

KIC 005381448

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})
005381448-01	OBS	No	1.410870	132.910285	33.5	4.976	10.6	9.9	2.22	7746	1.49	17538.53
005381448-02	OBS	No	0.745674	132.226222	27.8	4.090	8.9	8.4	2.22	7746	1.35	41043.43
005381448-03	OBS	No	77.235756	145.730552	492.2	4.433	11.4	8.8	2.22	7746	8.23	84.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005381448-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
005381448-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005381448-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST

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

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

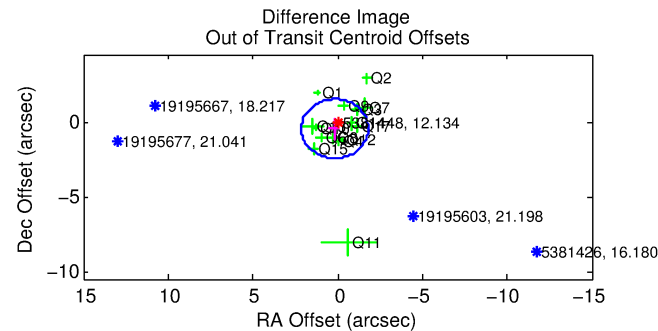
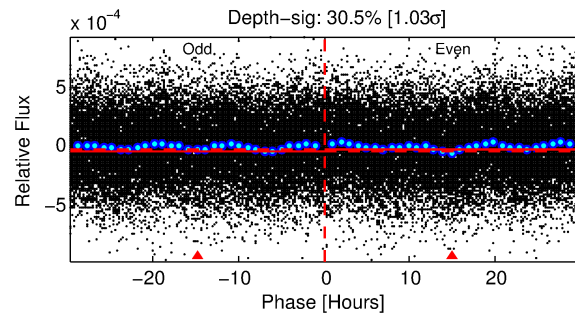
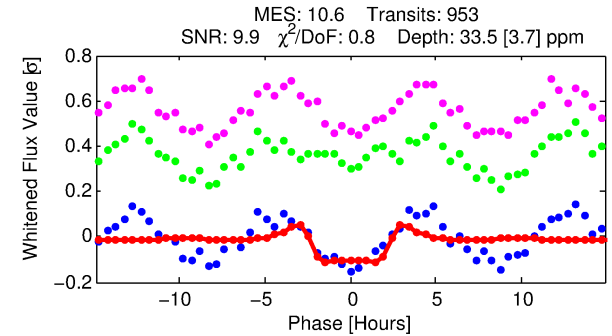
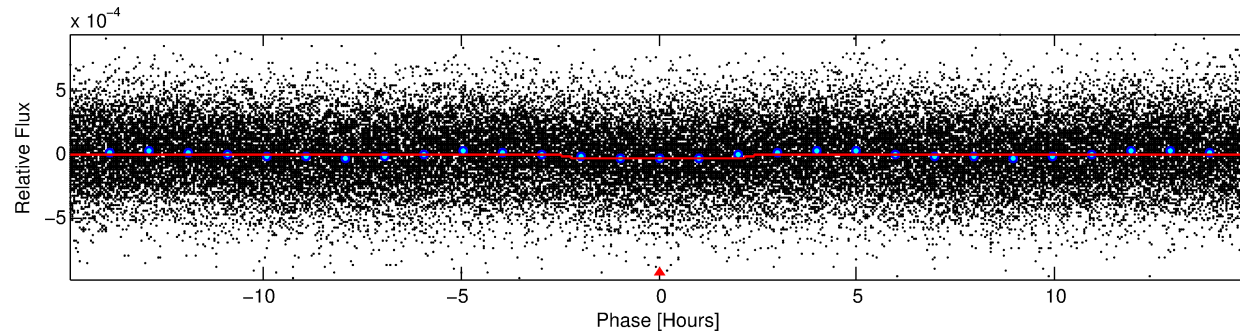
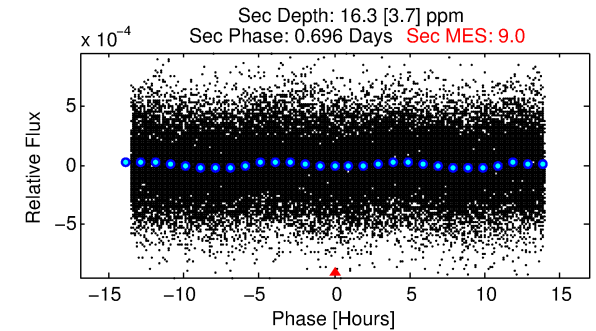
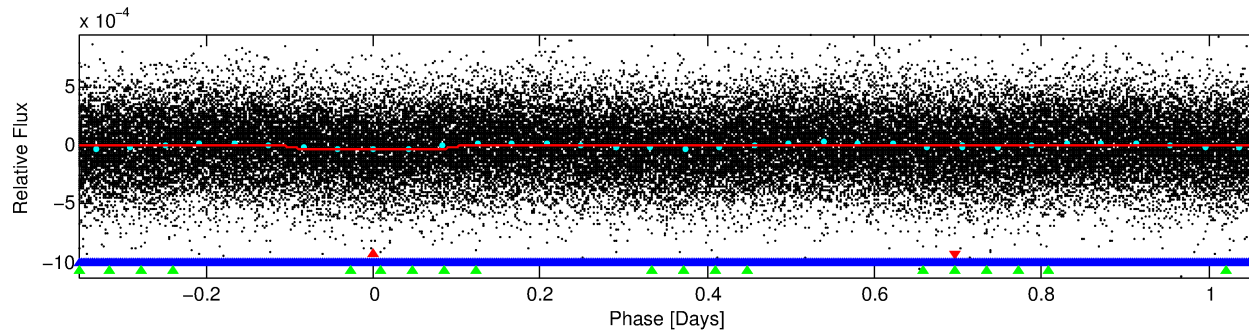
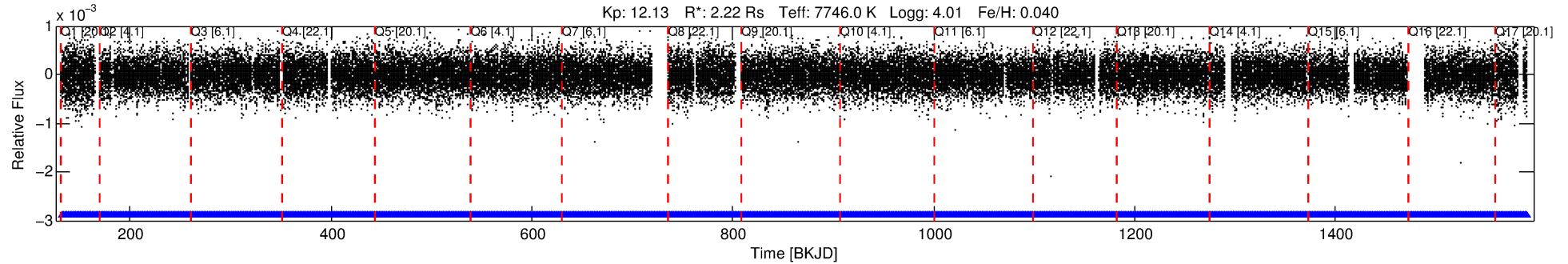
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005381448-01

No Significant Match Found

DV One-Page Summary

KIC: 5381448 Candidate: 1 of 3 Period: 1.411 d



DV Fit Results:

Period = 1.41087 [0.00001] d
Epoch = 132.9103 [0.0040] BKJD
Rp/R* = 0.0061 [0.0019]
a/R* = 1.35 [1.20]
b = 0.90 [0.42]
Seff = 17538.53 [6607.94]
Teq = 2934 [276] K
Rp = 1.49 [0.60] Re
a = 0.0301 [0.0068] AU
Ag = 3.68 [2.69] [1.00σ]
Teffp = 6284 [1064] K [3.05σ]

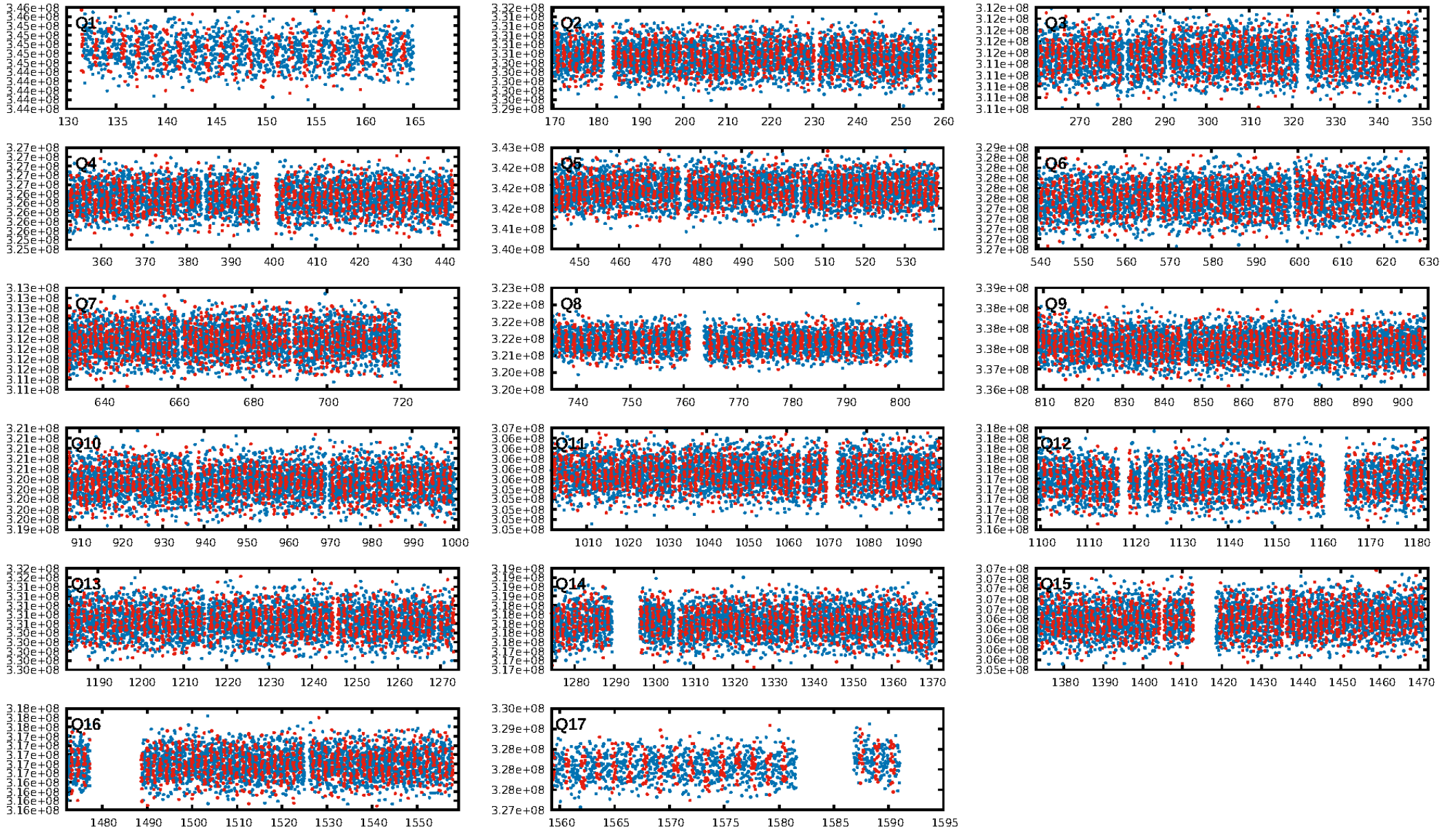
DV Diagnostic Results:

ShortPeriod-sig: 98.7% [2.48σ]
LongPeriod-sig: 100.0% [273.06σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.31e-09
RollingBand-fgt: 1.00 [910/910]
GhostDiagnostic-chr: 1.39
Centroid-sig: 0.6%
Centroid-so: 0.899 arcsec [2.21σ]
OotOffset-rm: 0.497 arcsec [0.76σ]
KicOffset-rm: 0.533 arcsec [0.91σ]
OotOffset-st: 4/4/3/4 [15]
KicOffset-st: 4/4/3/4 [15]
DiffImageQuality-fgm: 0.80 [12/15]
DiffImageOverlap-fno: 0.00 [0/17]

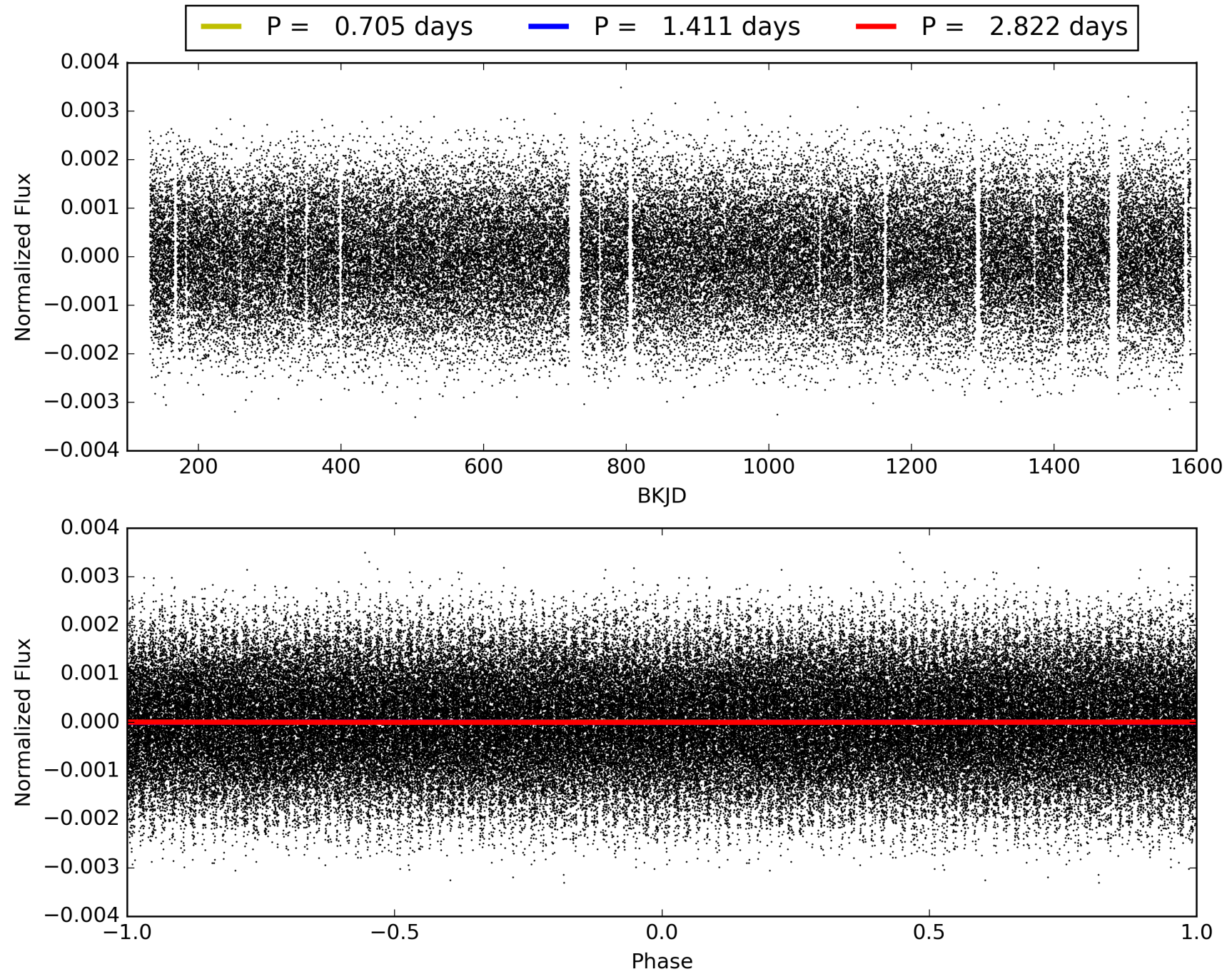
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:09:31 Z

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

TCE 005381448-01, PDC Light Curves

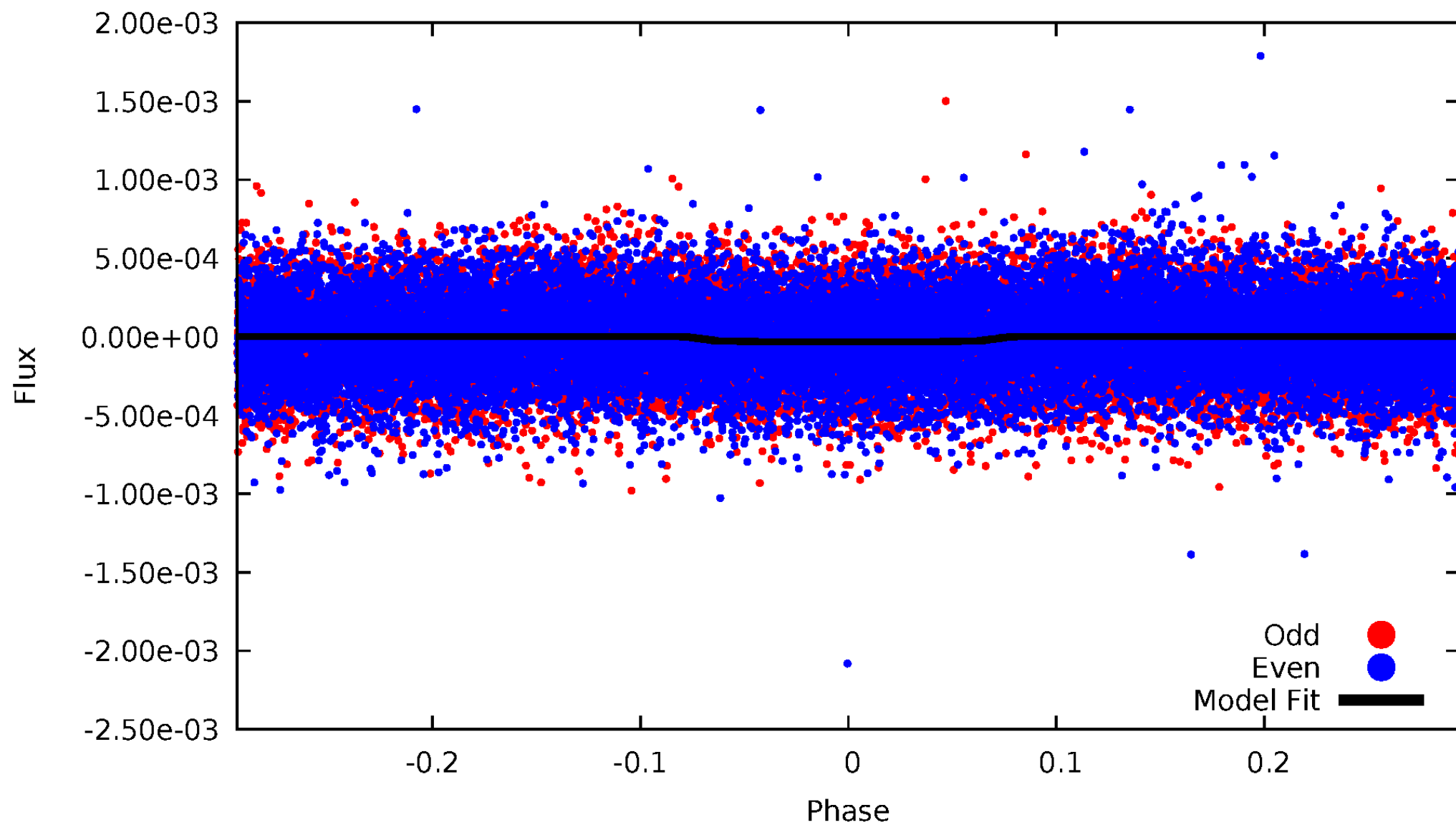


TCE 005381448-01



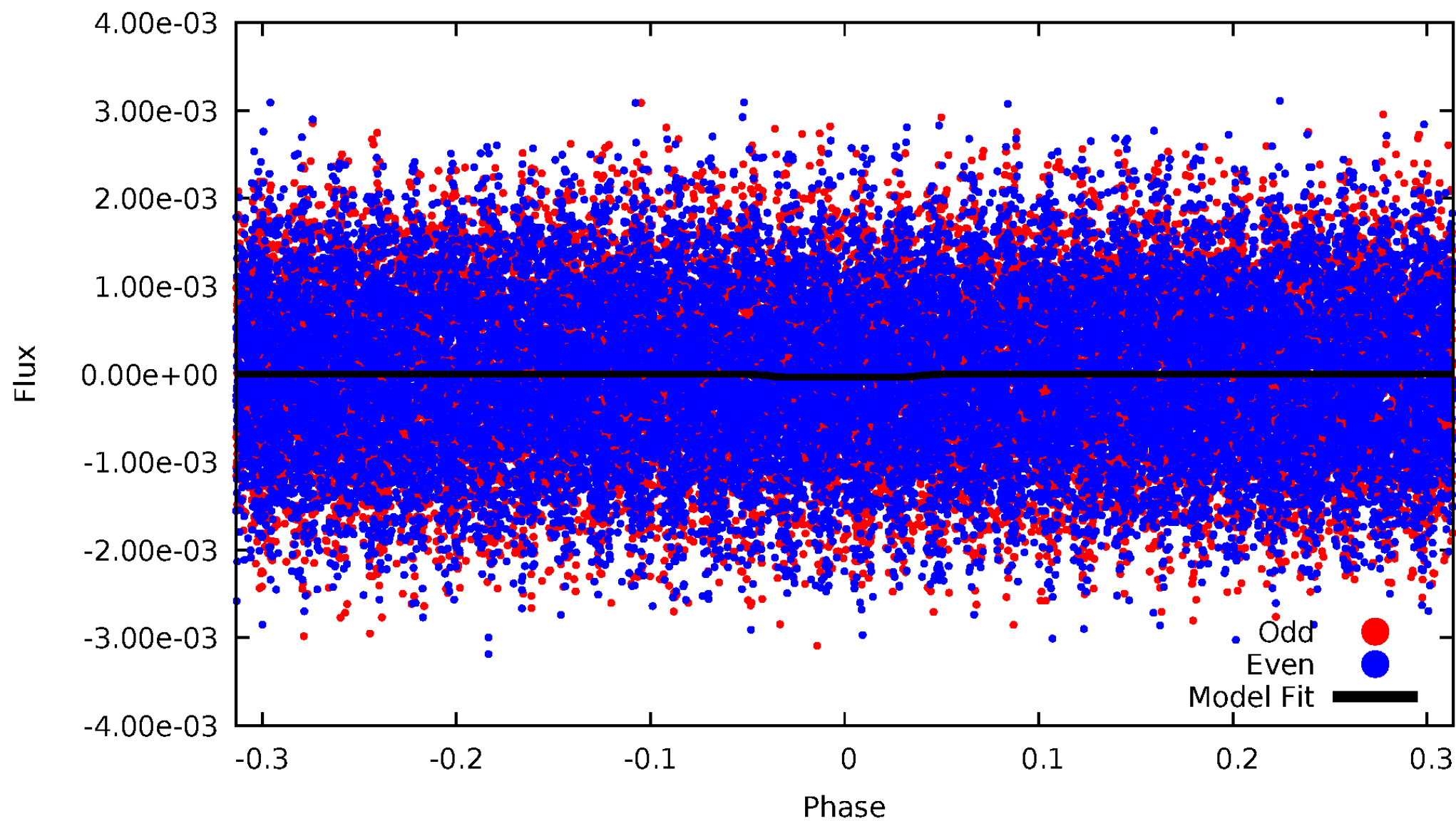
DV Odd/Even

TCE 005381448-01

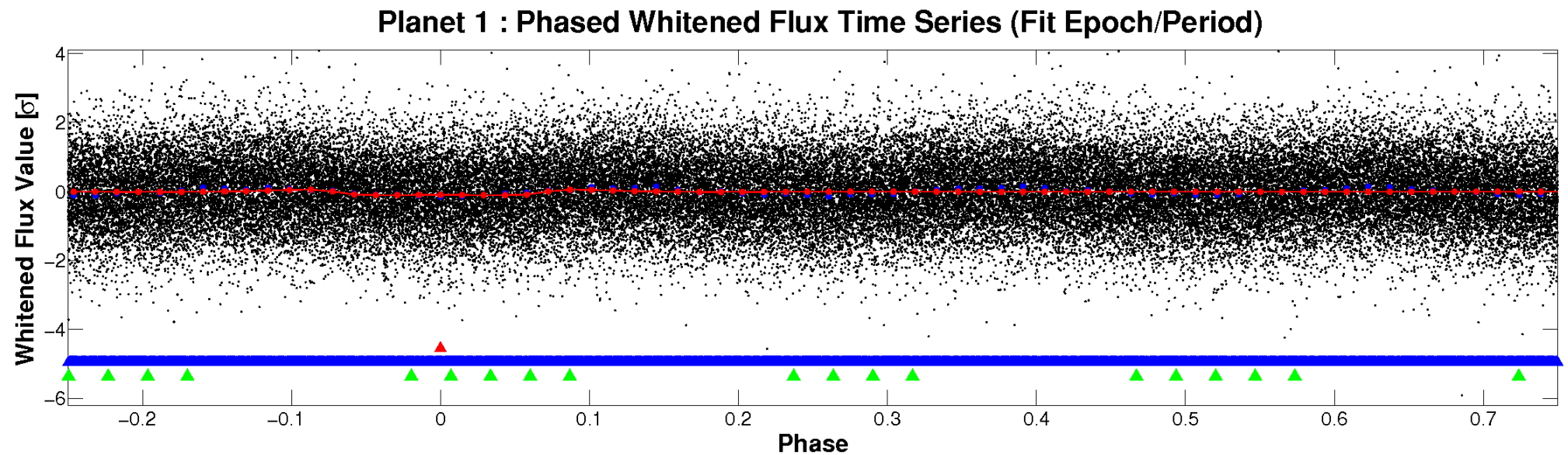
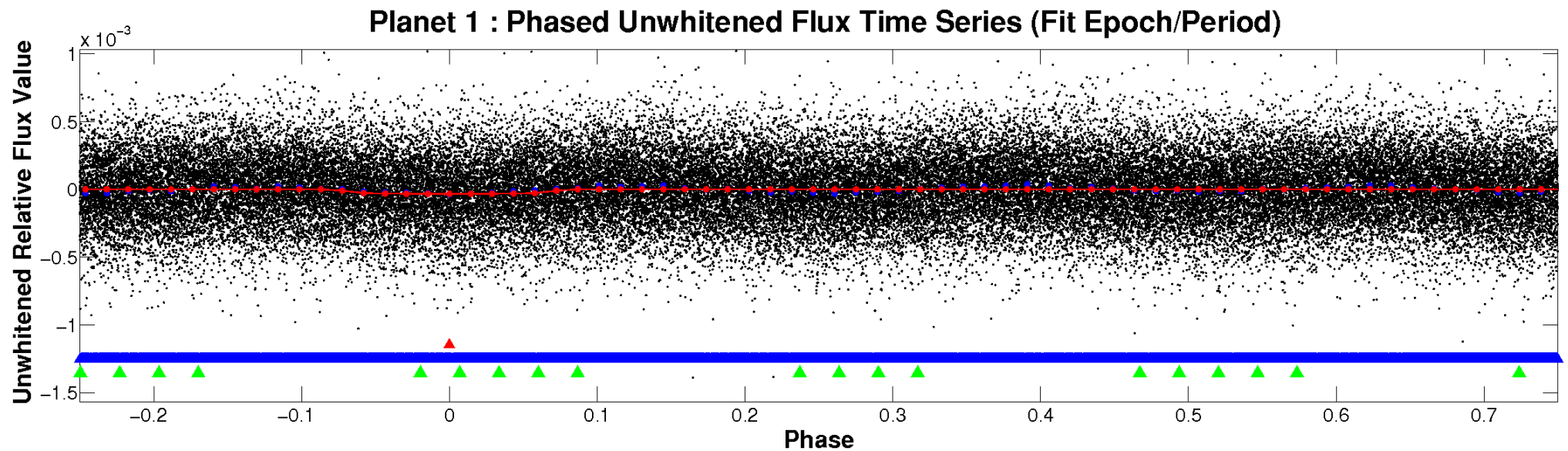


ALT Odd/Even

TCE 005381448-01

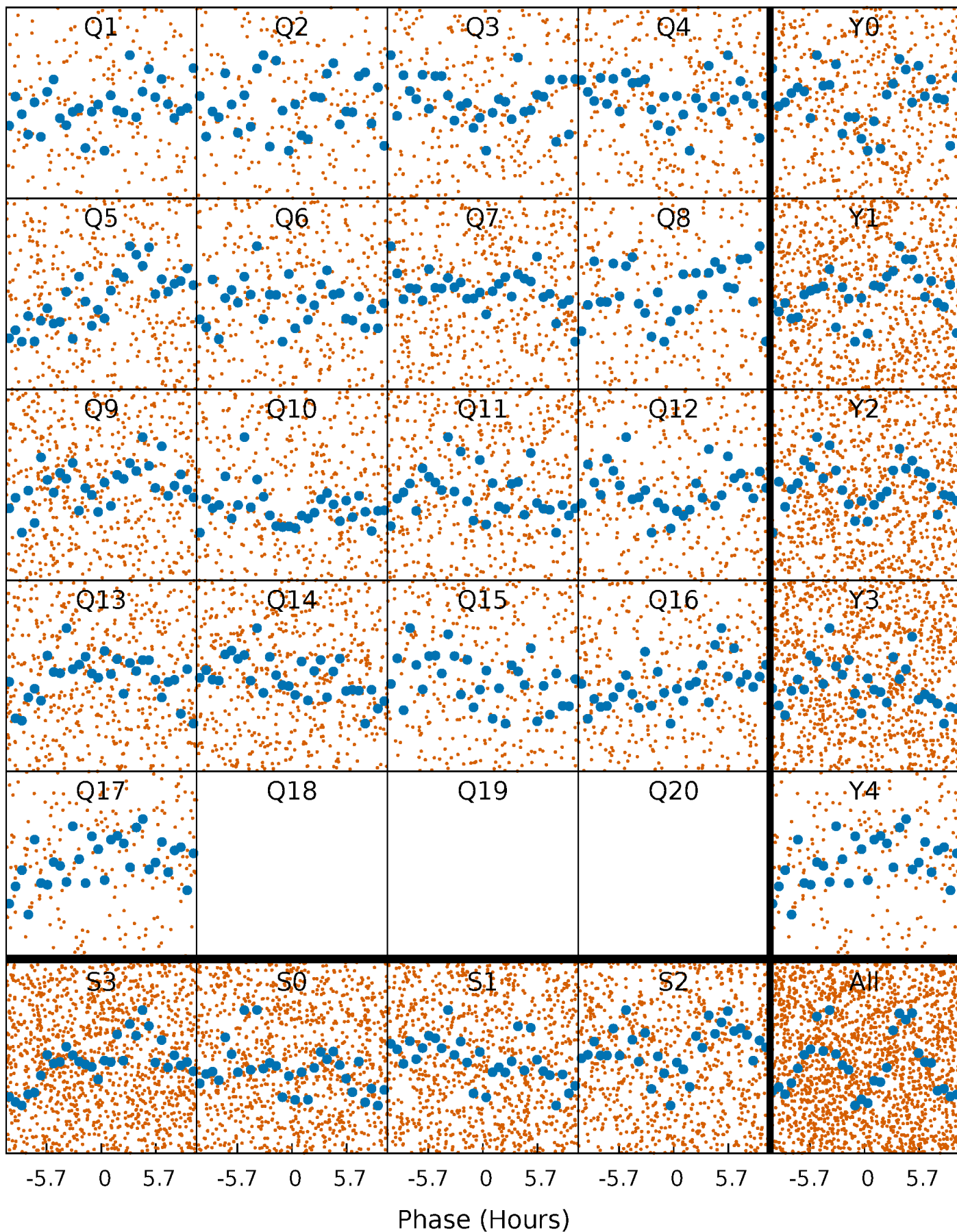


Non-Whitened Vs. Whitened Light Curve



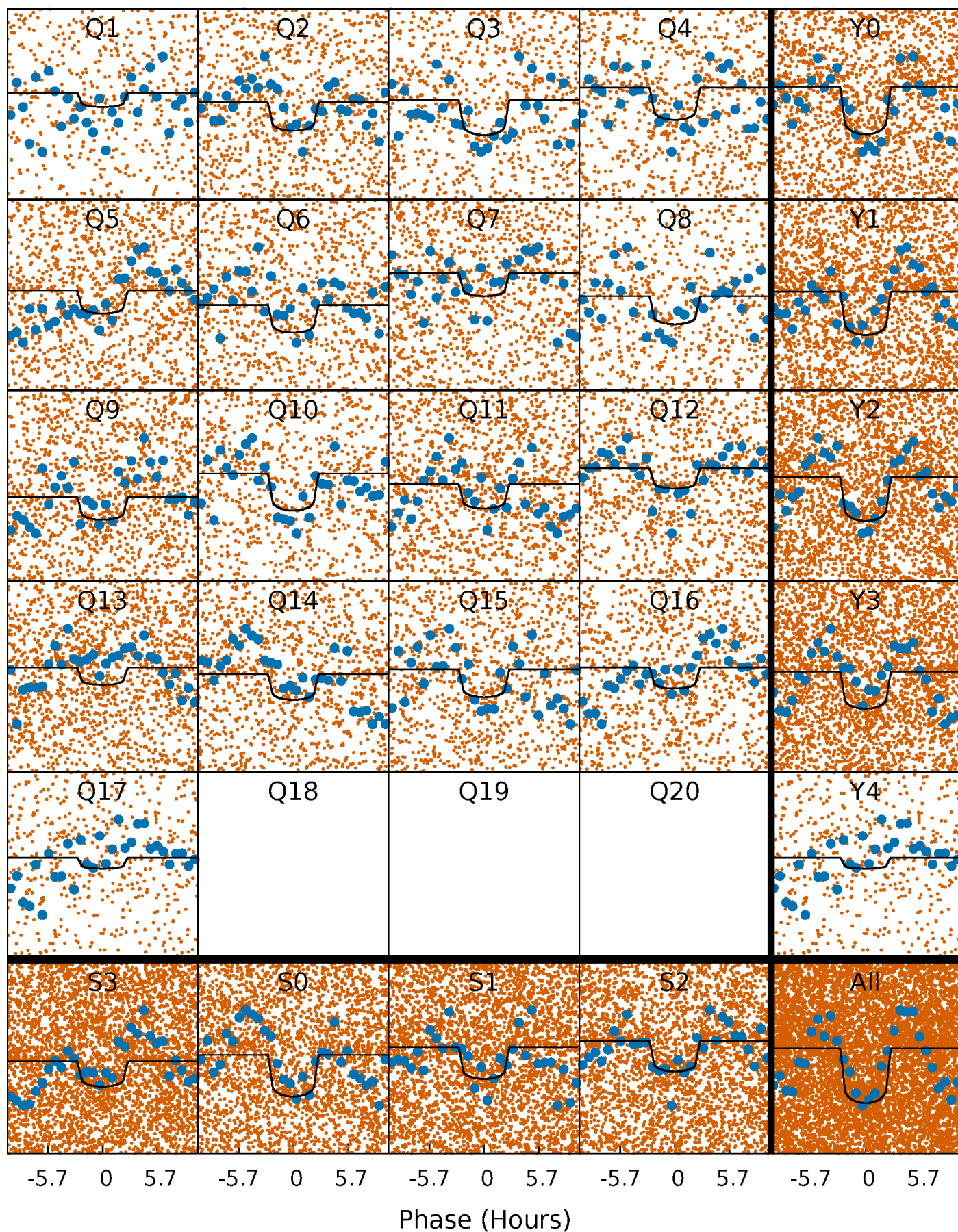
PDC Quarter-Phased Transit Curves

TCE 005381448-01 P= 1.410870 Days $T_0=132.910285$ (BKJD)



