

KIC 011081490

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})
011081490-01	OBS	No	0.578274	131.575888	195.4	1.727	17.7	22.4	2.50	9423	4.02	133958.25
011081490-02	OBS	No	0.578275	132.045332	294.4	3.007	18.1	28.0	2.50	9423	4.93	133957.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011081490-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011081490-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

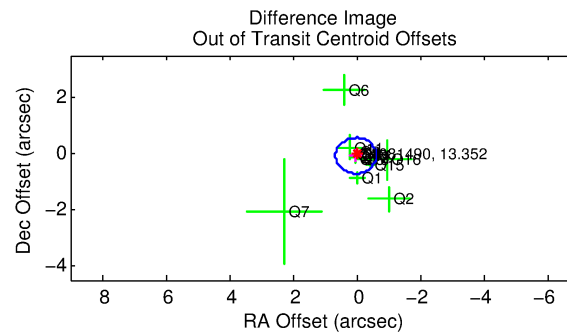
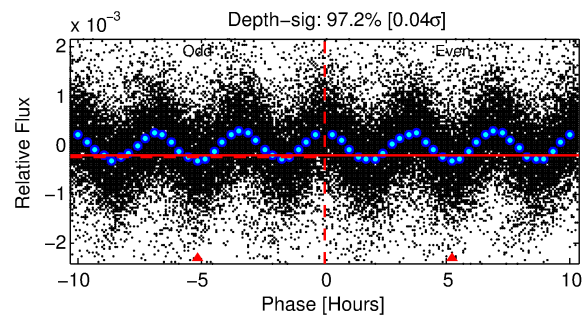
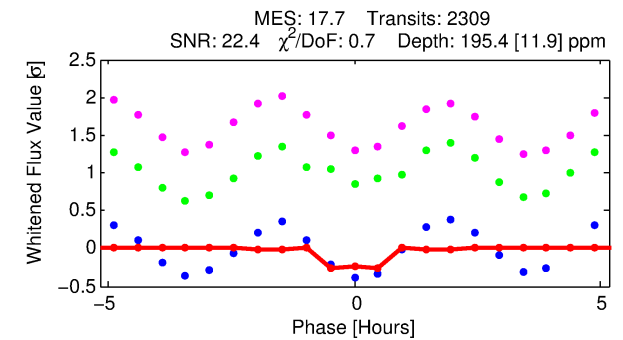
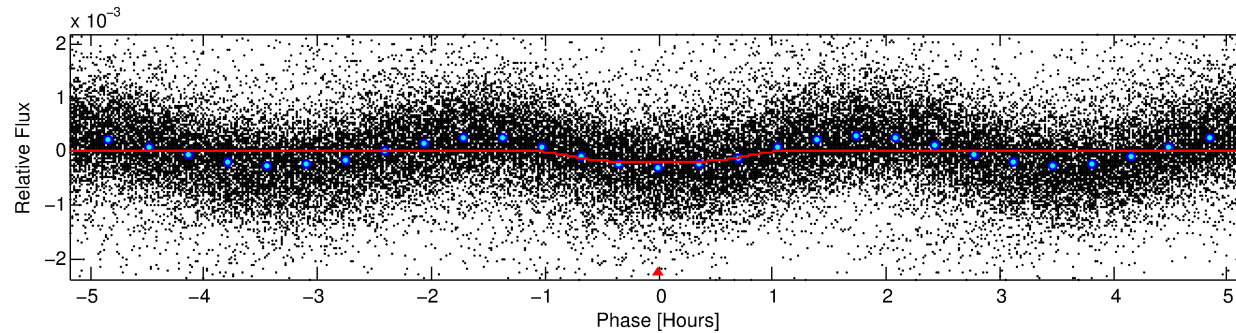
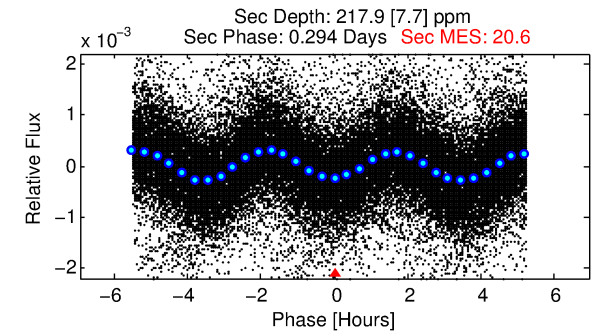
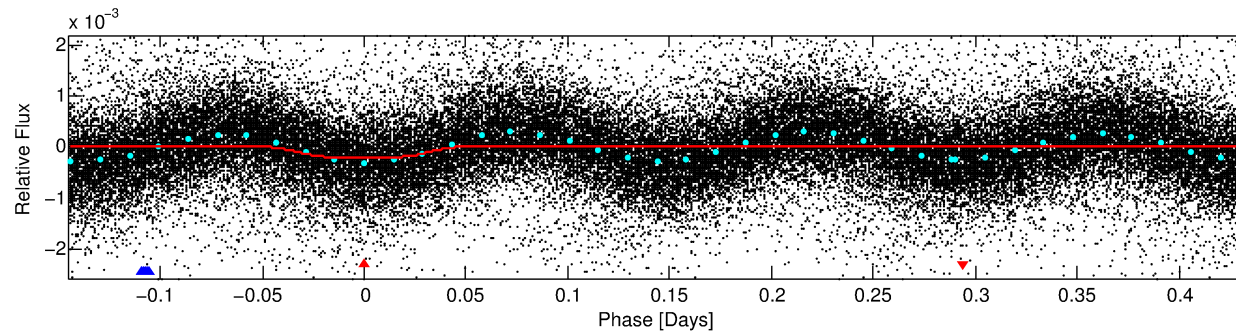
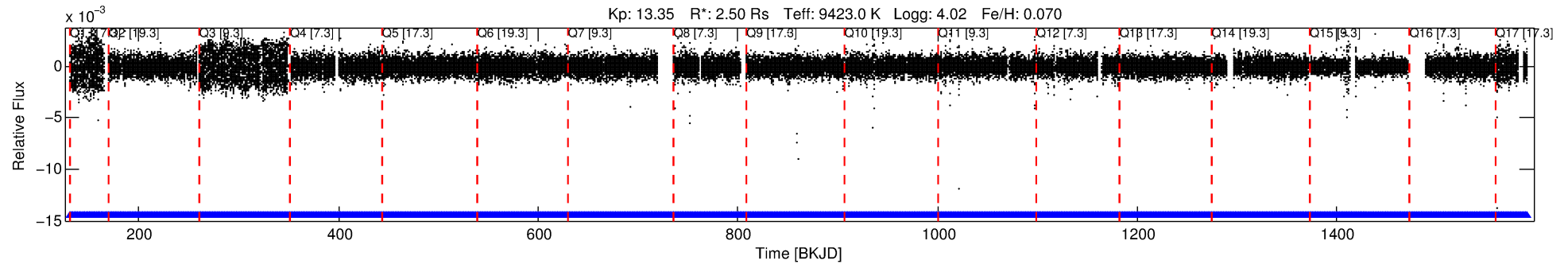
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011081490-01

No Significant Match Found

DV One-Page Summary

KIC: 11081490 Candidate: 1 of 2 Period: 0.578 d



DV Fit Results:

Period = 0.57827 [0.00000] d
Epoch = 131.5759 [0.0007] BKJD
Rp/R* = 0.0148 [0.0015]
a/R* = 1.52 [0.63]
b = 0.90 [0.16]
Seff = 133958.25 [64610.47]
Teff = 4878 [588] K
Rp = 4.02 [1.54] Re
a = 0.0181 [0.0056] AU
Ag = 2.44 [1.19] [1.21σ]
Teffp = 9424 [667] K [5.11σ]

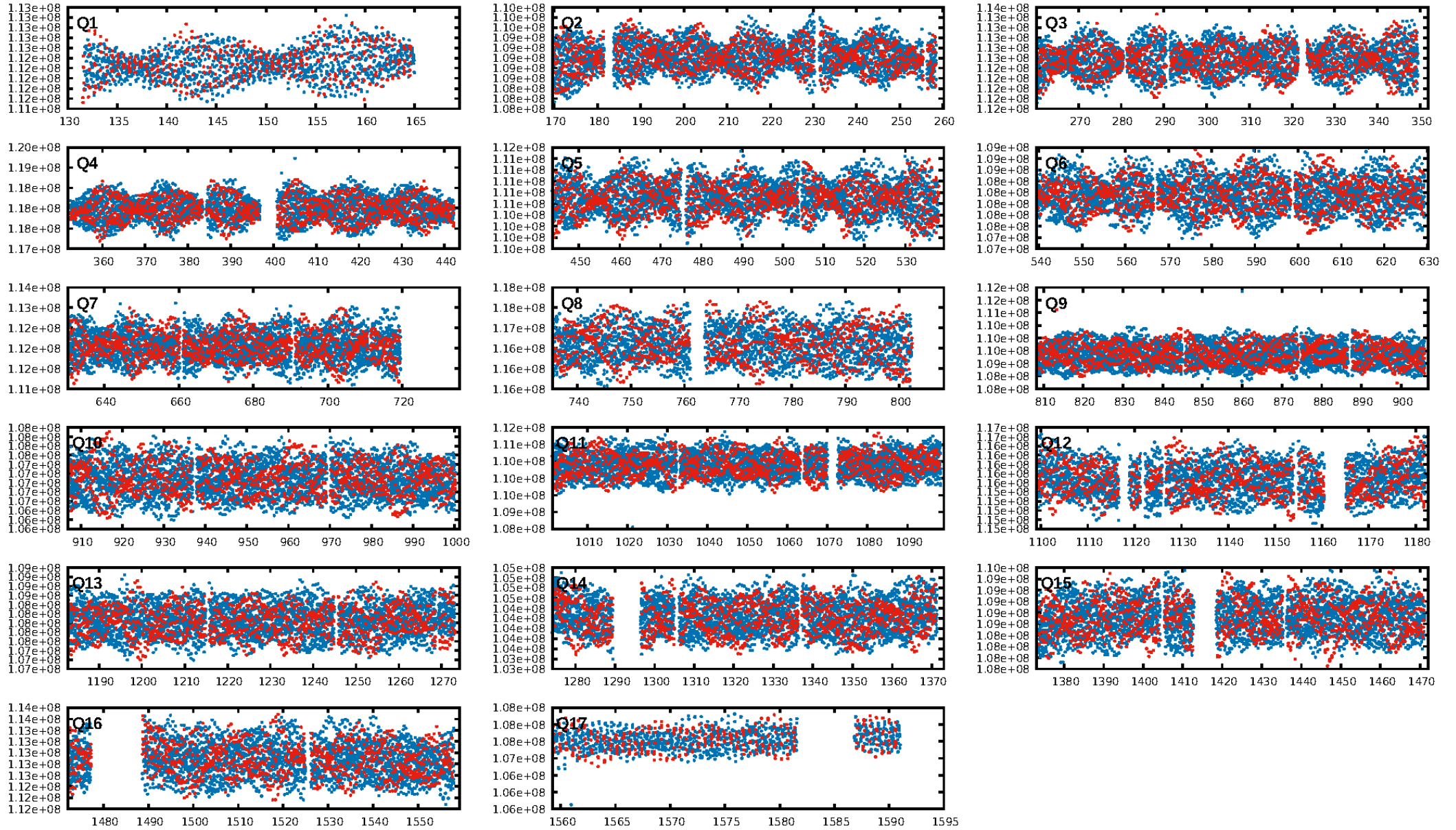
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 0.0% [0.00σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2205/2205]
GhostDiagnostic-chr: 3.85
Centroid-sig: 76.4%
Centroid-so: 0.075 arcsec [0.80σ]
OotOffset-rm: 0.075 arcsec [0.35σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.129 arcsec [0.68σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.47 [8/17]
DiffImageOverlap-fno: 0.00 [0/17]

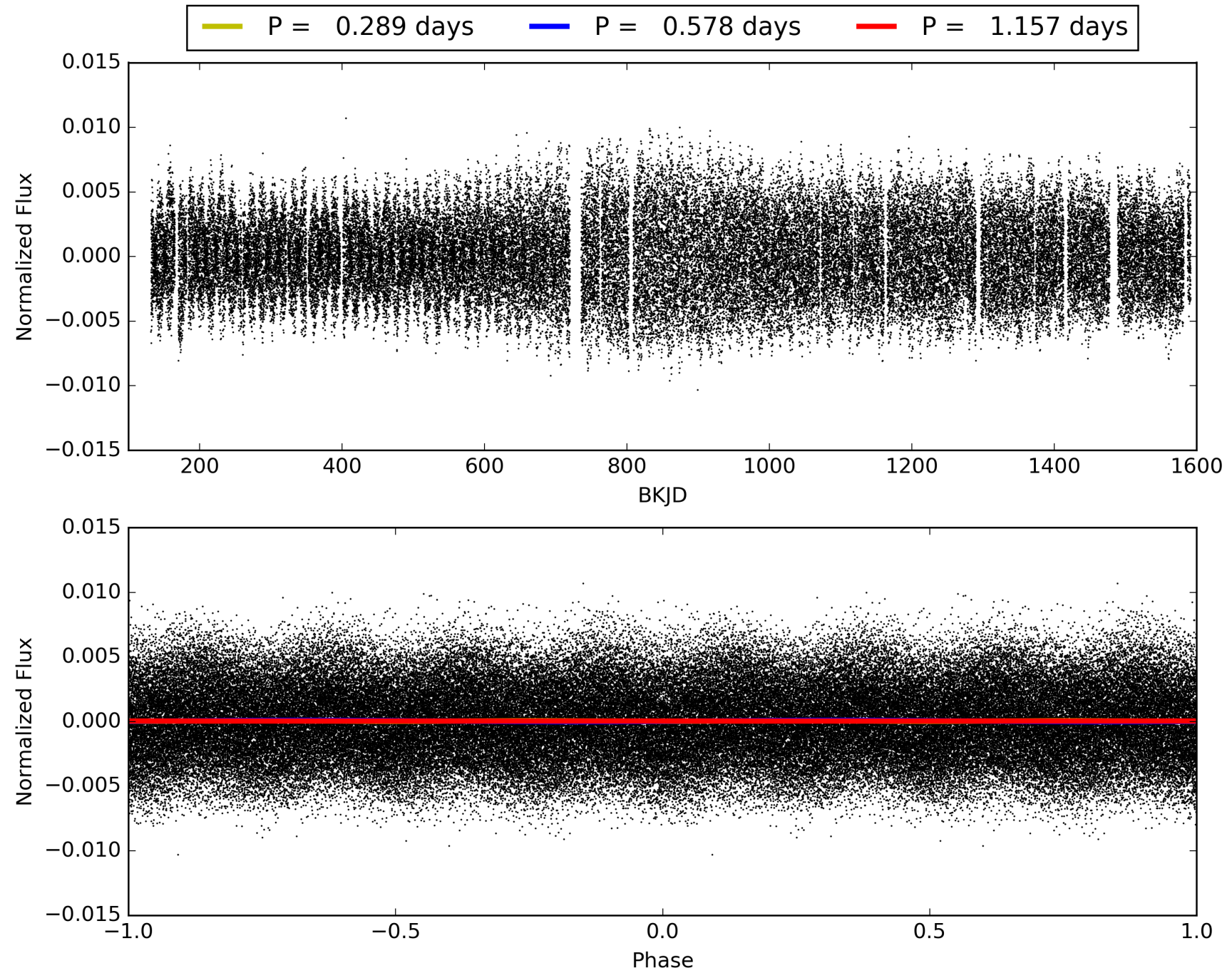
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:49:38 Z

