

KIC 005644758

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})
005644758-01	OBS	No	2.060889	132.218545	201.3	5.277	9.0	9.4	0.86	6075	1.43	936.12
005644758-02	OBS	No	1.236536	131.778832	162.6	6.479	8.3	8.0	0.86	6075	1.17	1849.82
005644758-03	OBS	No	77.532013	172.494940	1459.0	7.472	7.6	6.2	0.86	6075	3.41	7.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005644758-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005644758-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005644758-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—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.

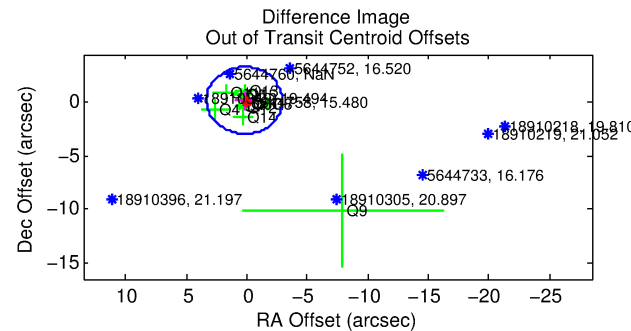
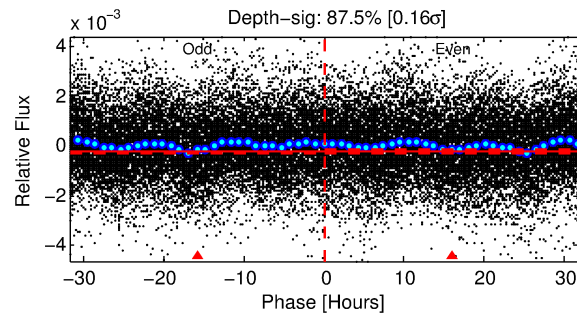
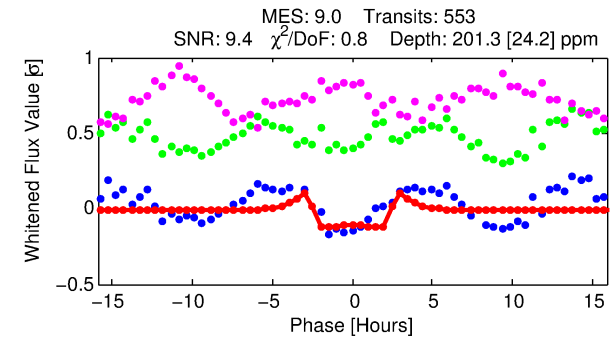
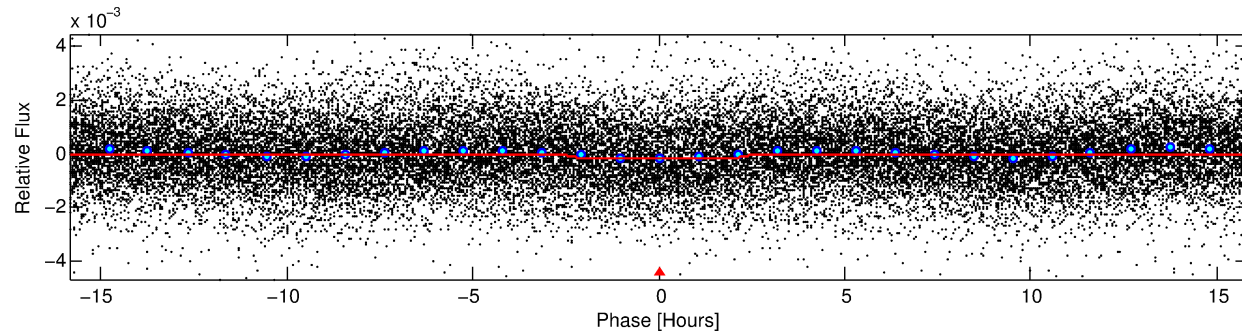
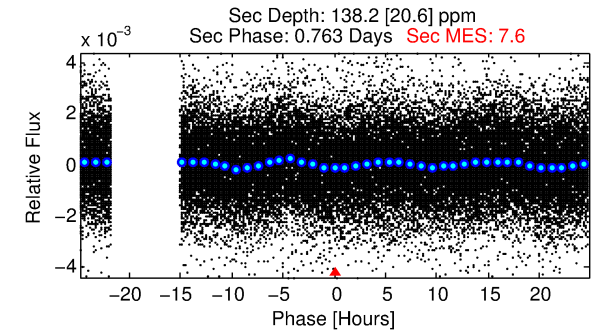
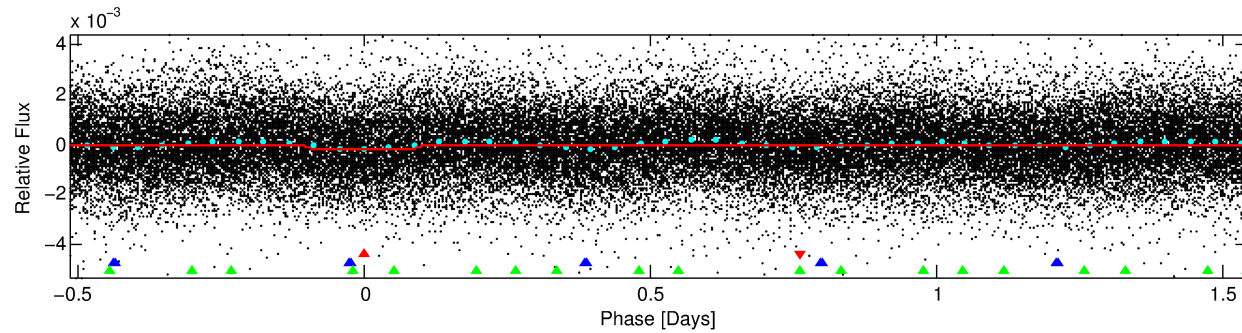
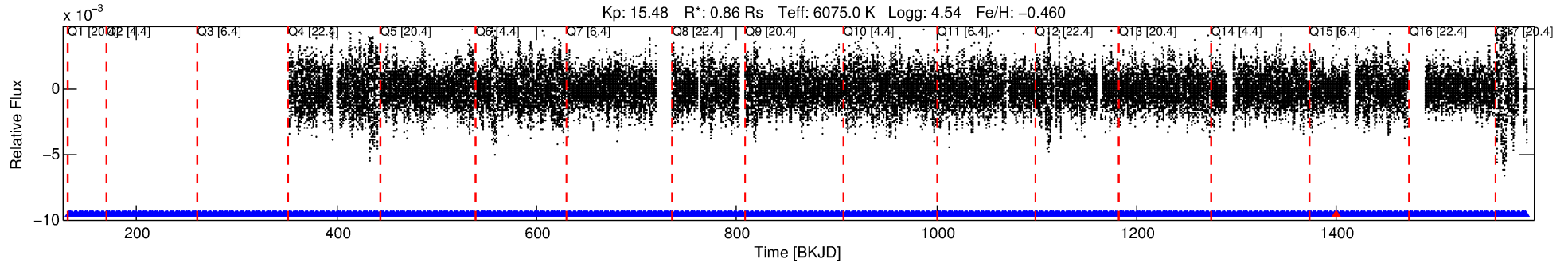
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005644758-01

No Significant Match Found

DV One-Page Summary

KIC: 5644758 Candidate: 1 of 3 Period: 2.061 d



DV Fit Results:

Period = 2.06089 [0.00001] d
Epoch = 132.2185 [0.0031] BKJD
Rp/R* = 0.0153 [0.0022]
a/R* = 1.68 [0.73]
b = 0.90 [0.14]
Seff = 936.12 [379.03]
Teq = 1410 [143] K
Rp = 1.43 [0.46] Re
a = 0.0310 [0.0079] AU
Ag = 35.73 [17.84] [1.95σ]
Teffp = 5331 [469] K [7.99σ]

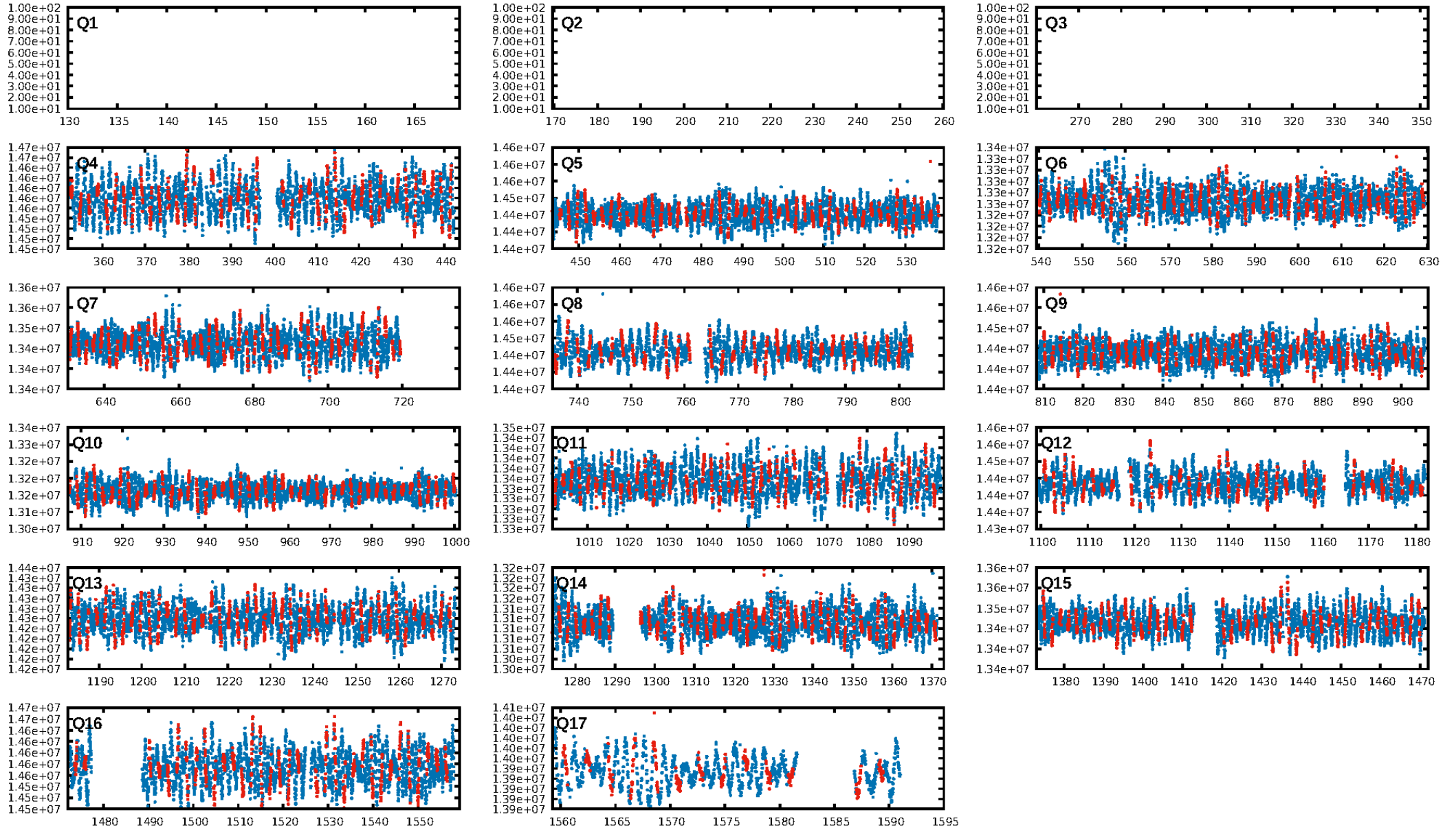
DV Diagnostic Results:

ShortPeriod-sig: 98.2% [2.37σ]
LongPeriod-sig: 100.0% [198.01σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.87e-13
RollingBand-fgt: 1.00 [539/540]
GhostDiagnostic-chr: -1.127
Centroid-sig: 1.2%
Centroid-so: 0.934 arcsec [1.69σ]
OotOffset-rm: 0.273 arcsec [0.26σ]
KicOffset-rm: 0.323 arcsec [0.33σ]
OotOffset-st: 3/3/3/3 [12]
KicOffset-st: 3/3/3/3 [12]
DiffImageQuality-fgm: 0.75 [9/12]
DiffImageOverlap-fno: 0.00 [0/14]

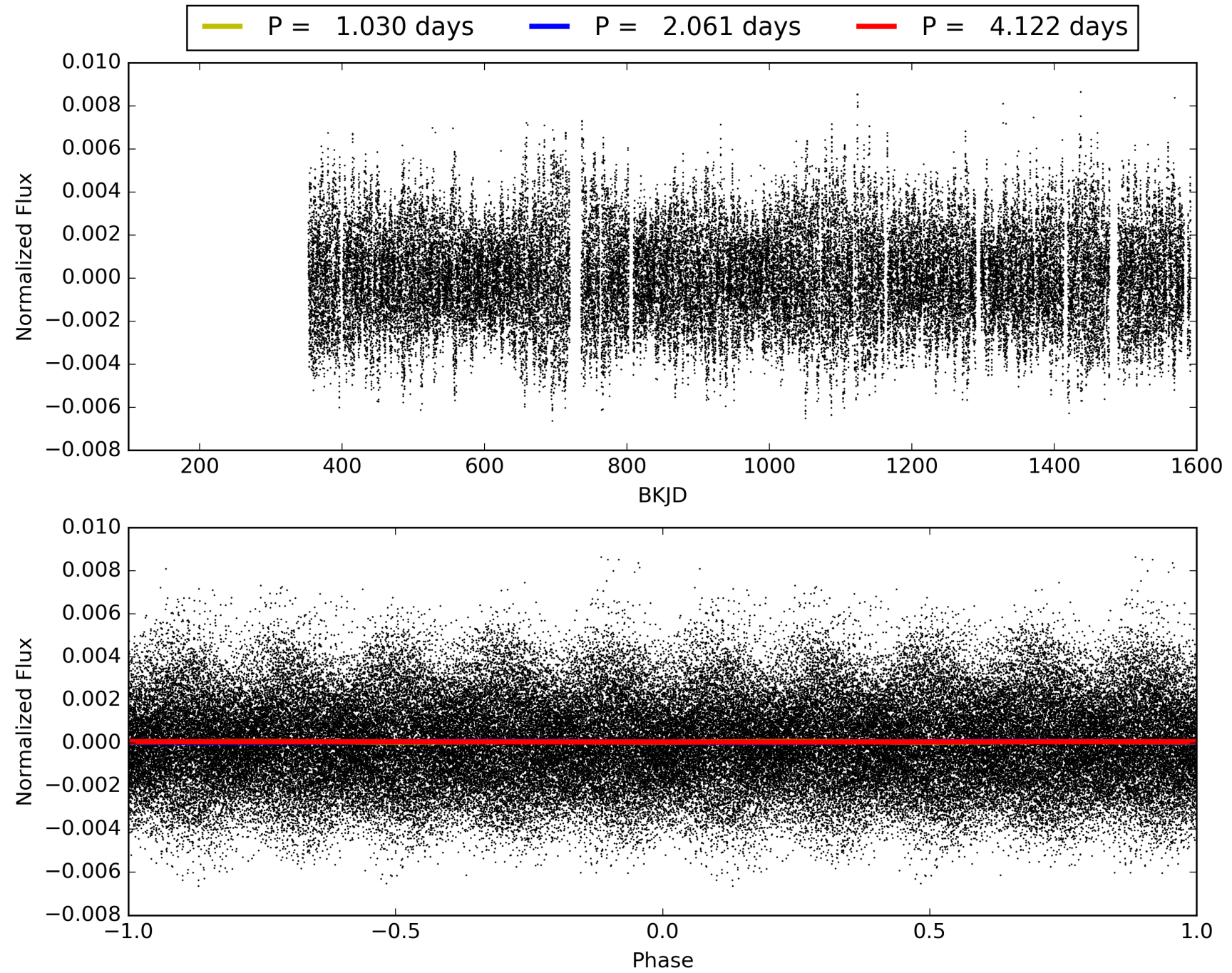
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:48:30 Z

