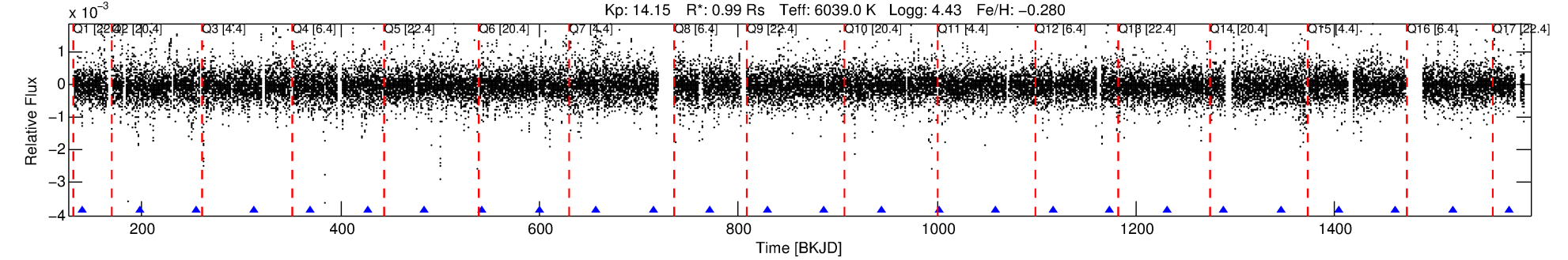
No Significant Match Found

DV One-Page Summary

KIC: 11517719 Candidate: 3 of 6 Period: 57.416 d

KOI: K01416 Corr: No Ephemeris Match

Kp: 14.15 R*: 0.99 Rs Teff: 6039.0 K Logg: 4.43 Fe/H: -0.280



DV Fit Results:

Period = 57.41553 [0.00763] d
Epoch = 140.3090 [0.1726] BKJD
Rp/R* = 0.0108 [0.7848]
a/R* = 235.29 [83930.69]
b = 0.06 [6493.35]
Seff = 14.23 [5.53]
Teq = 495 [48] K
Rp = 1.17 [84.96] Re
a = 0.2871 [0.0725] AU
Ag = 13952.01 [2025397.73] [0.01σ]
Teff = 8321 [301997] K [0.03σ]

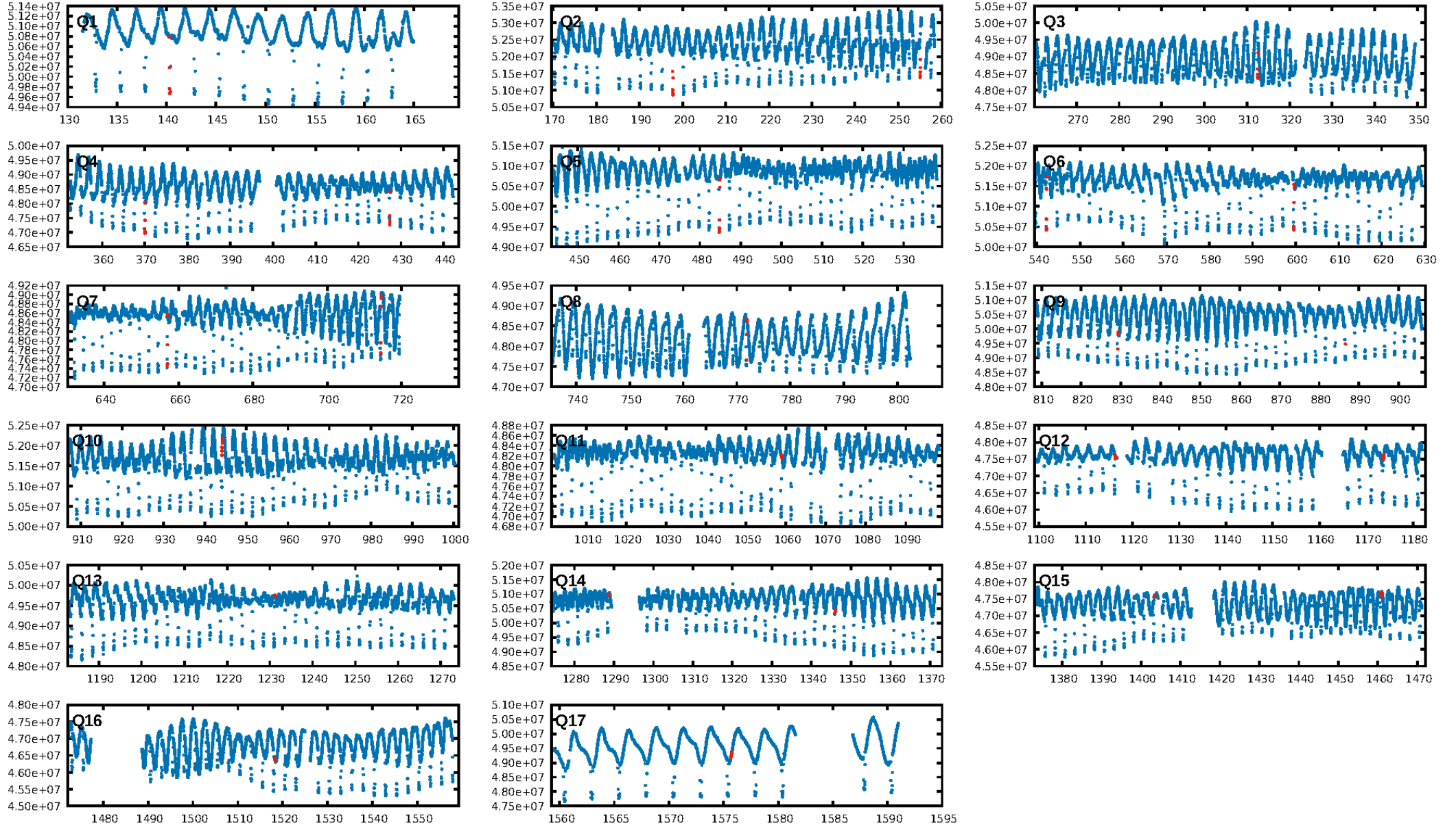
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [286.01σ]
LongPeriod-sig: 100.0% [854.20σ]
ModelChiSquare2-sig: 17.7%
ModelChiSquareGof-sig: 99.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.1321
Centroid-sig: 0.4%
Centroid-so: 6.286 arcsec [1.90σ]
OotOffset-rm: 0.004 arcsec [0.03σ]
KicOffset-rm: 0.081 arcsec [0.26σ]
OotOffset-st: 4/3/4/5 [16]
KicOffset-st: 4/3/4/5 [16]
DiffImageQuality-fgm: 0.44 [7/16]
DiffImageOverlap-fno: 0.00 [0/17]

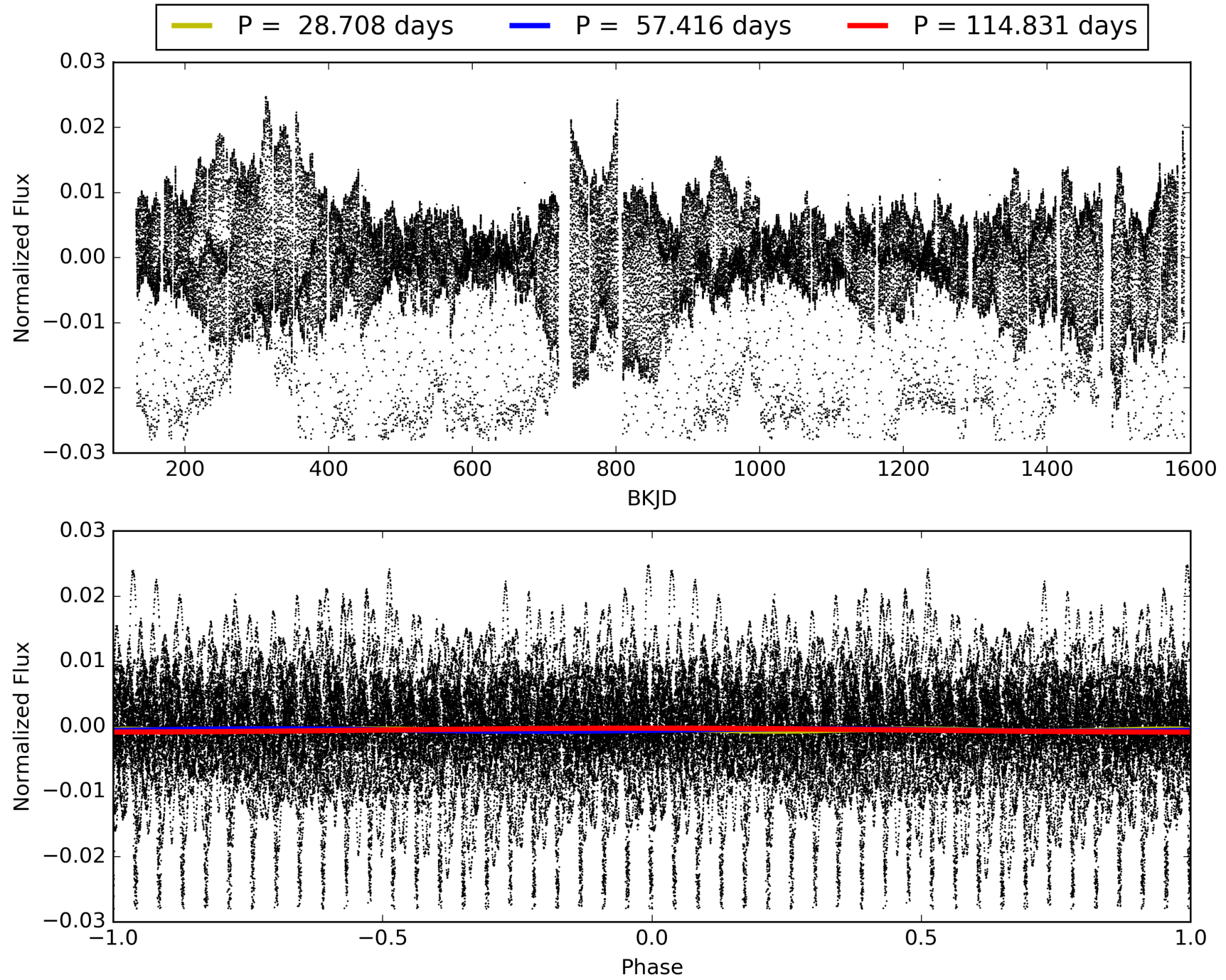
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:46:37 Z

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

TCE 011517719-03, PDC Light Curves

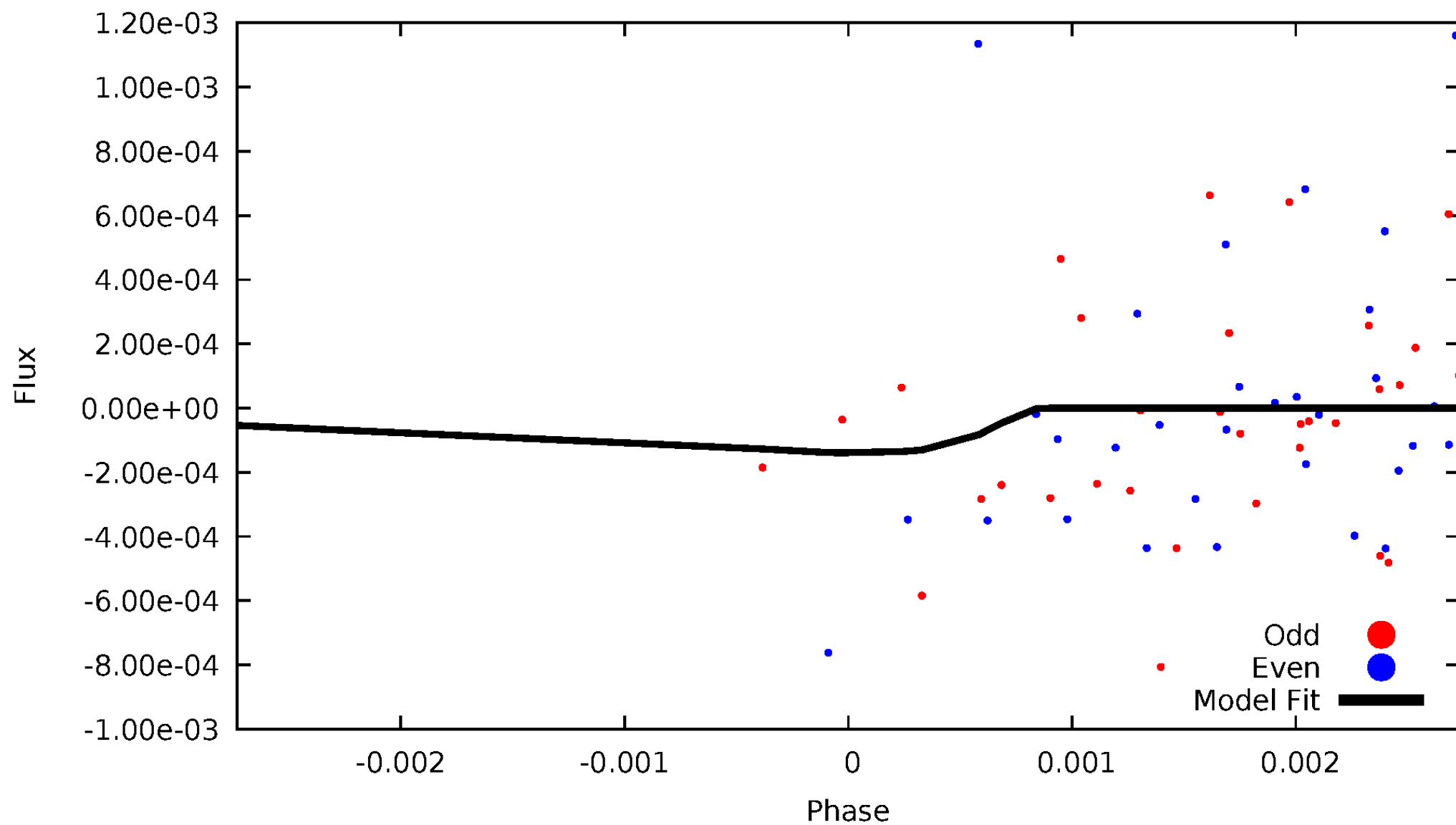


TCE 011517719-03



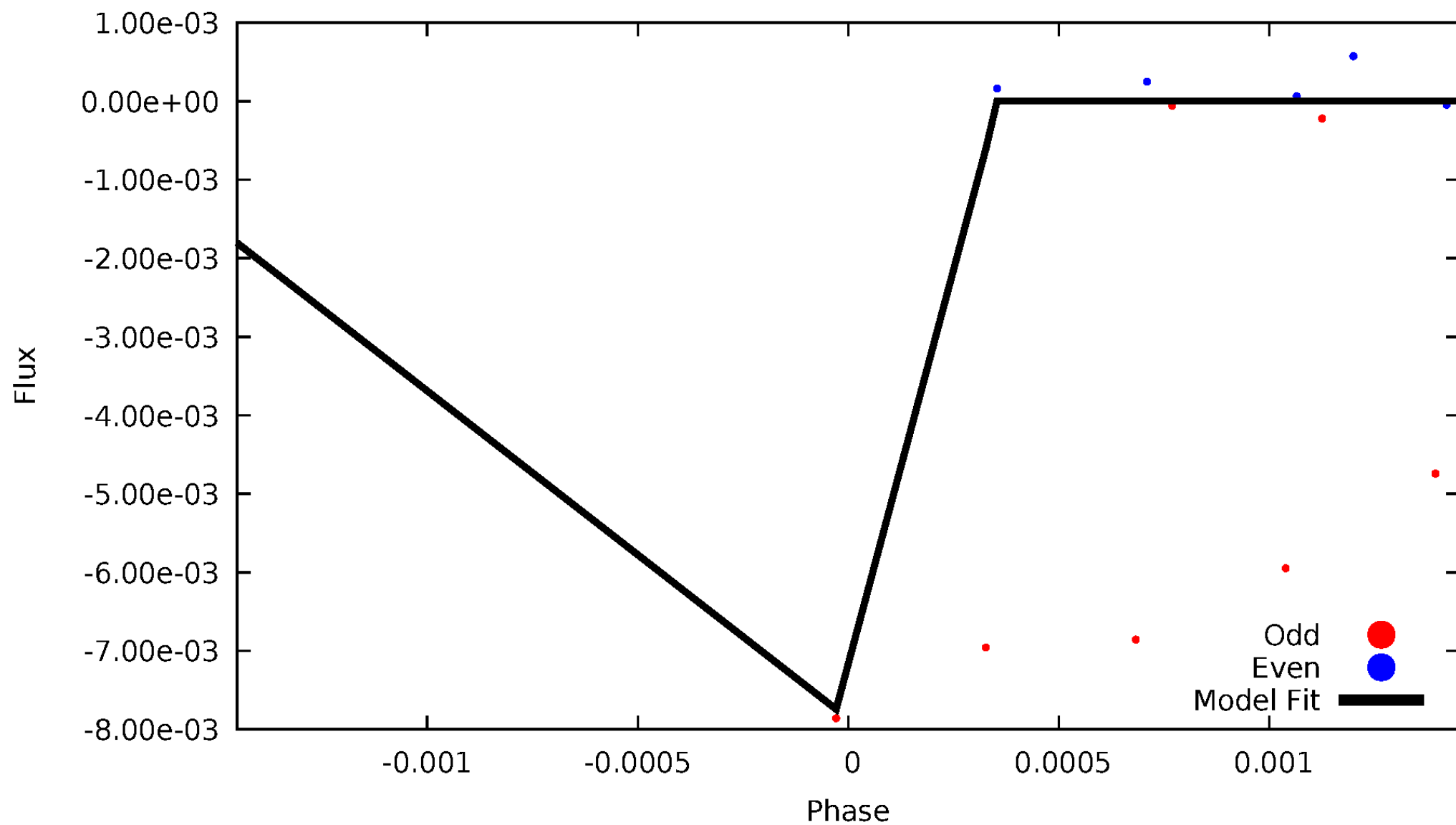
DV Odd/Even

TCE 011517719-03



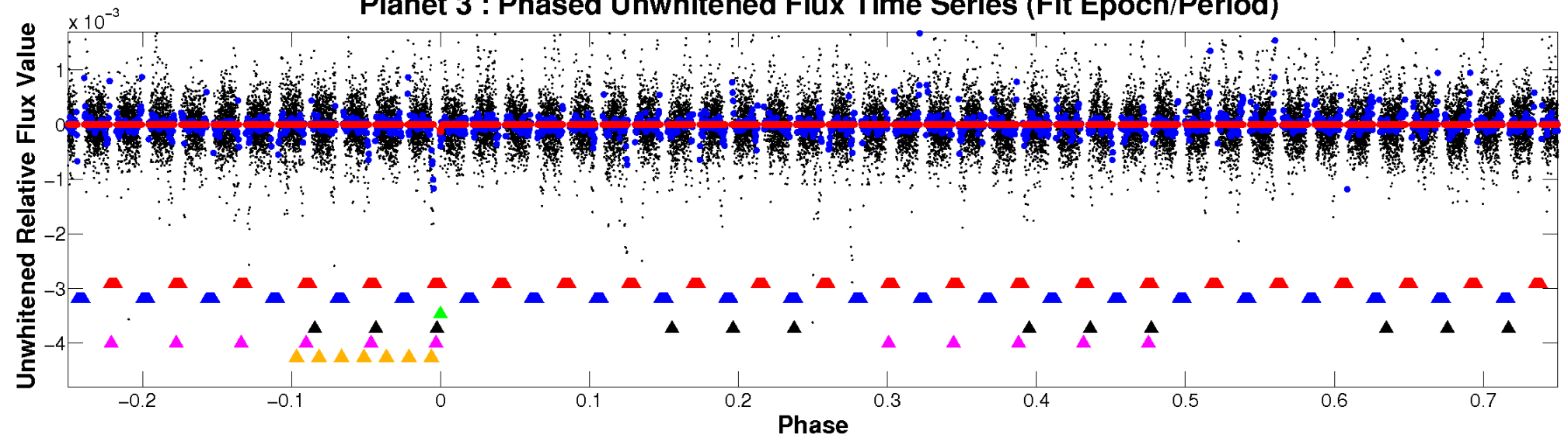
ALT Odd/Even

TCE 011517719-03

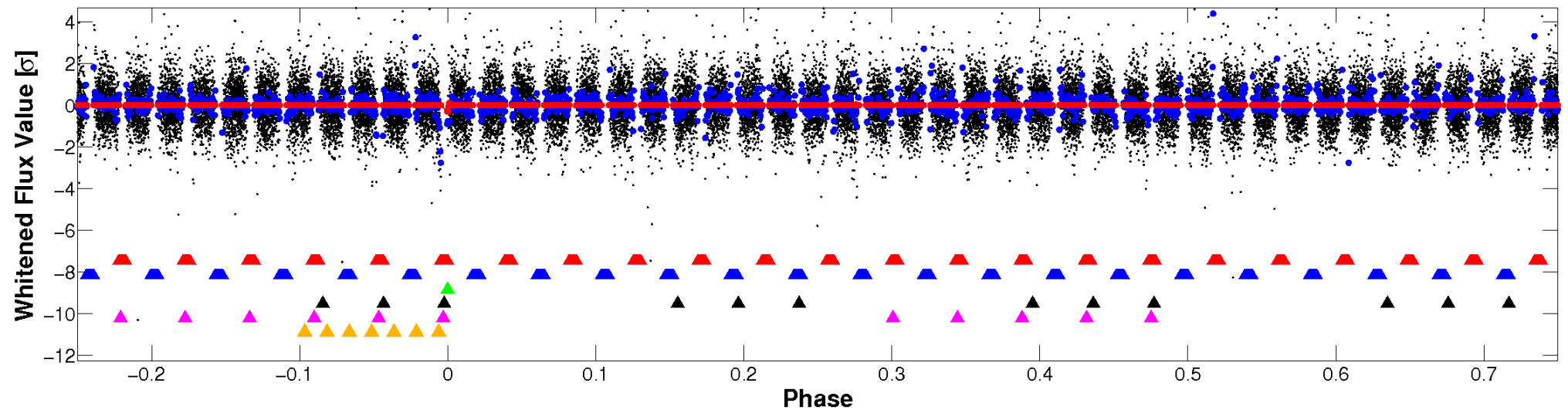


Non-Whitened Vs. Whitened Light Curve

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

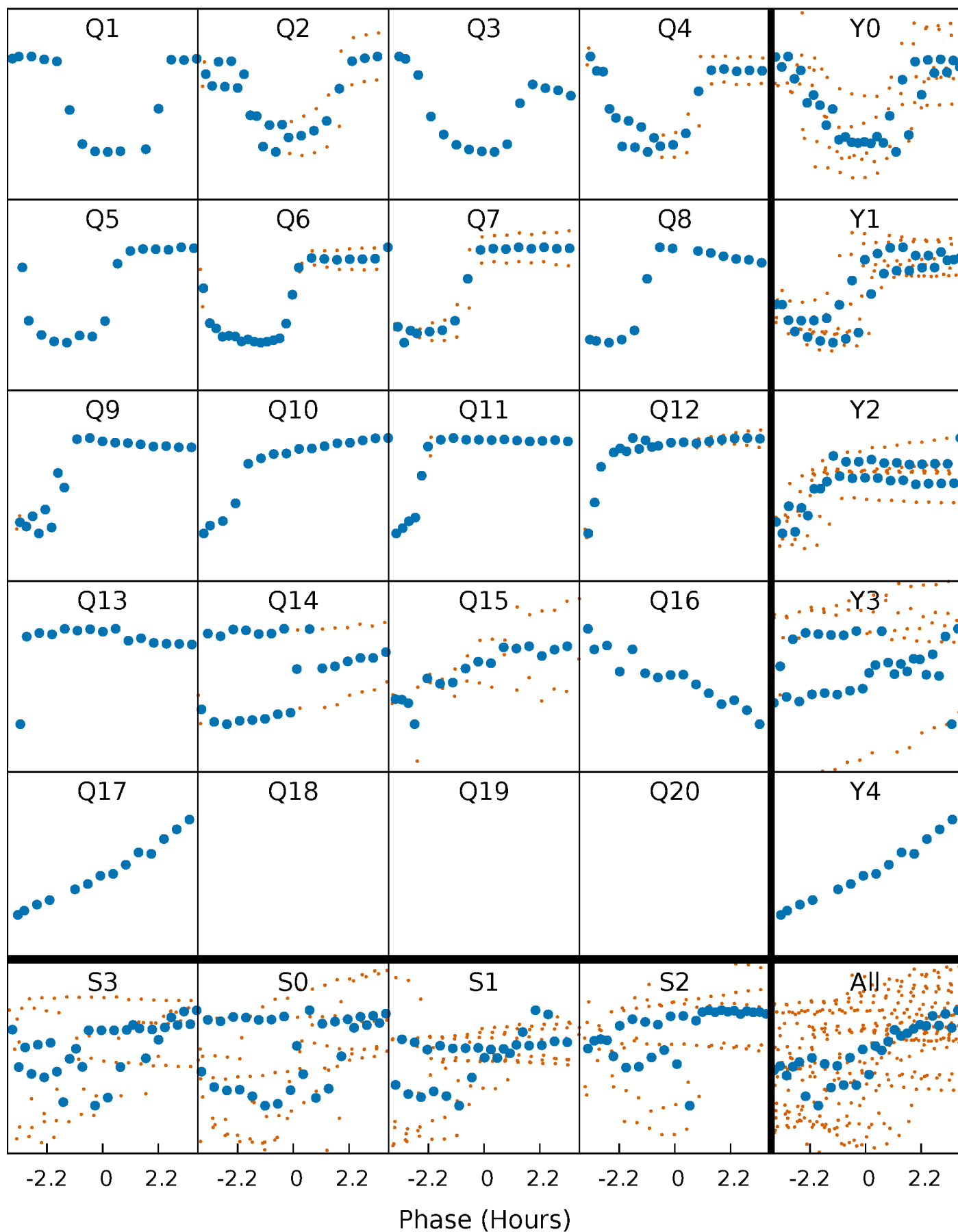


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



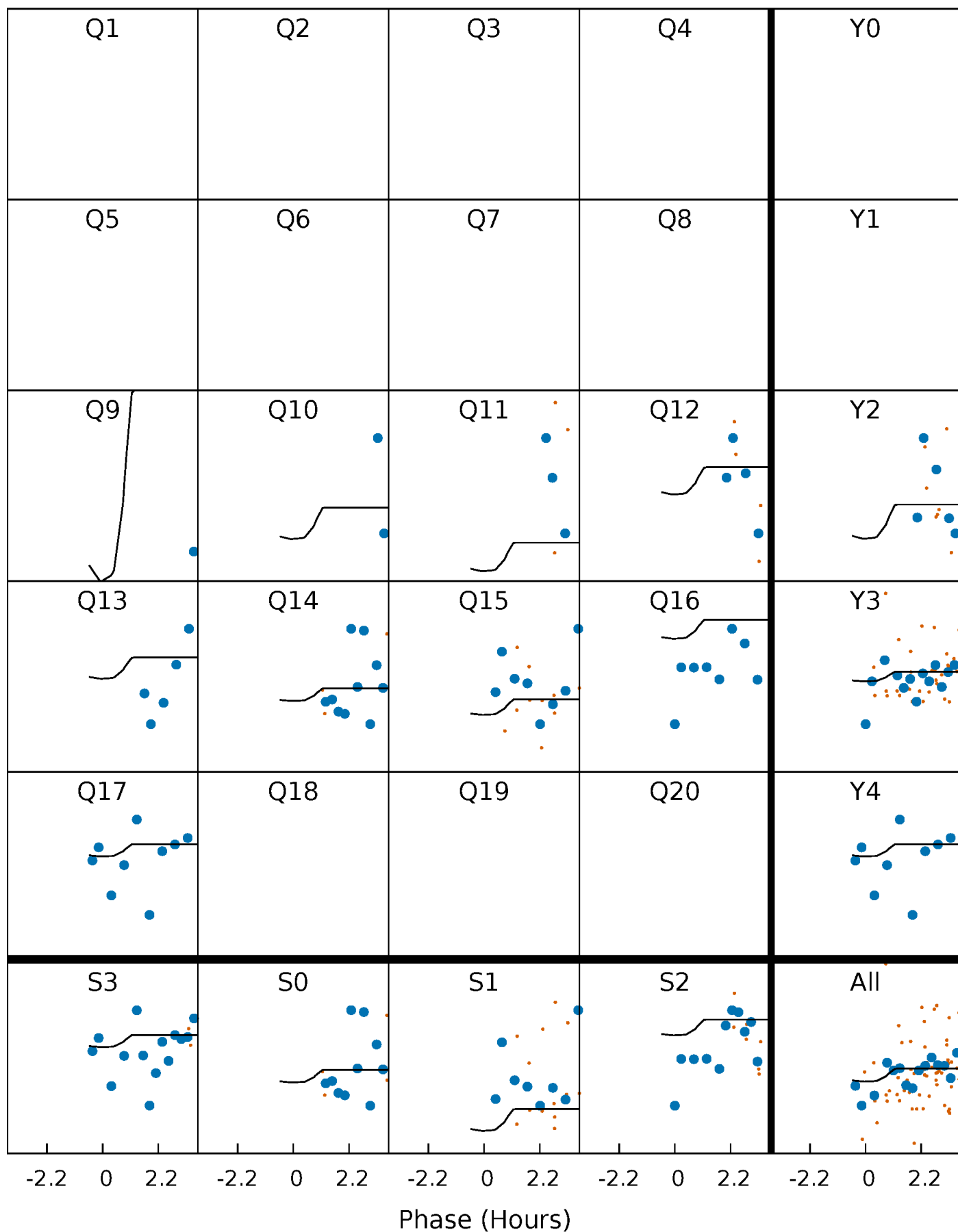
PDC Quarter-Phased Transit Curves

TCE 011517719-03 P= 57.415534 Days $T_0=140.308971$ (BKJD)



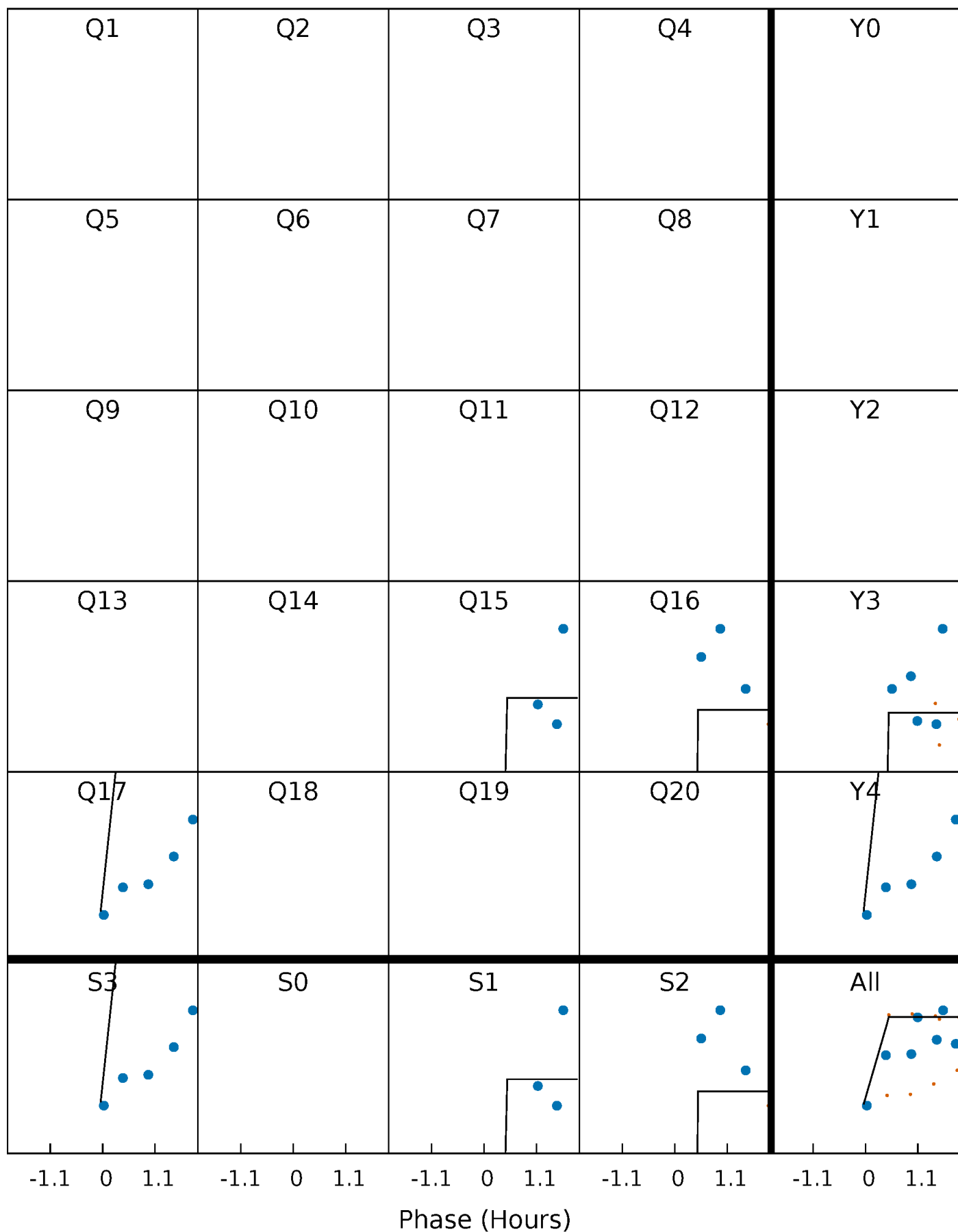
DV Quarter-Phased Transit Curves

TCE 011517719-03 P= 57.415534 Days $T_0=140.308971$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

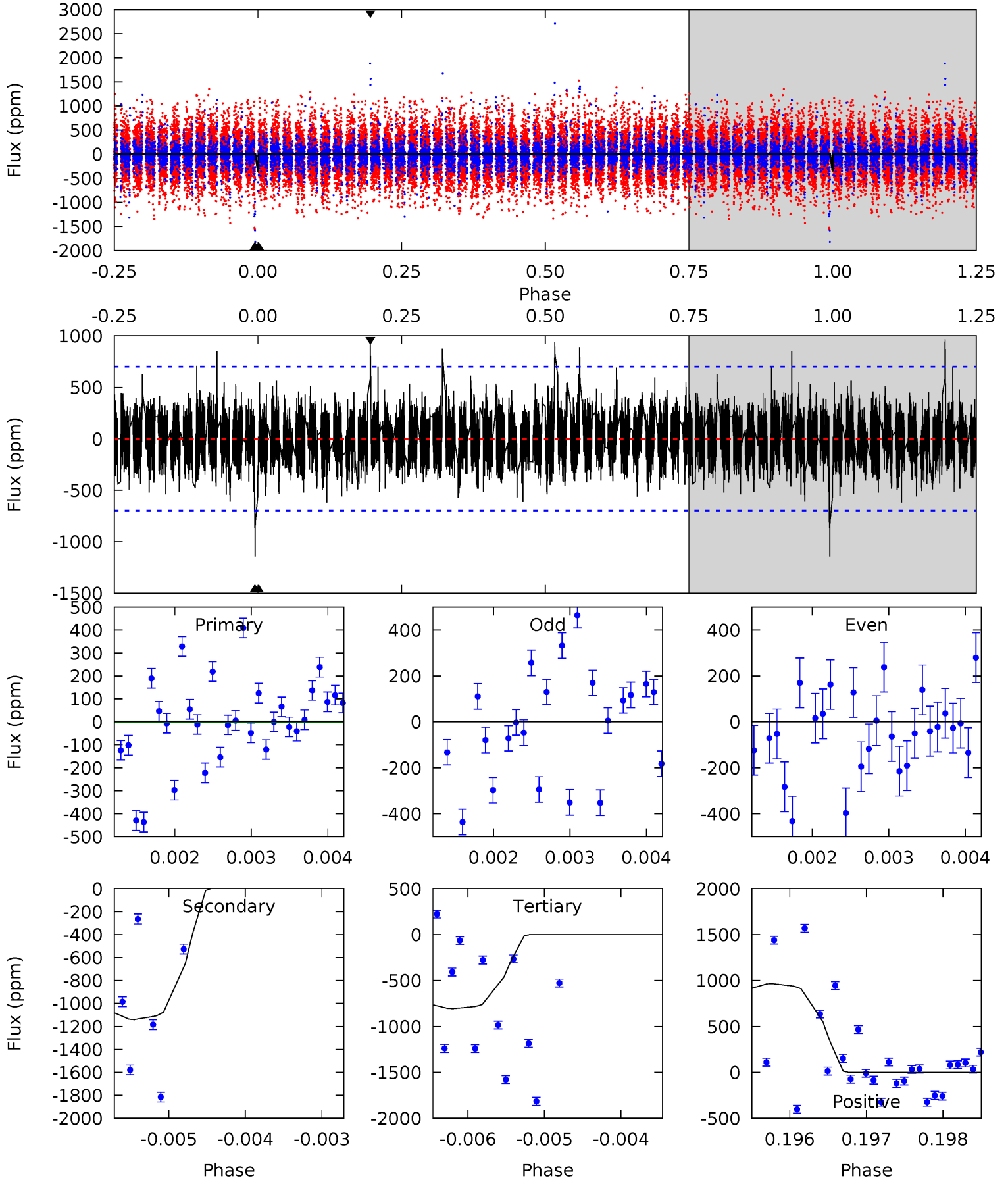
TCE 011517719-03 P= 57.420621 Days $T_0=140.161464$ (BKJD)



DV Model-Shift Uniqueness Test

011517719-03, P = 57.415534 Days, E = 82.893437 Days

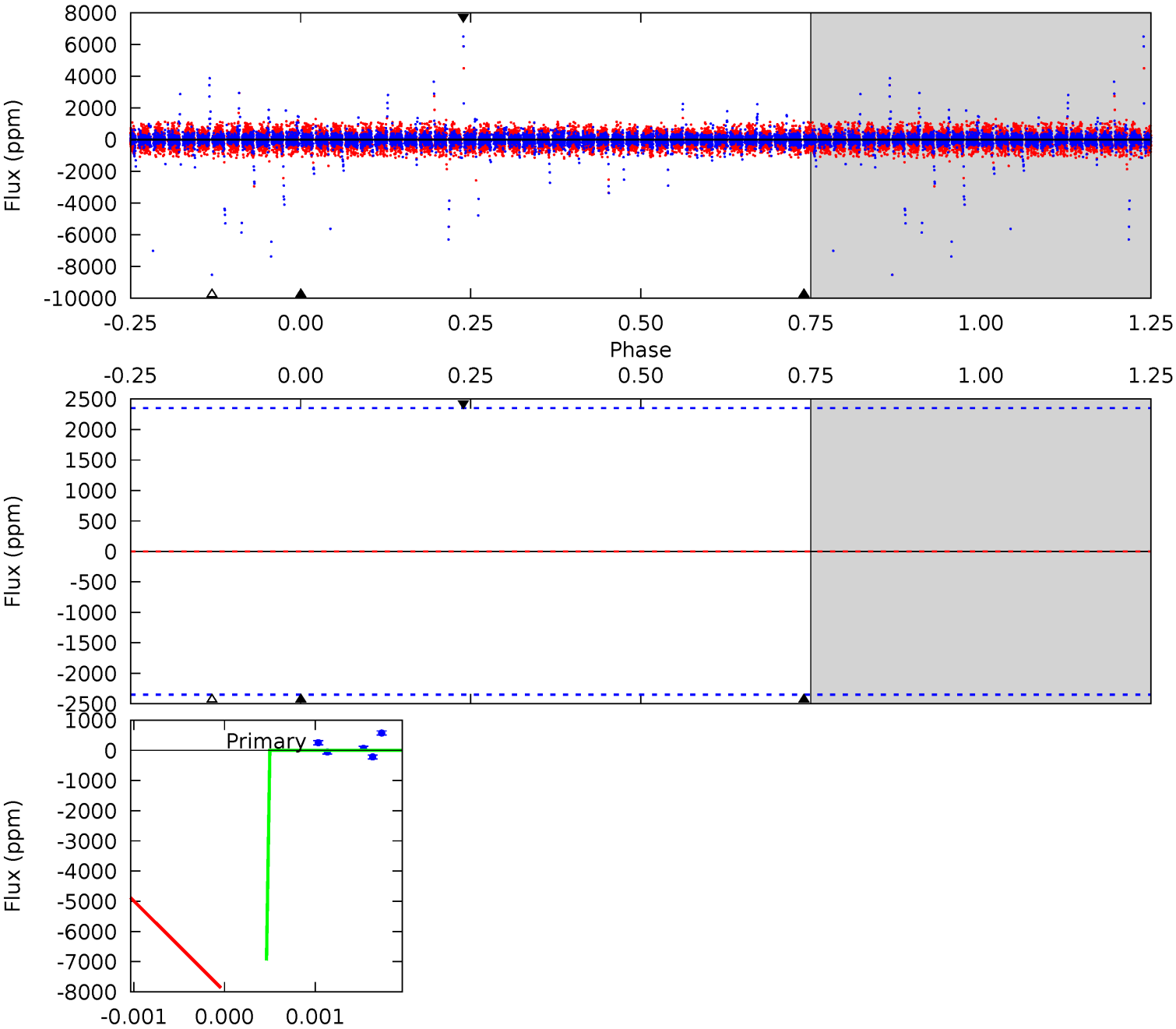
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.74	8.91	6.30	7.54	5.46	3.31	1.22	-3.56	-4.80	2.61	1.37	1.25	1.08	0.46	0.02