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

TCE 011081490-01, PDC Light Curves

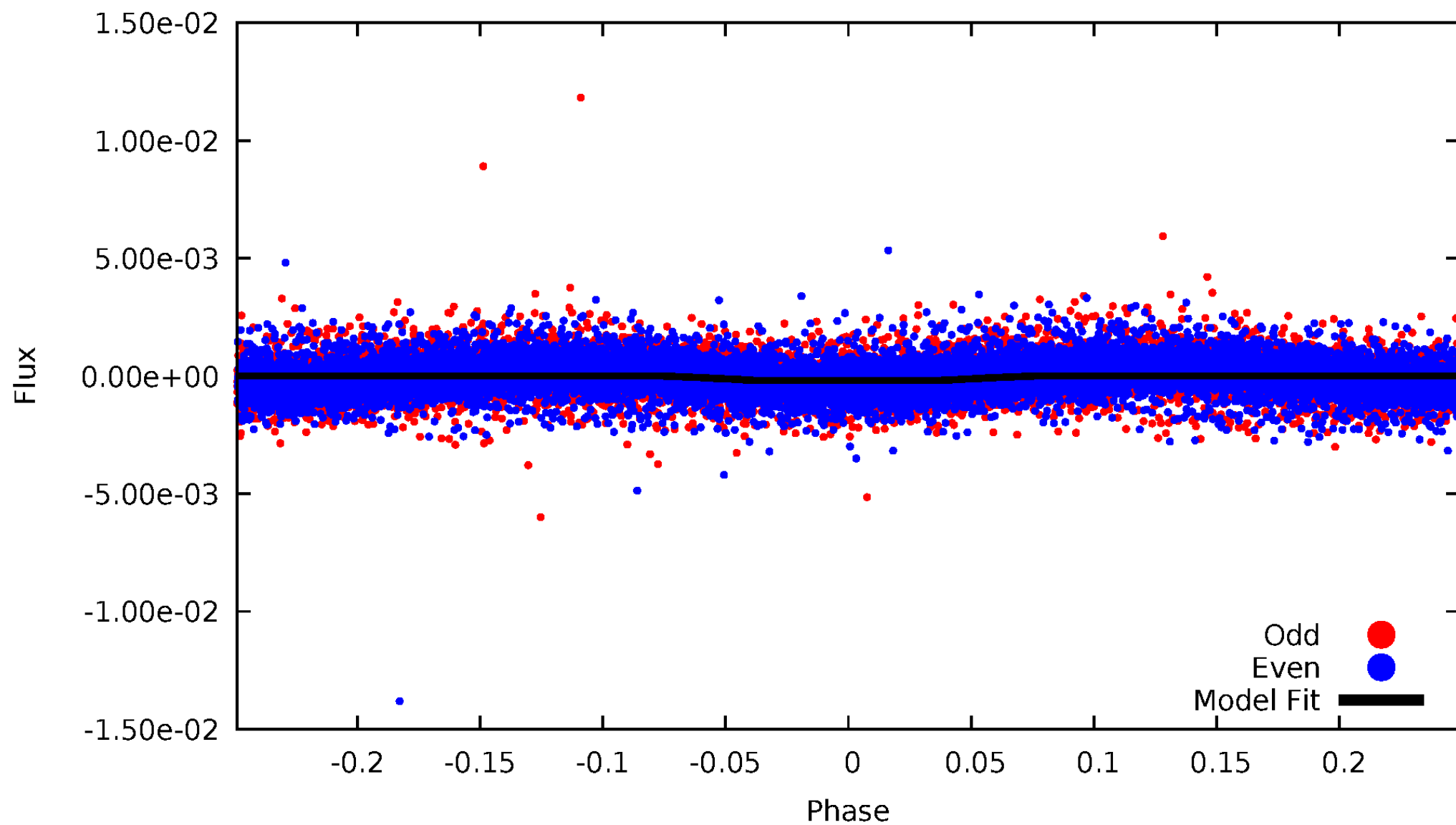


TCE 011081490-01



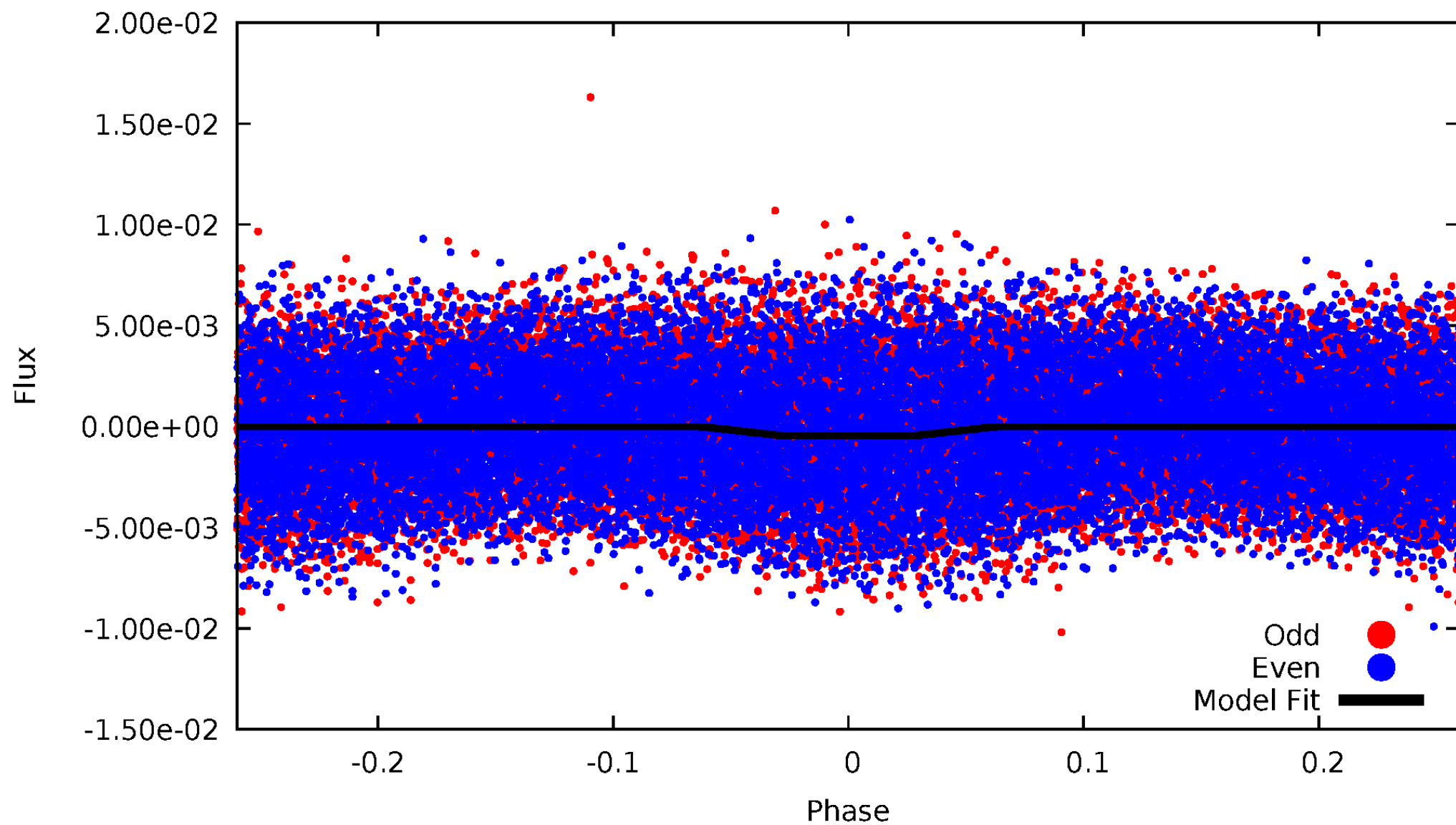
DV Odd/Even

TCE 011081490-01



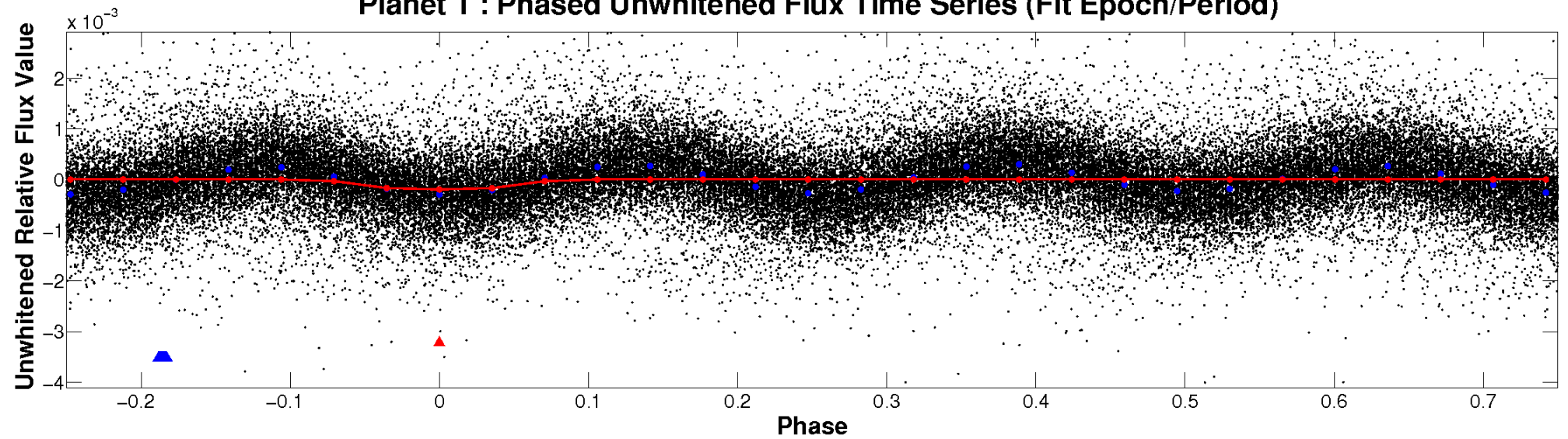
ALT Odd/Even

TCE 011081490-01

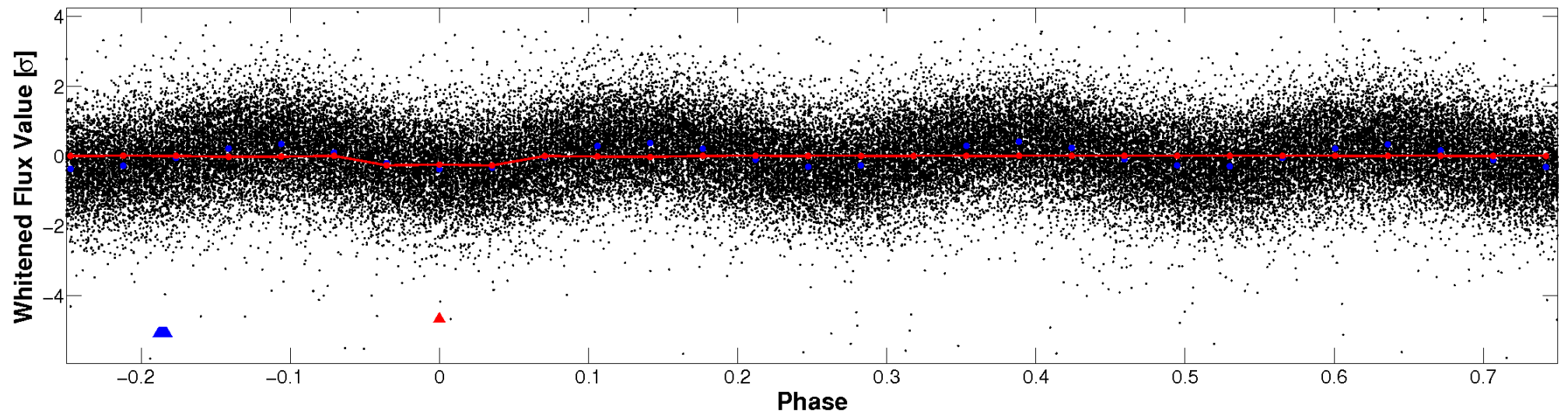


Non-Whitened Vs. Whitened Light Curve

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

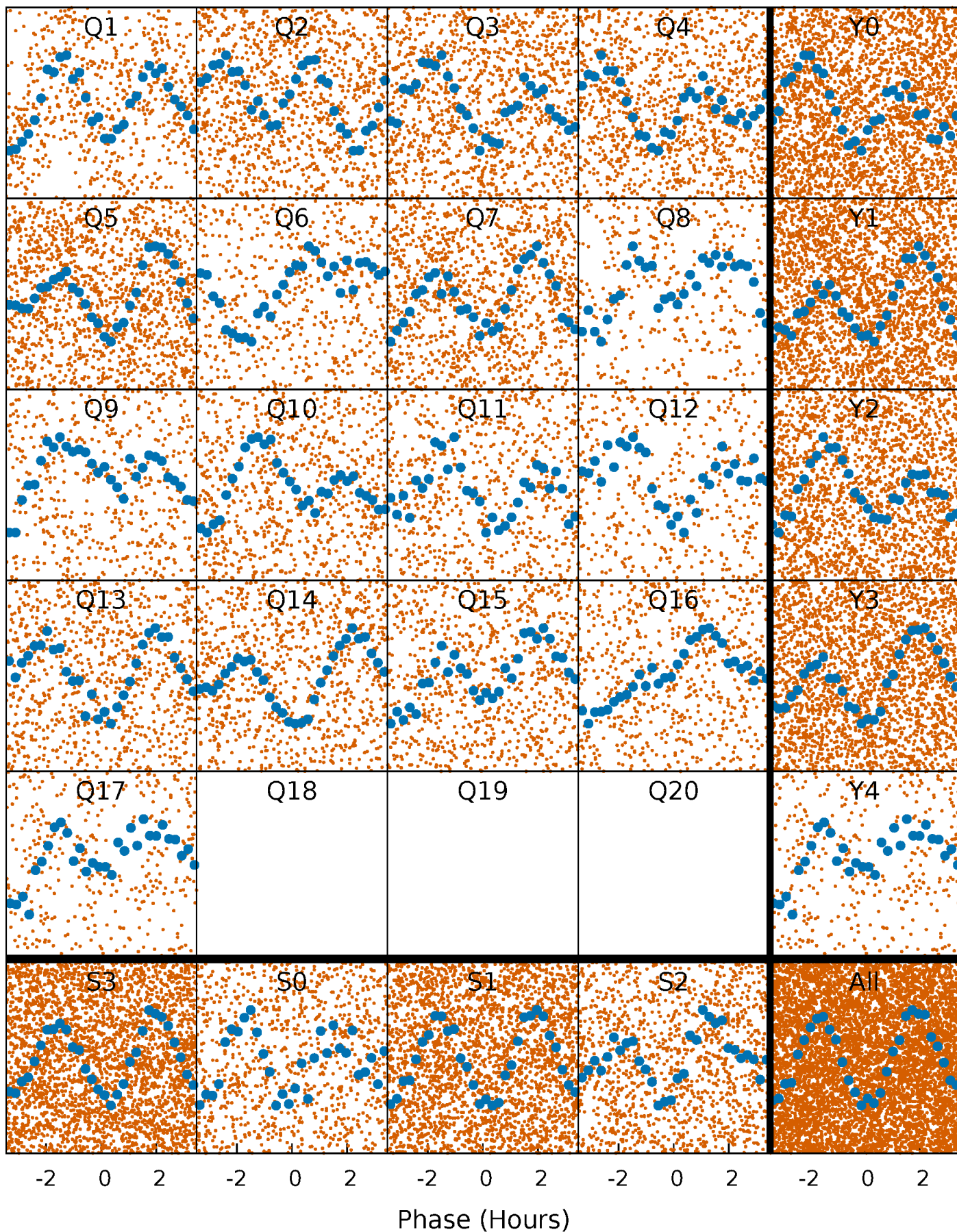


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



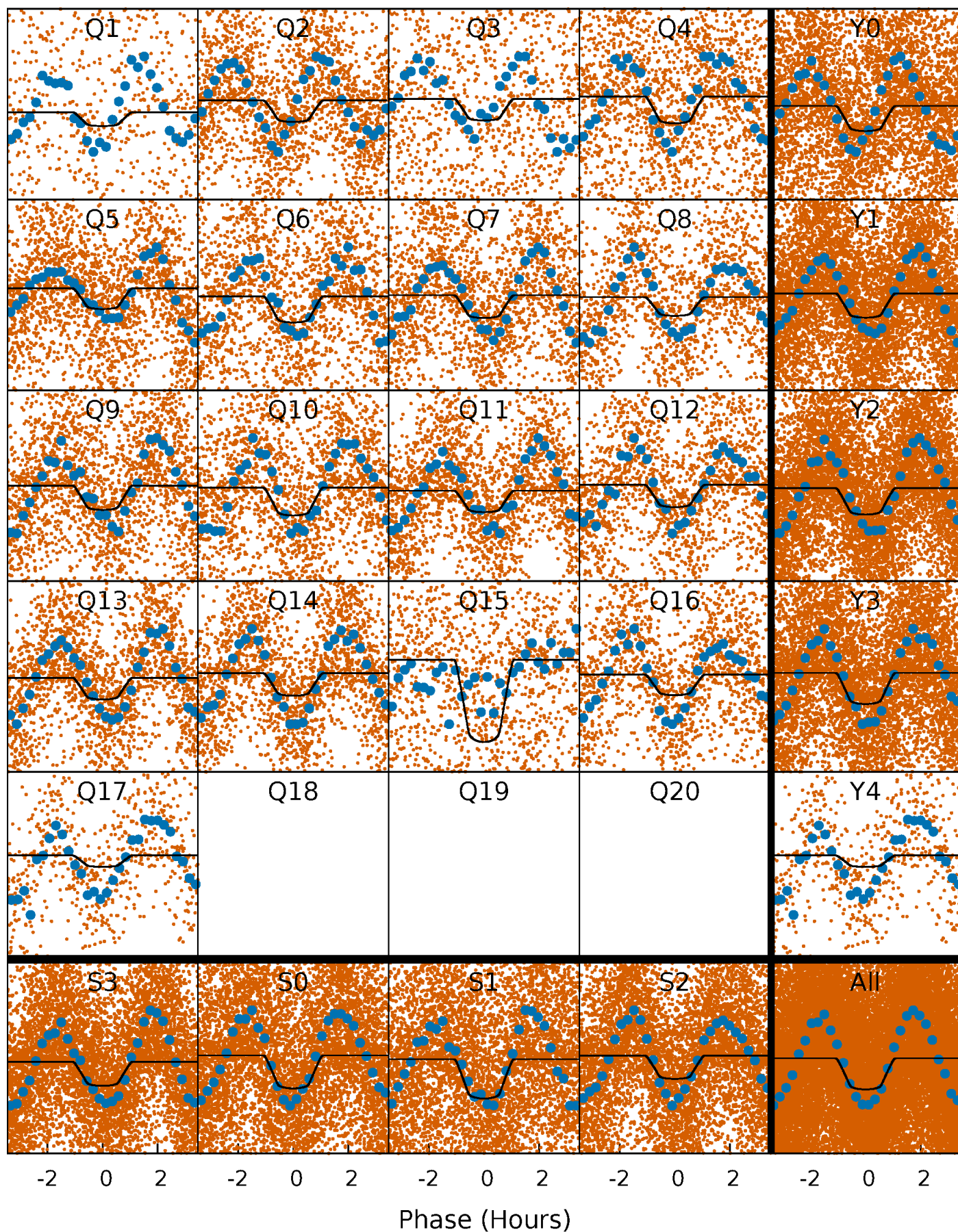
PDC Quarter-Phased Transit Curves

TCE 011081490-01 P= 0.578274 Days $T_0=131.575888$ (BKJD)



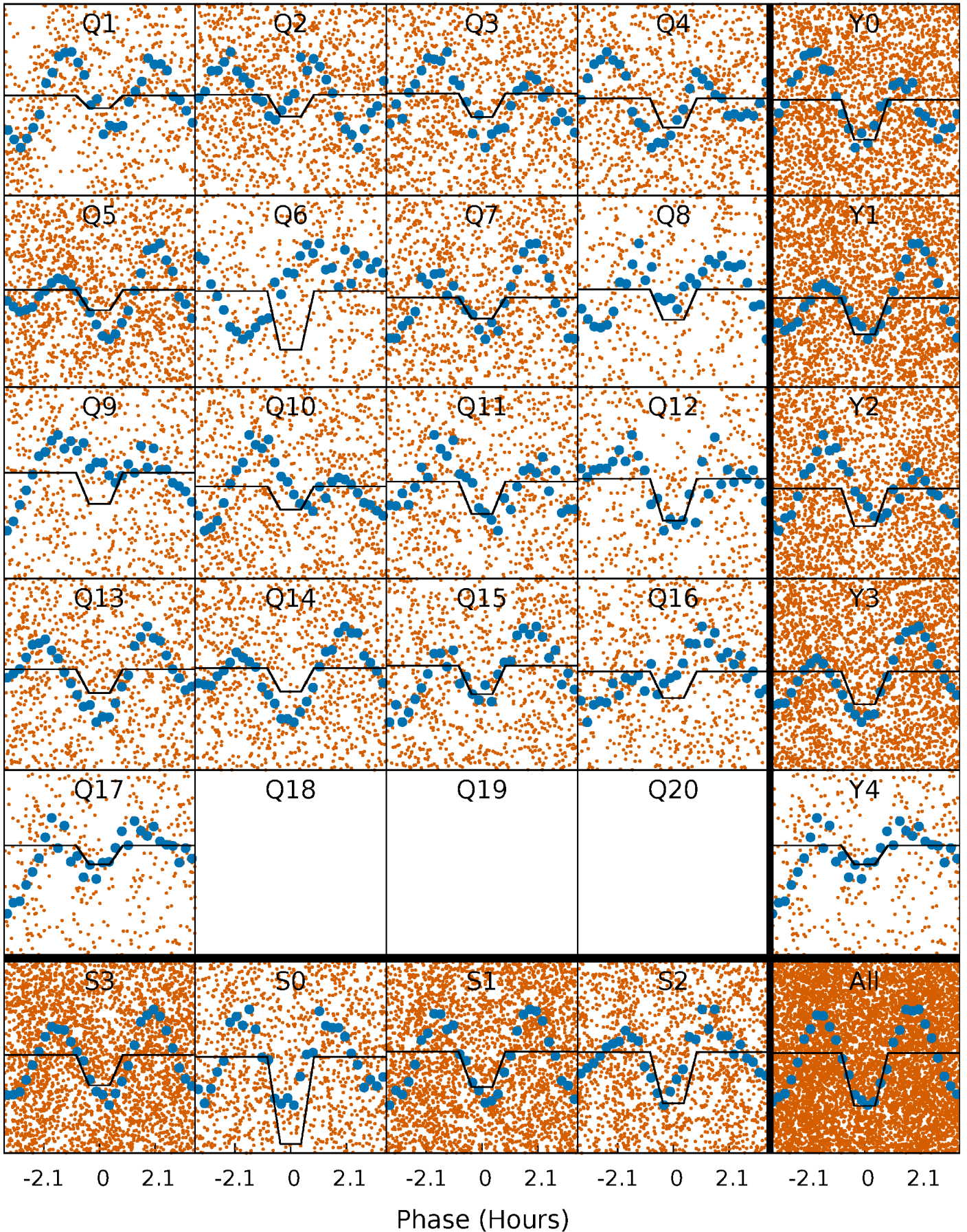
DV Quarter-Phased Transit Curves

TCE 011081490-01 P= 0.578274 Days $T_0=131.575888$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

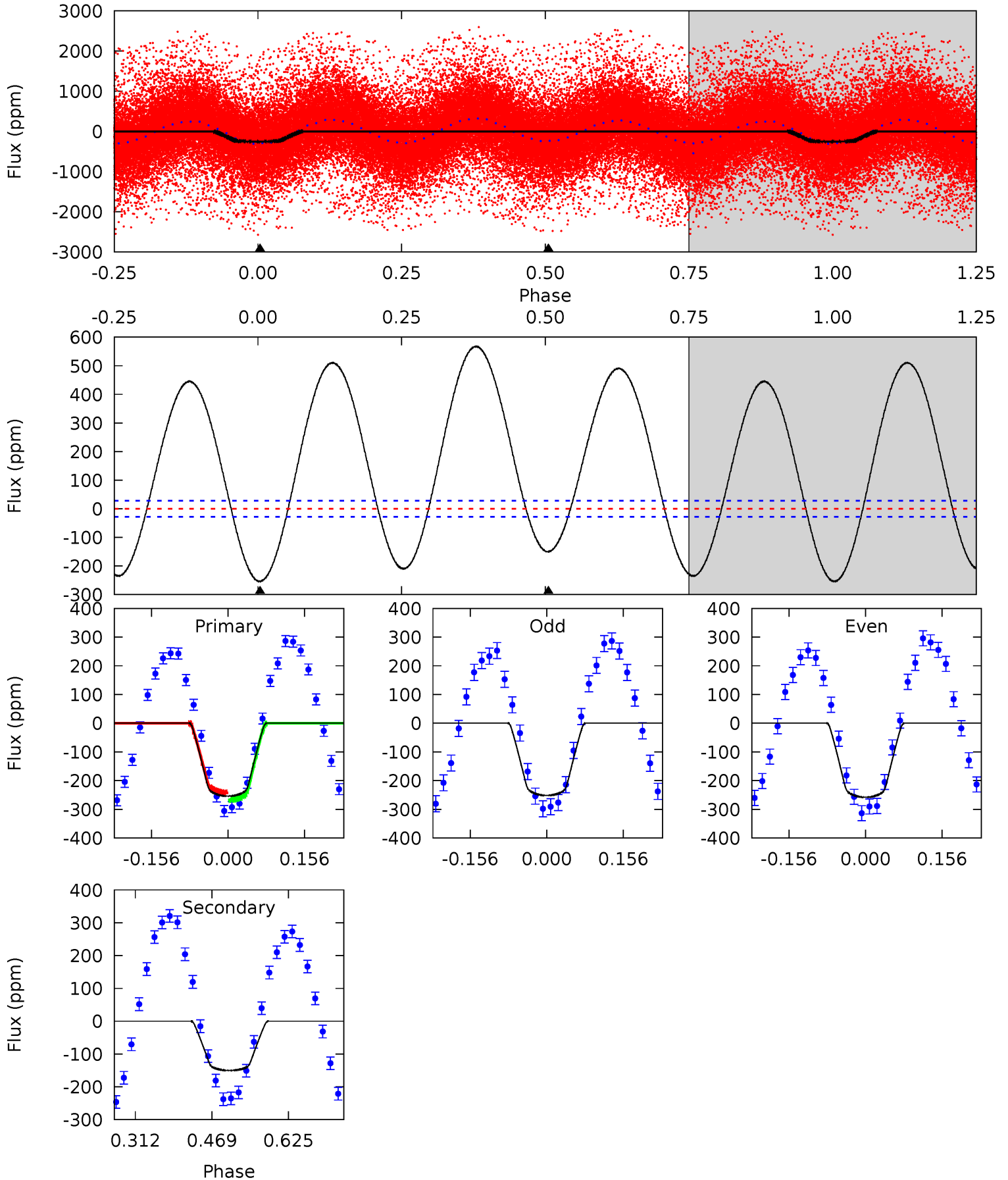
TCE 011081490-01 P= 0.578280 Days $T_0=131.569181$ (BKJD)



DV Model-Shift Uniqueness Test

011081490-01, P = 0.578274 Days, E = 130.997614 Days

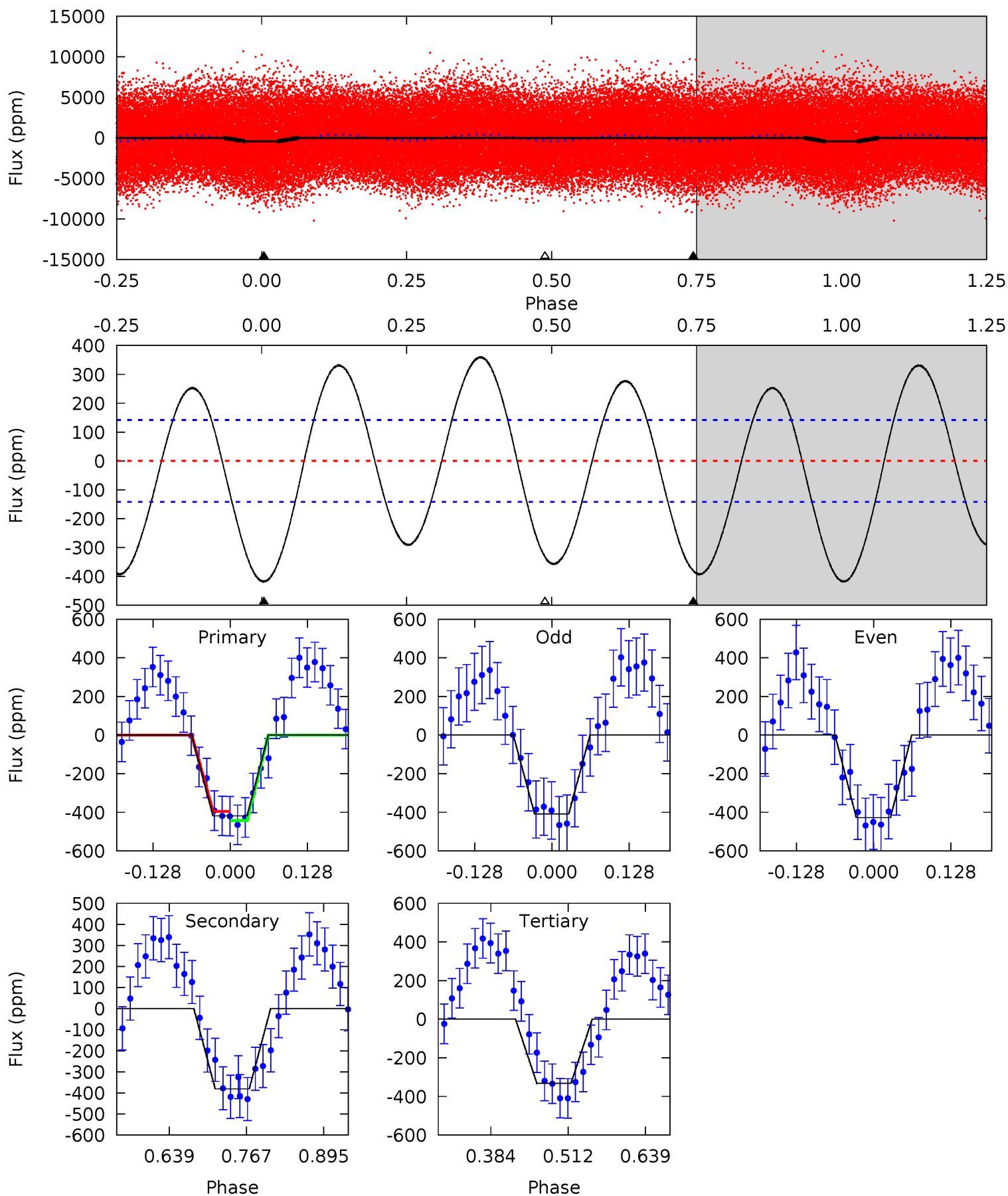
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
40.6	24.0	0	0	4.47	1.42	32.2	40.6	40.6	24.0	24.0	0.50	1.06	0.69	2.13