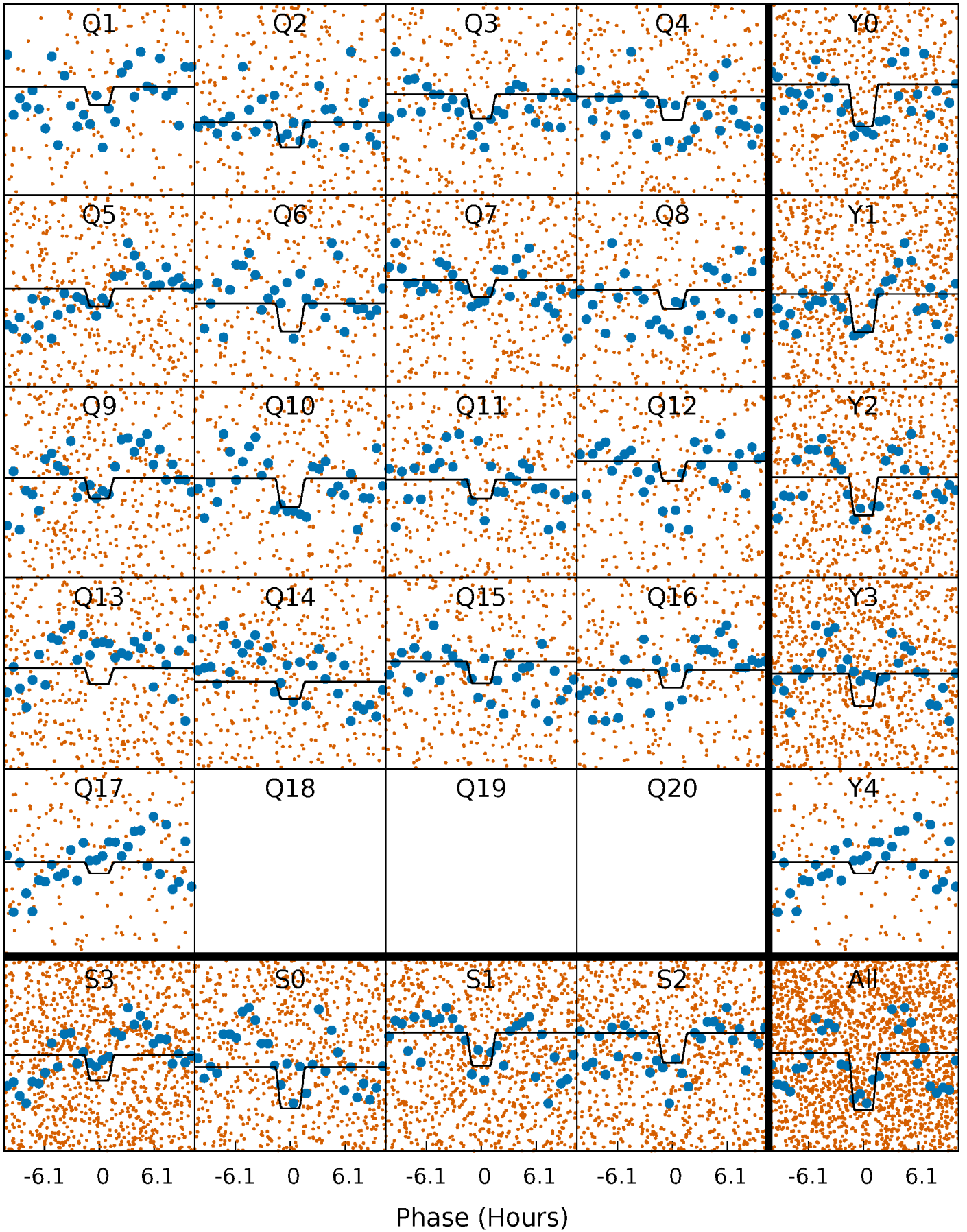
DV Quarter-Phased Transit Curves

TCE 005381448-01 P= 1.410870 Days $T_0=132.910285$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

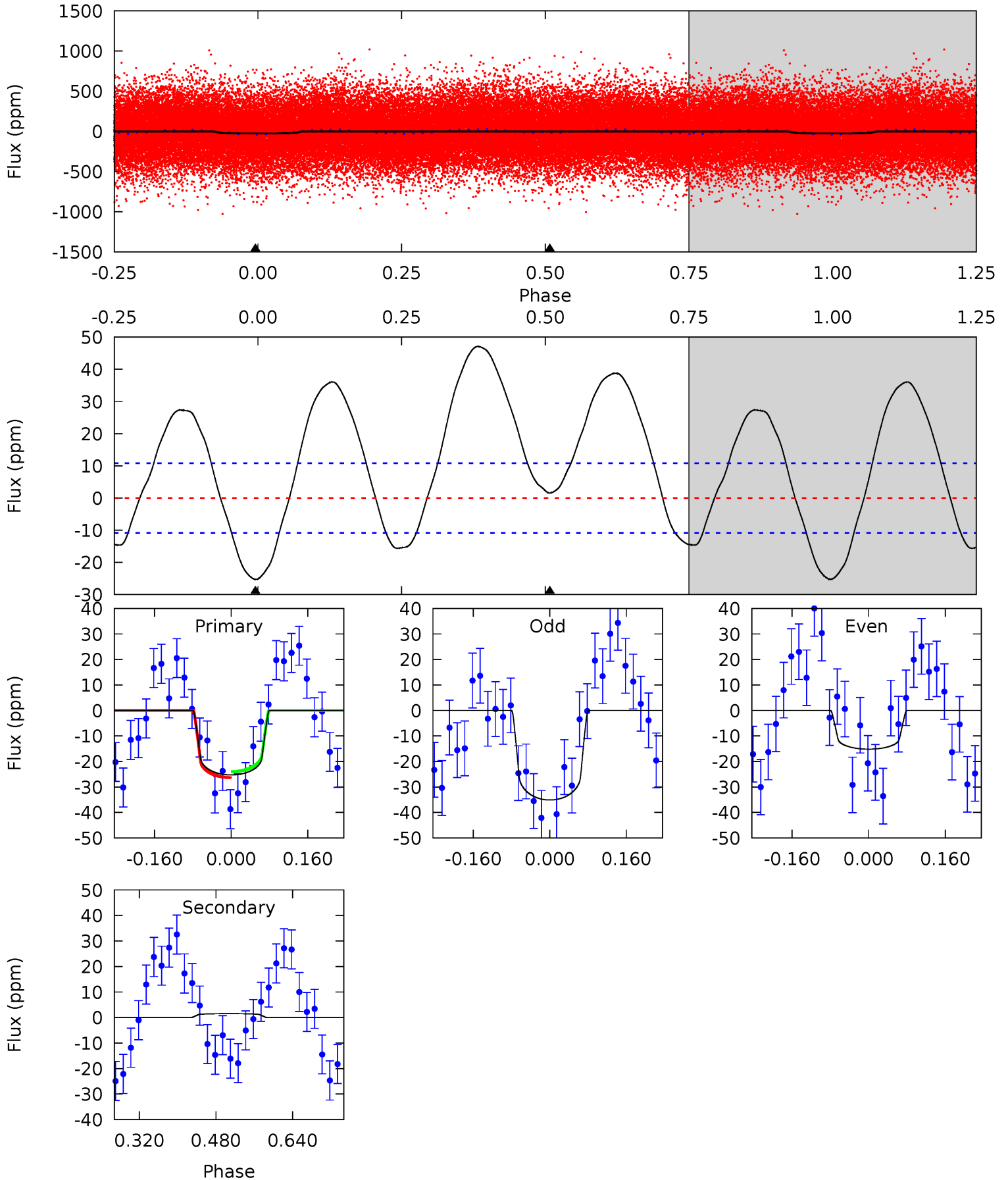
TCE 005381448-01 P= 1.410869 Days $T_0=132.910501$ (BKJD)



DV Model-Shift Uniqueness Test

005381448-01, P = 1.410870 Days, E = 131.499415 Days

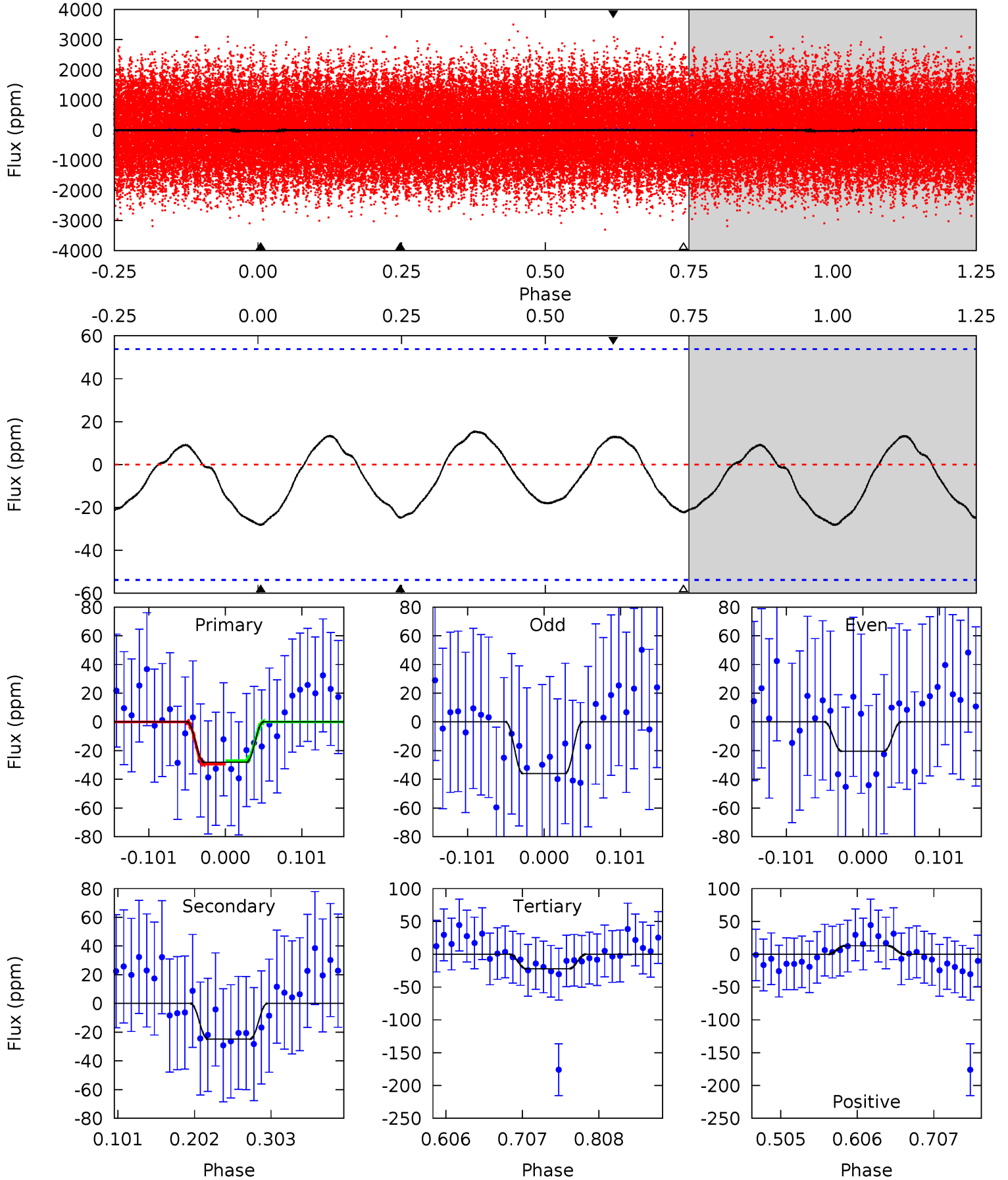
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.4	-0.64	0	0	4.47	1.40	5.85	10.4	10.4	-0.64	-0.64	4.12	1.09	0.65	0.50



Alt Model-Shift Uniqueness Test

005381448-01, P = 1.410869 Days, E = 131.499632 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.39	2.10	1.90	1.10	4.56	1.64	1.01	0.50	1.29	0.21	1.01	0.66	0.76	0.35	0.10



Stellar Parameters For KIC 005381448

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7746^{+214}_{-349}	$4.007^{+0.182}_{-0.149}$	$0.040^{+0.200}_{-0.350}$	$2.219^{+0.483}_{-0.590}$	$1.826^{+0.145}_{-0.339}$	$0.235^{+0.268}_{-0.102}$
	+3%/-5%	+5%/-4%	+500%/-875%	+22%/-27%	+8%/-19%	+114%/-43%
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 005381448-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	2 ± 2	$1.46^{+0.50}_{-0.46}$	4092^{+265}_{-297}	-4253^{+1055}_{-737}	$-0.337^{+0.510}_{-0.842}$
Alt.	-25 ± 12	$1.42^{+0.53}_{-0.49}$	4093^{+270}_{-308}	6767^{+2212}_{-1402}	$5.668^{+9.313}_{-3.439}$

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 $A_{obs} \gg 1.0$

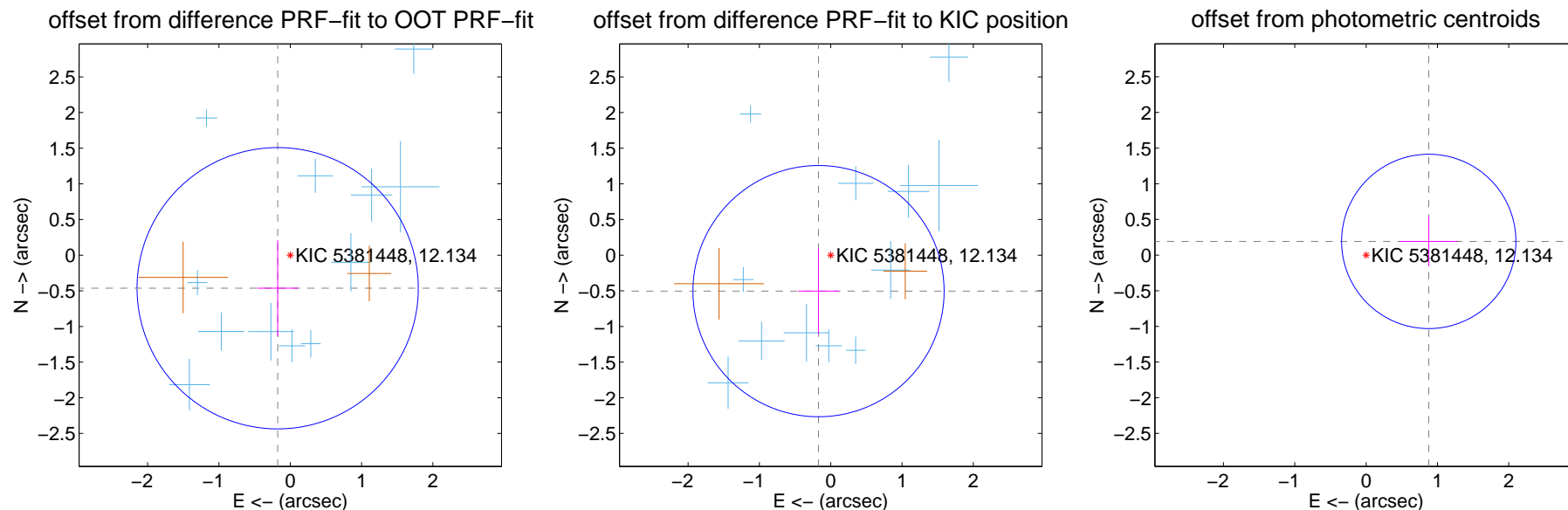
DV Centroid Data

Supplemental centroid analysis for 005381448-01. Kepler magnitude: 12.13. Transit SNR 9.89

There are 12 quarters with good PRF difference image offsets

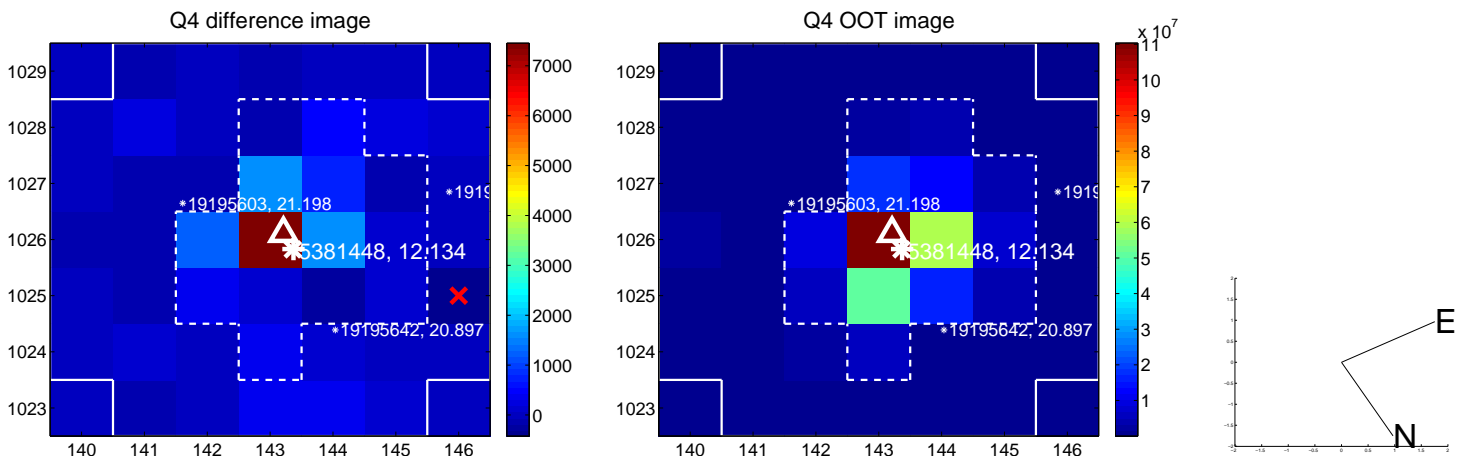
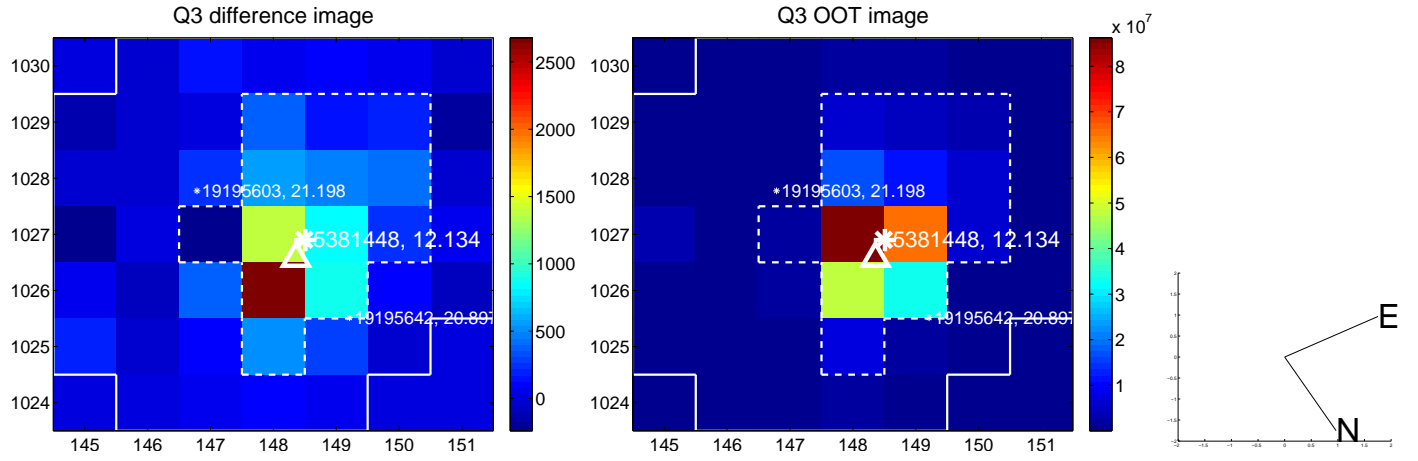
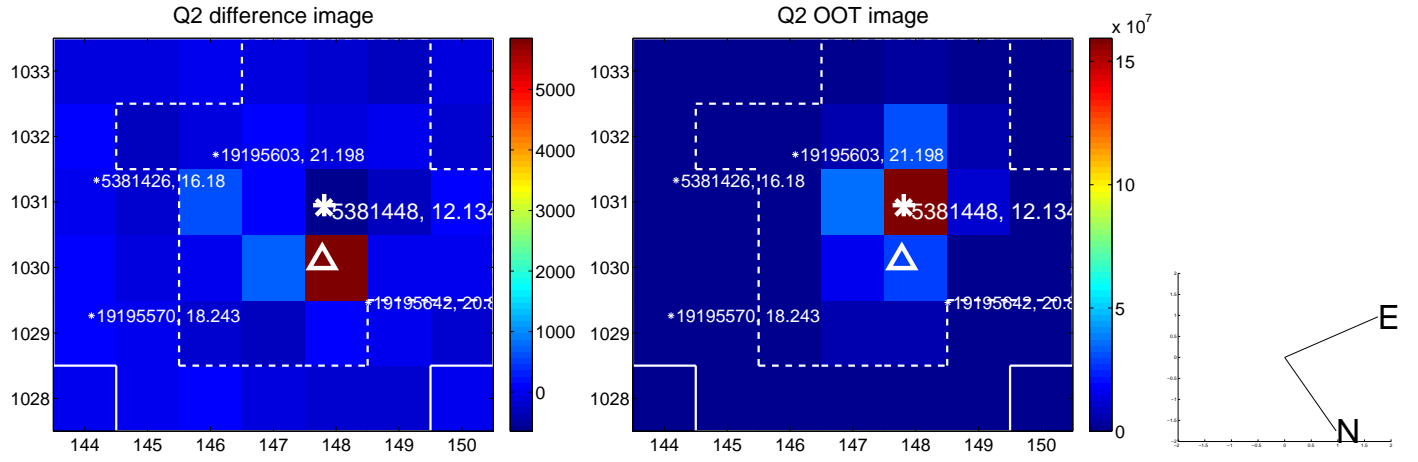
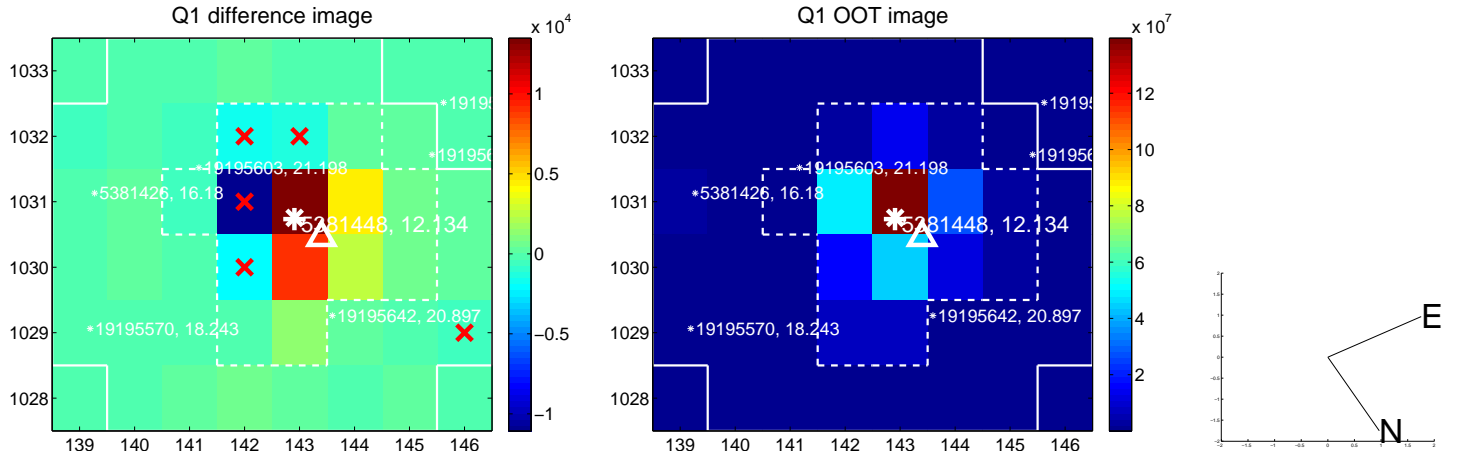
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.497 ± 0.658	0.76	0.177 ± 0.285	-0.464 ± 0.677
PRF-fit source offset from KIC position	0.533 ± 0.587	0.91	0.171 ± 0.286	-0.505 ± 0.604
photometric centroid source offset	0.90 ± 0.41	2.21	-0.88 ± 0.41	0.19 ± 0.35

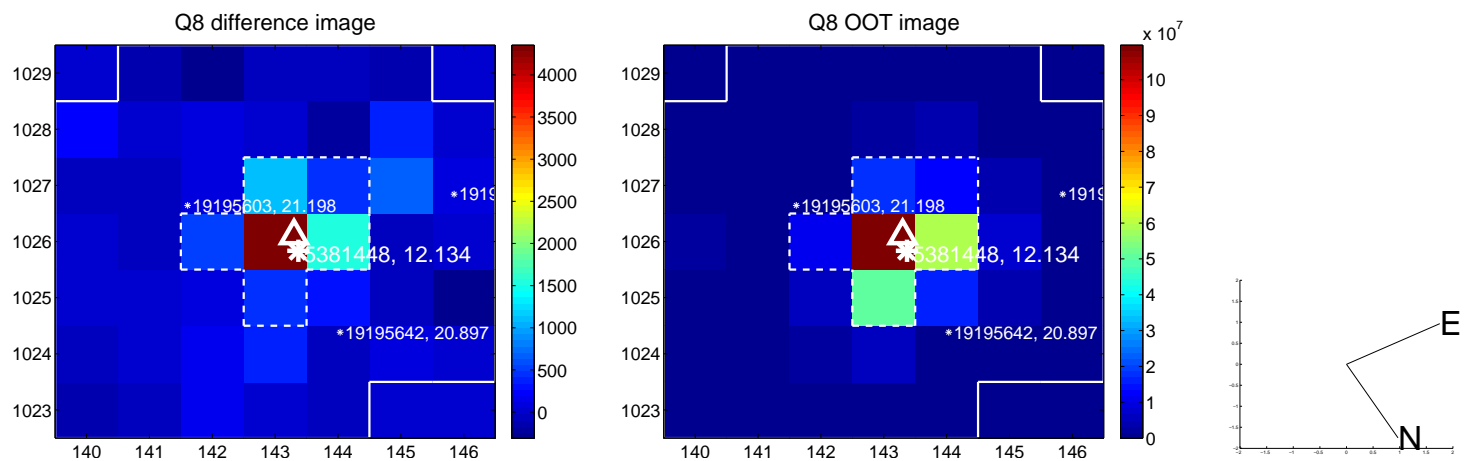
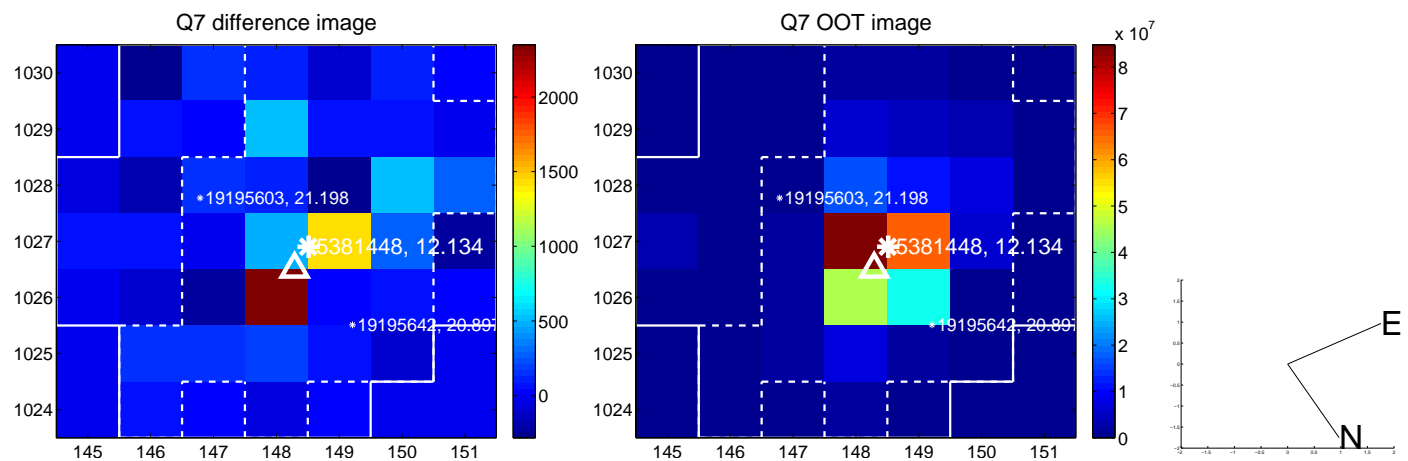
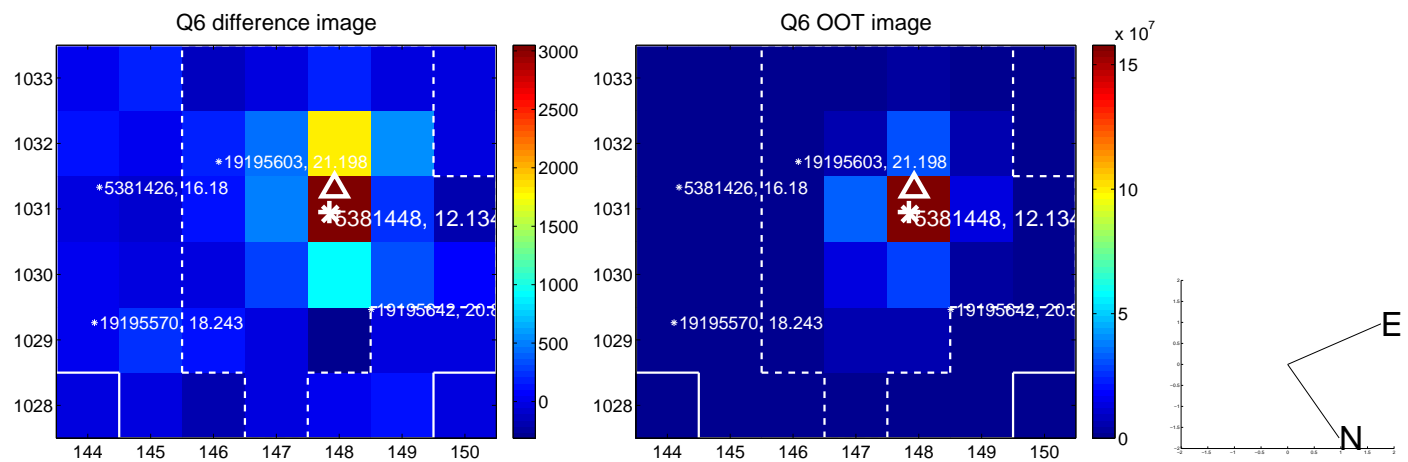
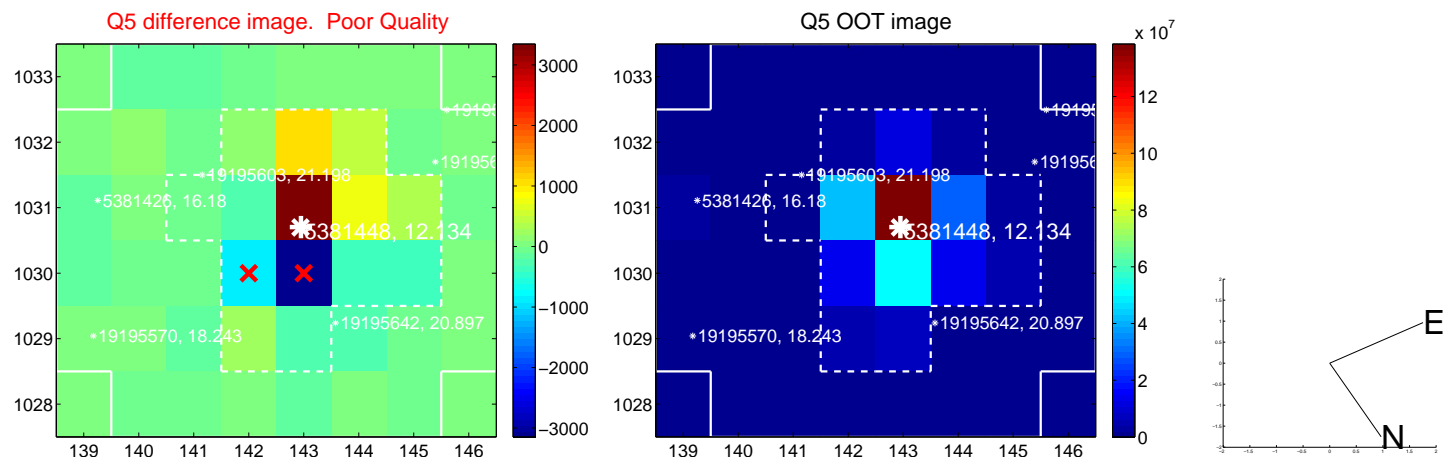