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

TCE 005644758-01, PDC Light Curves

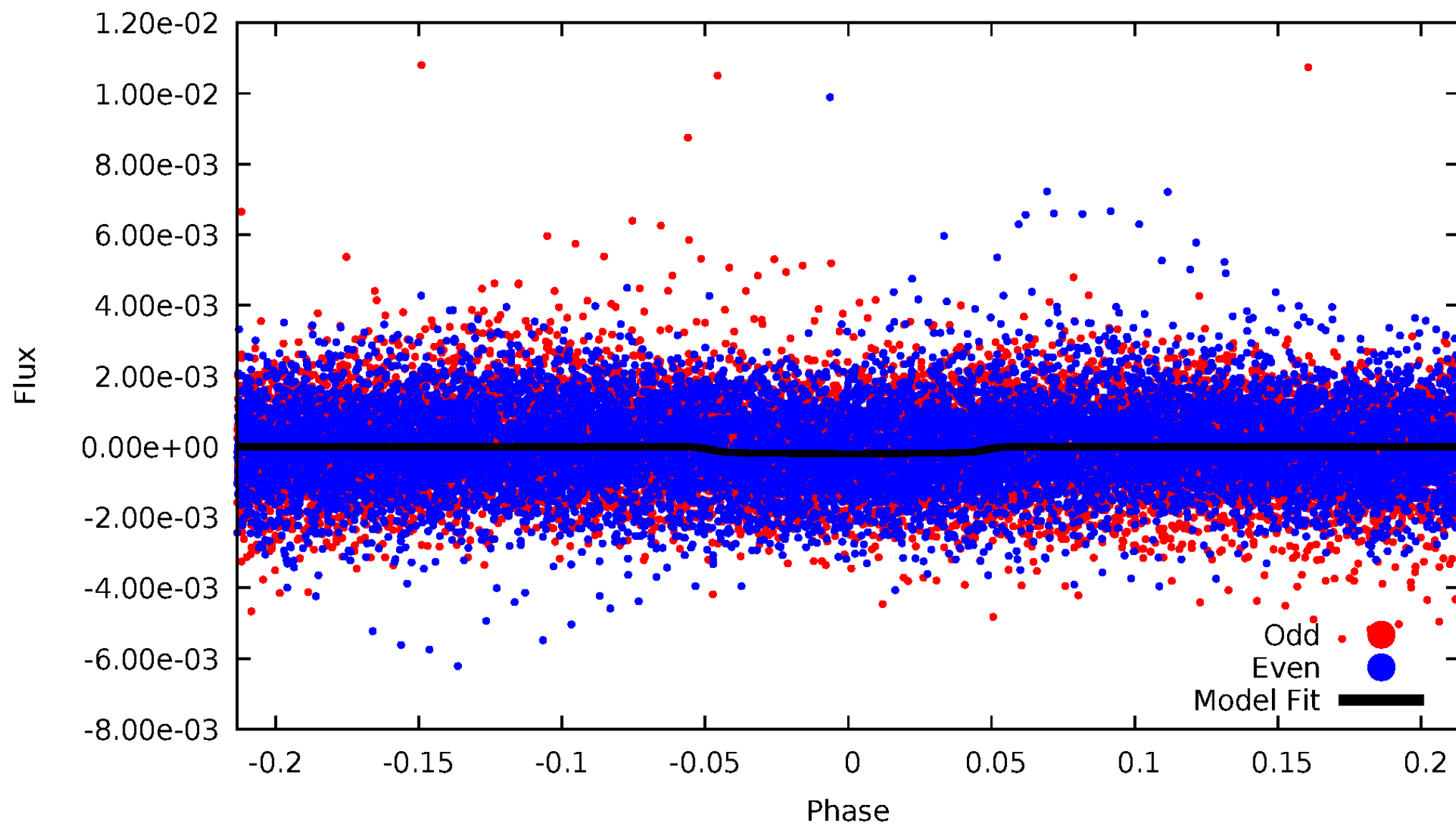


TCE 005644758-01



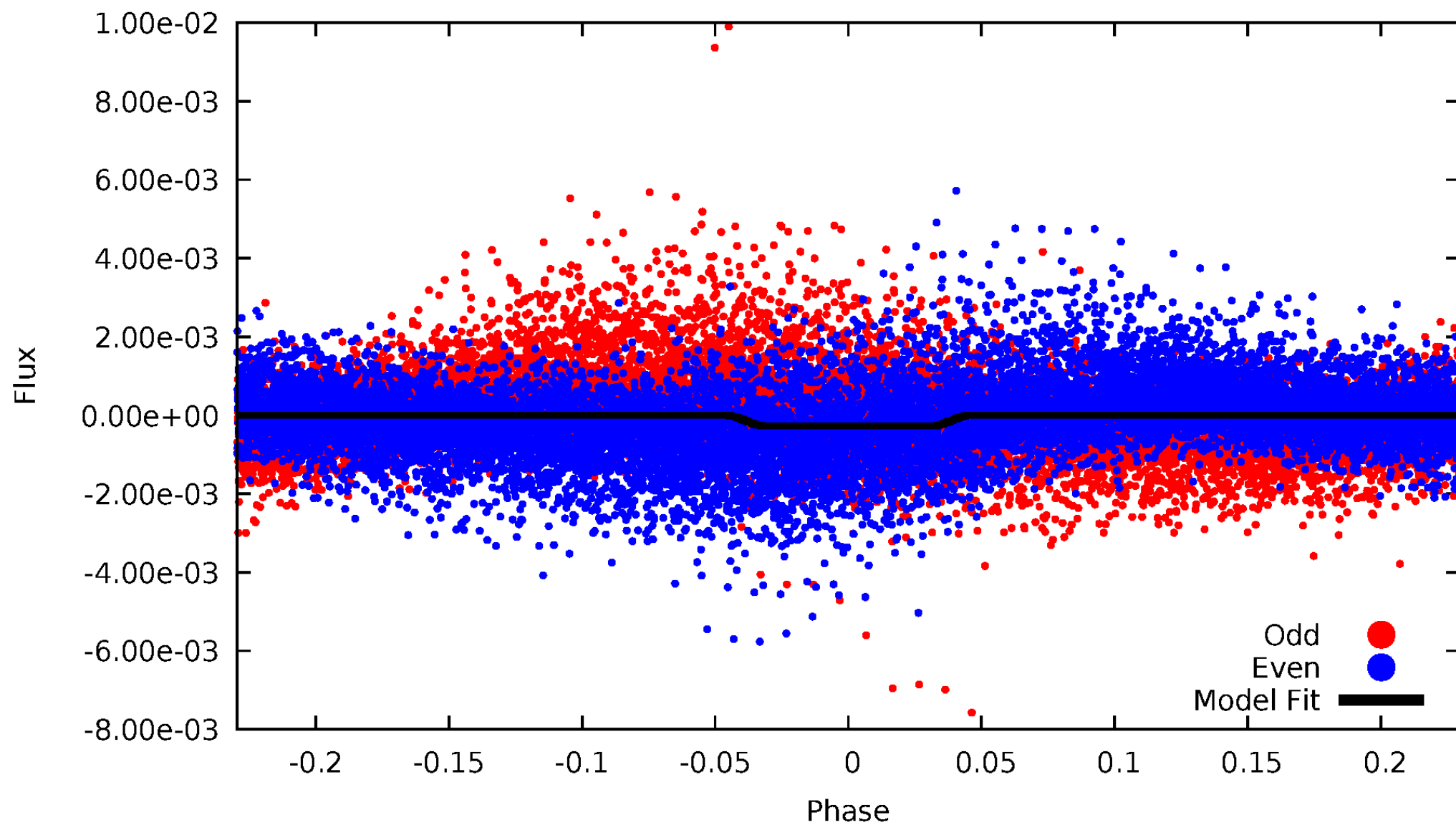
DV Odd/Even

TCE 005644758-01

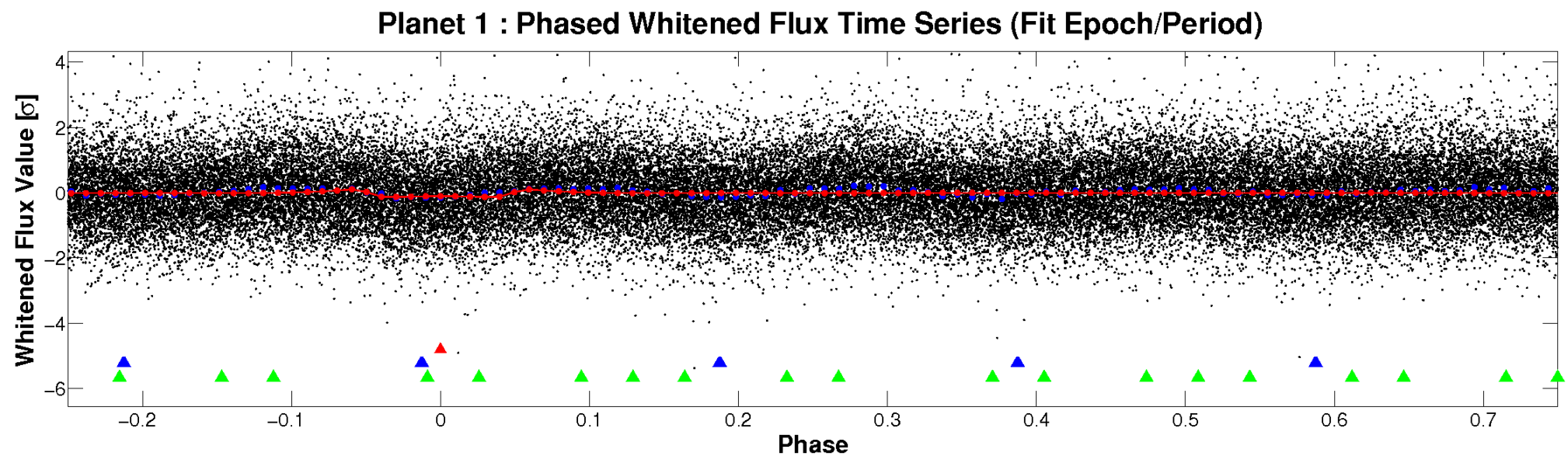
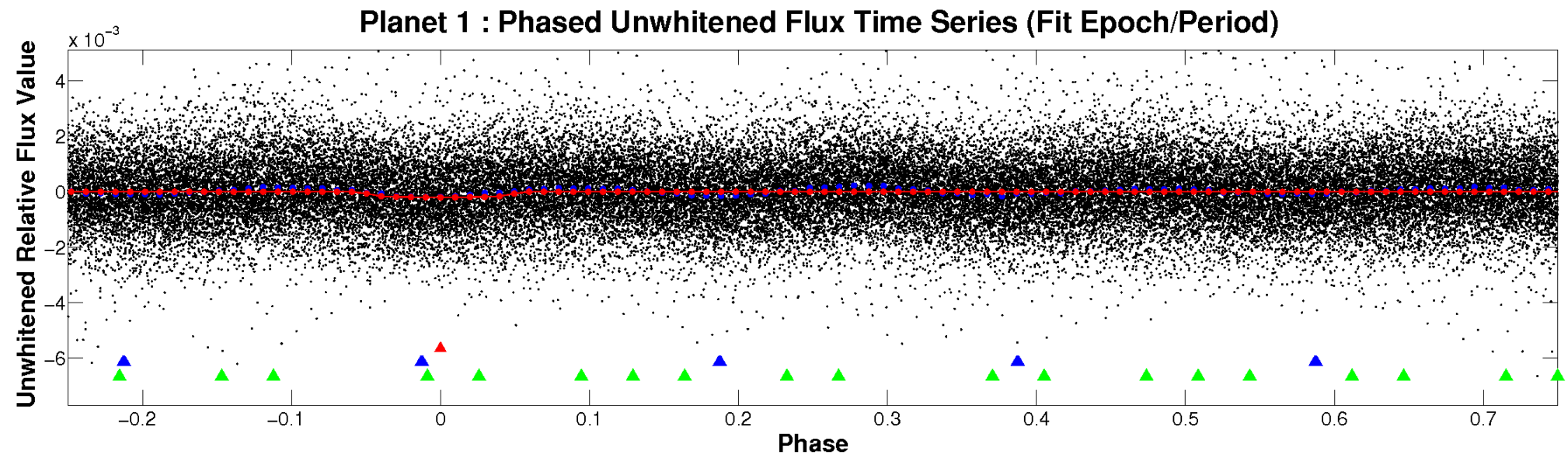


ALT Odd/Even

TCE 005644758-01

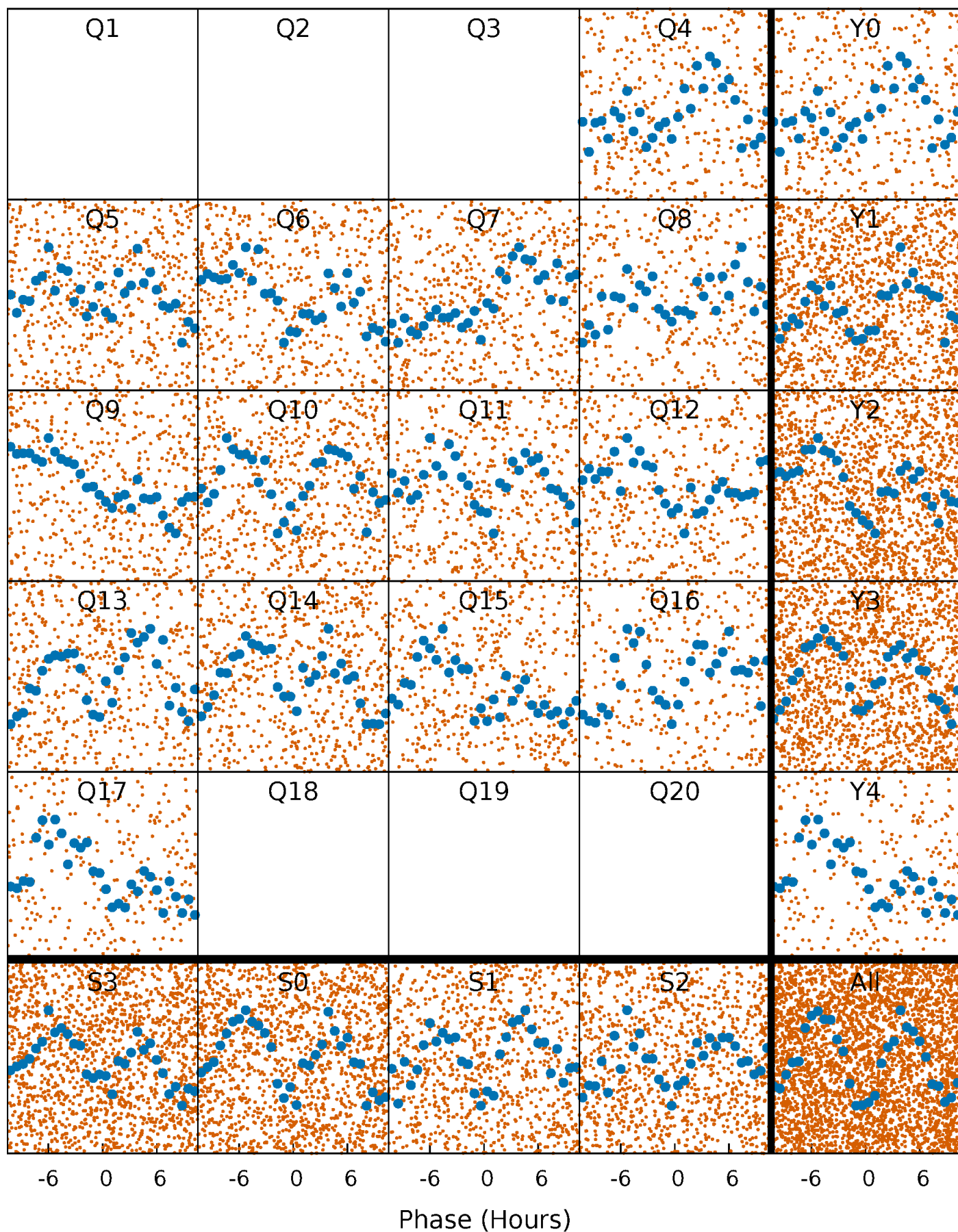


Non-Whitened Vs. Whitened Light Curve



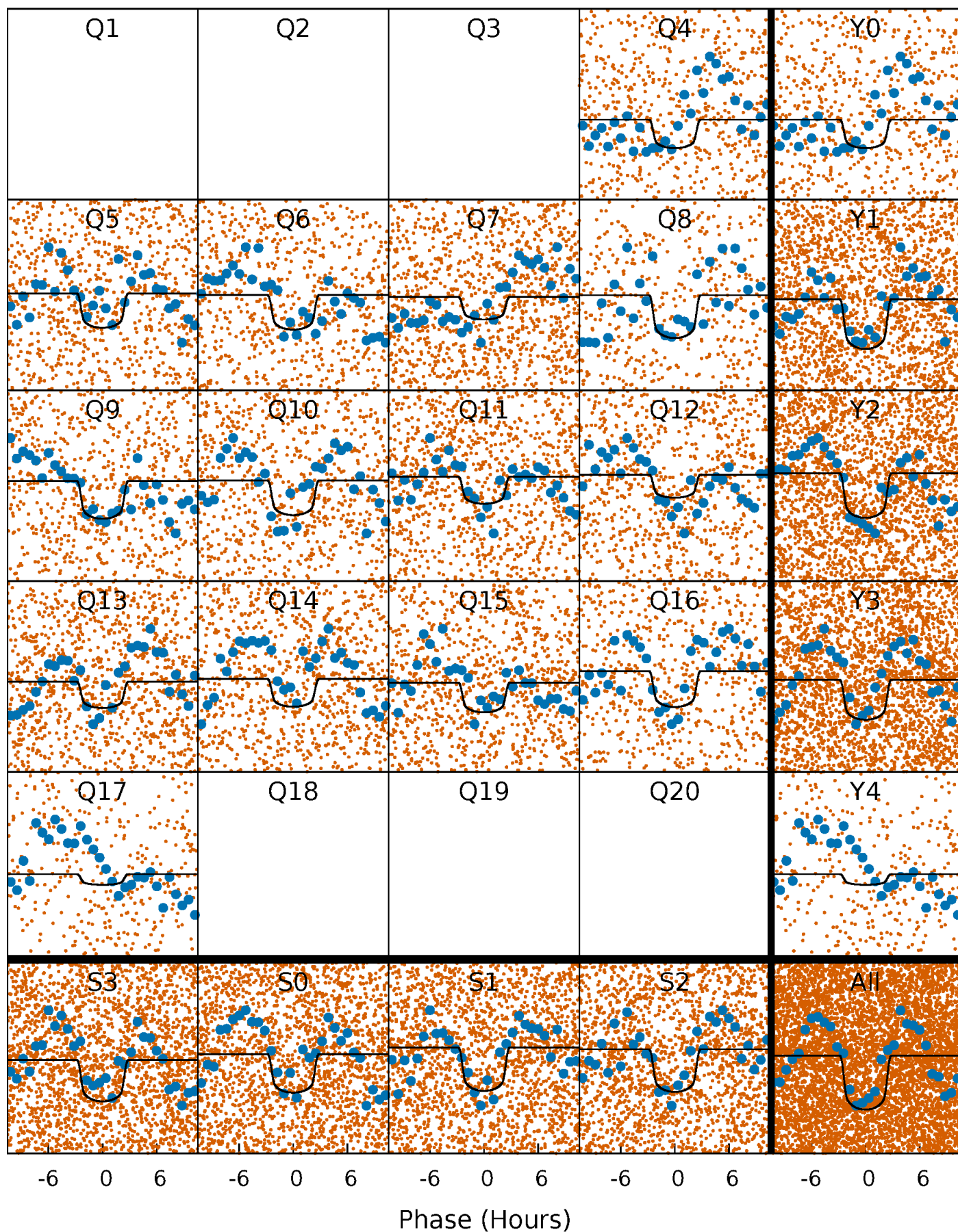
PDC Quarter-Phased Transit Curves

TCE 005644758-01 P= 2.060889 Days $T_0=132.218545$ (BKJD)