Alt Model-Shift Uniqueness Test

011517719-03, P = 57.420621 Days, E = 82.740843 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.3	34.6	20.0	15.2	5.51	3.39	1.00	-3.66	1.09	14.7	19.4	0	1.00	0.31	1.93



Stellar Parameters For KIC 011517719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6039^{+163}_{-181}	$4.426^{+0.087}_{-0.203}$	$-0.280^{+0.300}_{-0.300}$	$0.992^{+0.296}_{-0.127}$	$0.959^{+0.130}_{-0.117}$	$1.384^{+0.611}_{-0.677}$
	+3%/-3%	+2%/-5%	+107%/-107%	+30%/-13%	+14%/-12%	+44%/-49%
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 011517719-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1141 ± 128	$60.33^{+68.10}_{-42.57}$	701^{+54}_{-35}	2390^{+944}_{-379}	14^{+149}_{-11}
Alt.	-0 ± 426	$64.13^{+69.98}_{-44.57}$	697^{+52}_{-34}	-1686^{+3934}_{-582}	$-0.143^{+8.156}_{-8.154}$

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 $A_{obs} \gg 1.0$

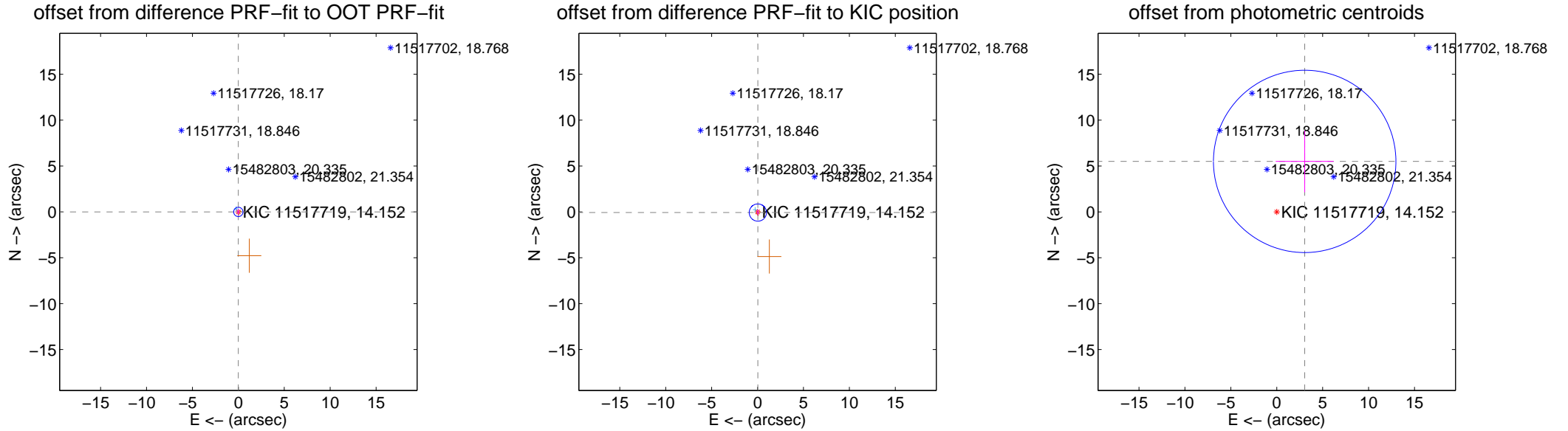
DV Centroid Data

Supplemental centroid analysis for 011517719-03. Kepler magnitude: 14.15. Transit SNR 0.88

There are 7 quarters with good PRF difference image offsets

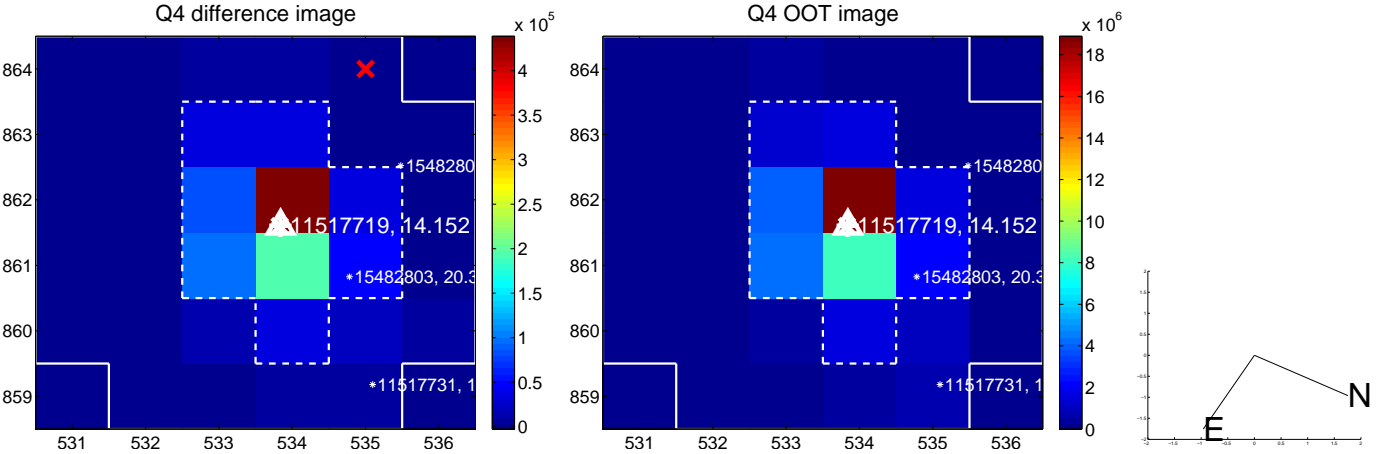
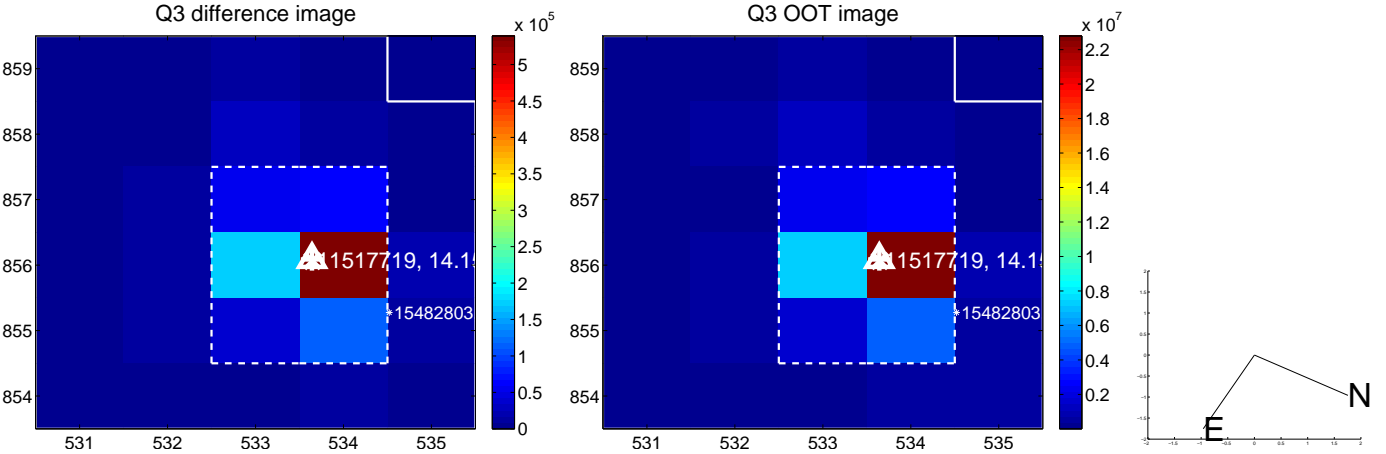
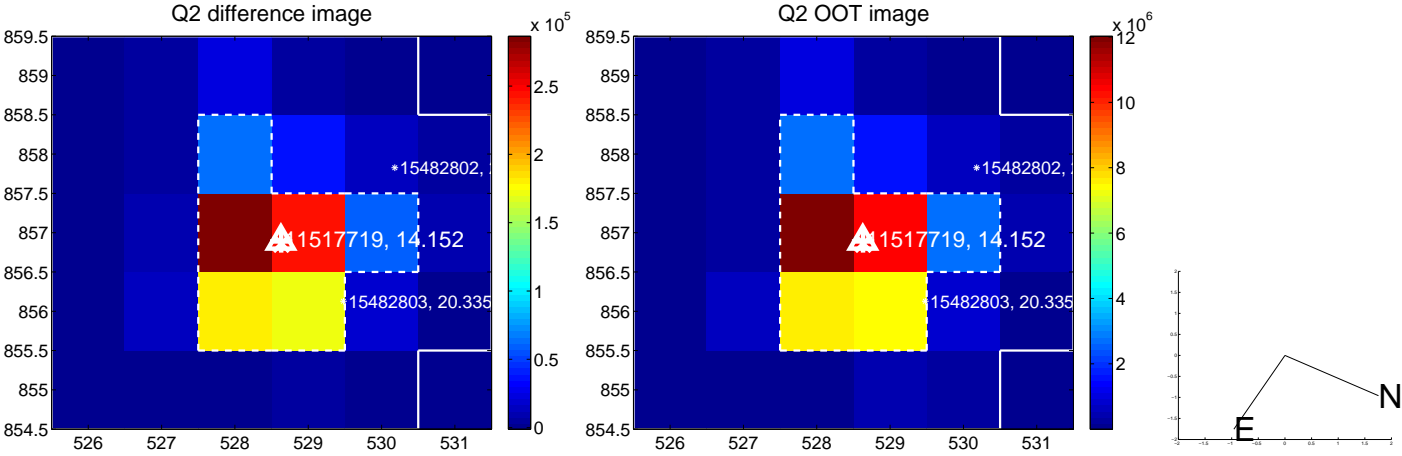
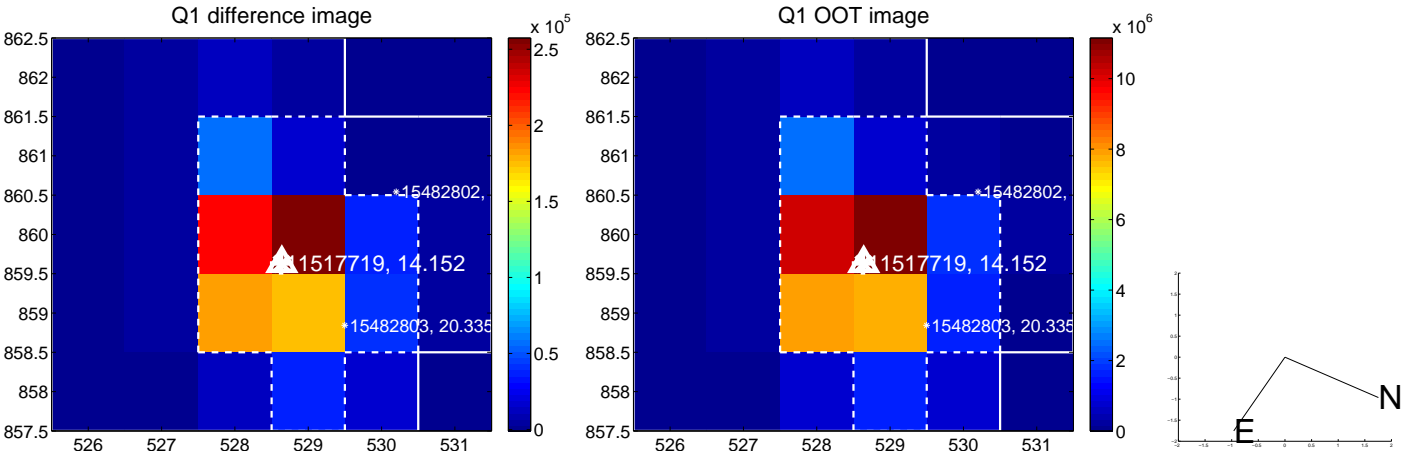
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.004 ± 0.169	0.03	0.003 ± 0.104	-0.003 ± 0.314
PRF-fit source offset from KIC position	0.081 ± 0.313	0.26	-0.034 ± 0.104	-0.073 ± 0.308
photometric centroid source offset	6.29 ± 3.31	1.90	-3.04 ± 3.15	5.50 ± 3.36

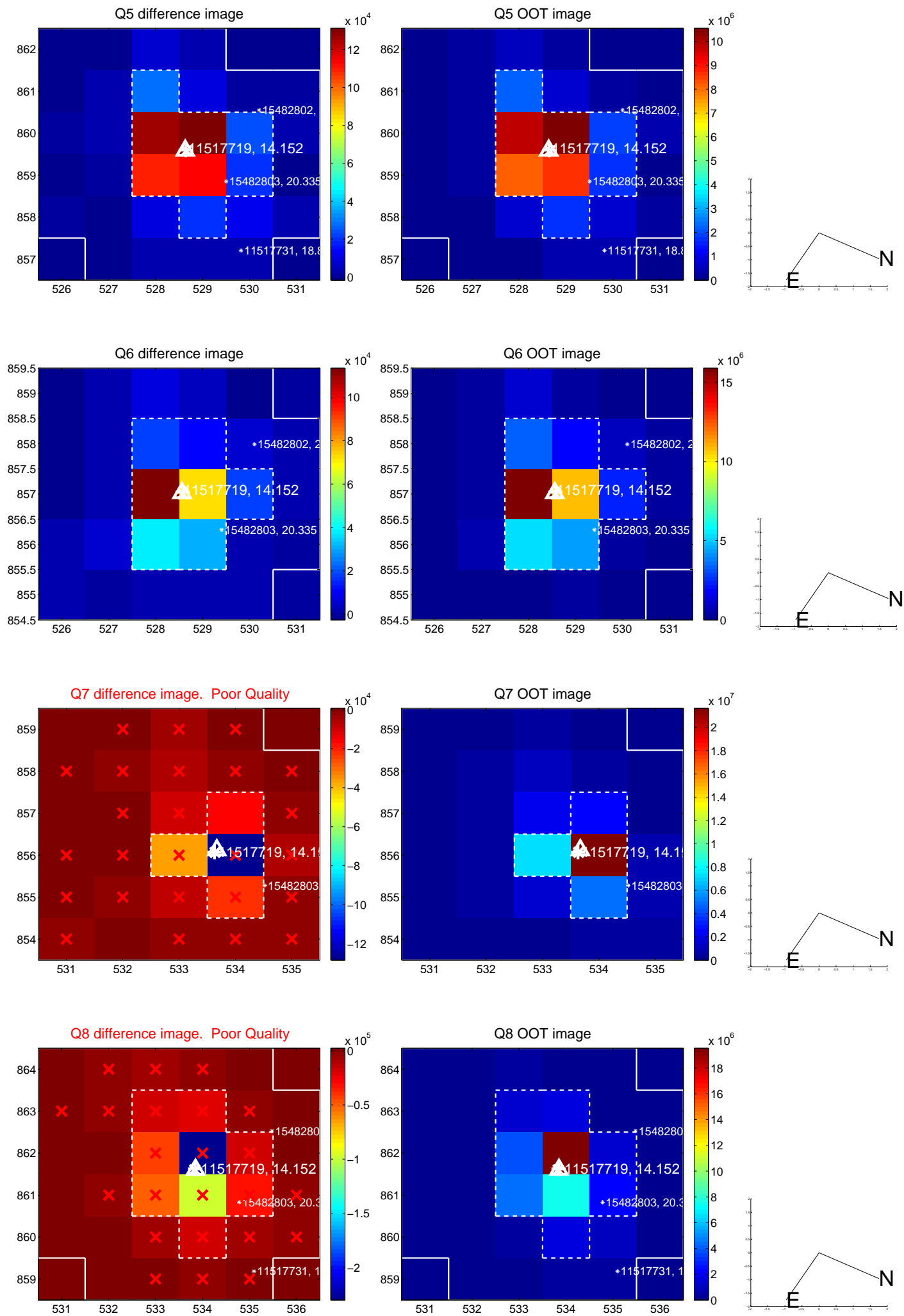


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

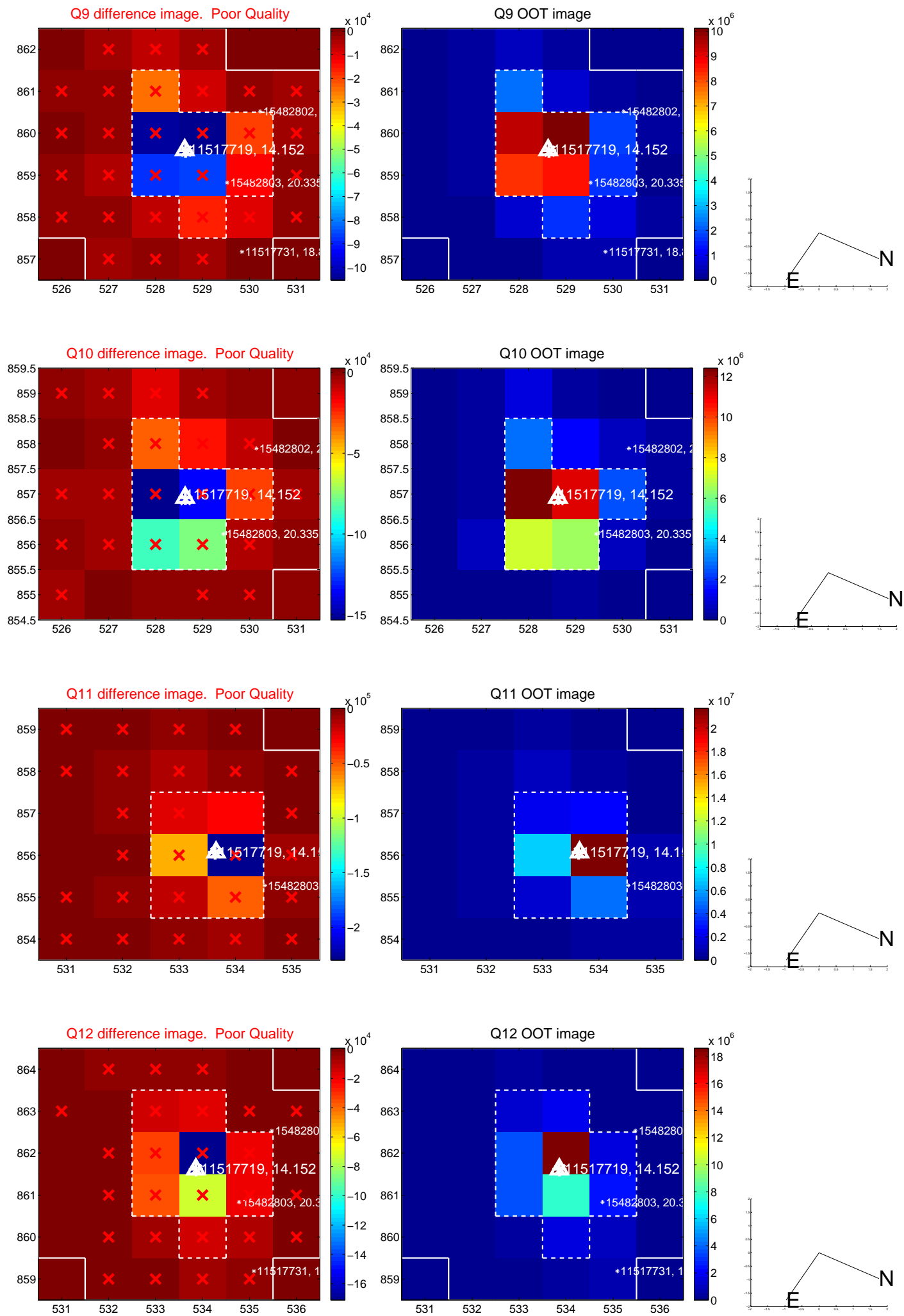
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



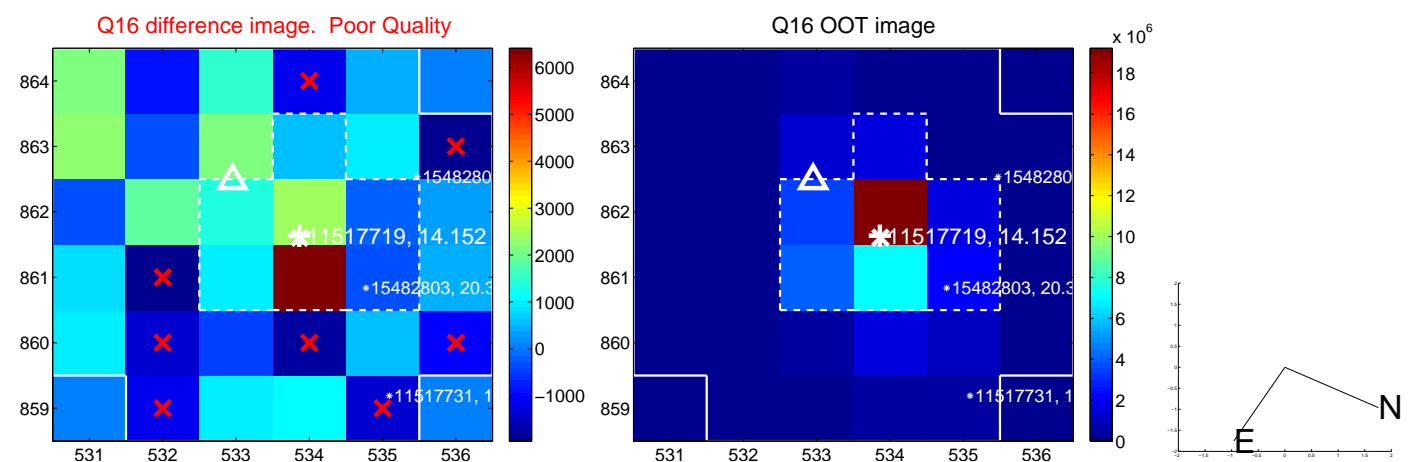
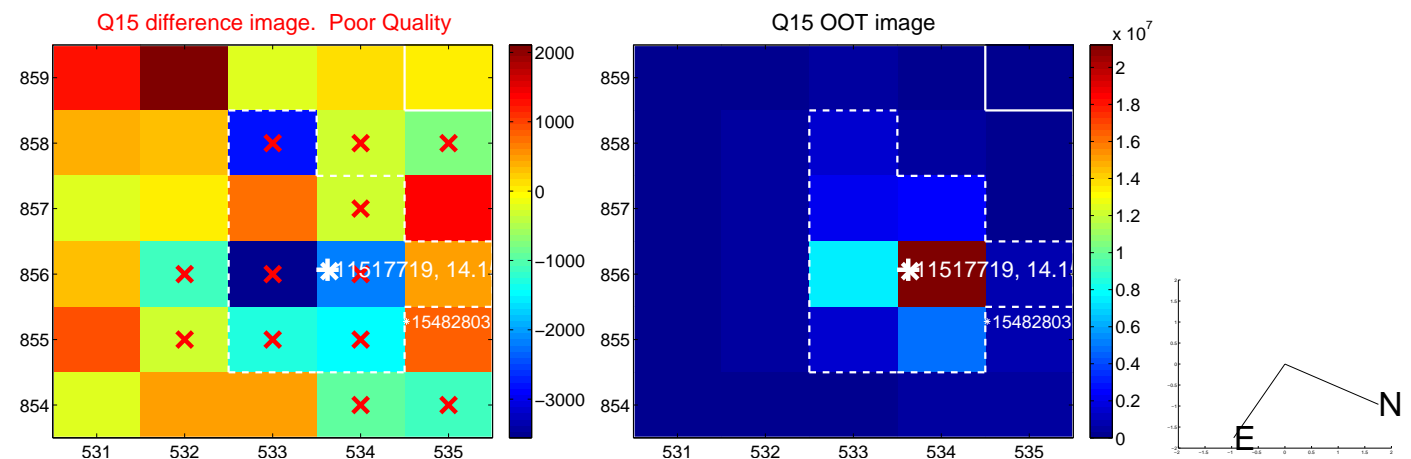
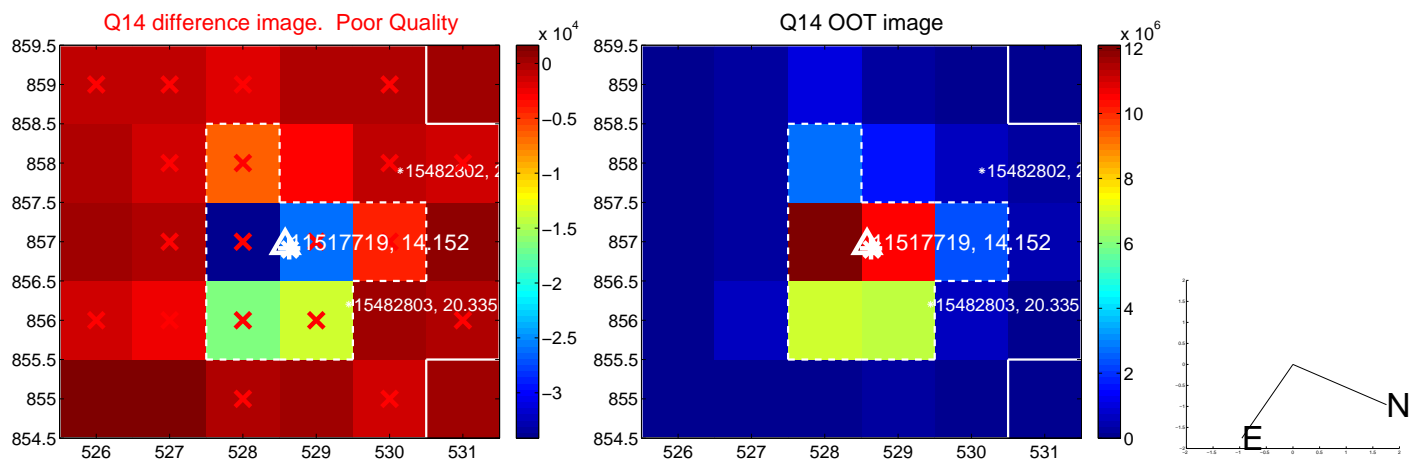
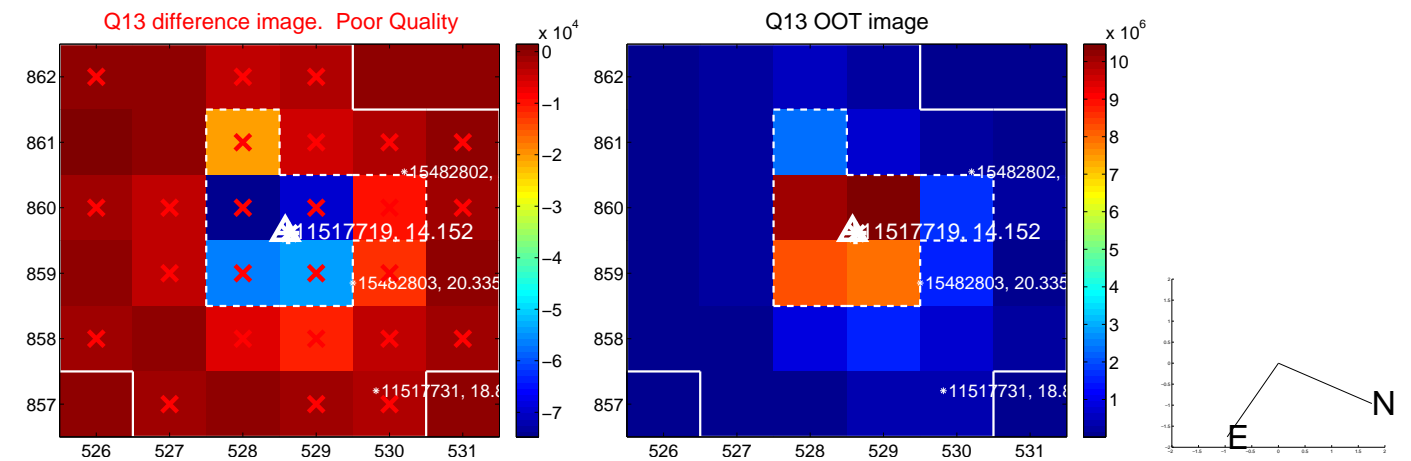
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



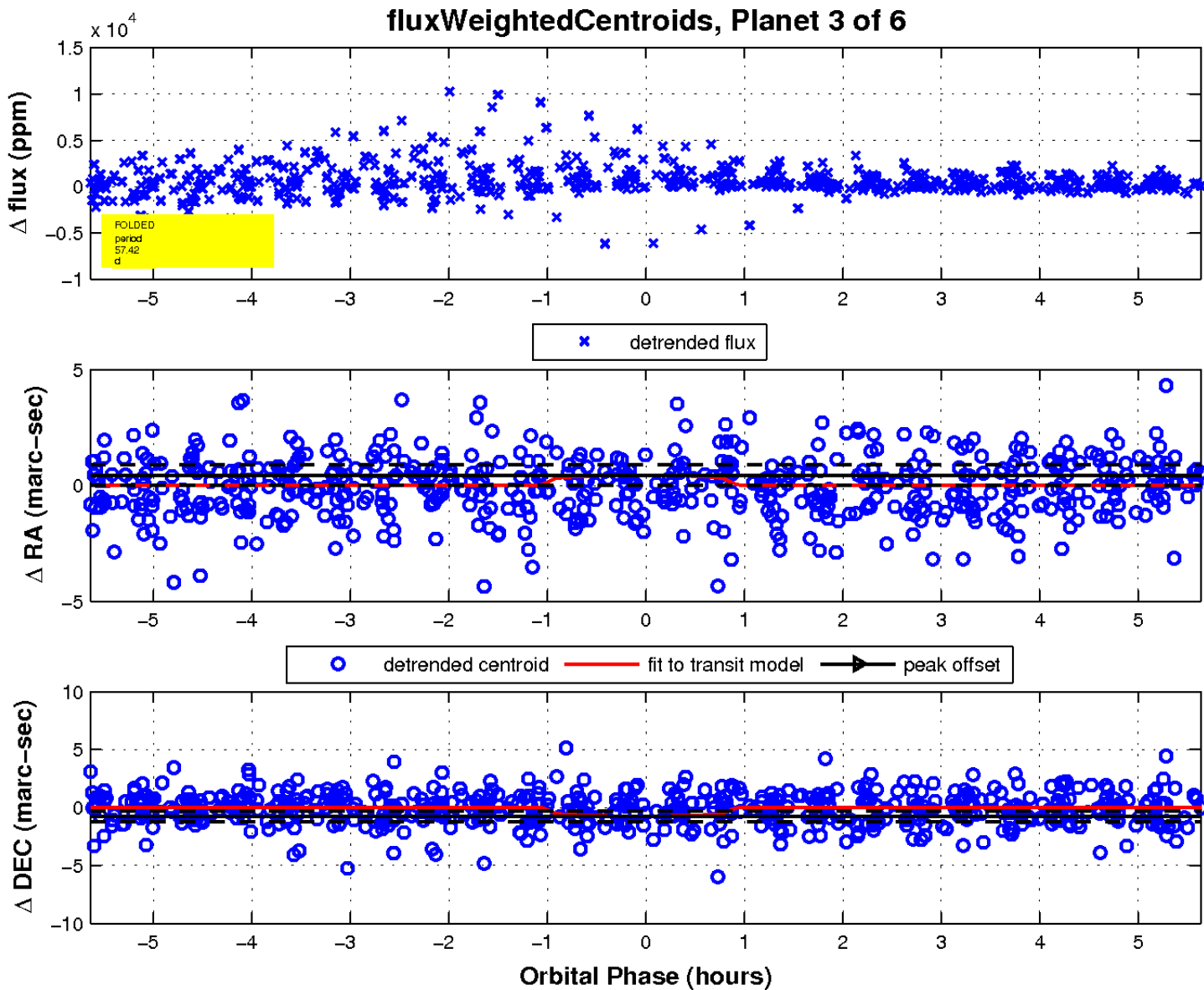
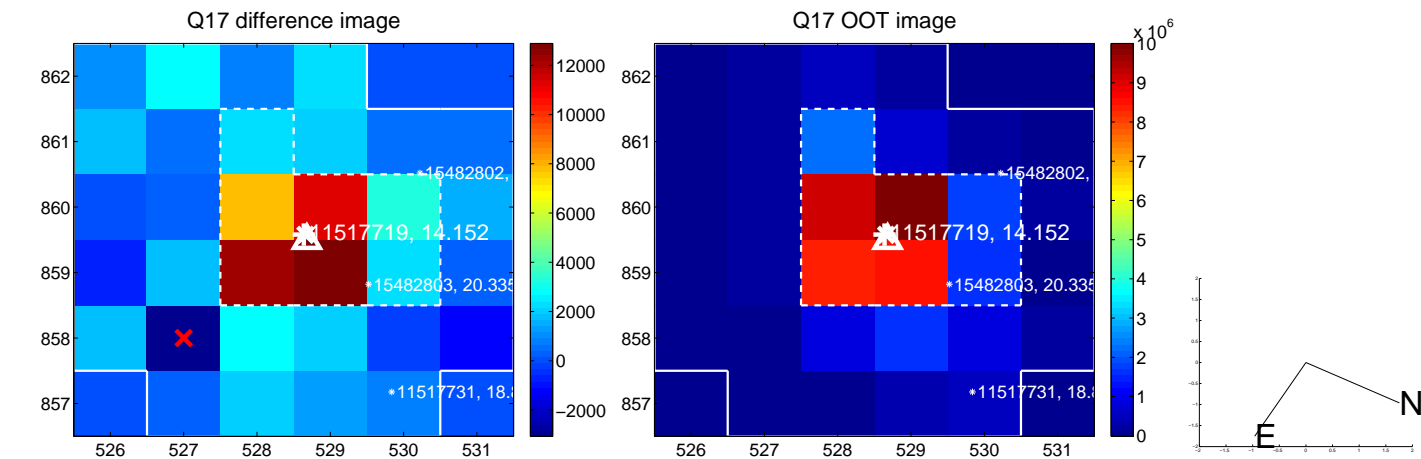
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

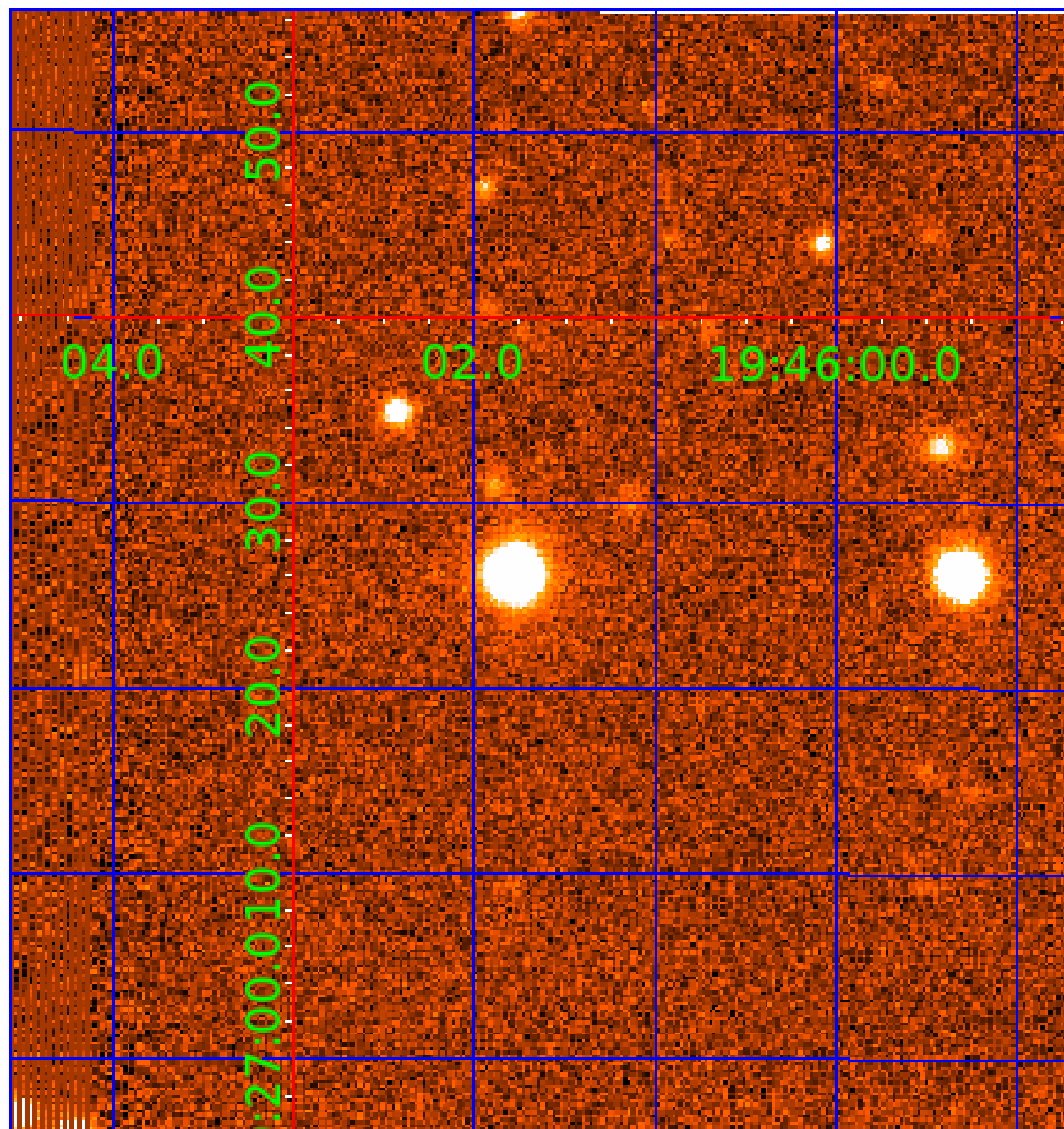


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011517719

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})
011517719-01	OBS	1416.01	2.495773	132.842673	24236.5	4.211	1486.8	1491.7	0.99	6039	15.46	930.73
011517719-02	OBS	No	2.495782	131.591539	338.5	4.207	26.2	26.7	0.99	6039	2.15	930.72
011517719-03	OBS	No	57.415534	140.308971	138.9	1.882	8.6	0.9	0.99	6039	1.17	14.22
011517719-04	OBS	No	128.596542	140.173722	69.9	0.678	8.5	0.4	0.99	6039	1.00	4.85
011517719-05	OBS	No	142.287269	140.137565	2742.4	21.932	8.7	6.5	0.99	6039	6.39	4.24
011517719-06	OBS	No	228.796075	197.375531	680.4	5.274	7.9	4.0	0.99	6039	2.83	2.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011517719-01	OBS	PC	0.92	0	1	0	0	MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE
011517719-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011517719-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011517719-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011517719-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011517719-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