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

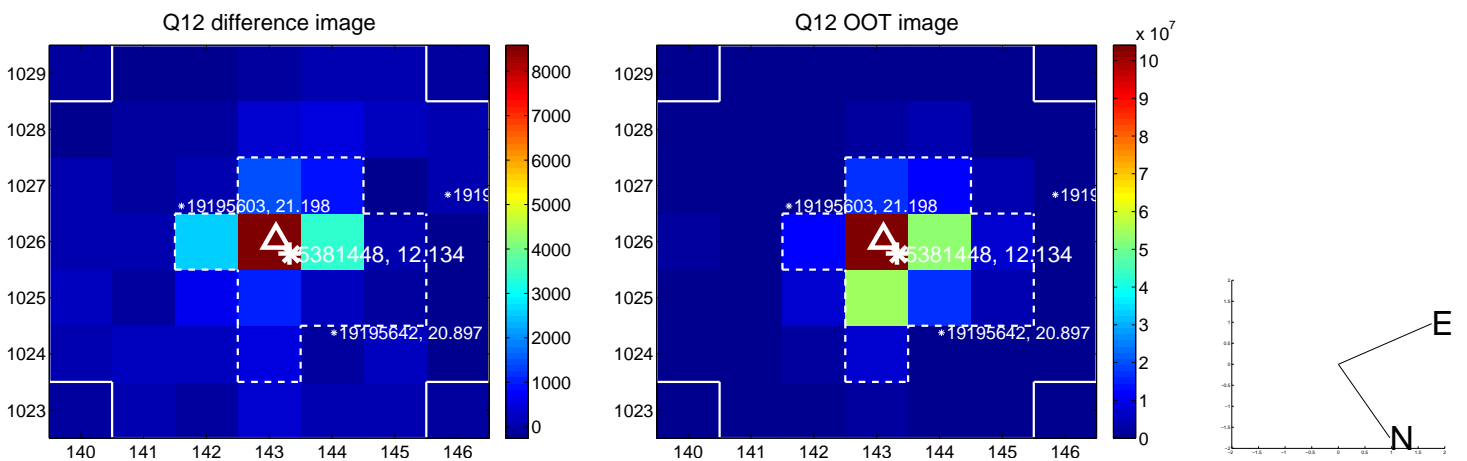
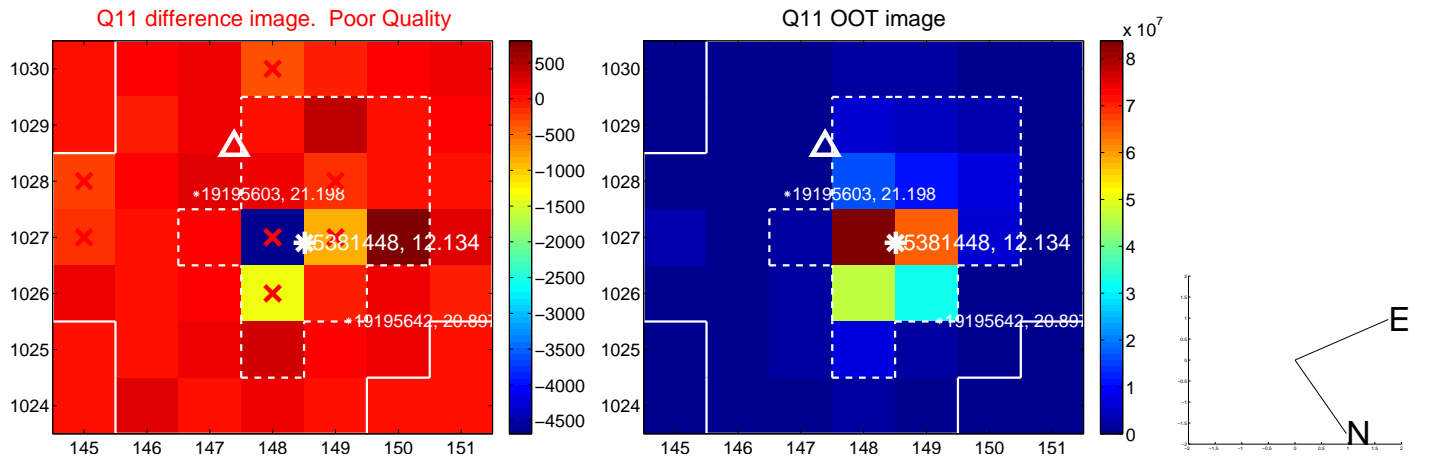
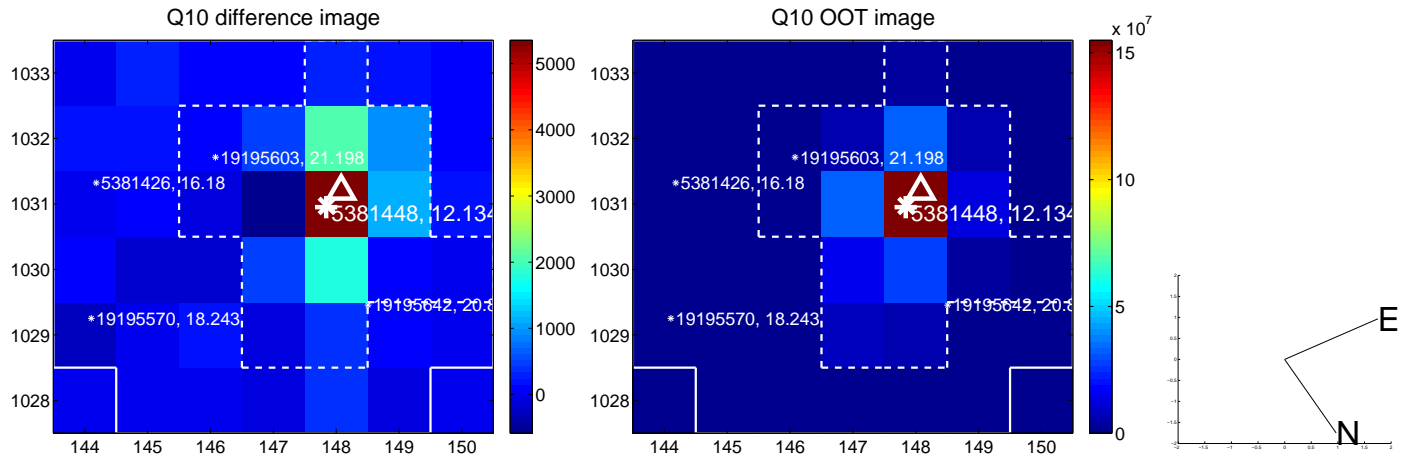
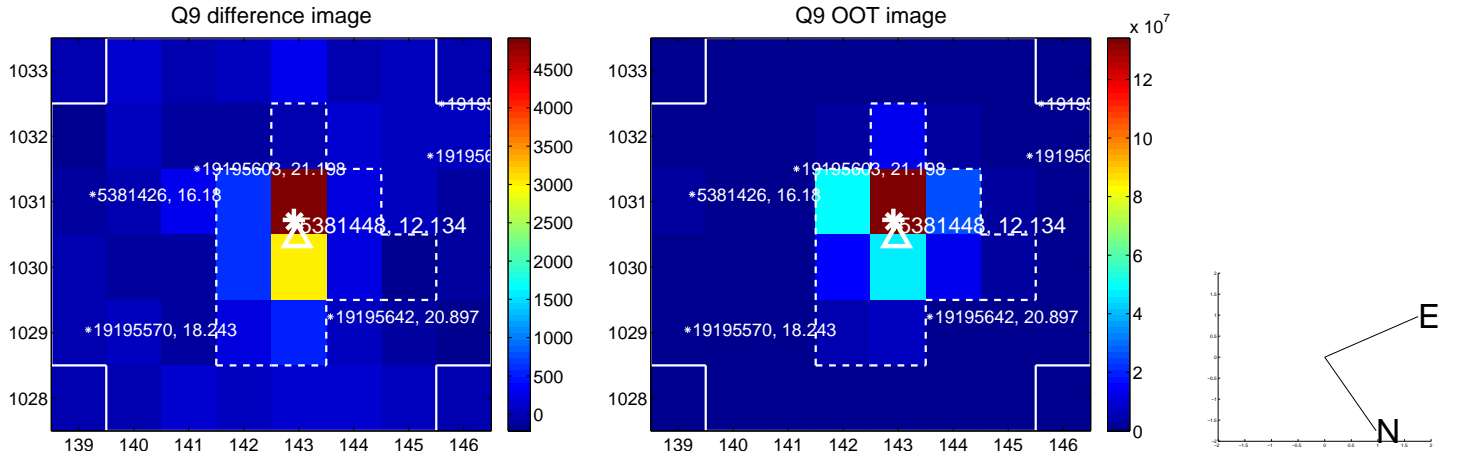
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



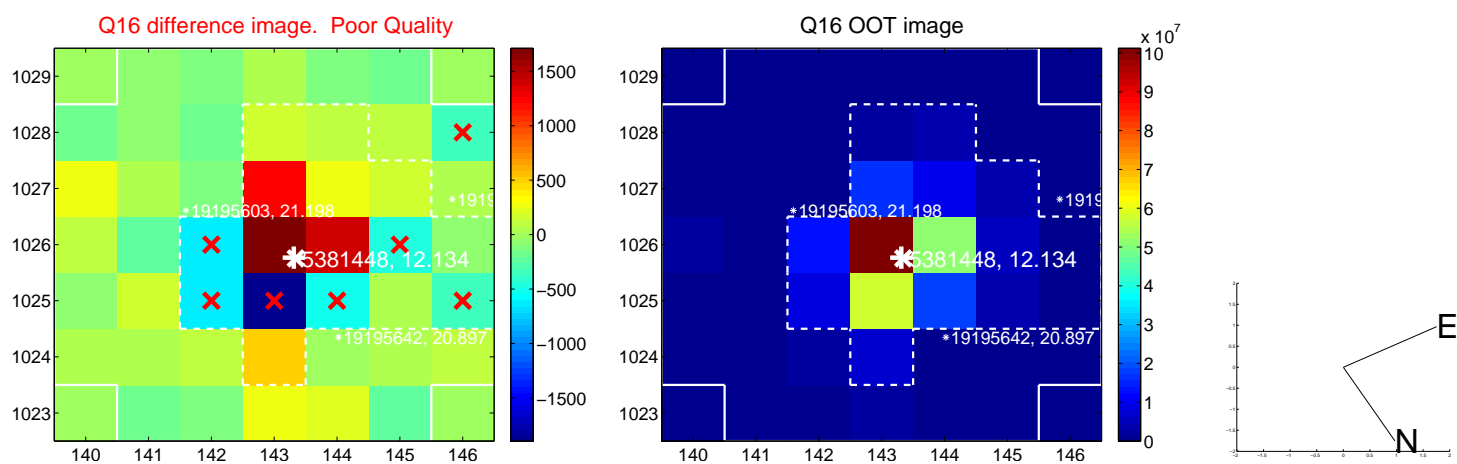
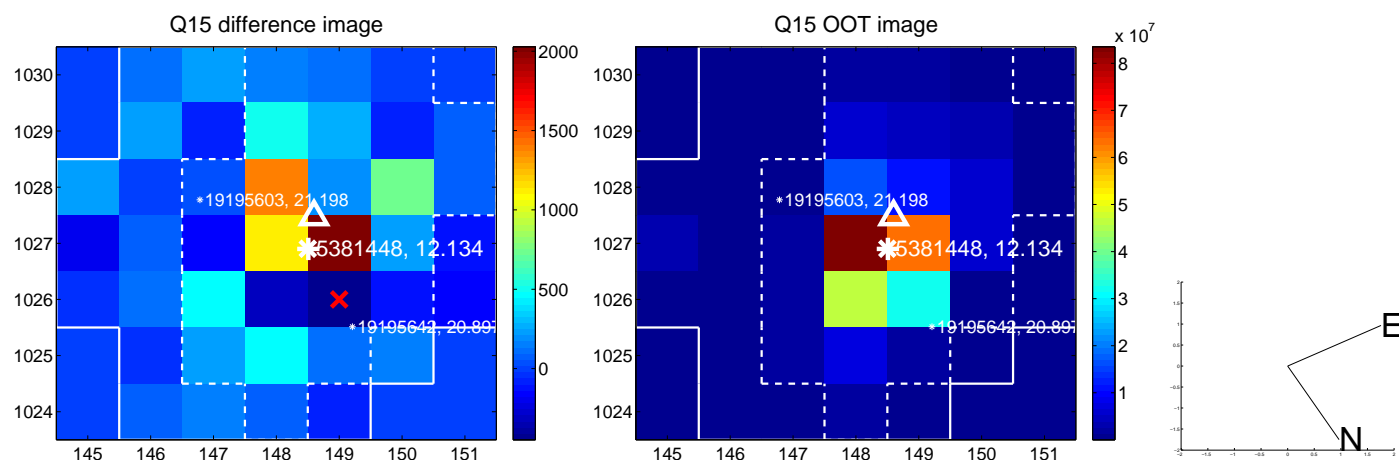
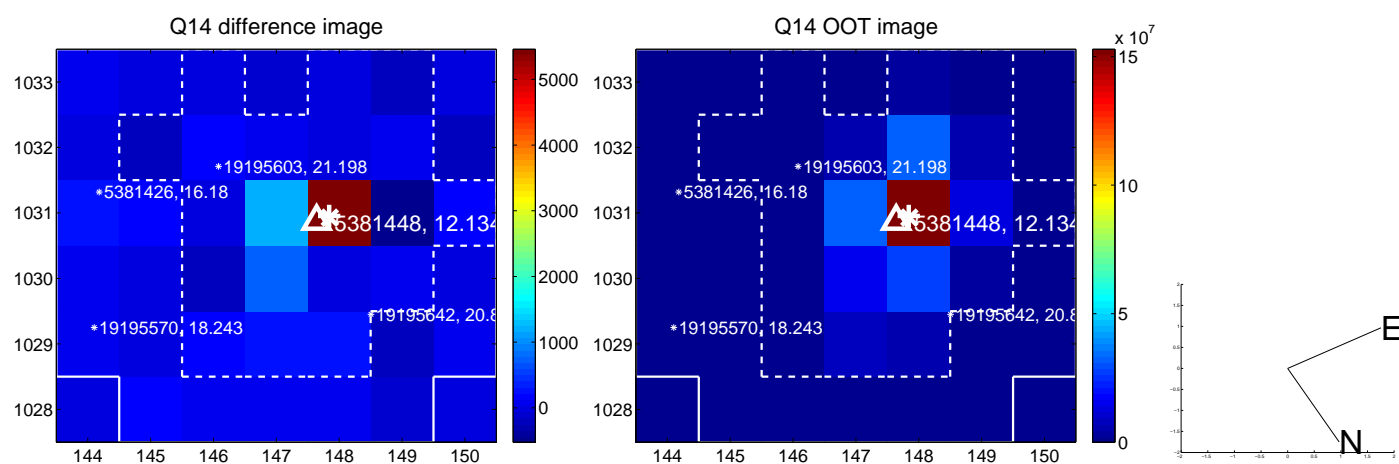
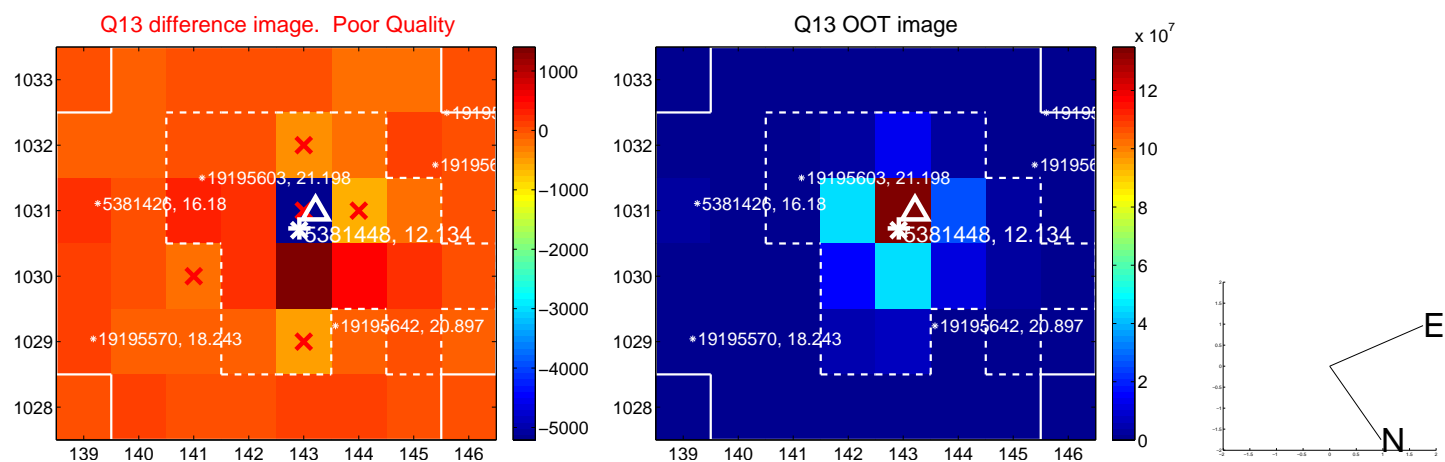
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



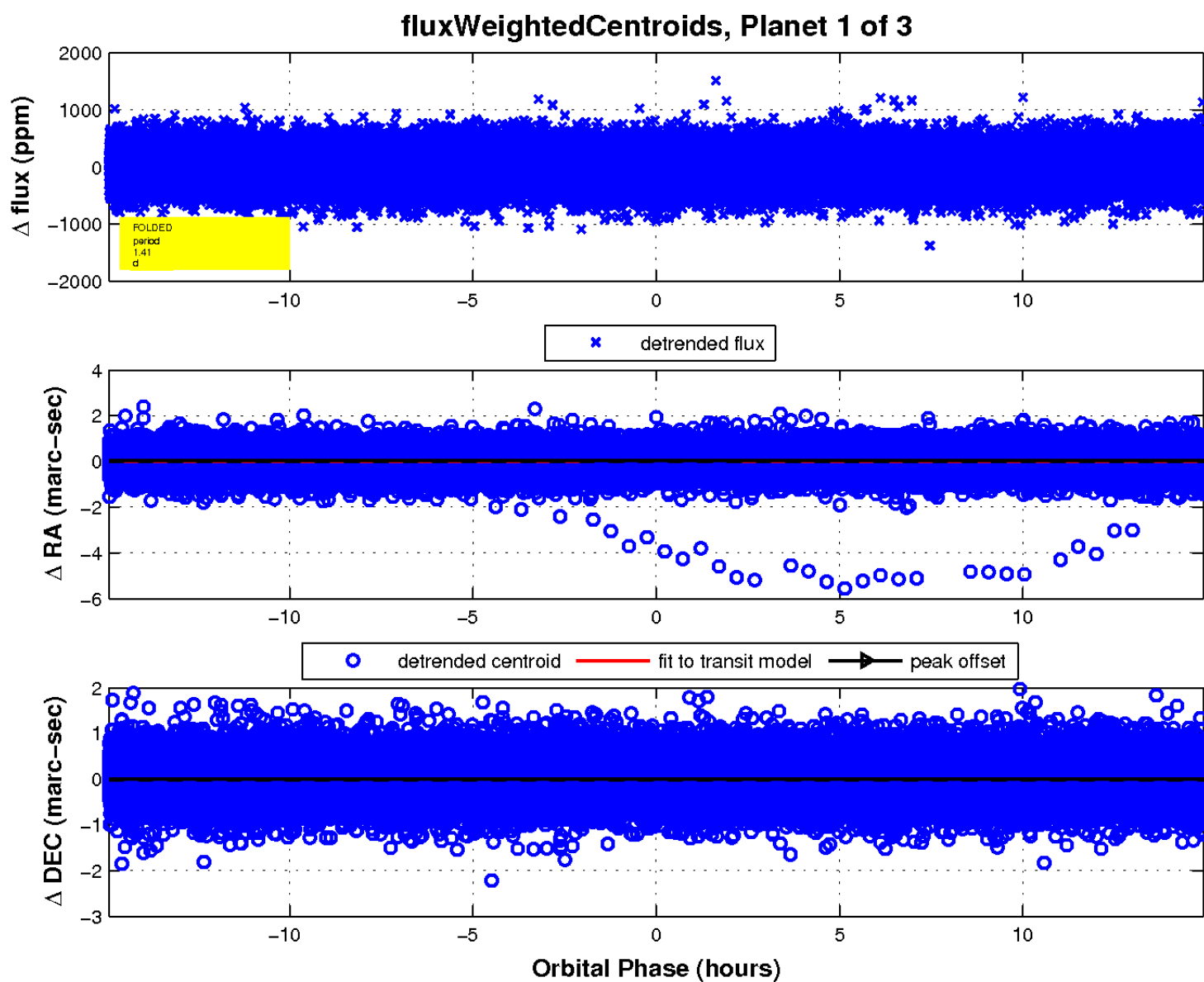
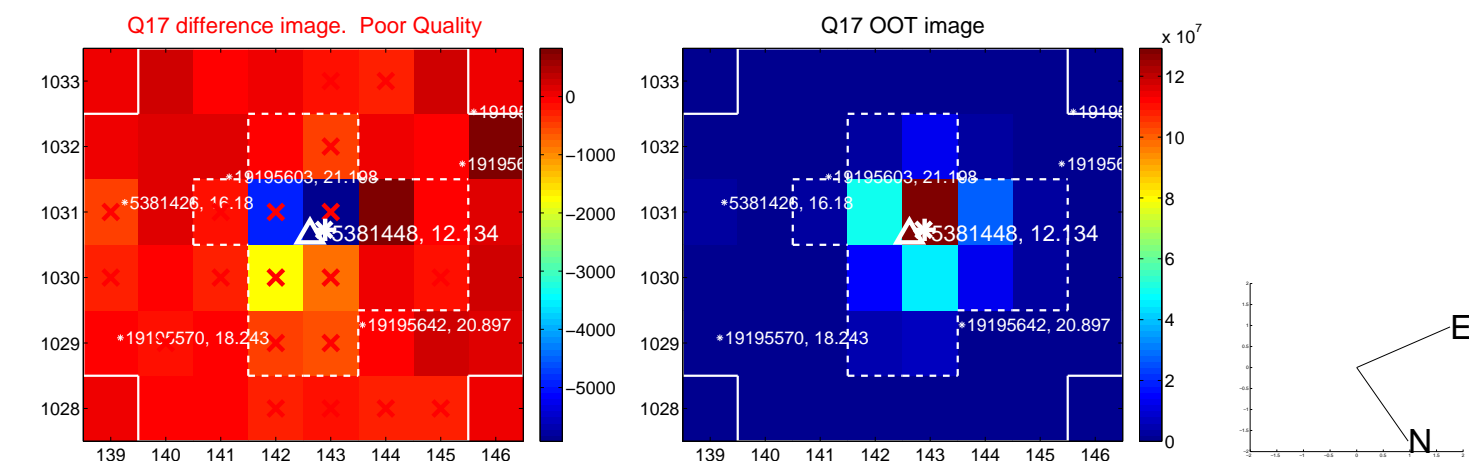
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

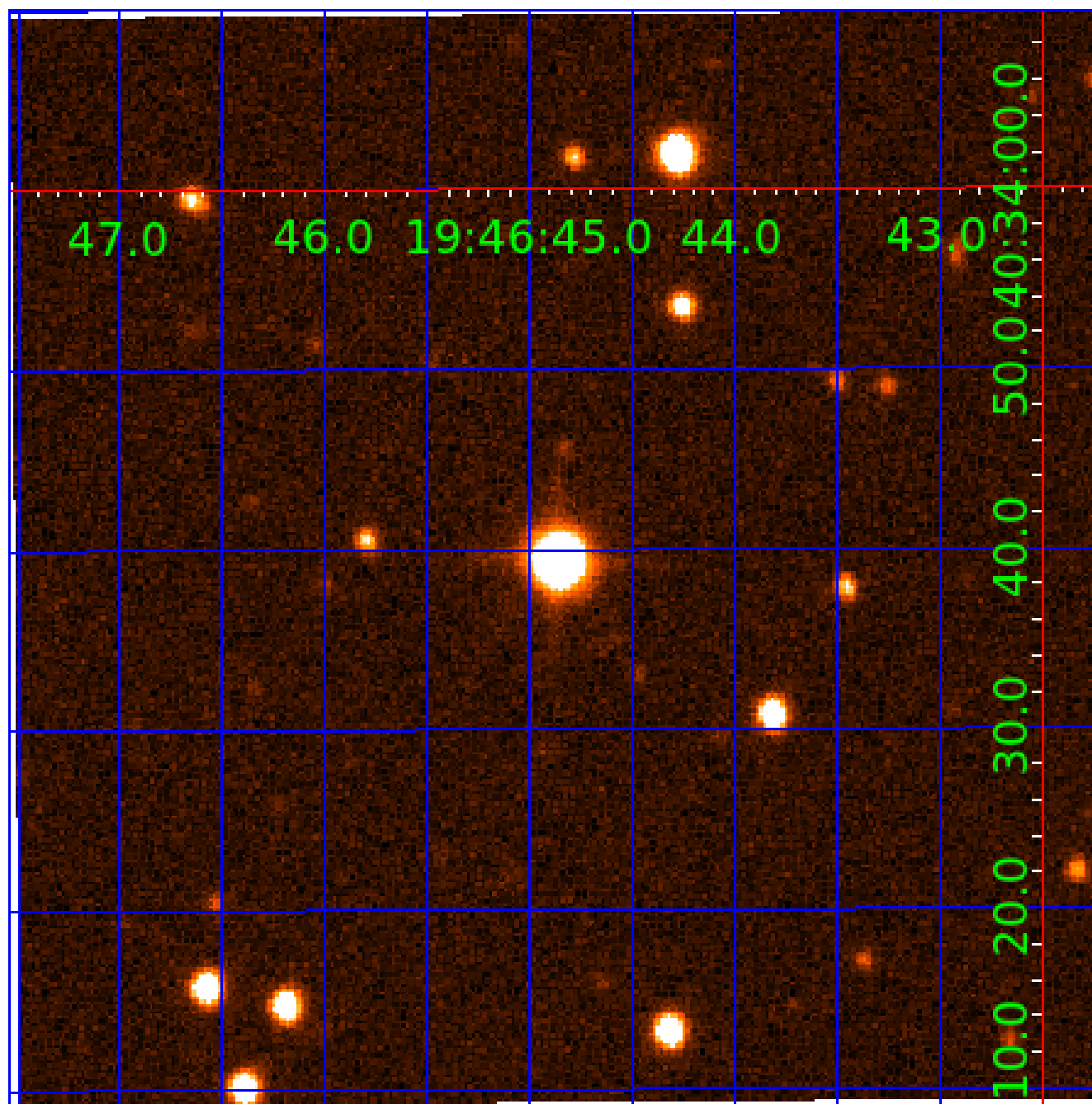


white \times : KIC target position; $+$: OOT centroid; Δ : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005381448

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})
005381448-01	OBS	No	1.410870	132.910285	33.5	4.976	10.6	9.9	2.22	7746	1.49	17538.53
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Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005381448-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
005381448-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005381448-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST

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

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

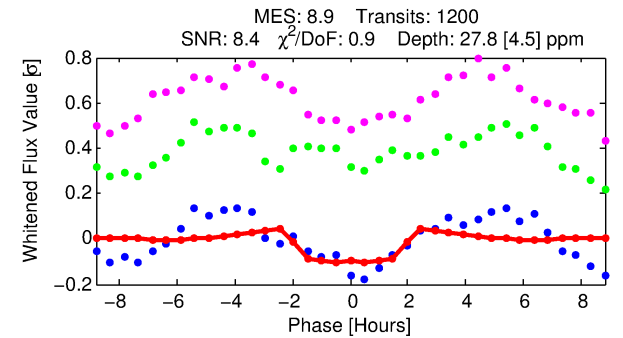
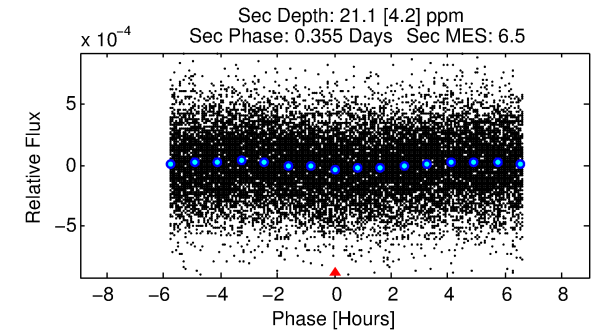
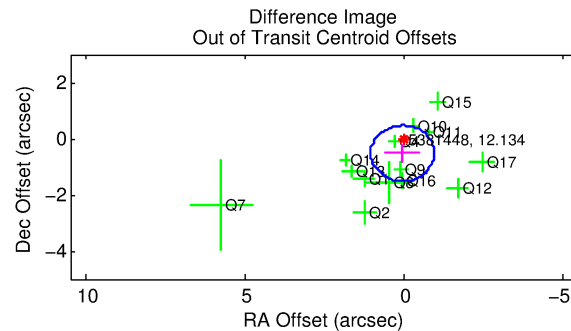
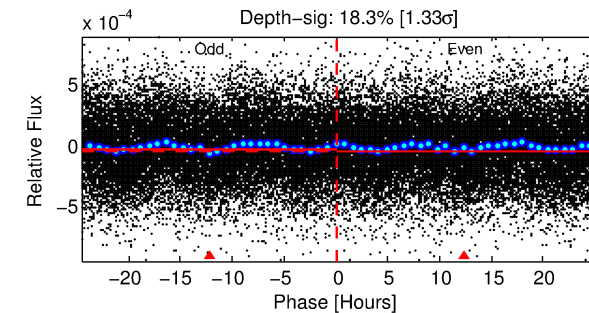
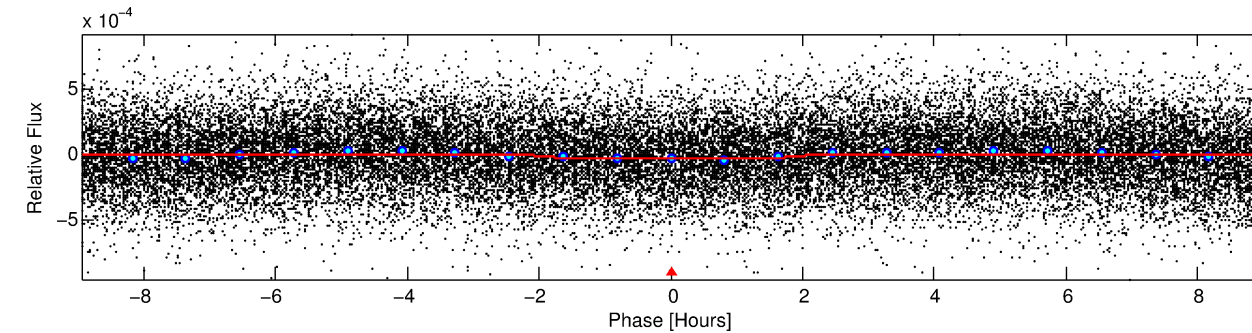
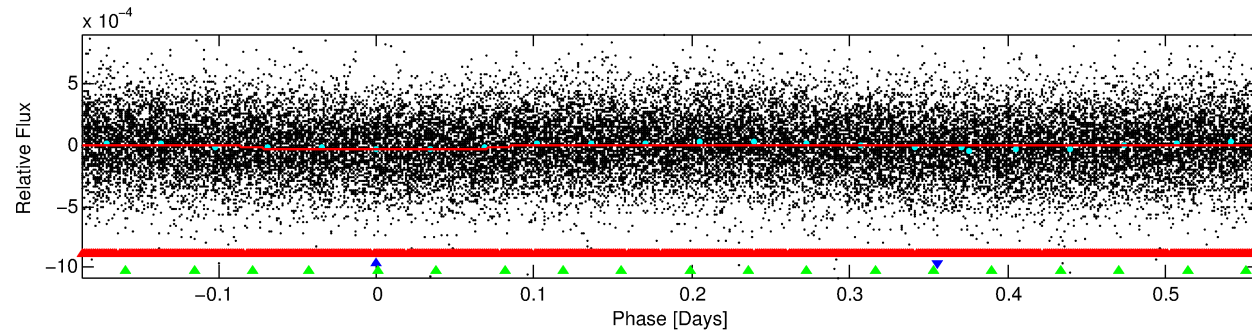
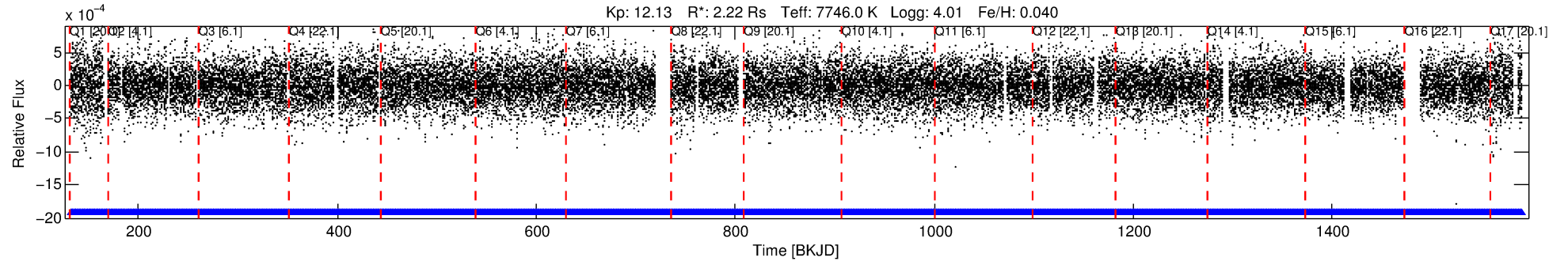
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005381448-02