Alt Model-Shift Uniqueness Test

011081490-01, P = 0.578280 Days, E = 130.990901 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.3	12.1	10.6	0	4.51	1.52	7.43	2.76	13.3	1.55	12.1	0.30	0.97	0.46	0.73



Stellar Parameters For KIC 011081490

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9423^{+301}_{-451}	$4.019^{+0.240}_{-0.180}$	$0.070^{+0.200}_{-0.750}$	$2.496^{+0.835}_{-0.919}$	$2.370^{+0.377}_{-0.700}$	$0.215^{+0.357}_{-0.110}$
	+3%/-5%	+6%/-4%	+286%/-1071%	+33%/-37%	+16%/-30%	+166%/-51%
Source	KIC0	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 011081490-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-150 ± 6	$3.91^{+0.97}_{-0.75}$	6715^{+575}_{-572}	7788^{+752}_{-686}	$1.736^{+0.854}_{-0.573}$
Alt.	-381 ± 31	$5.77^{+1.07}_{-1.19}$	6694^{+624}_{-558}	8308^{+647}_{-536}	$2.080^{+0.924}_{-0.582}$

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 $A_{obs} \gg 1.0$

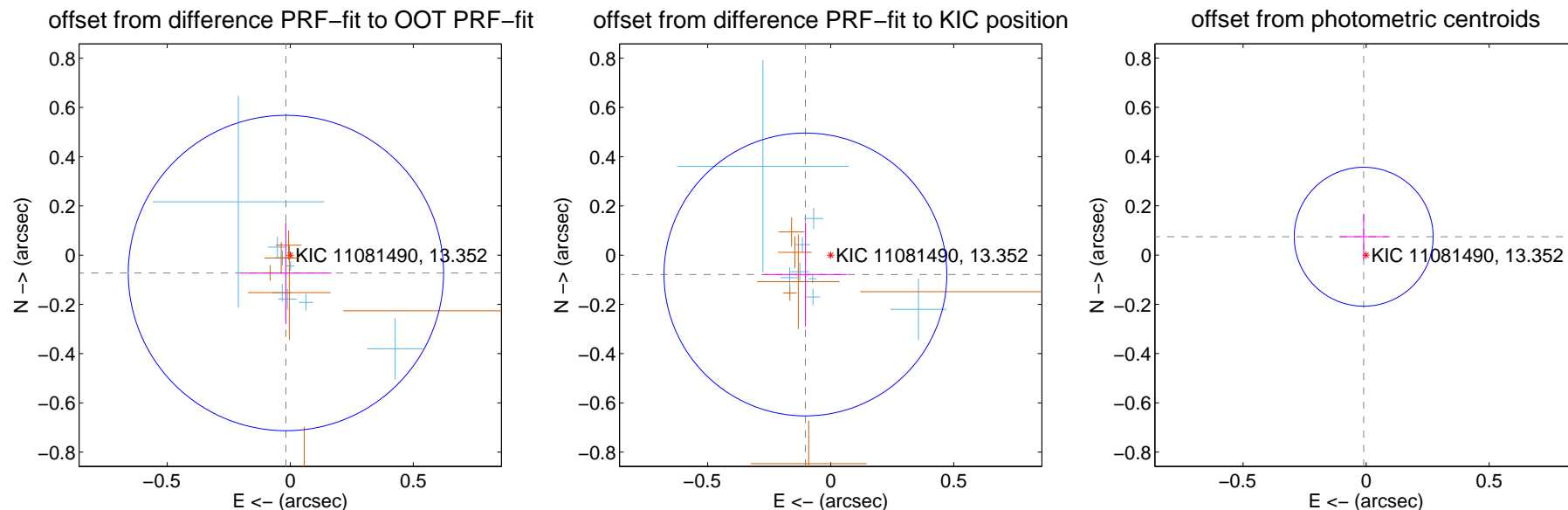
DV Centroid Data

Supplemental centroid analysis for 011081490-01. Kepler magnitude: 13.35. Transit SNR 22.45

There are 8 quarters with good PRF difference image offsets

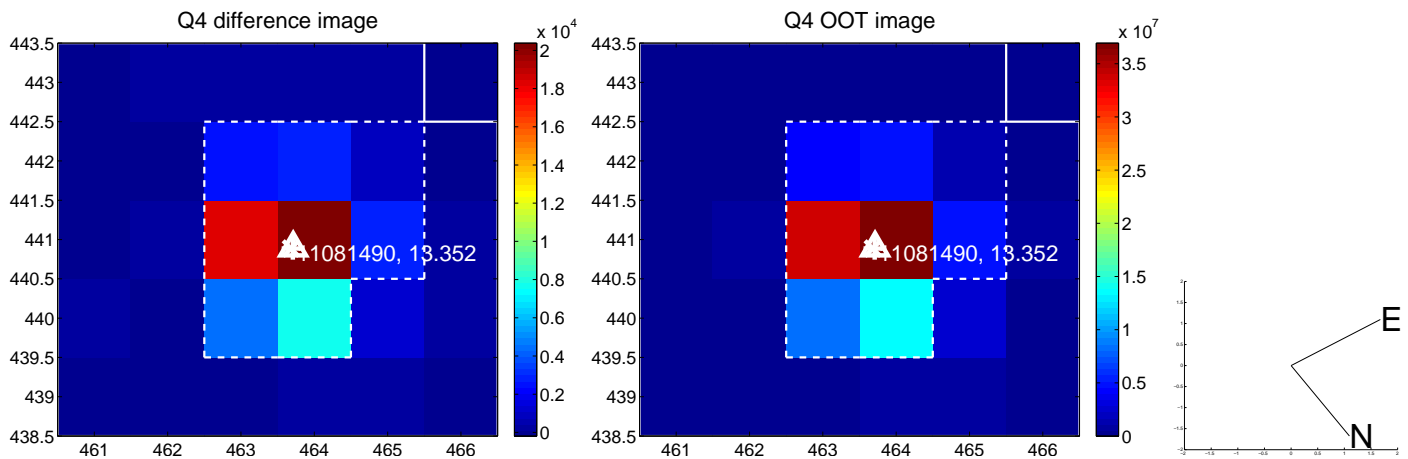
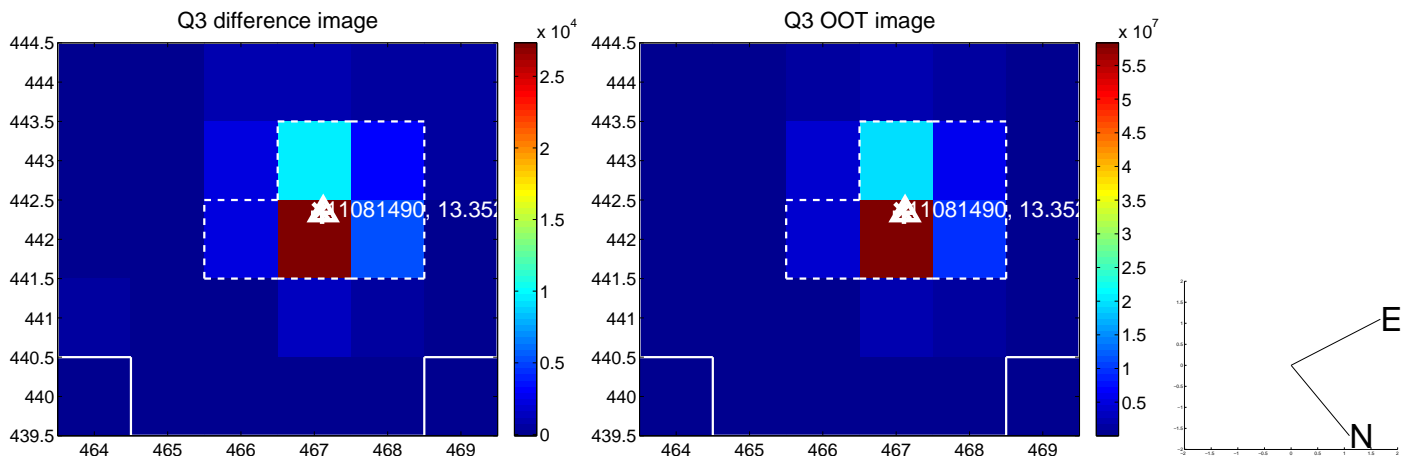
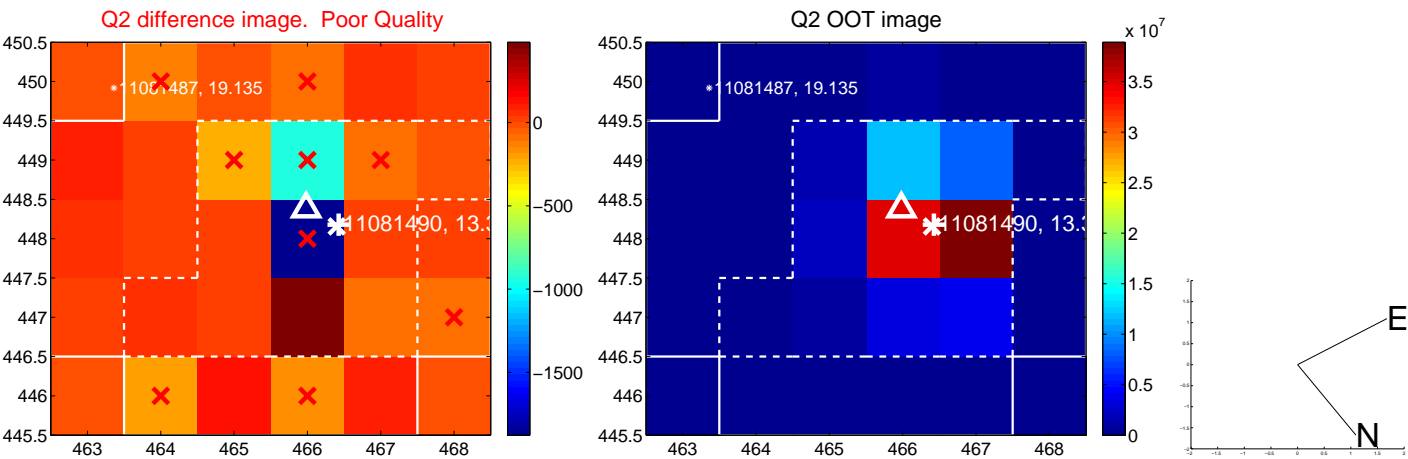
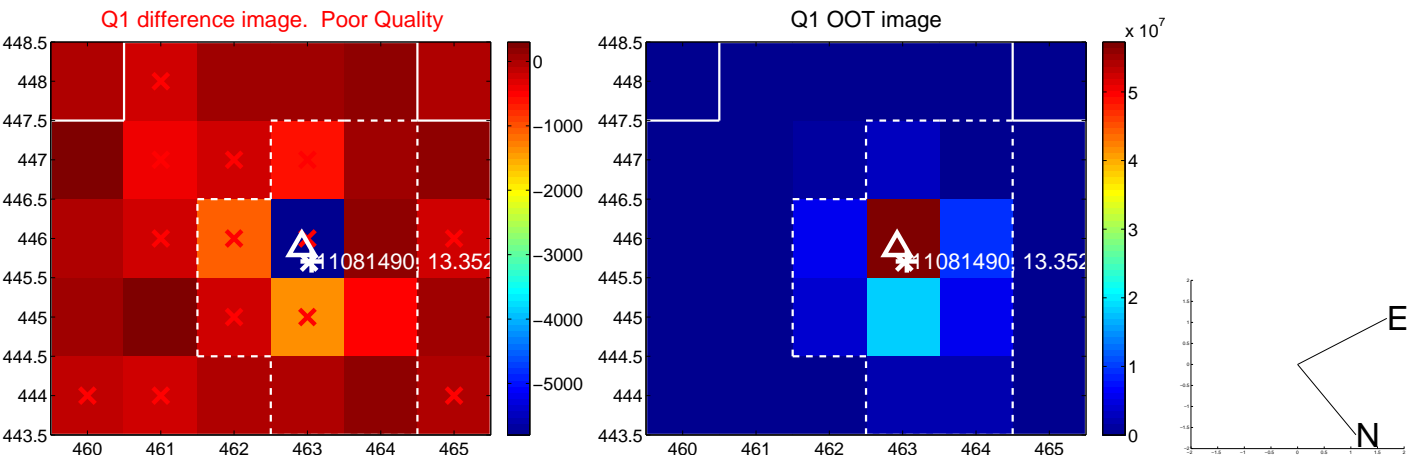
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.075 ± 0.214	0.35	0.018 ± 0.185	-0.073 ± 0.207
PRF-fit source offset from KIC position	0.129 ± 0.191	0.68	0.103 ± 0.169	-0.078 ± 0.211
photometric centroid source offset	0.08 ± 0.09	0.80	0.01 ± 0.10	0.07 ± 0.09

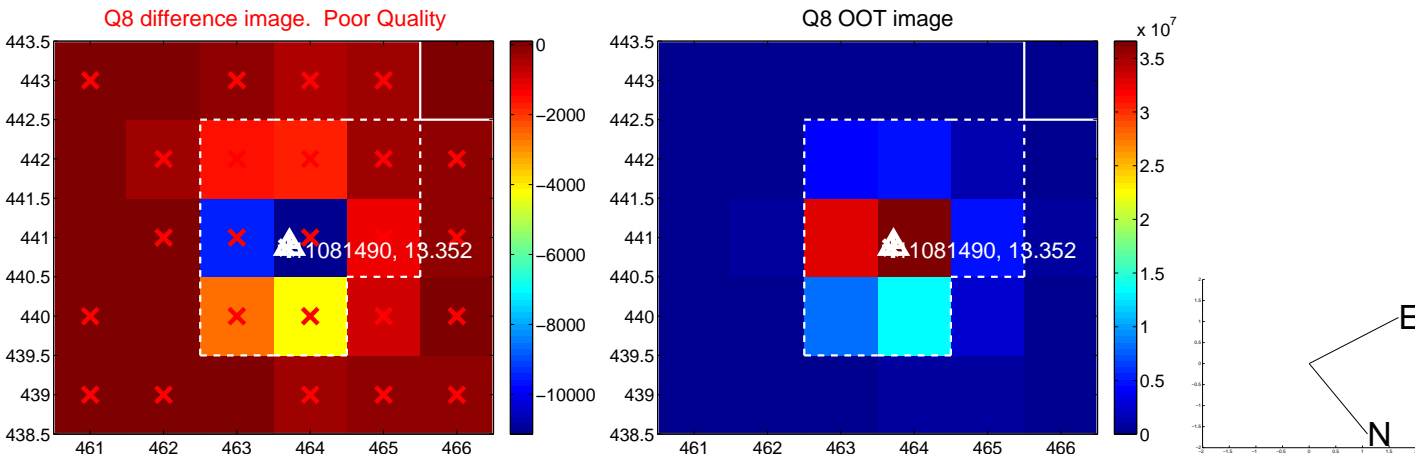
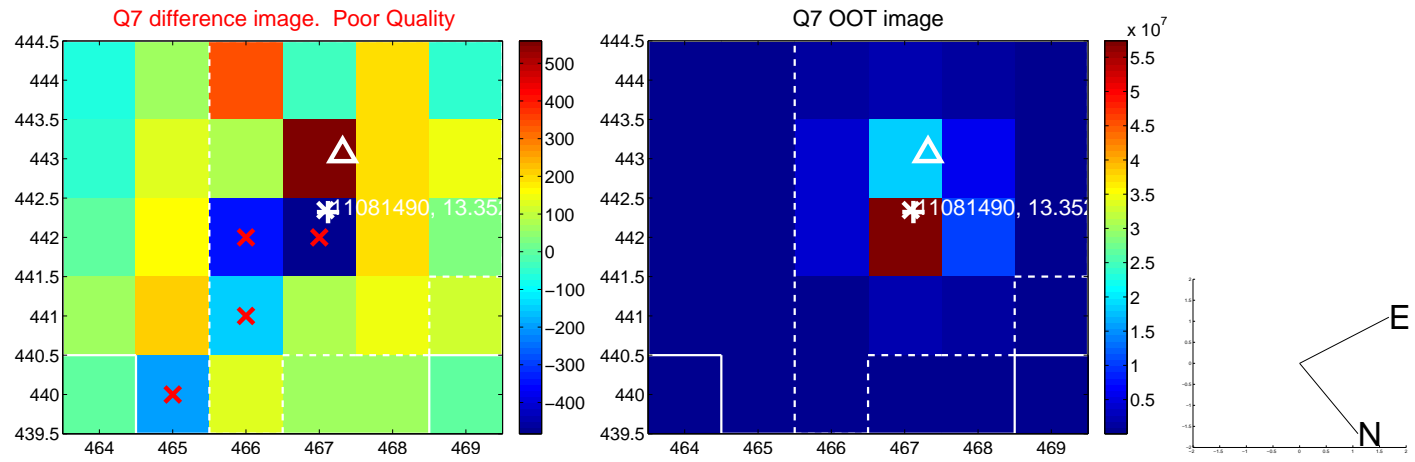
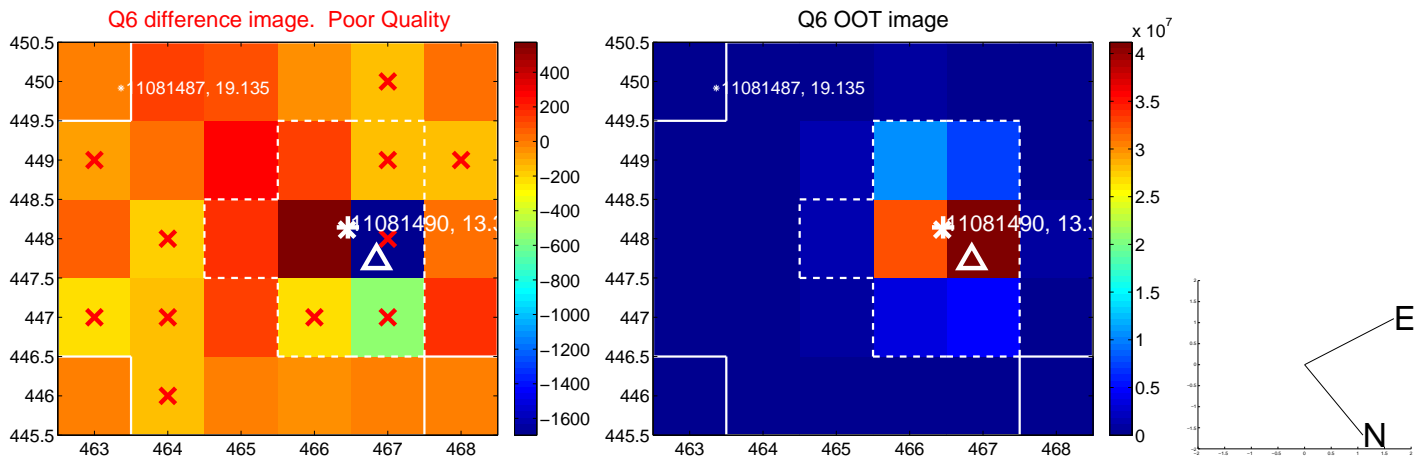
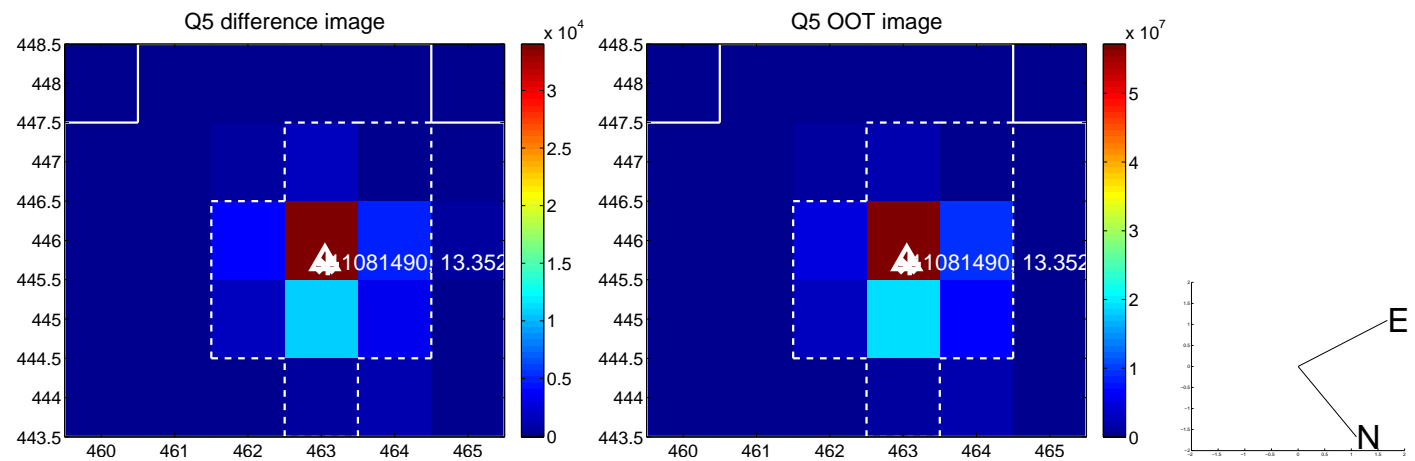