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

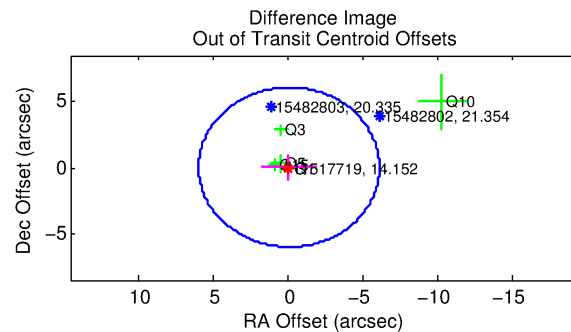
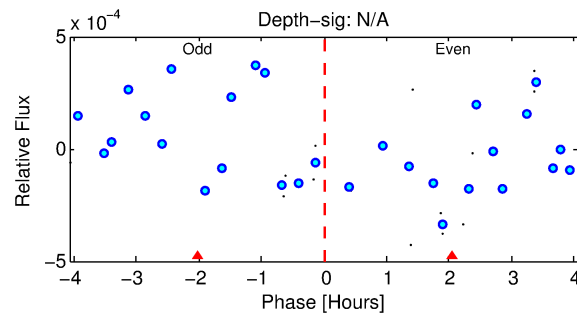
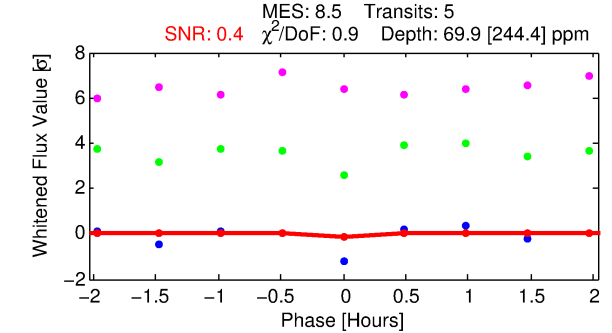
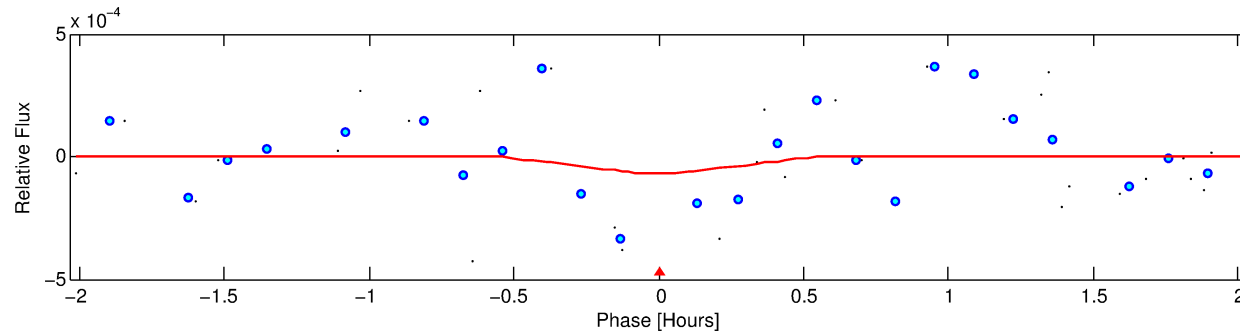
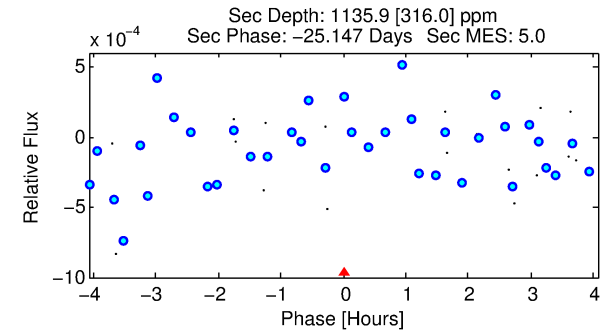
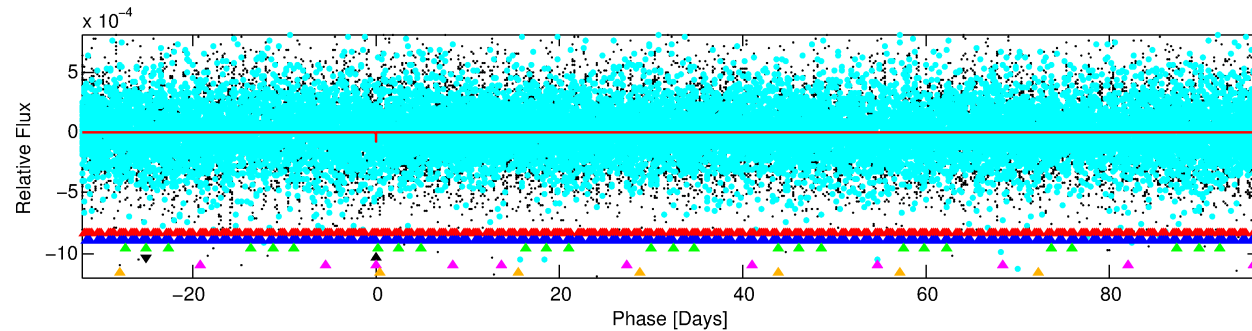
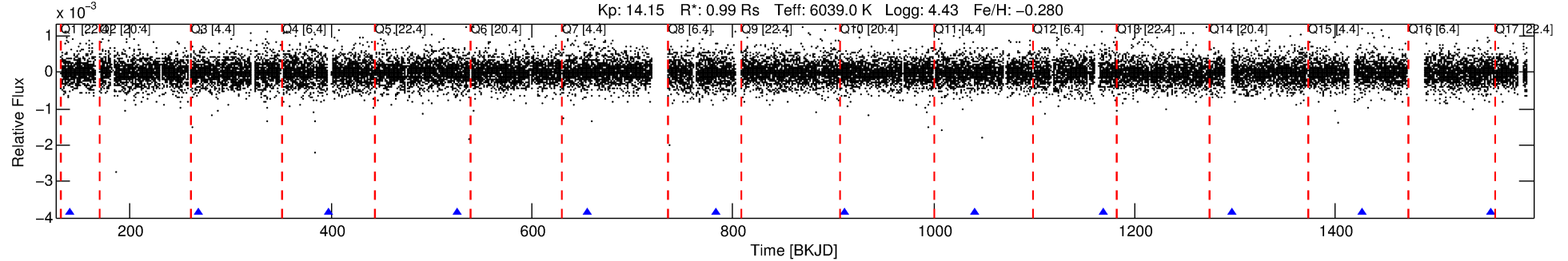
Ephemeris Match Information For 011517719-04

No Significant Match Found

DV One-Page Summary

KIC: 11517719 Candidate: 4 of 6 Period: 128.597 d
KOI: K01416 Corr: No Ephemeris Match

Kp: 14.15 R*: 0.99 Rs Teff: 6039.0 K Logg: 4.43 Fe/H: -0.280



DV Fit Results:

Period = 128.59654 [0.00967] d
Epoch = 140.1737 [0.0896] BKJD
Rp/R* = 0.0092 [0.1243]
a/R* = 646.94 [45947.27]
b = 0.91 [14.61]
Seff = 4.85 [1.89]
Teq = 378 [37] K
Rp = 1.00 [13.46] Re
a = 0.4915 [0.1242] AU
Ag = 150736.99 [4053502.78] [0.04σ]
Teffp = 11531 [77511] K [0.14σ]

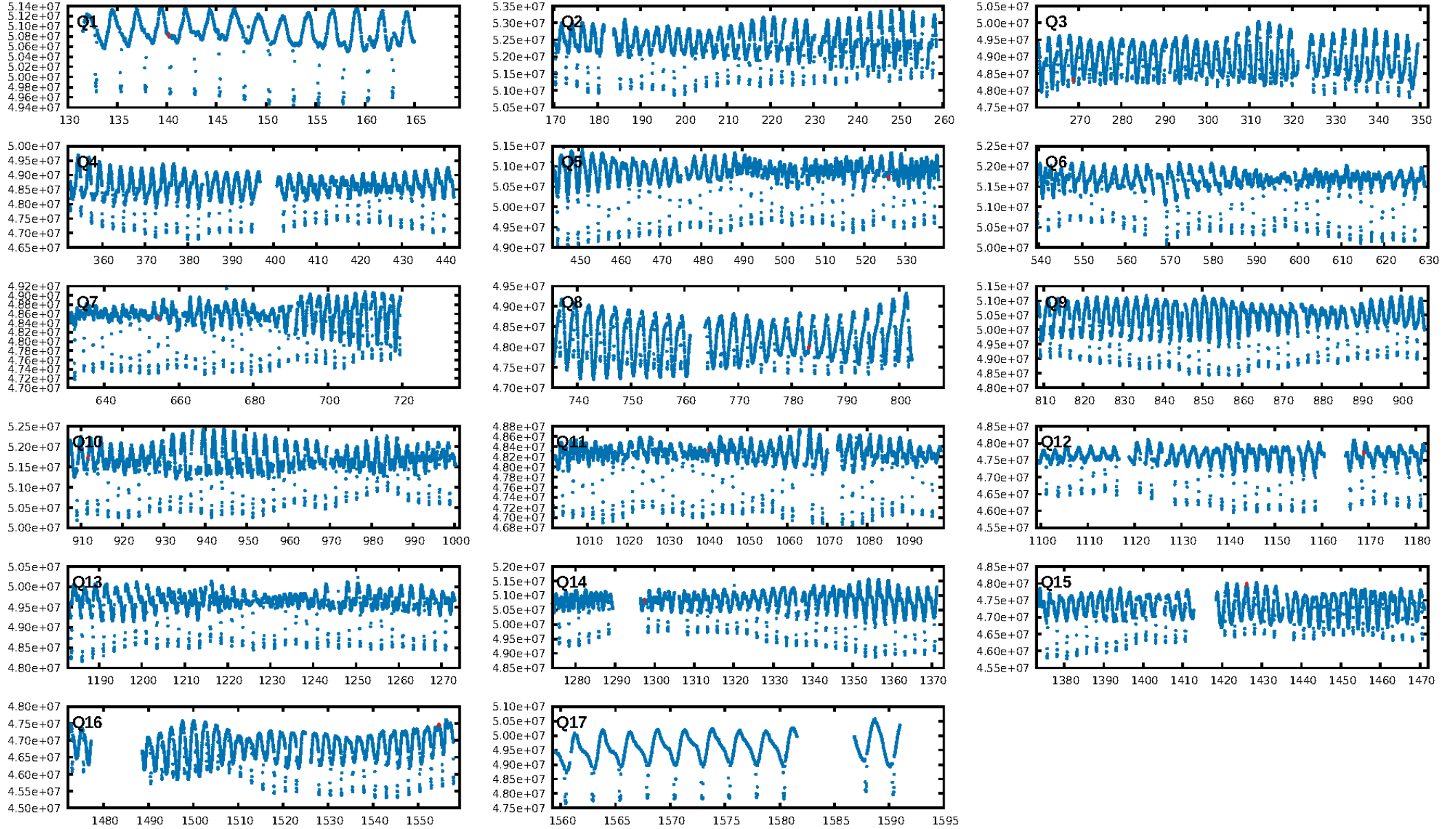
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [854.20σ]
LongPeriod-sig: 100.0% [14.97σ]
ModelChiSquare2-sig: 97.5%
ModelChiSquareGof-sig: 99.3%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 0.311
Centroid-sig: 11.0%
Centroid-so: 40.726 arcsec [2.42σ]
OotOffset-rm: 0.127 arcsec [0.06σ]
OotOffset-st: 1/2/0/2 [5]
KicOffset-rm: 0.125 arcsec [0.06σ]
KicOffset-st: 1/2/0/2 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.38 [3/8]

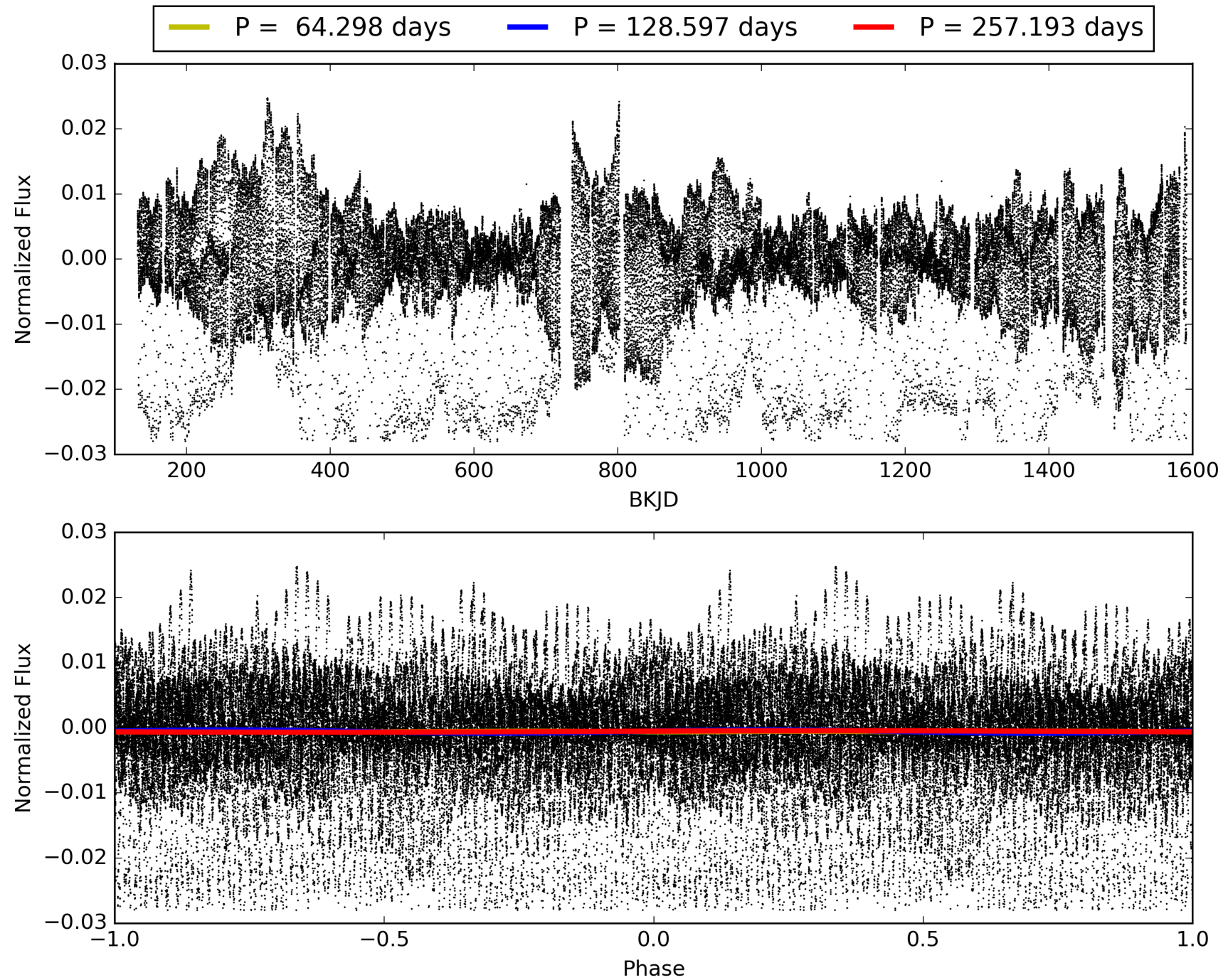
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:46:53 Z

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

TCE 011517719-04, PDC Light Curves

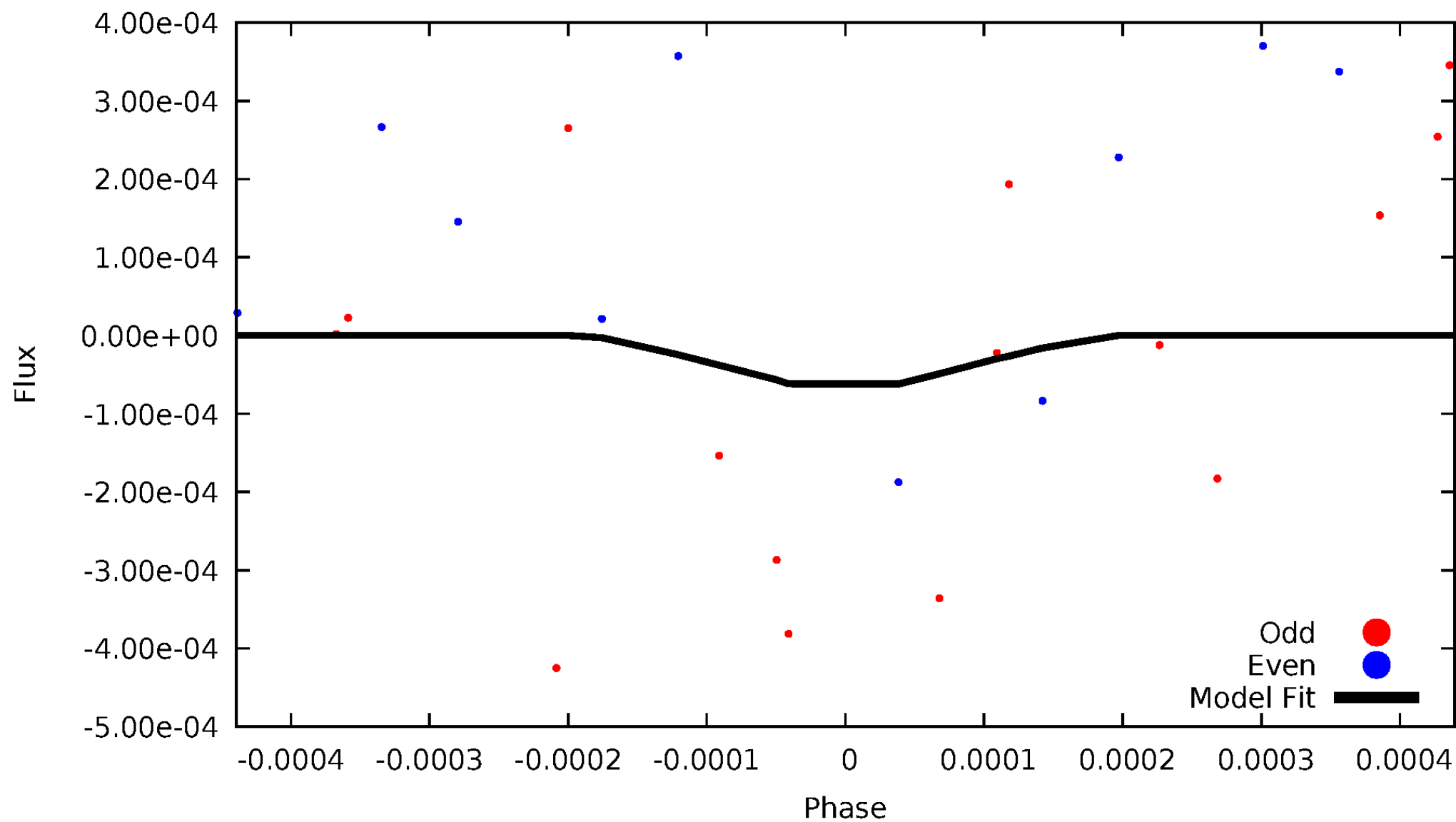


TCE 011517719-04



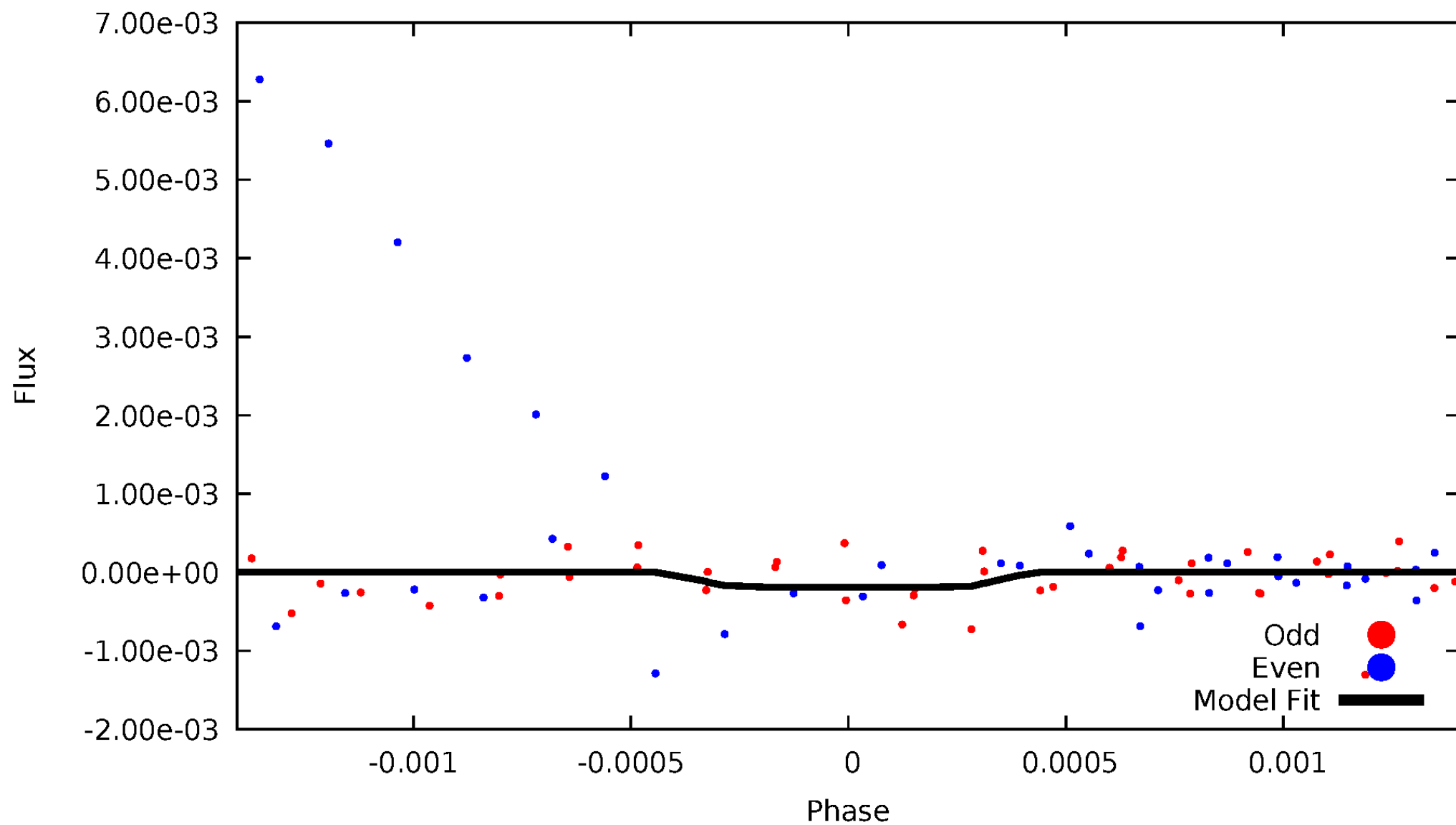
DV Odd/Even

TCE 011517719-04



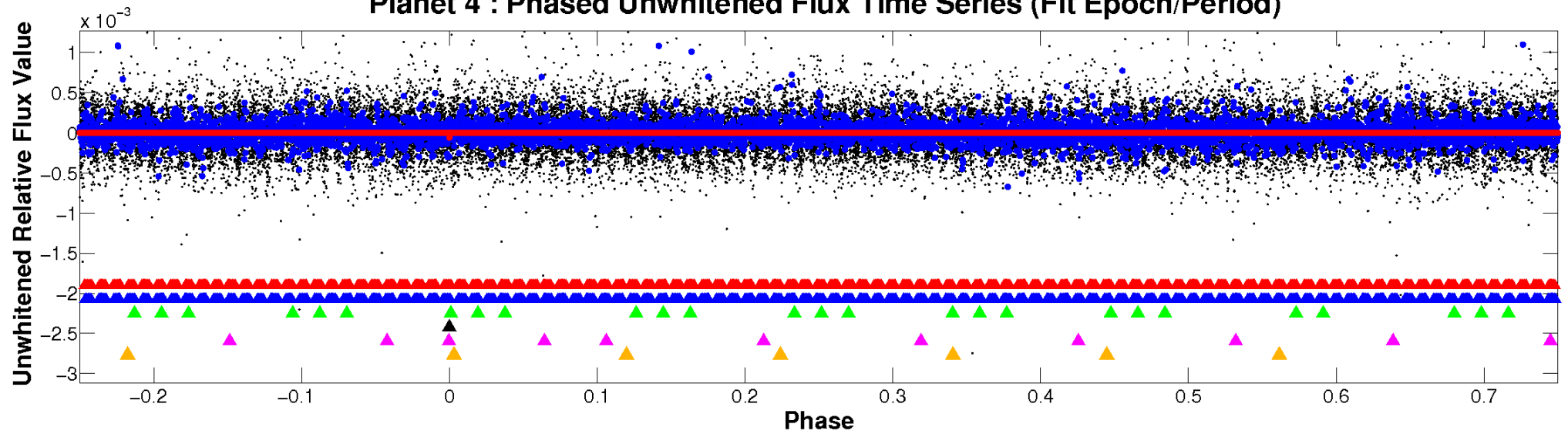
ALT Odd/Even

TCE 011517719-04

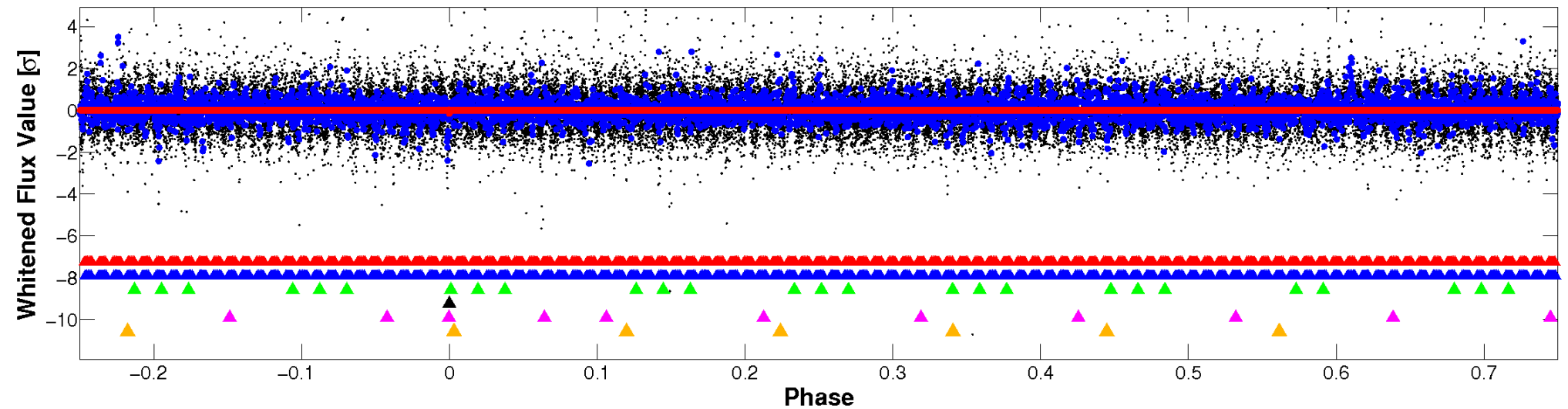


Non-Whitened Vs. Whitened Light Curve

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

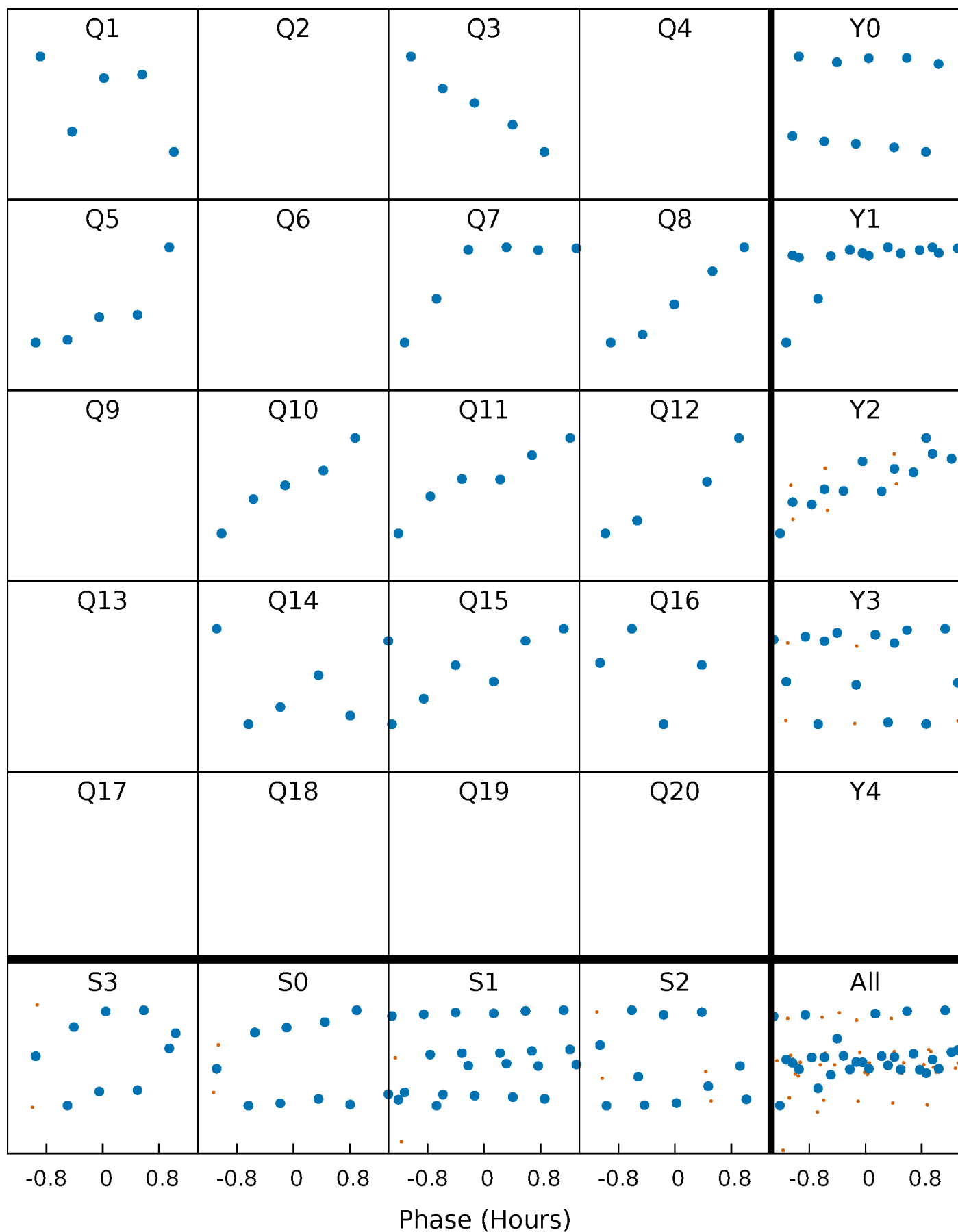


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



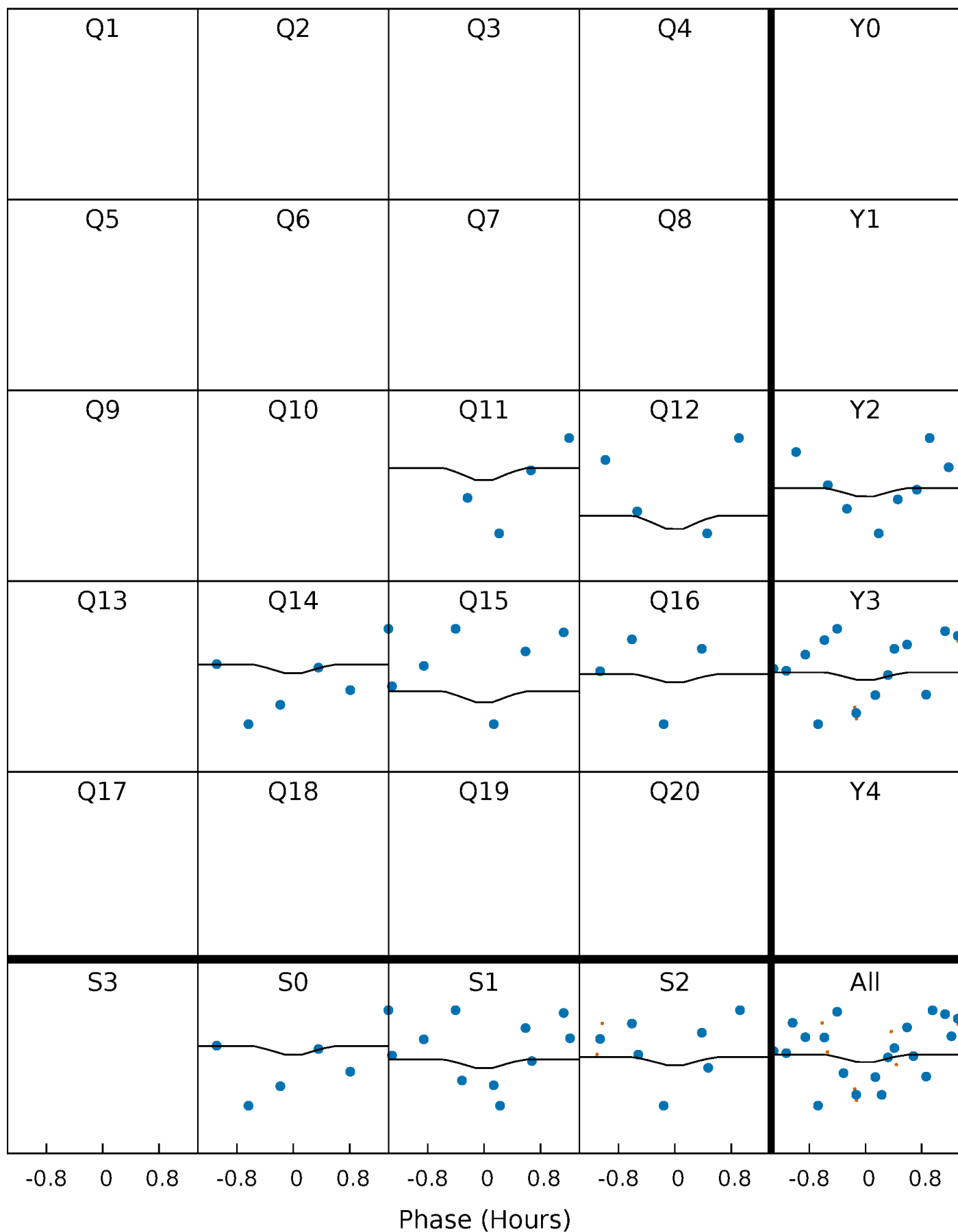
PDC Quarter-Phased Transit Curves

TCE 011517719-04 P=128.596542 Days $T_0=140.173722$ (BKJD)



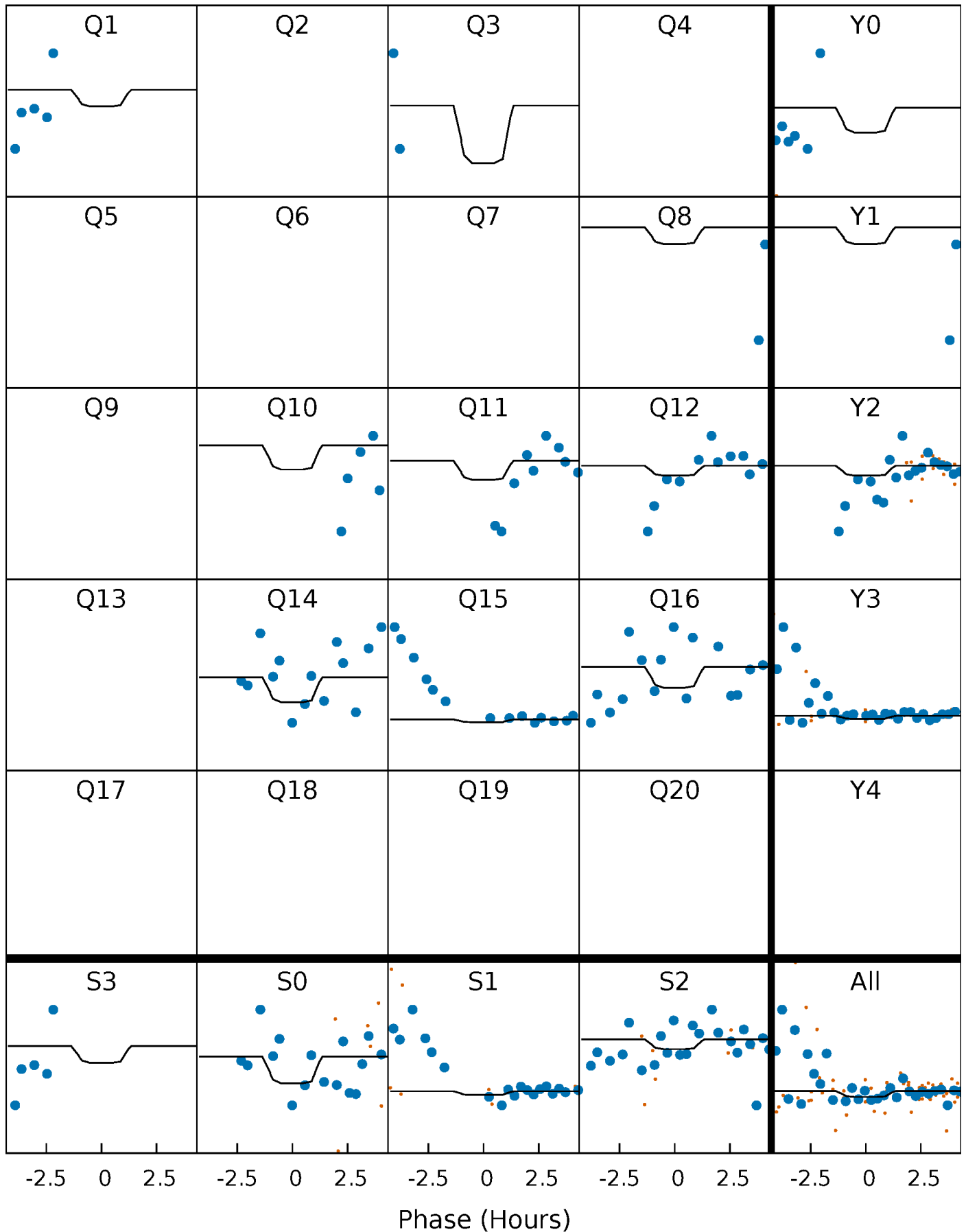
DV Quarter-Phased Transit Curves

TCE 011517719-04 P=128.596542 Days $T_0=140.173722$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

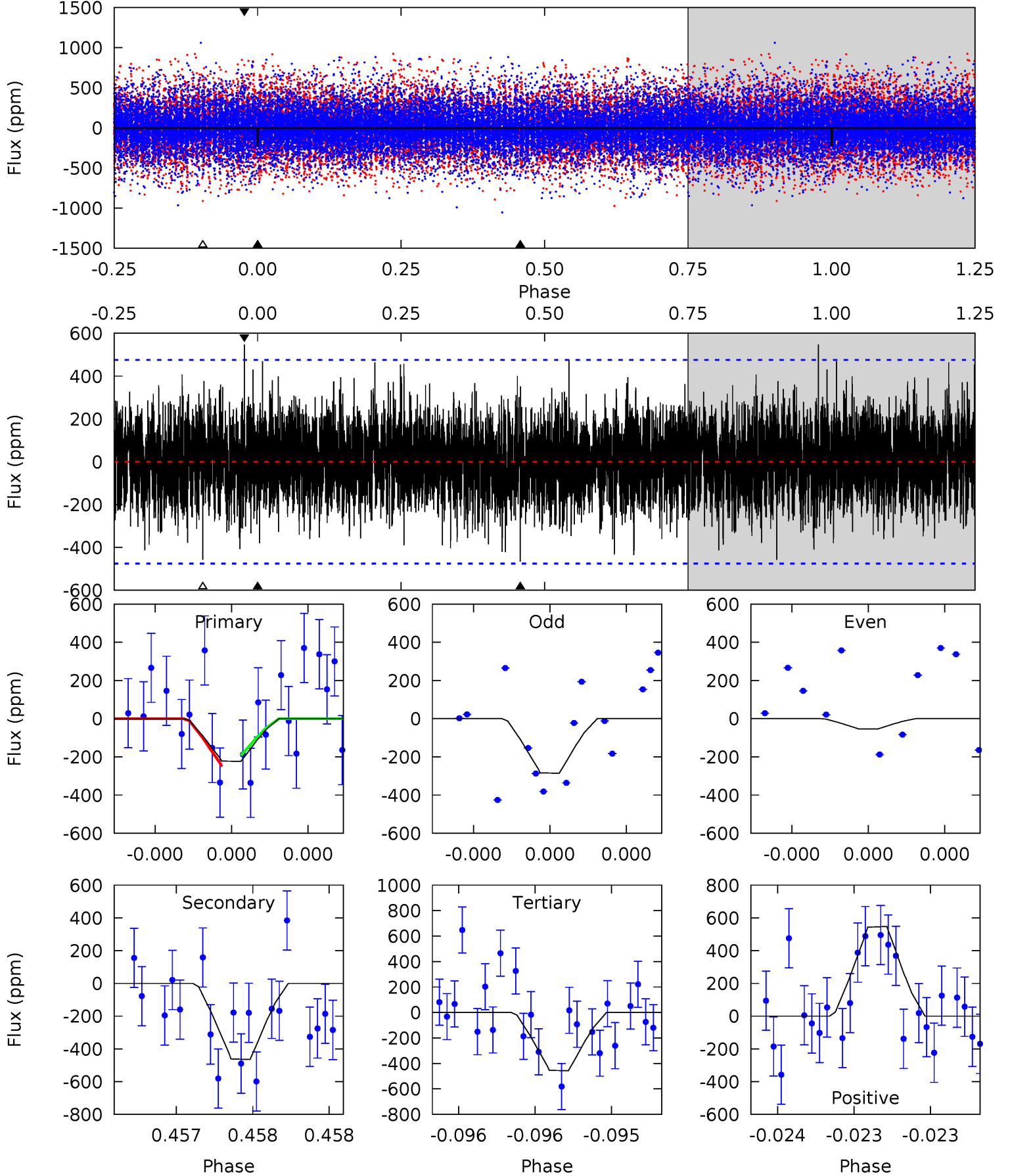
TCE 011517719-04 P=128.597310 Days $T_0=140.140705$ (BKJD)