No Significant Match Found

DV One-Page Summary

KIC: 5381448 Candidate: 2 of 3 Period: 0.746 d



DV Fit Results:

Period = 0.74567 [0.00001] d
Epoch = 132.2262 [0.0043] BKJD
Rp/R* = 0.0056 [0.0030]
a/R* = 1.13 [0.88]
b = 0.90 [0.78]
Seff = 41043.44 [15463.81]
Teff = 3629 [342] K
Rp = 1.35 [0.81] Re
a = 0.0197 [0.0044] AU
Ag = 2.46 [2.82] [0.52 σ]
Teffp = 7025 [1958] K [1.71 σ]

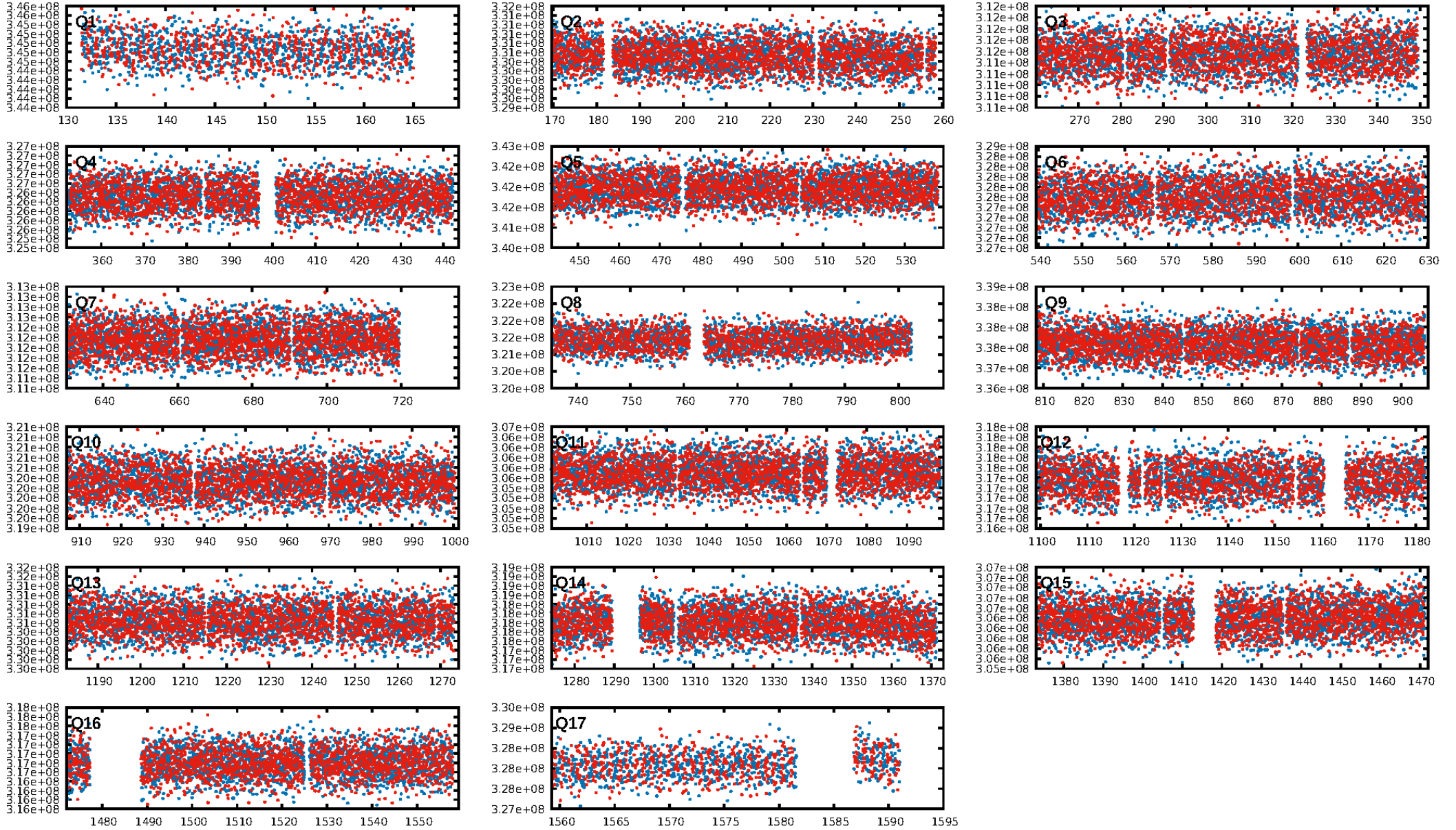
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 98.7% [2.48 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.35e-07
RollingBand-fgt: 1.00 [1144/1144]
GhostDiagnostic-chr: 2.811
Centroid-sig: 25.0%
Centroid-so: 0.296 arcsec [0.86 σ]
OotOffset-rm: 0.530 arcsec [1.60 σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-rm: 0.559 arcsec [1.81 σ]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.86 [12/14]
DiffImageOverlap-fno: 1.00 [17/17]

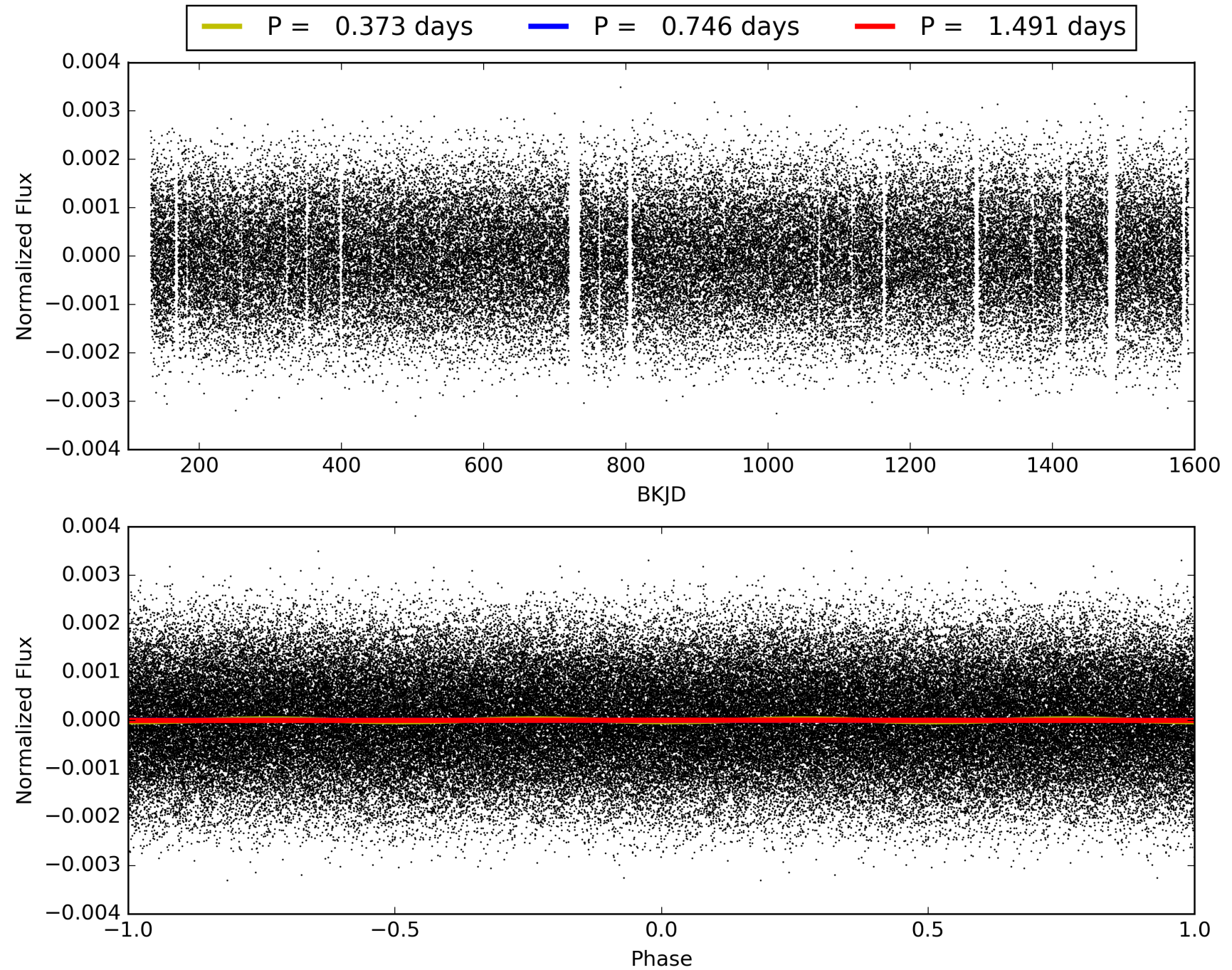
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:09:44 Z

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

TCE 005381448-02, PDC Light Curves

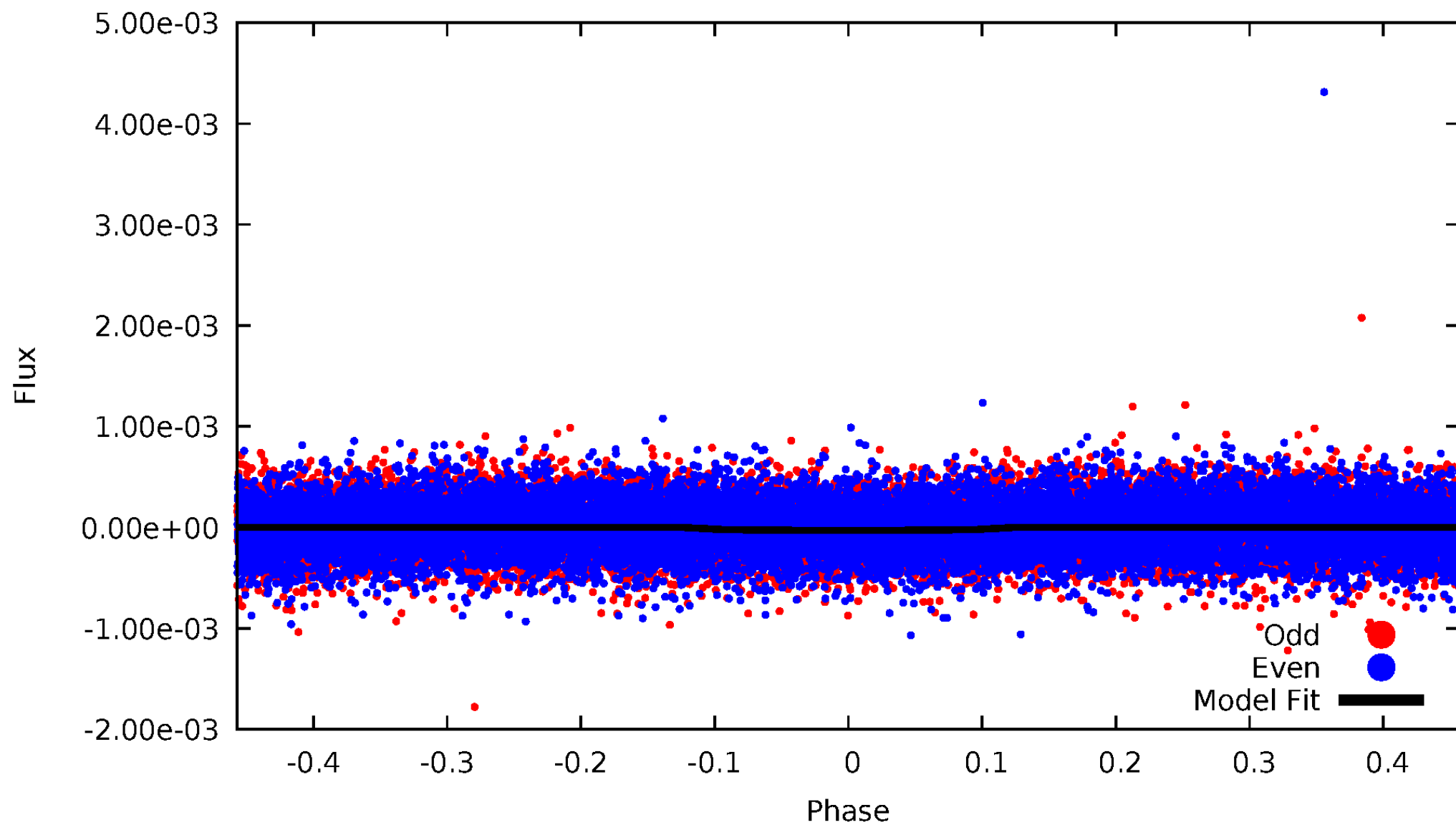


TCE 005381448-02



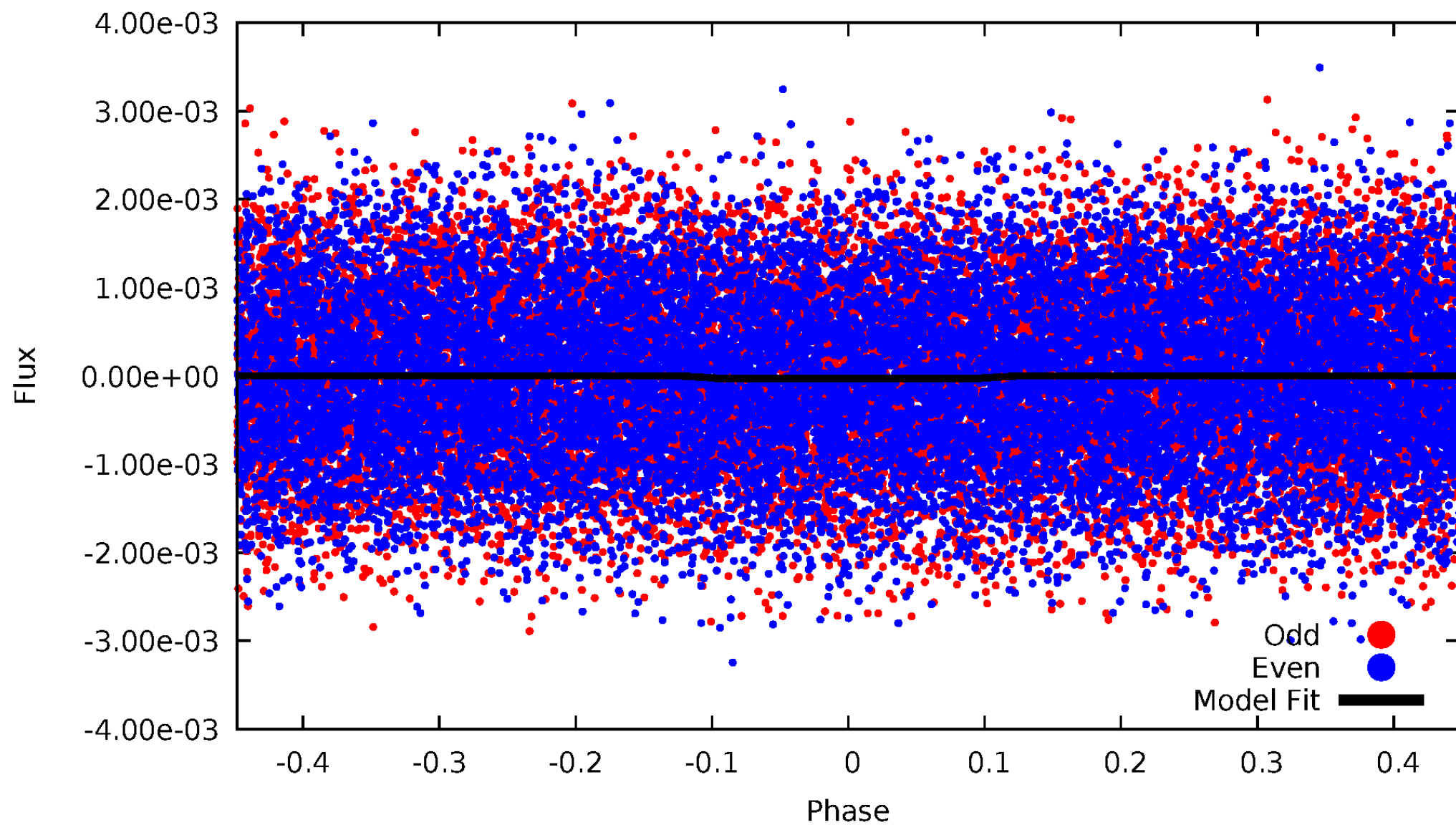
DV Odd/Even

TCE 005381448-02



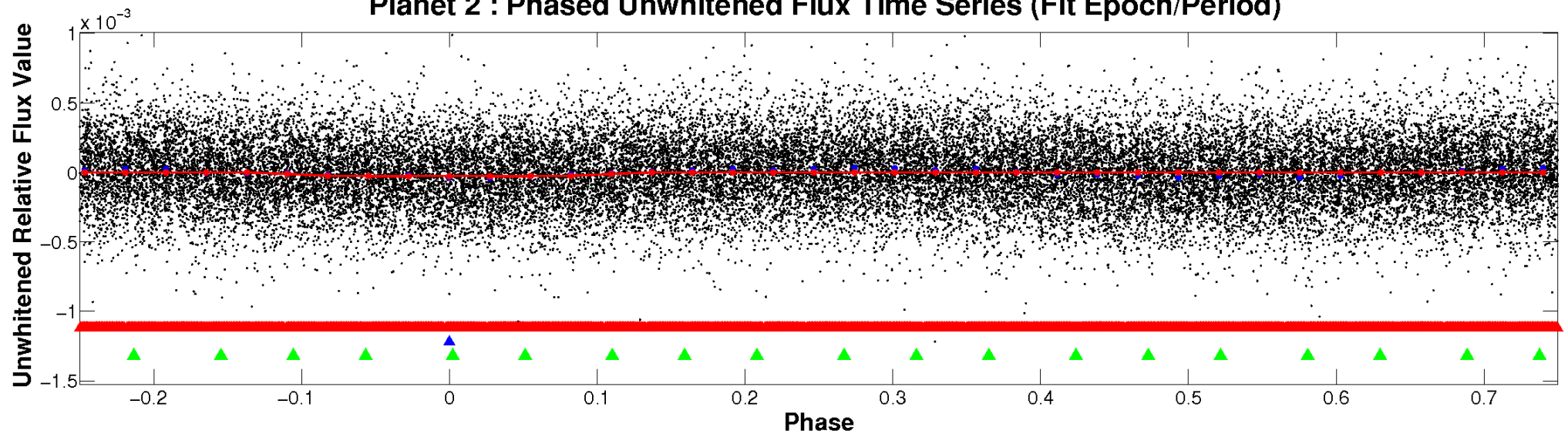
ALT Odd/Even

TCE 005381448-02

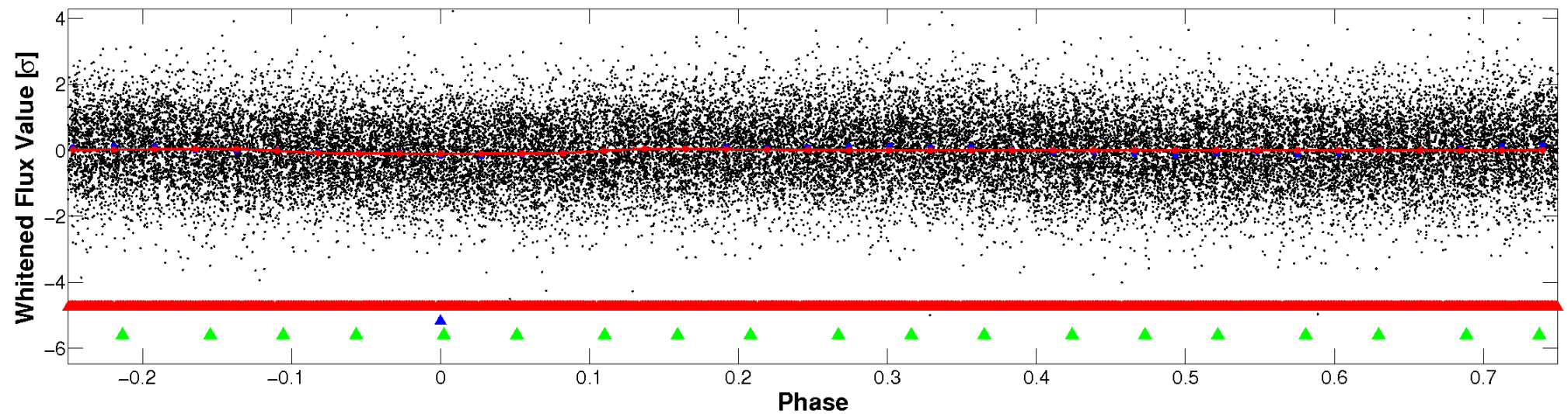


Non-Whitened Vs. Whitened Light Curve

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

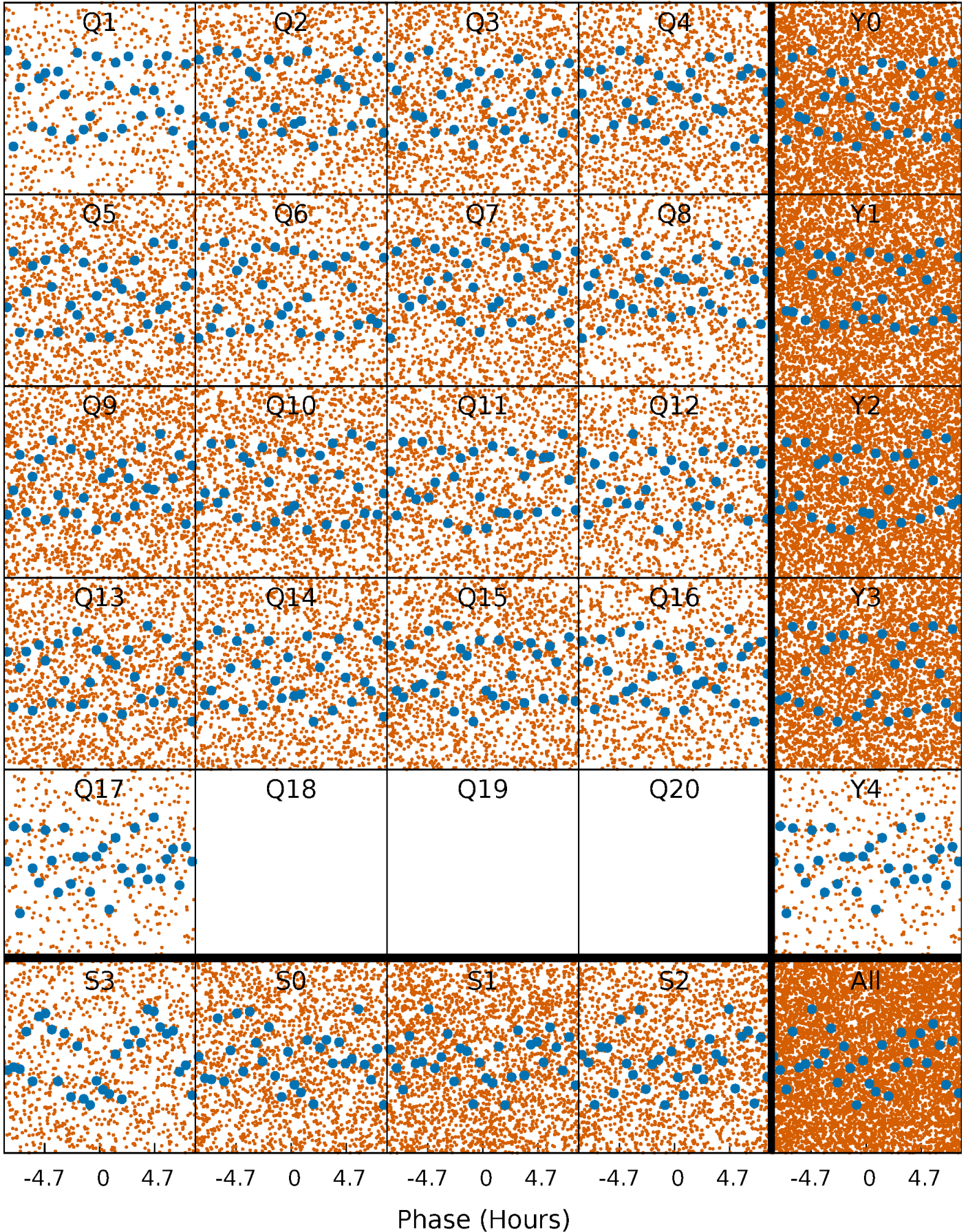


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



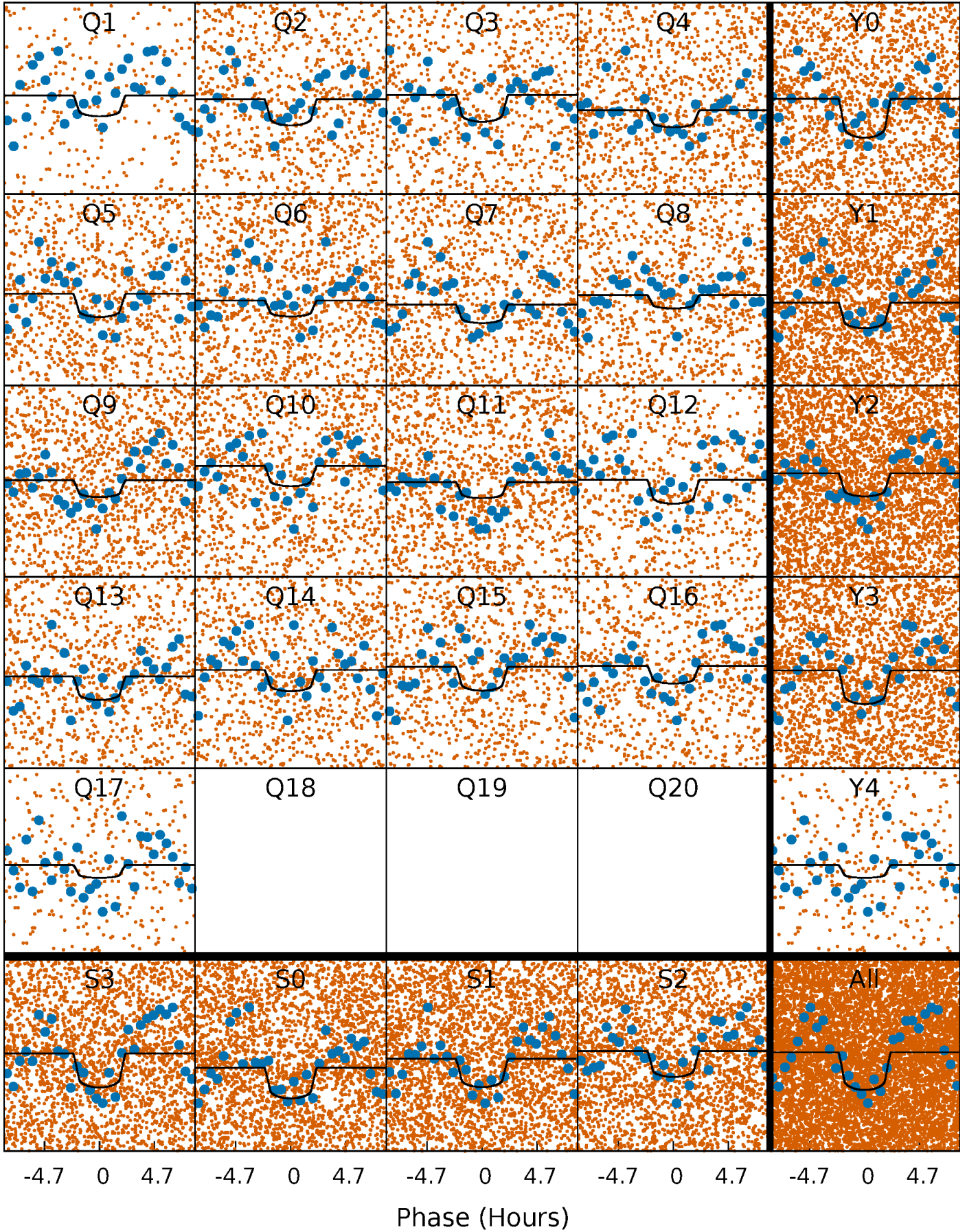
PDC Quarter-Phased Transit Curves

TCE 005381448-02 P= 0.745674 Days $T_0=132.226222$ (BKJD)



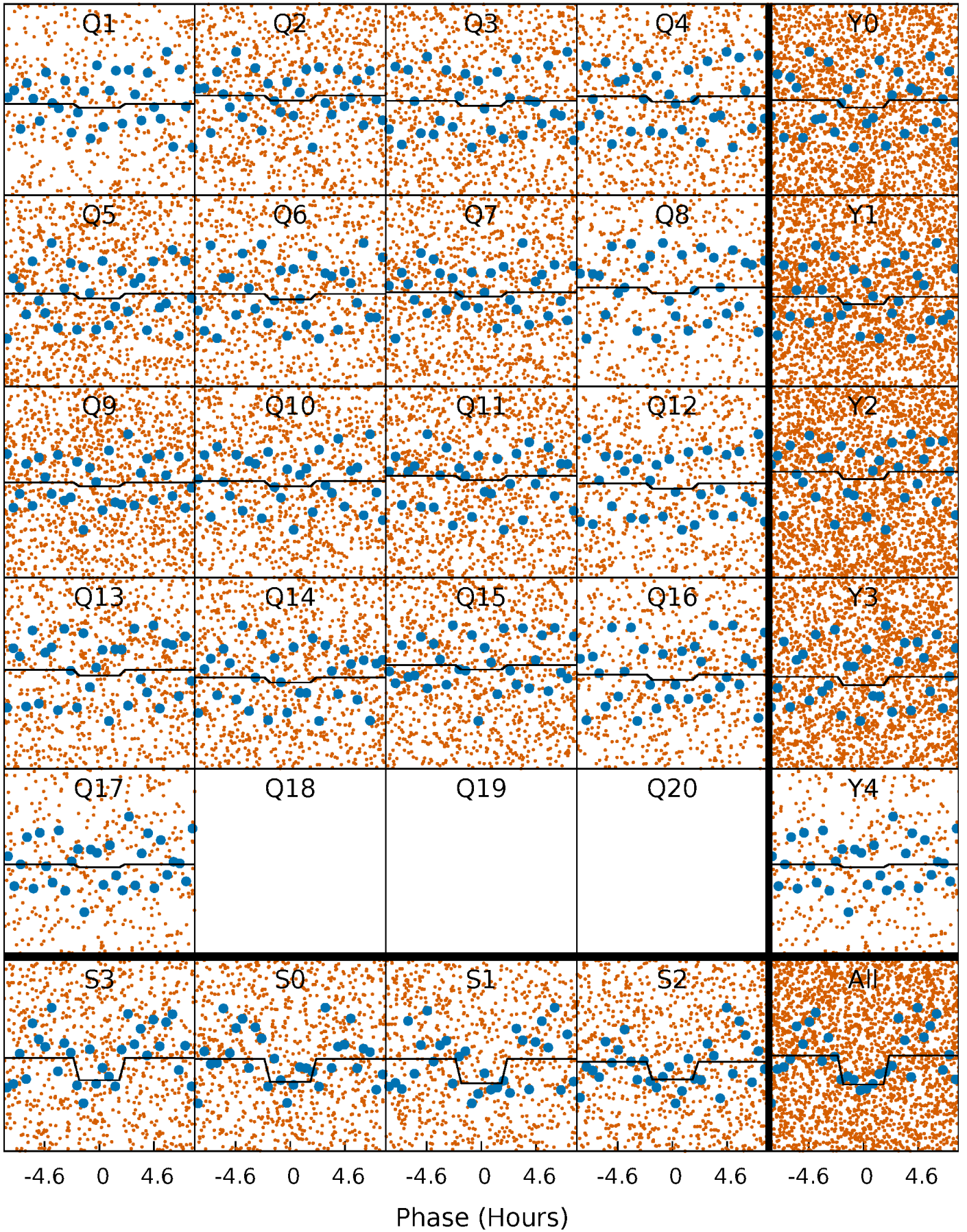
DV Quarter-Phased Transit Curves

TCE 005381448-02 P= 0.745674 Days $T_0=132.226222$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