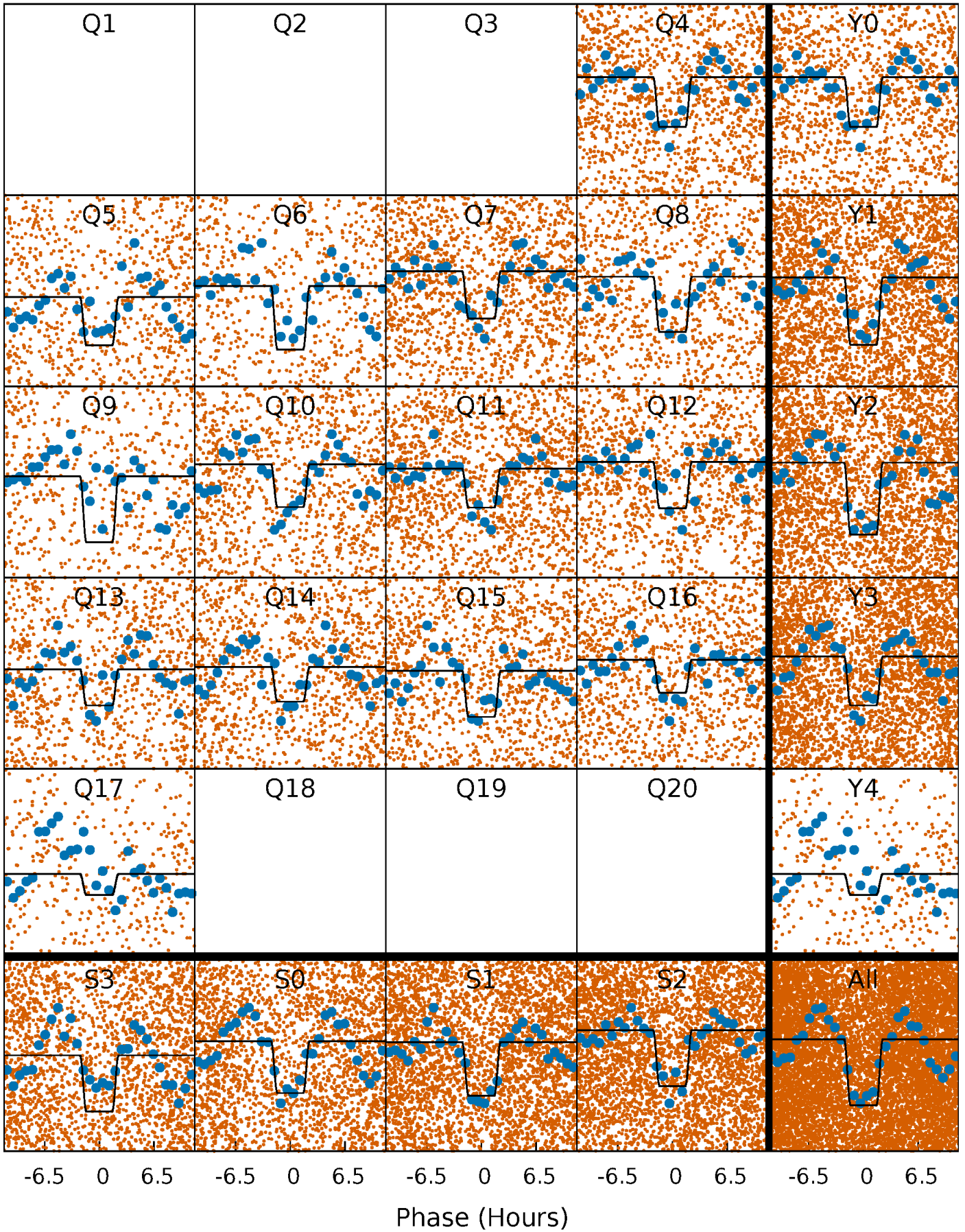
DV Quarter-Phased Transit Curves

TCE 005644758-01 P= 2.060889 Days $T_0=132.218545$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

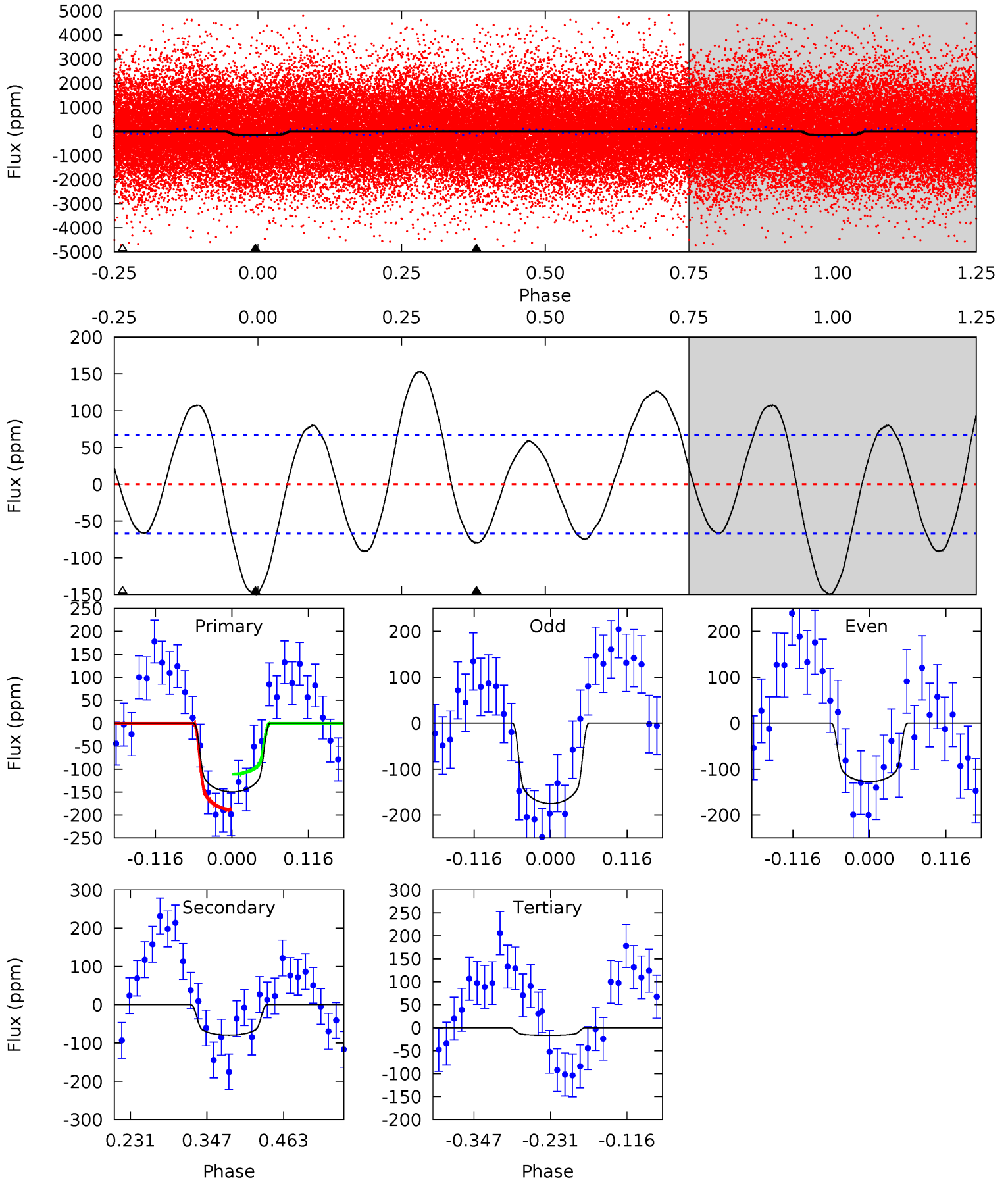
TCE 005644758-01 P= 2.060917 Days $T_0=132.197036$ (BKJD)



DV Model-Shift Uniqueness Test

005644758-01, P = 2.060889 Days, E = 132.218545 Days

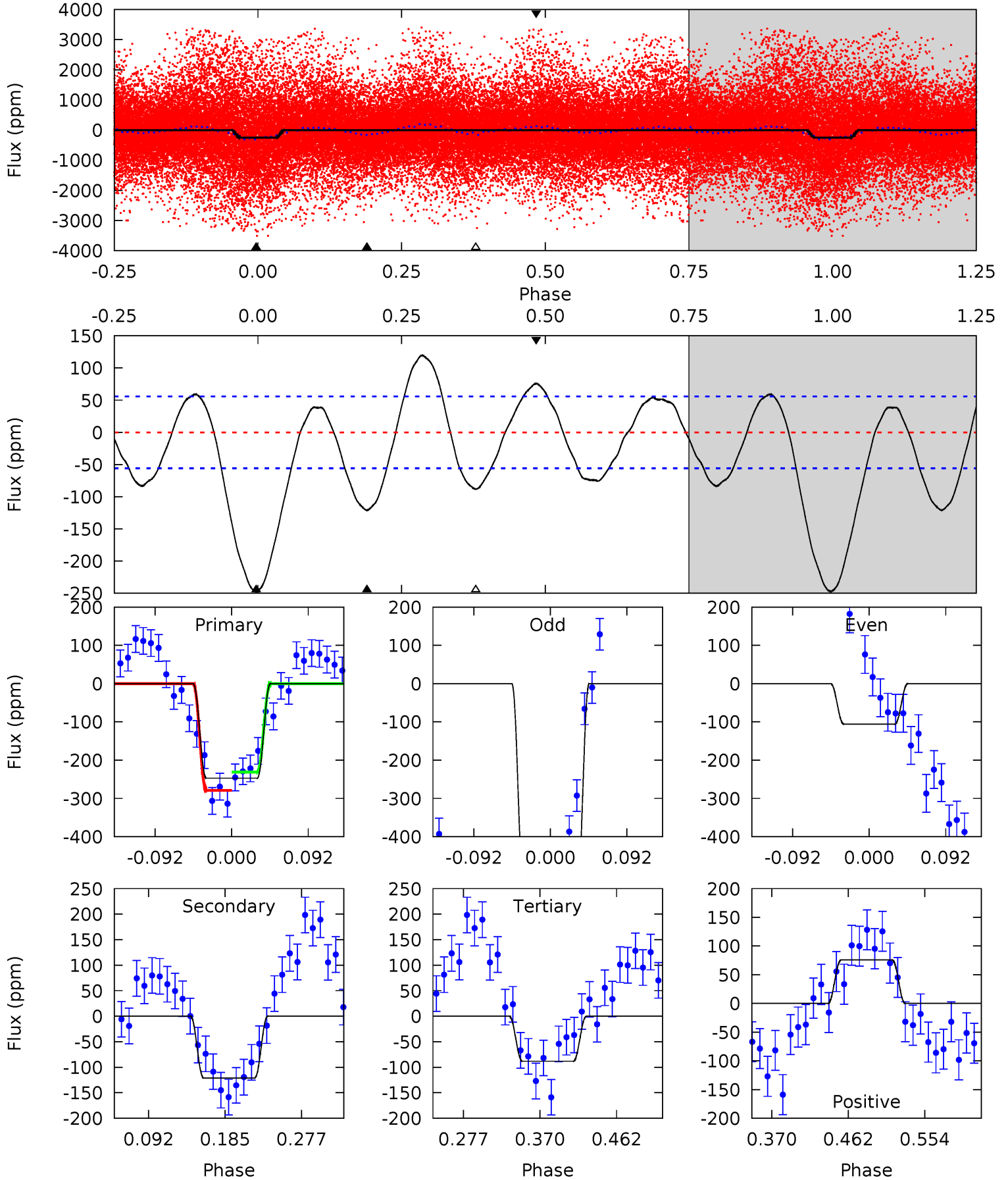
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.1	5.36	1.12	0	4.53	1.57	4.50	8.97	10.1	4.24	5.36	1.61	0.71	0.51	2.54



Alt Model-Shift Uniqueness Test

005644758-01, P = 2.060917 Days, E = 132.197036 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	9.92	7.23	6.21	4.58	1.68	4.62	13.0	14.0	2.69	3.71	20.7	0.82	0.33	2.00



Stellar Parameters For KIC 005644758

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6075^{+190}_{-211}	$4.541^{+0.050}_{-0.213}$	$-0.460^{+0.300}_{-0.300}$	$0.858^{+0.250}_{-0.083}$	$0.934^{+0.108}_{-0.119}$	$2.082^{+0.417}_{-1.075}$
	+3%/-3%	+1%/-5%	+65%/-65%	+29%/-10%	+12%/-13%	+20%/-52%
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 005644758-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-79 ± 15	$1.51^{+0.28}_{-0.25}$	2020^{+149}_{-105}	4744^{+406}_{-349}	18^{+9}_{-7}
Alt.	-121 ± 12	$1.61^{+0.31}_{-0.26}$	2017^{+143}_{-99}	5021^{+380}_{-292}	24^{+10}_{-7}

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

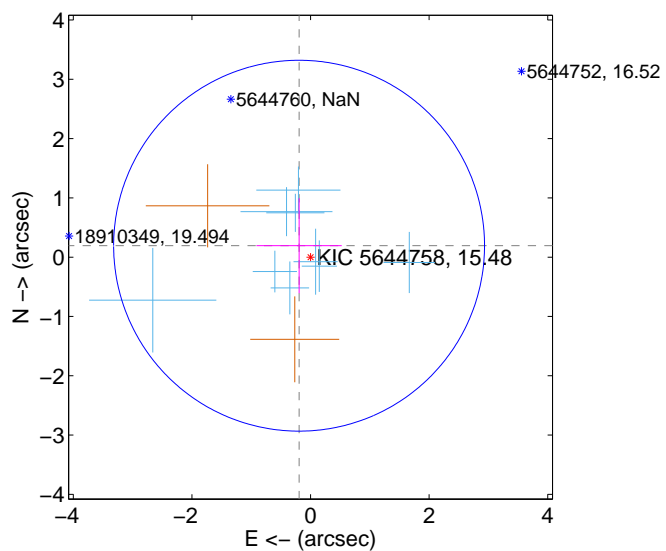
Supplemental centroid analysis for 005644758-01. Kepler magnitude: 15.48. Transit SNR 9.37

There are 9 quarters with good PRF difference image offsets

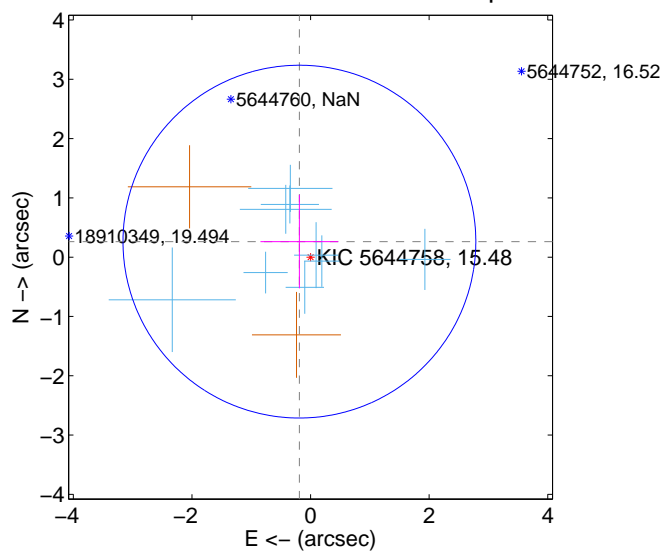
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.273 ± 1.043	0.26	0.193 ± 0.719	0.193 ± 0.801
PRF-fit source offset from KIC position	0.323 ± 0.992	0.33	0.188 ± 0.656	0.262 ± 0.789
photometric centroid source offset	0.93 ± 0.55	1.69	-0.47 ± 0.61	-0.81 ± 0.53

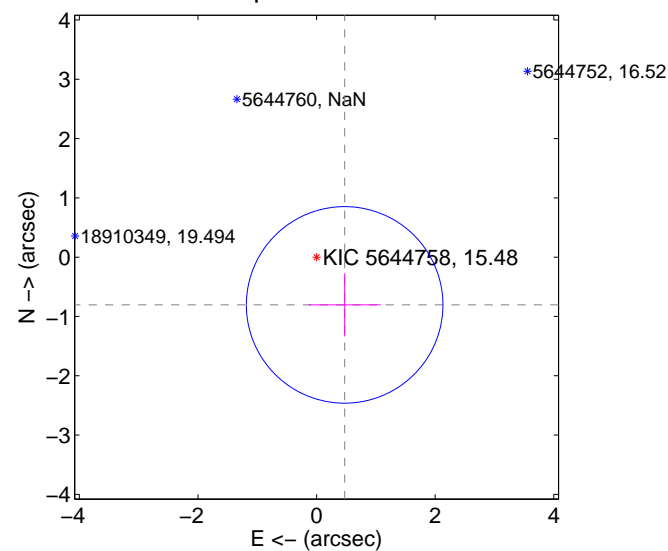
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