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

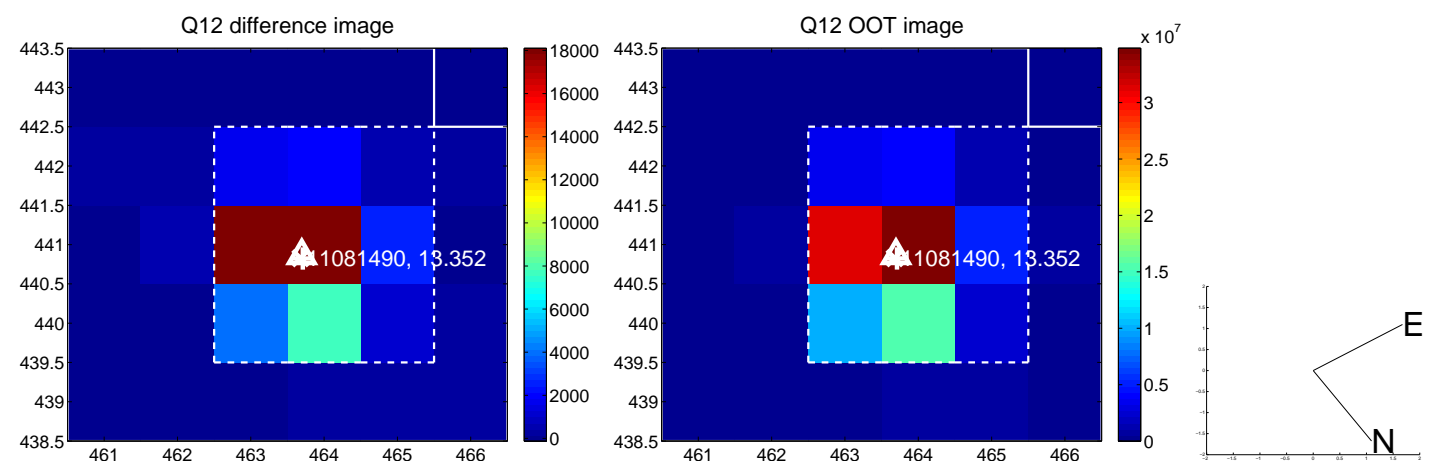
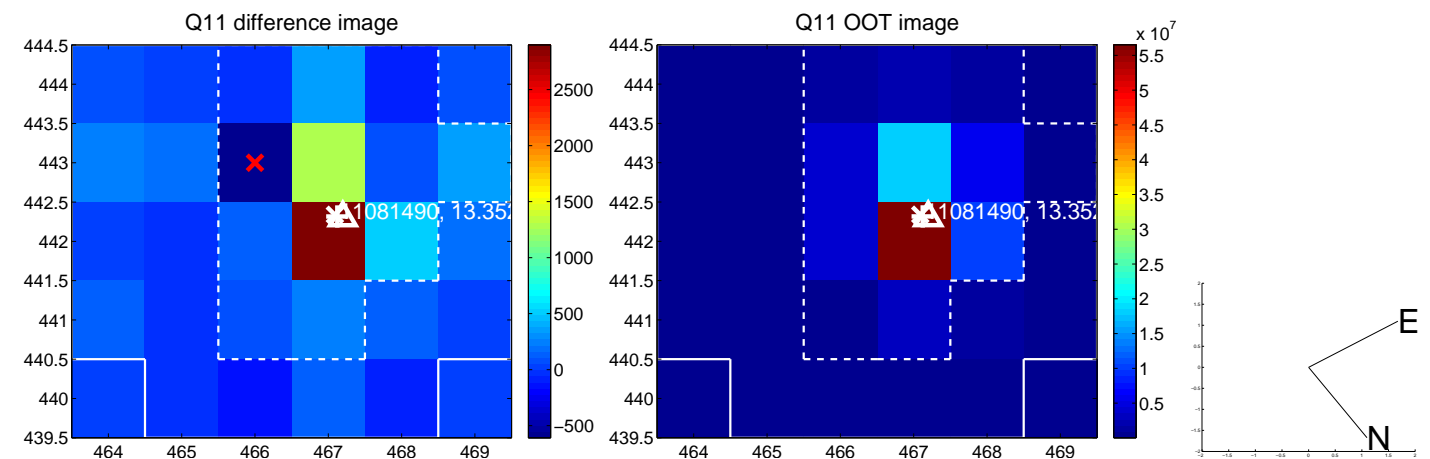
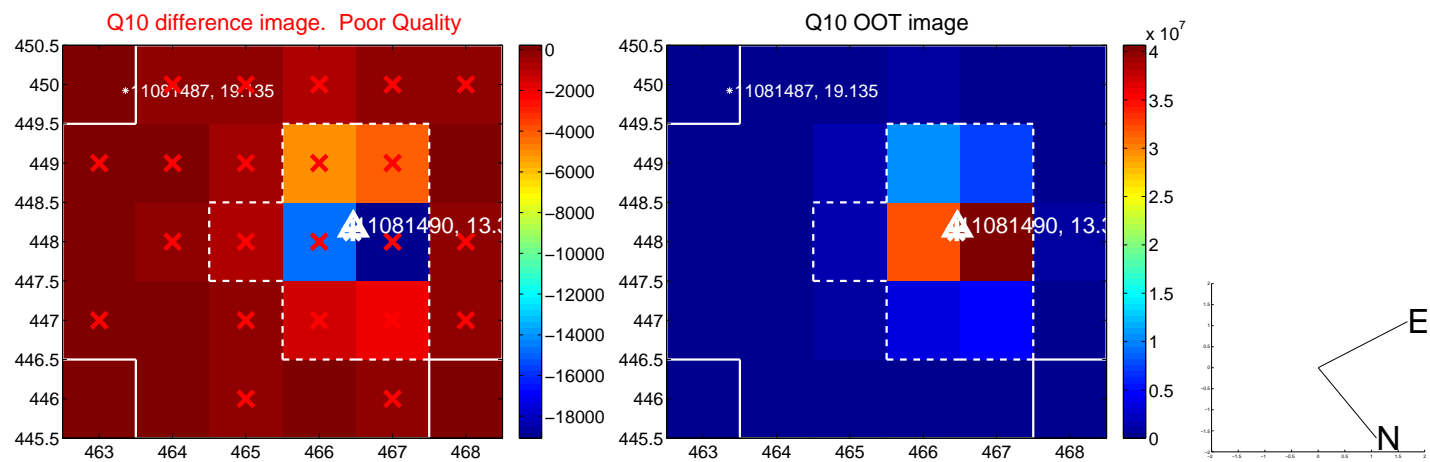
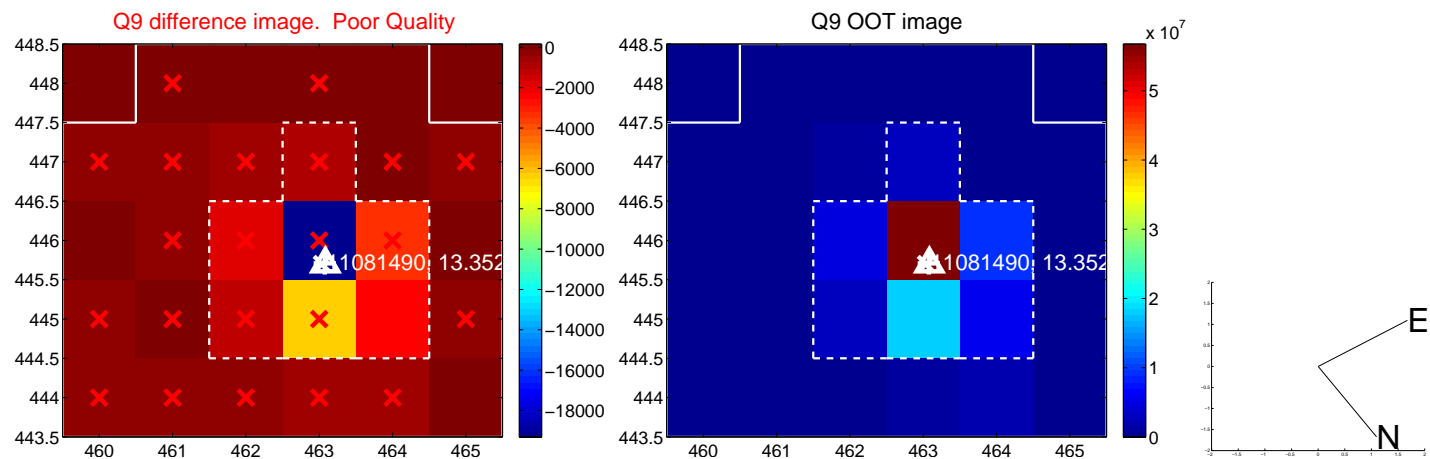
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



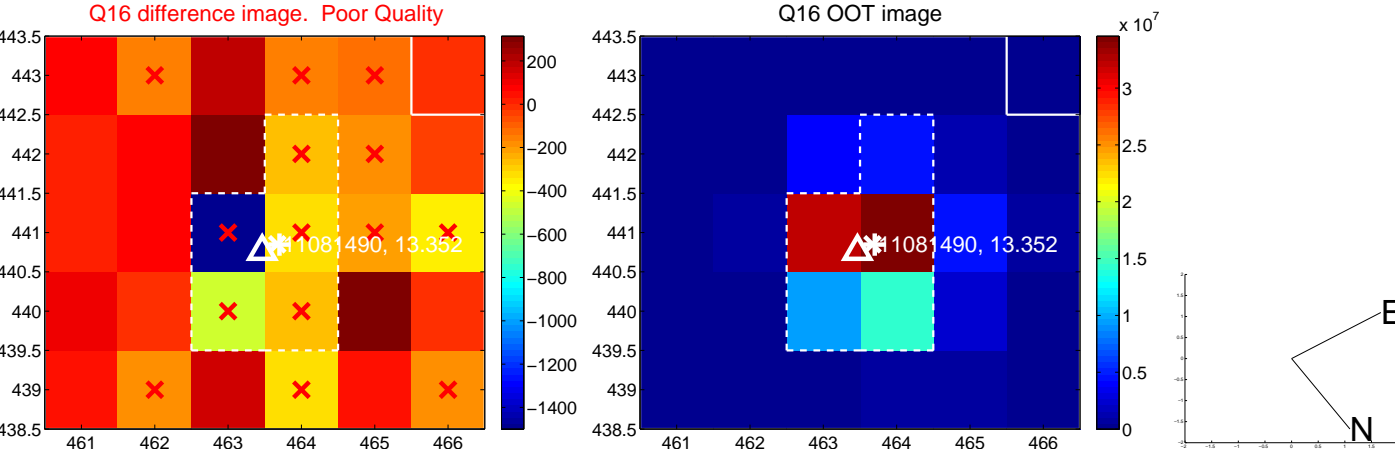
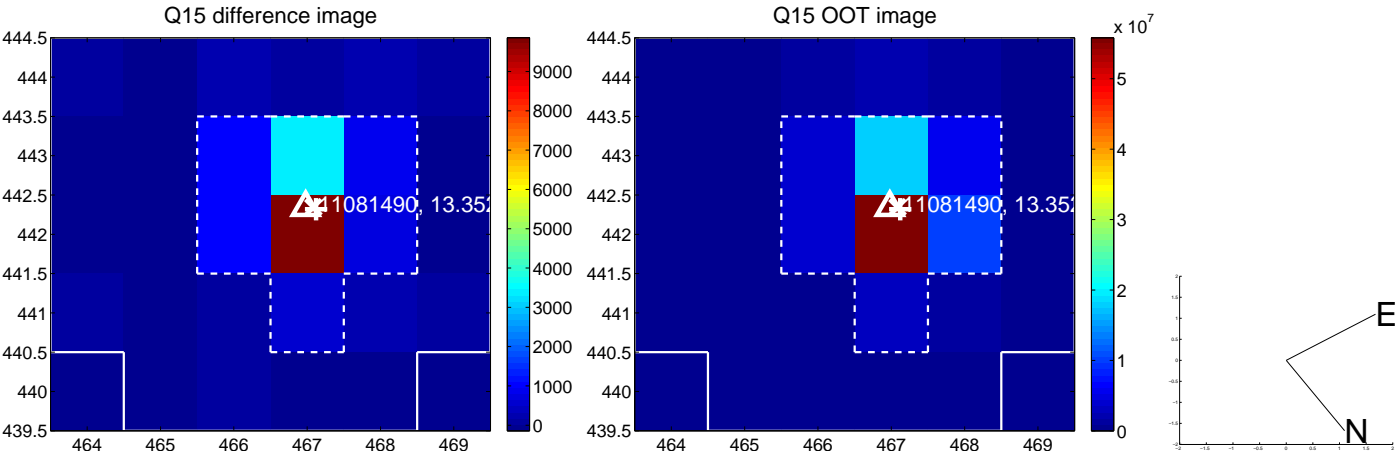
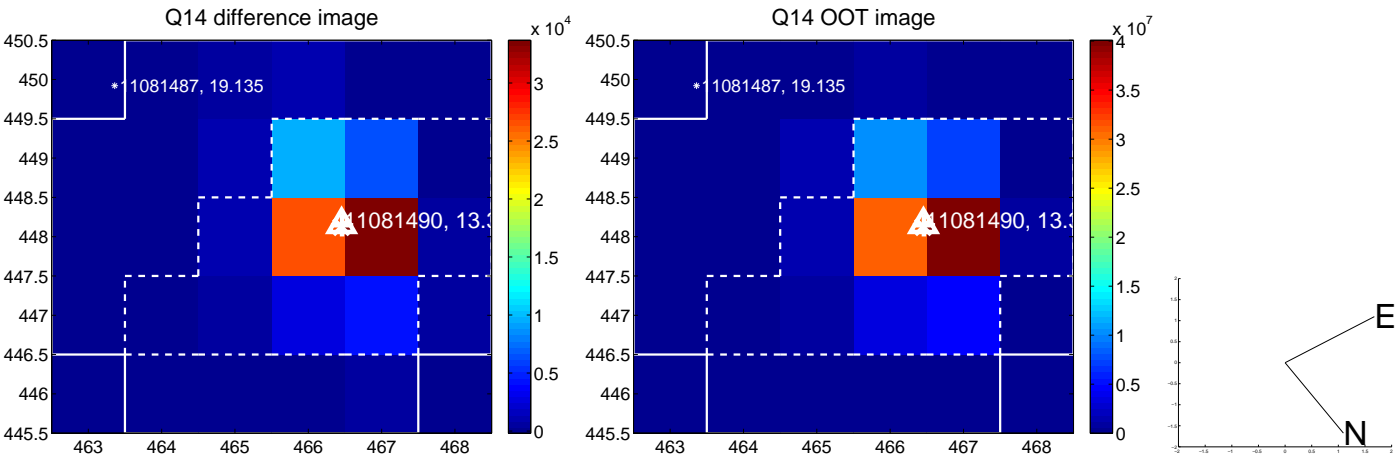
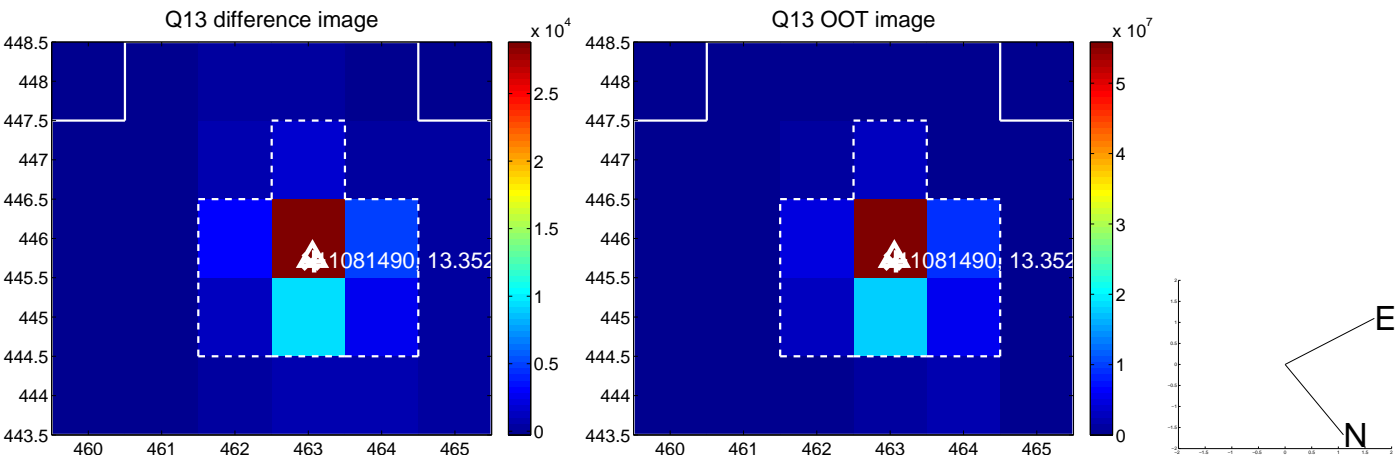
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



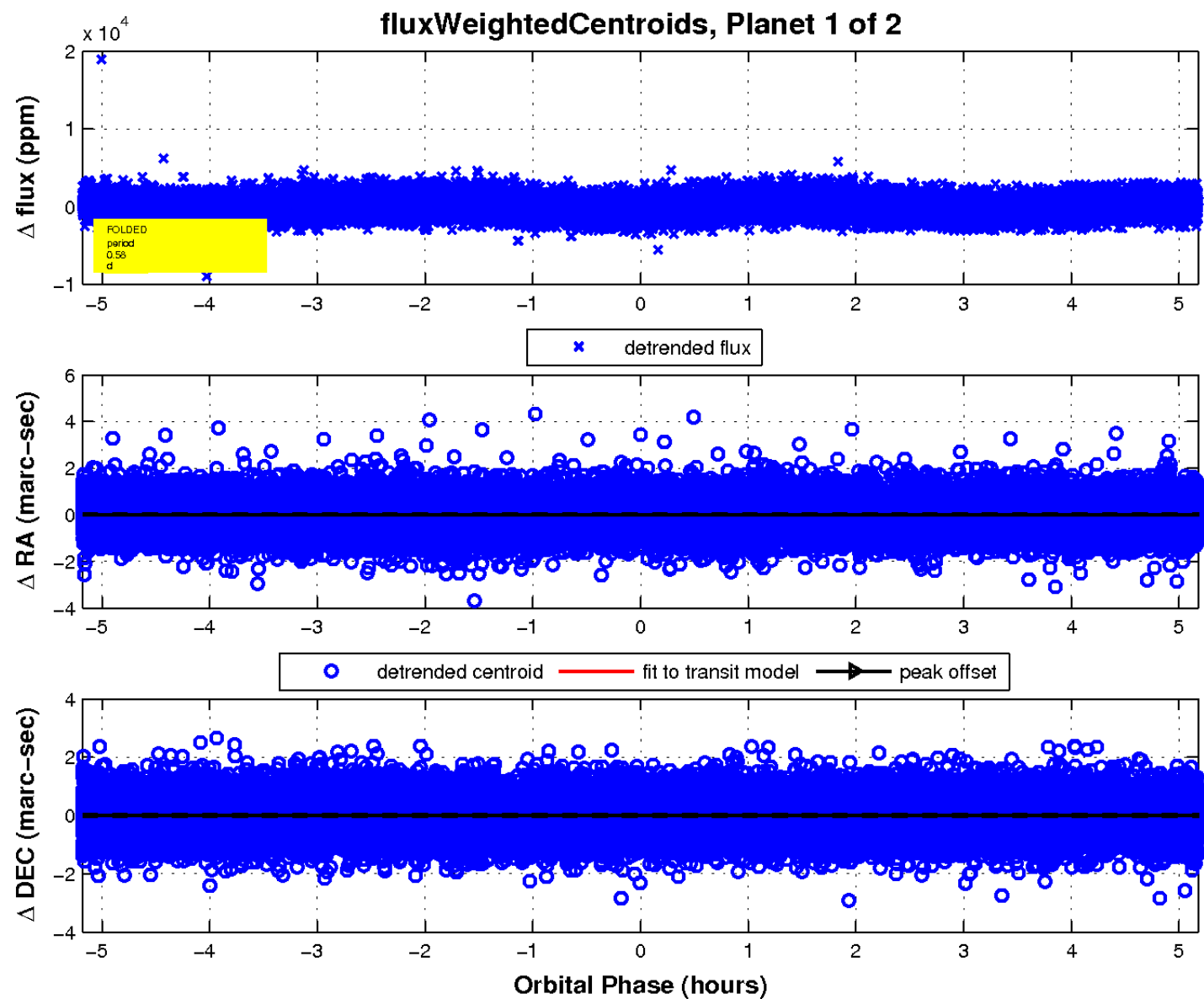
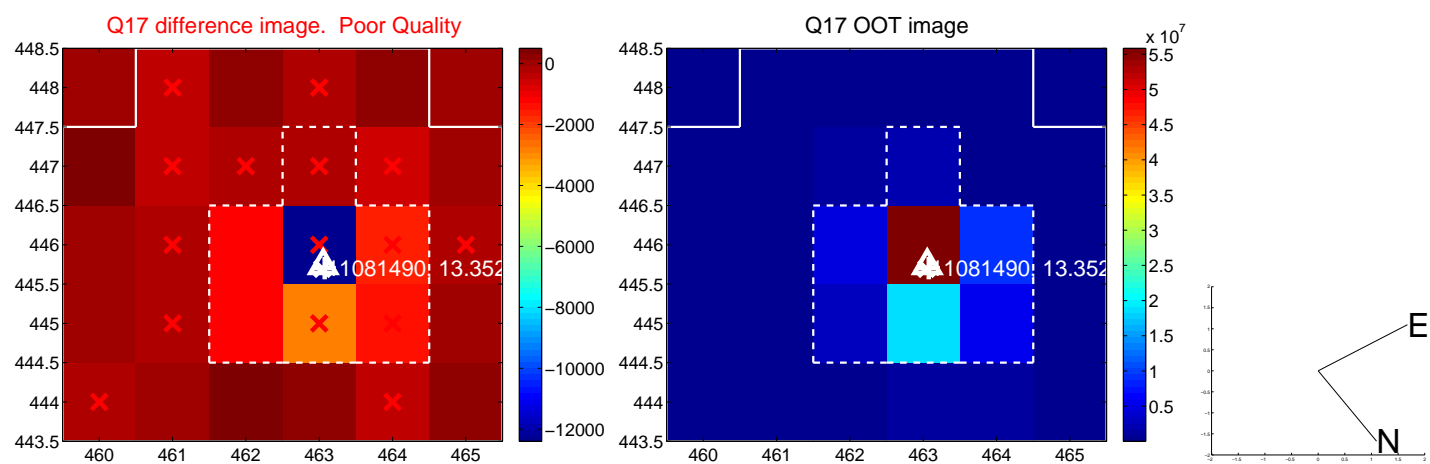
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