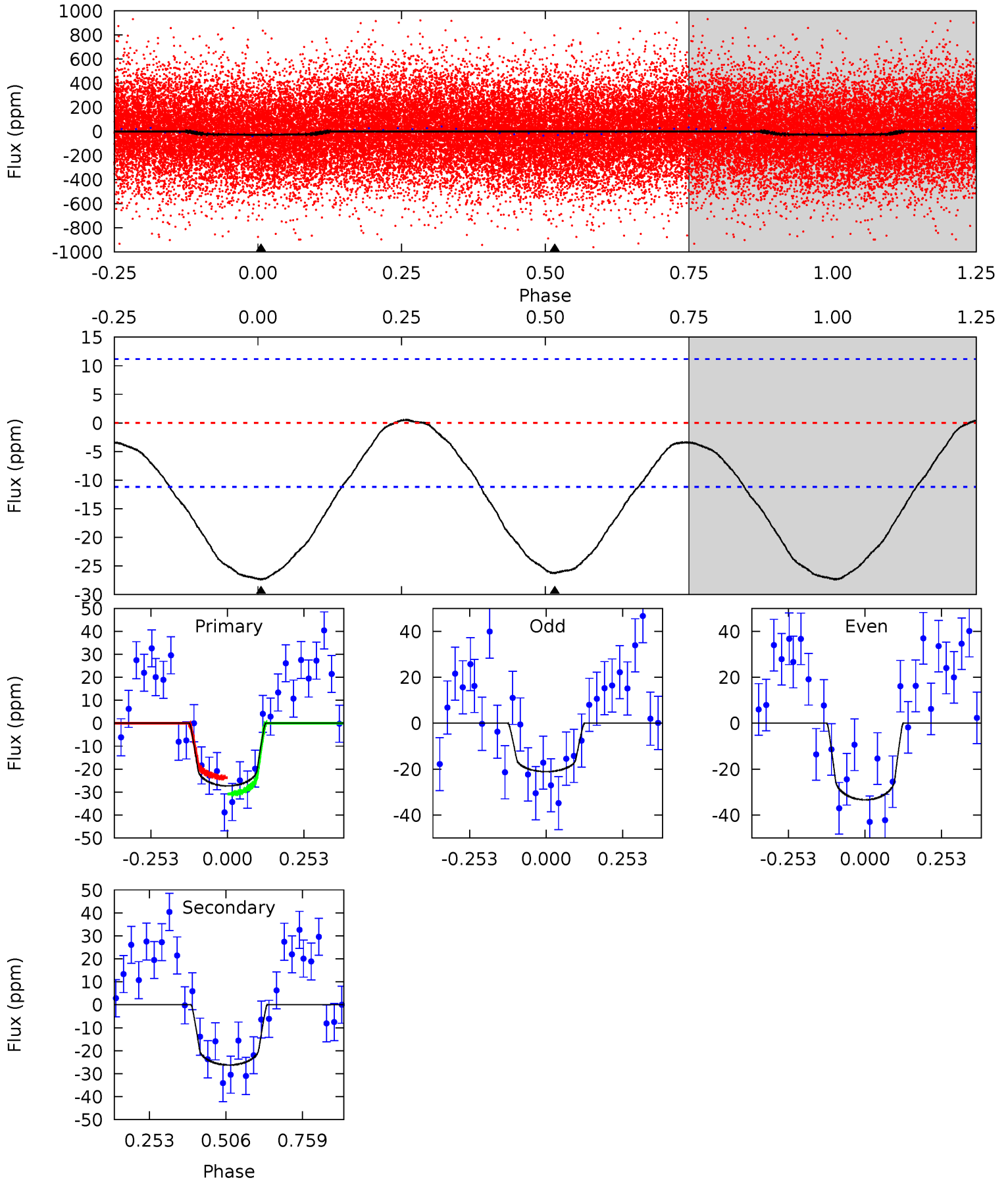
TCE 005381448-02 P= 0.745684 Days $T_0=132.224671$ (BKJD)



DV Model-Shift Uniqueness Test

005381448-02, P = 0.745674 Days, E = 131.480548 Days

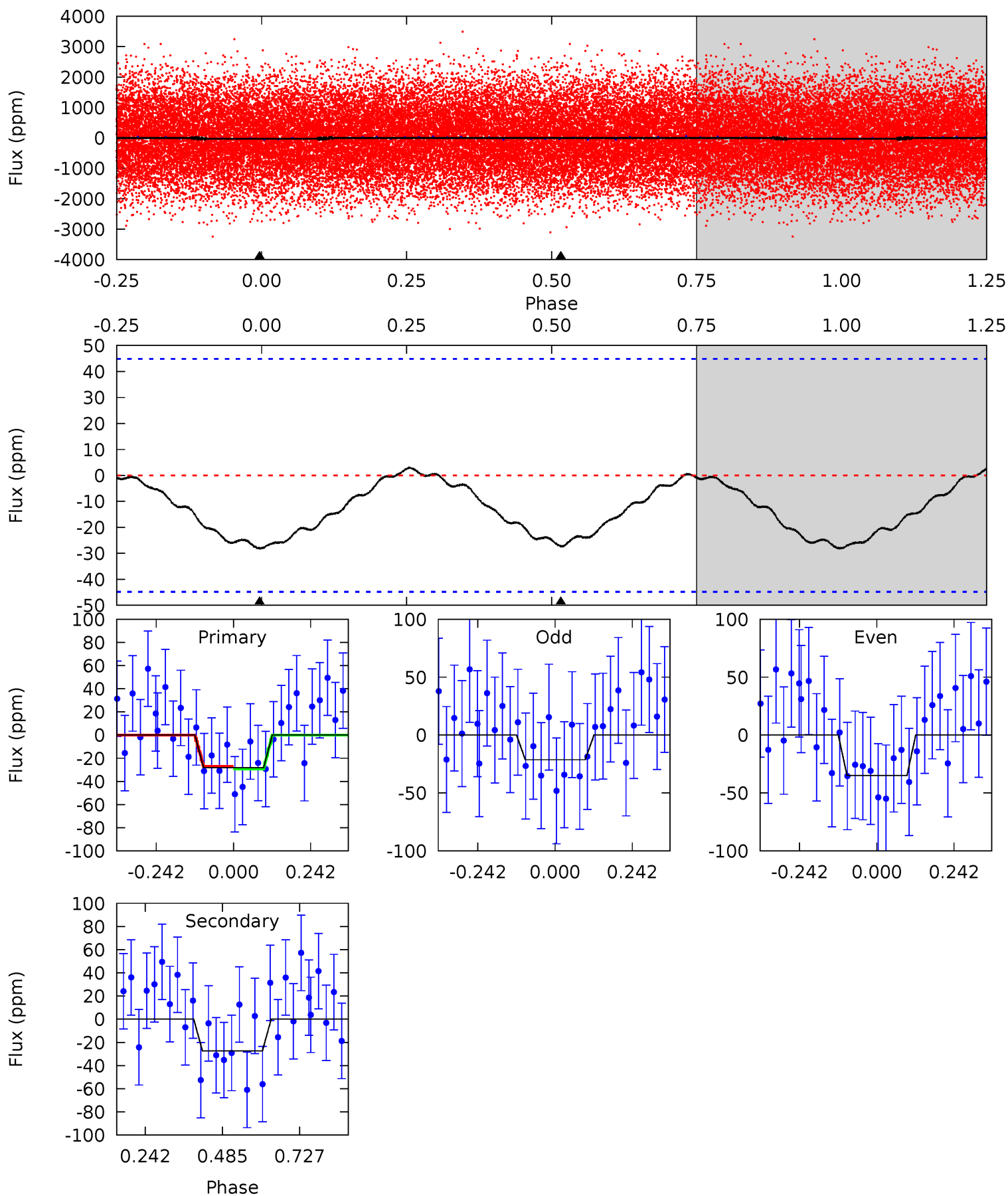
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.7	10.3	0	0	4.37	1.14	0.75	10.7	10.7	10.3	10.3	2.45	0.87	0.02	1.43



Alt Model-Shift Uniqueness Test

005381448-02, P = 0.745684 Days, E = 131.478987 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.75	2.67	0	0	4.38	1.17	0.13	2.75	2.75	2.67	2.67	0.66	1.08	0.10	0.10



Stellar Parameters For KIC 005381448

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7746^{+214}_{-349}	$4.007^{+0.182}_{-0.149}$	$0.040^{+0.200}_{-0.350}$	$2.219^{+0.483}_{-0.590}$	$1.826^{+0.145}_{-0.339}$	$0.235^{+0.268}_{-0.102}$
	+3%/-5%	+5%/-4%	+500%/-875%	+22%/-27%	+8%/-19%	+114%/-43%
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 005381448-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-26 ± 3	$1.35^{+0.74}_{-0.69}$	5042^{+338}_{-390}	6957^{+4766}_{-1514}	$2.925^{+10.013}_{-1.692}$
Alt.	-27 ± 10	$1.27^{+0.77}_{-0.68}$	5062^{+338}_{-378}	7348^{+4862}_{-1969}	$3.528^{+11.914}_{-2.363}$

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 $A_{obs} \gg 1.0$

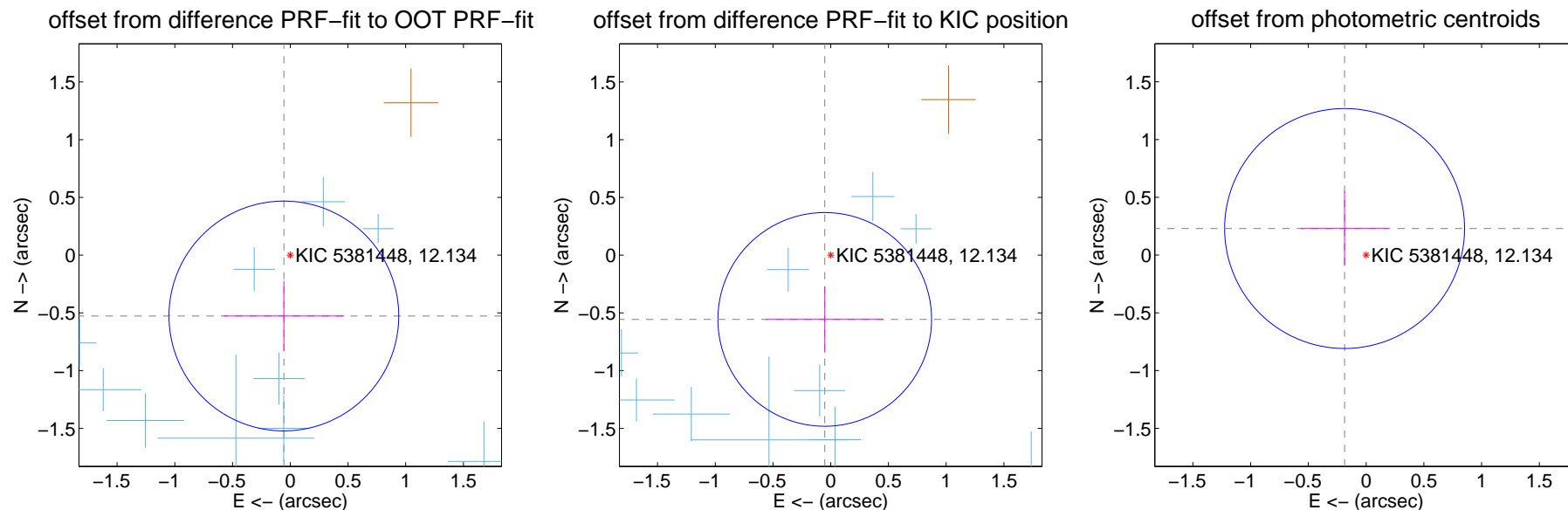
DV Centroid Data

Supplemental centroid analysis for 005381448-02. Kepler magnitude: 12.13. Transit SNR 8.39

There are 12 quarters with good PRF difference image offsets

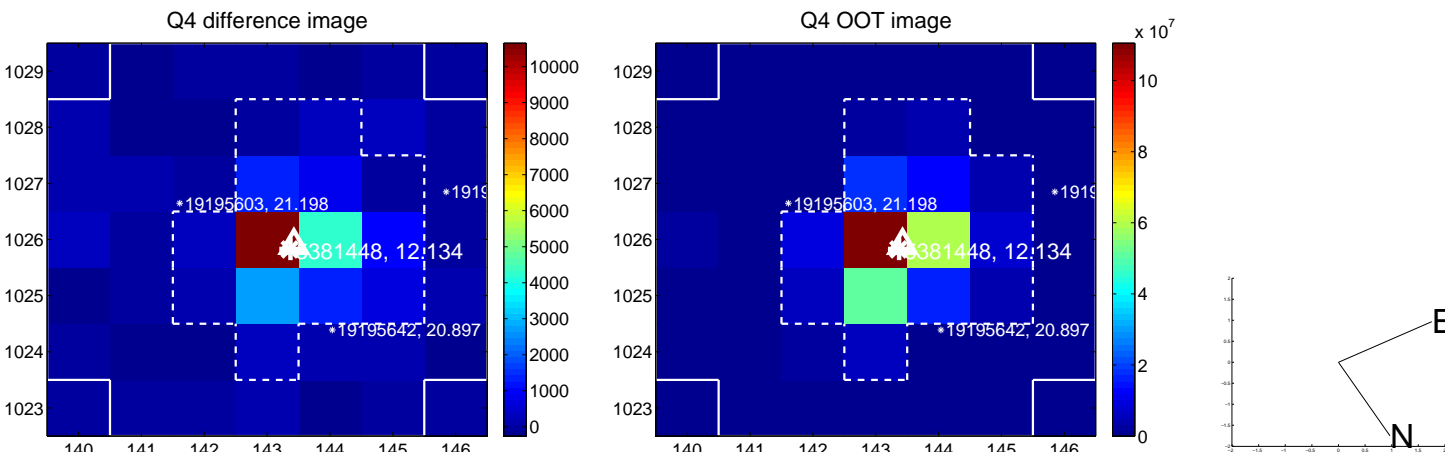
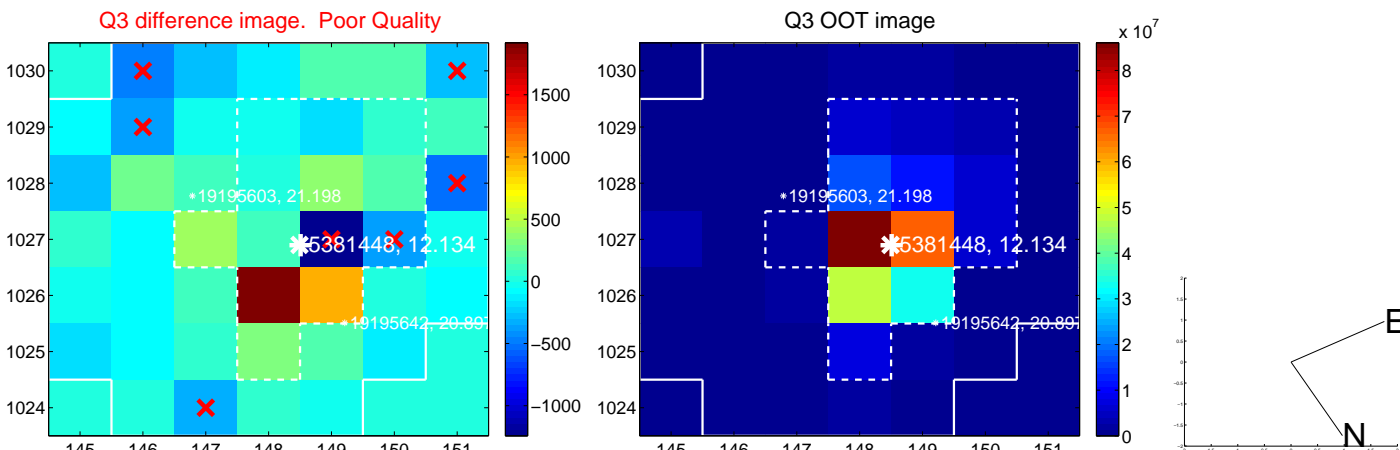
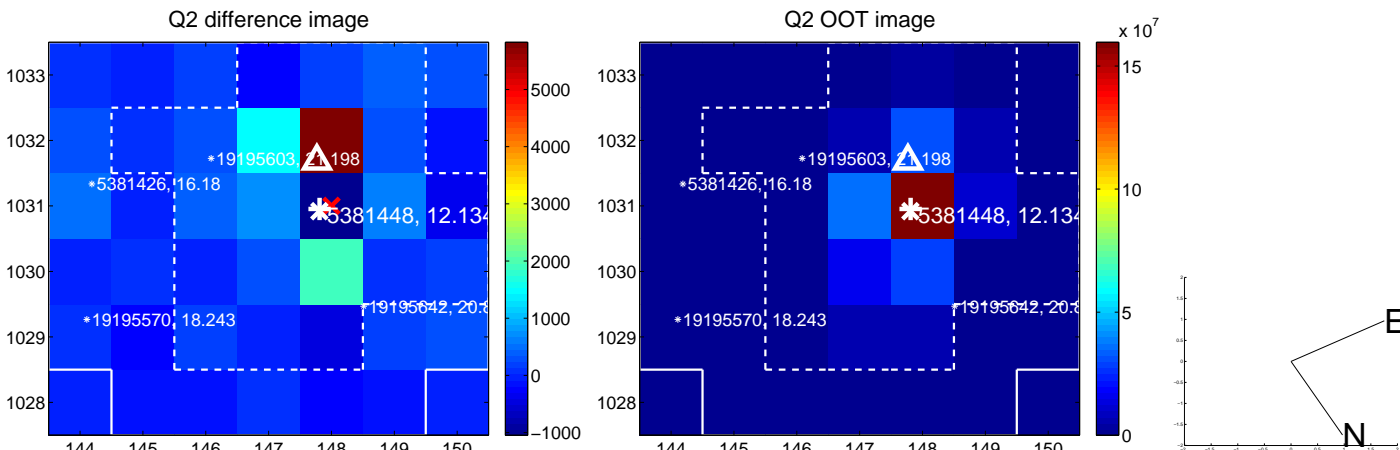
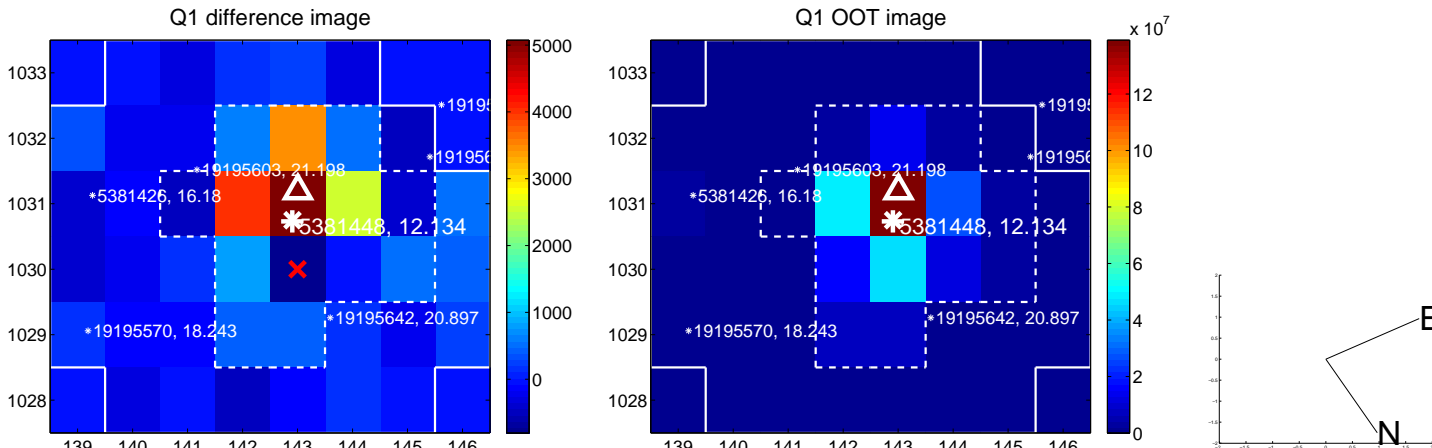
The direct PRF centroid is offset from the target star catalog position by about 0.07 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.530 ± 0.332	1.60	0.055 ± 0.523	-0.527 ± 0.304
PRF-fit source offset from KIC position	0.559 ± 0.308	1.81	0.052 ± 0.510	-0.556 ± 0.286
photometric centroid source offset	0.30 ± 0.35	0.86	0.19 ± 0.38	0.23 ± 0.32

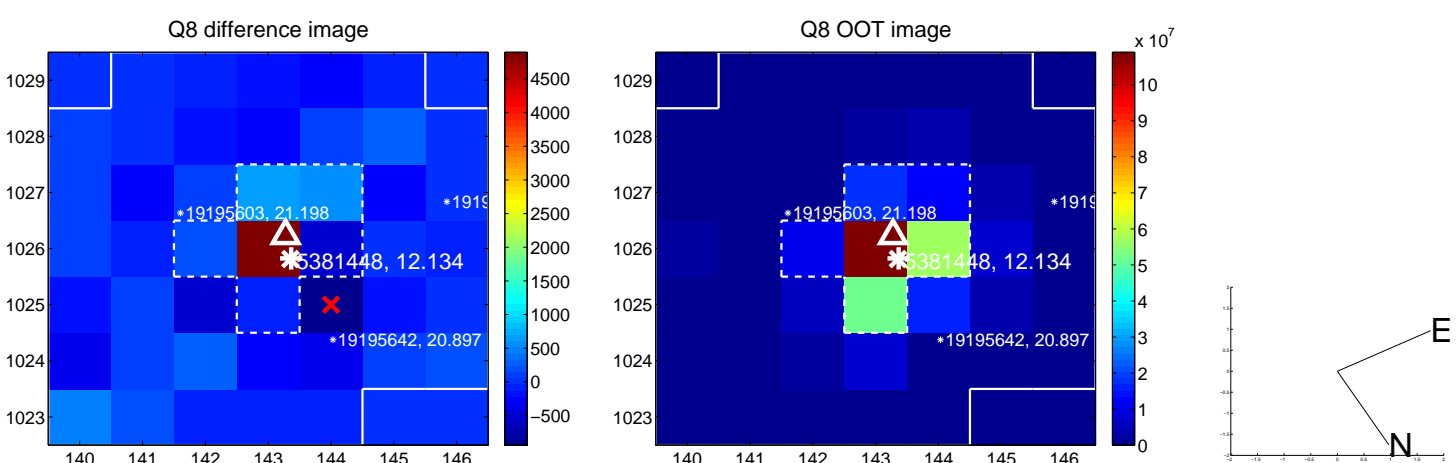
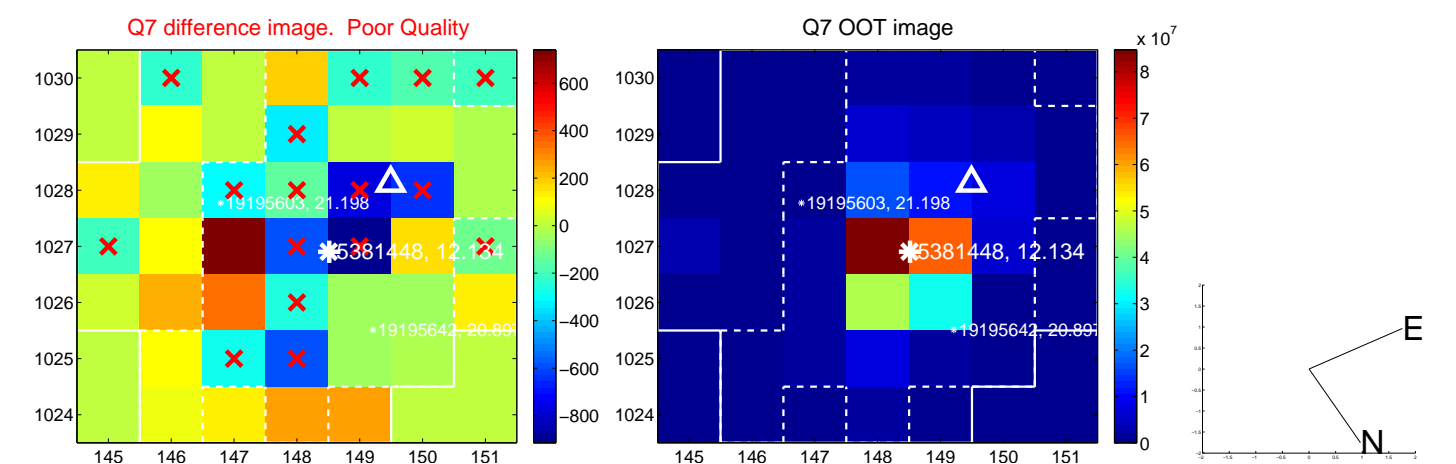
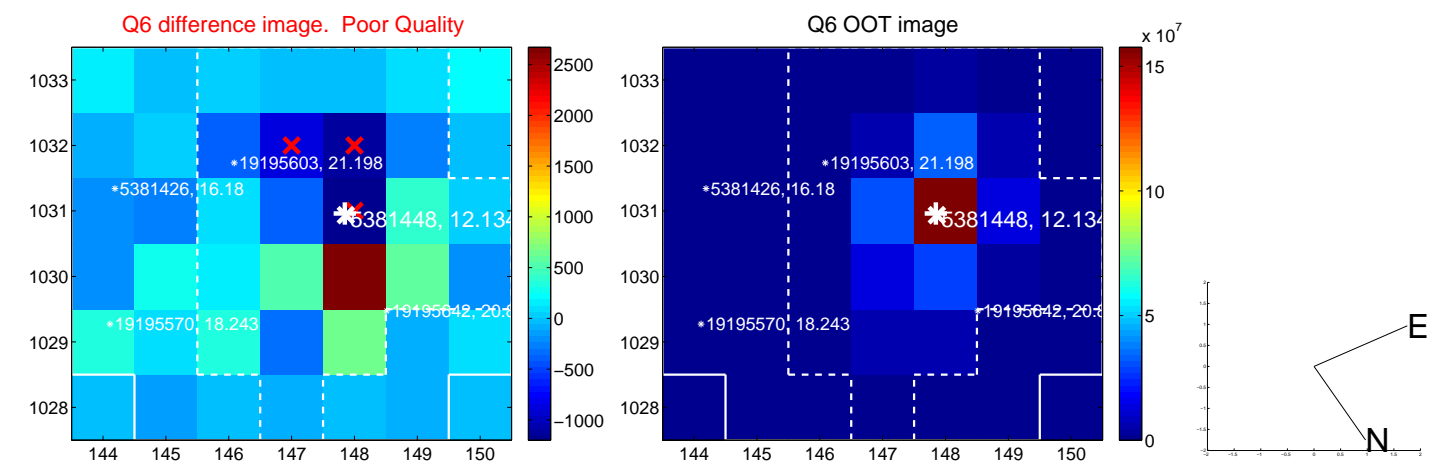
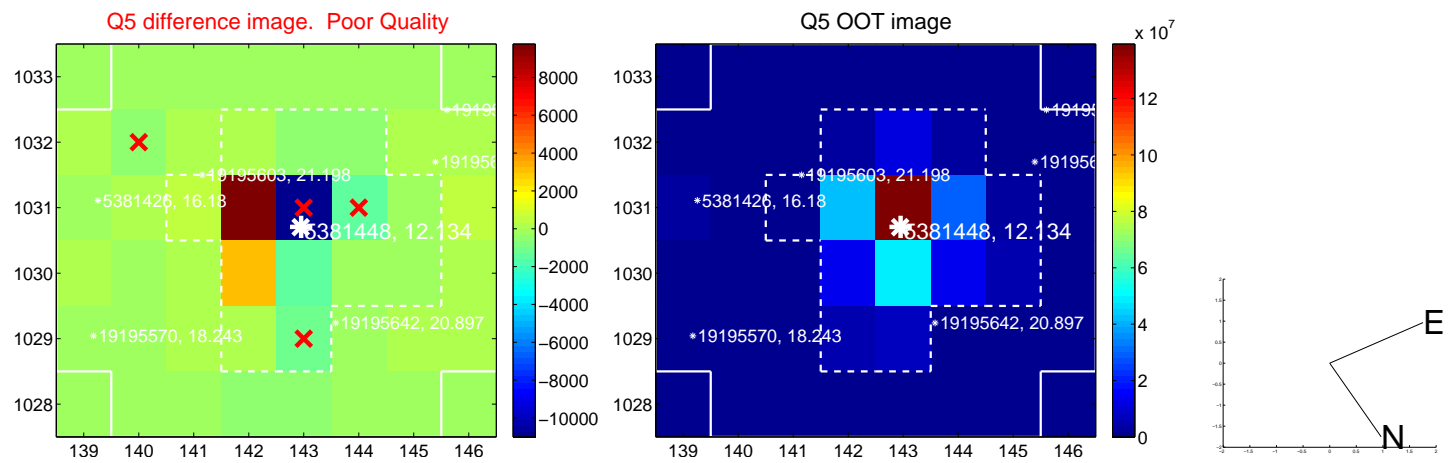


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

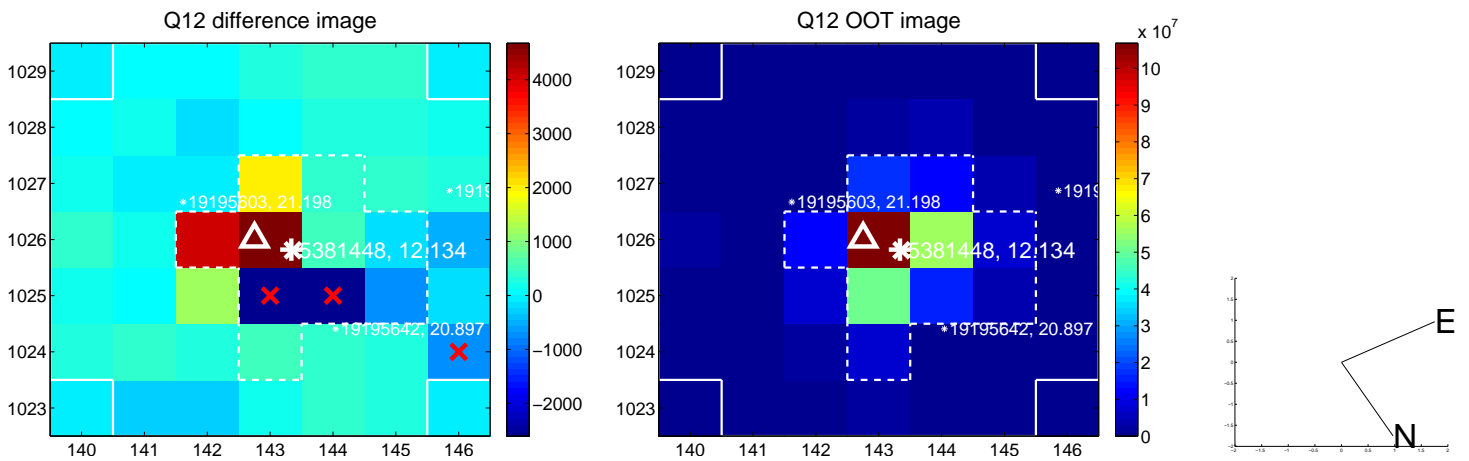
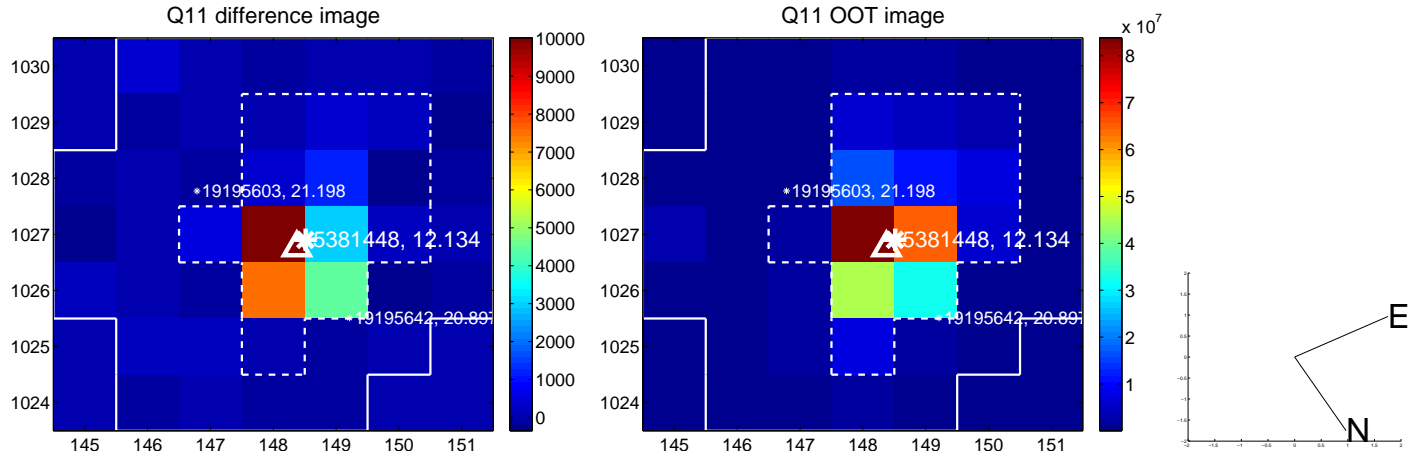
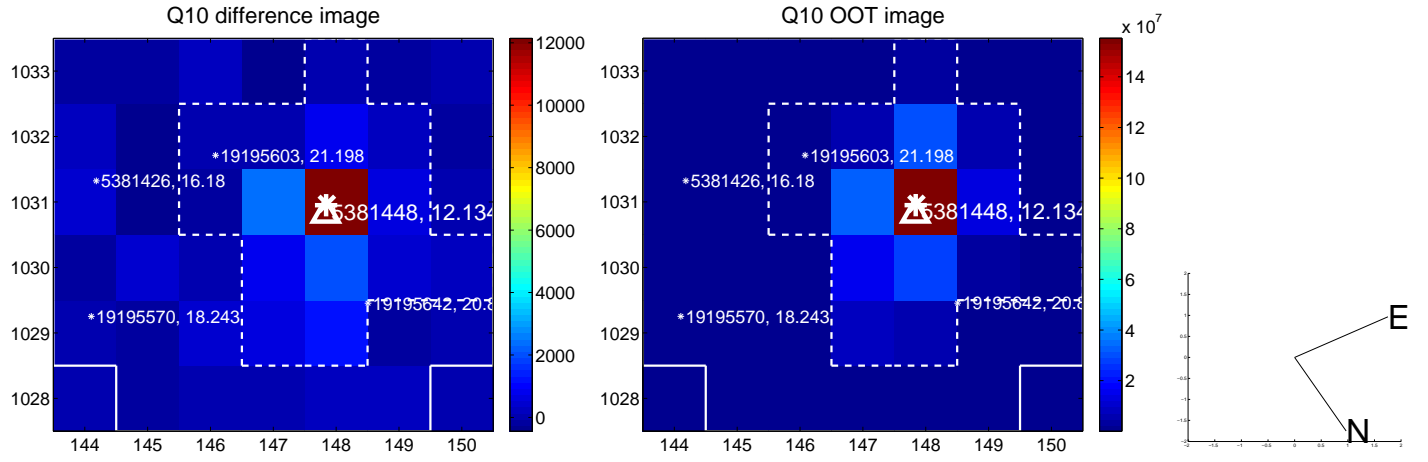
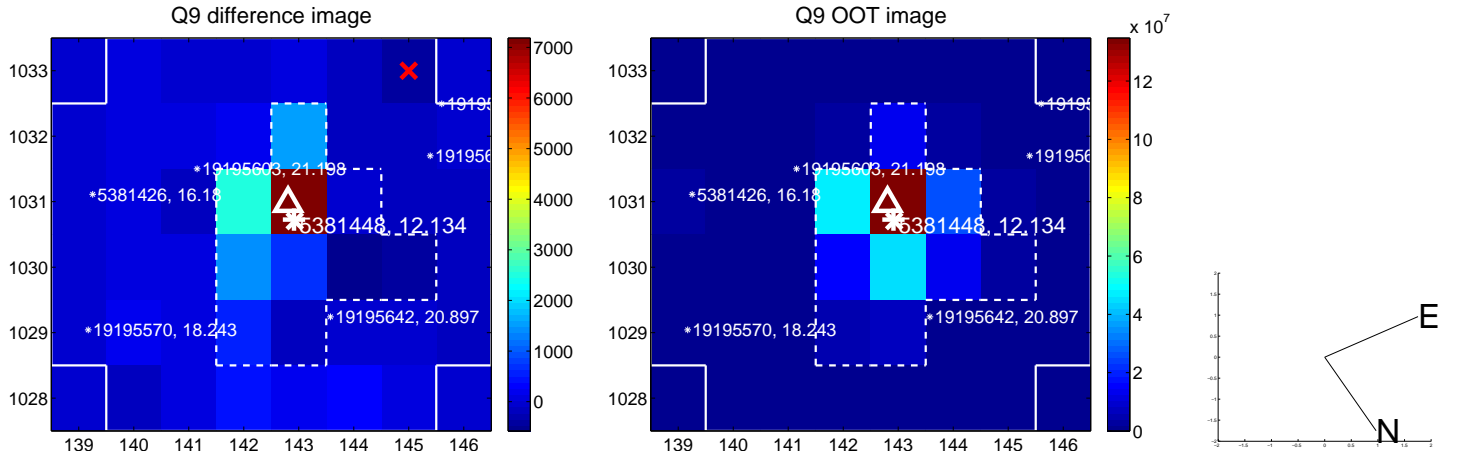
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