DV Model-Shift Uniqueness Test

011517719-04, P = 128.596542 Days, E = 11.577180 Days

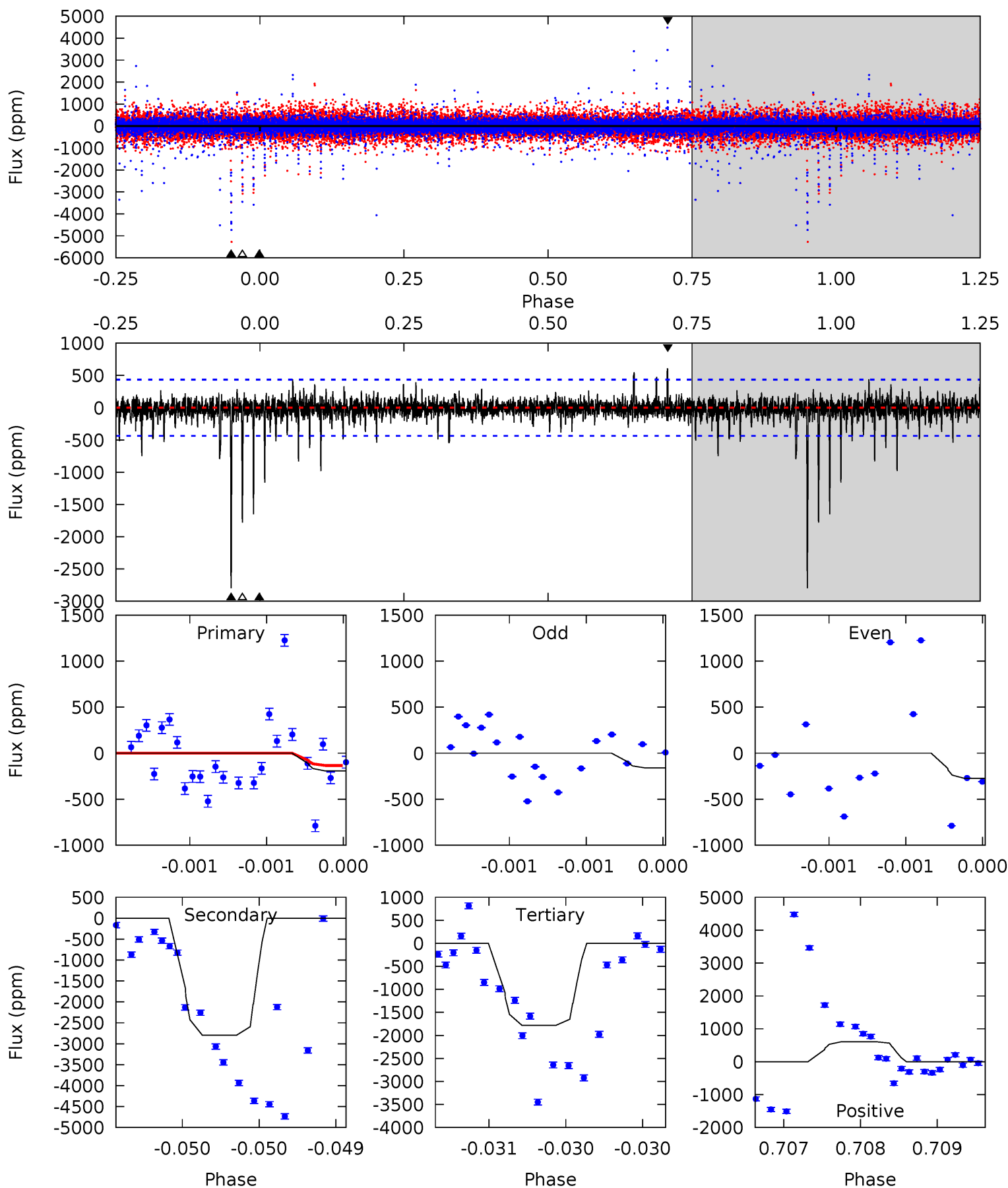
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.66	5.53	5.44	6.50	5.65	3.60	1.37	-2.78	-3.85	0.09	-0.98	1.19	0.94	0.54	0.34



Alt Model-Shift Uniqueness Test

011517719-04, P = 128.597310 Days, E = 11.543395 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.44	35.3	22.5	7.68	5.51	3.38	1.36	-20.0	-5.24	12.8	27.6	0.60	2.02	0.18	0.72



Stellar Parameters For KIC 011517719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6039^{+163}_{-181}	$4.426^{+0.087}_{-0.203}$	$-0.280^{+0.300}_{-0.300}$	$0.992^{+0.296}_{-0.127}$	$0.959^{+0.130}_{-0.117}$	$1.384^{+0.611}_{-0.677}$
	+3%/-3%	+2%/-5%	+107%/-107%	+30%/-13%	+14%/-12%	+44%/-49%
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 011517719-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-465 ± 84	$10.07^{+10.51}_{-6.95}$	535^{+42}_{-28}	3479^{+1817}_{-656}	591^{+5659}_{-436}
Alt.	-2797 ± 79	$9.97^{+10.82}_{-6.84}$	536^{+40}_{-28}	4775^{+3984}_{-1128}	3726^{+35094}_{-2880}

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 $A_{obs} \gg 1.0$

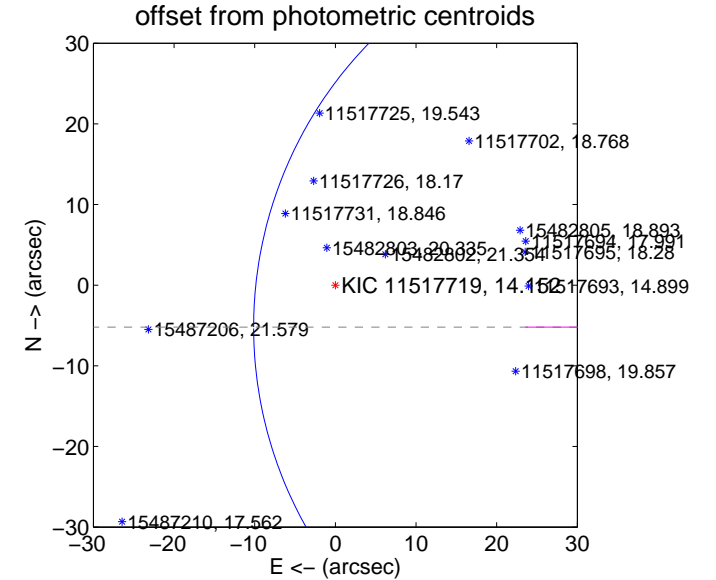
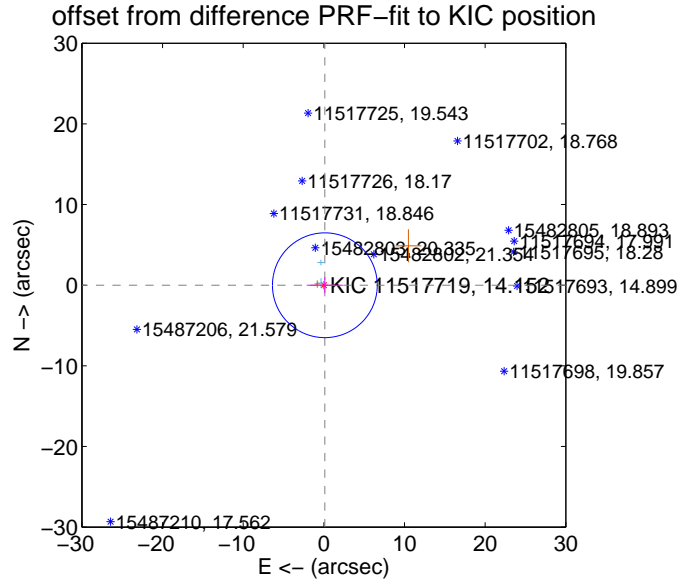
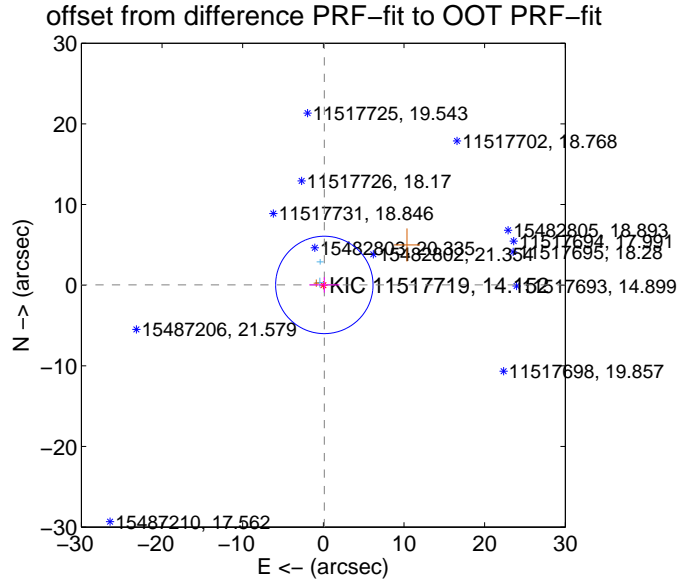
DV Centroid Data

Supplemental centroid analysis for 011517719-04. Kepler magnitude: 14.15. Transit SNR 0.35

There are 2 quarters with good PRF difference image offsets

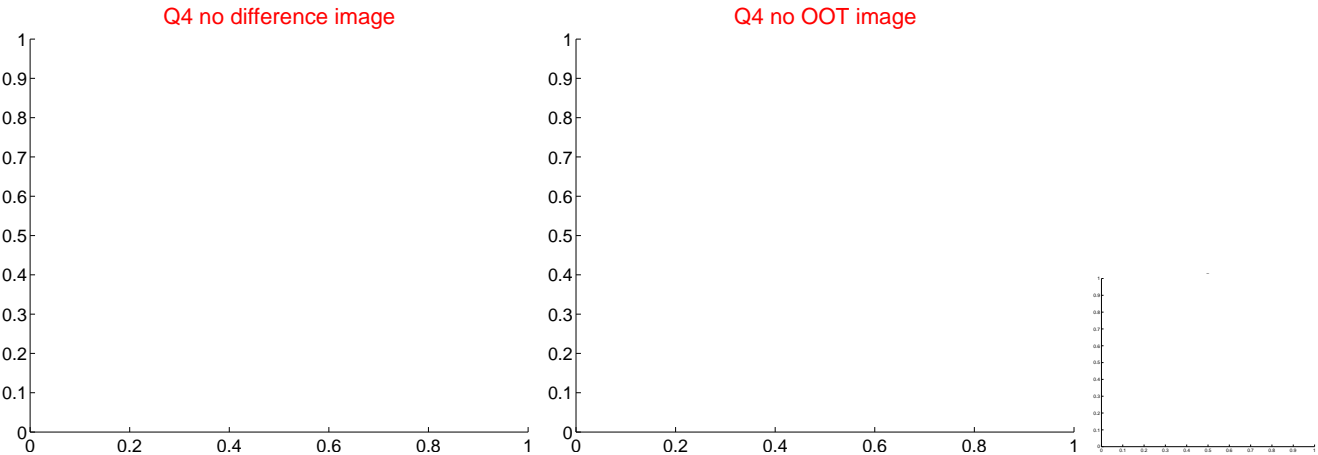
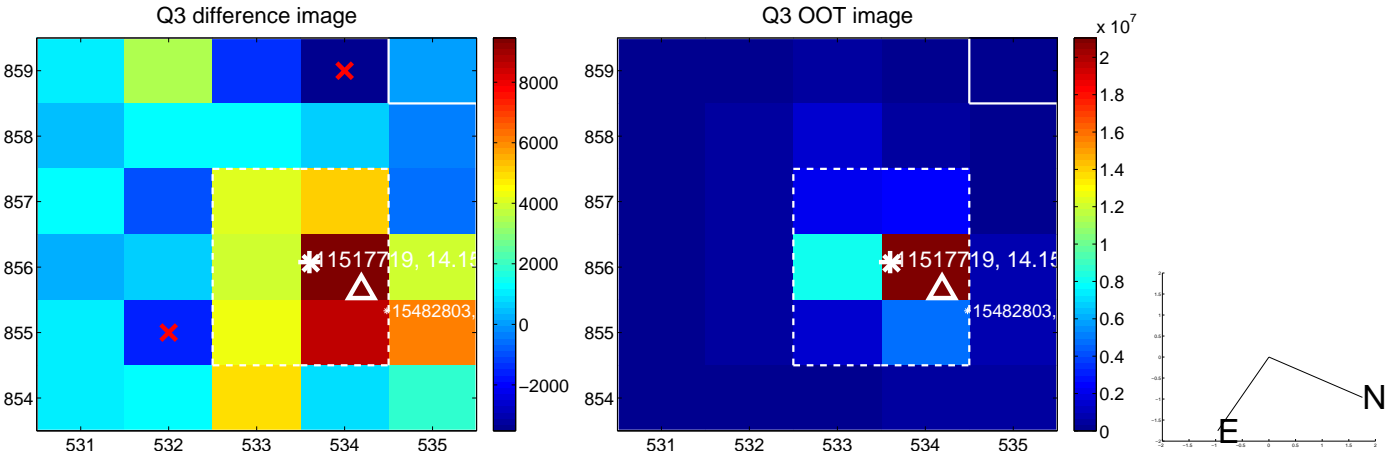
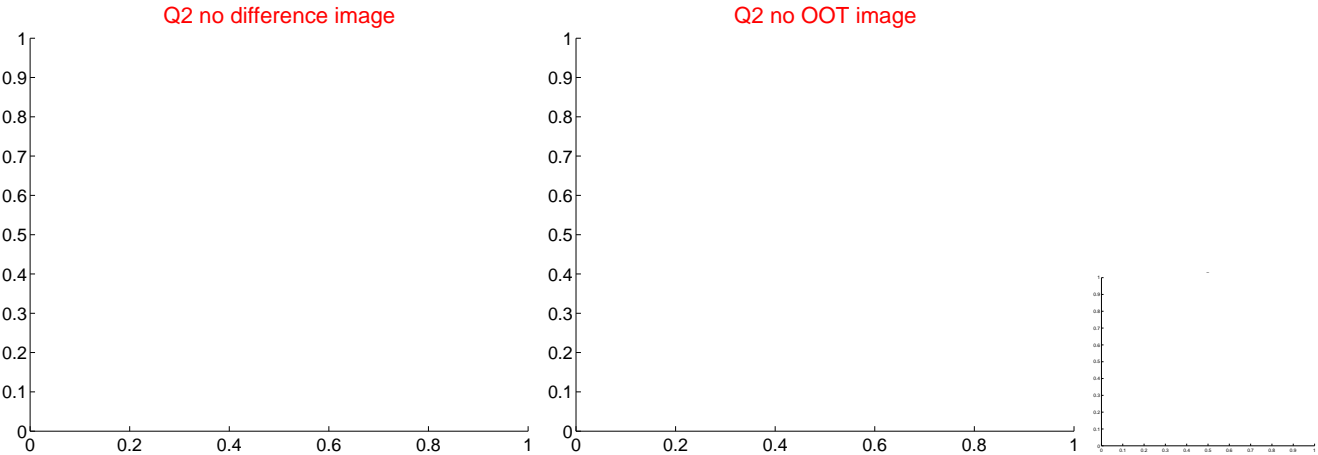
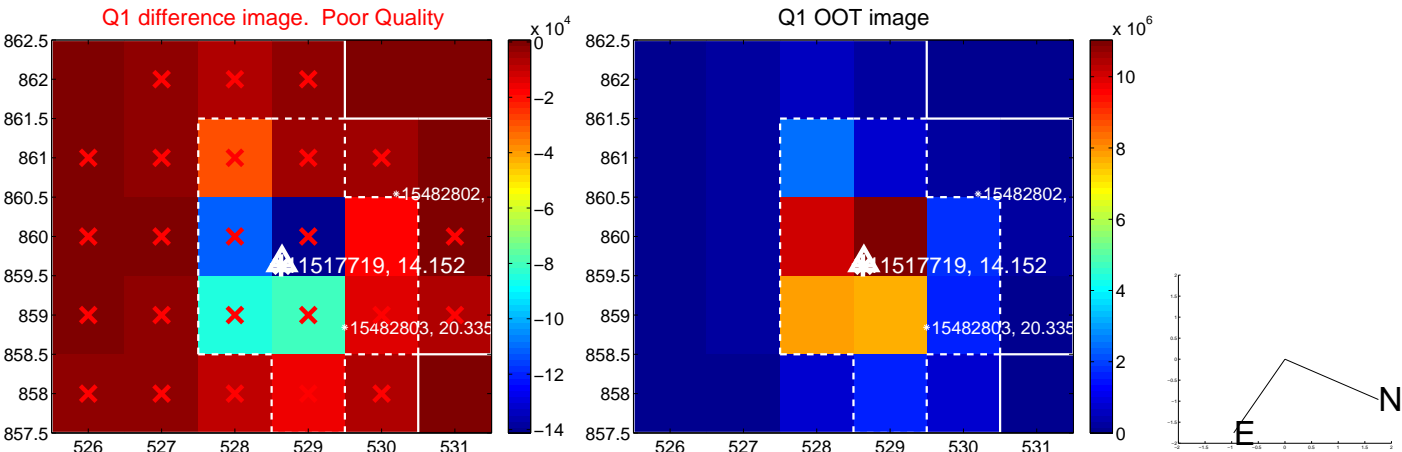
The direct PRF centroid is offset from the target star catalog position by about 0.12 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.127 ± 2.013	0.06	-0.124 ± 1.868	0.030 ± 0.956
PRF-fit source offset from KIC position	0.125 ± 2.165	0.06	-0.124 ± 2.241	-0.010 ± 0.979
photometric centroid source offset	40.73 ± 16.84	2.42	-40.39 ± 16.83	-5.21 ± 17.43

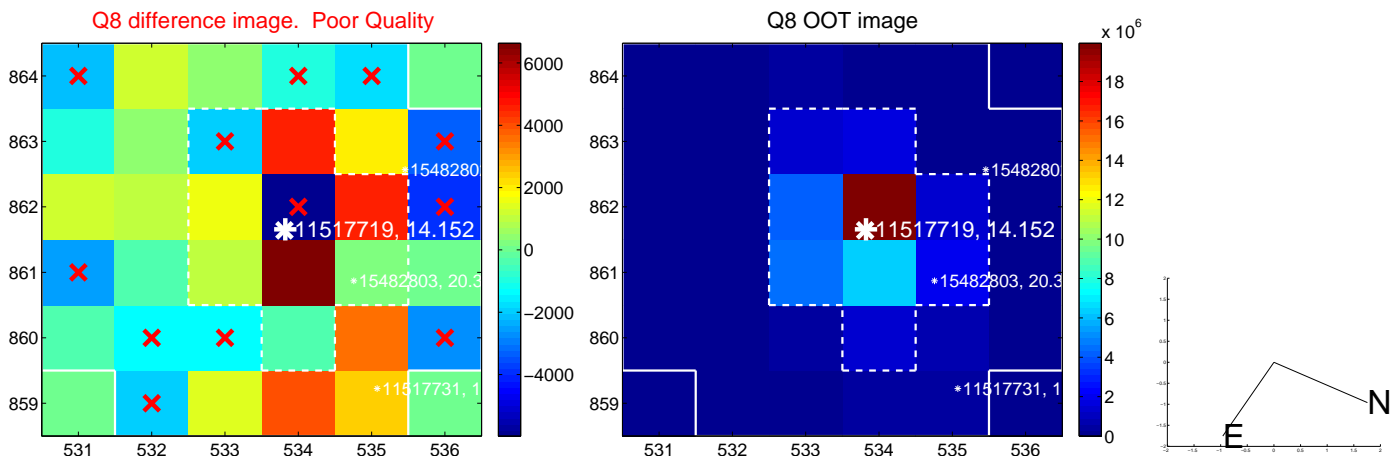
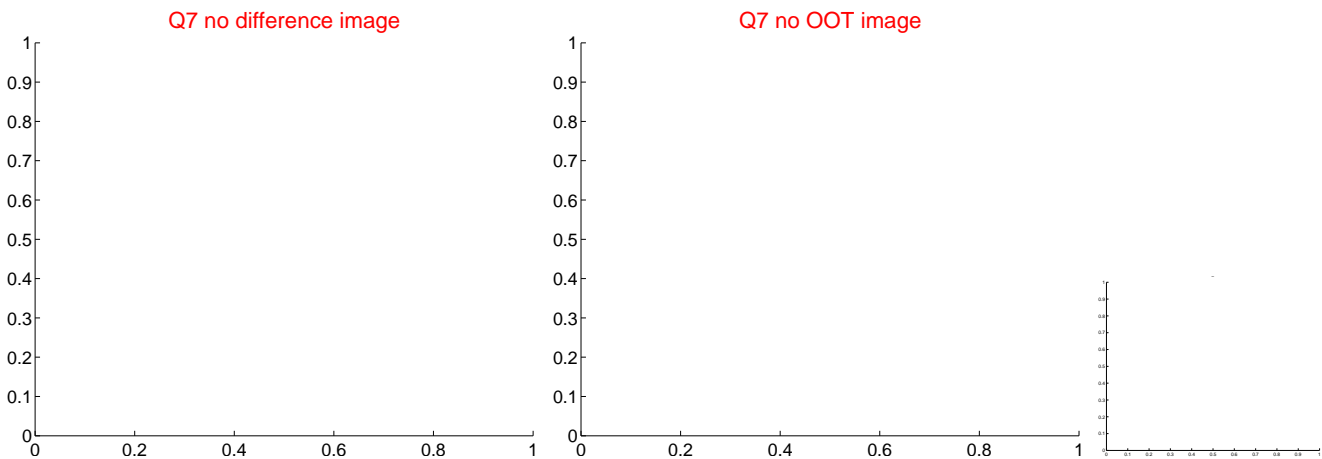
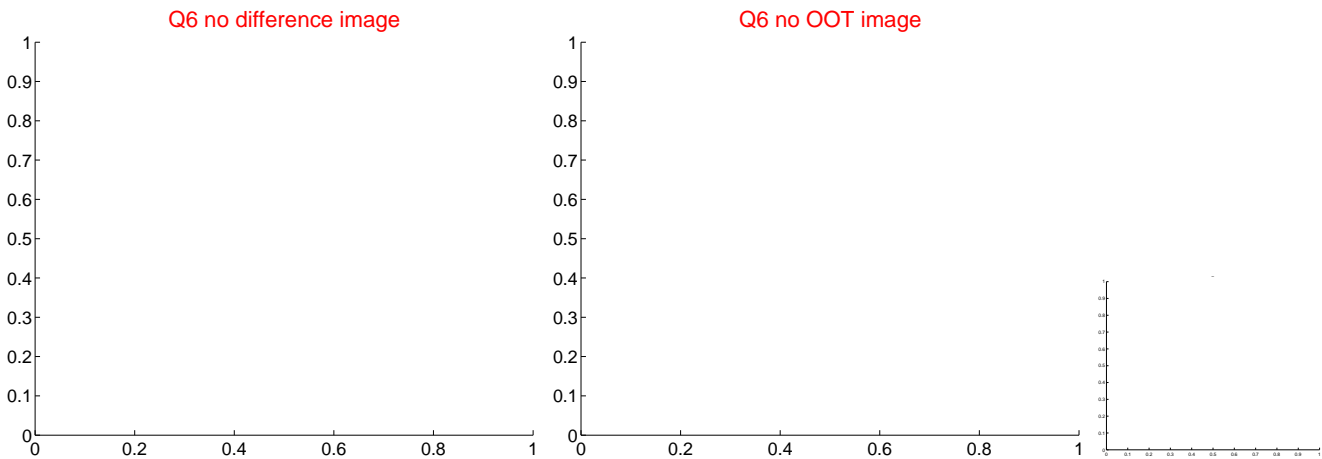
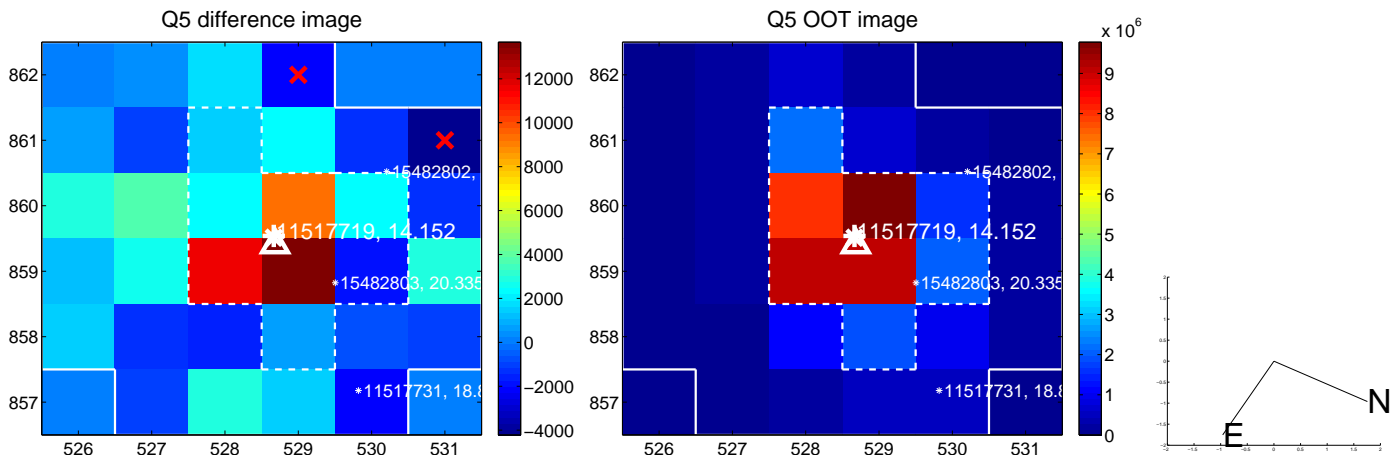


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ . 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 ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



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

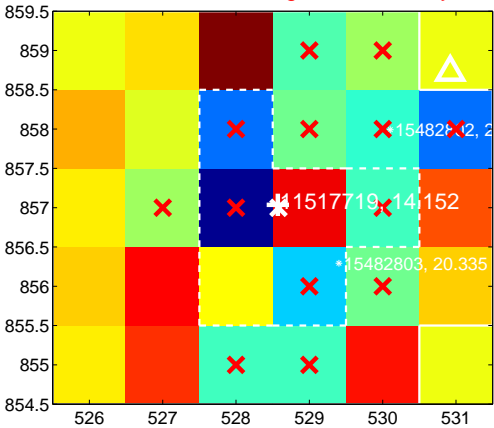
Q9 no difference image



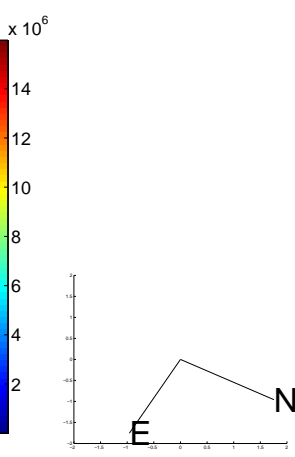
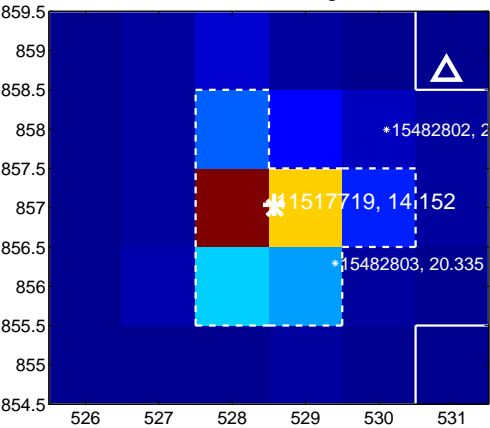
Q9 no OOT image



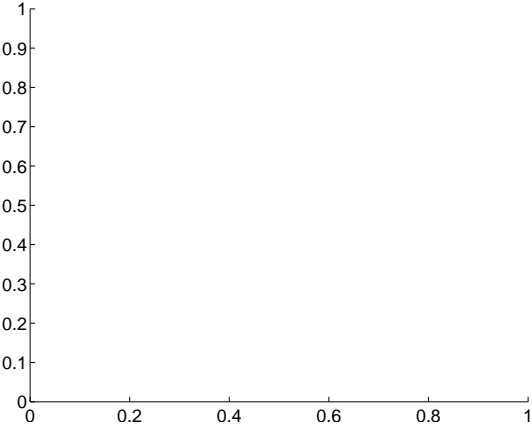
Q10 difference image. Poor Quality



Q10 OOT image



Q11 no difference image



Q11 no OOT image



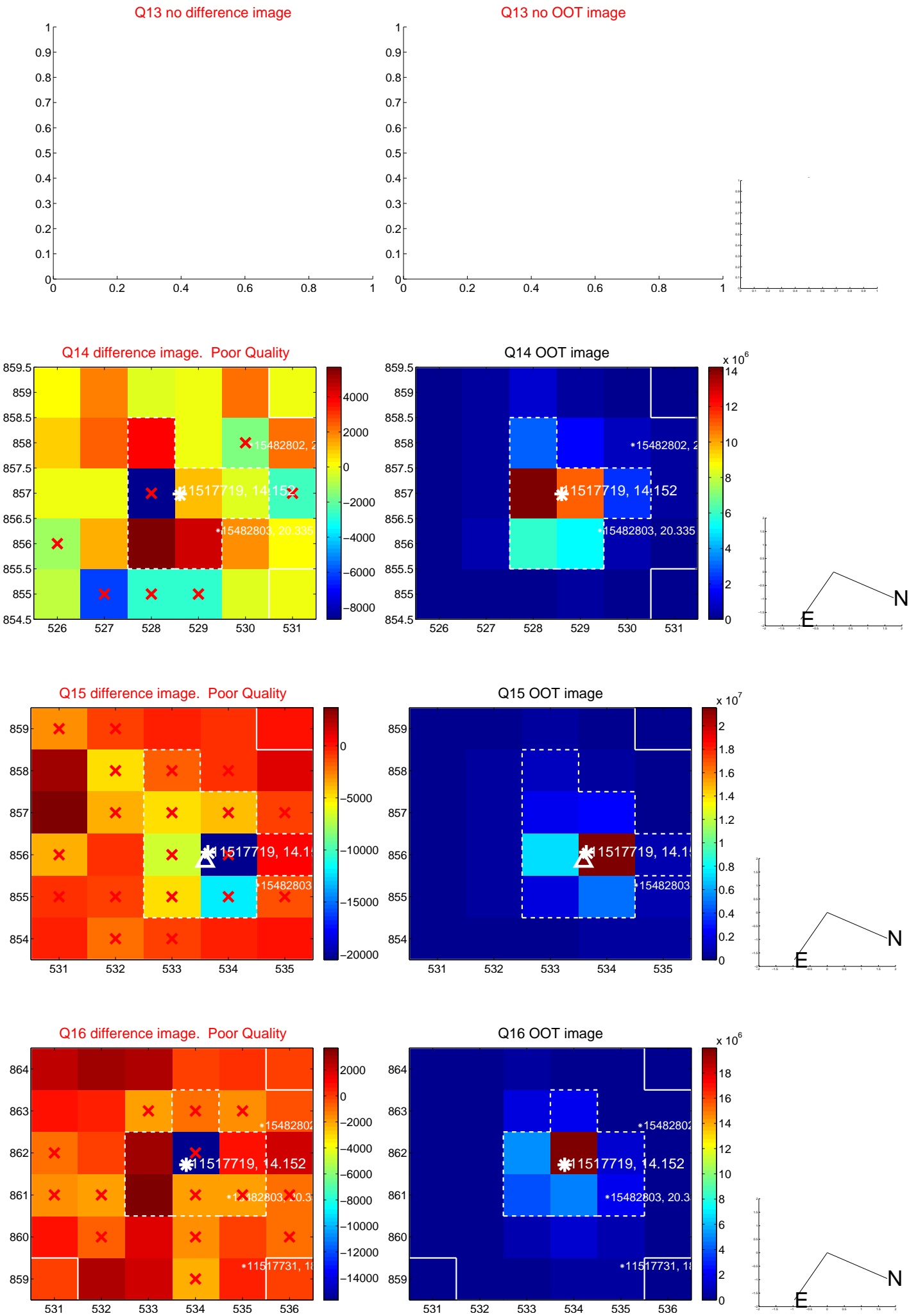
Q12 no difference image



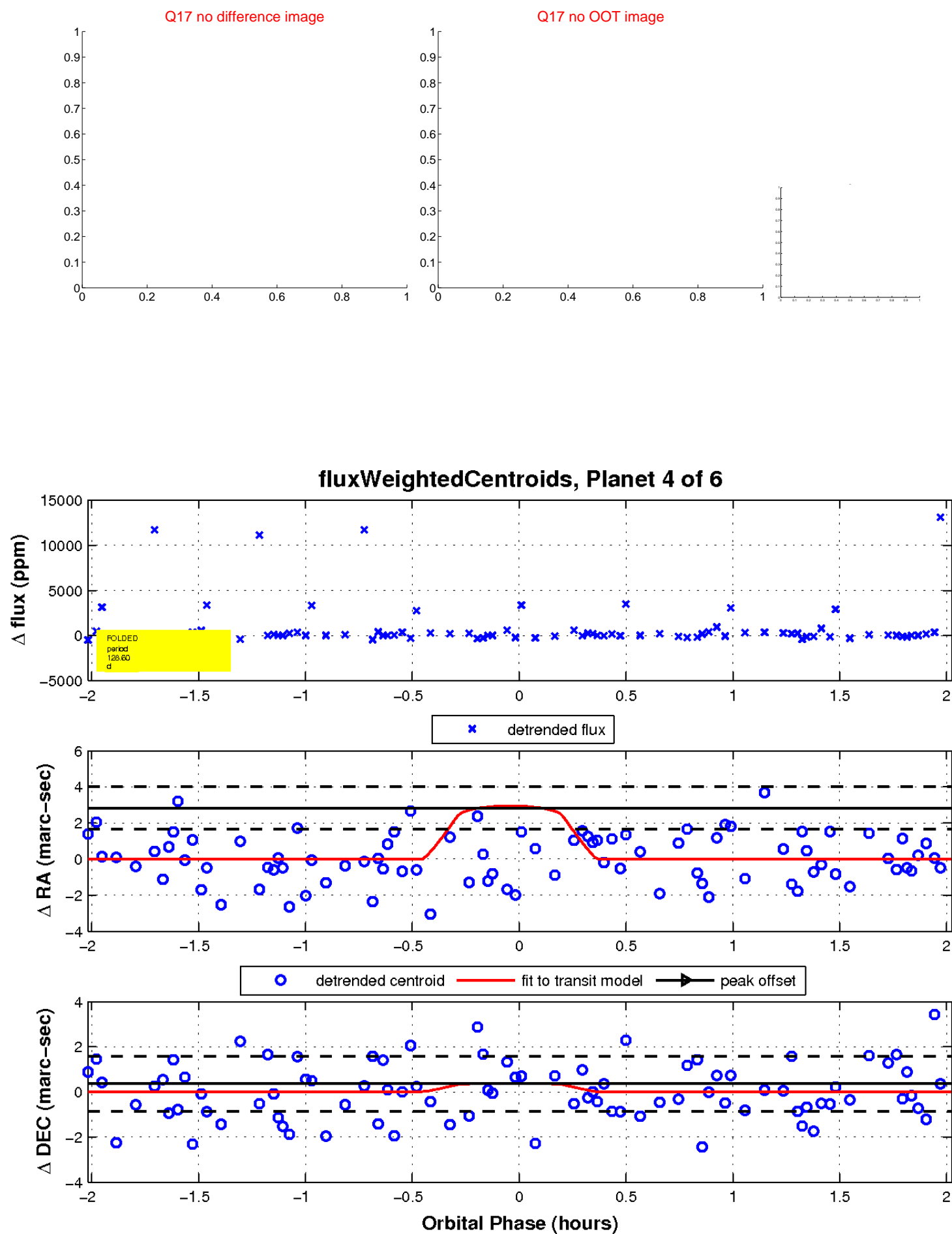
Q12 no OOT image



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

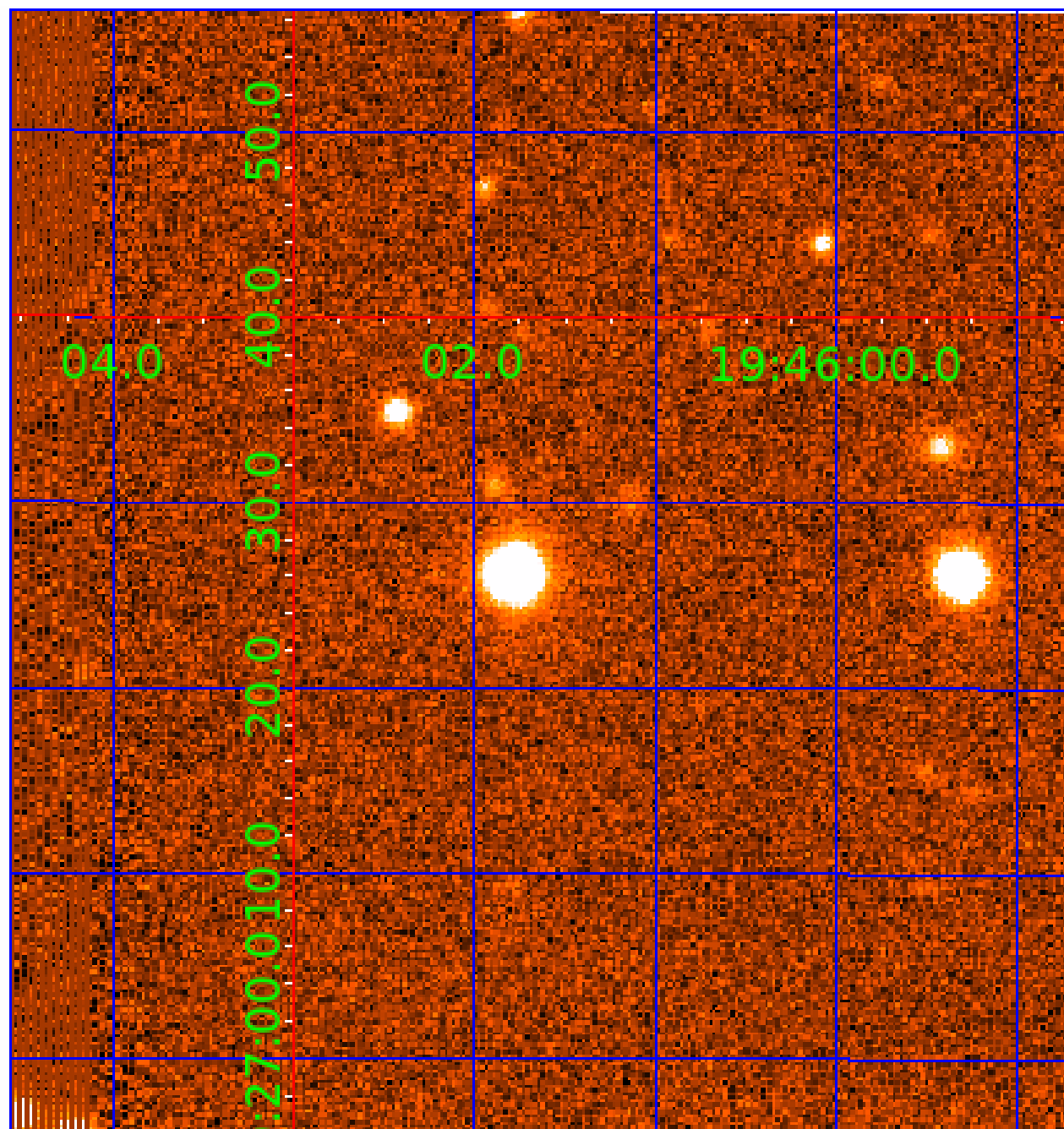


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011517719

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})
011517719-01	OBS	1416.01	2.495773	132.842673	24236.5	4.211	1486.8	1491.7	0.99	6039	15.46	930.73
011517719-02	OBS	No	2.495782	131.591539	338.5	4.207	26.2	26.7	0.99	6039	2.15	930.72
011517719-03	OBS	No	57.415534	140.308971	138.9	1.882	8.6	0.9	0.99	6039	1.17	14.22
011517719-04	OBS	No	128.596542	140.173722	69.9	0.678	8.5	0.4	0.99	6039	1.00	4.85
011517719-05	OBS	No	142.287269	140.137565	2742.4	21.932	8.7	6.5	0.99	6039	6.39	4.24
011517719-06	OBS	No	228.796075	197.375531	680.4	5.274	7.9	4.0	0.99	6039	2.83	2.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011517719-01	OBS	PC	0.92	0	1	0	0	MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE
011517719-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011517719-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011517719-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011517719-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011517719-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