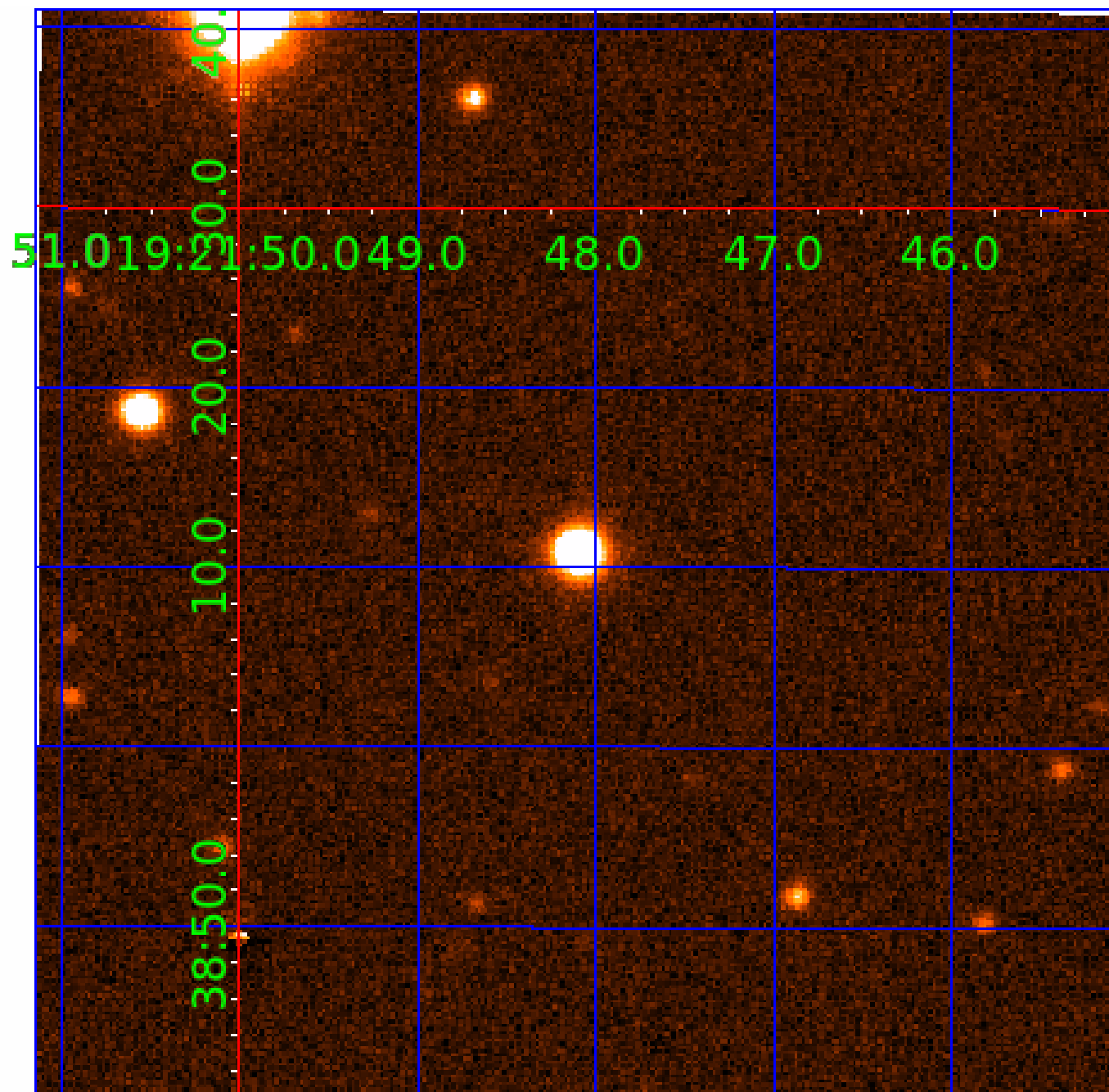


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011081490

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})
011081490-01	OBS	No	0.578274	131.575888	195.4	1.727	17.7	22.4	2.50	9423	4.02	133958.25
011081490-02	OBS	No	0.578275	132.045332	294.4	3.007	18.1	28.0	2.50	9423	4.93	133957.87

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011081490-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
011081490-02	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—SAME_NTL_PERIOD—HALO_GHOST

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

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

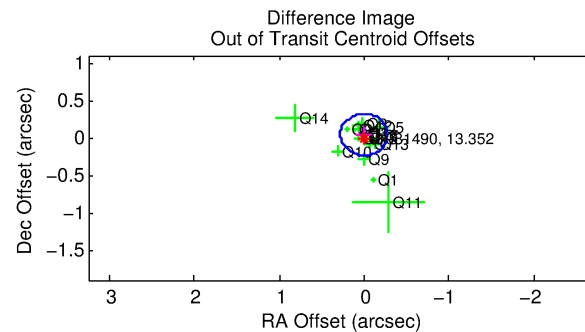
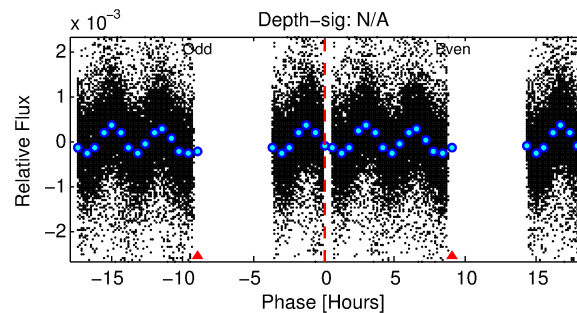
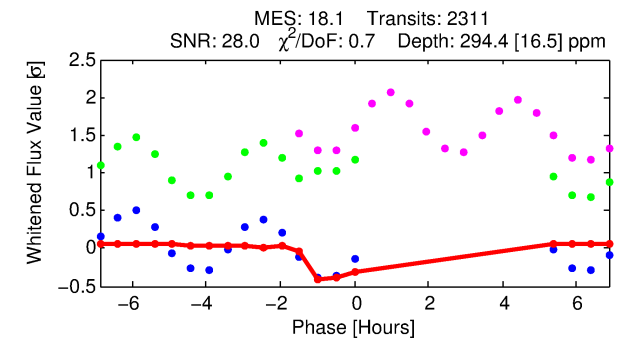
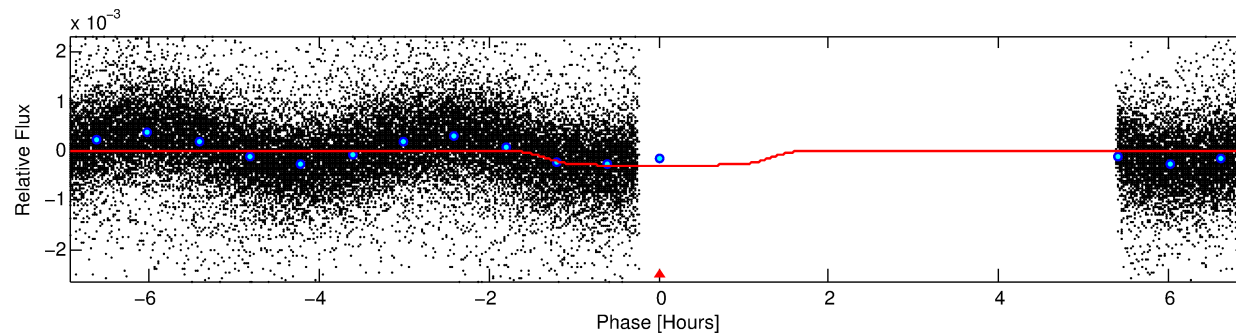
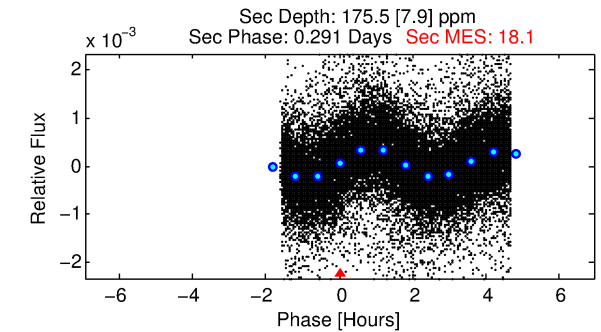
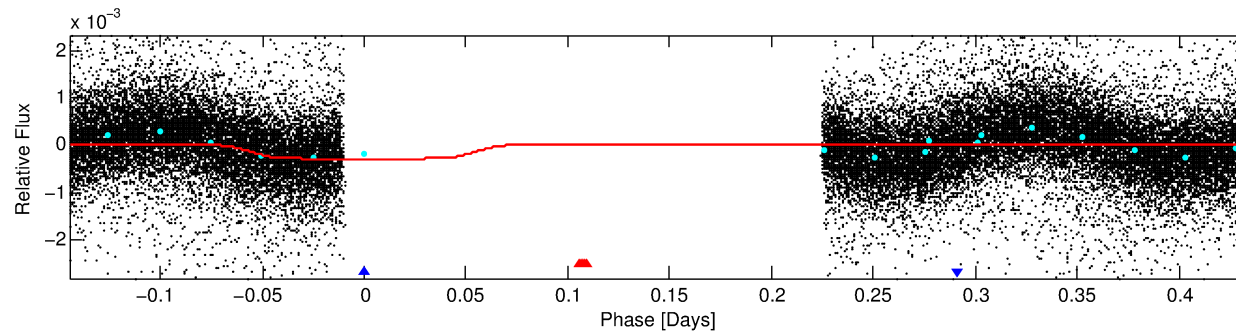
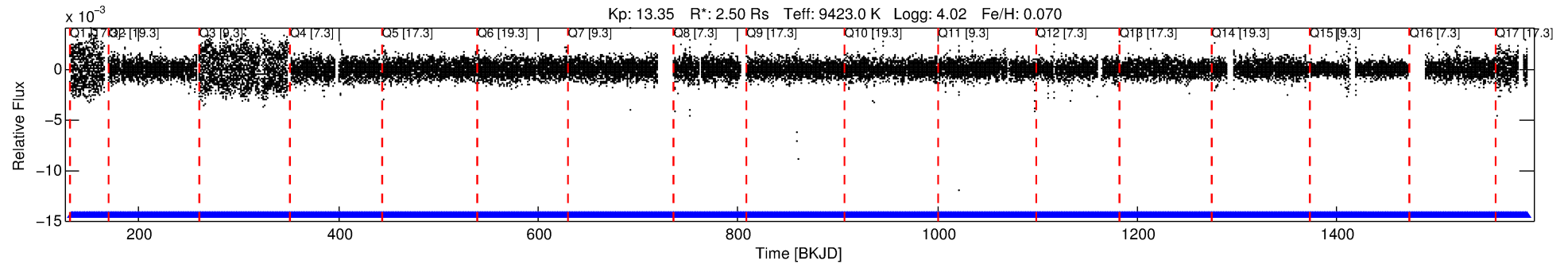
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011081490-02

No Significant Match Found

DV One-Page Summary

KIC: 11081490 Candidate: 2 of 2 Period: 0.578 d



DV Fit Results:

Period = 0.57828 [0.00000] d
Epoch = 132.0453 [0.0034] BKJD
Rp/R* = 0.0181 [0.0013]
a/R* = 1.18 [0.13]
b = 0.90 [0.10]
Seff = 133957.87 [64610.29]
Teff = 4878 [588] K
Rp = 4.93 [1.85] Re
a = 0.0181 [0.0056] AU
Ag = 1.31 [0.61] [0.50σ]
Teffp = 8063 [485] K [4.18σ]

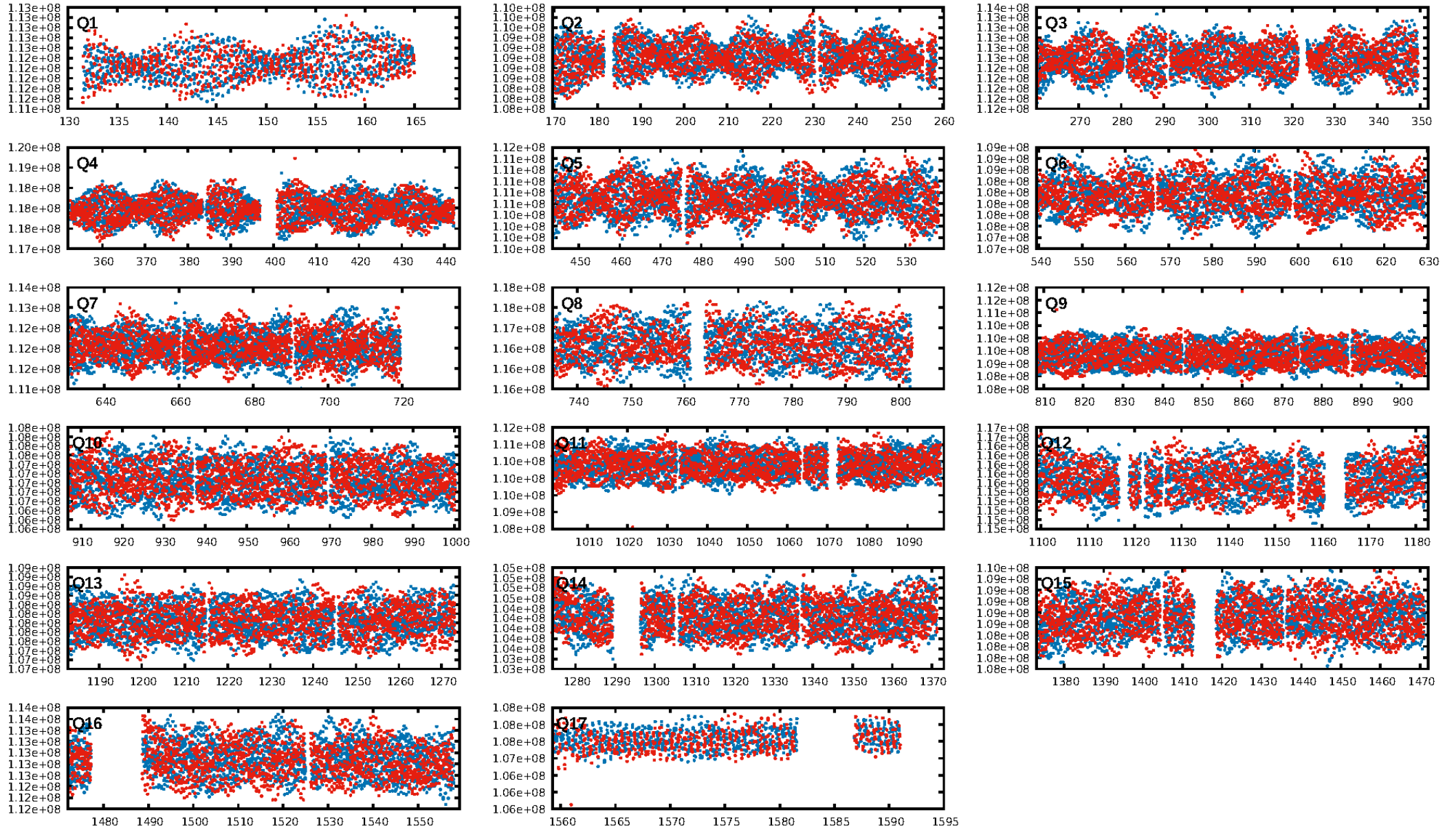
DV Diagnostic Results:

ShortPeriod-sig: 0.0% [0.00σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2208/2208]
GhostDiagnostic-chr: 0.2066
Centroid-sig: 28.2%
Centroid-so: 0.054 arcsec [1.12σ]
OotOffset-rm: 0.041 arcsec [0.44σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-rm: 0.141 arcsec [1.45σ]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.65 [11/17]
DiffImageOverlap-fno: 0.00 [0/17]

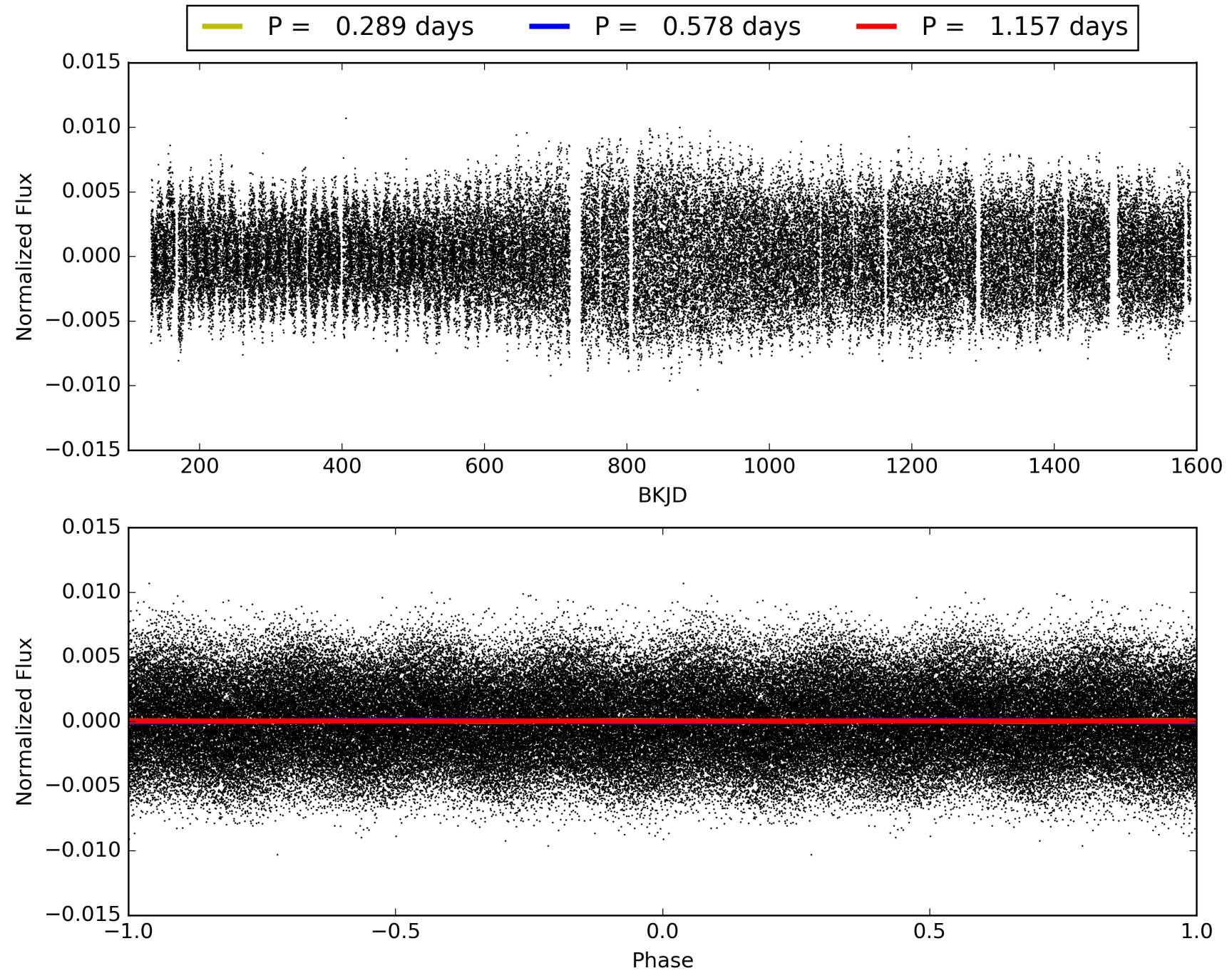
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:49:51 Z