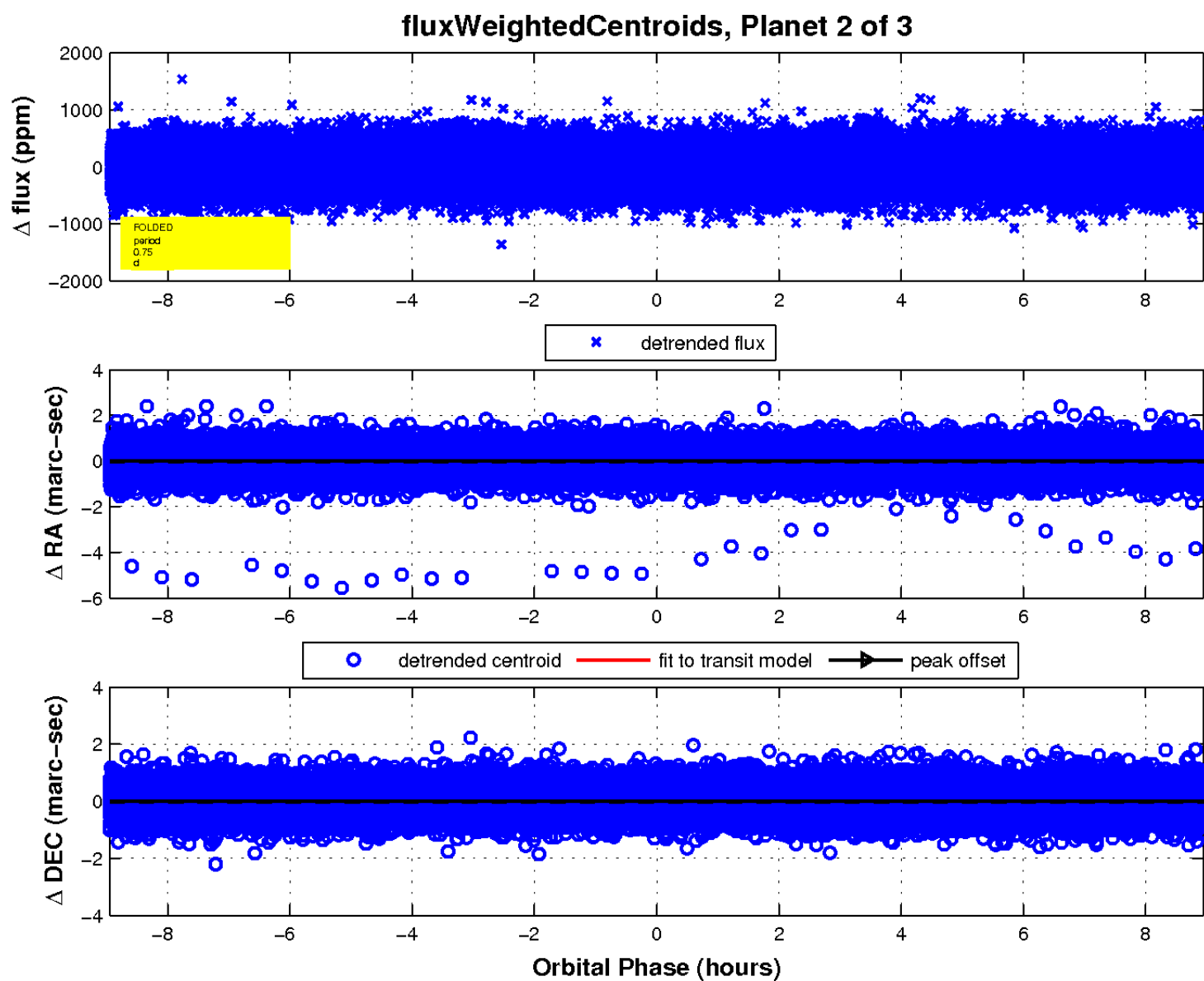
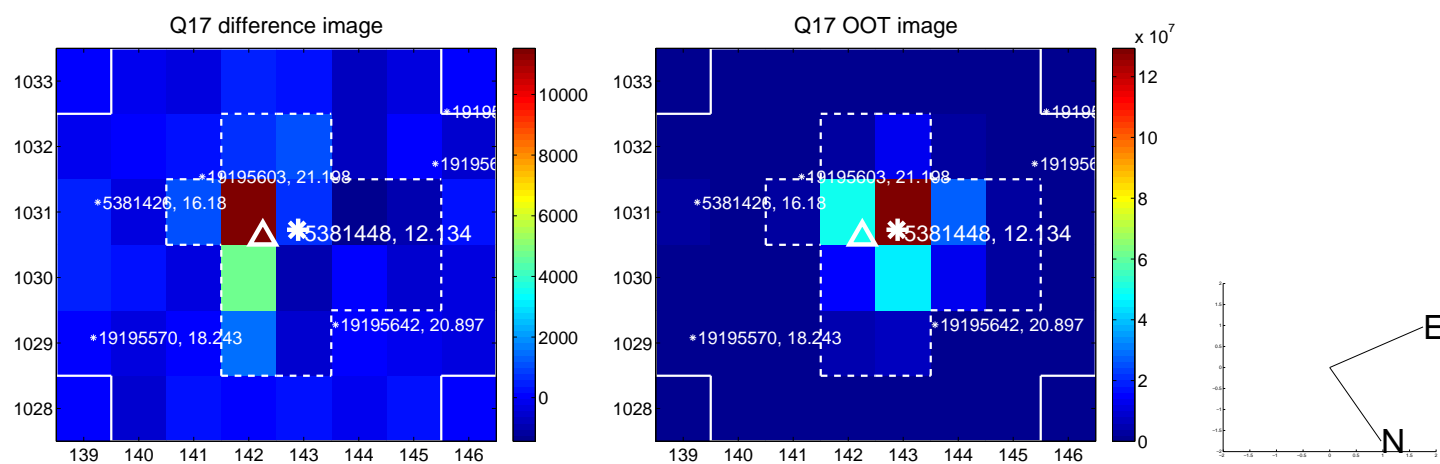
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

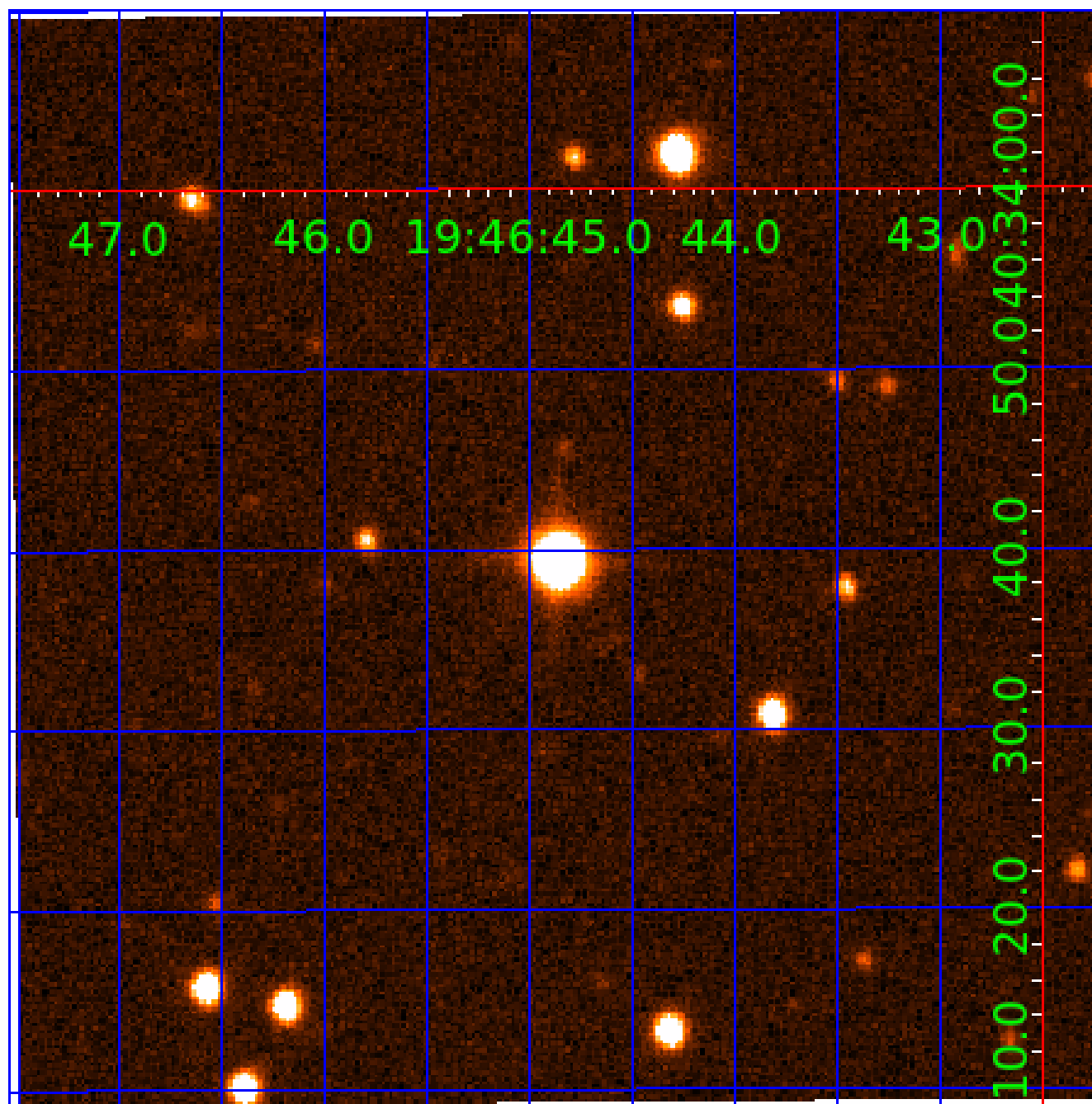


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



UKIRT Image

Declination



KIC 005381448

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})
005381448-01	OBS	No	1.410870	132.910285	33.5	4.976	10.6	9.9	2.22	7746	1.49	17538.53
005381448-02	OBS	No	0.745674	132.226222	27.8	4.090	8.9	8.4	2.22	7746	1.35	41043.43
005381448-03	OBS	No	77.235756	145.730552	492.2	4.433	11.4	8.8	2.22	7746	8.23	84.38

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005381448-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT
005381448-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT
005381448-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—HALO_GHOST

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

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

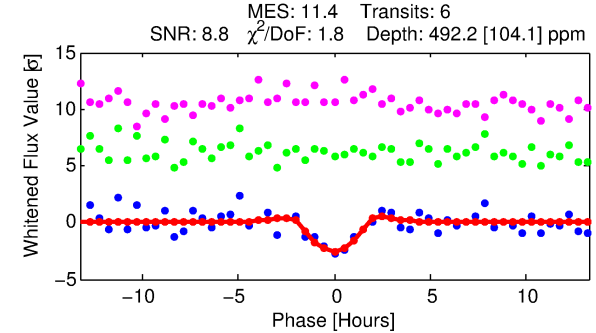
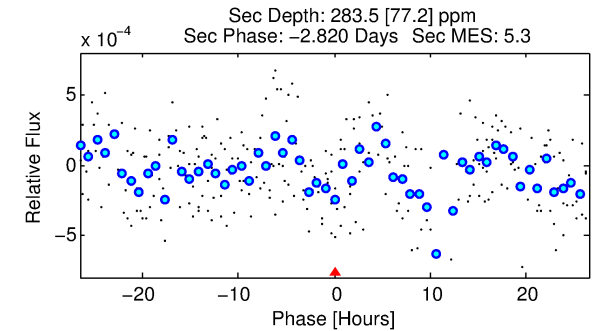
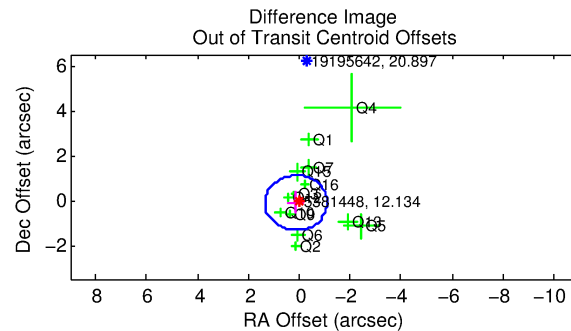
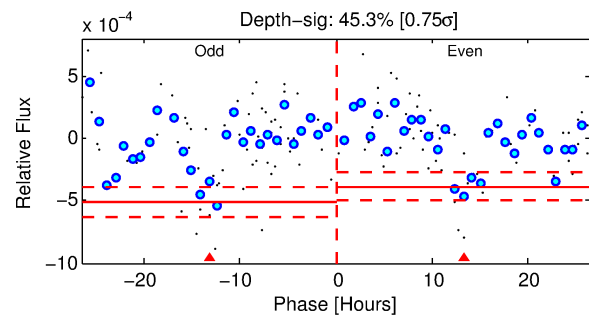
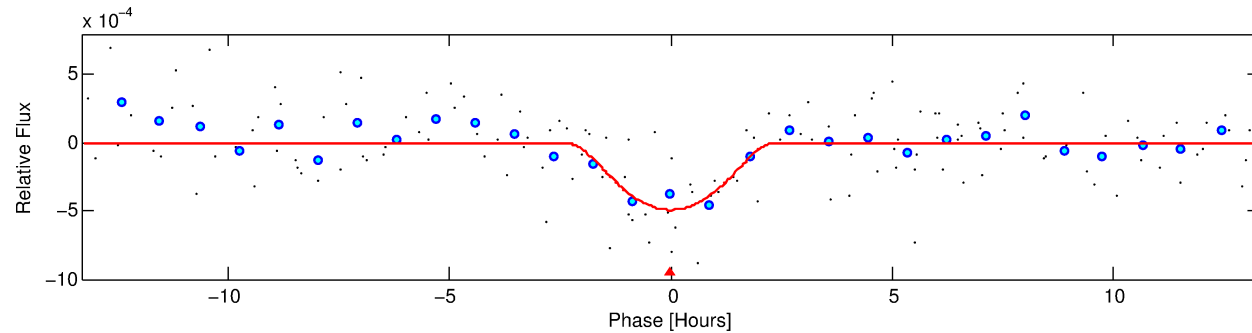
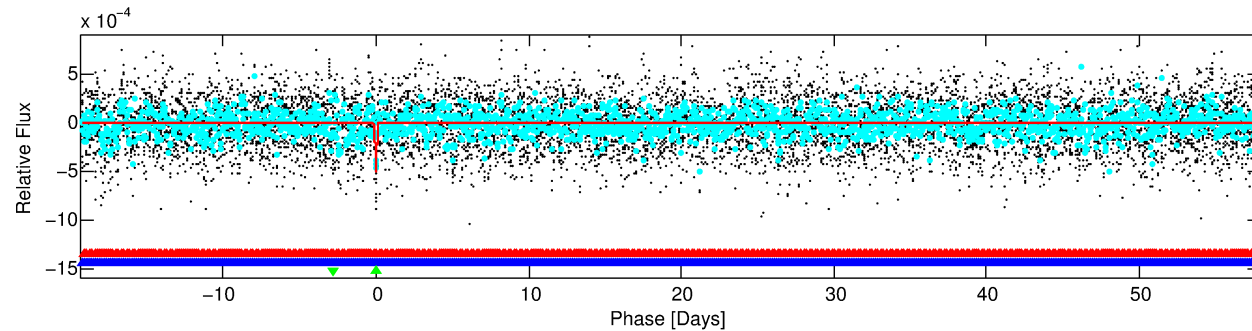
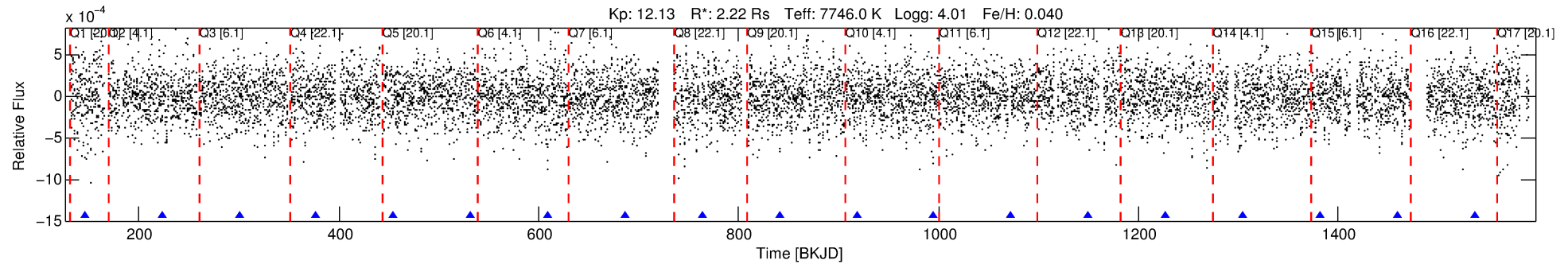
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005381448-03

No Significant Match Found

DV One-Page Summary

KIC: 5381448 Candidate: 3 of 3 Period: 77.236 d



DV Fit Results:

Period = 77.23576 [0.00159] d
Epoch = 145.7306 [0.0209] BKJD
Rp/R* = 0.0340 [0.1055]
a/R* = 38.36 [38.03]
b = 0.99 [0.18]
Seff = 84.38 [31.79]
Teq = 773 [73] K
Rp = 8.23 [25.63] Re
a = 0.4339 [0.0979] AU
Ag = 433.01 [2692.63] [0.16 σ]
Teffp = 5451 [8465] K [0.55 σ]

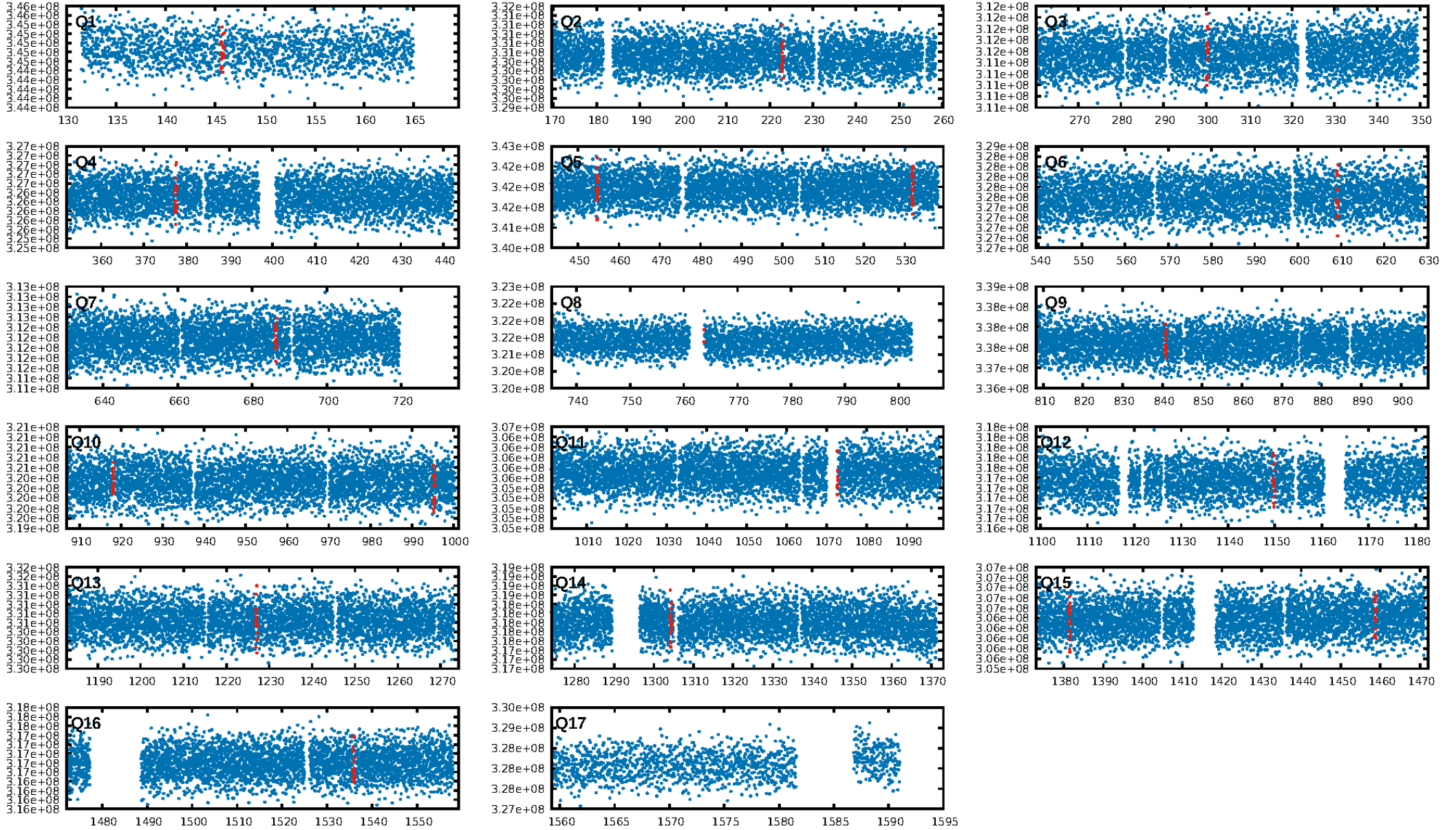
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [273.06 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.9%
ModelChiSquareGof-sig: 99.5%
Bootstrap-pfa: 2.76e-14
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -0.02843
Centroid-sig: 7.7%
Centroid-so: 0.448 arcsec [1.60 σ]
OotOffset-rm: 0.169 arcsec [0.41 σ]
KicOffset-rm: 0.215 arcsec [0.45 σ]
OotOffset-st: 3/3/3/4 [13]
KicOffset-st: 3/3/3/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 0.00 [0/14]

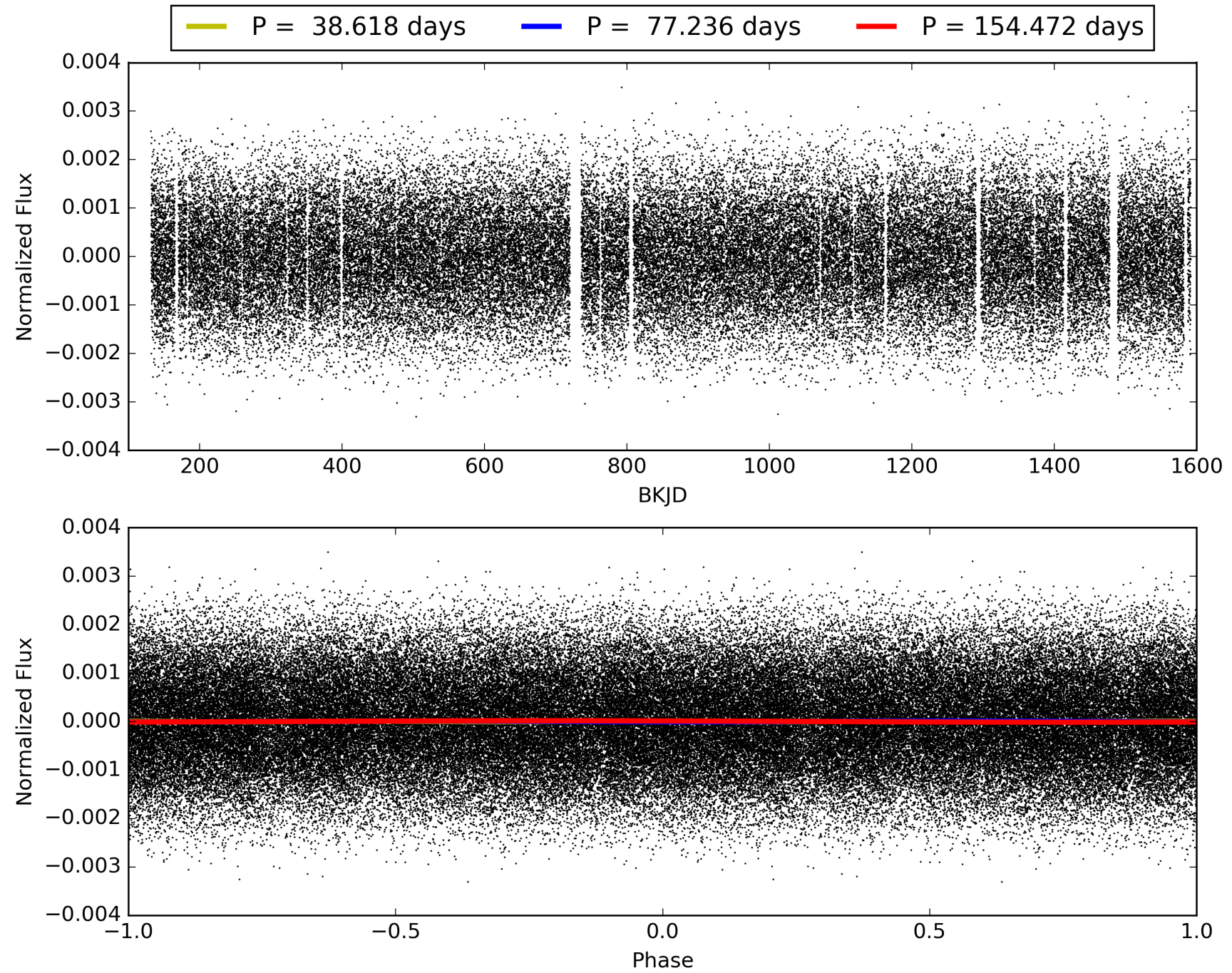
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 08:09:52 Z