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

Ephemeris Match Information For 011517719-05

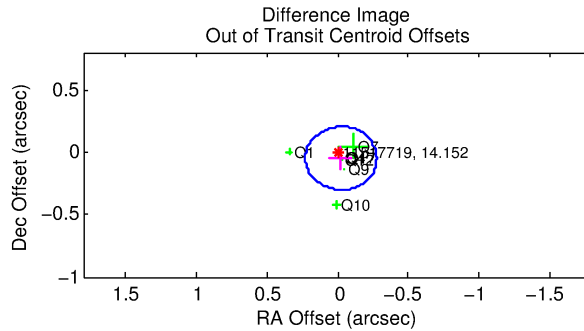
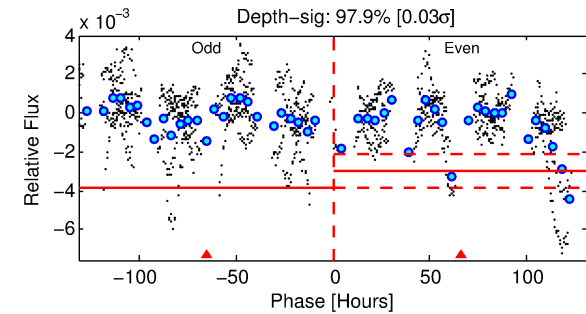
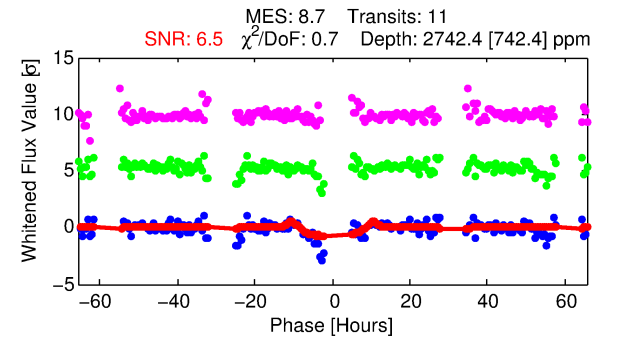
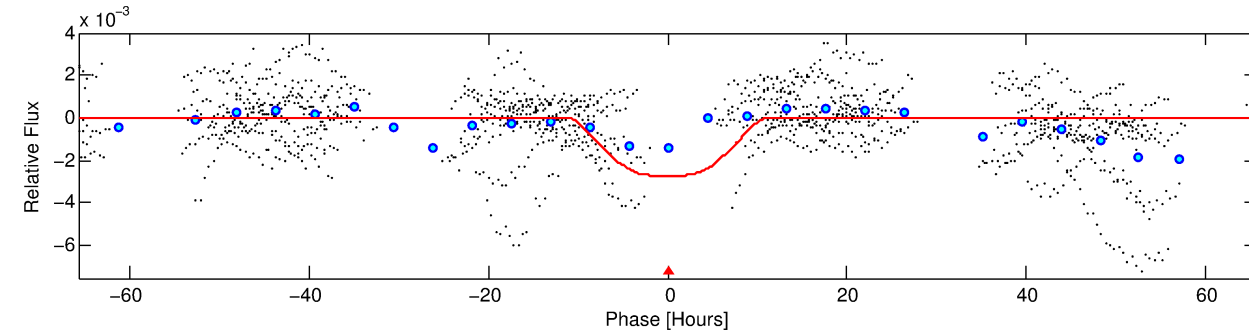
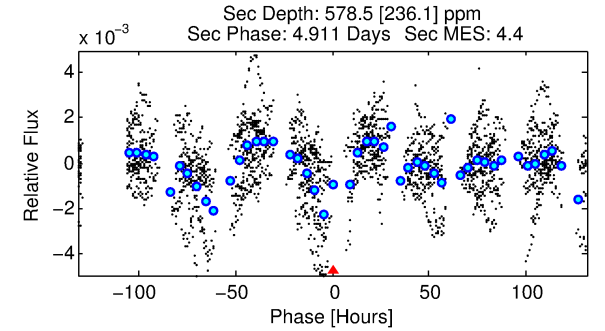
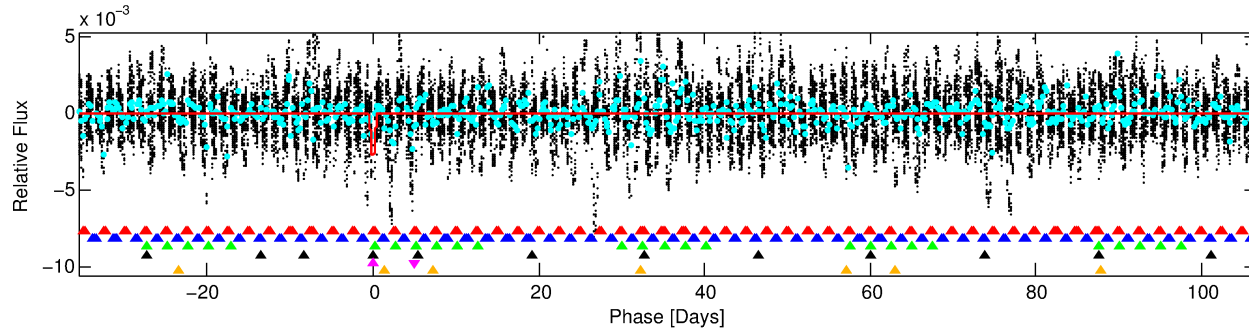
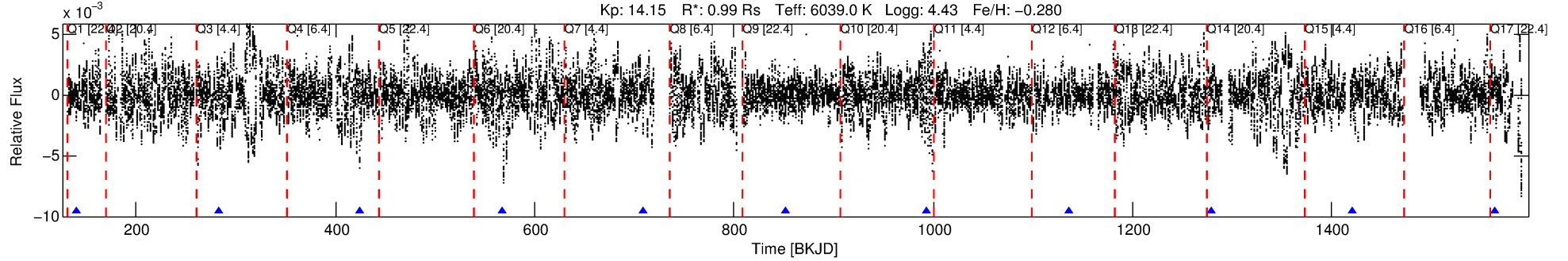
No Significant Match Found

DV One-Page Summary

KIC: 11517719 Candidate: 5 of 6 Period: 142.287 d

KOI: K01416 Corr: No Ephemeris Match

Kp: 14.15 R*: 0.99 Rs Teff: 6039.0 K Logg: 4.43 Fe/H: -0.280



DV Fit Results:

Period = 142.28727 [0.00302] d
Epoch = 140.1376 [0.0185] BKJD
Rp/R* = 0.0590 [0.0093]
a/R* = 24.72 [1.22]
b = 0.93 [0.02]
Seff = 4.24 [1.65]
Teq = 366 [36] K
Rp = 6.39 [2.16] Re
a = 0.5258 [0.1329] AU
Ag = 2154.37 [1367.08] [1.58σ]
Teffp = 3855 [510] K [6.82σ]

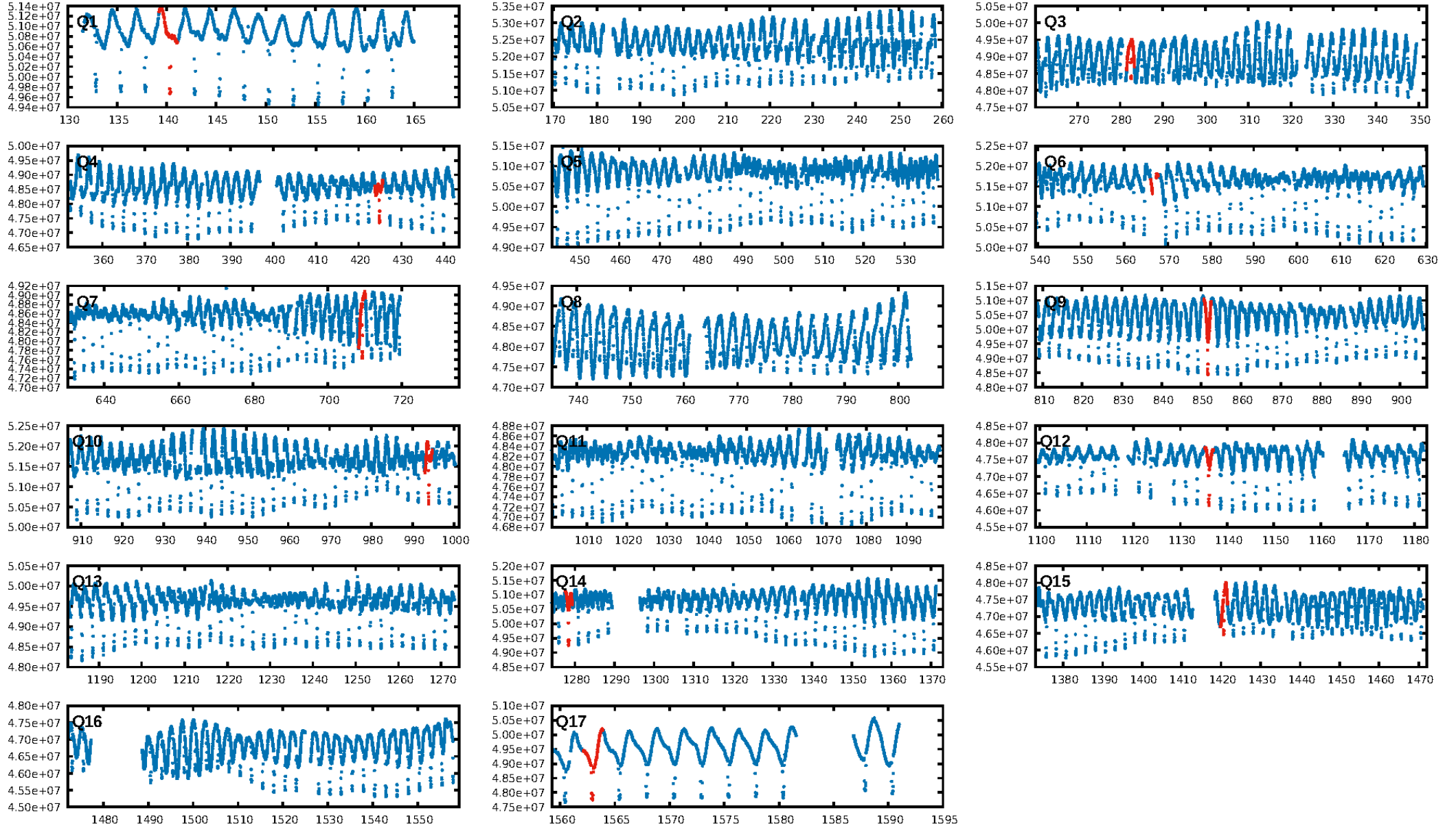
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [14.97σ]
LongPeriod-sig: 100.0% [92.04σ]
ModelChiSquare2-sig: 4.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [9/9]
GhostDiagnostic-chr: 0.188
Centroid-sig: 90.9%
Centroid-so: 0.118 arcsec [0.88σ]
OotOffset-rm: 0.055 arcsec [0.65σ]
KicOffset-rm: 0.135 arcsec [1.32σ]
OotOffset-st: 1/1/2/3 [7]
KicOffset-st: 1/1/2/3 [7]
DiffImageQuality-fgm: 0.86 [6/7]
DiffImageOverlap-fno: 0.00 [0/7]

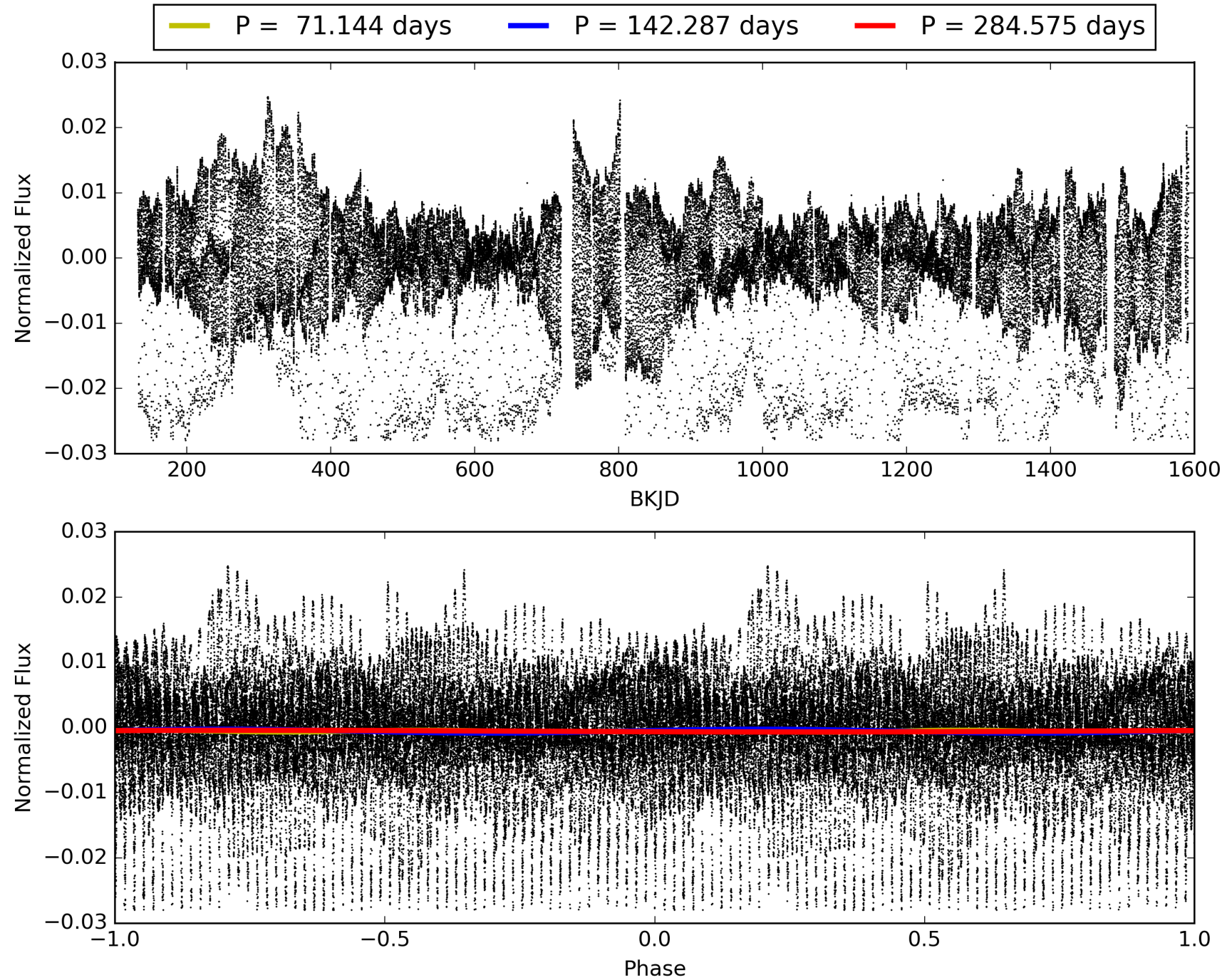
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:46:59 Z

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

TCE 011517719-05, PDC Light Curves

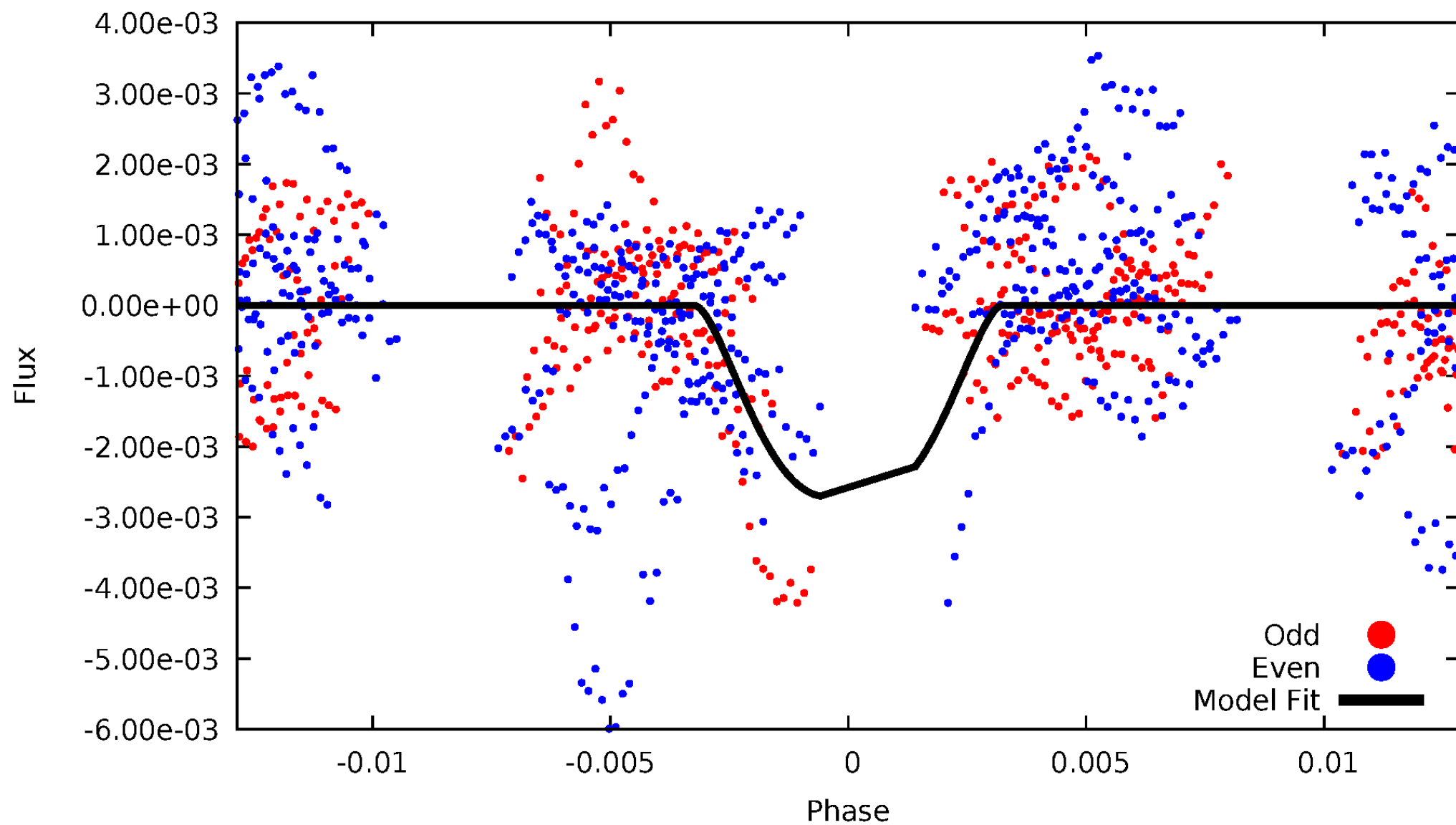


TCE 011517719-05



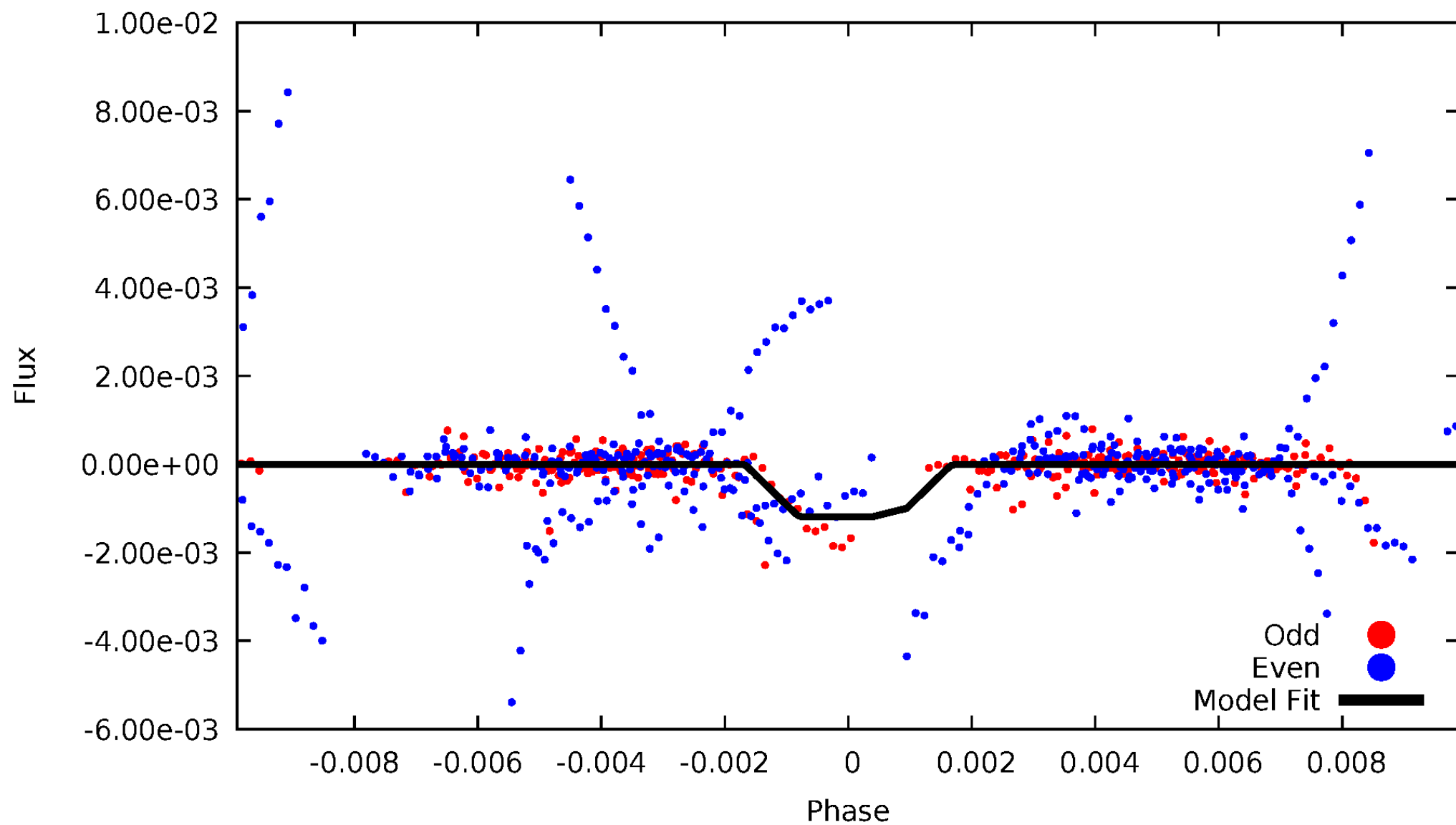
DV Odd/Even

TCE 011517719-05



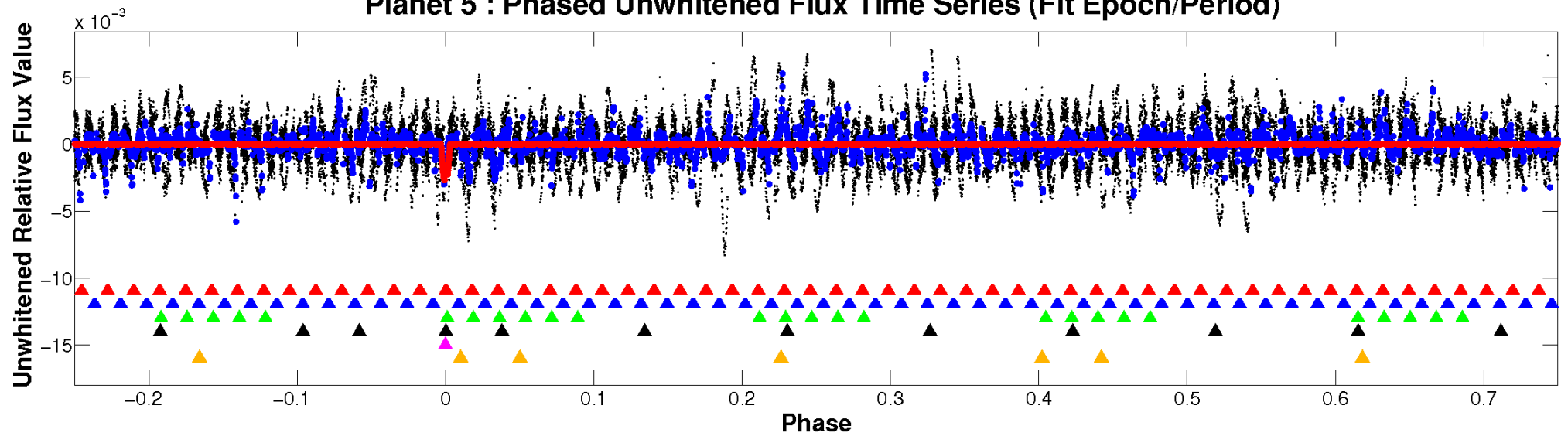
ALT Odd/Even

TCE 011517719-05

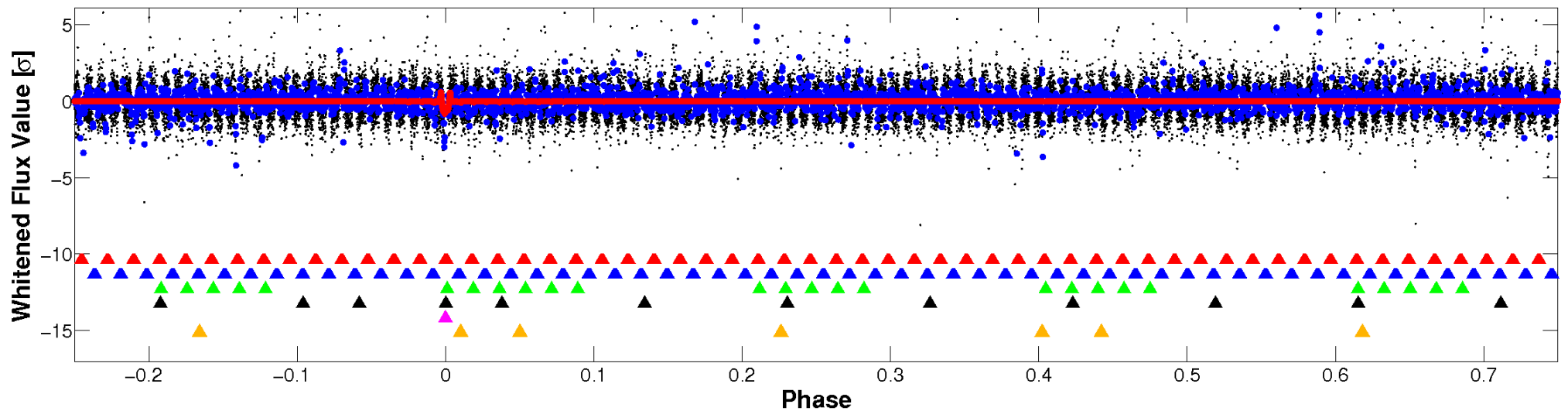


Non-Whitened Vs. Whitened Light Curve

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

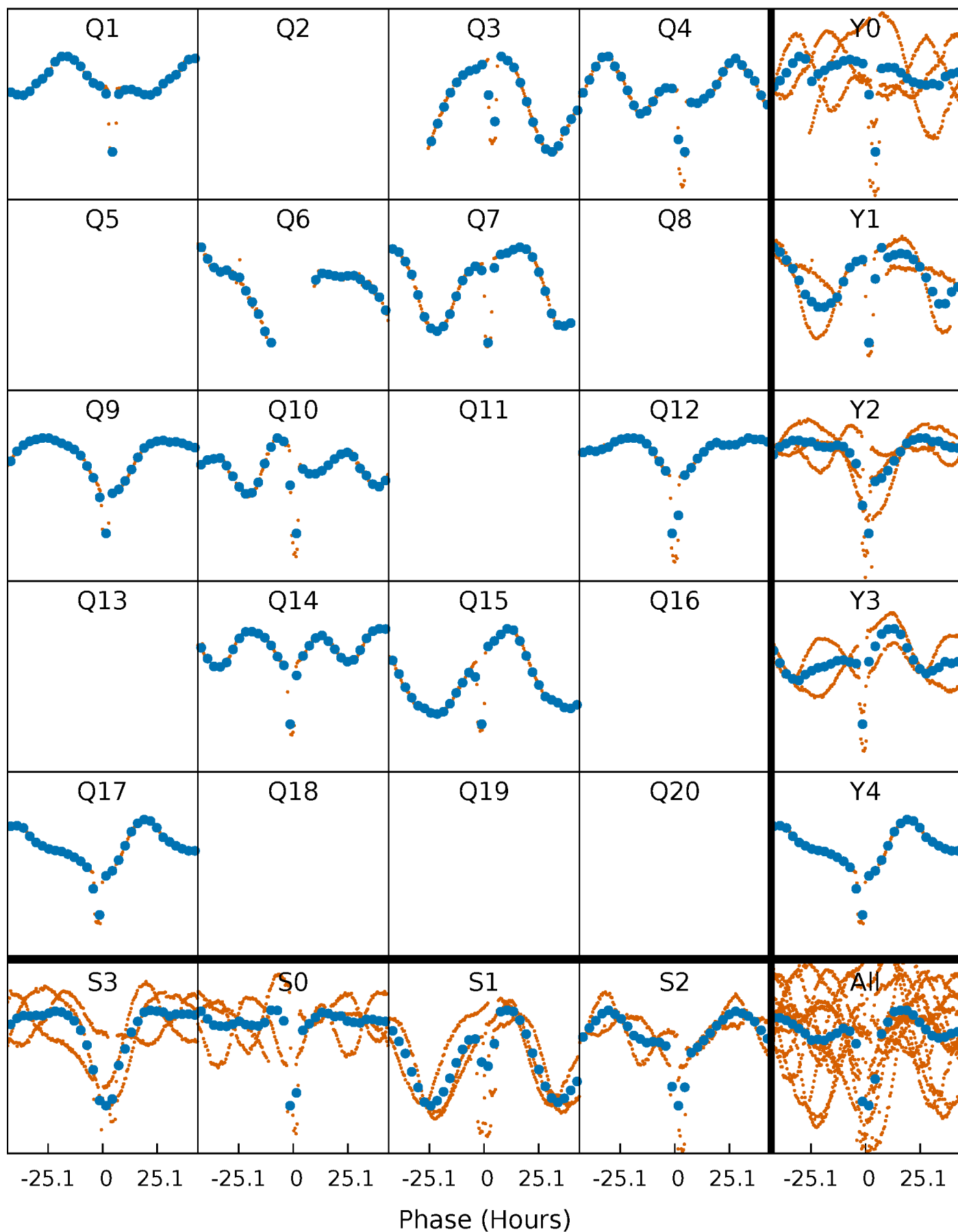


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



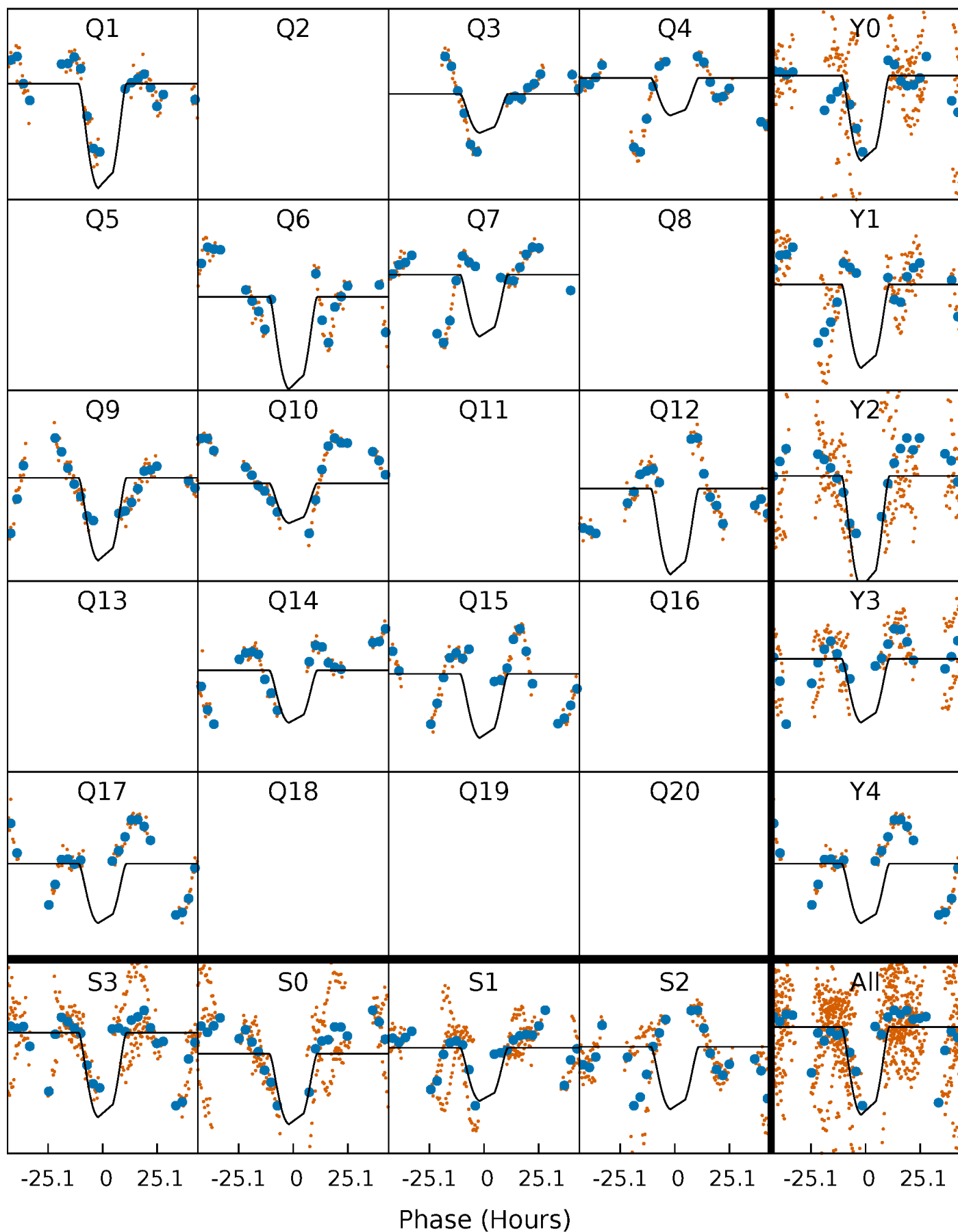
PDC Quarter-Phased Transit Curves

TCE 011517719-05 $P=142.287269$ Days $T_0=140.137565$ (BKJD)



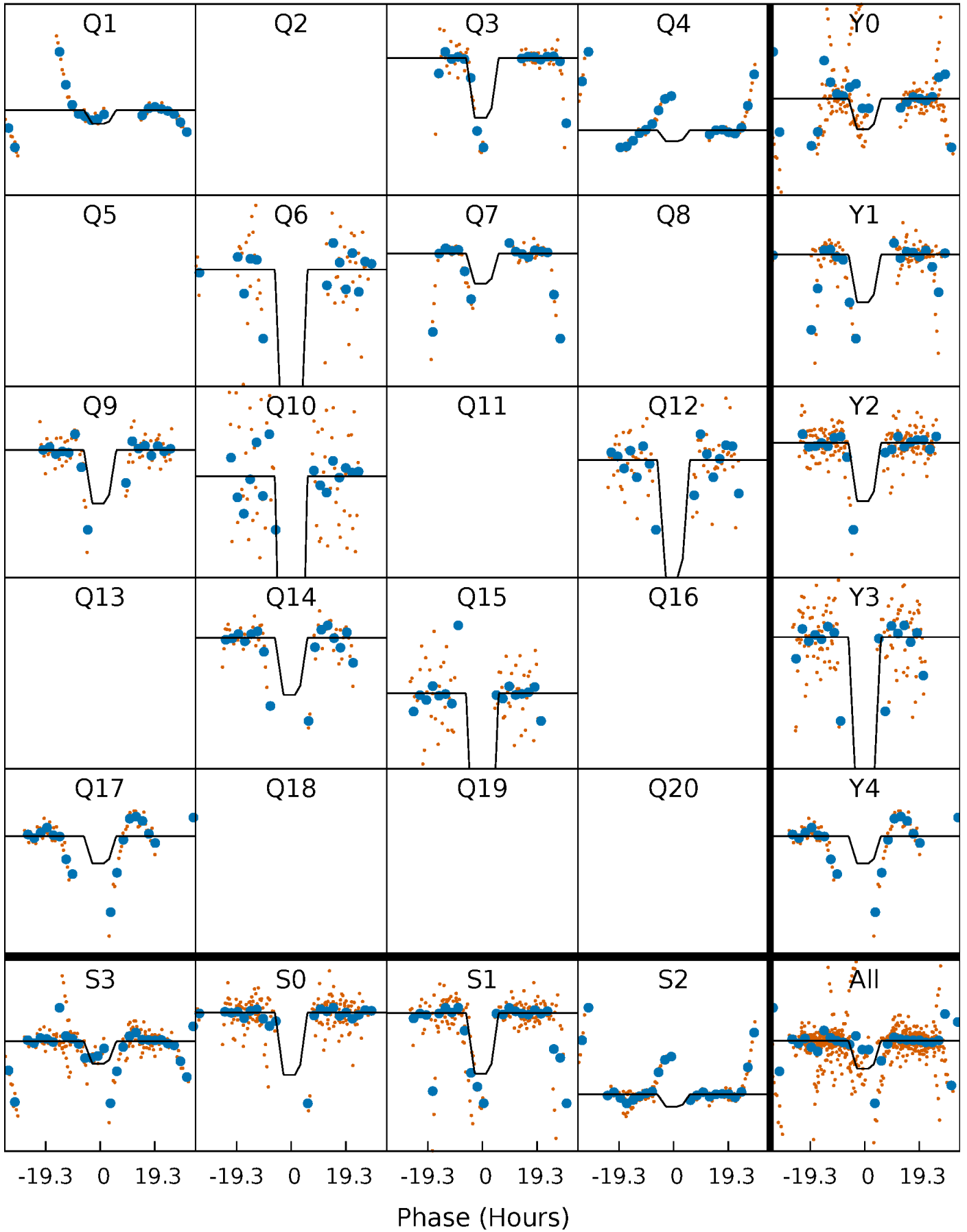
DV Quarter-Phased Transit Curves

TCE 011517719-05 $P=142.287269$ Days $T_0=140.137565$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