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

TCE 011081490-02, PDC Light Curves

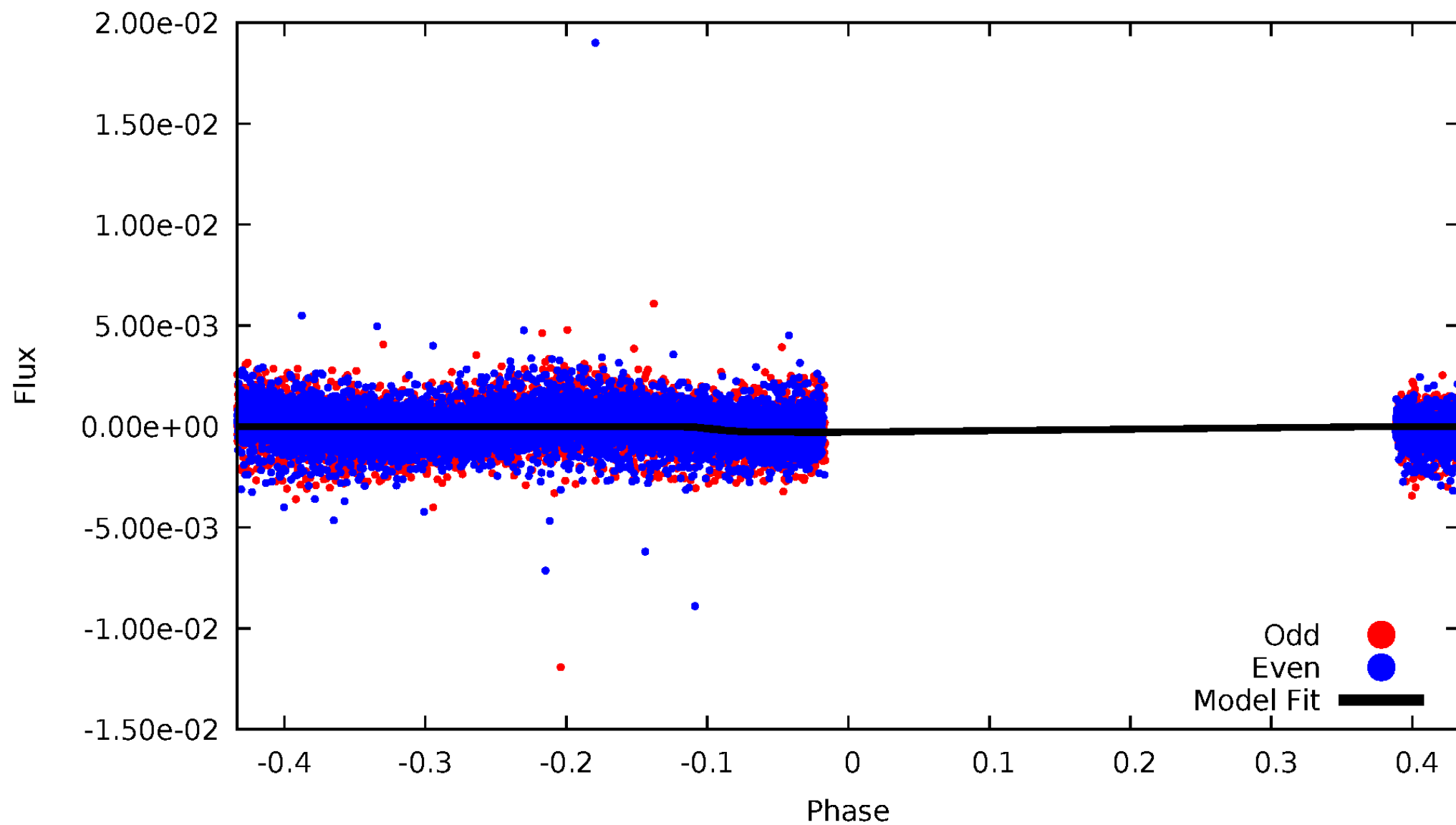


TCE 011081490-02



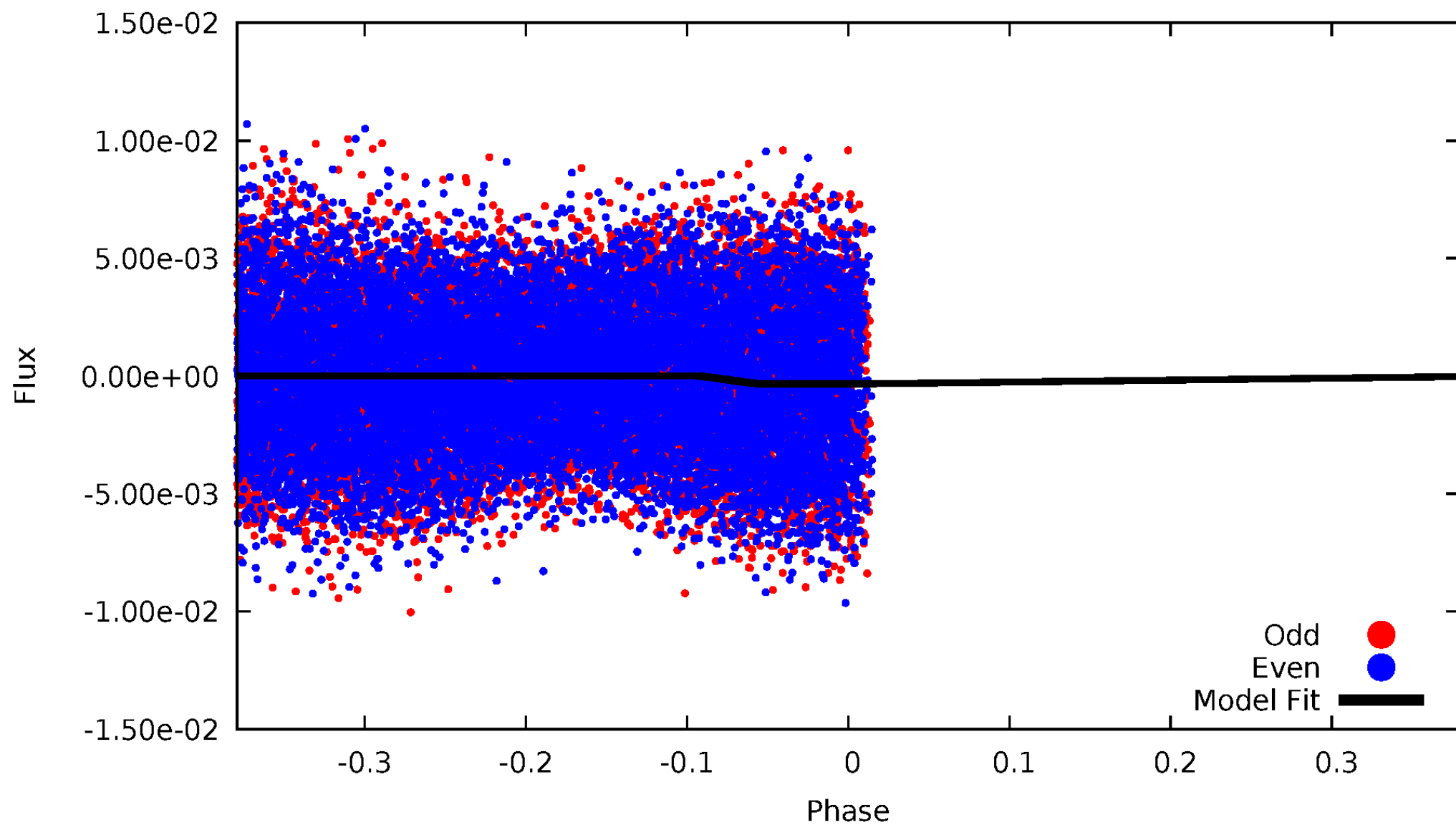
DV Odd/Even

TCE 011081490-02



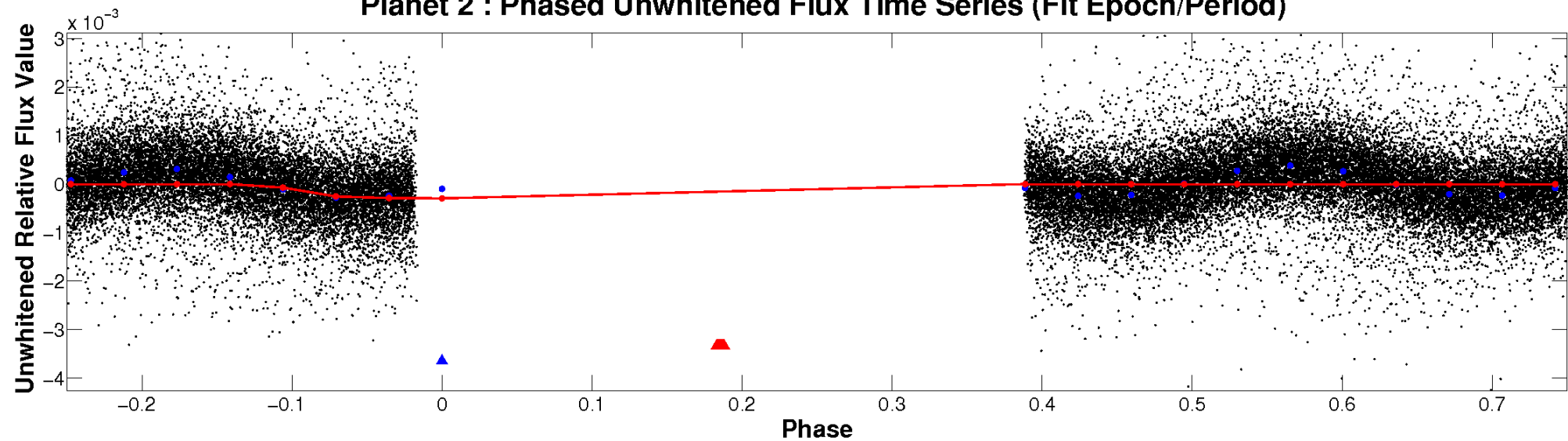
ALT Odd/Even

TCE 011081490-02

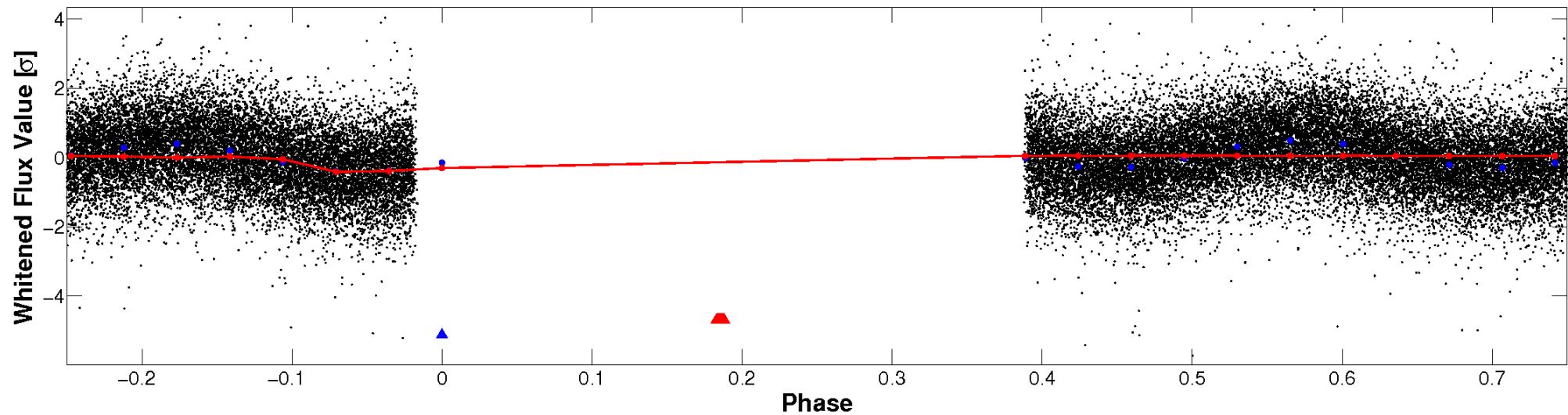


Non-Whitened Vs. Whitened Light Curve

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

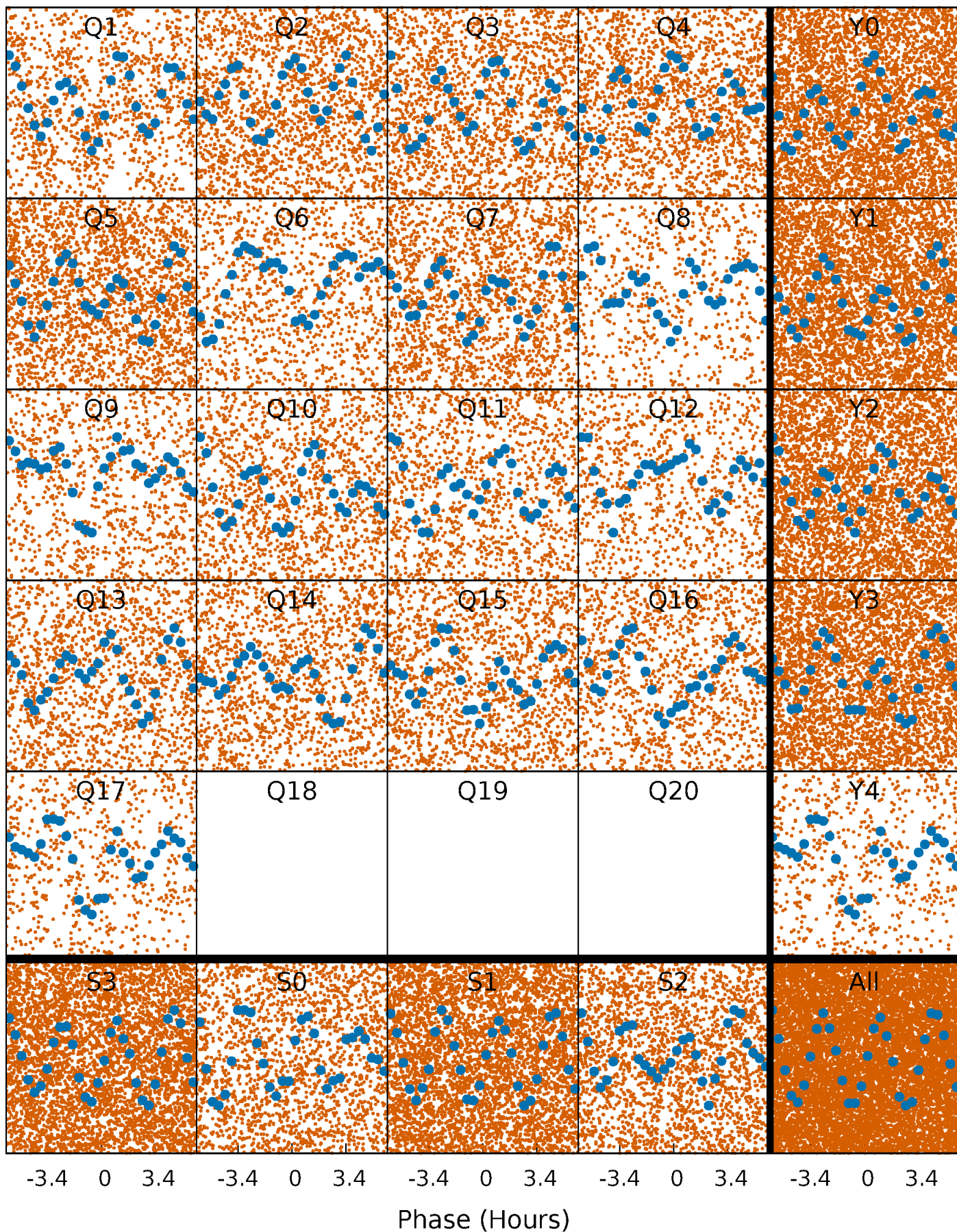


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



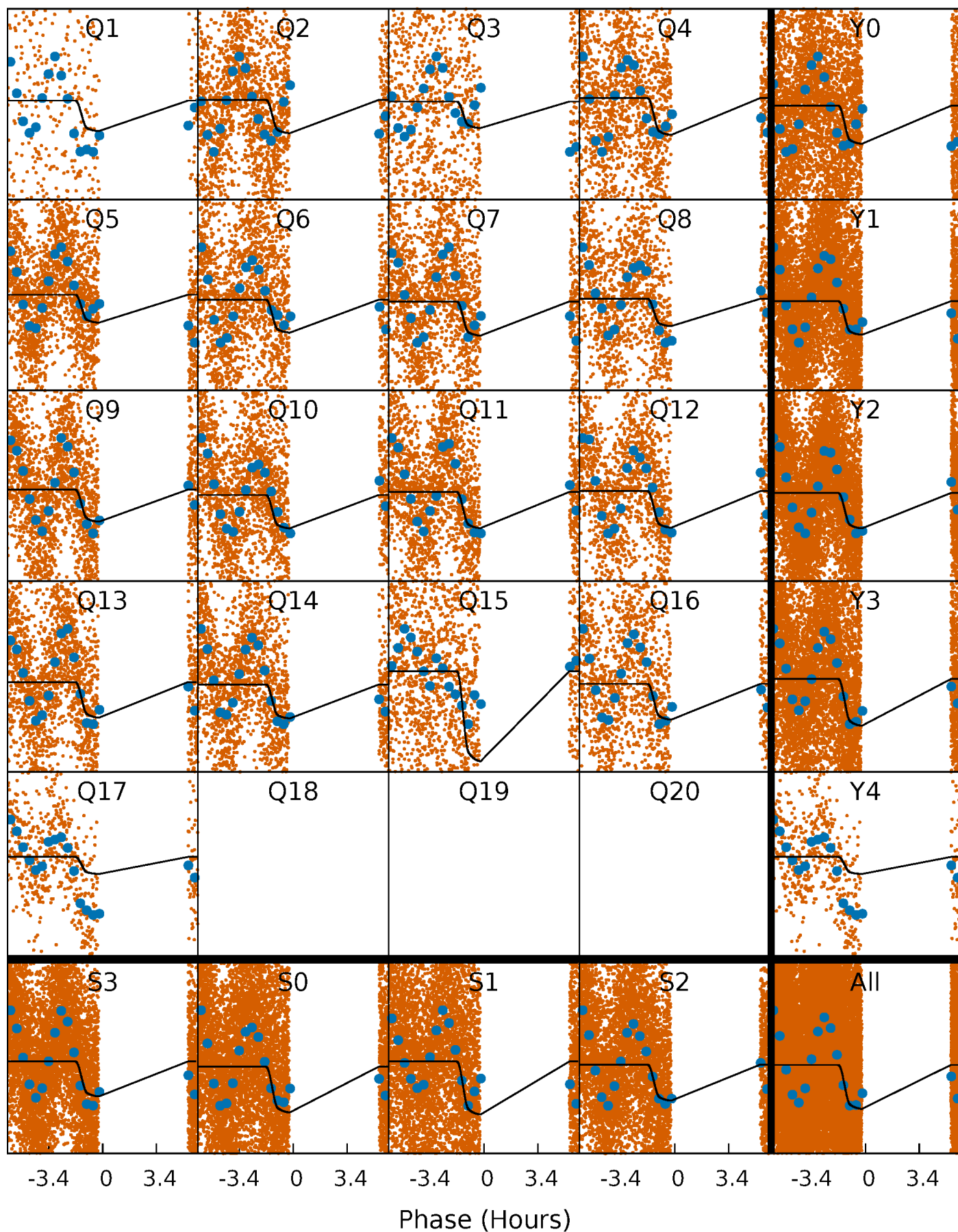
PDC Quarter-Phased Transit Curves

TCE 011081490-02 P= 0.578275 Days $T_0=132.045332$ (BKJD)



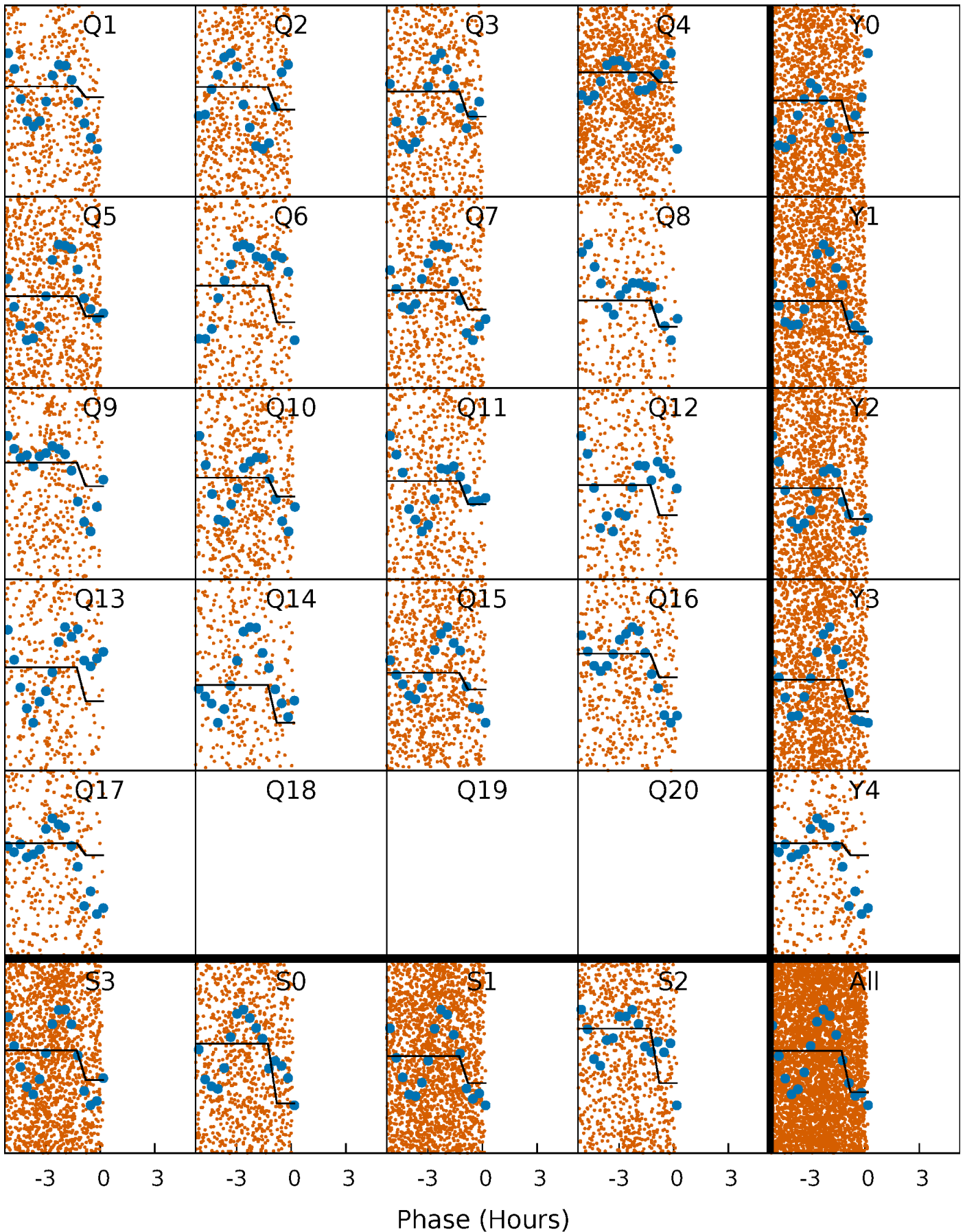
DV Quarter-Phased Transit Curves

TCE 011081490-02 P= 0.578275 Days $T_0=132.045332$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

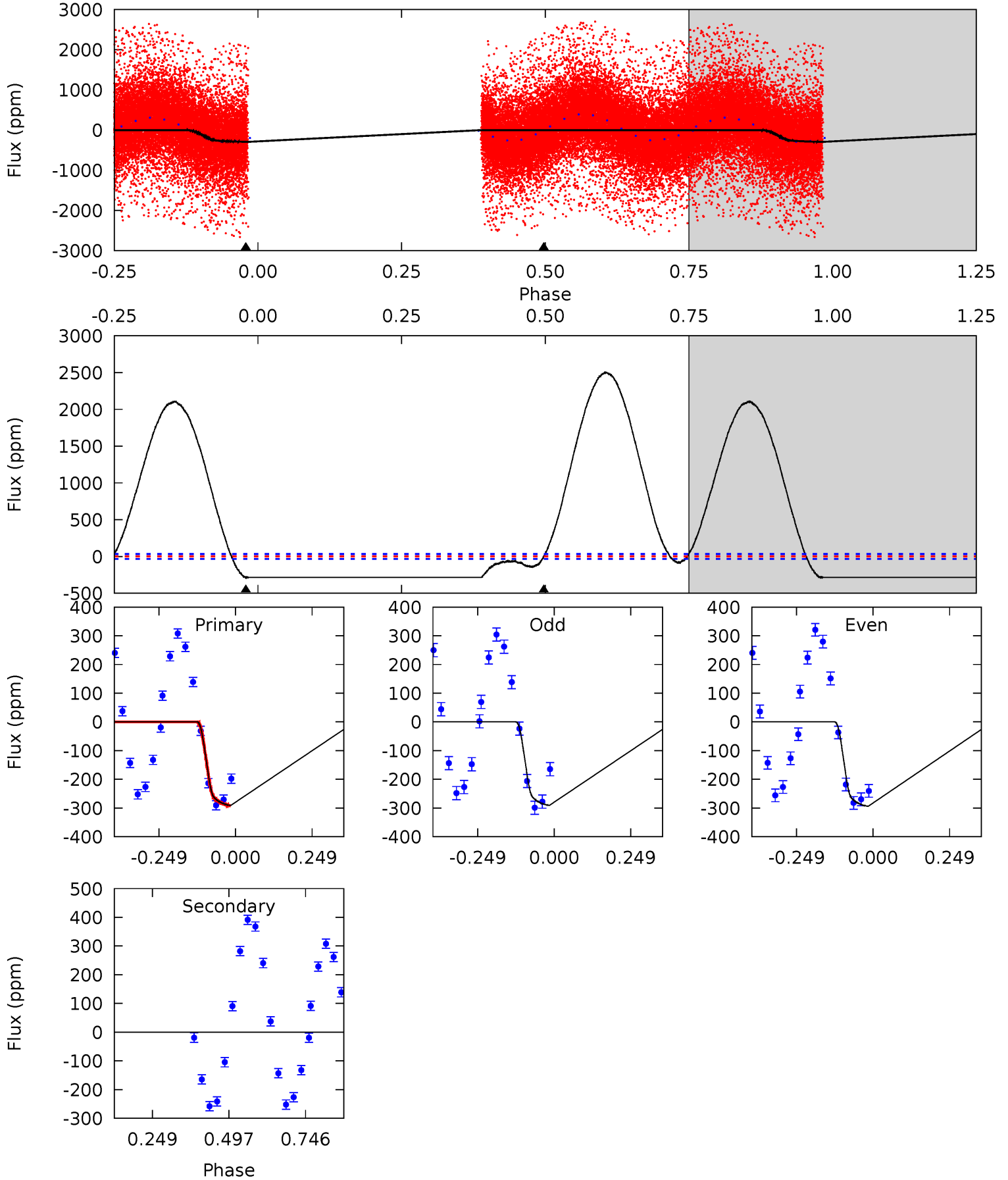
TCE 011081490-02 P= 0.578270 Days $T_0=132.037049$ (BKJD)