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

TCE 005381448-03, PDC Light Curves

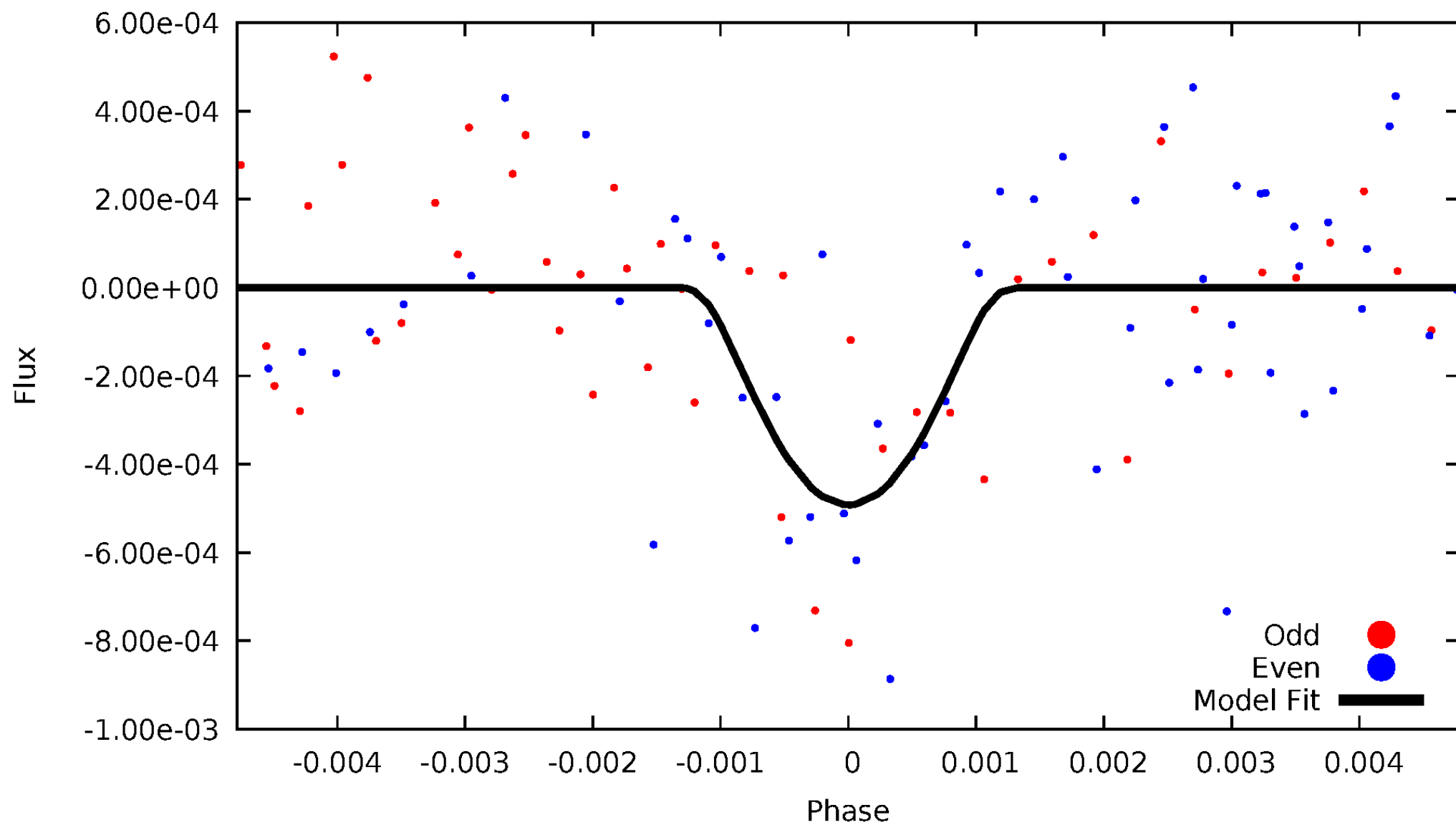


TCE 005381448-03



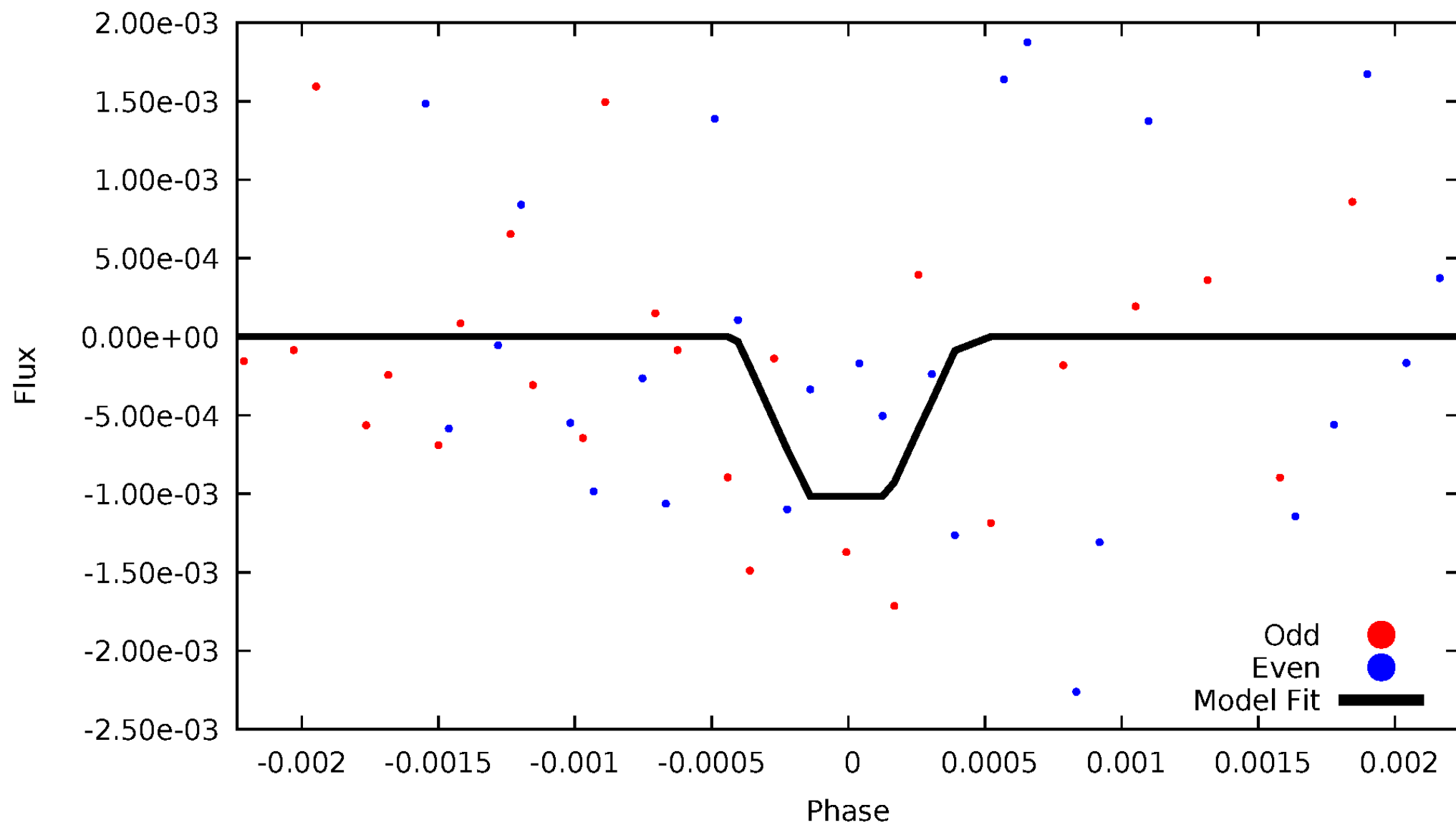
DV Odd/Even

TCE 005381448-03



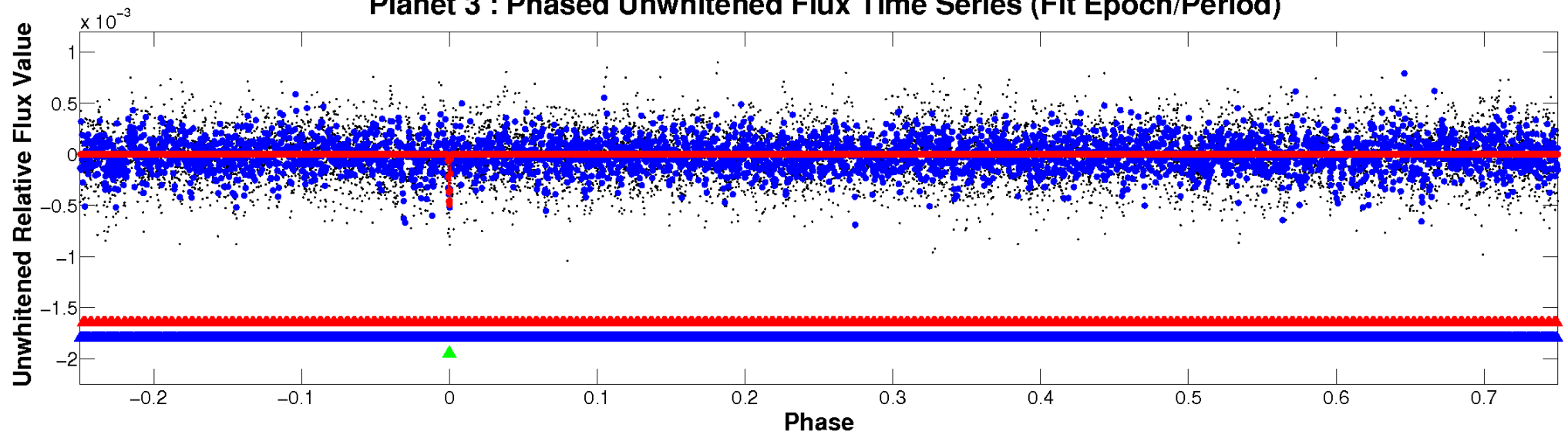
ALT Odd/Even

TCE 005381448-03

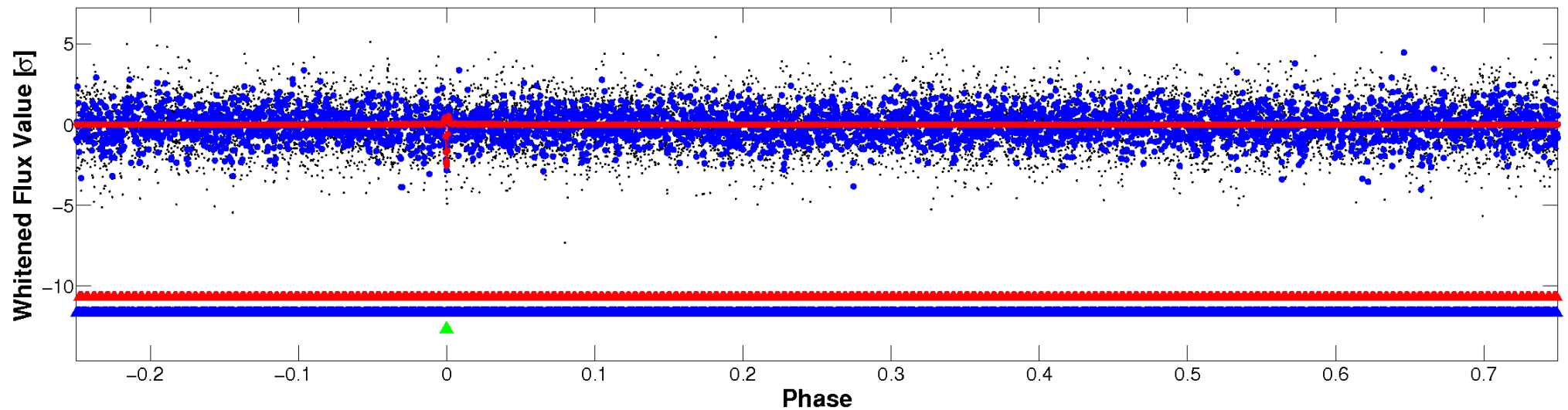


Non-Whitened Vs. Whitened Light Curve

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

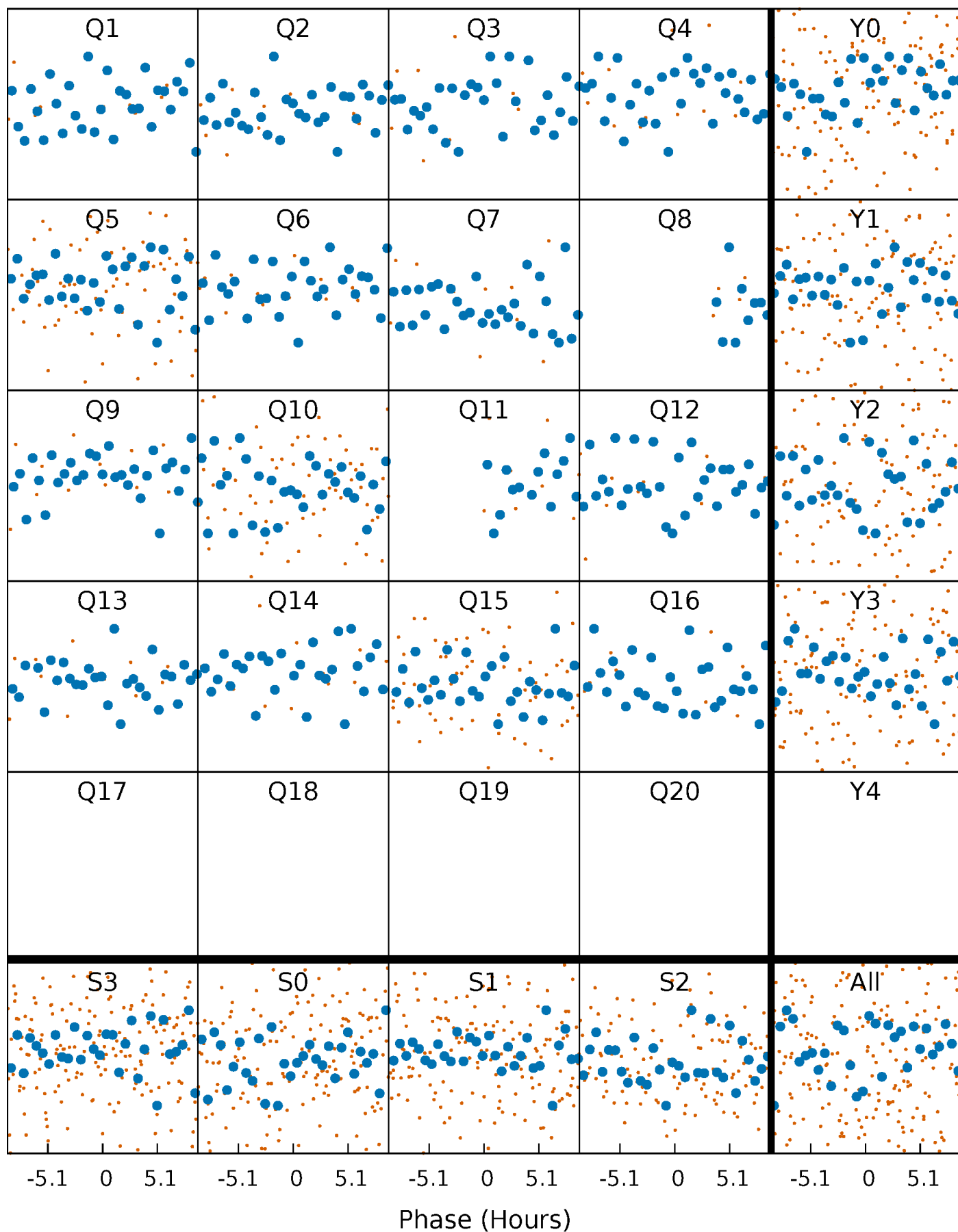


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



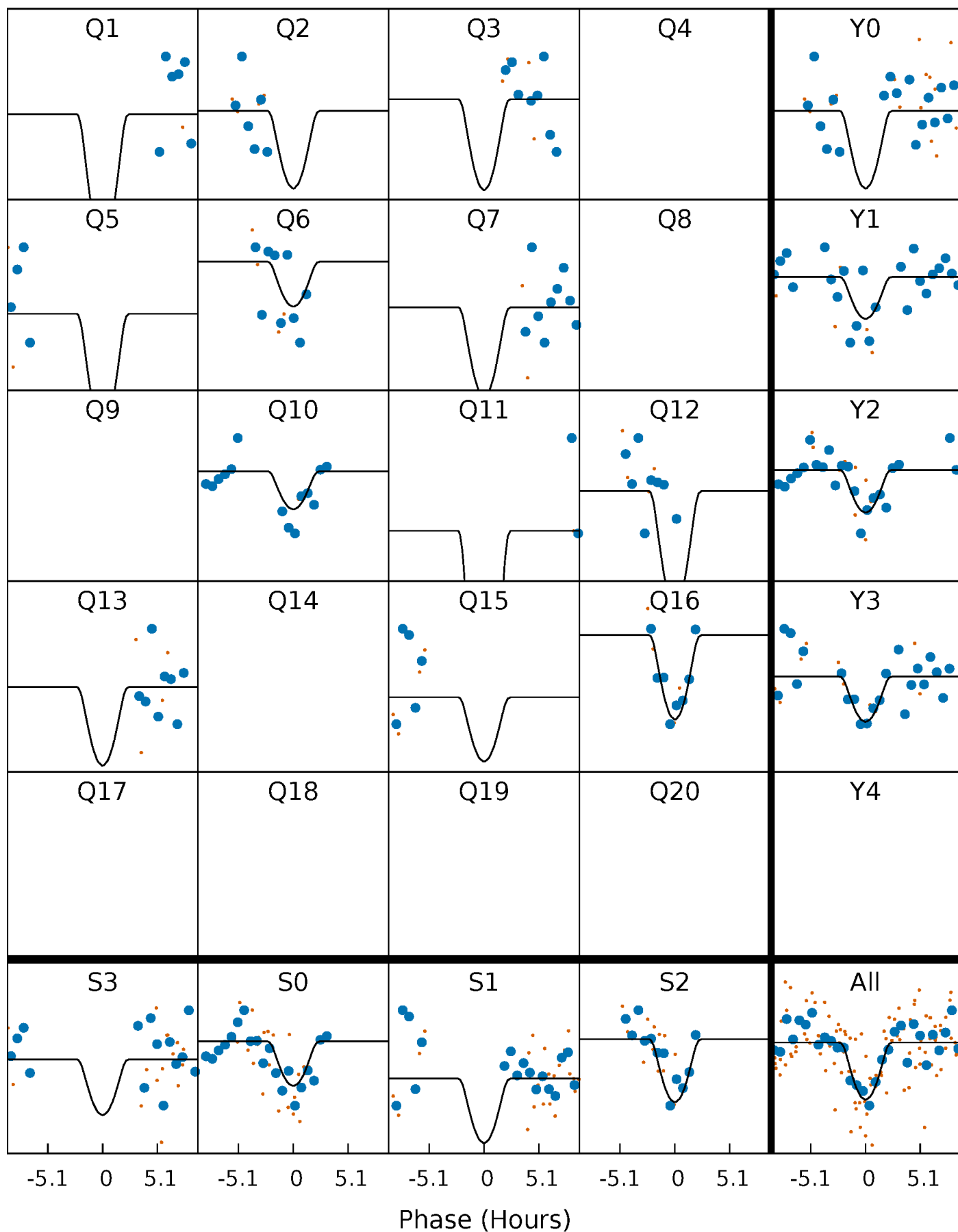
PDC Quarter-Phased Transit Curves

TCE 005381448-03 P= 77.235756 Days $T_0=145.730552$ (BKJD)



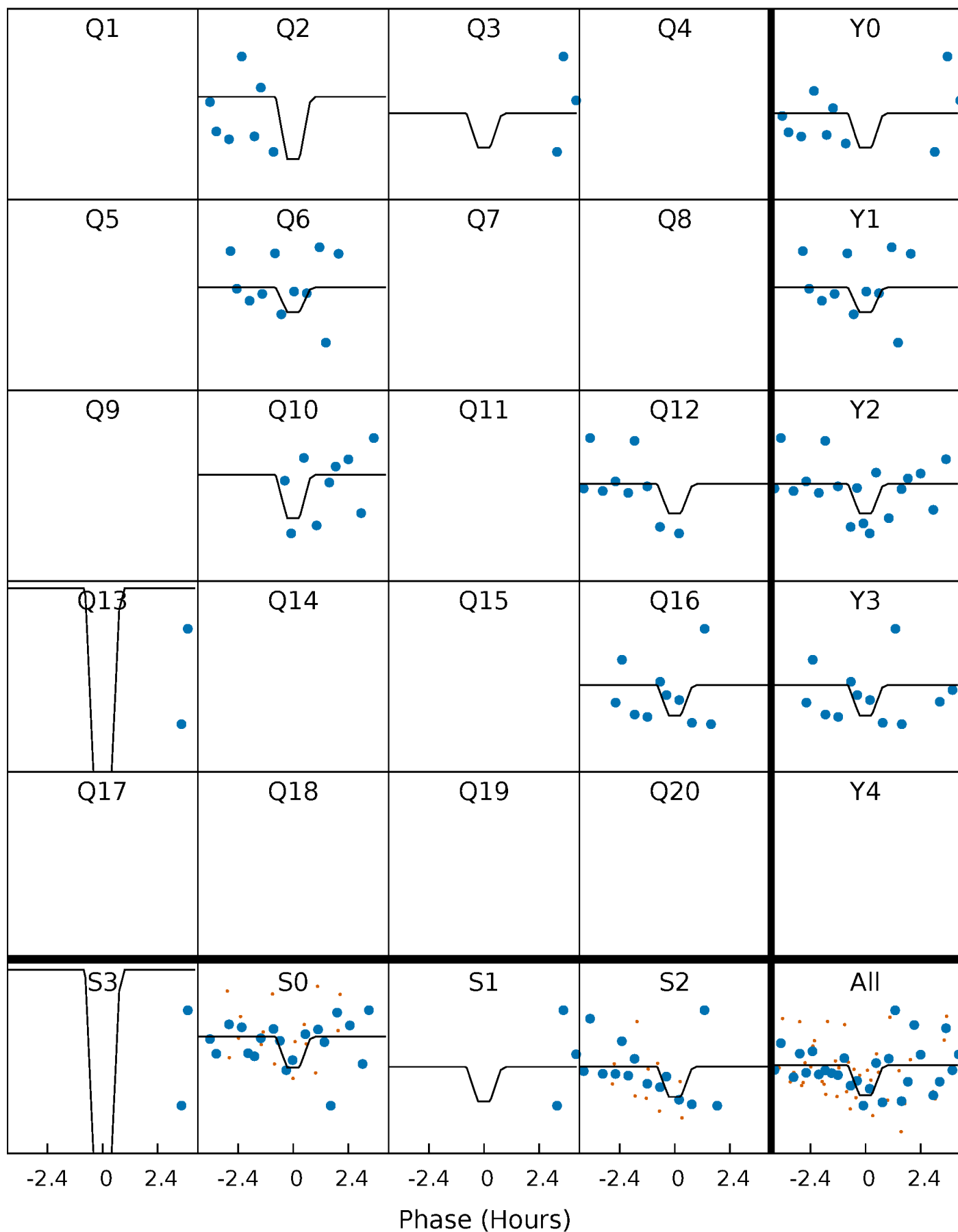
DV Quarter-Phased Transit Curves

TCE 005381448-03 P= 77.235756 Days $T_0=145.730552$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

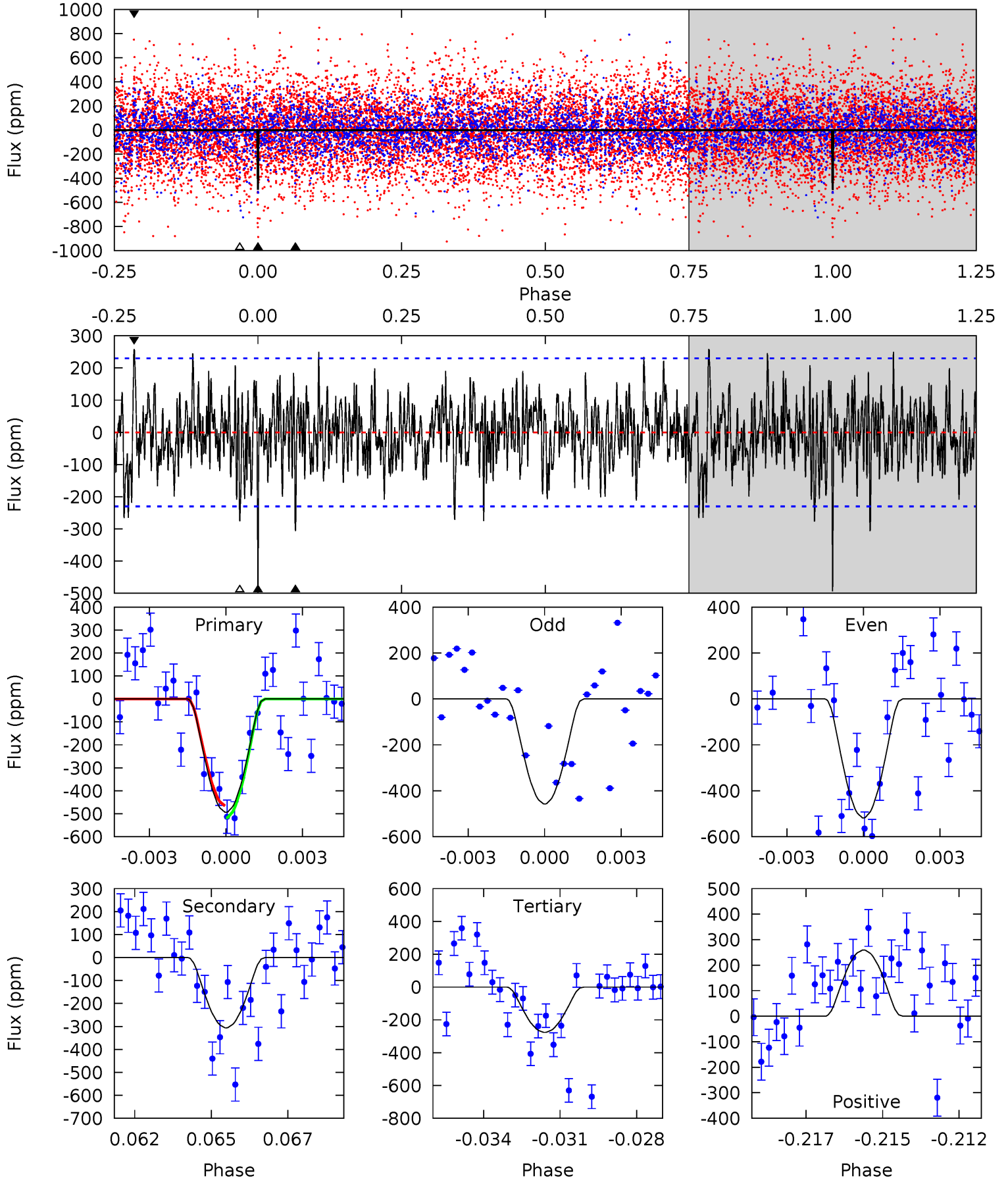
TCE 005381448-03 P= 77.239695 Days $T_0=145.667756$ (BKJD)



DV Model-Shift Uniqueness Test

005381448-03, P = 77.235756 Days, E = 68.494796 Days

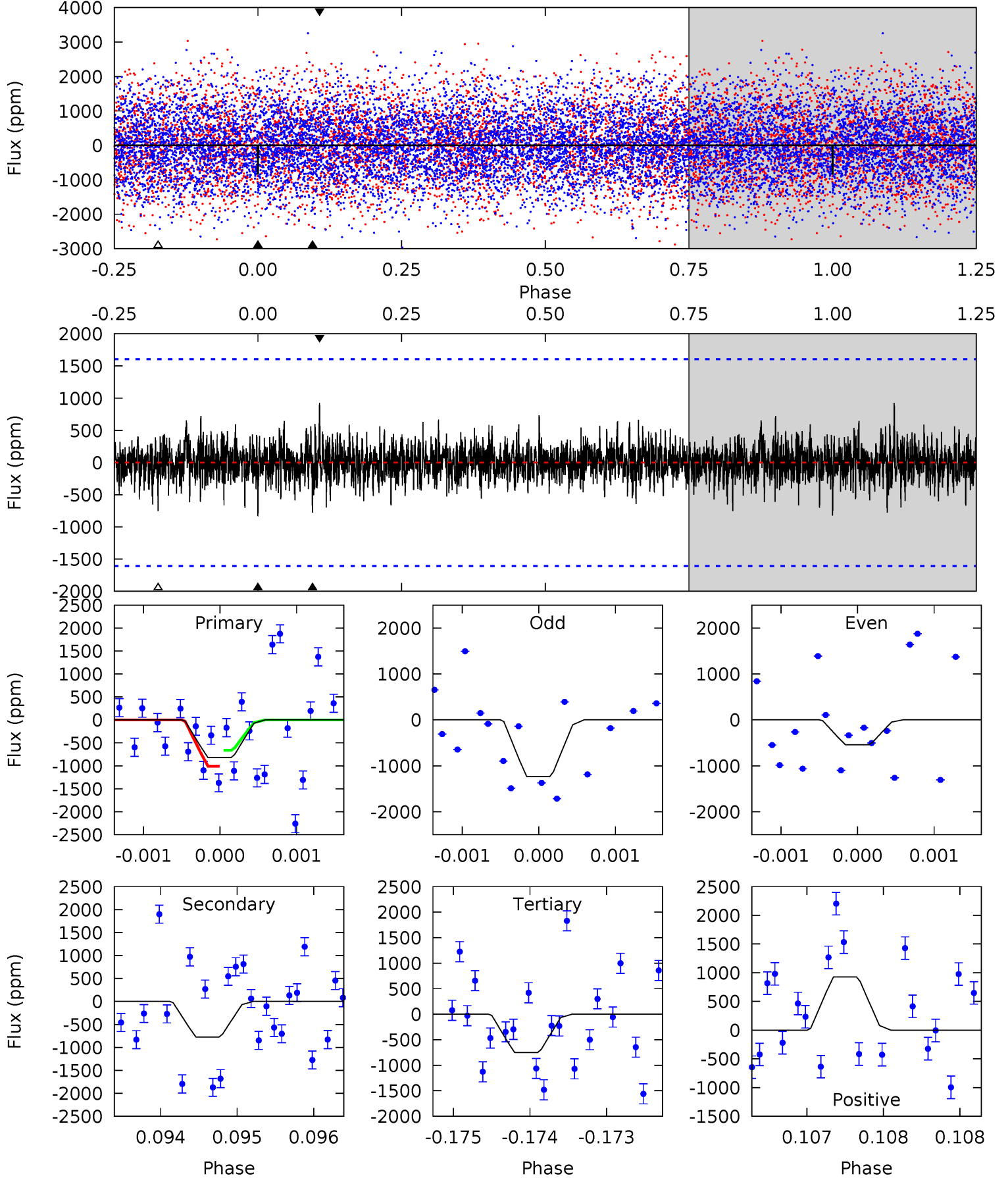
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.3	7.03	6.35	5.96	5.28	3.01	1.88	4.99	5.38	0.69	1.08	0.68	0.56	0.34	0.60



Alt Model-Shift Uniqueness Test

005381448-03, P = 77.239695 Days, E = 68.428061 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.80	2.65	2.56	3.16	5.47	3.33	0.67	0.24	-0.36	0.09	-0.52	1.17	1.44	0.53	0.58



Stellar Parameters For KIC 005381448

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7746^{+214}_{-349}	$4.007^{+0.182}_{-0.149}$	$0.040^{+0.200}_{-0.350}$	$2.219^{+0.483}_{-0.590}$	$1.826^{+0.145}_{-0.339}$	$0.235^{+0.268}_{-0.102}$
	+3%/-5%	+5%/-4%	+500%/-875%	+22%/-27%	+8%/-19%	+114%/-43%
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 005381448-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-306 ± 44	$19.93^{+21.21}_{-13.41}$	1075^{+72}_{-82}	3823^{+2133}_{-772}	74^{+666}_{-56}
Alt.	-777 ± 294	$19.50^{+20.74}_{-13.44}$	1074^{+76}_{-79}	4586^{+3387}_{-1073}	197^{+1866}_{-152}

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 $A_{obs} \gg 1.0$

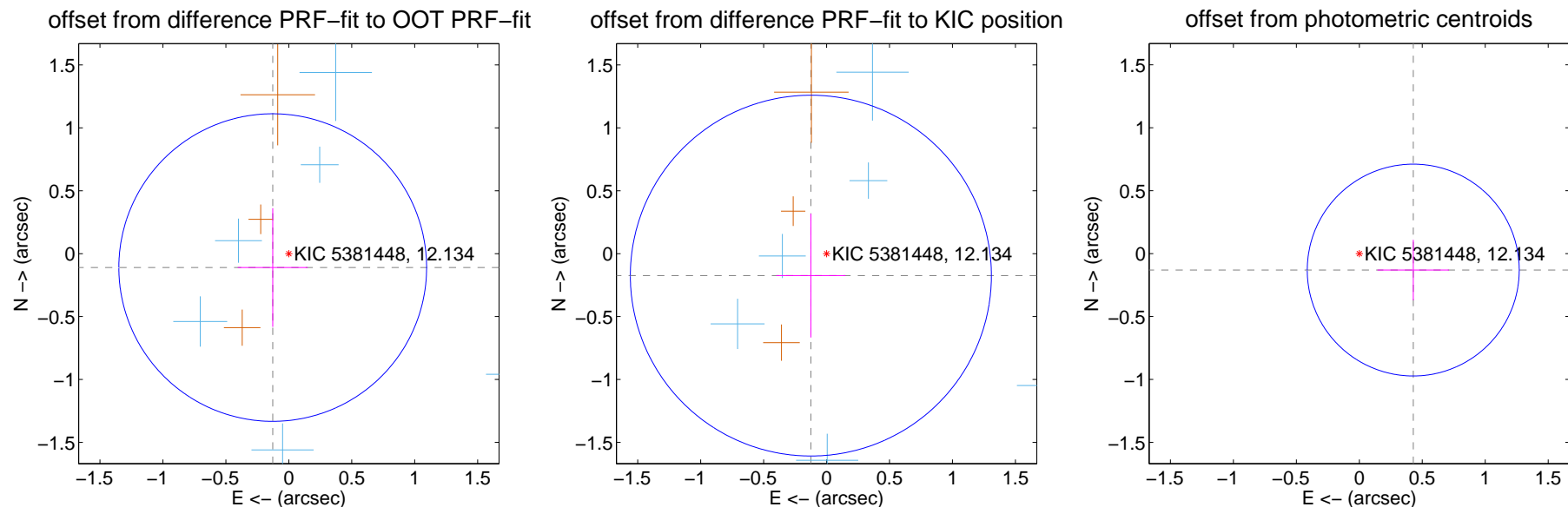
DV Centroid Data

Supplemental centroid analysis for 005381448-03. Kepler magnitude: 12.13. Transit SNR 8.84