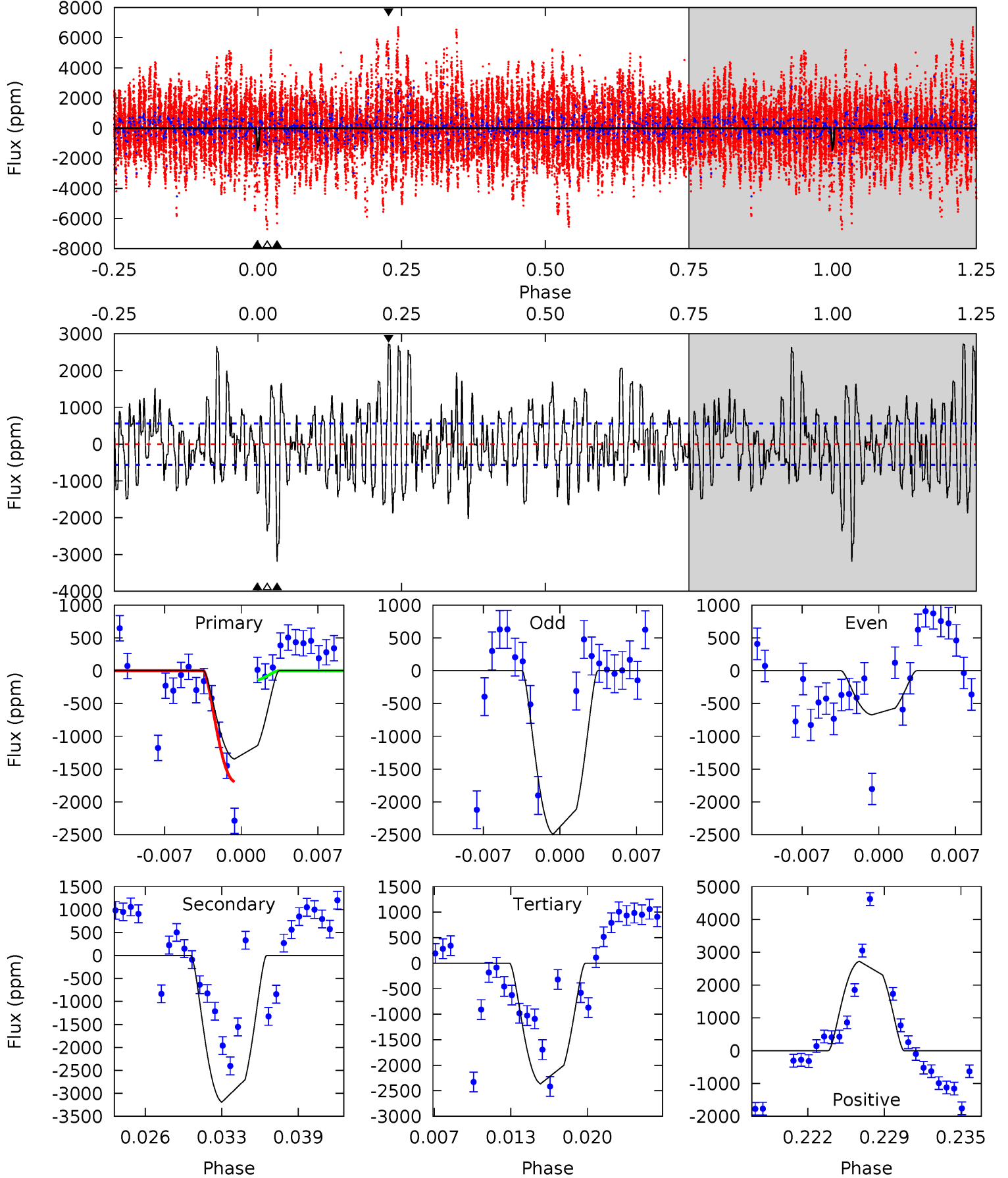
TCE 011517719-05 $P=142.307631$ Days $T_0=139.999415$ (BKJD)



DV Model-Shift Uniqueness Test

011517719-05, P = 142.287269 Days, E = 140.137565 Days

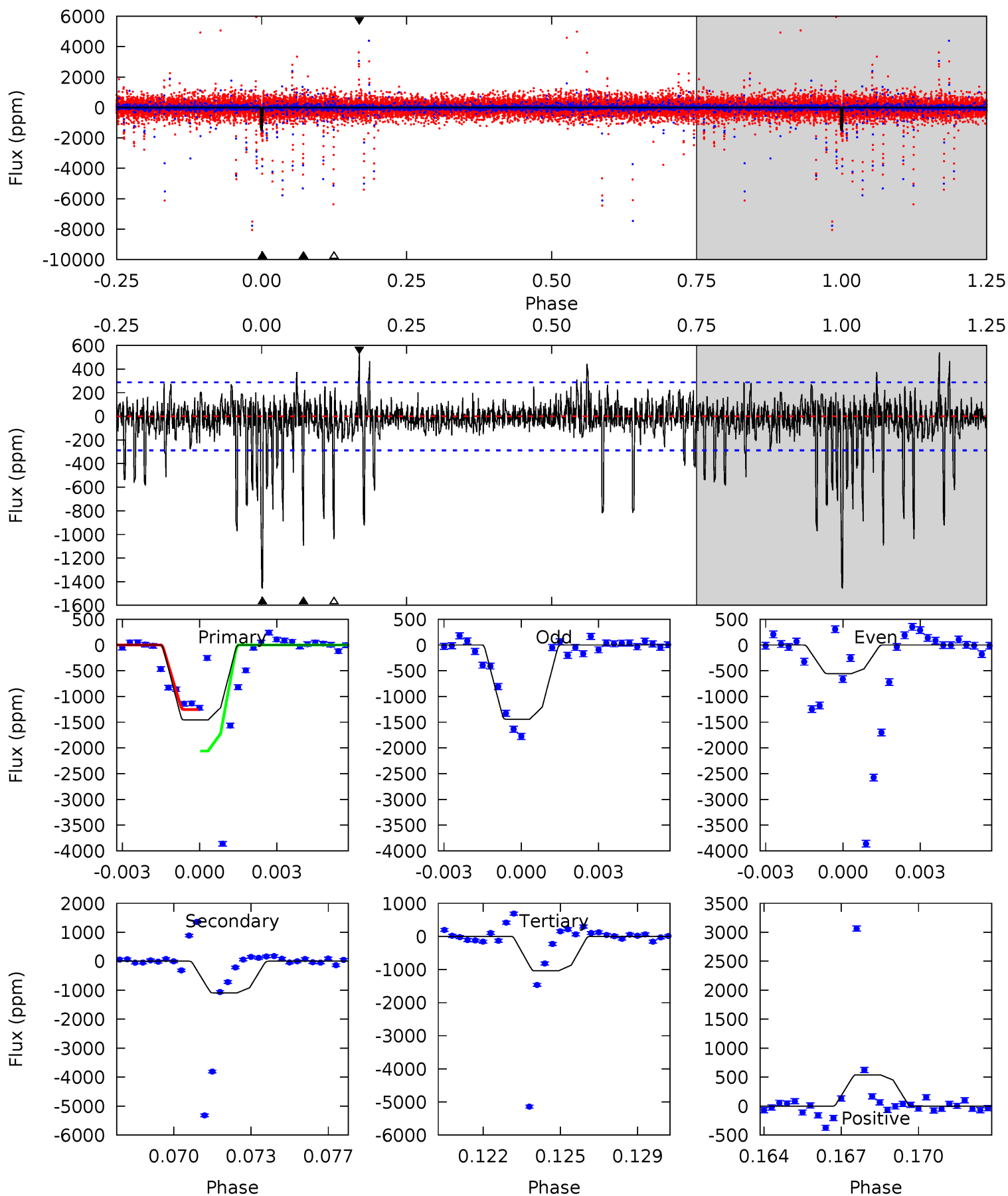
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.2	29.0	21.4	24.7	5.11	2.72	6.99	-9.22	-12.5	7.52	4.22	8.10	2.05	0.46	6.82



Alt Model-Shift Uniqueness Test

011517719-05, P = 142.307631 Days, E = 139.999415 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	19.8	18.8	9.79	5.23	2.92	1.92	7.60	16.7	0.98	10.0	6.98	1.35	0.27	6.90



Stellar Parameters For KIC 011517719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6039^{+163}_{-181}	$4.426^{+0.087}_{-0.203}$	$-0.280^{+0.300}_{-0.300}$	$0.992^{+0.296}_{-0.127}$	$0.959^{+0.130}_{-0.117}$	$1.384^{+0.611}_{-0.677}$
	+3%/-3%	+2%/-5%	+107%/-107%	+30%/-13%	+14%/-12%	+44%/-49%
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 011517719-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3193 ± 110	$6.66^{+1.45}_{-1.24}$	520^{+39}_{-29}	5882^{+557}_{-400}	10934^{+5265}_{-3421}
Alt.	-1094 ± 55	$3.92^{+1.26}_{-1.08}$	518^{+36}_{-28}	5827^{+1063}_{-566}	10742^{+9183}_{-4593}

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

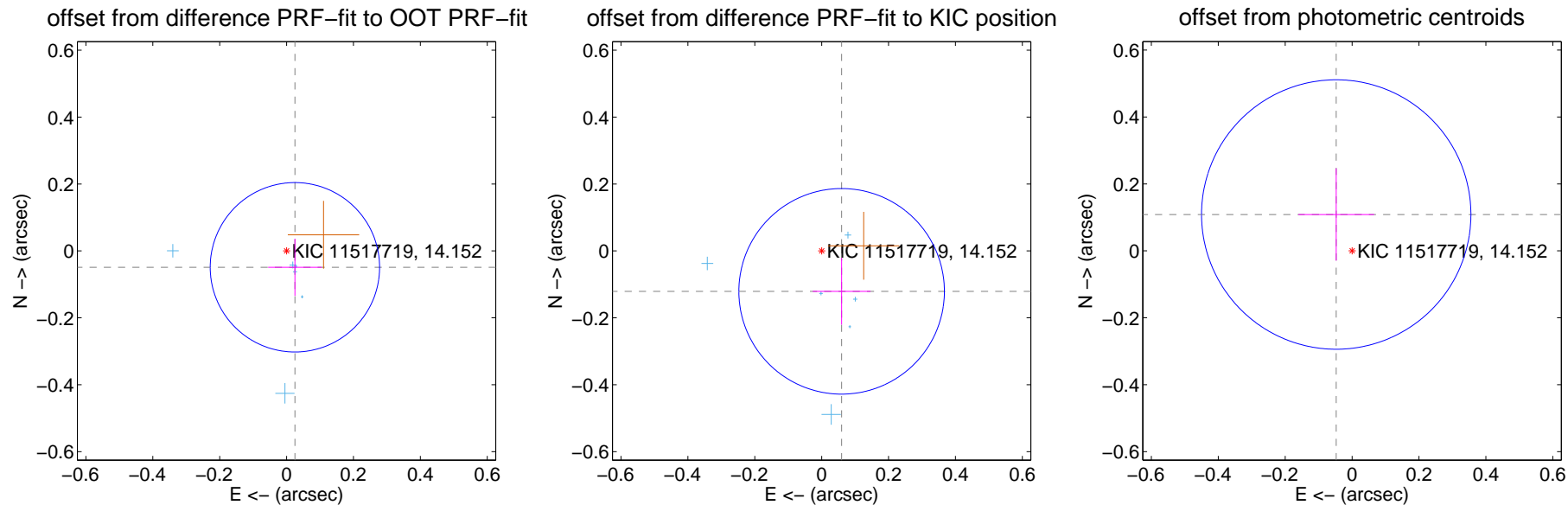
DV Centroid Data

Supplemental centroid analysis for 011517719-05. Kepler magnitude: 14.15. Transit SNR 6.53

There are 6 quarters with good PRF difference image offsets

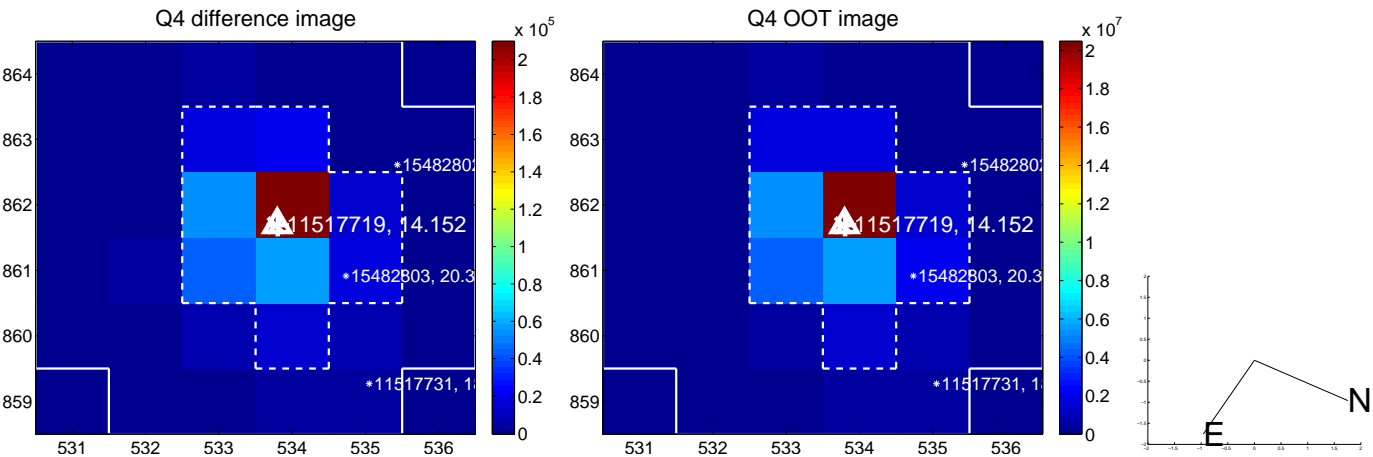
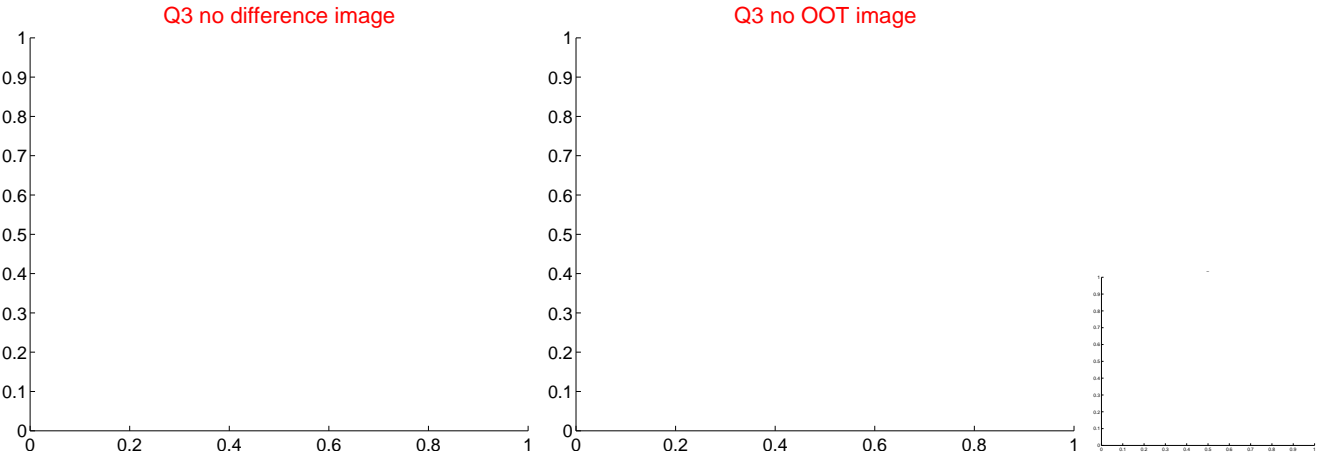
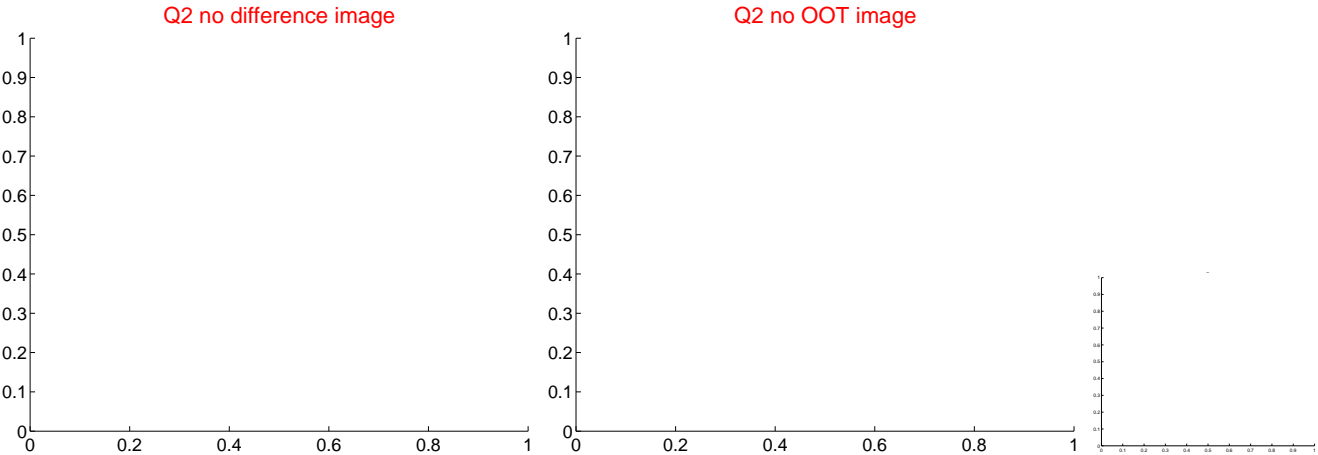
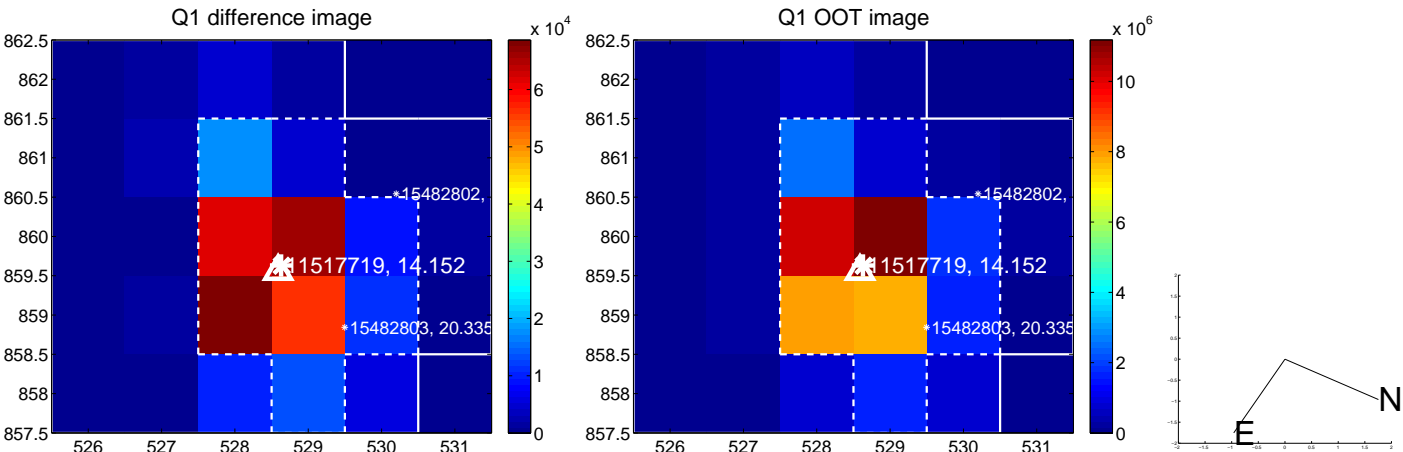
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.055 ± 0.084	0.65	-0.025 ± 0.080	-0.049 ± 0.085
PRF-fit source offset from KIC position	0.135 ± 0.102	1.32	-0.060 ± 0.086	-0.121 ± 0.100
photometric centroid source offset	0.12 ± 0.13	0.88	0.05 ± 0.11	0.11 ± 0.14

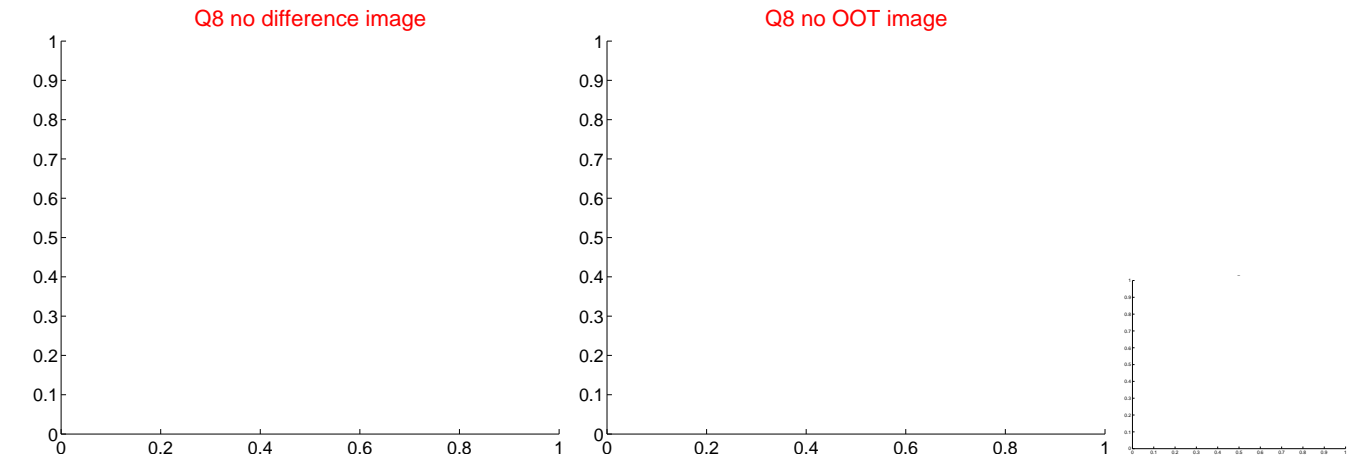
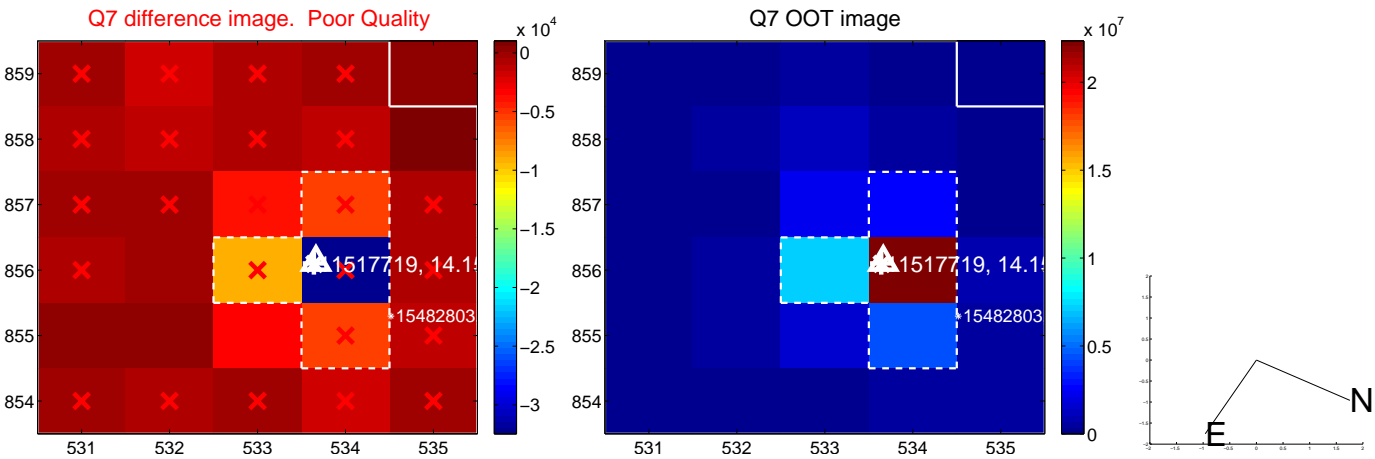
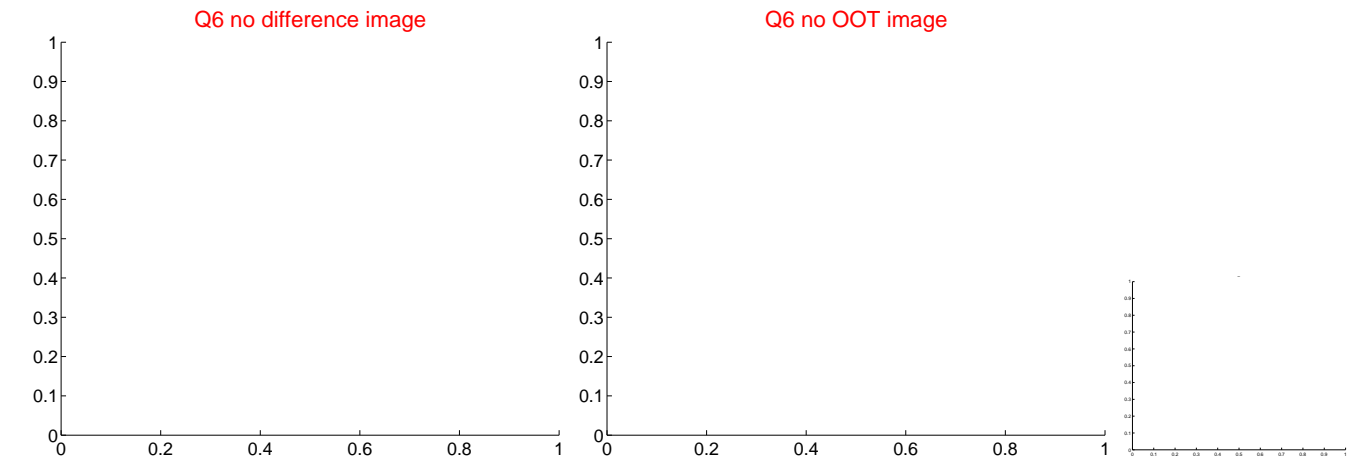
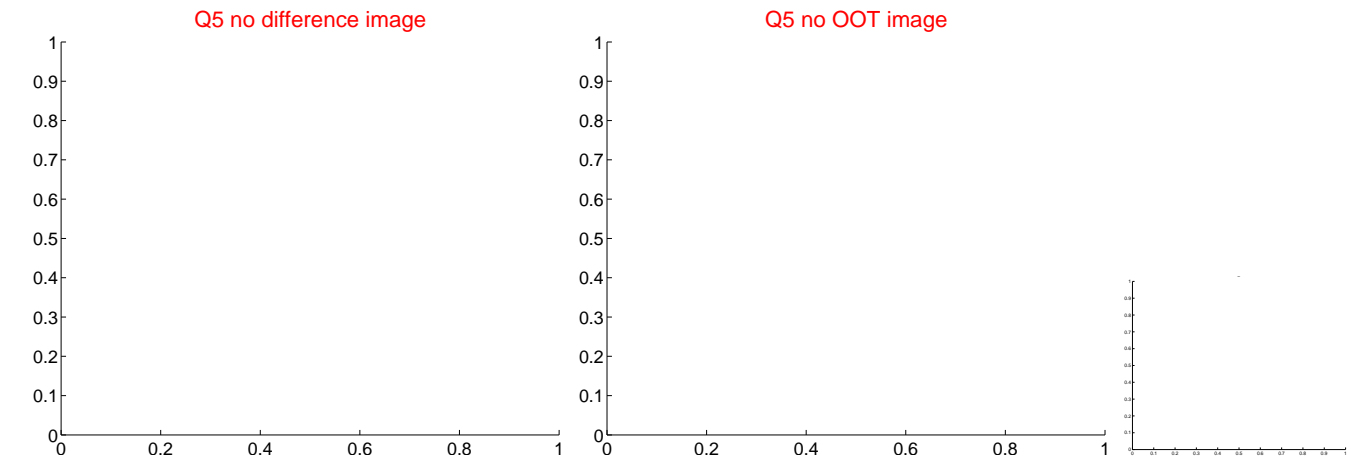


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

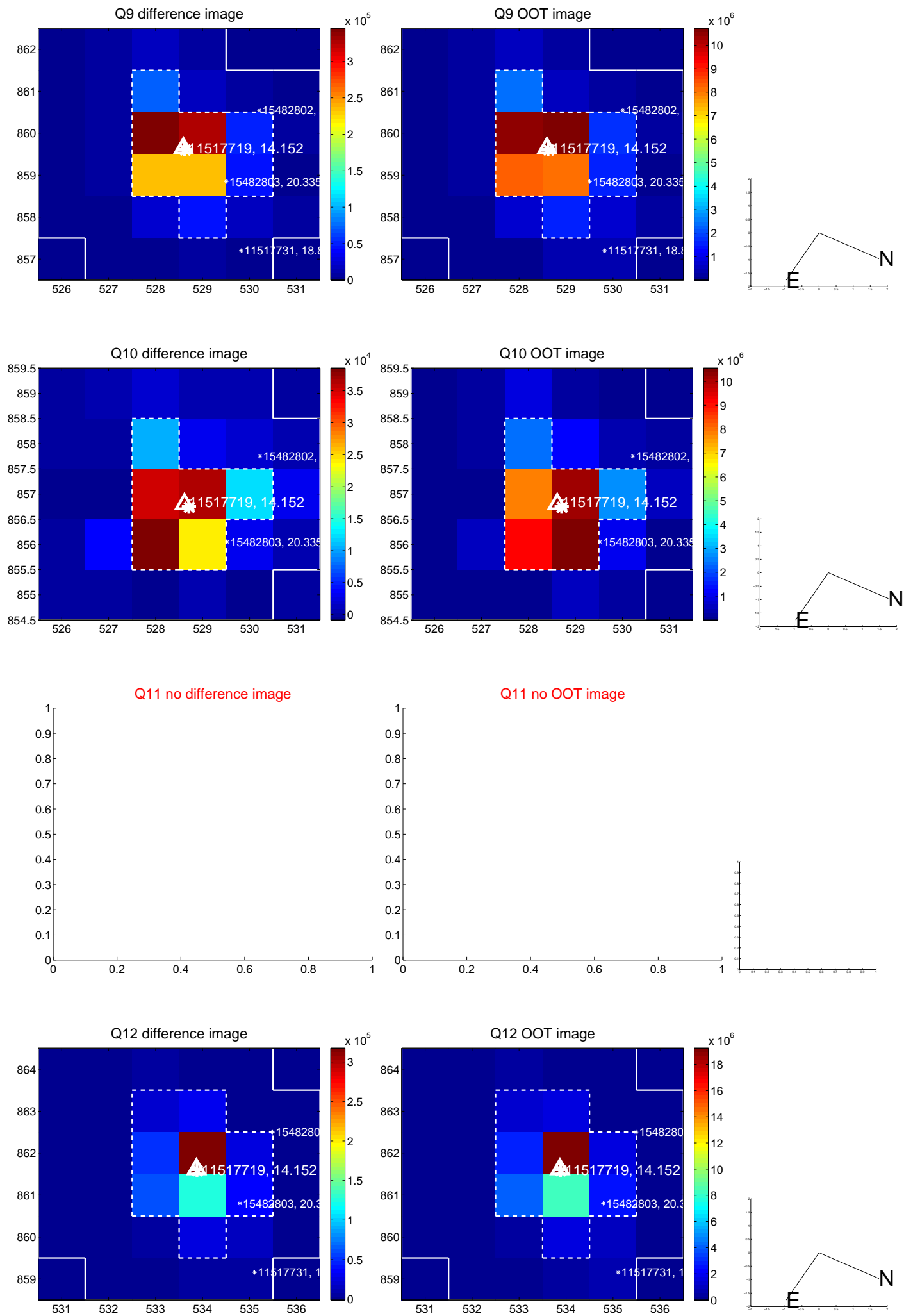
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ×: large negative pixel value.



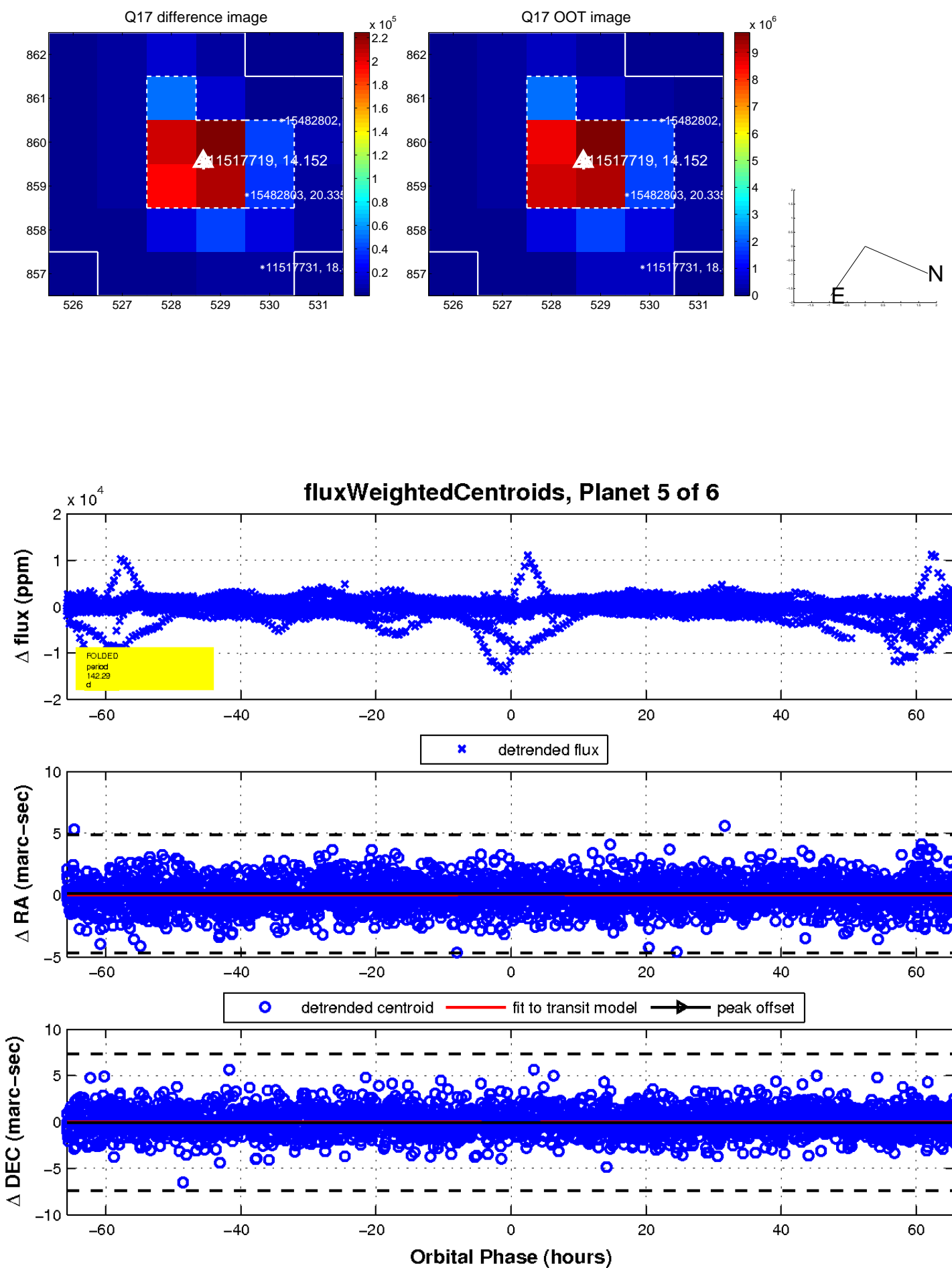
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

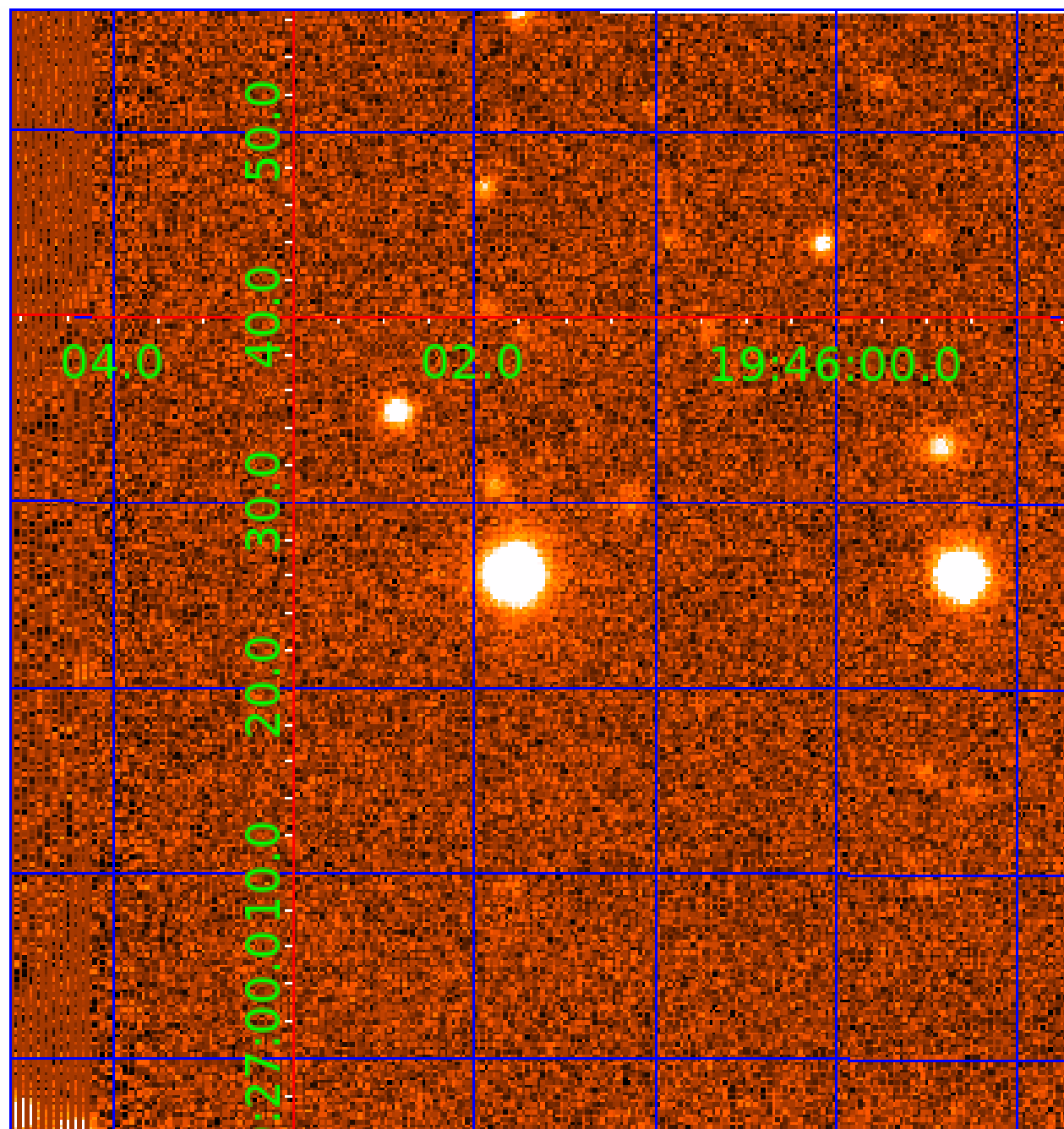


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011517719

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})
011517719-01	OBS	1416.01	2.495773	132.842673	24236.5	4.211	1486.8	1491.7	0.99	6039	15.46	930.73
011517719-02	OBS	No	2.495782	131.591539	338.5	4.207	26.2	26.7	0.99	6039	2.15	930.72
011517719-03	OBS	No	57.415534	140.308971	138.9	1.882	8.6	0.9	0.99	6039	1.17	14.22
011517719-04	OBS	No	128.596542	140.173722	69.9	0.678	8.5	0.4	0.99	6039	1.00	4.85
011517719-05	OBS	No	142.287269	140.137565	2742.4	21.932	8.7	6.5	0.99	6039	6.39	4.24
011517719-06	OBS	No	228.796075	197.375531	680.4	5.274	7.9	4.0	0.99	6039	2.83	2.25

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011517719-01	OBS	PC	0.92	0	1	0	0	MOD_SEC_ALT—PLANET_OCCULT_ALT—HAS_SEC_TCE
011517719-02	OBS	FP	0.00	1	1	0	0	IS_SEC_TCE
011517719-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST
011517719-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_TRACKER—TRANS_GAPPED—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
011517719-05	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—HALO_GHOST
011517719-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT

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

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

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

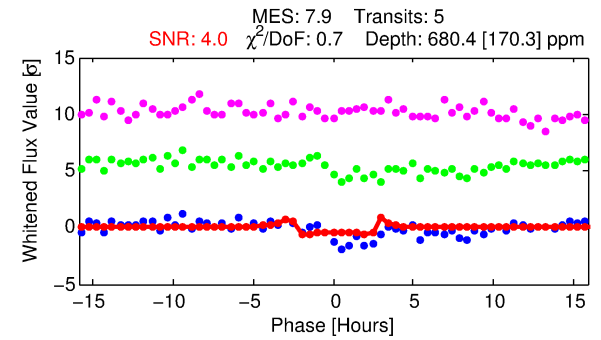
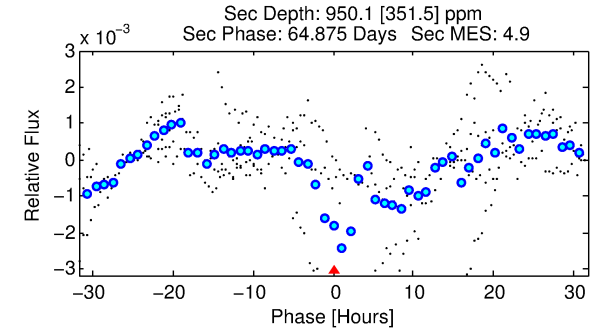
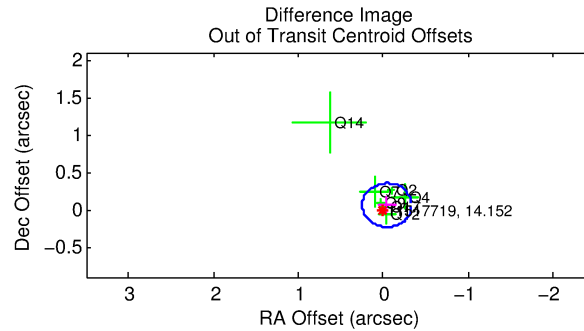
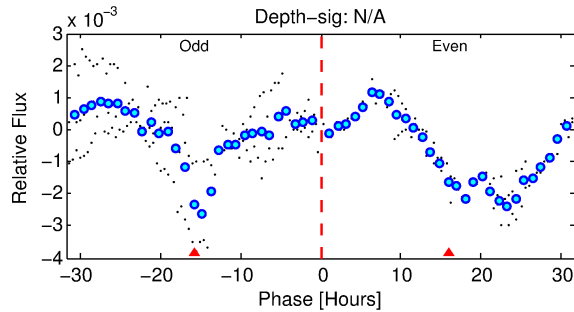
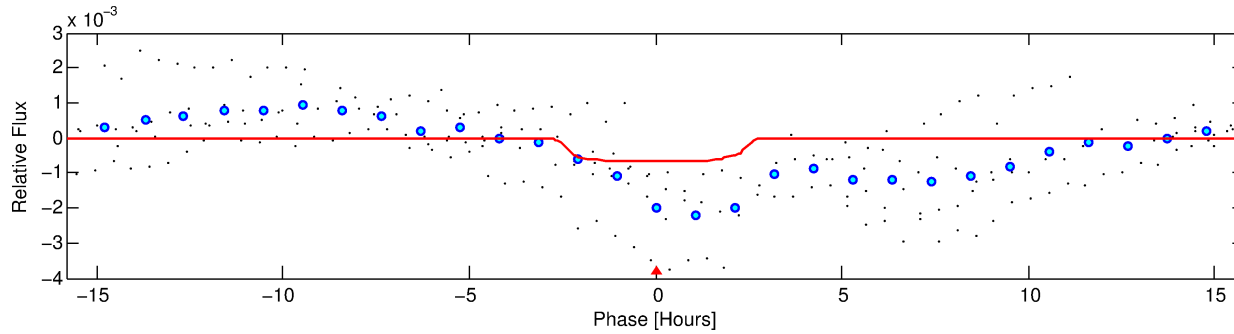
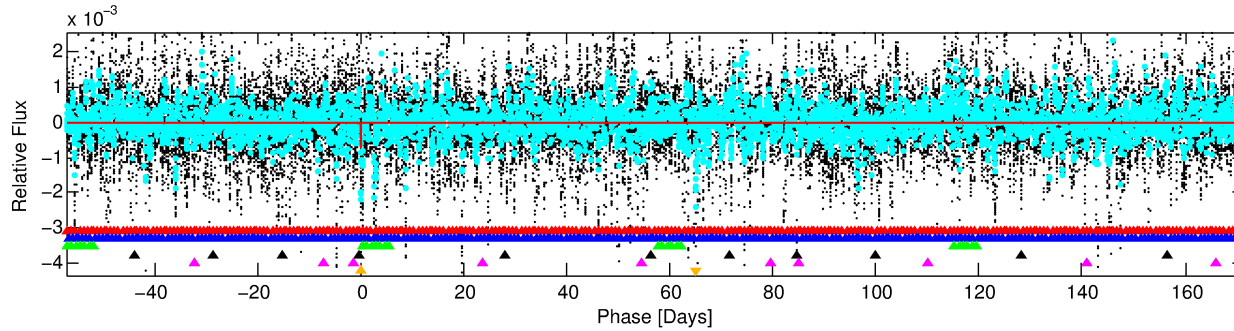
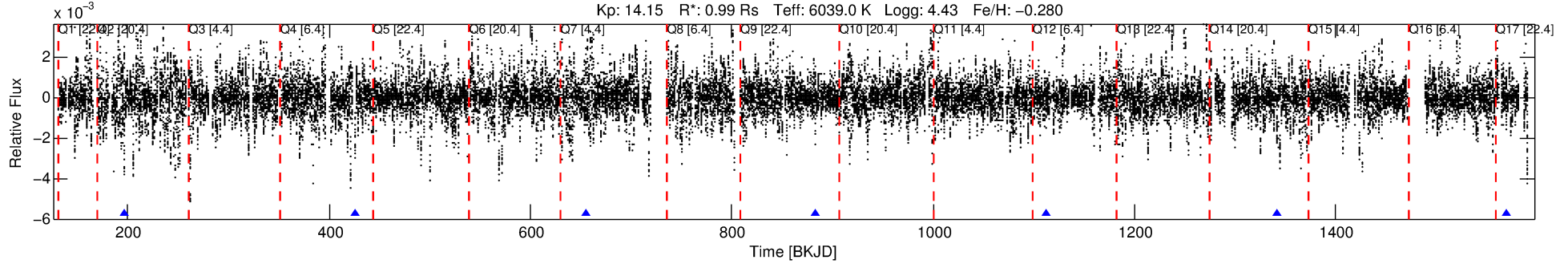
Ephemeris Match Information For 011517719-06

No Significant Match Found

DV One-Page Summary

KIC: 11517719 Candidate: 6 of 6 Period: 228.796 d
KOI: K01416 Corr: No Ephemeris Match

Kp: 14.15 R*: 0.99 Rs Teff: 6039.0 K Logg: 4.43 Fe/H: -0.280



DV Fit Results:

Period = 228.79607 [0.00297] d
Epoch = 197.3755 [0.0128] BKJD
Rp/R* = 0.0262 [0.0080]
a/R* = 223.08 [263.61]
b = 0.77 [0.61]
Seff = 2.25 [0.88]
Teq = 312 [30] K
Rp = 2.83 [1.21] Re
a = 0.7217 [0.1824] AU
Ag = 33883.45 [27160.09] [1.25σ]
Teffp = 6552 [1181] K [5.28σ]

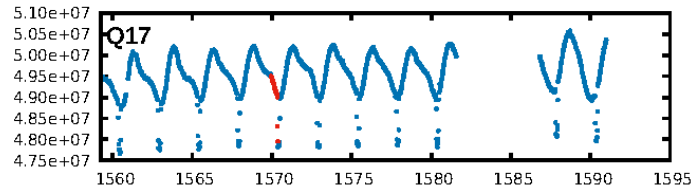
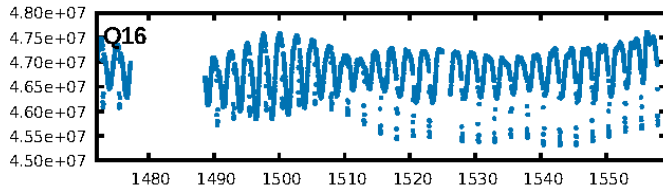
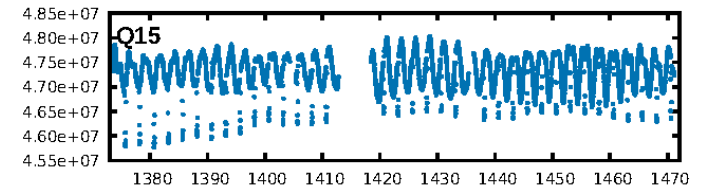
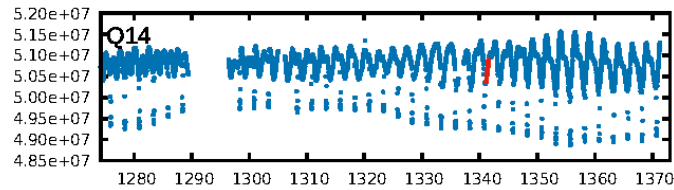
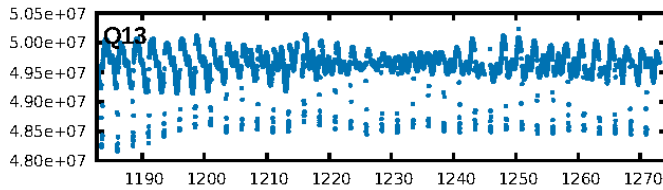
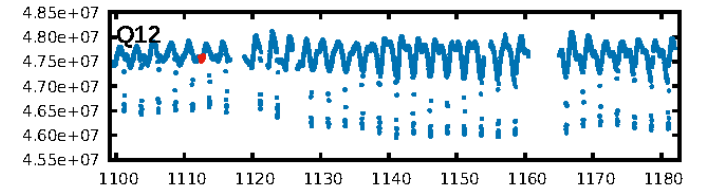
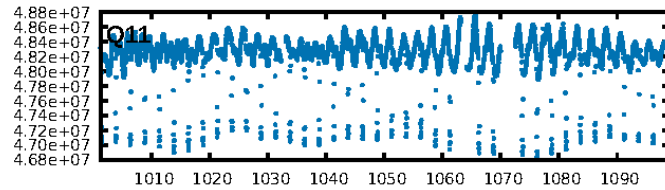
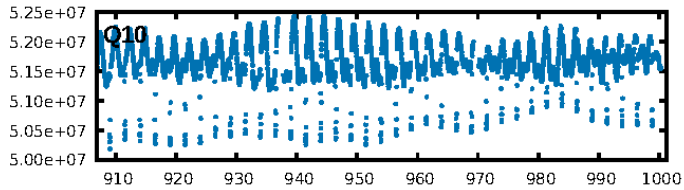
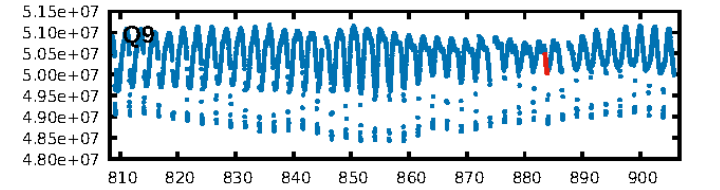
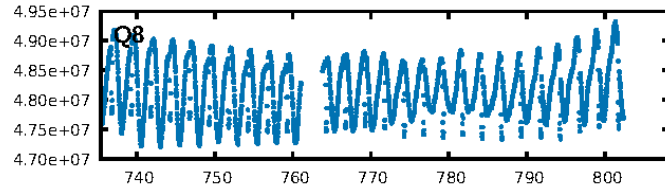
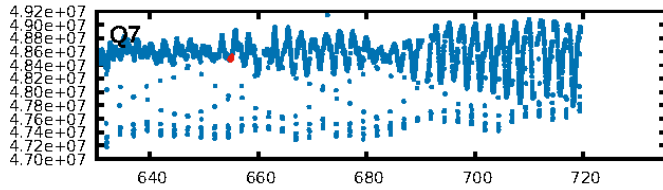
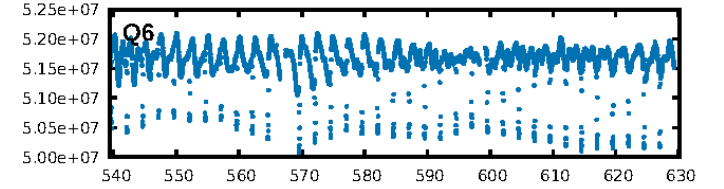
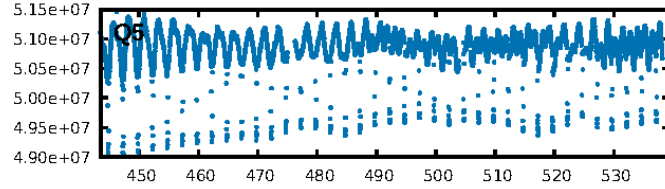
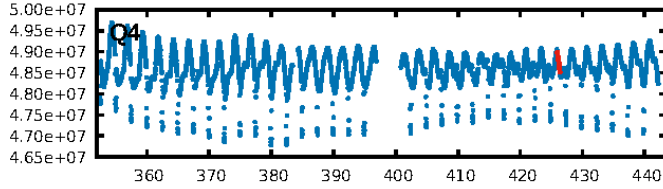
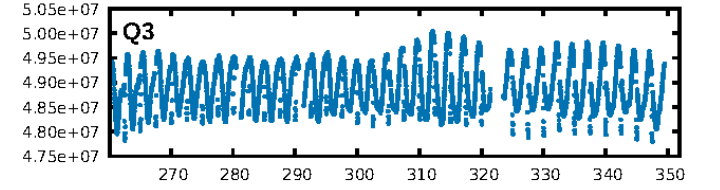
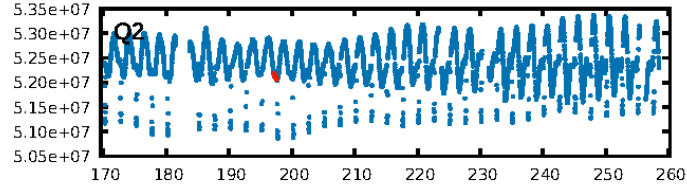
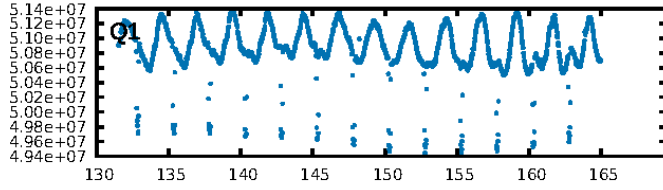
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [92.04σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 14.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.5773
Centroid-sig: 20.4%
Centroid-so: 0.904 arcsec [0.99σ]
OotOffset-rm: 0.075 arcsec [0.77σ]
OotOffset-st: 2/1/2/2 [7]
KicOffset-rm: 0.076 arcsec [0.78σ]
KicOffset-st: 2/1/2/2 [7]
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DiffImageOverlap-fno: 0.14 [1/7]

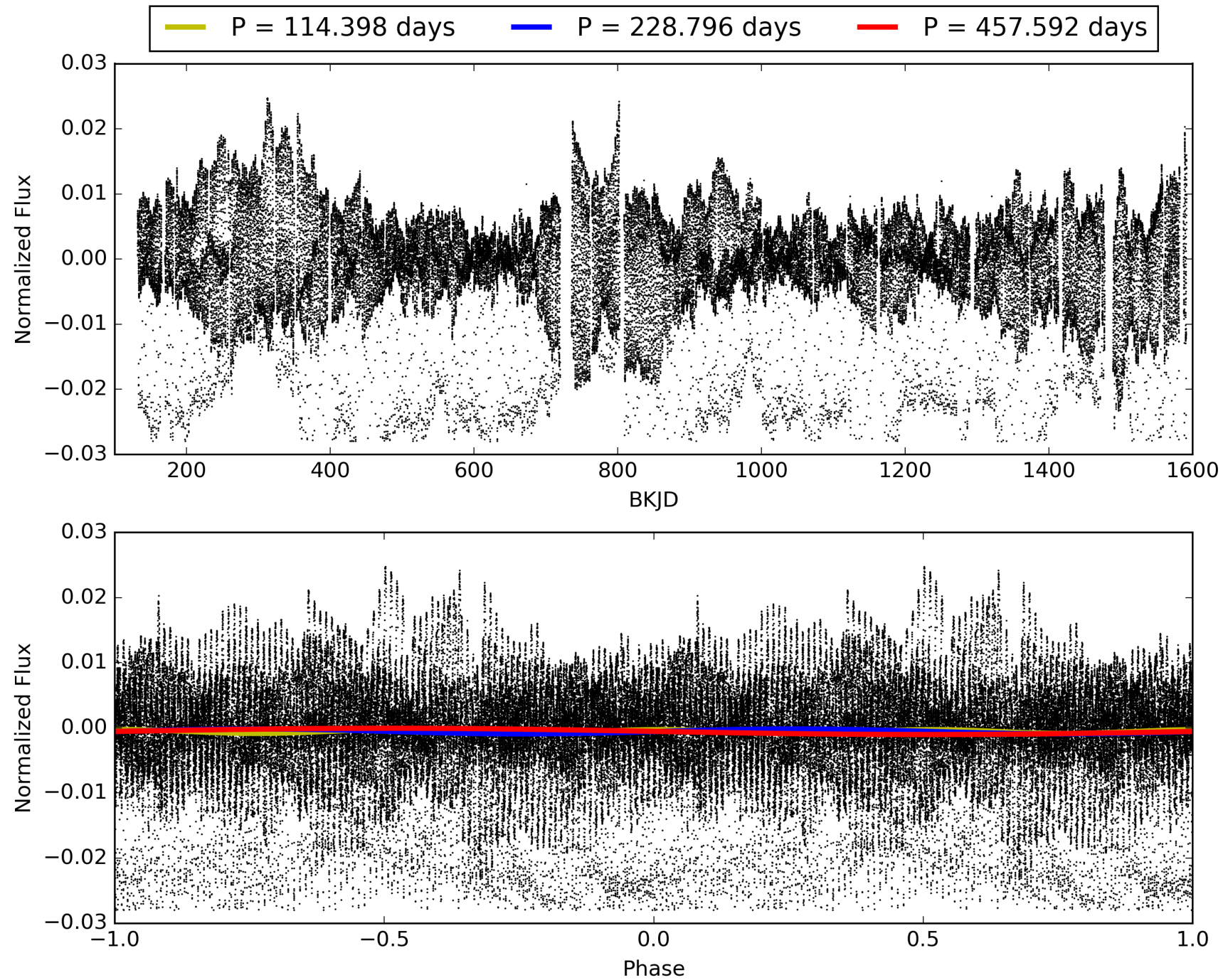
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:47:06 Z

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

TCE 011517719-06, PDC Light Curves

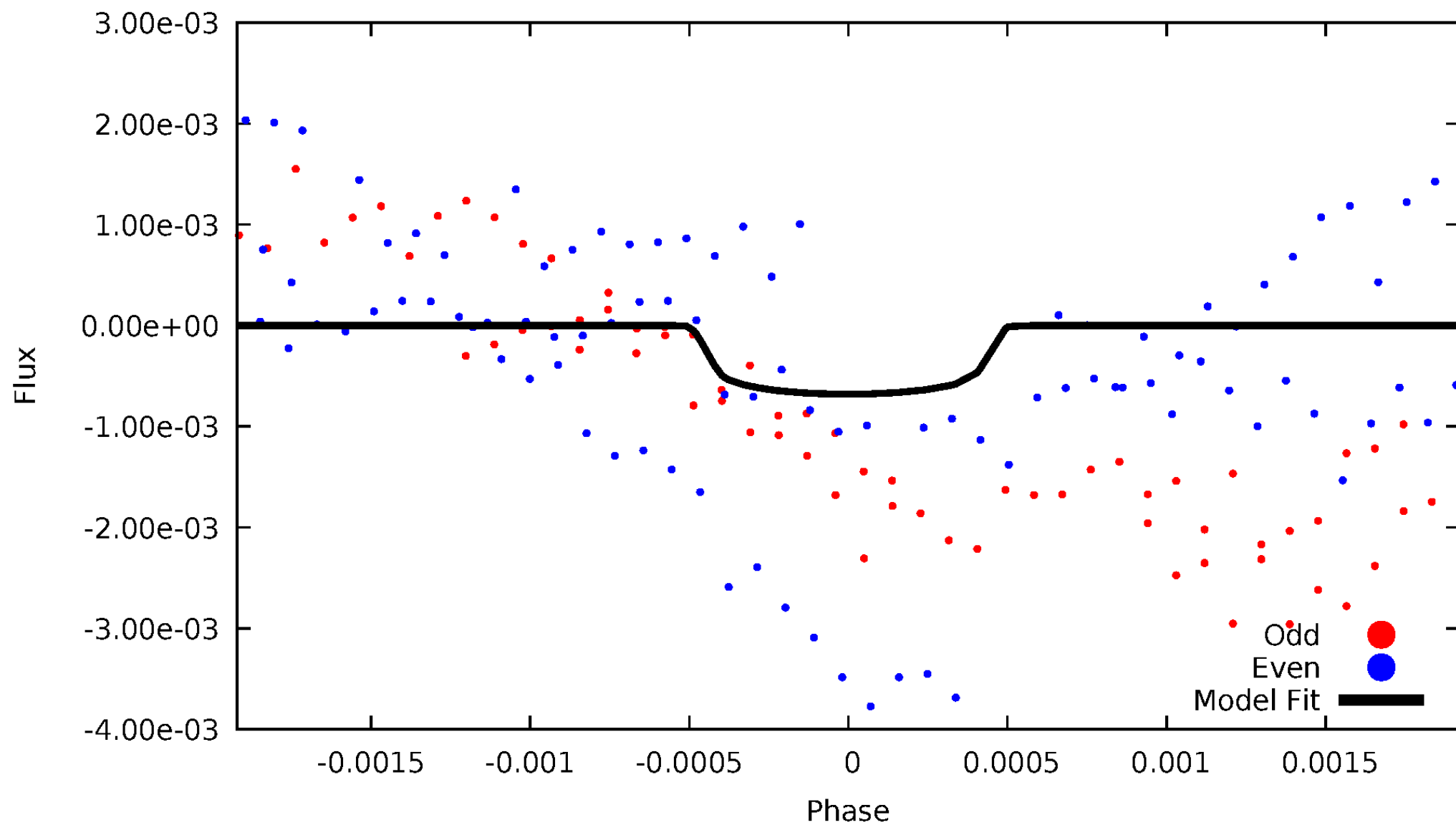


TCE 011517719-06



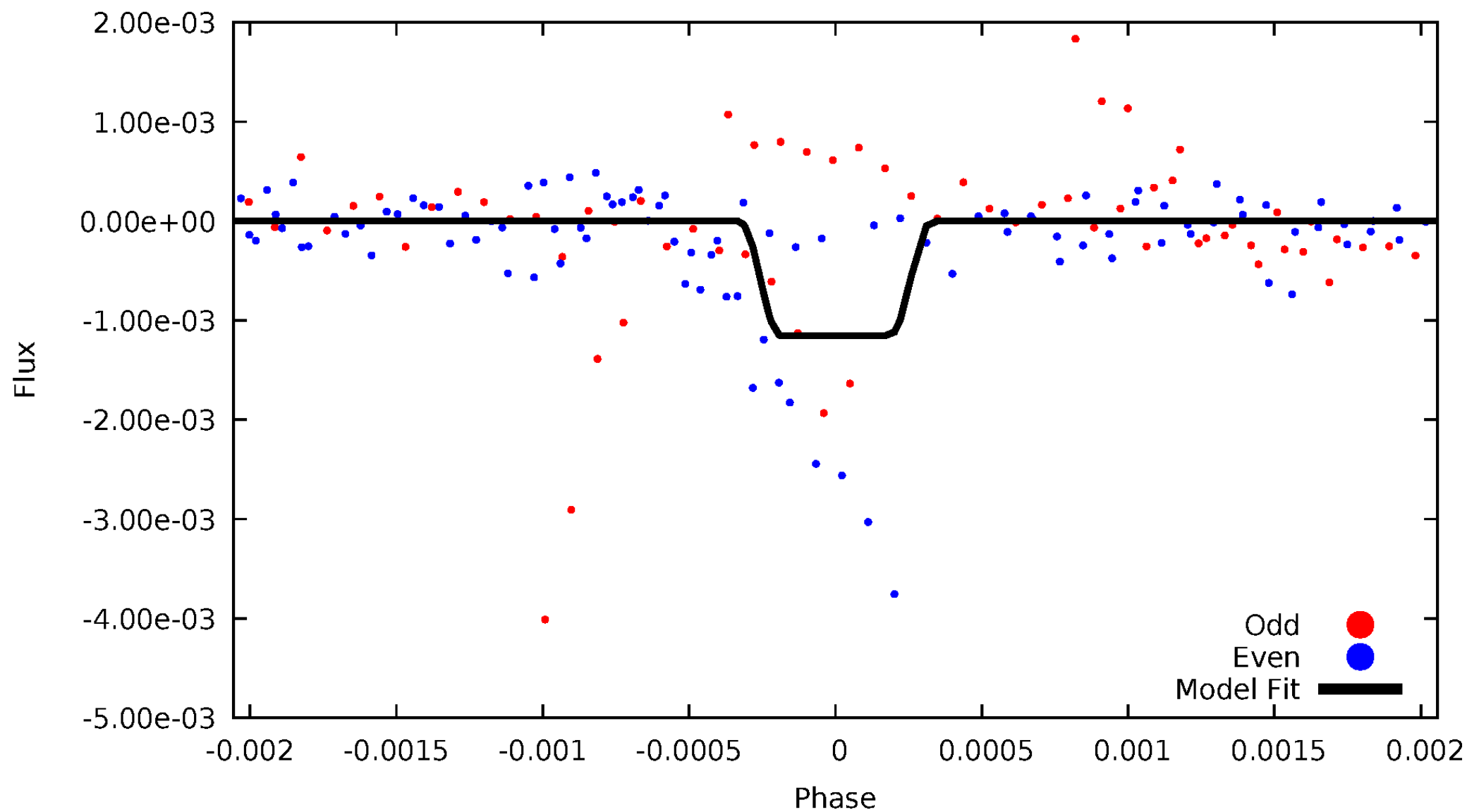
DV Odd/Even

TCE 011517719-06



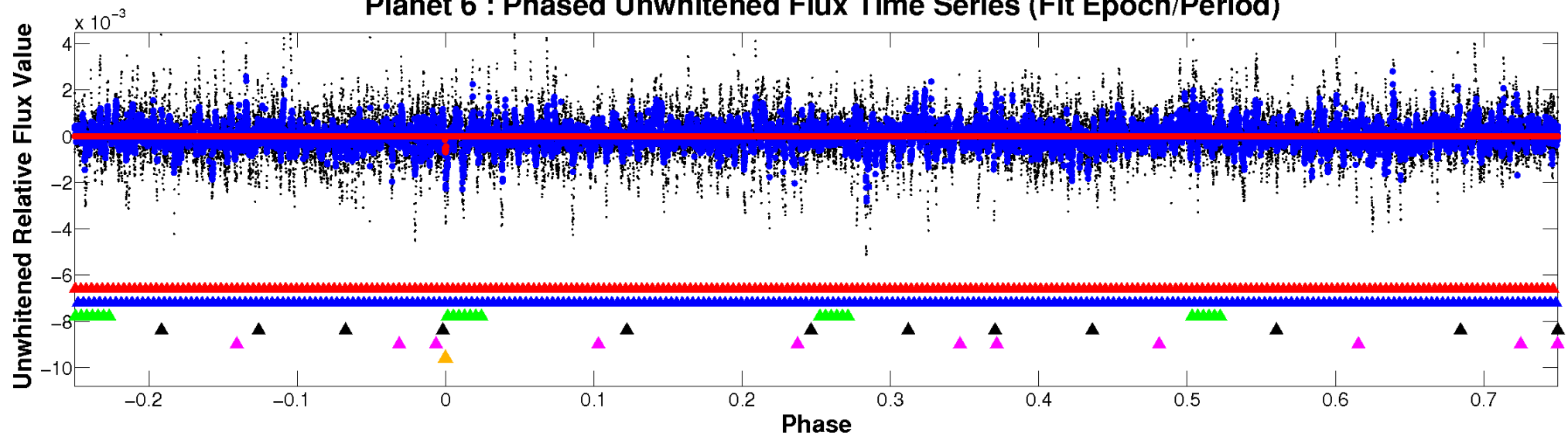
ALT Odd/Even

TCE 011517719-06

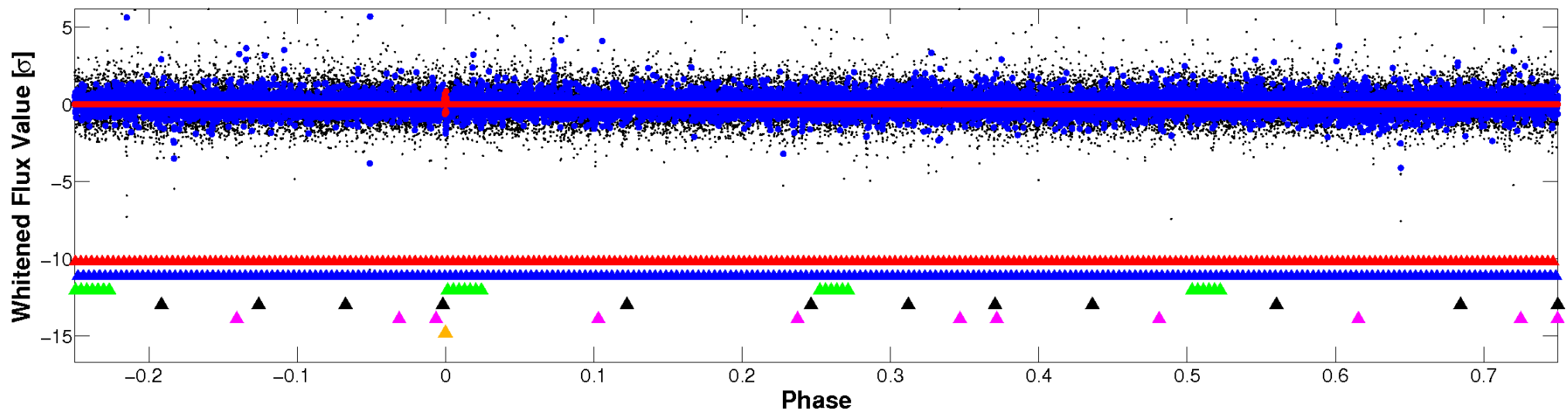


Non-Whitened Vs. Whitened Light Curve

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

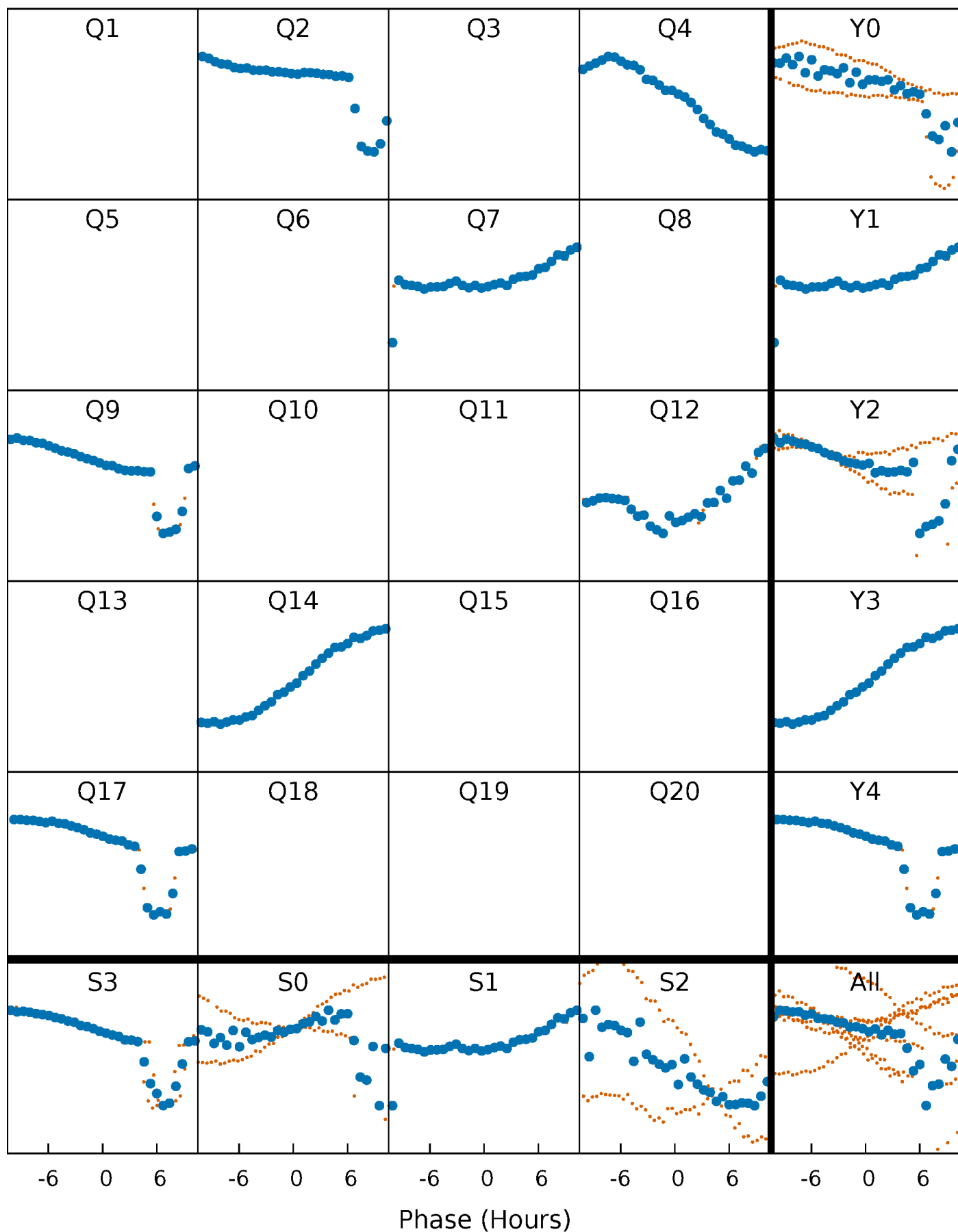


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



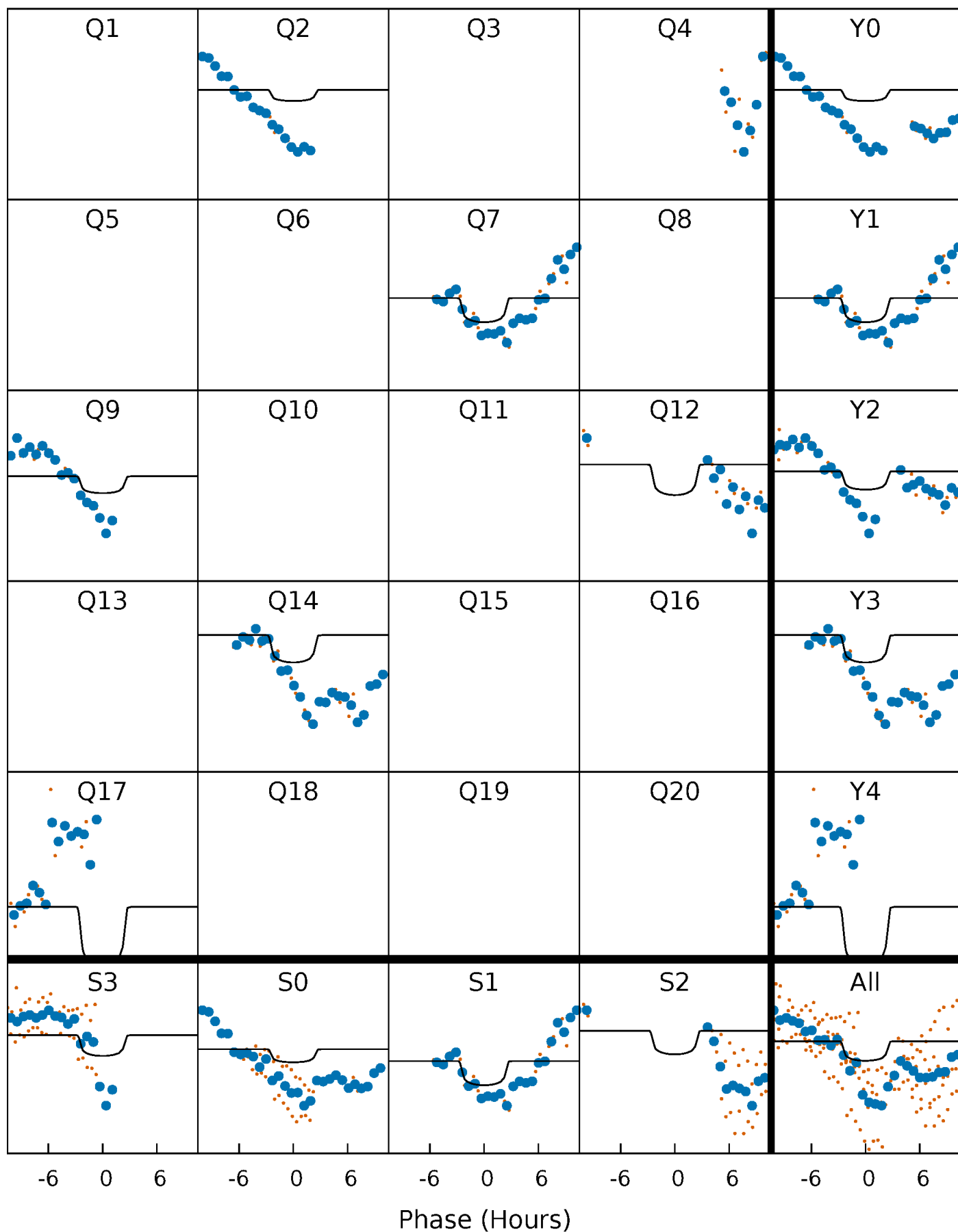
PDC Quarter-Phased Transit Curves

TCE 011517719-06 P=228.796075 Days $T_0=197.375531$ (BKJD)



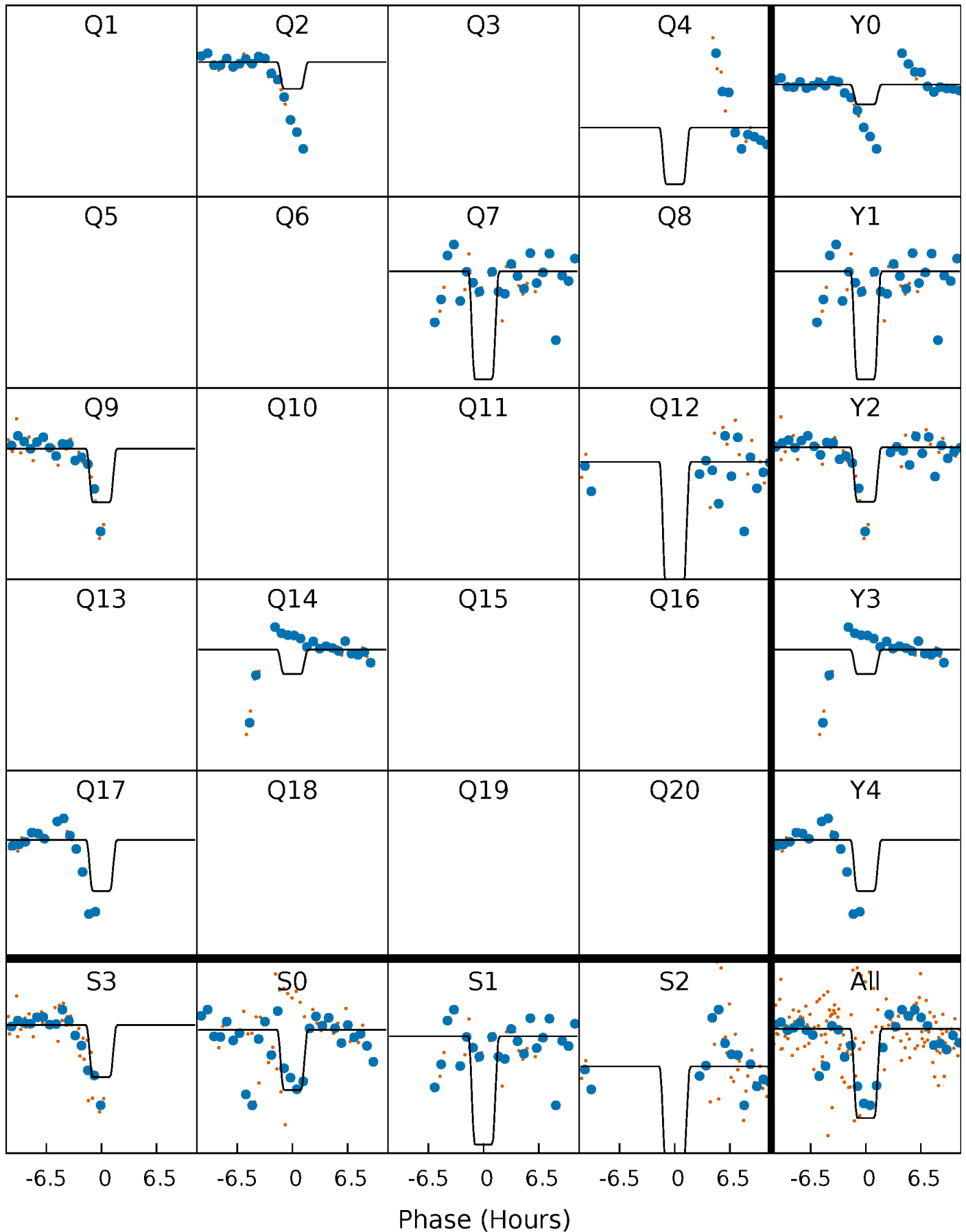
DV Quarter-Phased Transit Curves

TCE 011517719-06 P=228.796075 Days $T_0=197.375531$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