DV Model-Shift Uniqueness Test

011081490-02, P = 0.578275 Days, E = 131.467057 Days

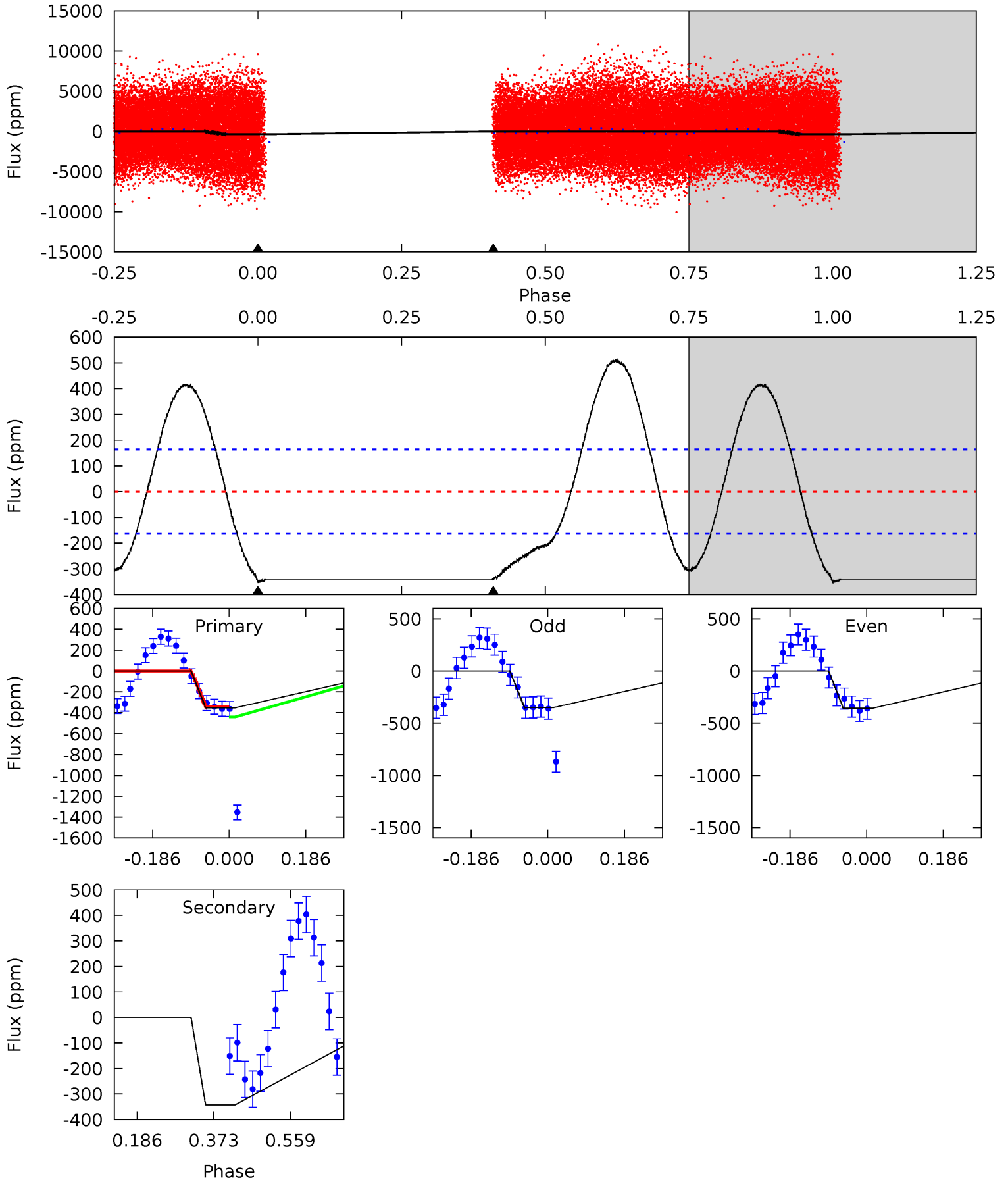
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.0	0	0	0	4.37	1.15	16.0	38.0	38.0	0	0	0.20	0	0.90	0



Alt Model-Shift Uniqueness Test

011081490-02, P = 0.578270 Days, E = 131.458779 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
9.54	9.25	0	0	4.43	1.32	8.15	9.54	9.54	9.25	9.25	0.10	0.86	0.59	0.70



Stellar Parameters For KIC 011081490

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	9423^{+301}_{-451}	$4.019^{+0.240}_{-0.180}$	$0.070^{+0.200}_{-0.750}$	$2.496^{+0.835}_{-0.919}$	$2.370^{+0.377}_{-0.700}$	$0.215^{+0.357}_{-0.110}$
	+3%/-5%	+6%/-4%	+286%/-1071%	+33%/-37%	+16%/-30%	+166%/-51%
Source	KIC0	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 011081490-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-0 ± 8	$4.84^{+1.01}_{-0.90}$	6744^{+614}_{-577}	-5228^{+435}_{-486}	$0.003^{+0.057}_{-0.062}$
Alt.	-343 ± 37	$4.86^{+0.96}_{-0.89}$	6704^{+610}_{-573}	9037^{+809}_{-682}	$2.580^{+1.198}_{-0.762}$

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 $A_{obs} \gg 1.0$

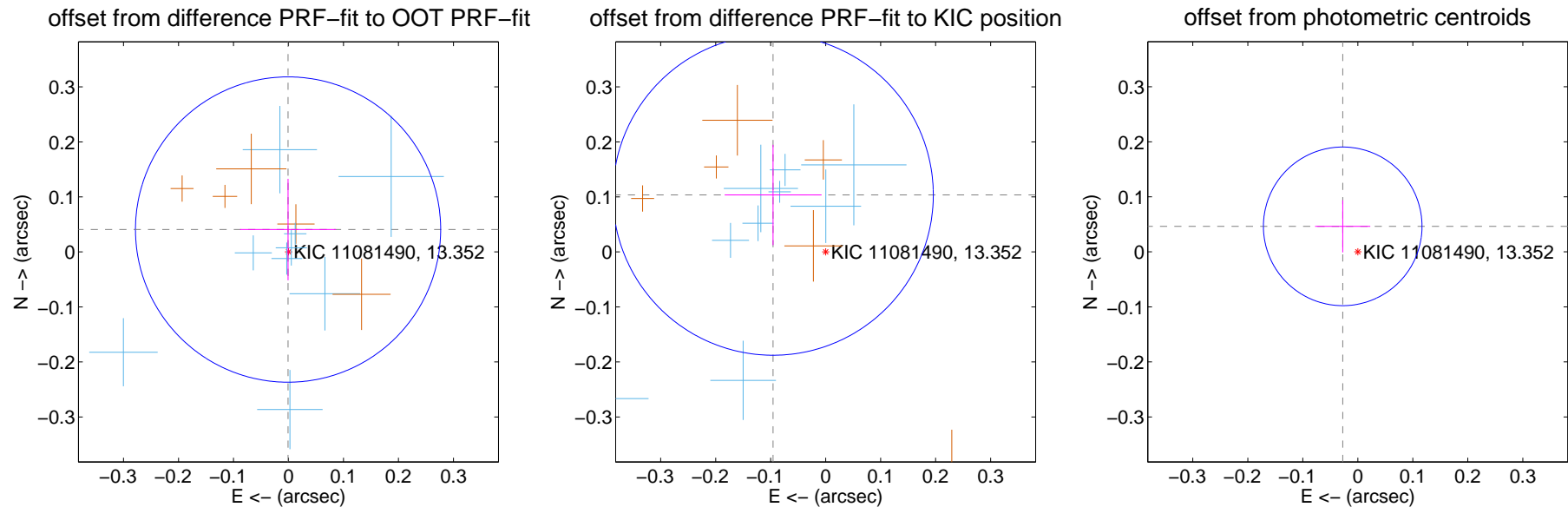
DV Centroid Data

Supplemental centroid analysis for 011081490-02. Kepler magnitude: 13.35. Transit SNR 28.03

There are 11 quarters with good PRF difference image offsets

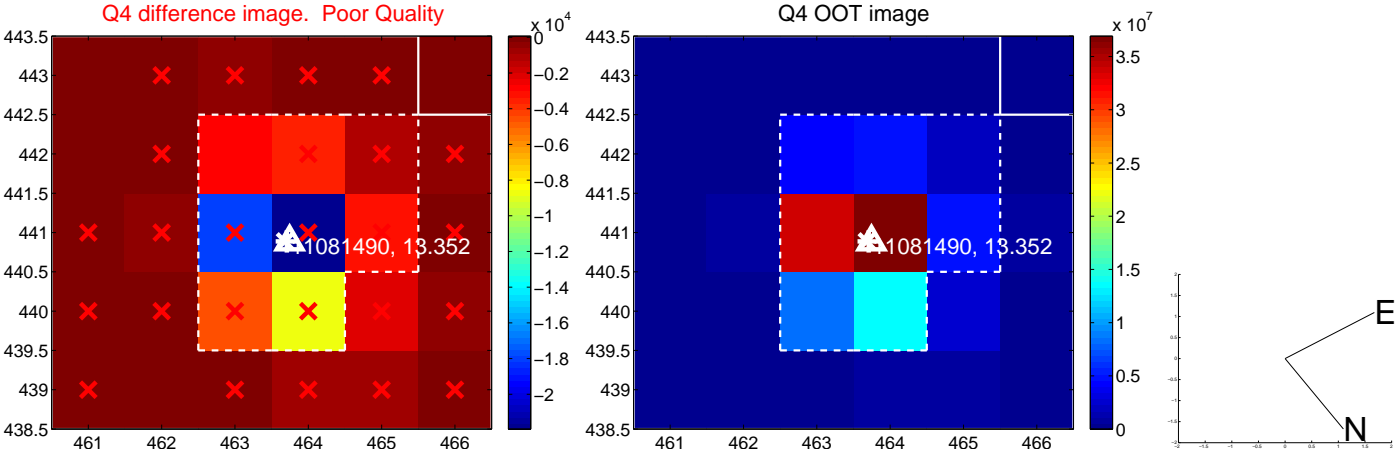
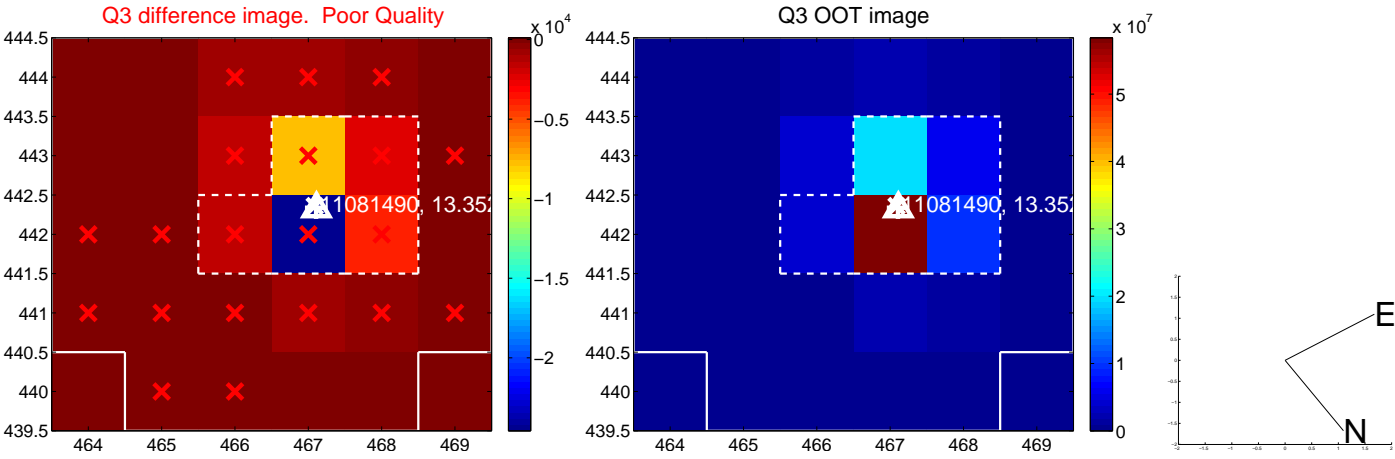
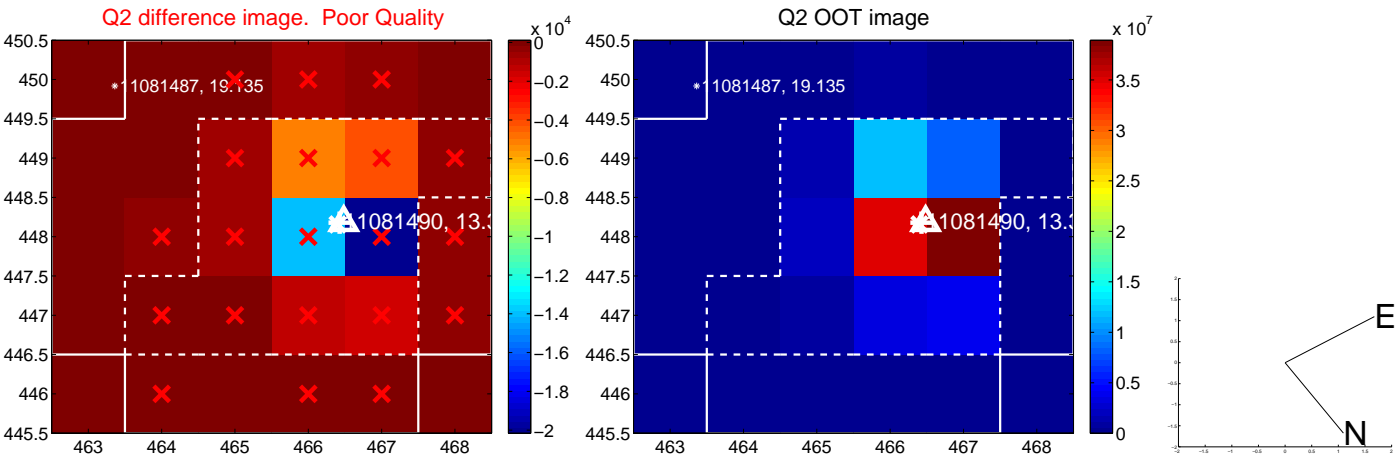
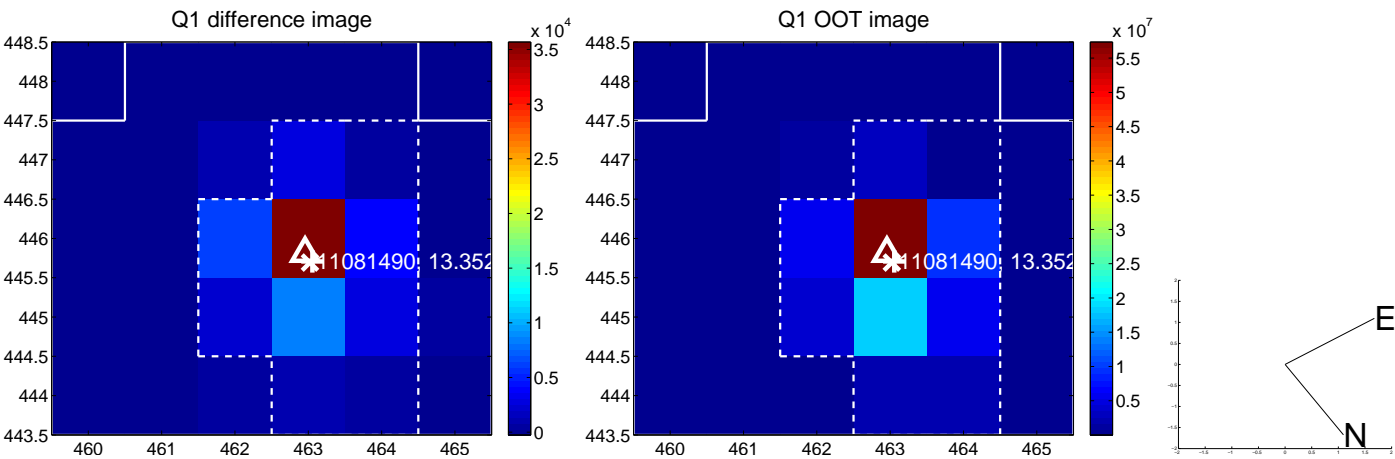
The direct PRF centroid is offset from the target star catalog position by about 0.14 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.041 ± 0.092	0.44	0.001 ± 0.087	0.041 ± 0.092
PRF-fit source offset from KIC position	0.141 ± 0.097	1.45	0.096 ± 0.088	0.104 ± 0.091
photometric centroid source offset	0.05 ± 0.05	1.12	0.03 ± 0.05	0.05 ± 0.05

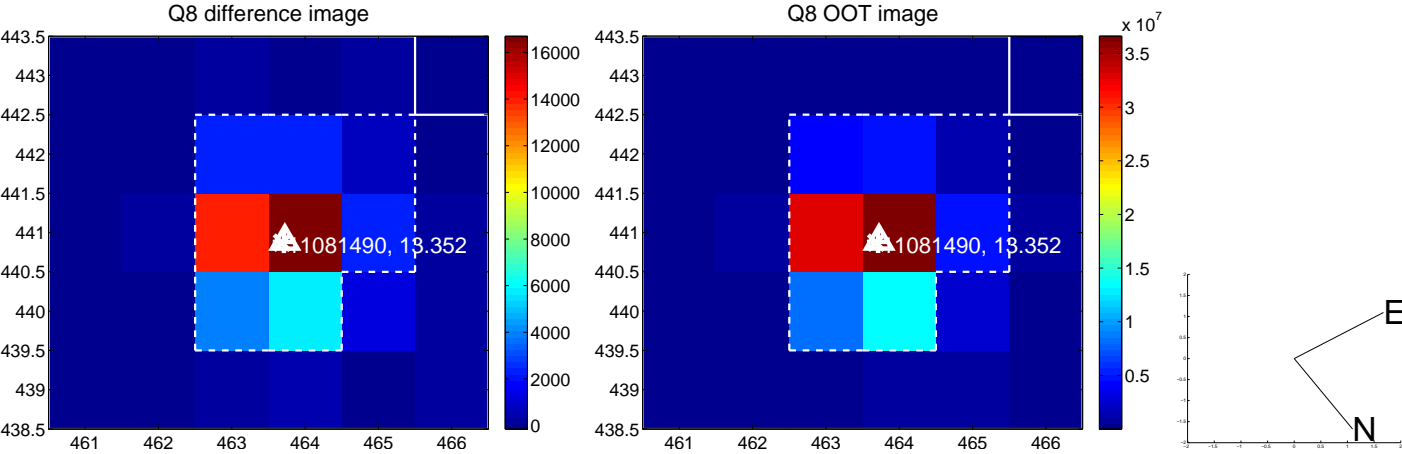
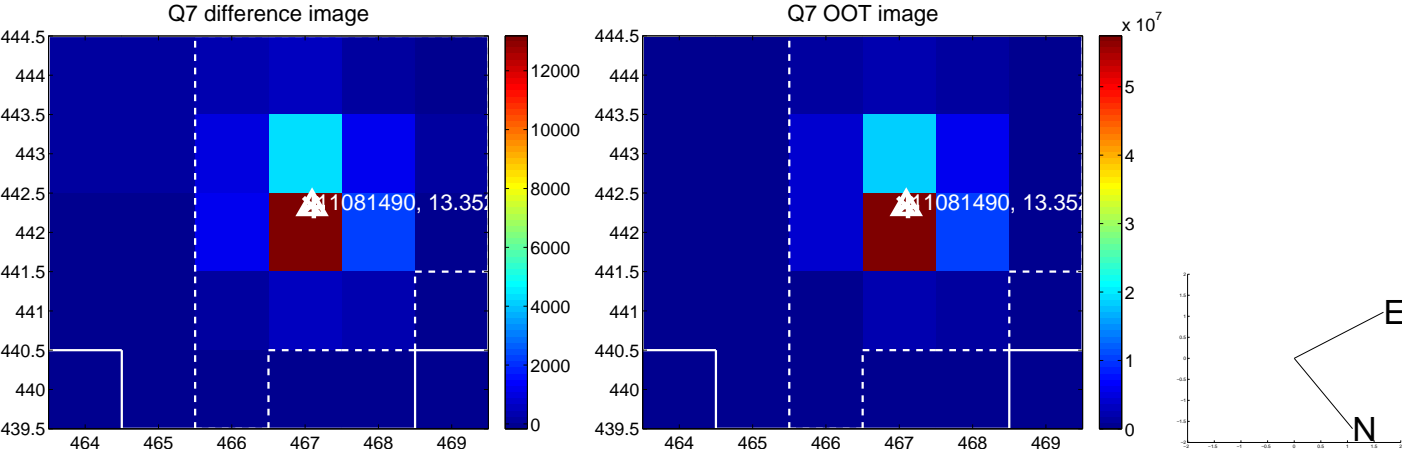
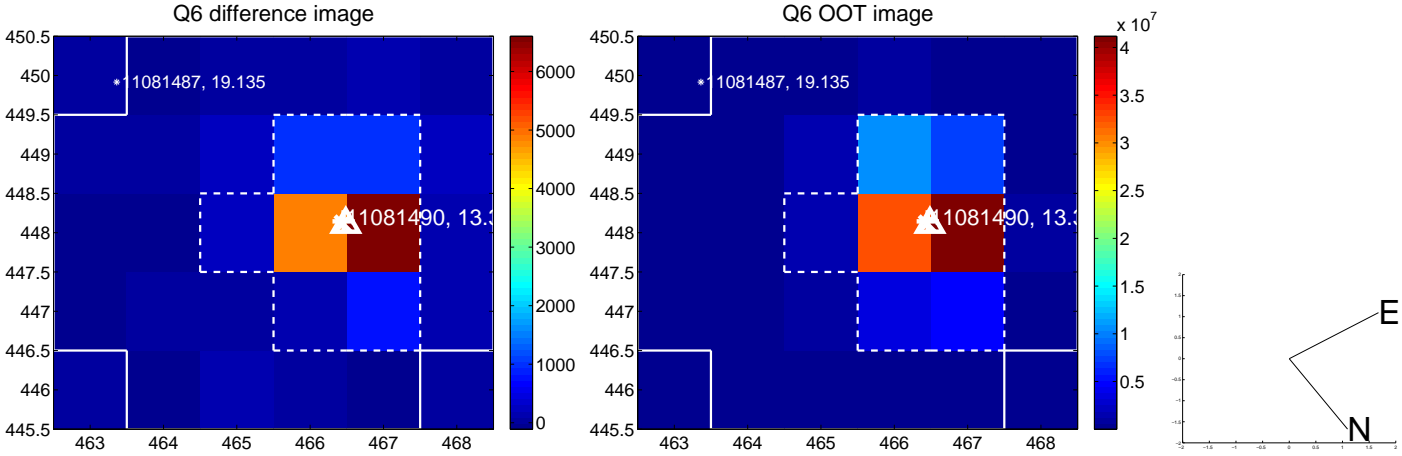
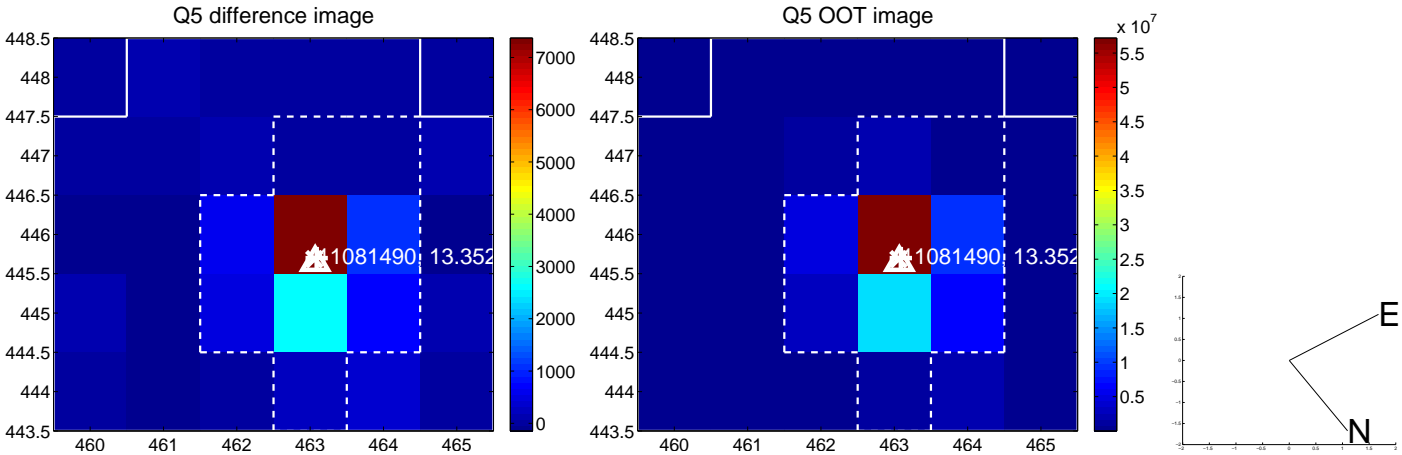