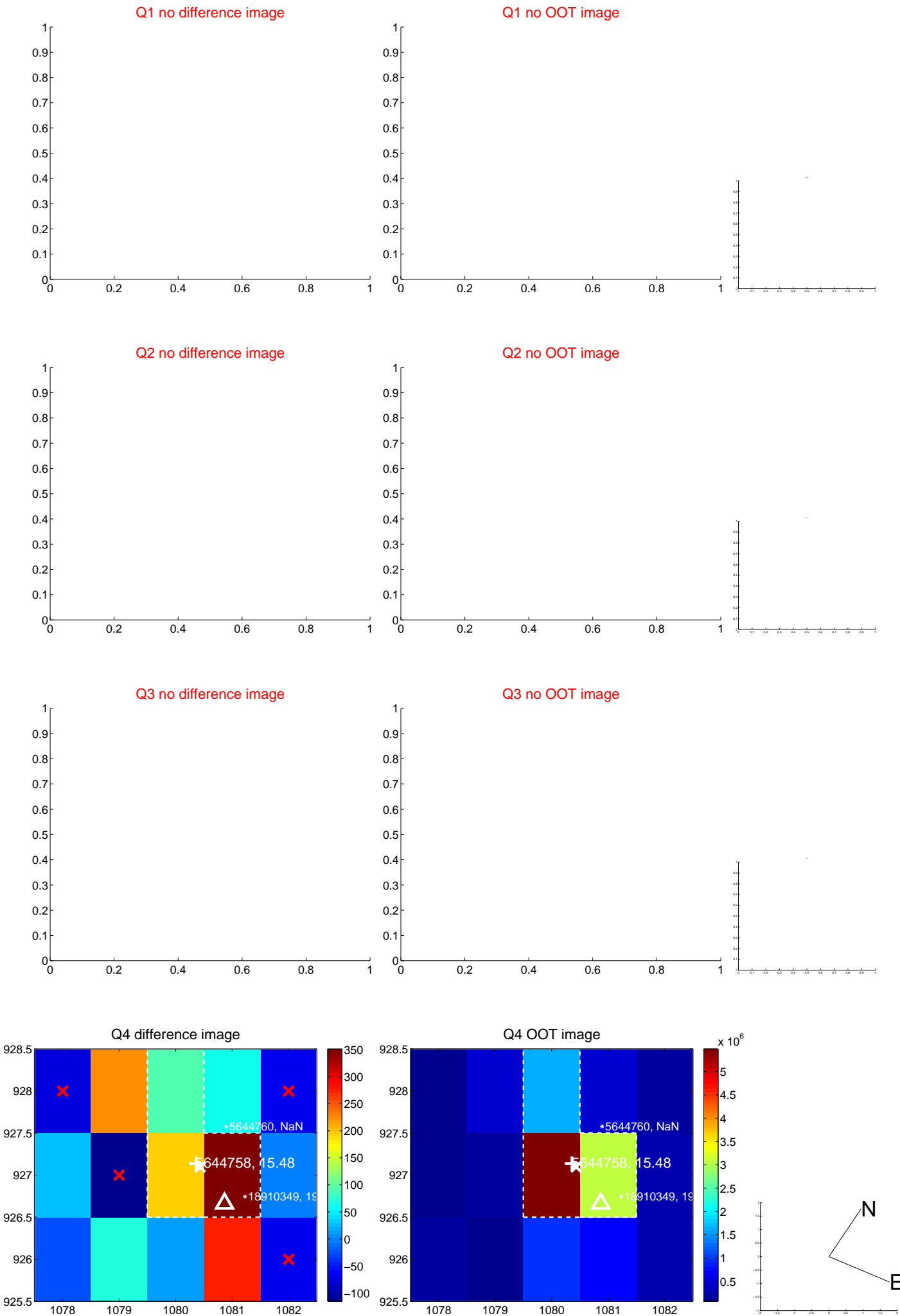


offset from photometric centroids

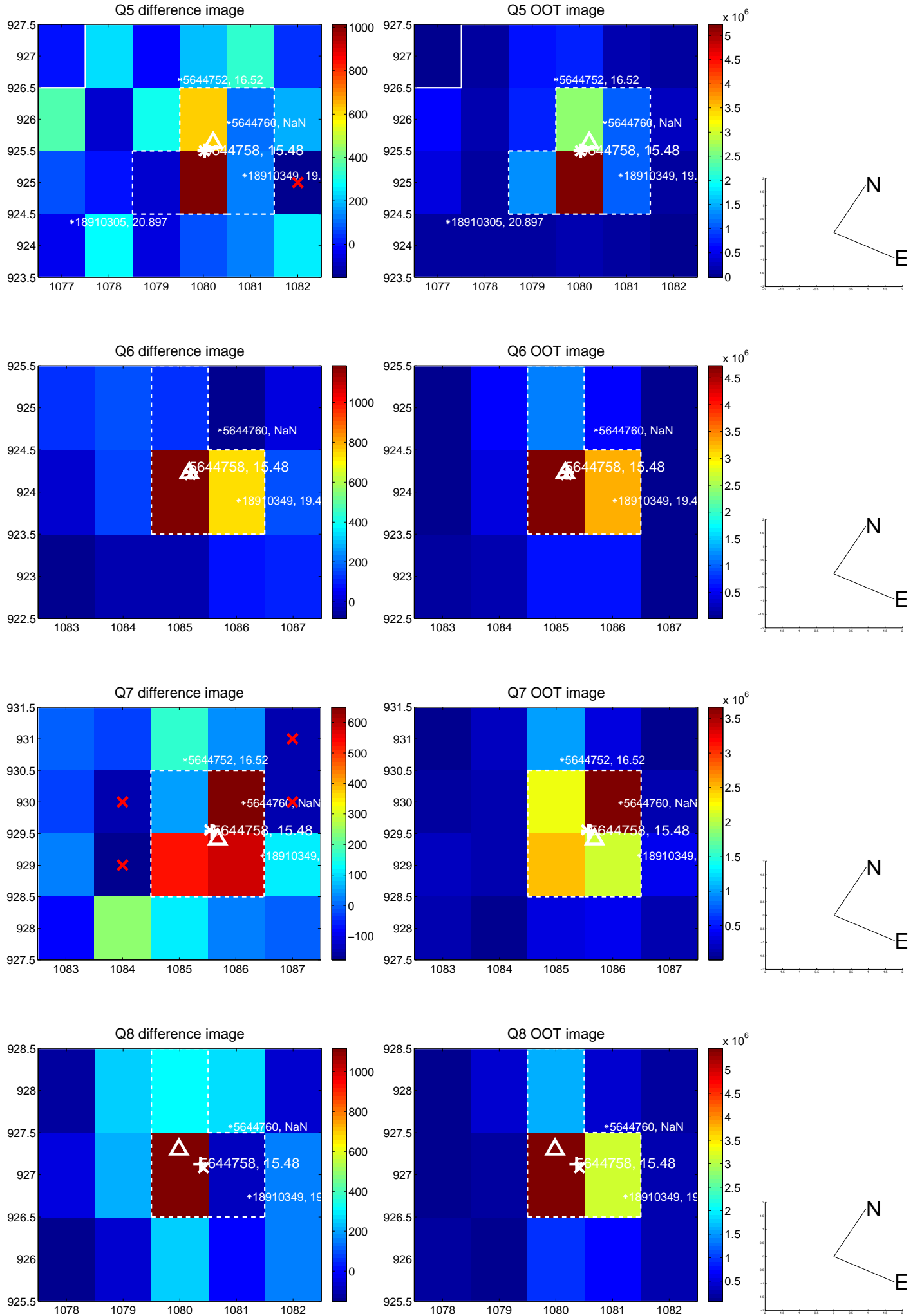


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

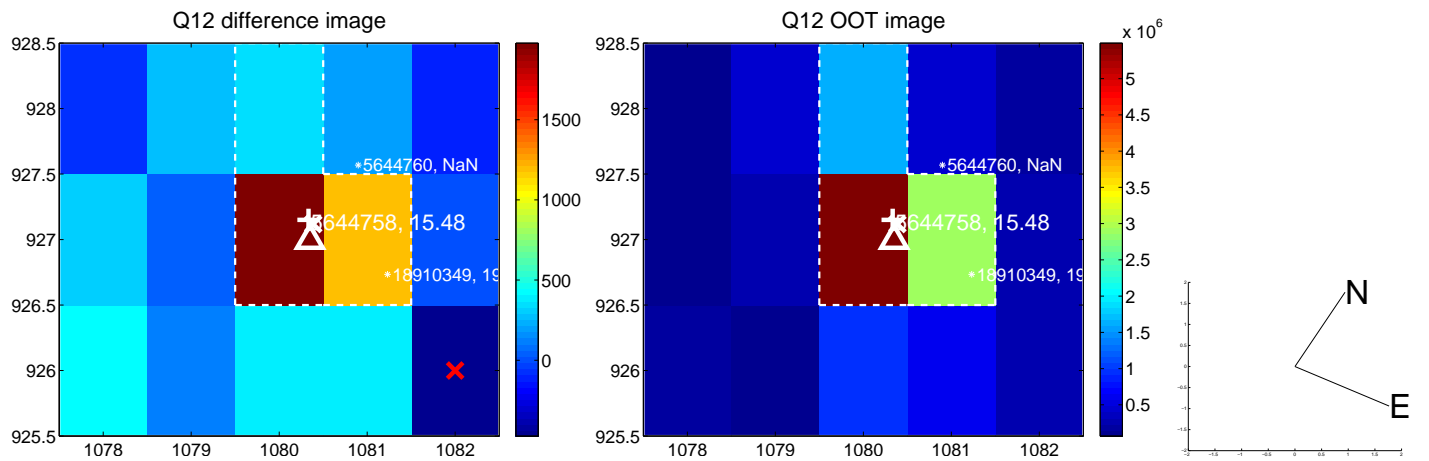
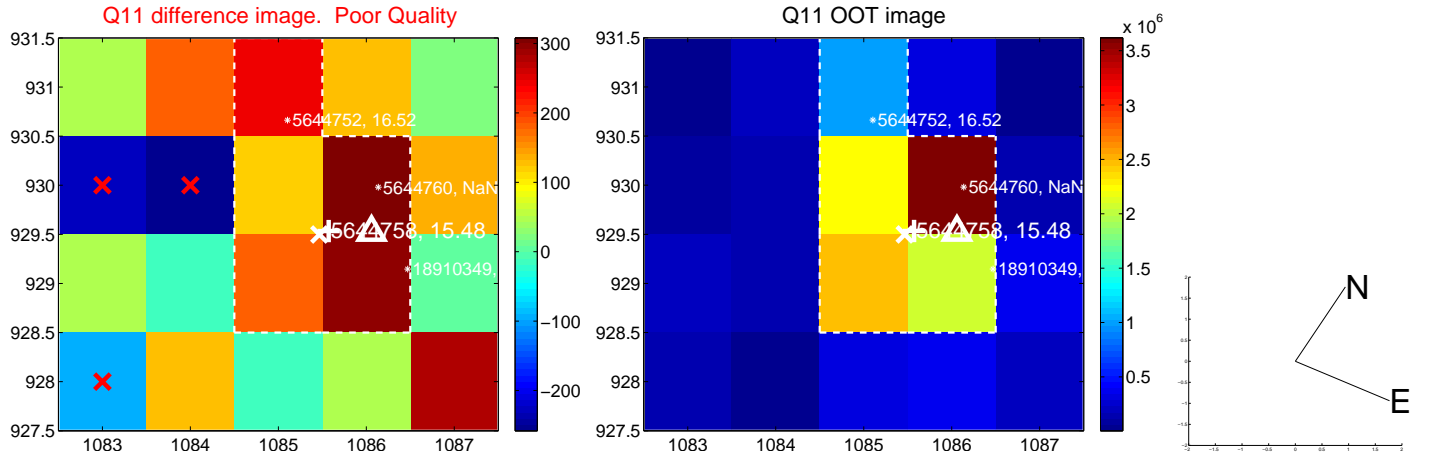
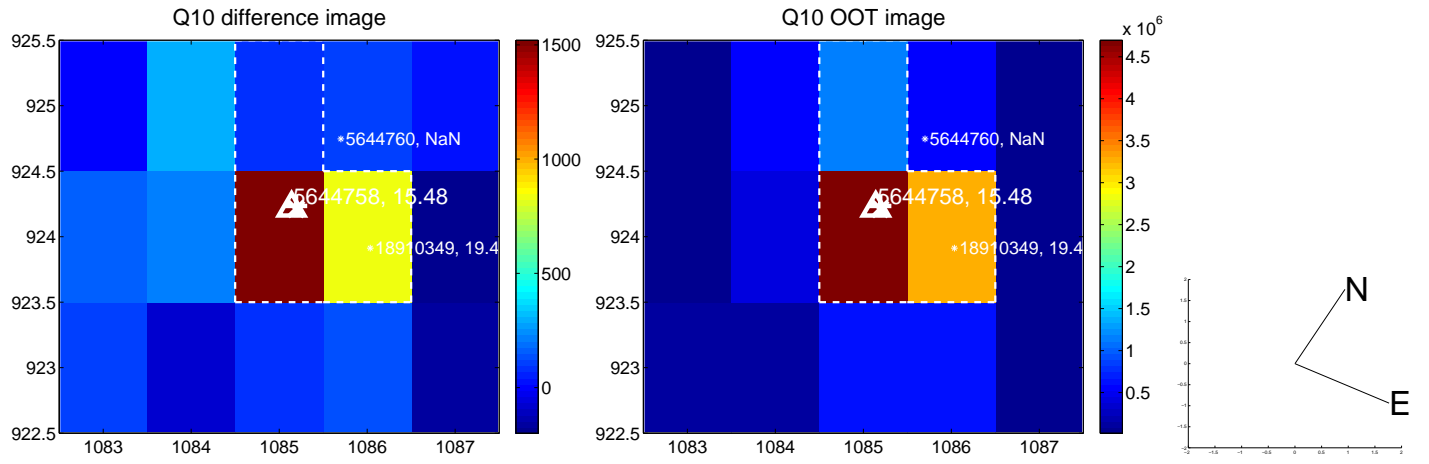
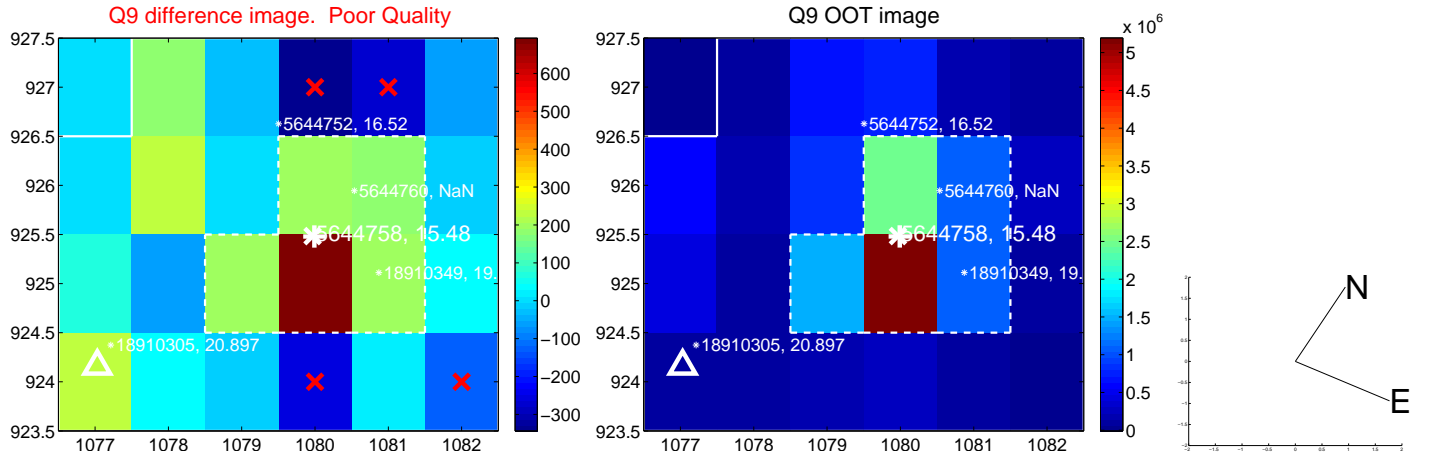
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



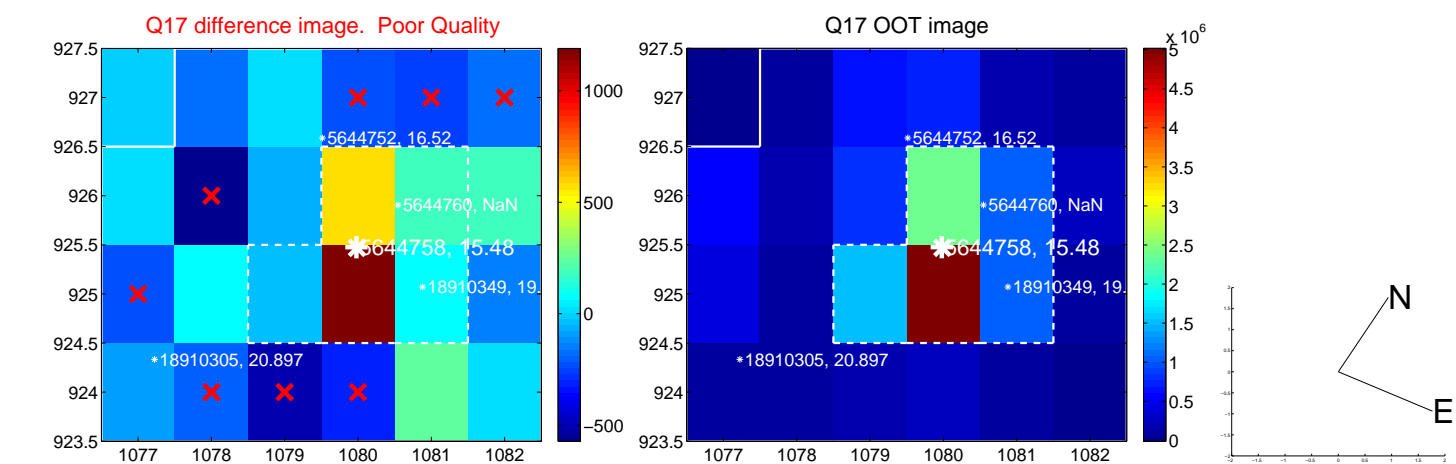
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



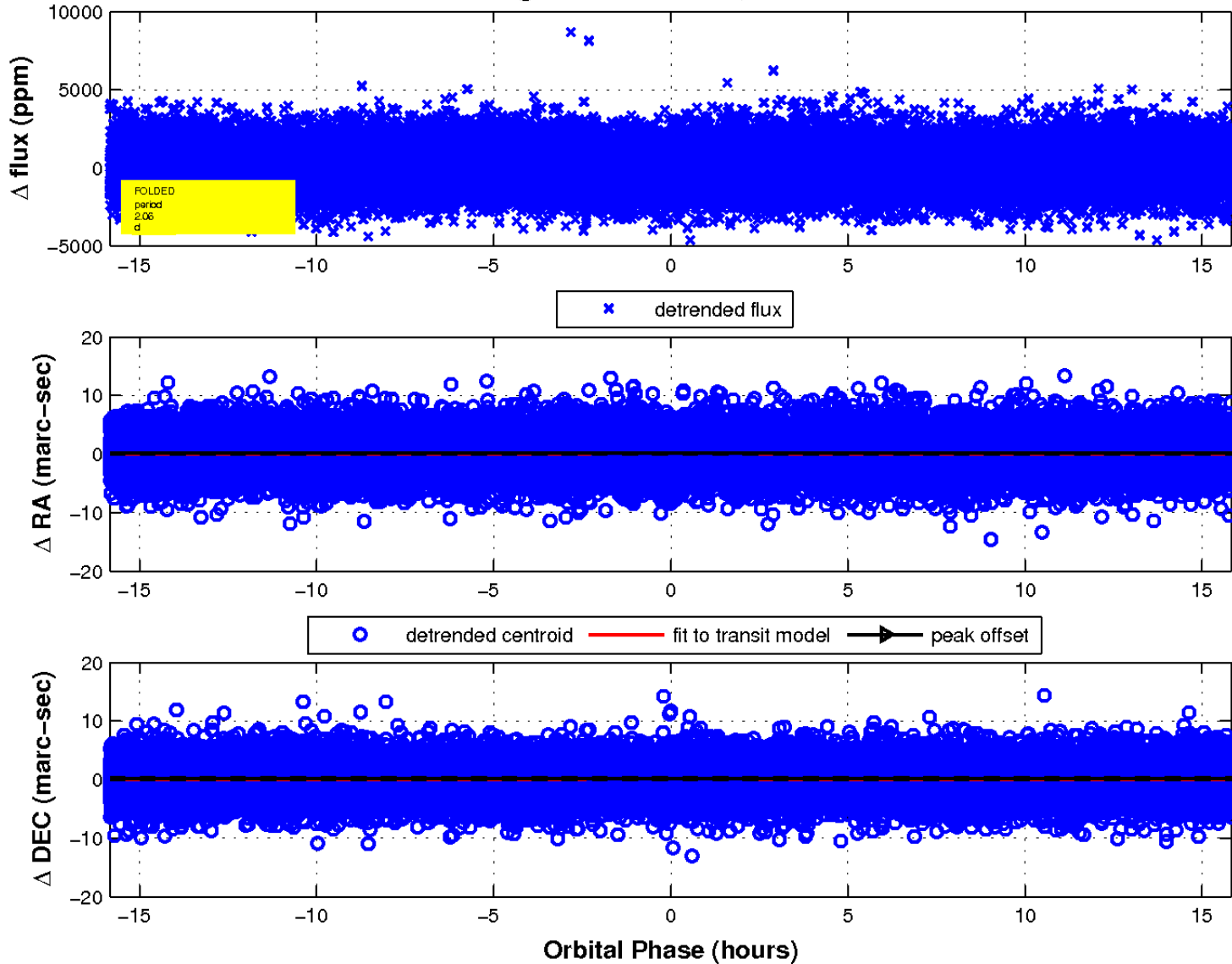
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