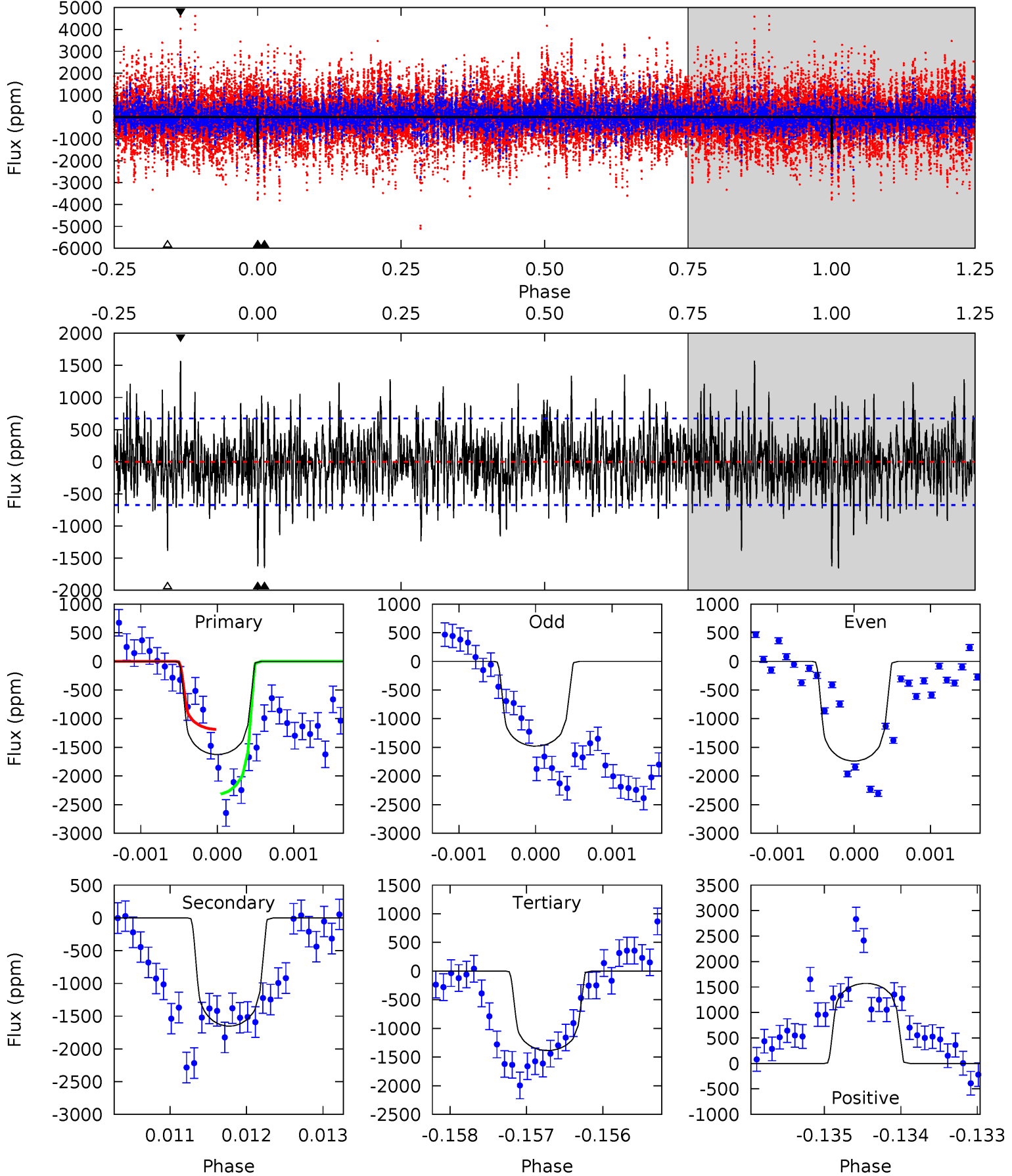
TCE 011517719-06 P=228.792440 Days $T_0=197.406799$ (BKJD)



DV Model-Shift Uniqueness Test

011517719-06, P = 228.796075 Days, E = 197.375531 Days

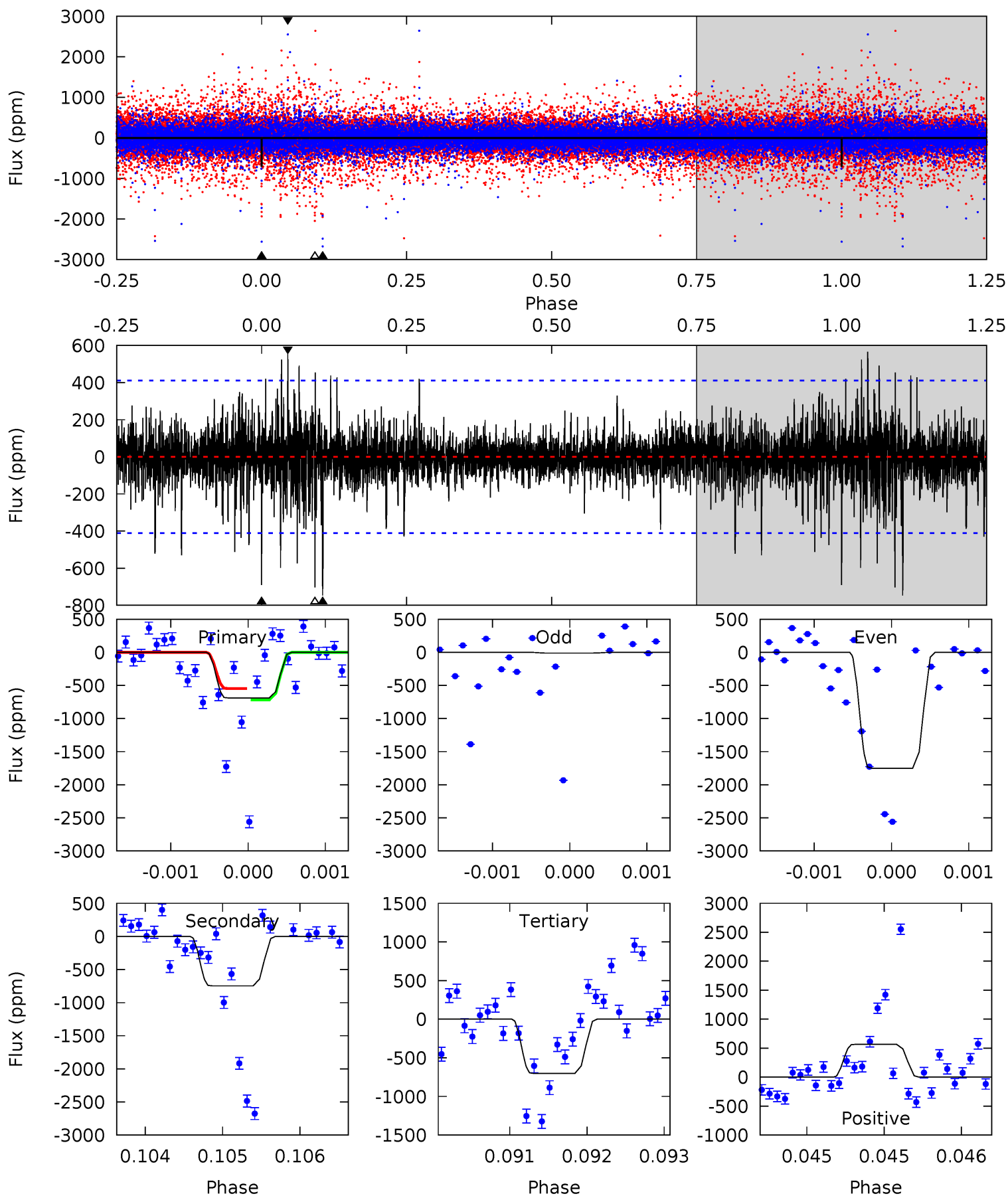
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	13.3	11.2	12.7	5.45	3.29	3.01	1.94	0.43	2.16	0.65	1.03	0.91	0.49	4.40



Alt Model-Shift Uniqueness Test

011517719-06, P = 228.792440 Days, E = 197.406799 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.28	10.1	9.46	7.62	5.54	3.42	1.30	-0.18	1.66	0.60	2.44	8.42	0.78	0.43	1.08



Stellar Parameters For KIC 011517719

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6039^{+163}_{-181}	$4.426^{+0.087}_{-0.203}$	$-0.280^{+0.300}_{-0.300}$	$0.992^{+0.296}_{-0.127}$	$0.959^{+0.130}_{-0.117}$	$1.384^{+0.611}_{-0.677}$
	+3%/-3%	+2%/-5%	+107%/-107%	+30%/-13%	+14%/-12%	+44%/-49%
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 011517719-06 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-1652 ± 124	$2.93^{+1.01}_{-0.92}$	442^{+34}_{-23}	7649^{+2097}_{-1061}	54820^{+60540}_{-24243}
Alt.	-747 ± 74	$3.86^{+1.05}_{-1.00}$	443^{+33}_{-23}	5449^{+710}_{-518}	14564^{+10536}_{-5737}

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

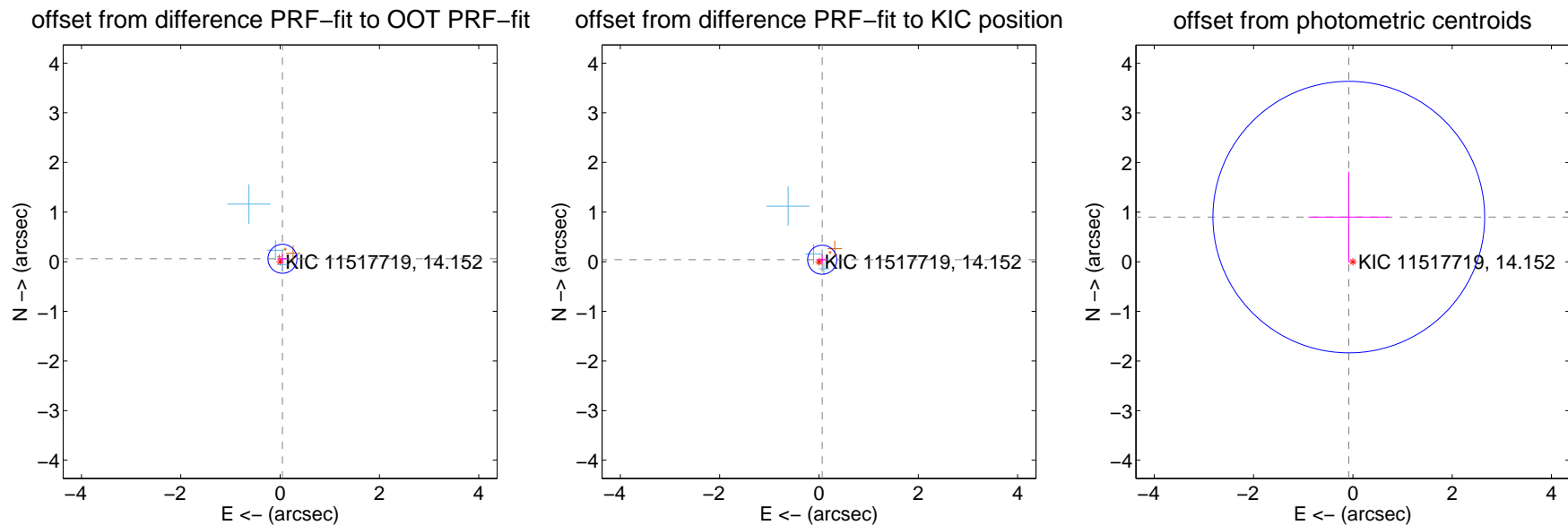
DV Centroid Data

Supplemental centroid analysis for 011517719-06. Kepler magnitude: 14.15. Transit SNR 4.02

There are 3 quarters with good PRF difference image offsets

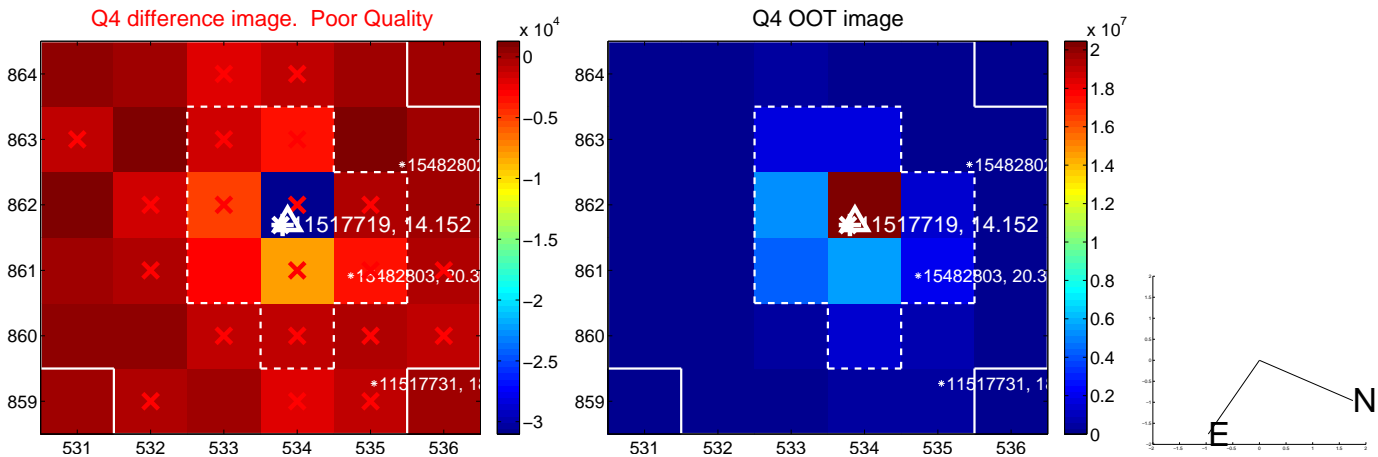
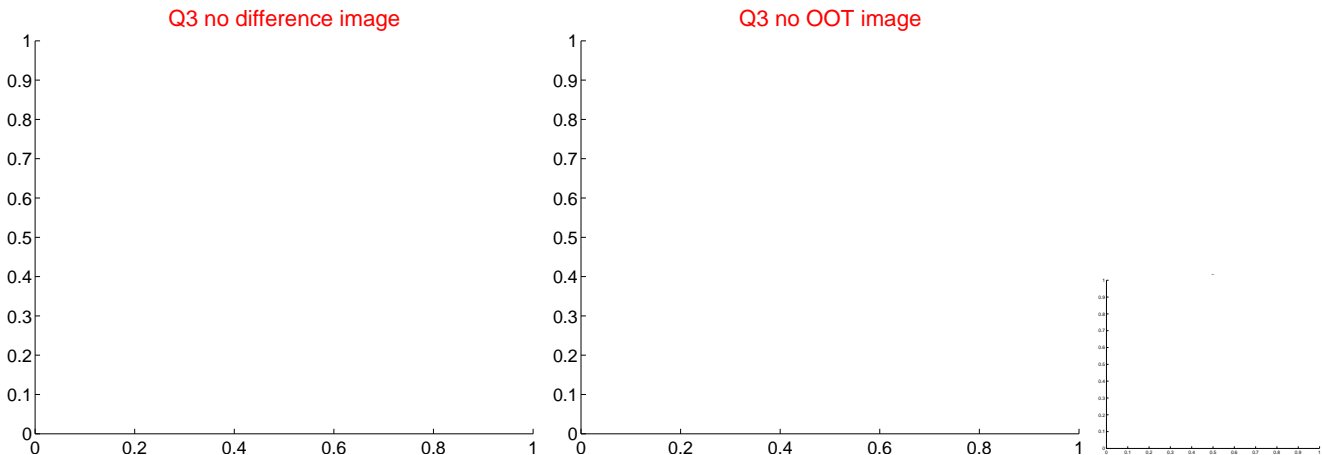
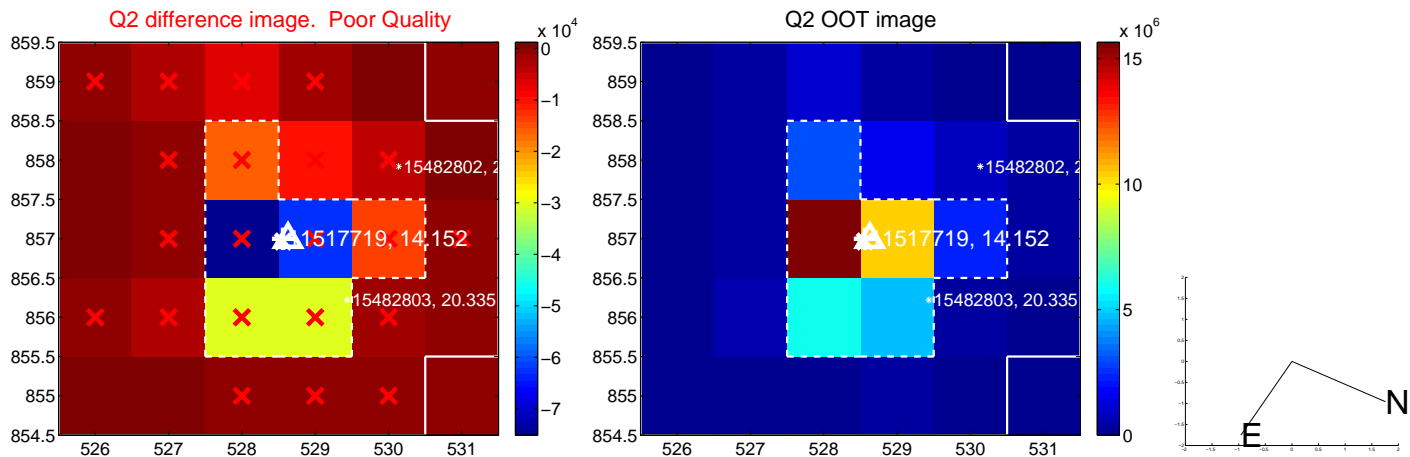
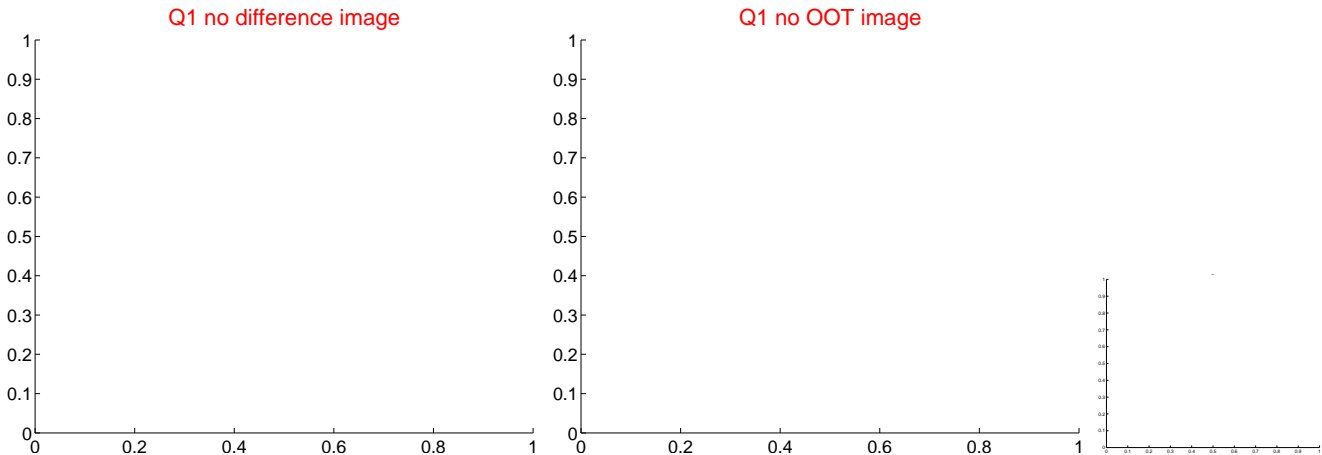
The direct PRF centroid is offset from the target star catalog position by about 0.09 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.097	0.77	-0.047 ± 0.098	0.059 ± 0.097
PRF-fit source offset from KIC position	0.076 ± 0.098	0.78	-0.065 ± 0.098	0.039 ± 0.097
photometric centroid source offset	0.90 ± 0.91	0.99	0.08 ± 0.81	0.90 ± 0.91

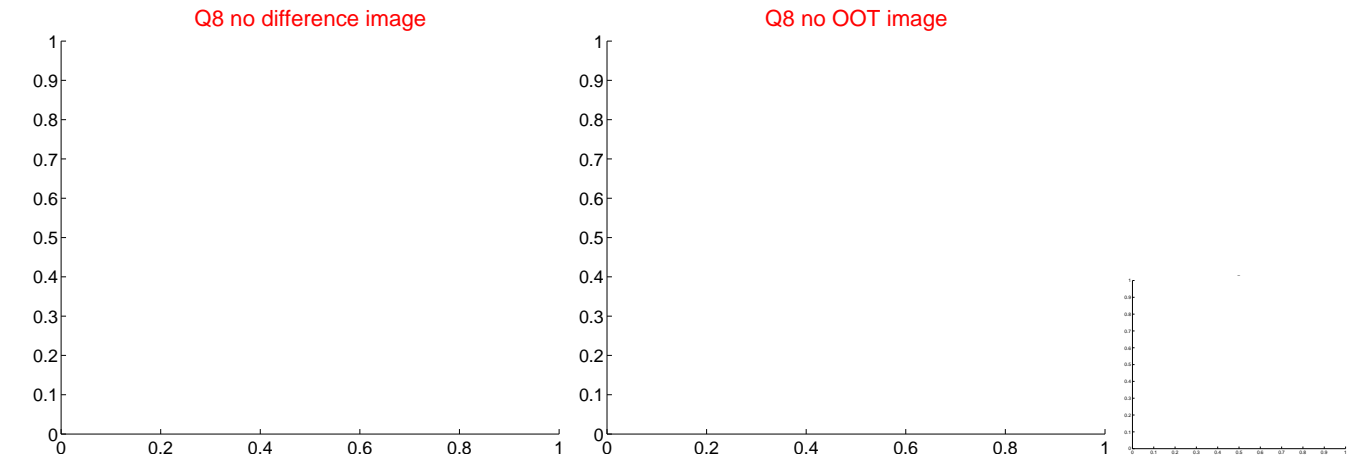
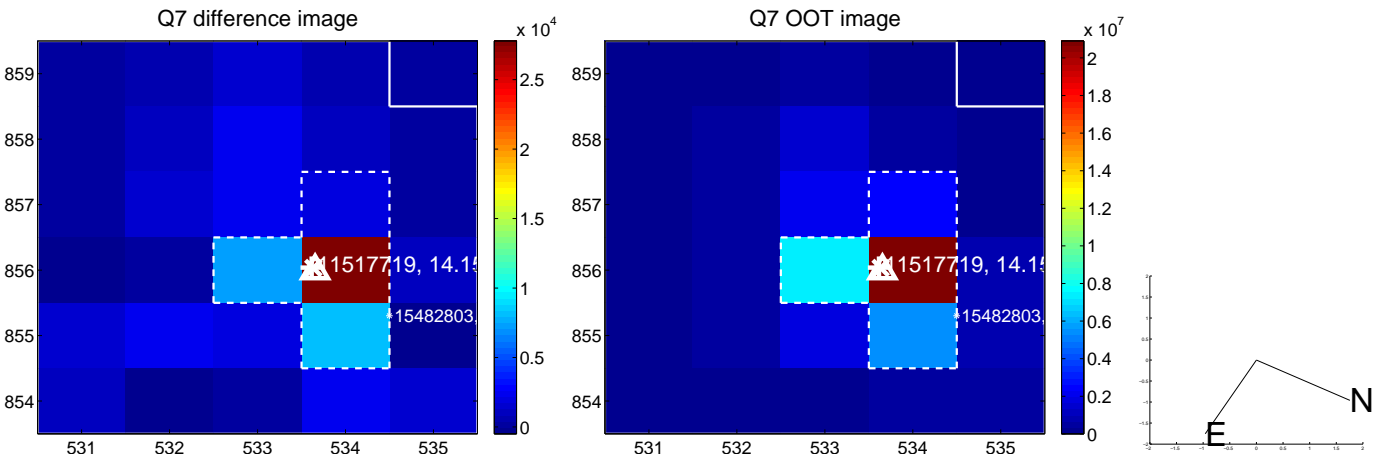
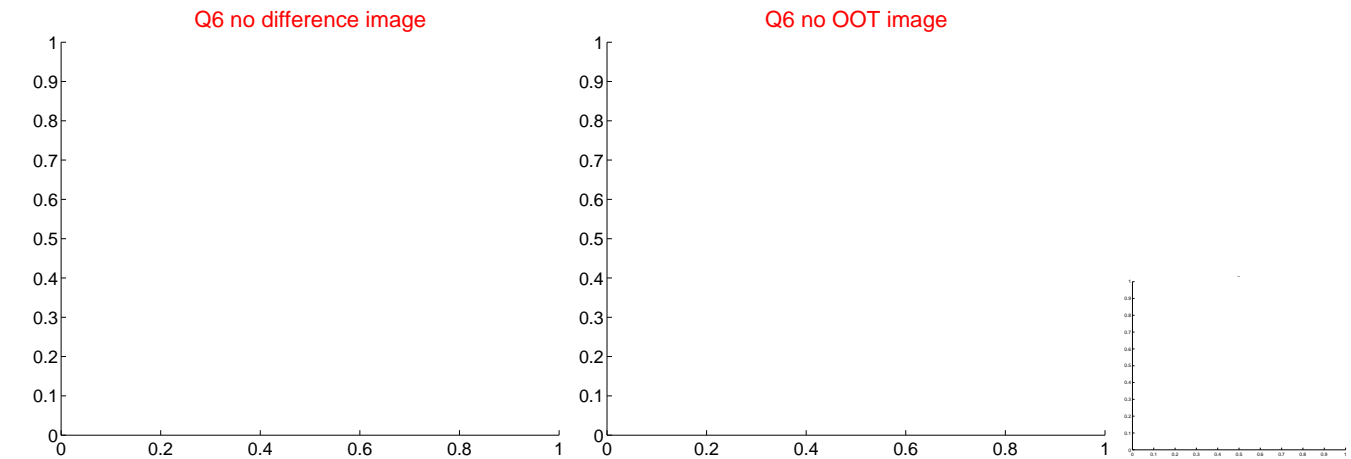
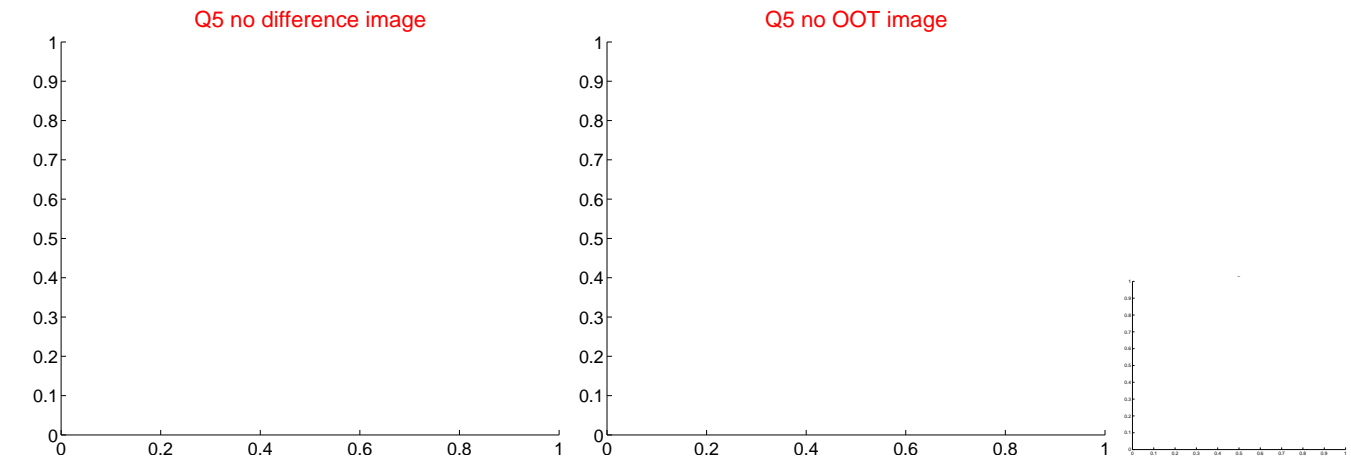


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

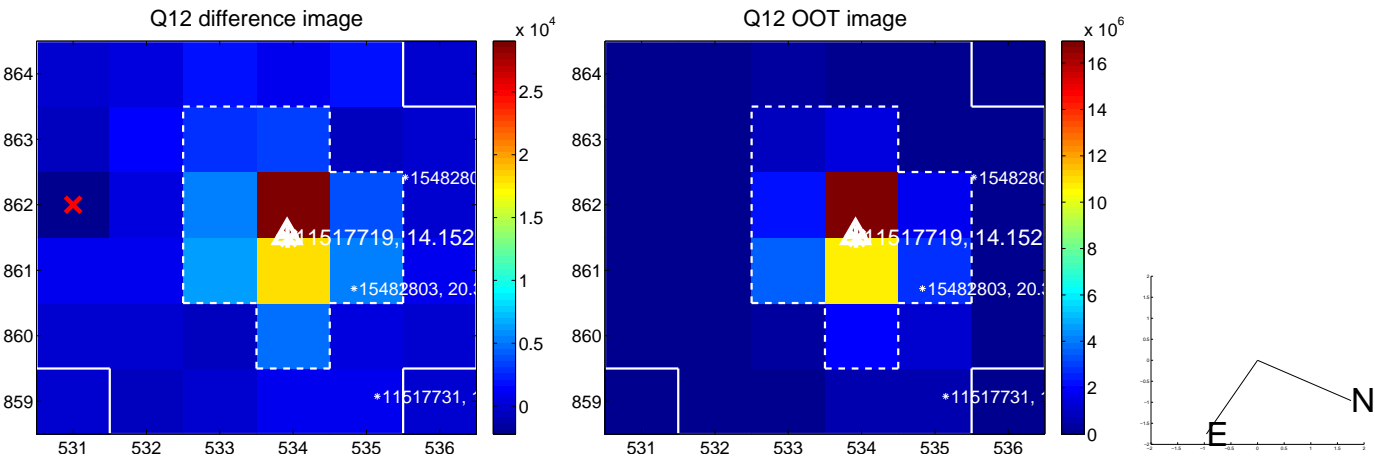
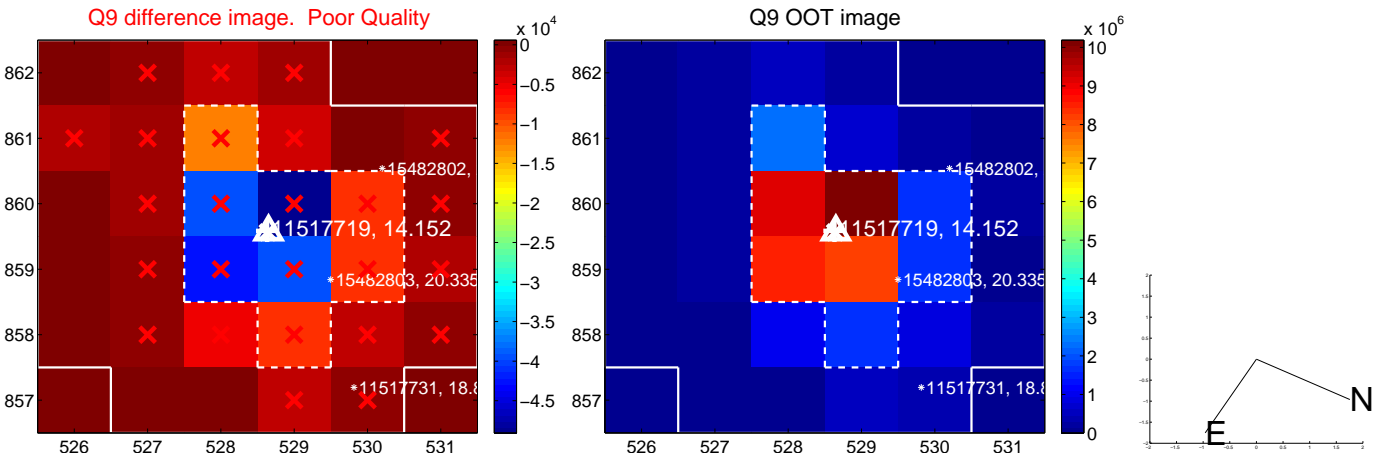
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: 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.

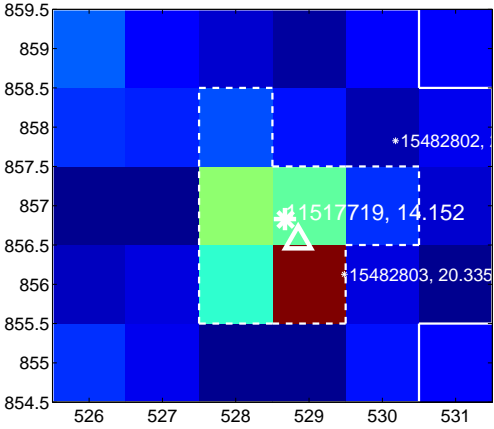
Q13 no difference image



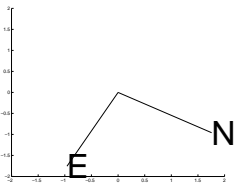
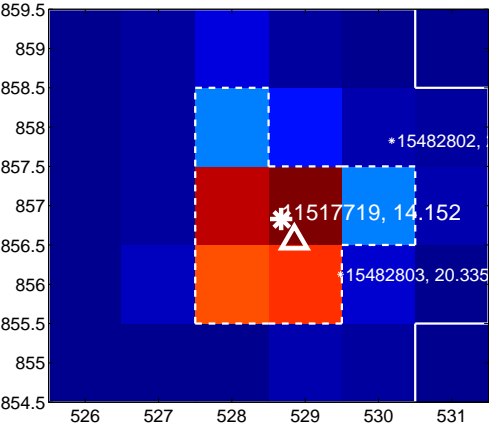
Q13 no OOT image



Q14 difference image



Q14 OOT image



Q15 no difference image



Q15 no OOT image



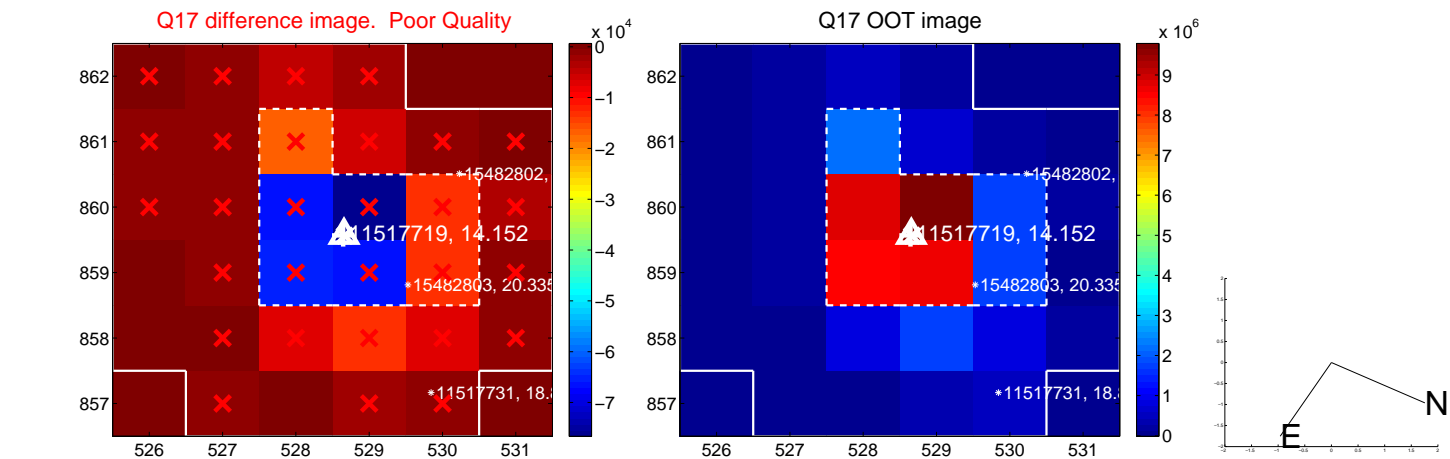
Q16 no difference image



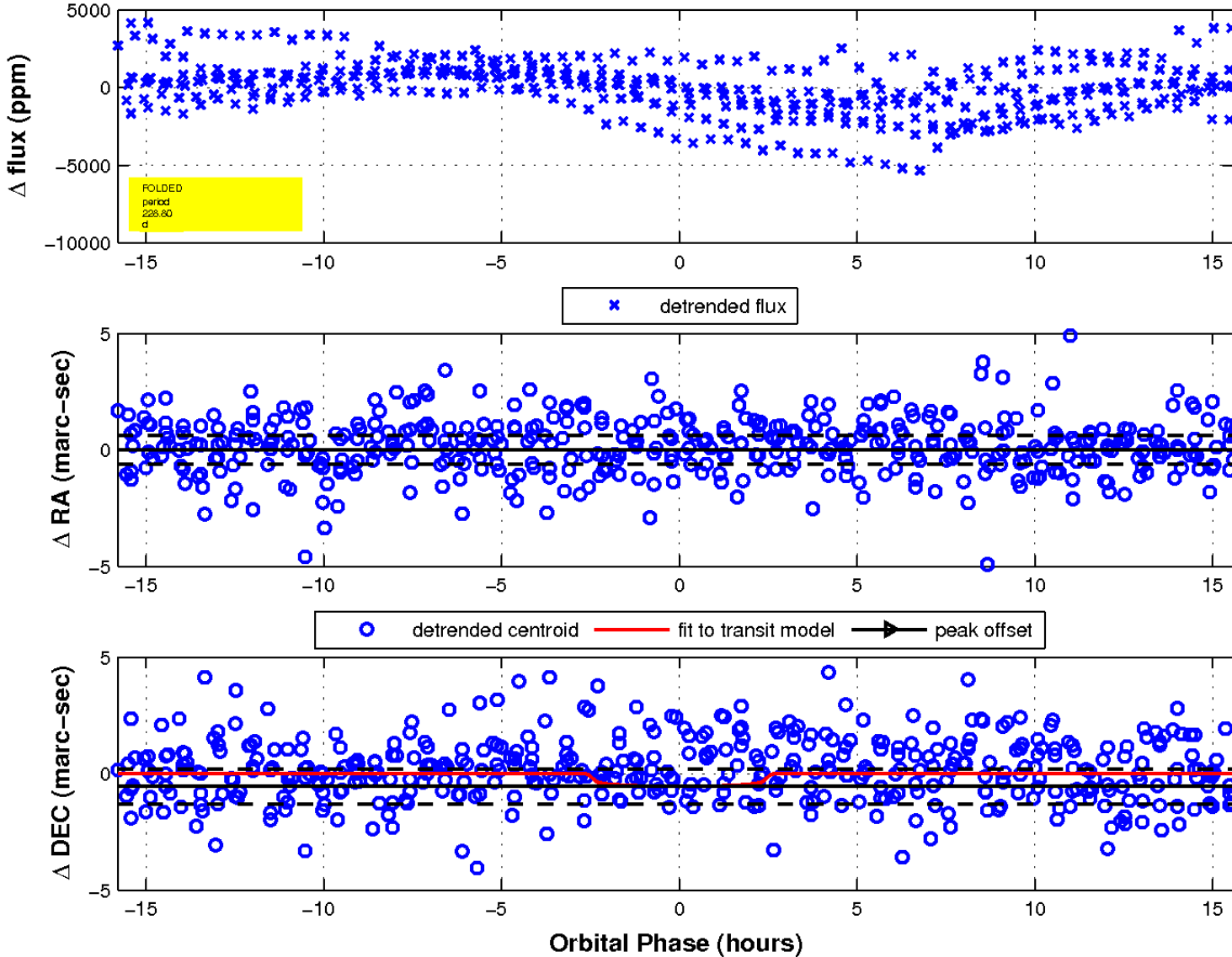
Q16 no OOT image



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



fluxWeightedCentroids, Planet 6 of 6



UKIRT Image

Declination