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

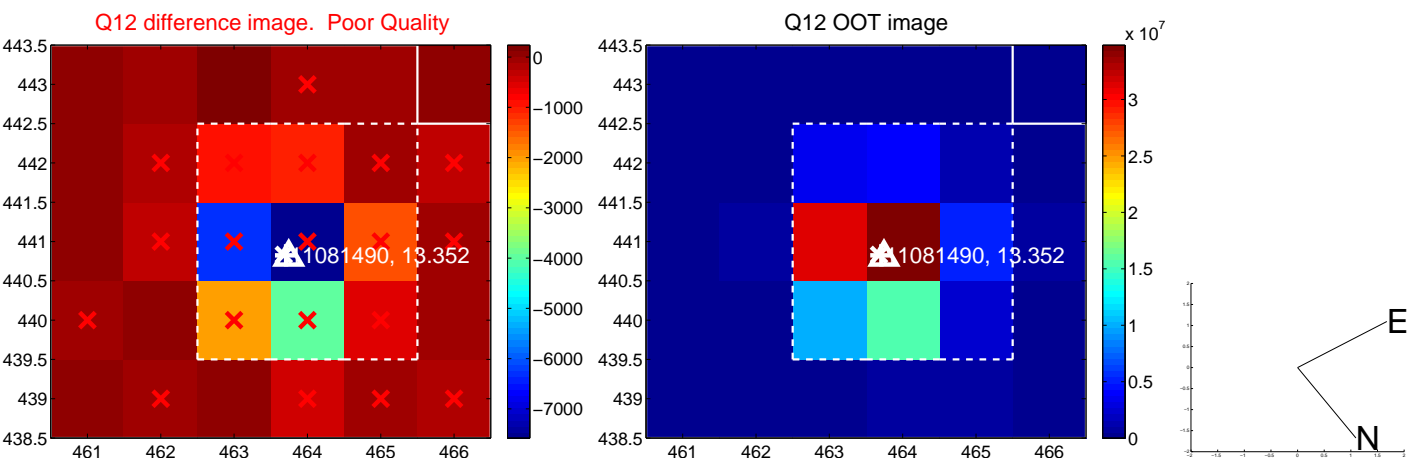
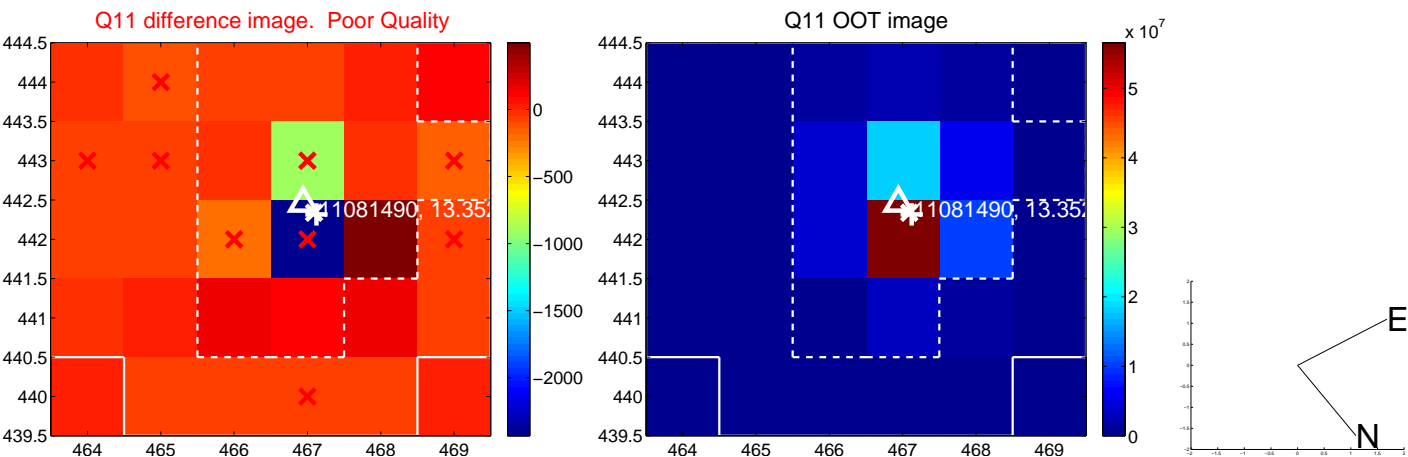
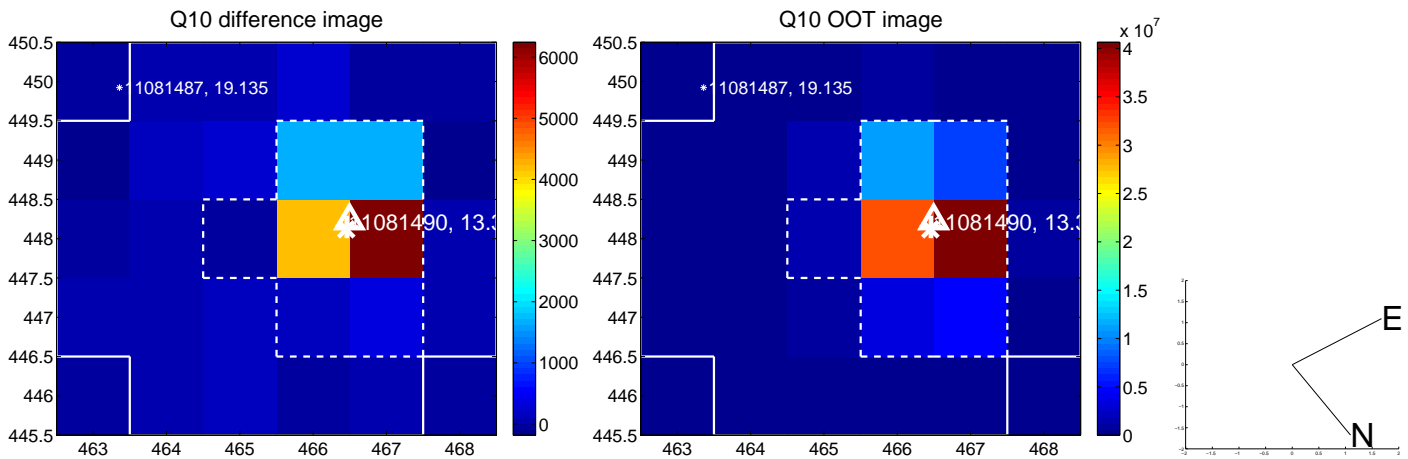
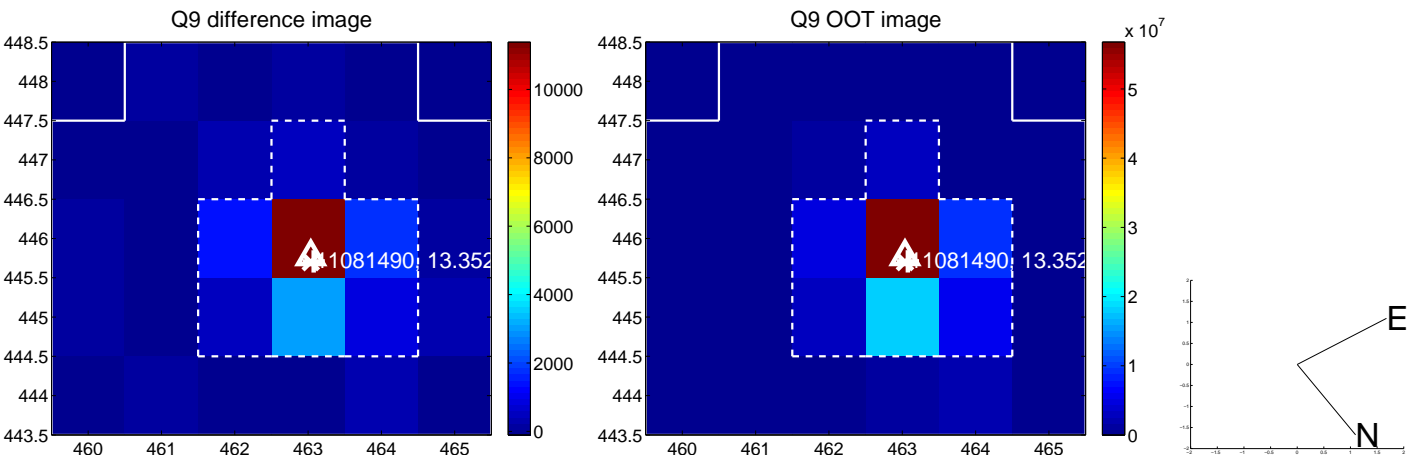
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



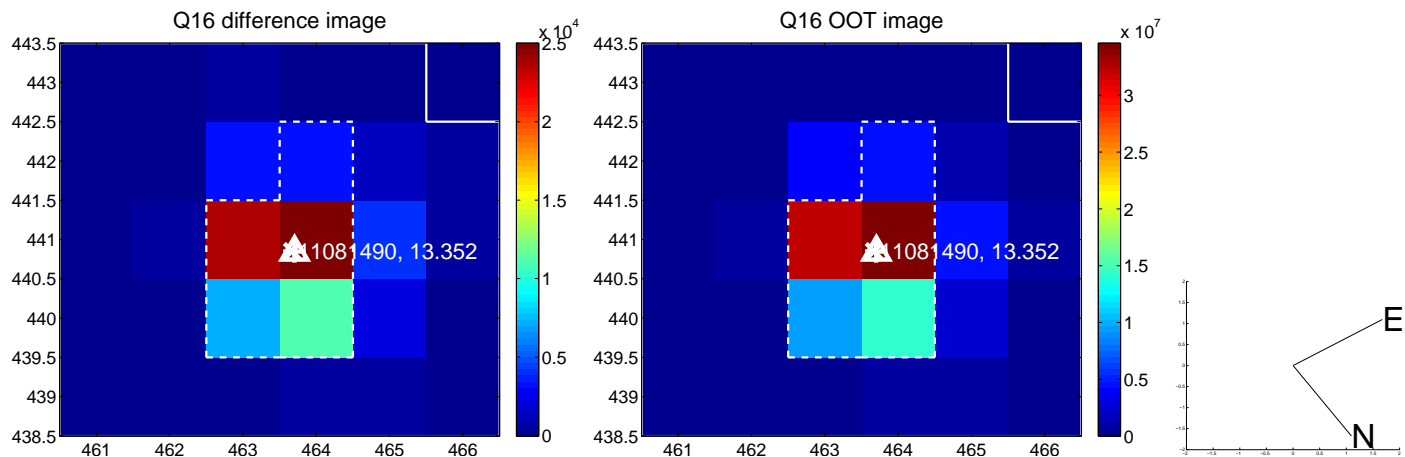
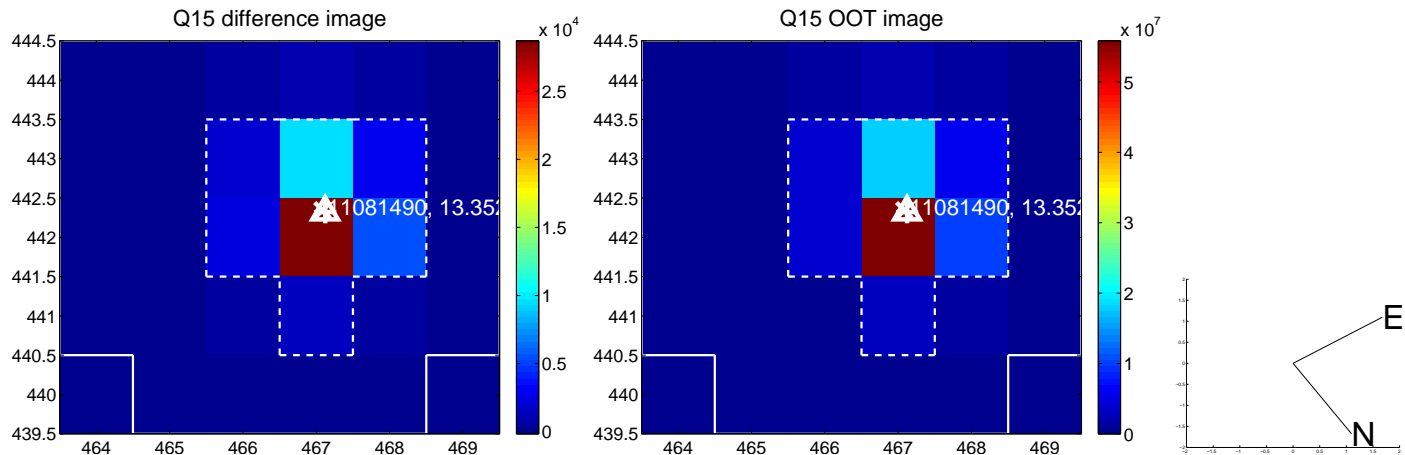
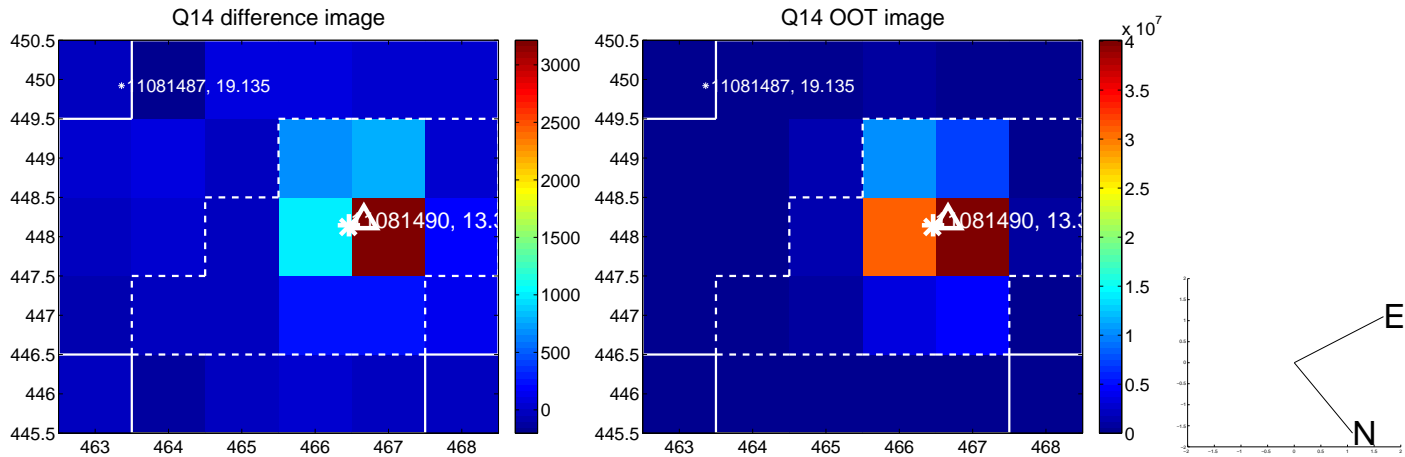
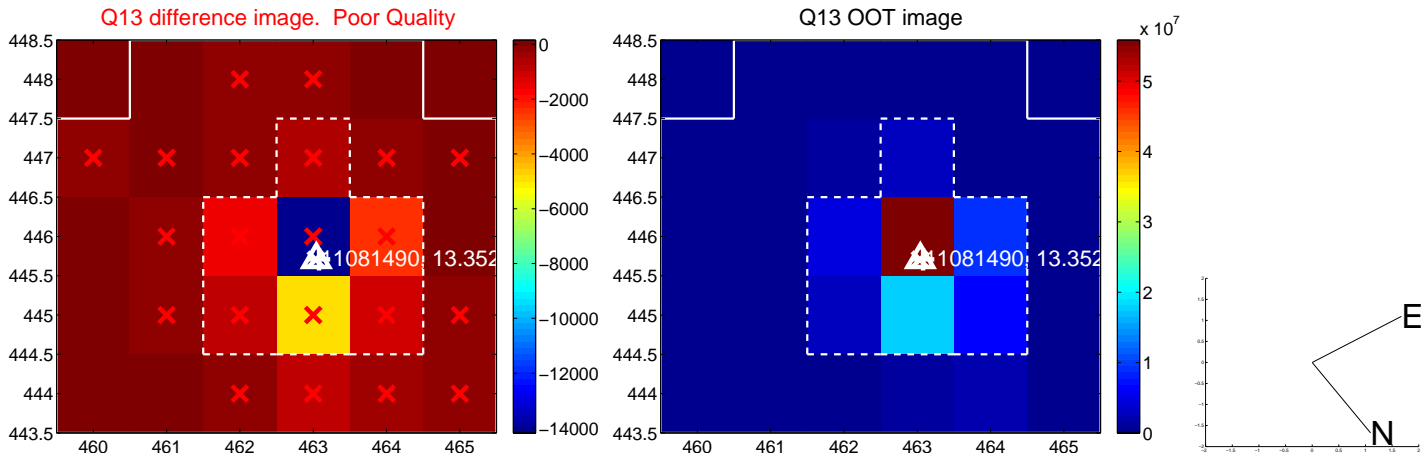
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



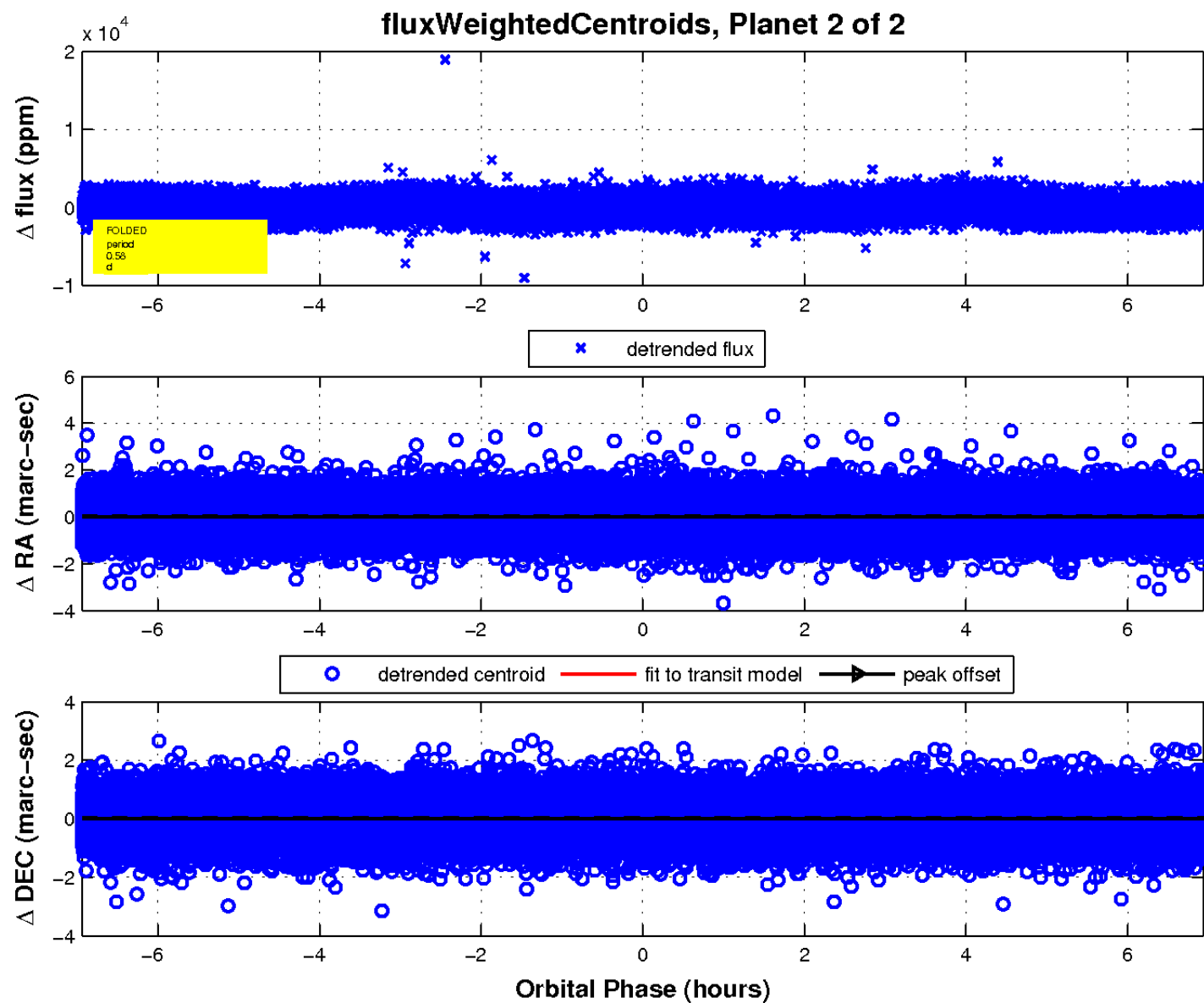
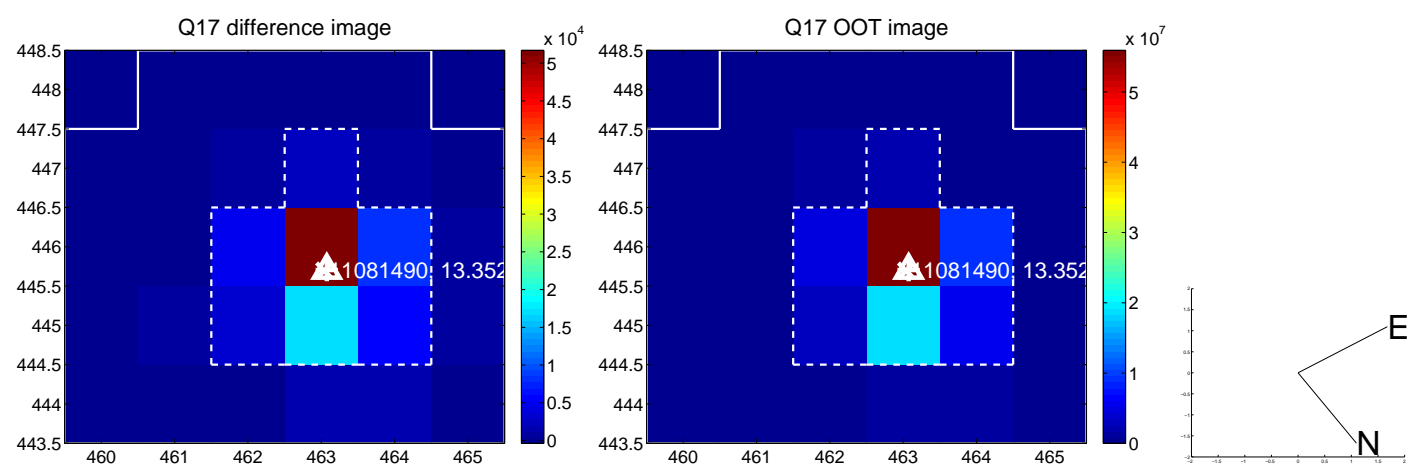
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