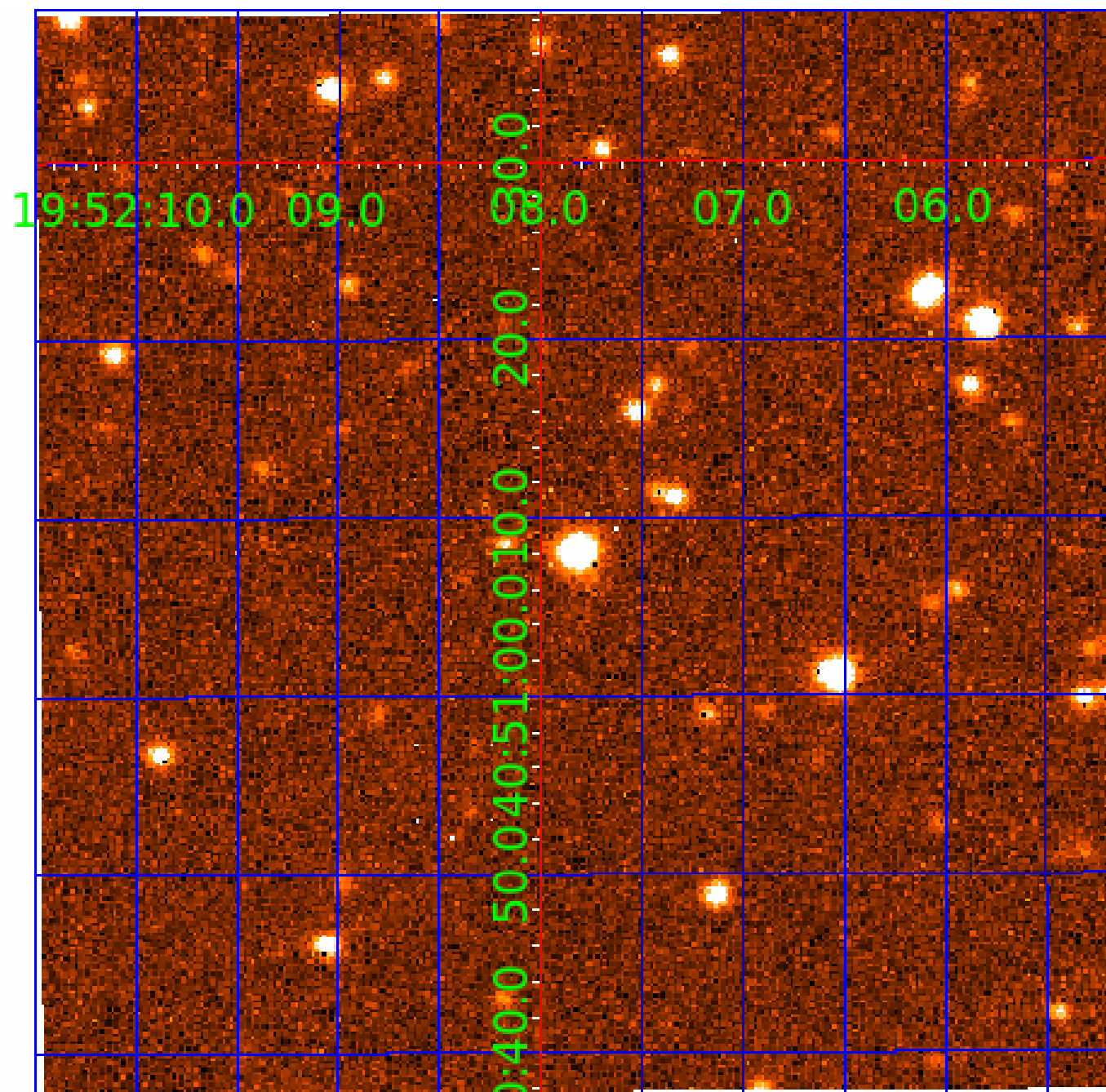


fluxWeightedCentroids, Planet 1 of 3



UKIRT Image

Declination



KIC 005644758

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})
005644758-01	OBS	No	2.060889	132.218545	201.3	5.277	9.0	9.4	0.86	6075	1.43	936.12
005644758-02	OBS	No	1.236536	131.778832	162.6	6.479	8.3	8.0	0.86	6075	1.17	1849.82
005644758-03	OBS	No	77.532013	172.494940	1459.0	7.472	7.6	6.2	0.86	6075	3.41	7.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005644758-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005644758-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005644758-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—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.

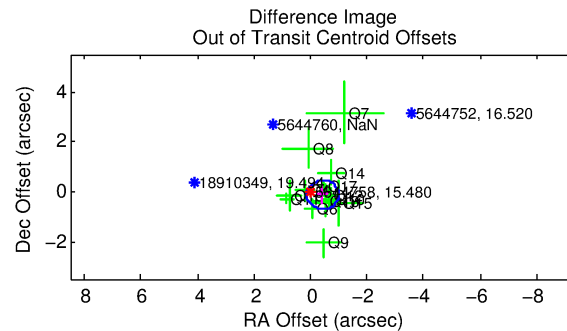
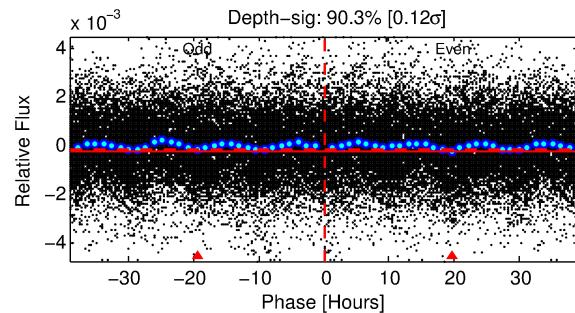
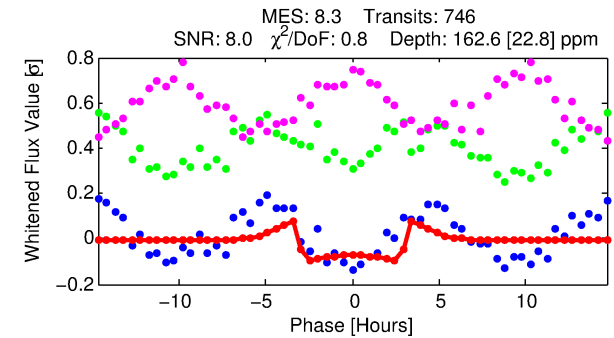
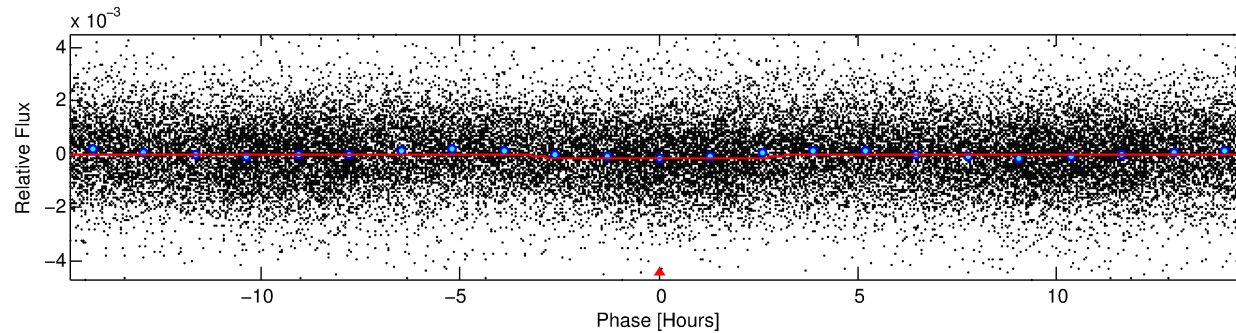
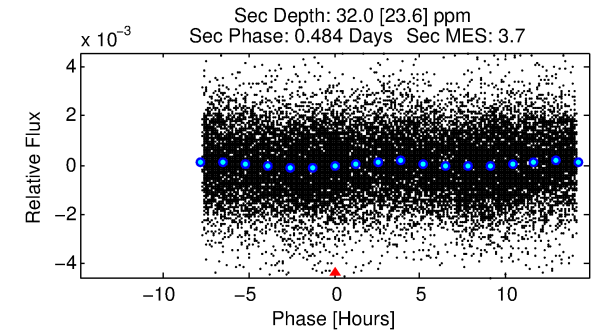
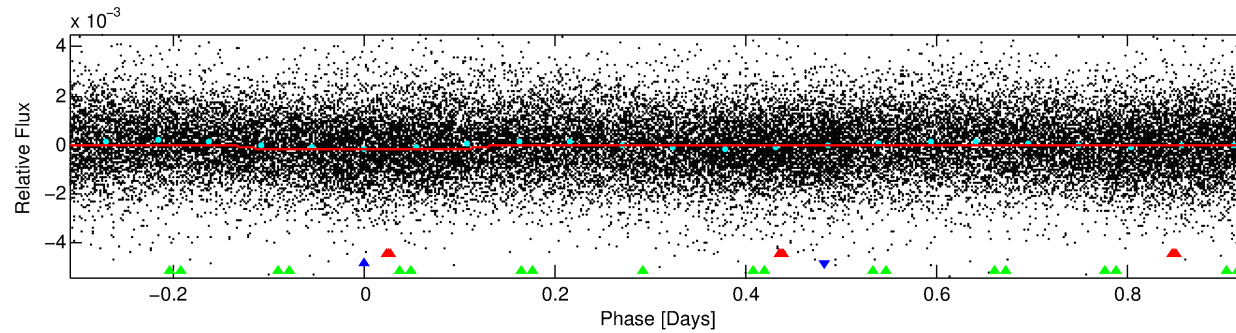
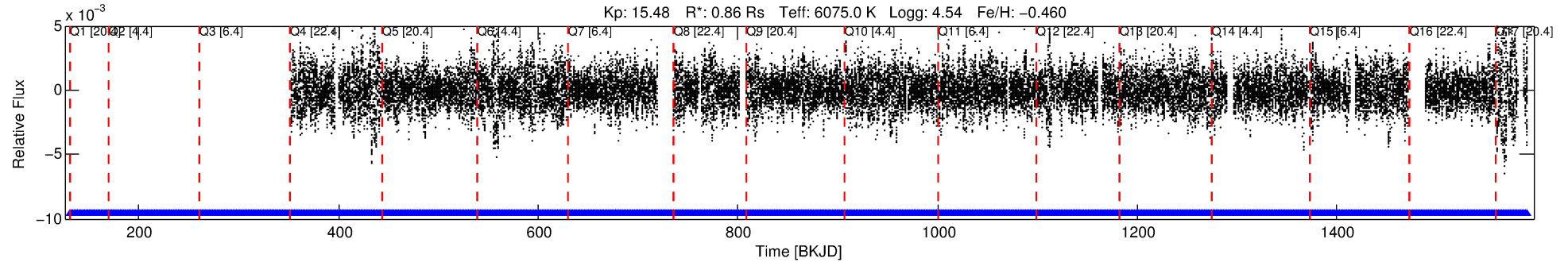
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005644758-02

No Significant Match Found

DV One-Page Summary

KIC: 5644758 Candidate: 2 of 3 Period: 1.237 d



DV Fit Results:

Period = 1.23654 [0.00001] d
Epoch = 131.7788 [0.0037] BKJD
Rp/R* = 0.0125 [0.0063]
a/R* = 1.35 [1.57]
b = 0.70 [1.87]
Seff = 1849.82 [748.99]
Teq = 1672 [169] K
Rp = 1.17 [0.68] Re
a = 0.0220 [0.0056] AU
Ag = 6.22 [8.16] [0.64σ]
Teffp = 4084 [1289] K [1.85σ]

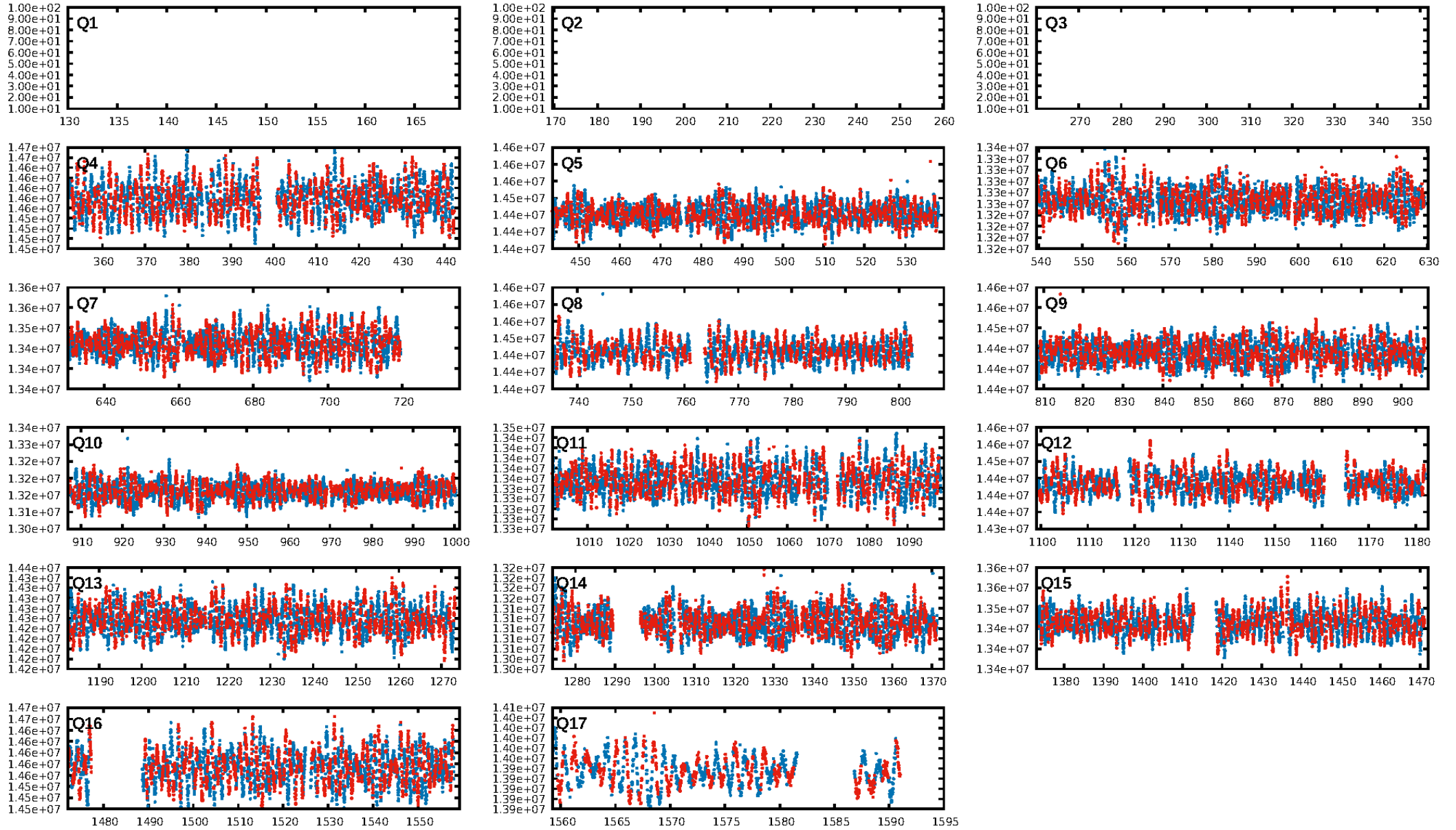
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 98.2% [2.37σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.81e-12
RollingBand-fgt: 1.00 [729/729]
GhostDiagnostic-chr: 0.8315
Centroid-sig: 0.0%
Centroid-so: 1.412 arcsec [2.80σ]
OotOffset-rm: 0.451 arcsec [2.37σ]
KicOffset-rm: 0.507 arcsec [2.65σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.46 [6/13]
DiffImageOverlap-fno: 1.00 [14/14]

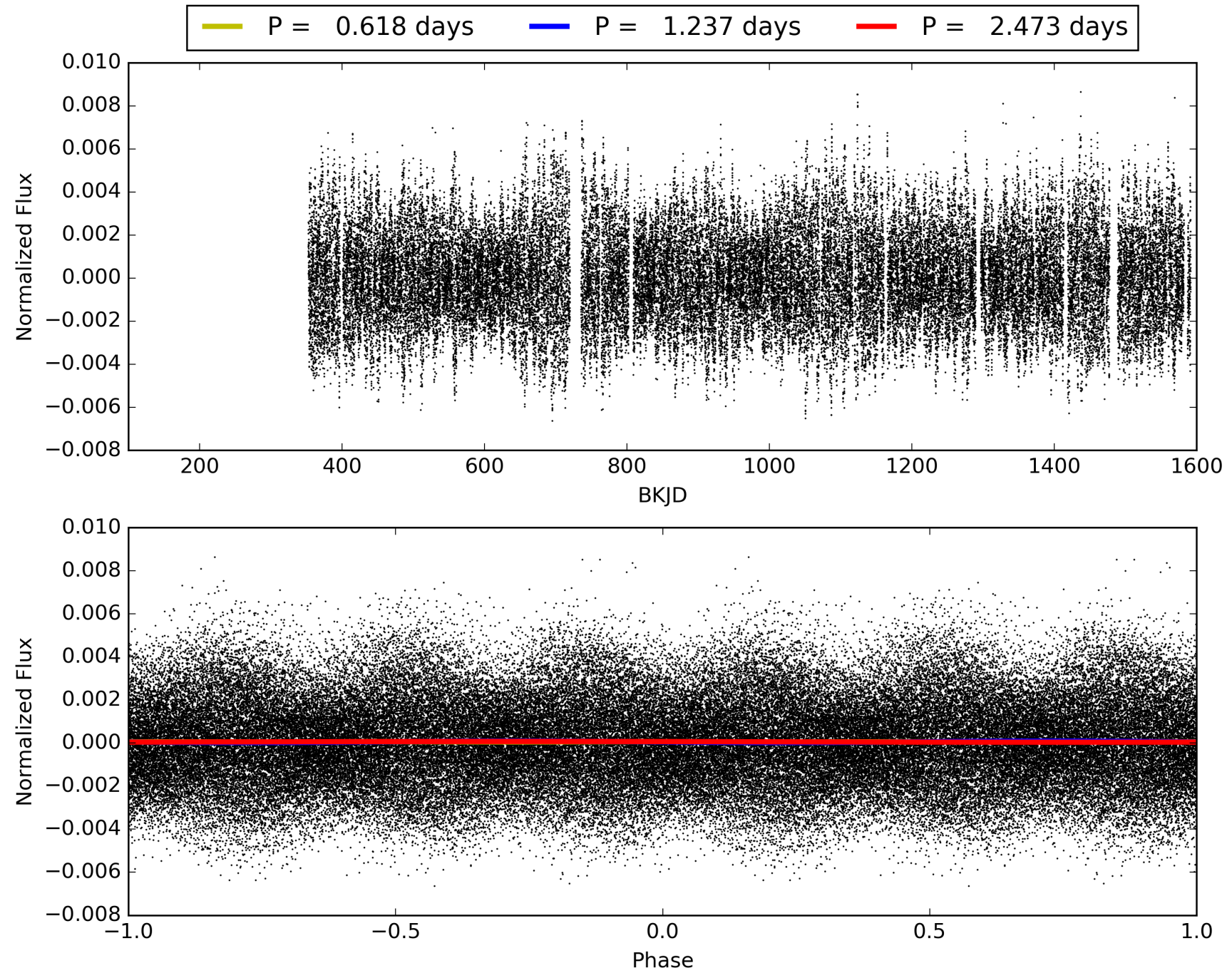
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:48:42 Z