There are 7 quarters with good PRF difference image offsets

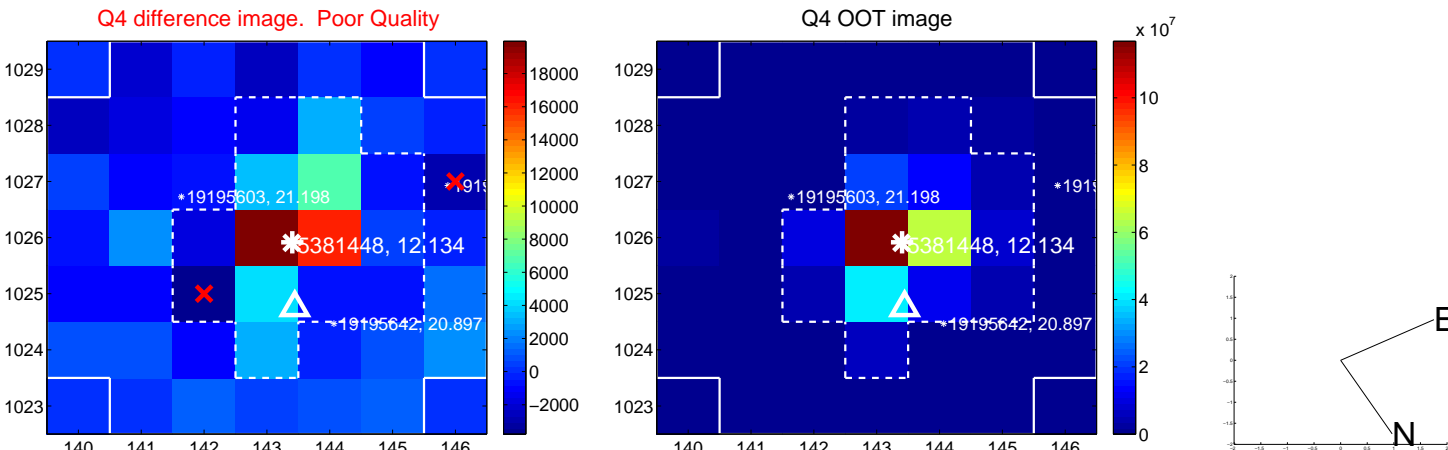
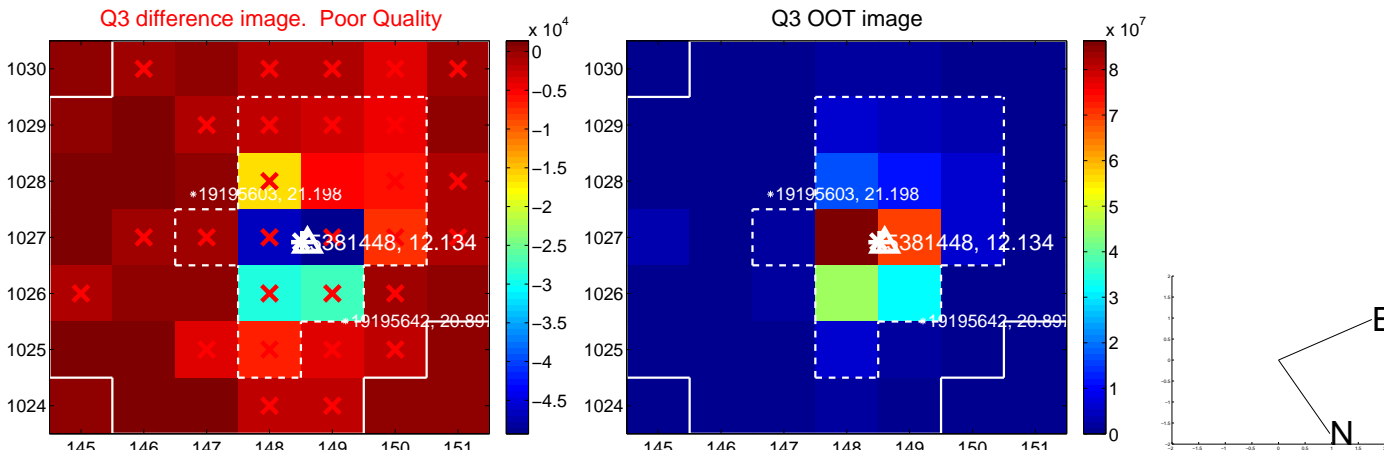
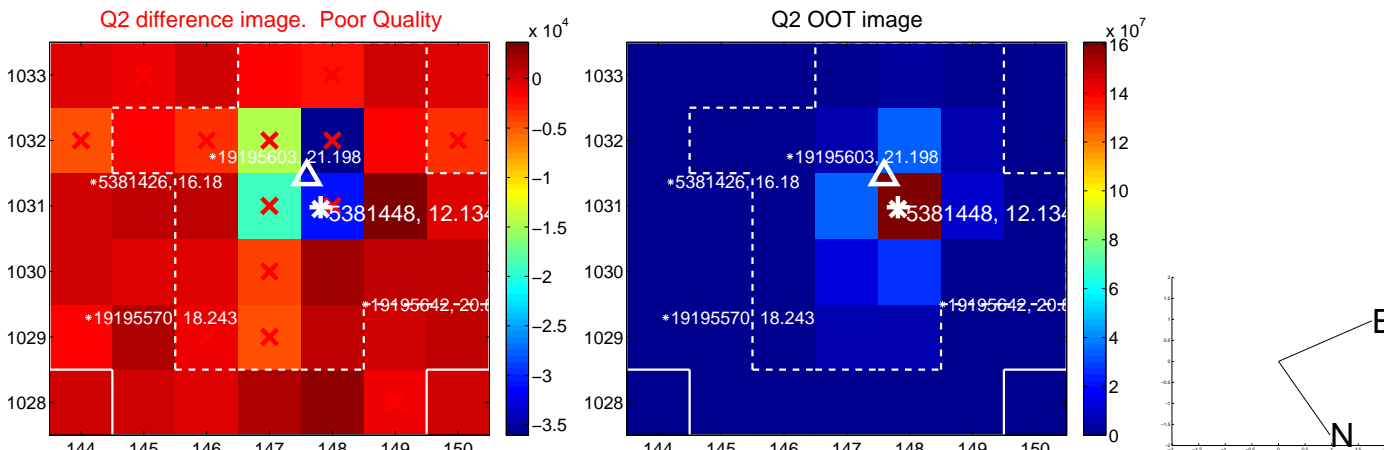
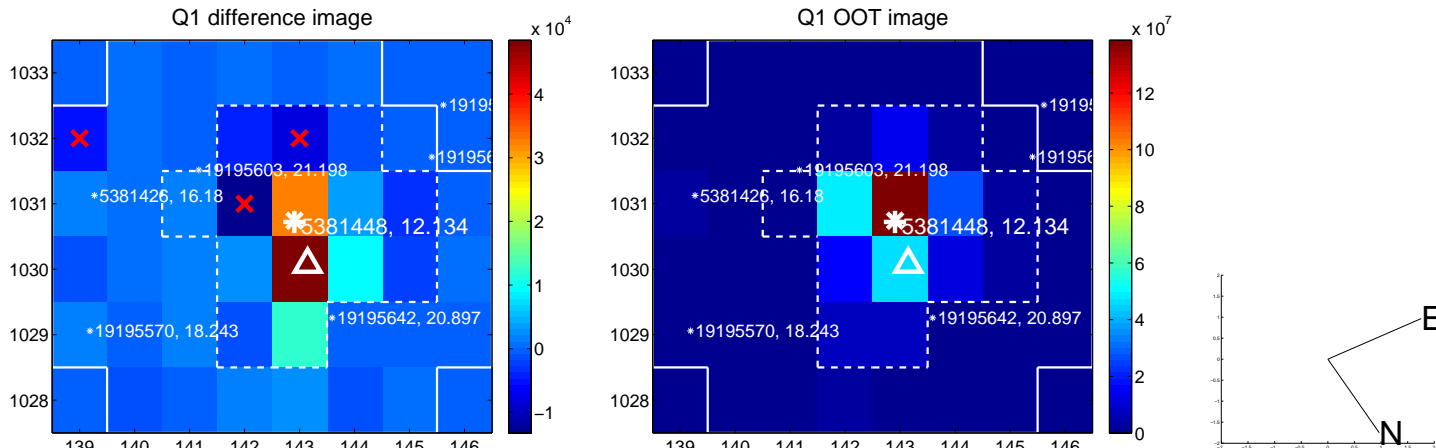
The direct PRF centroid is offset from the target star catalog position by about 0.15 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.169 ± 0.407	0.41	0.128 ± 0.278	-0.110 ± 0.472
PRF-fit source offset from KIC position	0.215 ± 0.478	0.45	0.125 ± 0.275	-0.174 ± 0.492
photometric centroid source offset	0.45 ± 0.28	1.60	-0.43 ± 0.28	-0.13 ± 0.24

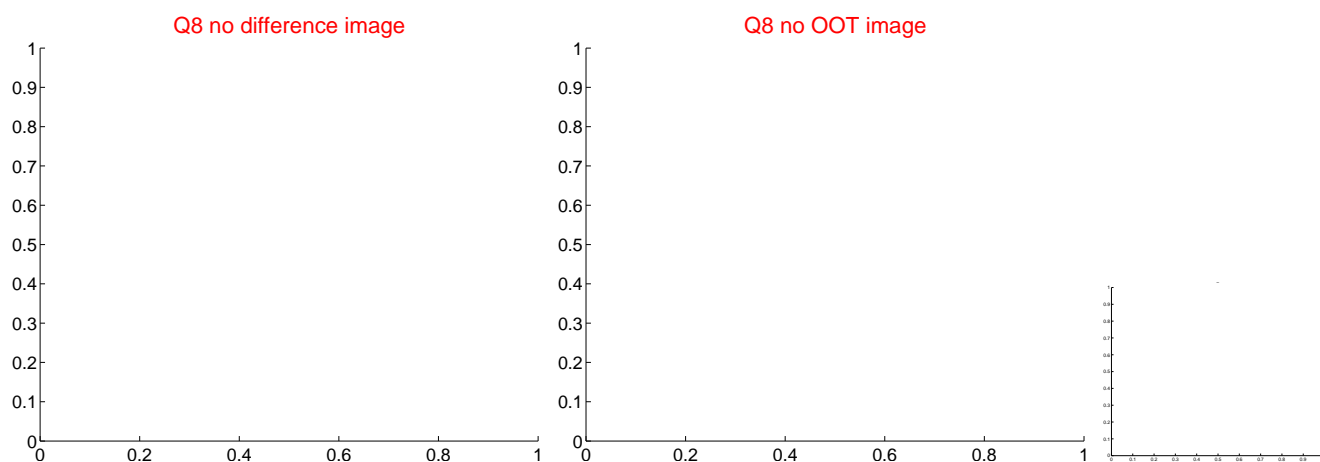
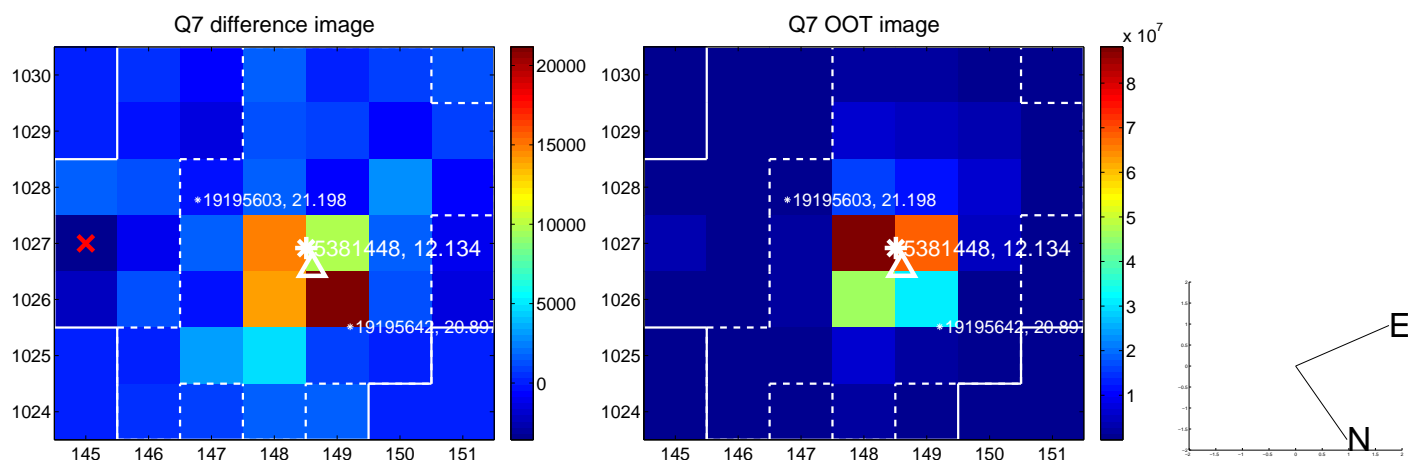
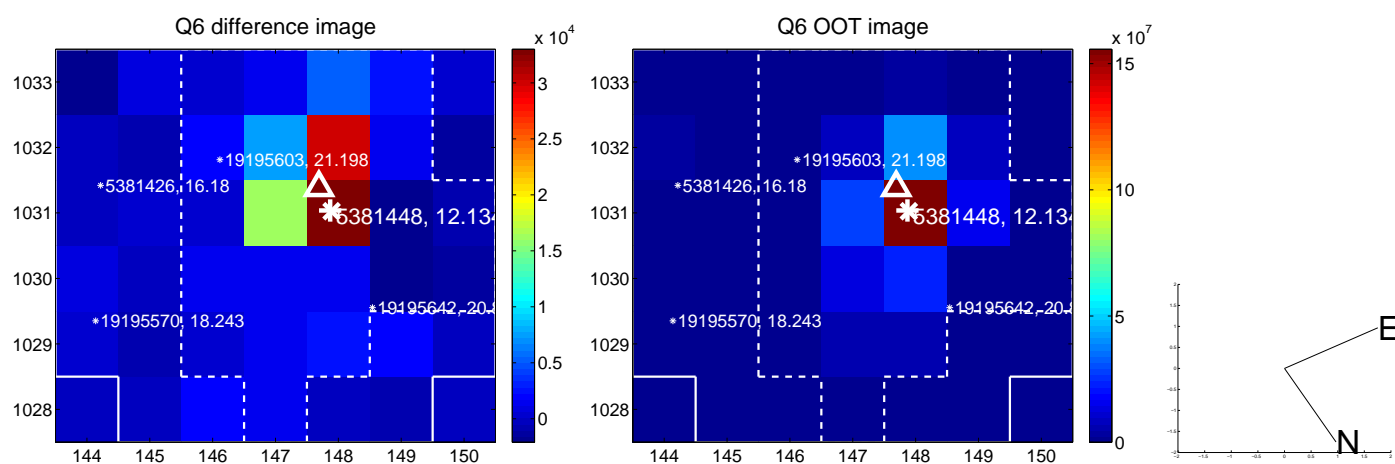
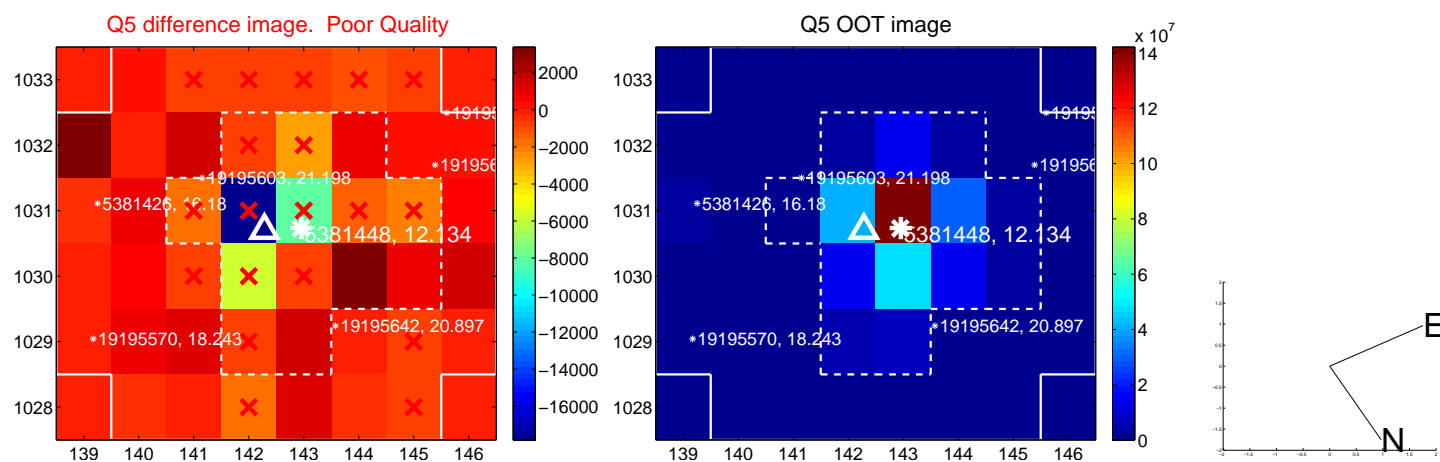


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

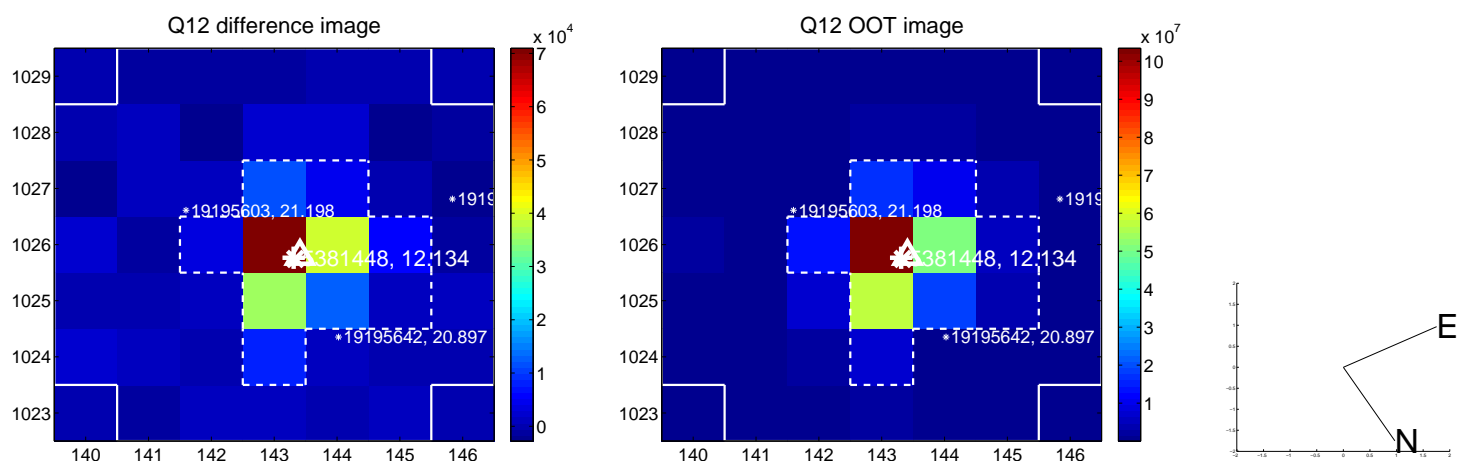
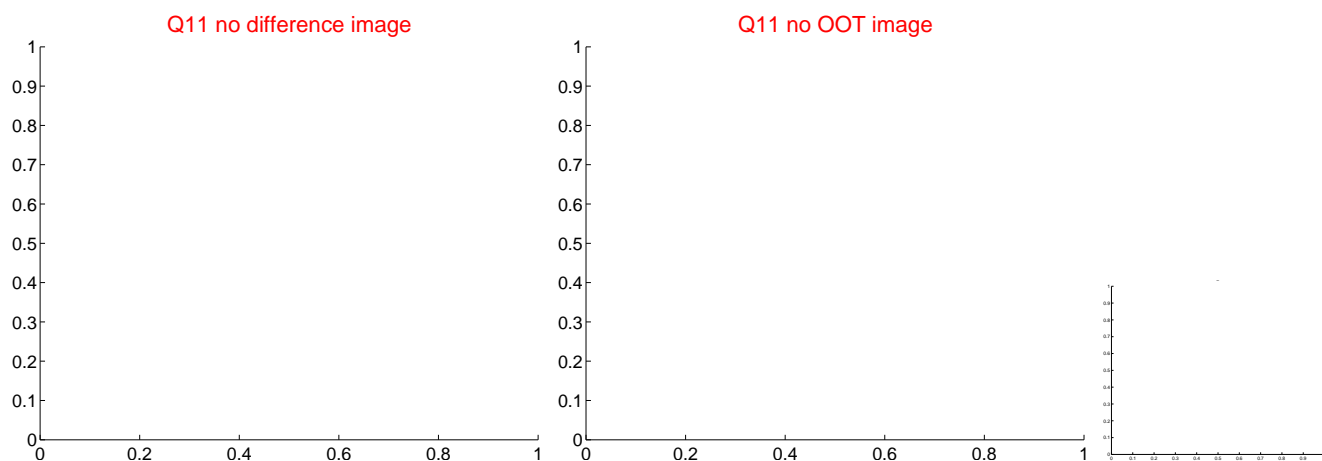
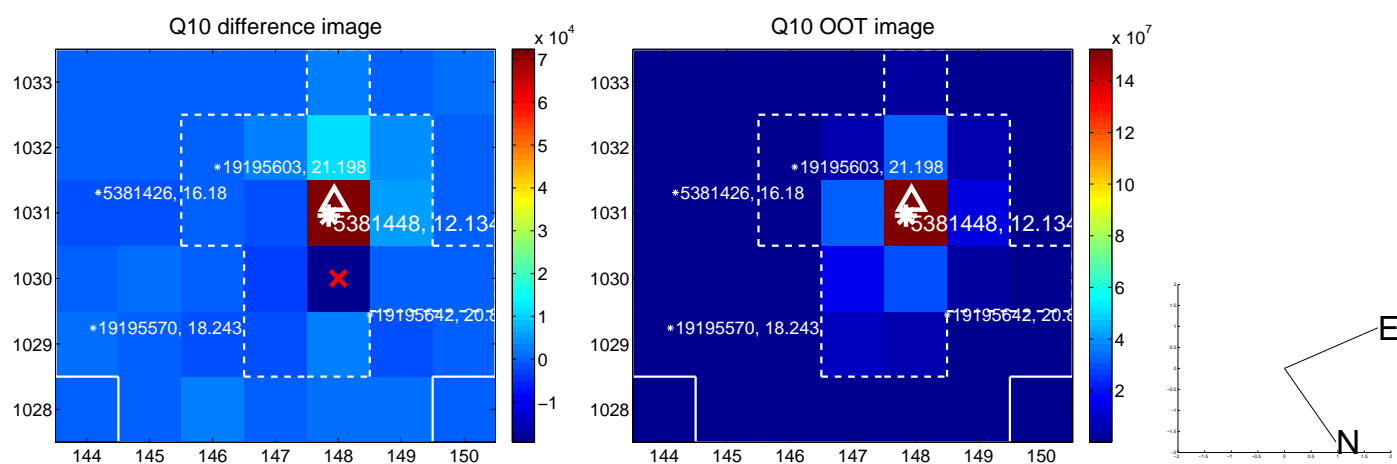
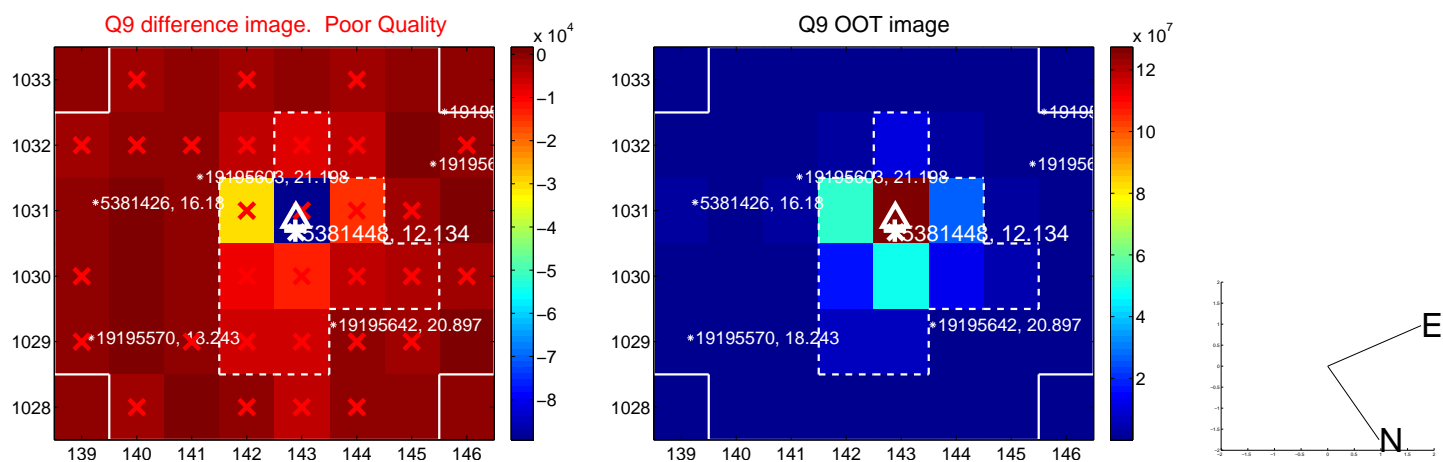
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



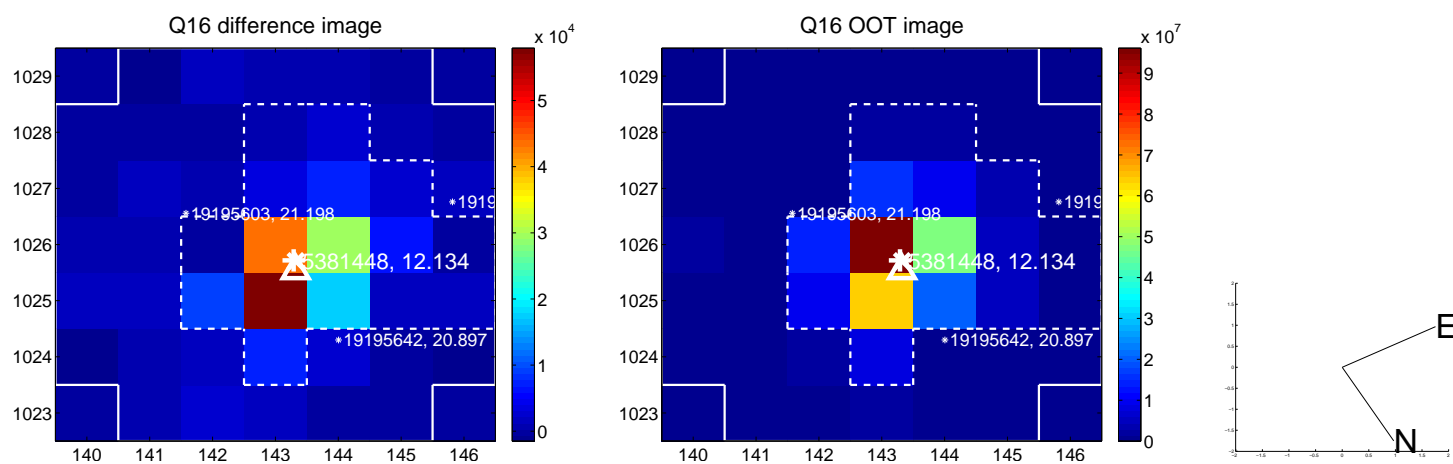
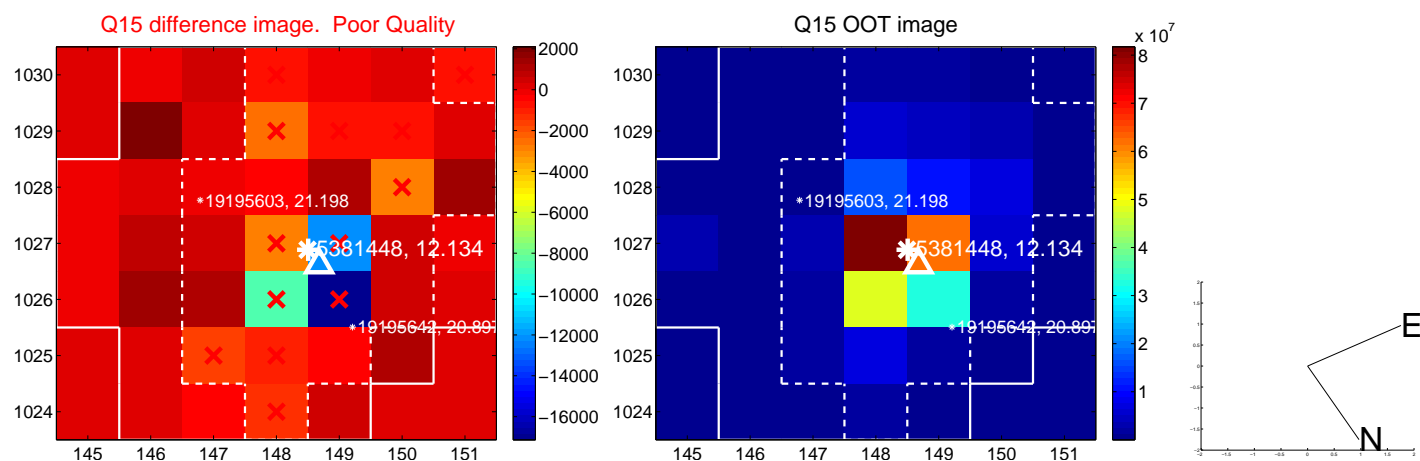
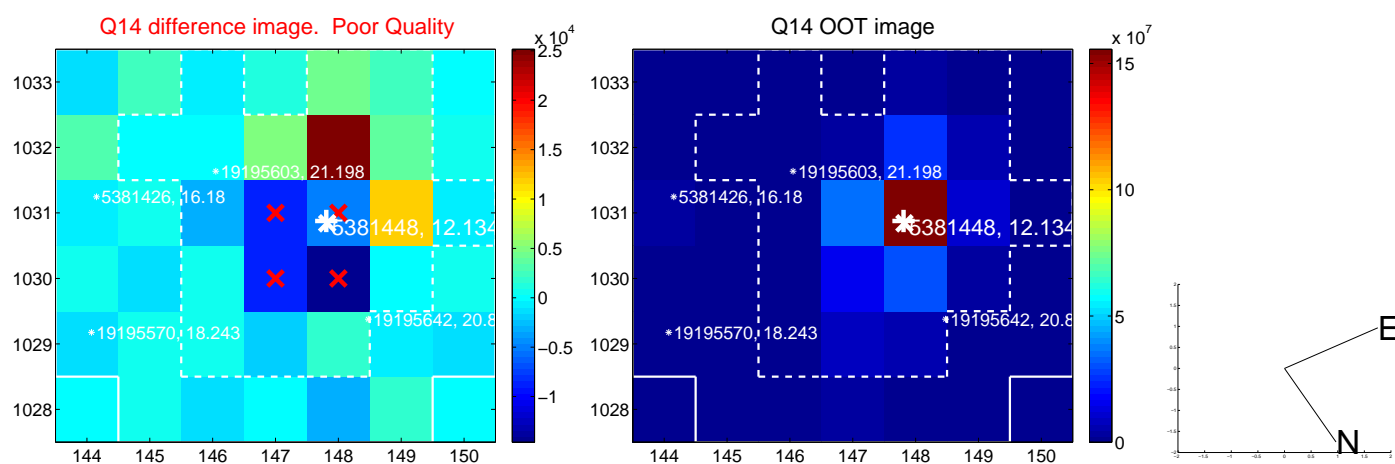
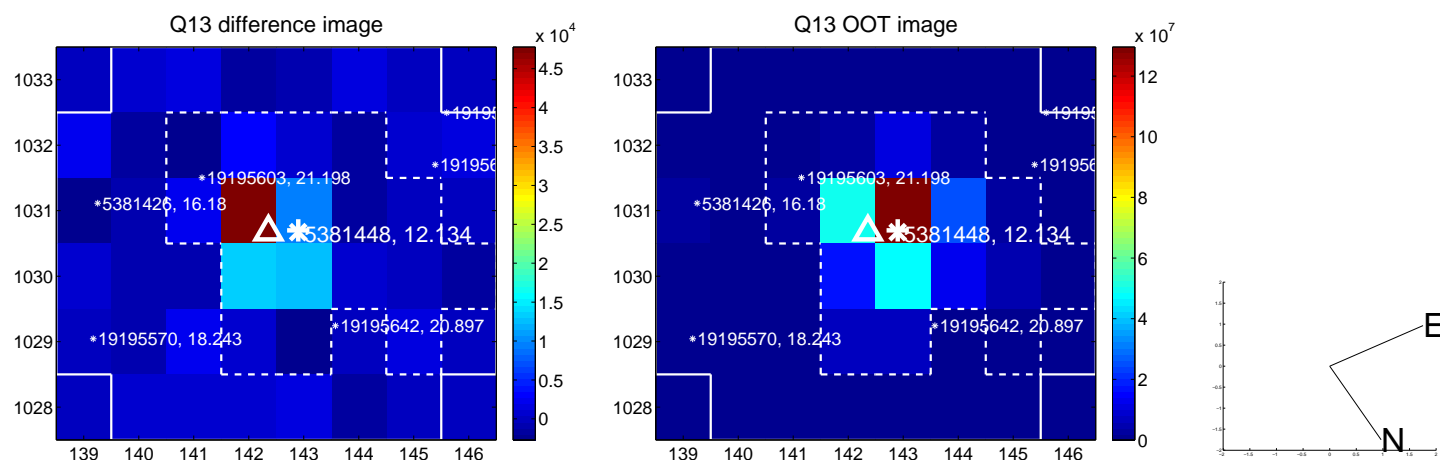
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



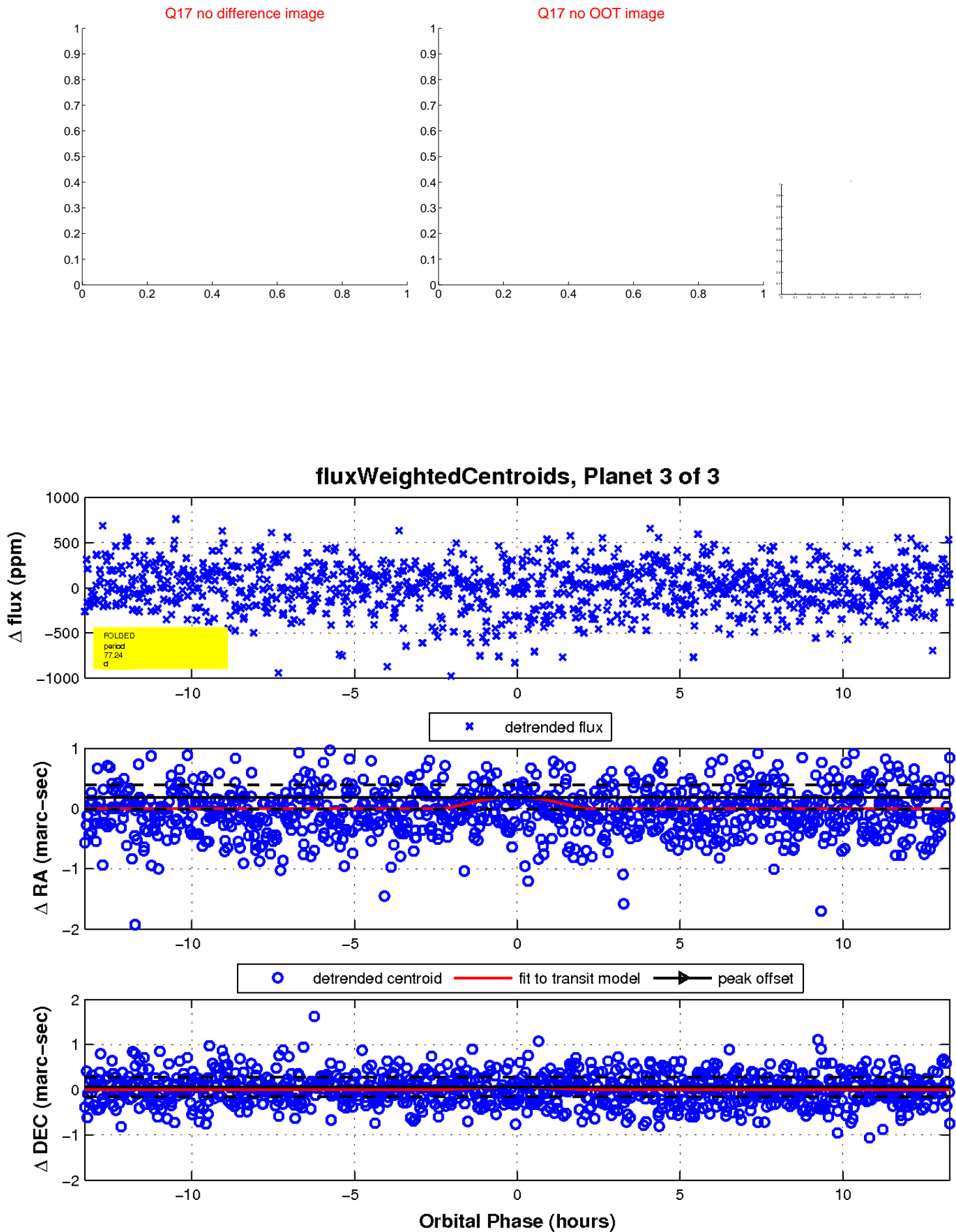
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image

Declination