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

TCE 005644758-02, PDC Light Curves

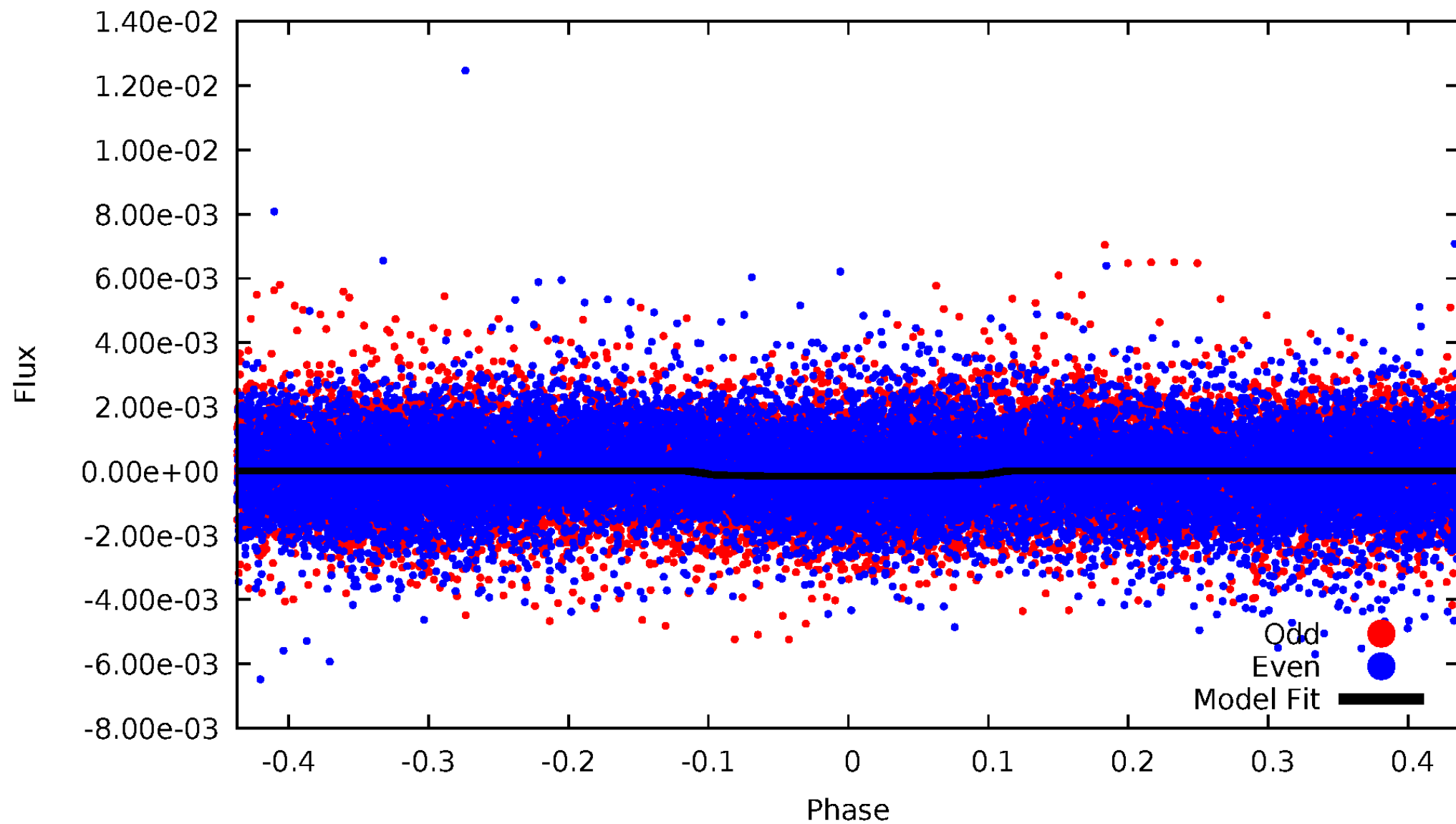


TCE 005644758-02



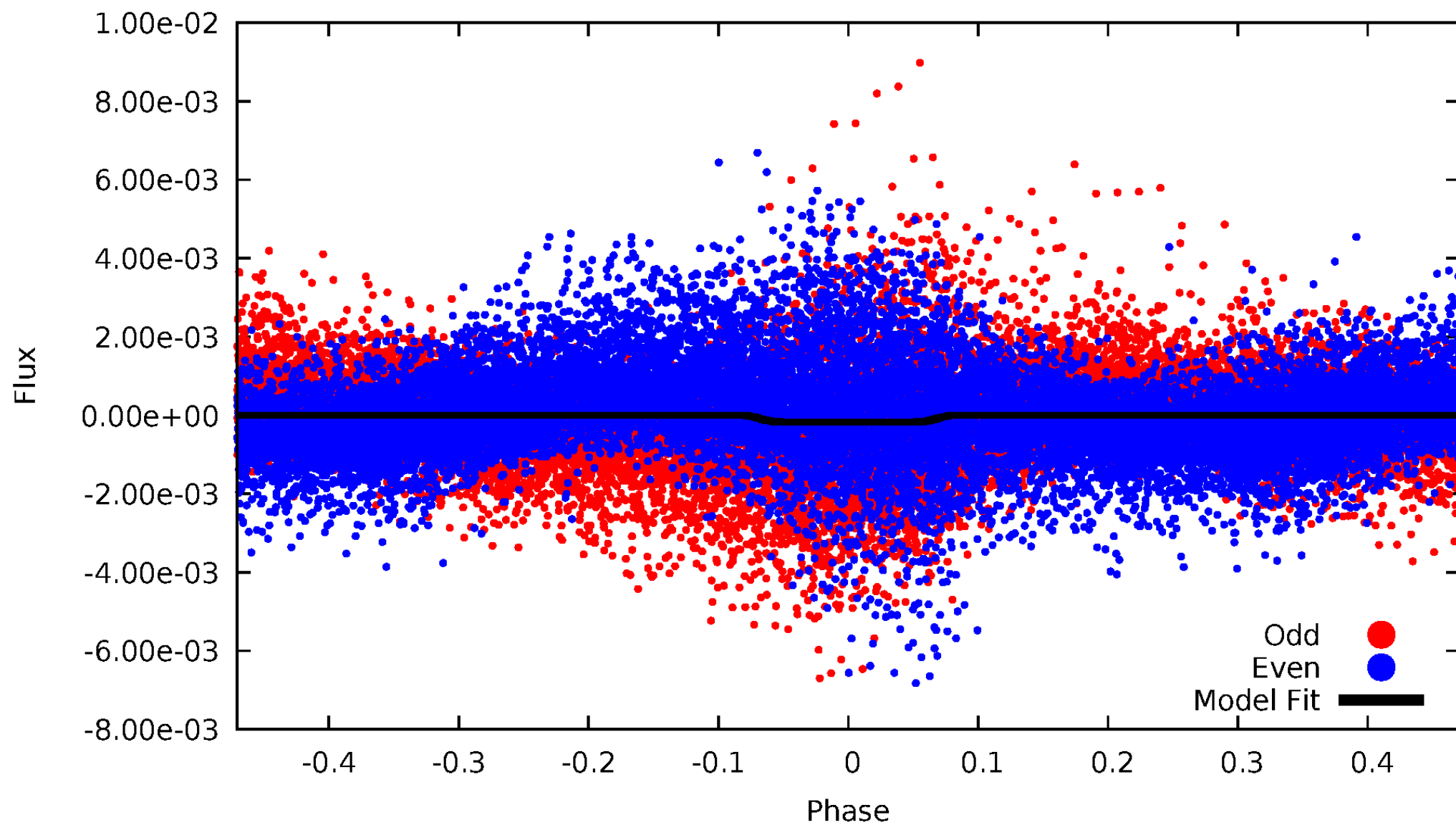
DV Odd/Even

TCE 005644758-02



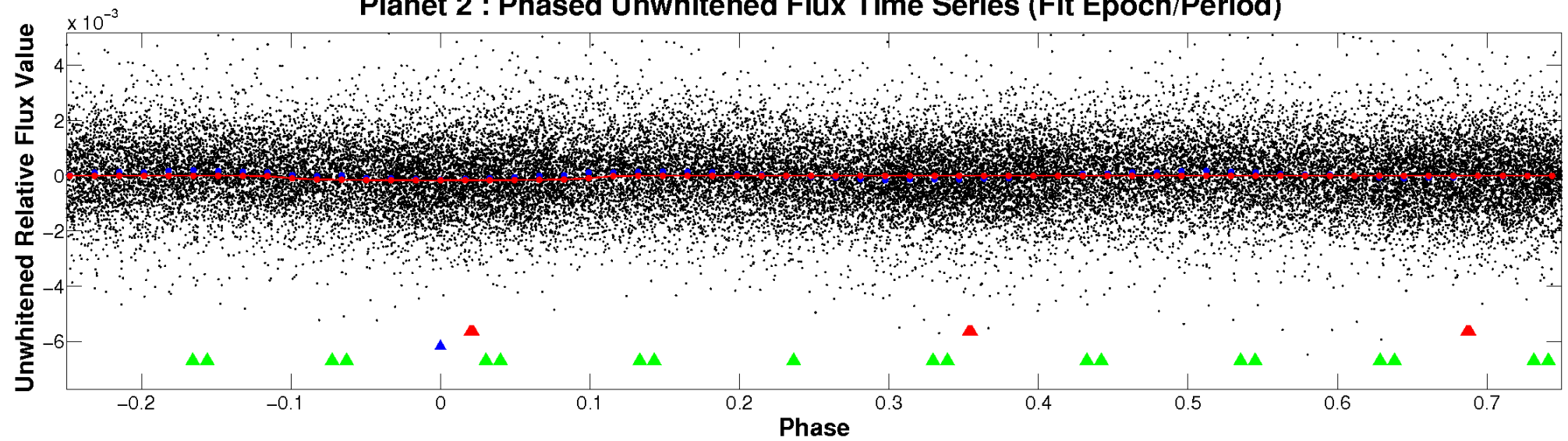
ALT Odd/Even

TCE 005644758-02

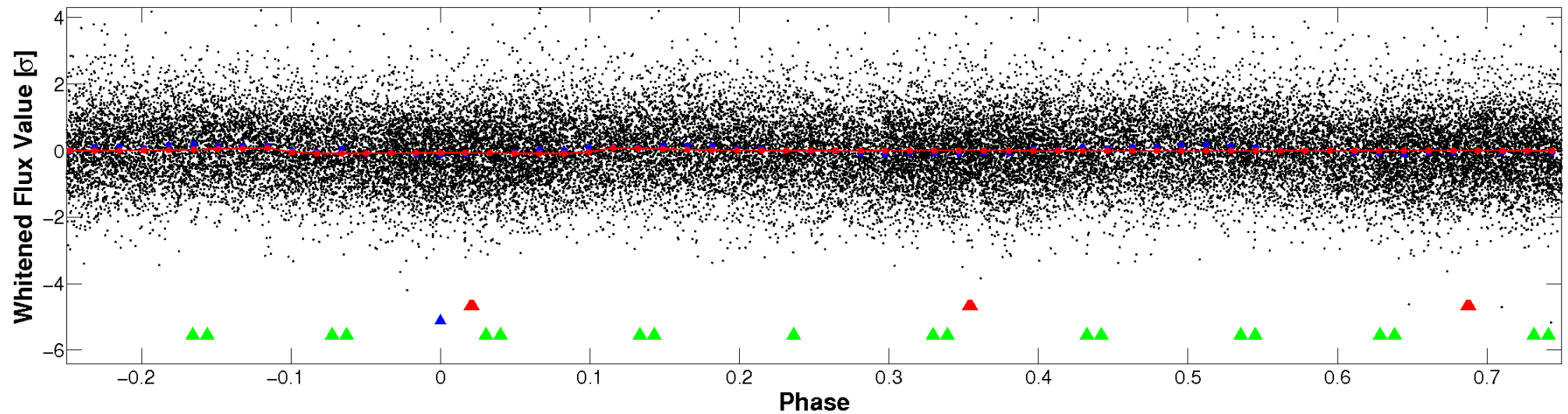


Non-Whitened Vs. Whitened Light Curve

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

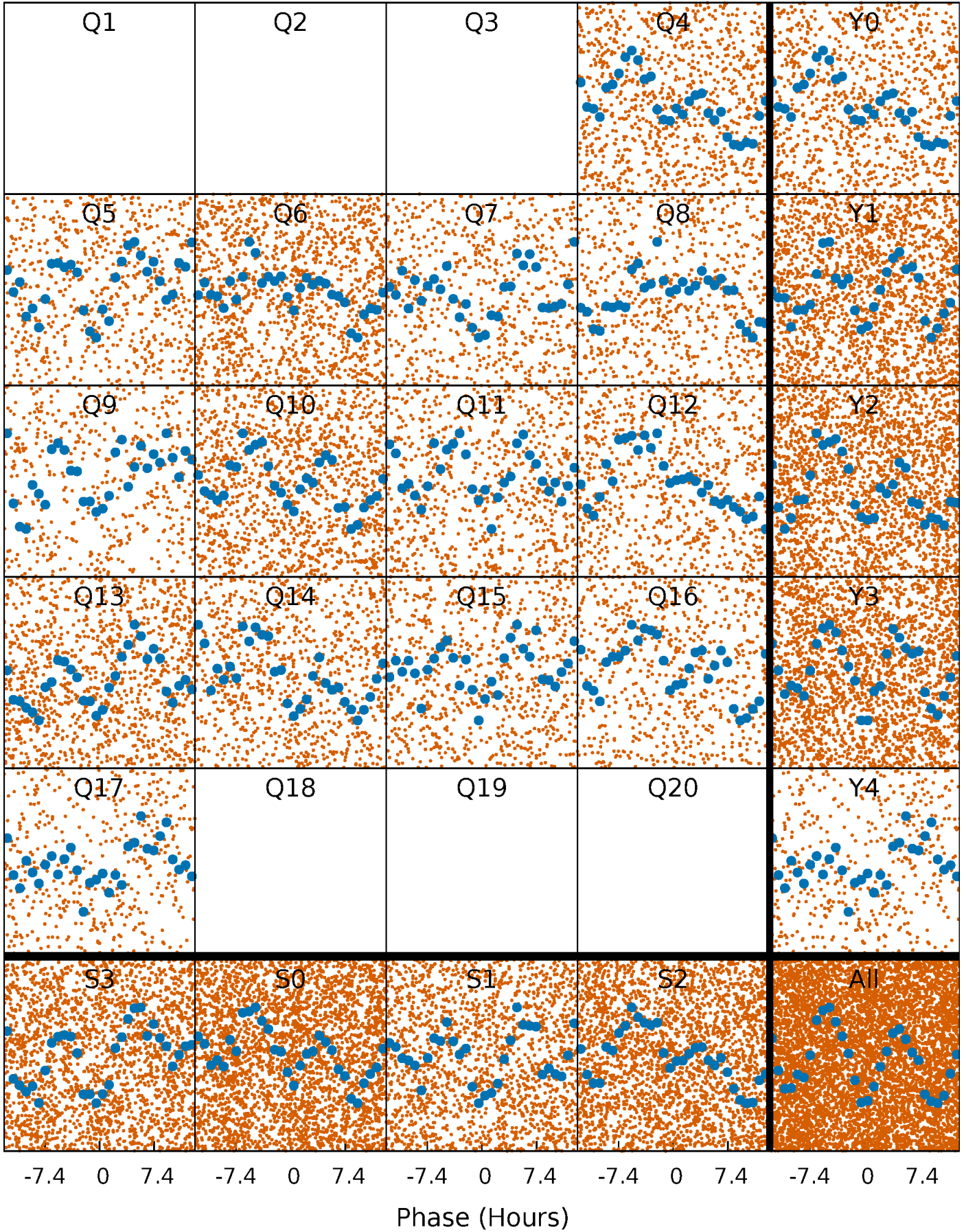


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



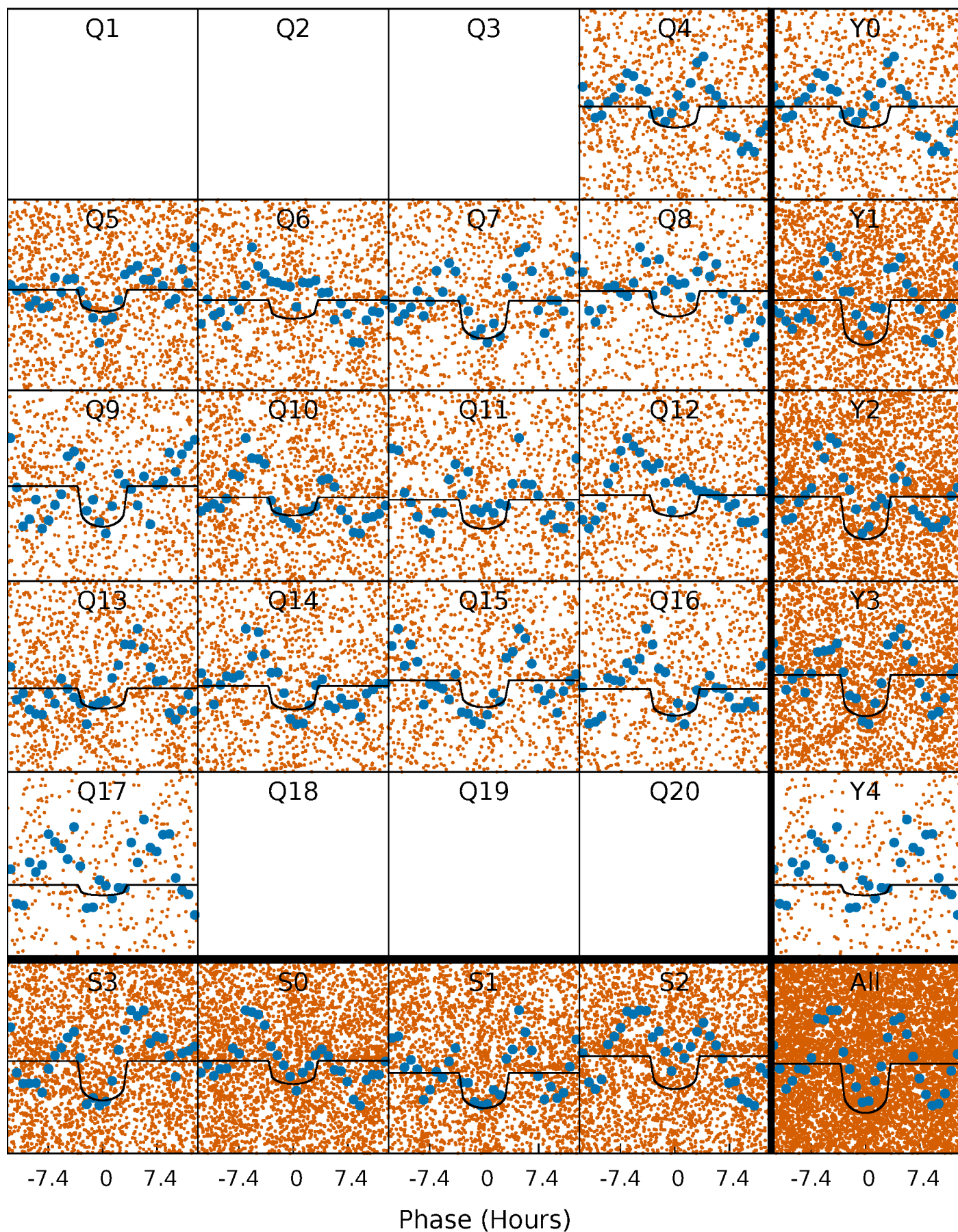
PDC Quarter-Phased Transit Curves

TCE 005644758-02 P= 1.236536 Days $T_0=131.778832$ (BKJD)



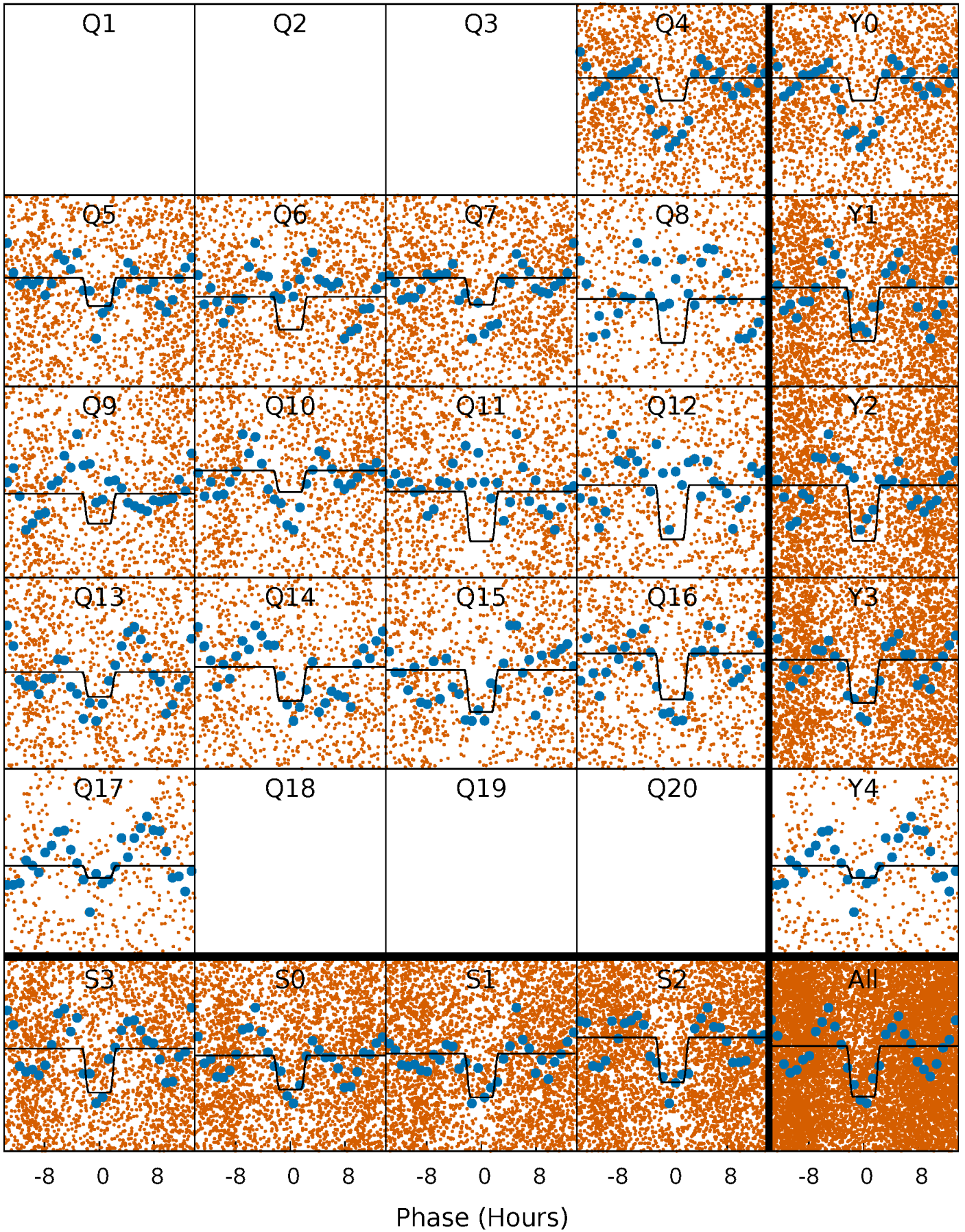
DV Quarter-Phased Transit Curves

TCE 005644758-02 P= 1.236536 Days $T_0=131.778832$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

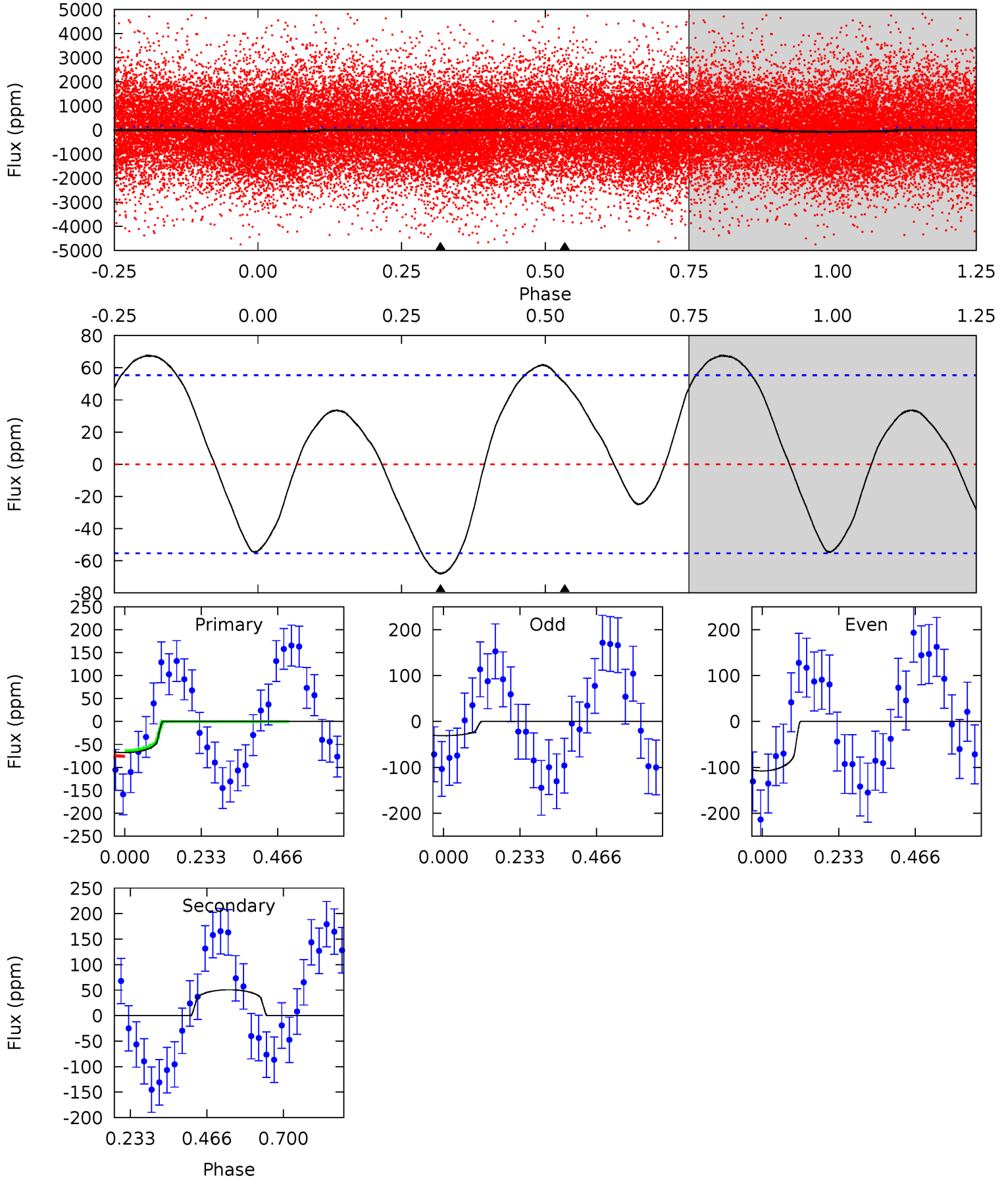
TCE 005644758-02 P= 1.236560 Days $T_0=131.762299$ (BKJD)



DV Model-Shift Uniqueness Test

005644758-02, $P = 1.236536$ Days, $E = 131.778832$ Days

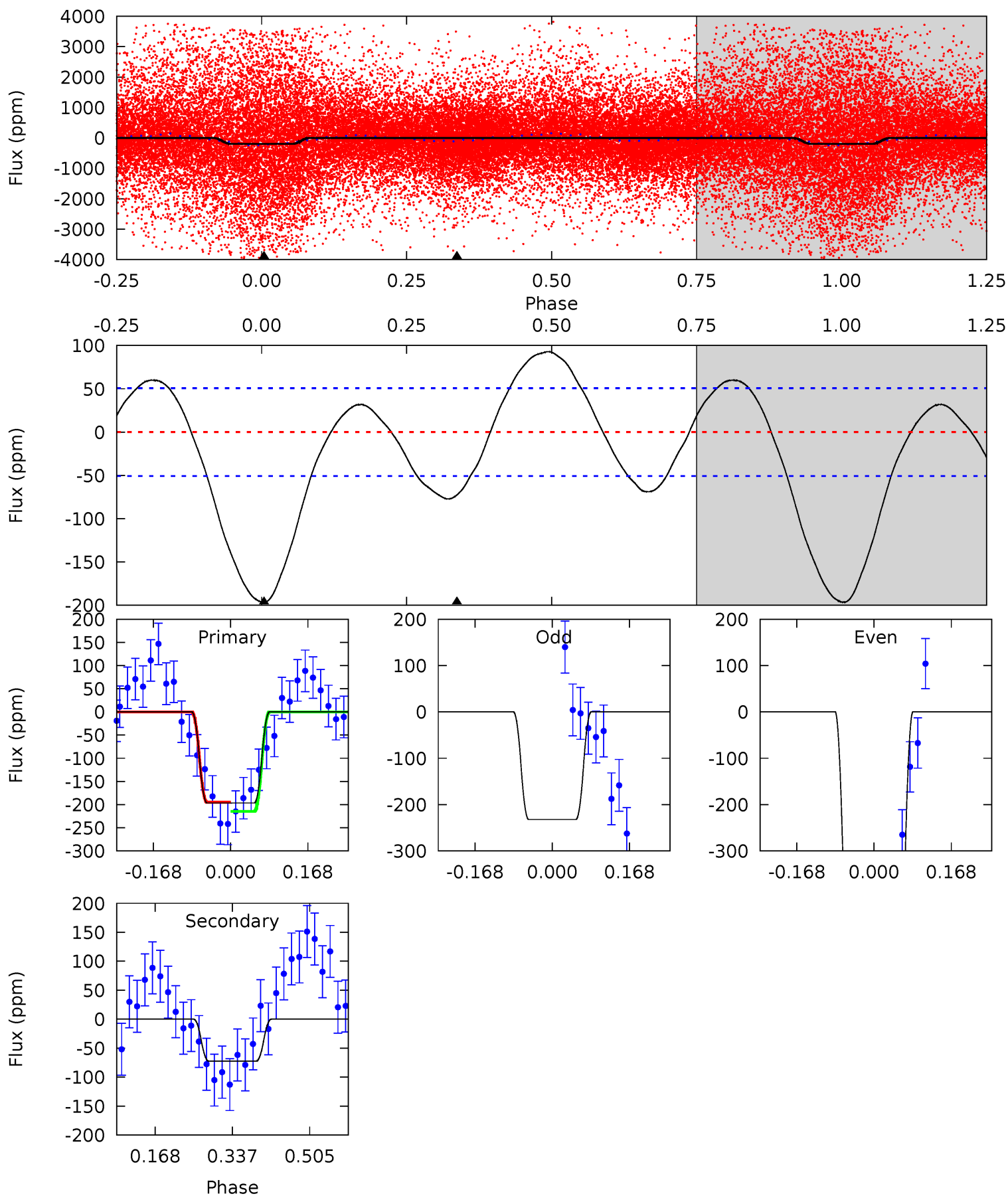
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.39	-4.02	0	0	4.38	1.19	3.49	5.39	5.39	-4.02	-4.02	3.08	0.58	0.50	0.48



Alt Model-Shift Uniqueness Test

005644758-02, P = 1.236560 Days, E = 131.762299 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	6.37	0	0	4.45	1.38	4.44	17.2	17.2	6.37	6.37	15.5	0.98	0.32	0.88



Stellar Parameters For KIC 005644758

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6075^{+190}_{-211}	$4.541^{+0.050}_{-0.213}$	$-0.460^{+0.300}_{-0.300}$	$0.858^{+0.250}_{-0.083}$	$0.934^{+0.108}_{-0.119}$	$2.082^{+0.417}_{-1.075}$
	+3%/-3%	+1%/-5%	+65%/-65%	+29%/-10%	+12%/-13%	+20%/-52%
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 005644758-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	51 ± 13	$1.26^{+0.61}_{-0.62}$	2383^{+167}_{-113}	-4702^{+653}_{-1578}	$-8.705^{+5.088}_{-22.888}$
Alt.	-73 ± 11	$1.28^{+0.65}_{-0.61}$	2395^{+167}_{-127}	4920^{+1877}_{-724}	11^{+31}_{-6}

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

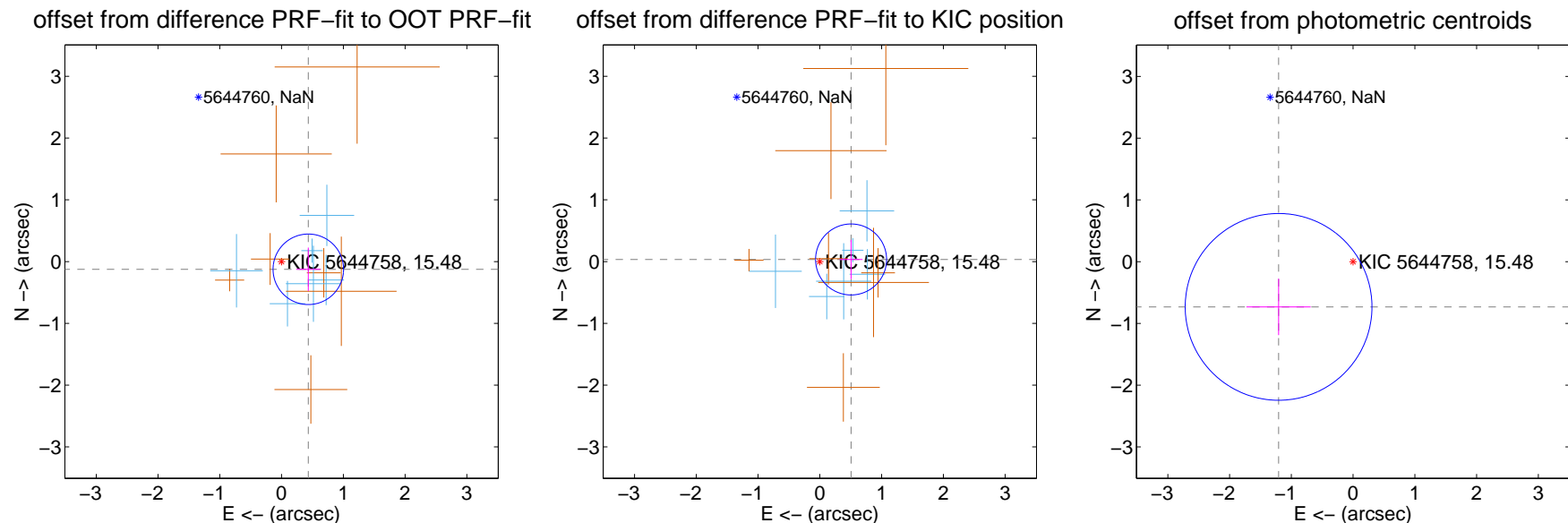
DV Centroid Data

Supplemental centroid analysis for 005644758-02. Kepler magnitude: 15.48. Transit SNR 8.02

There are 6 quarters with good PRF difference image offsets

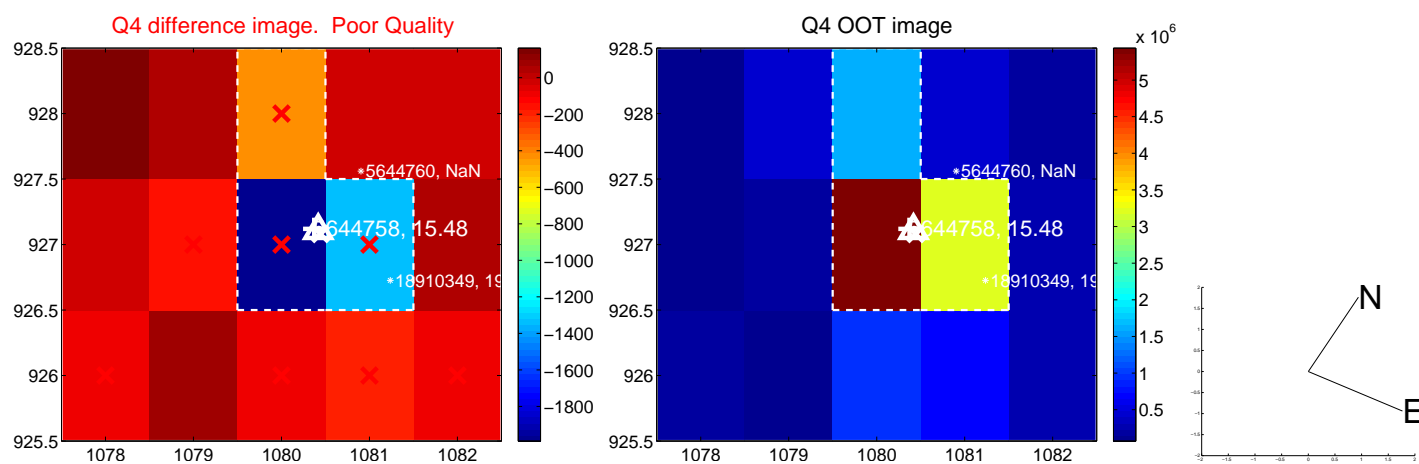
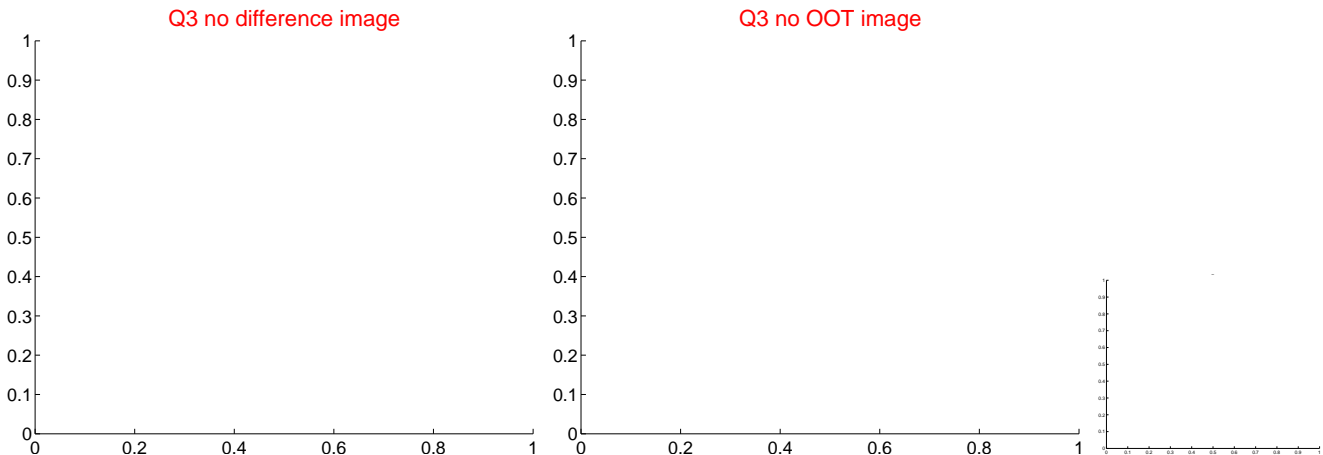
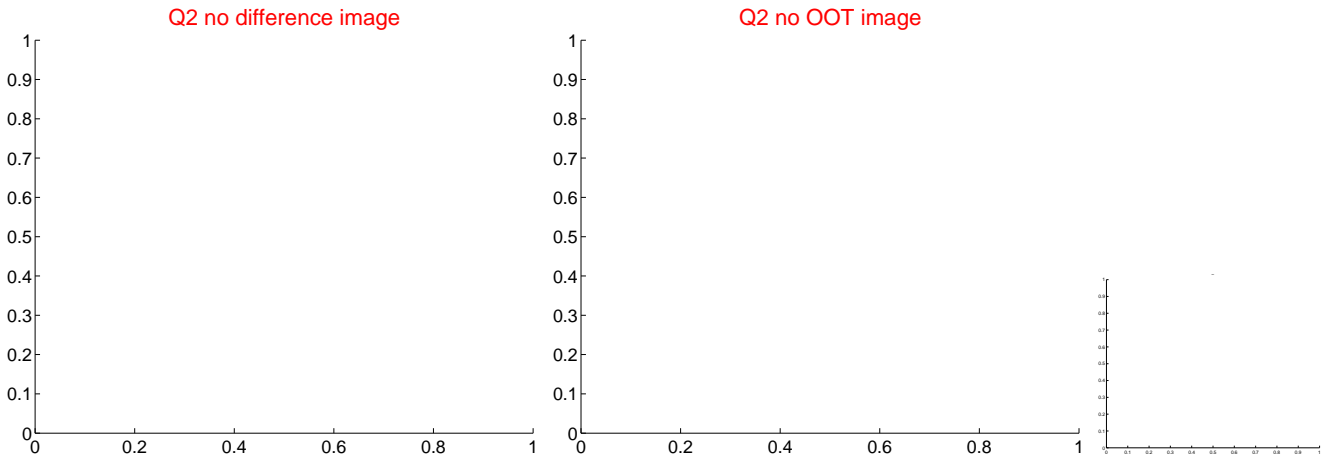
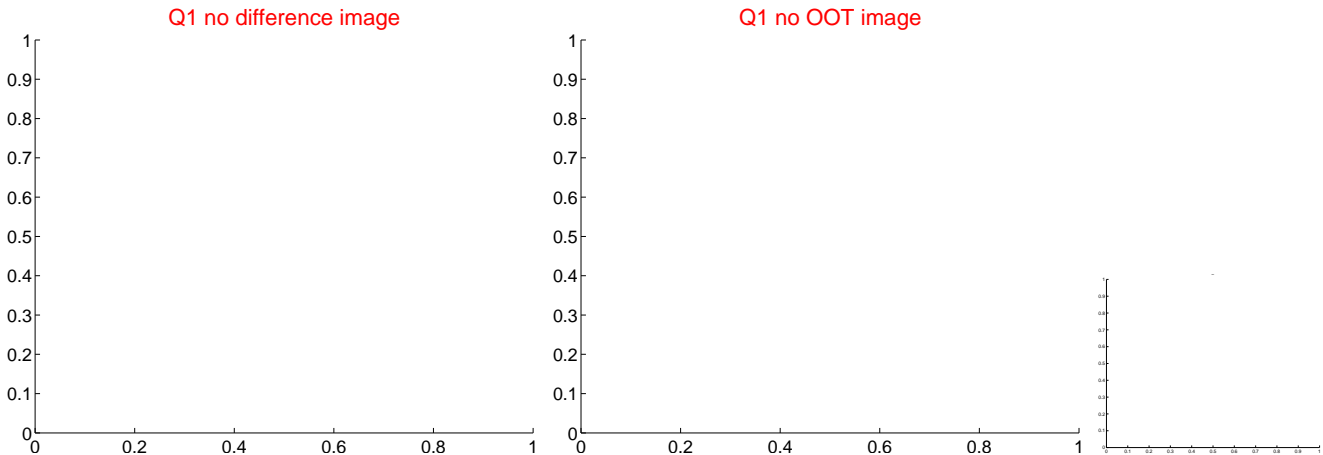
The direct PRF centroid is offset from the target star catalog position by about 0.04 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.451 ± 0.190	2.37	-0.433 ± 0.195	-0.125 ± 0.351
PRF-fit source offset from KIC position	0.507 ± 0.192	2.65	-0.506 ± 0.186	0.034 ± 0.316
photometric centroid source offset	1.41 ± 0.50	2.80	1.21 ± 0.52	-0.73 ± 0.46

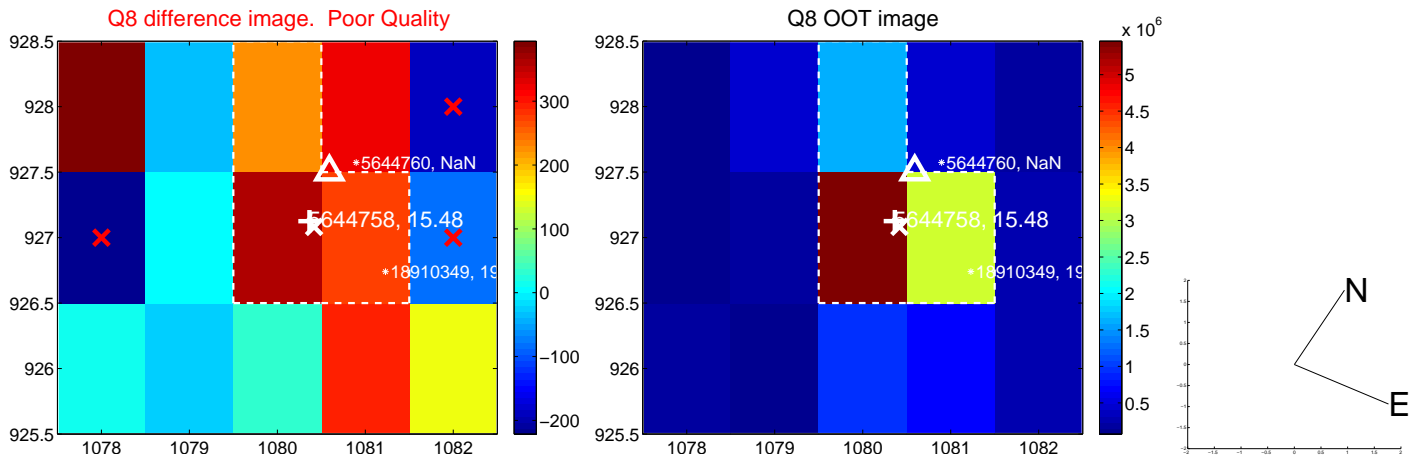
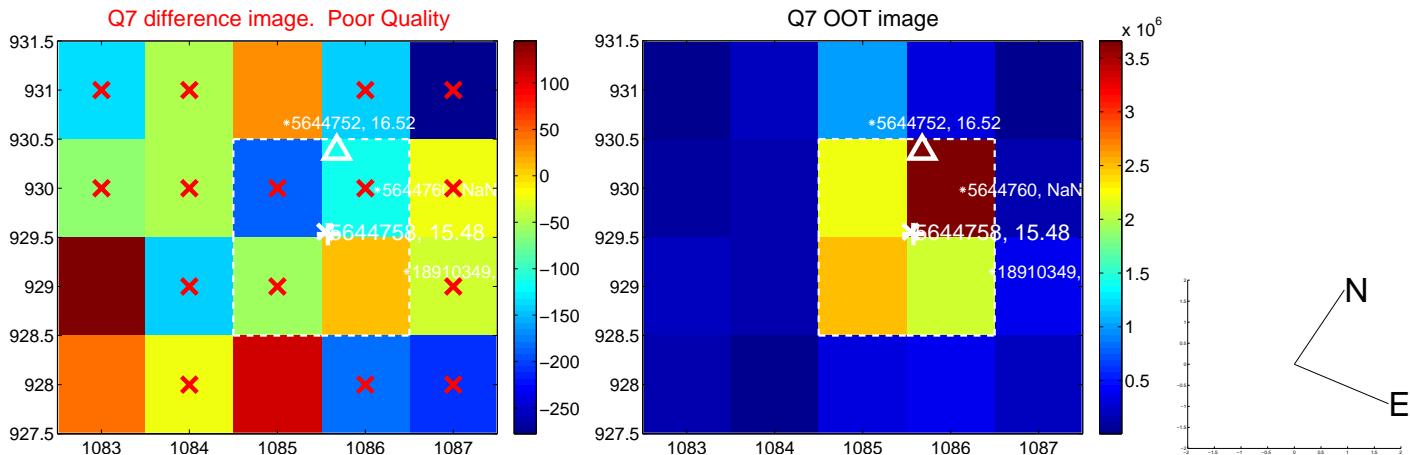
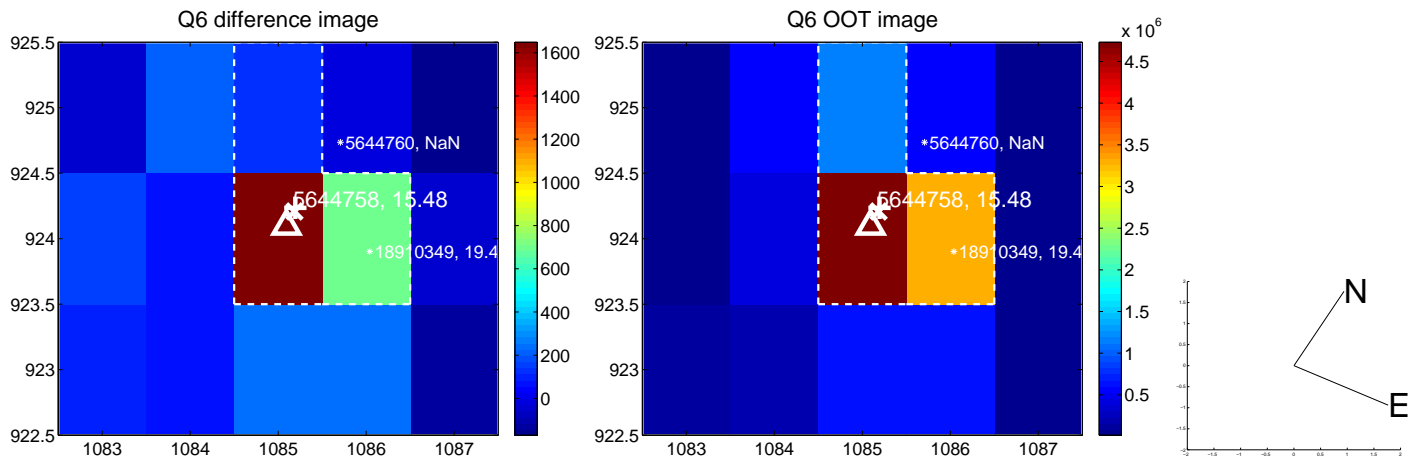
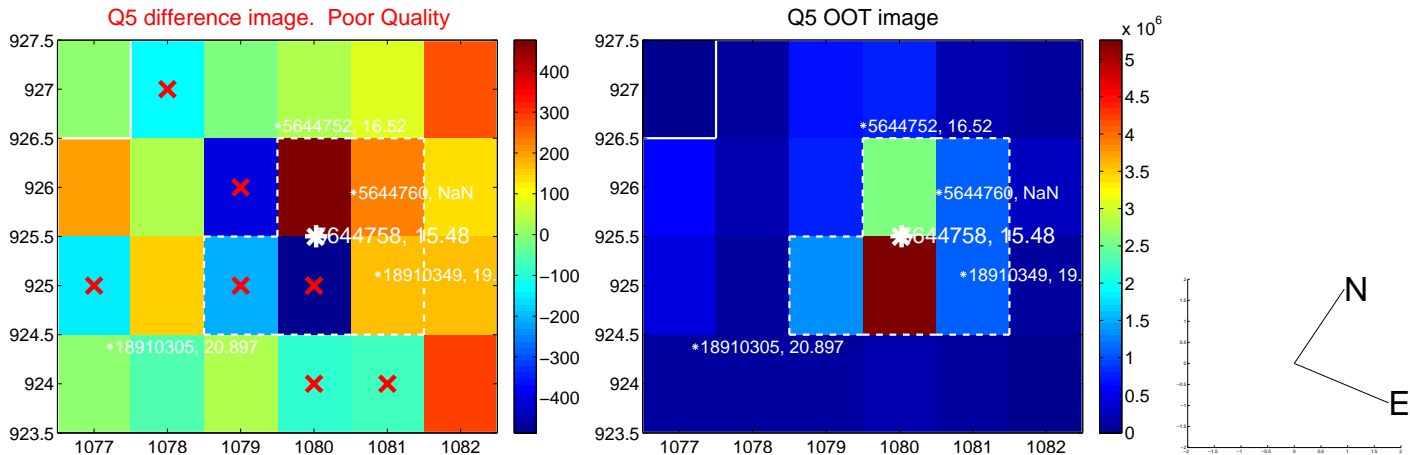


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

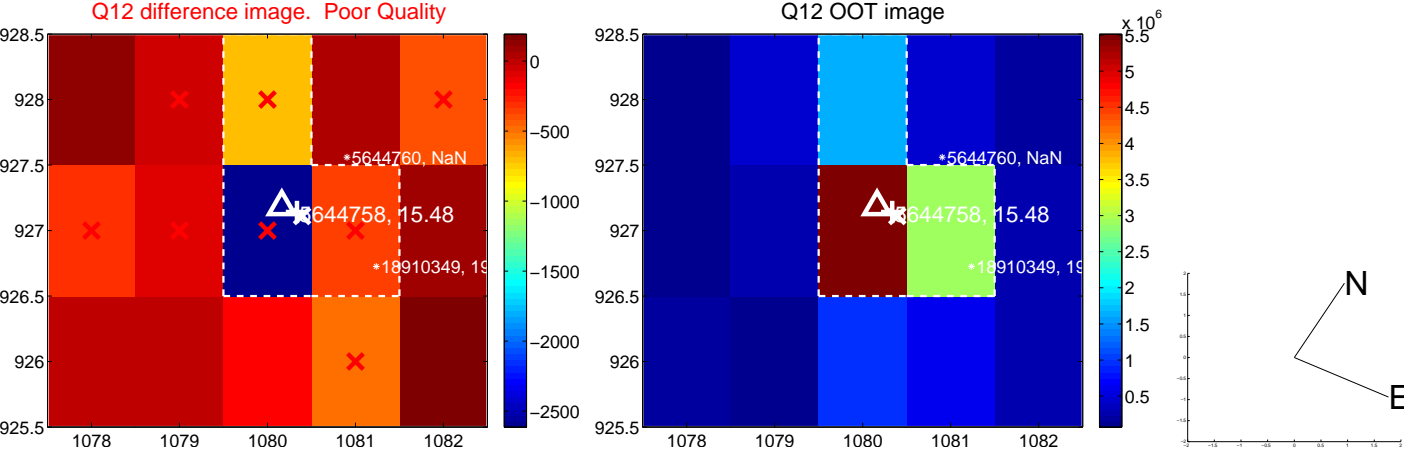
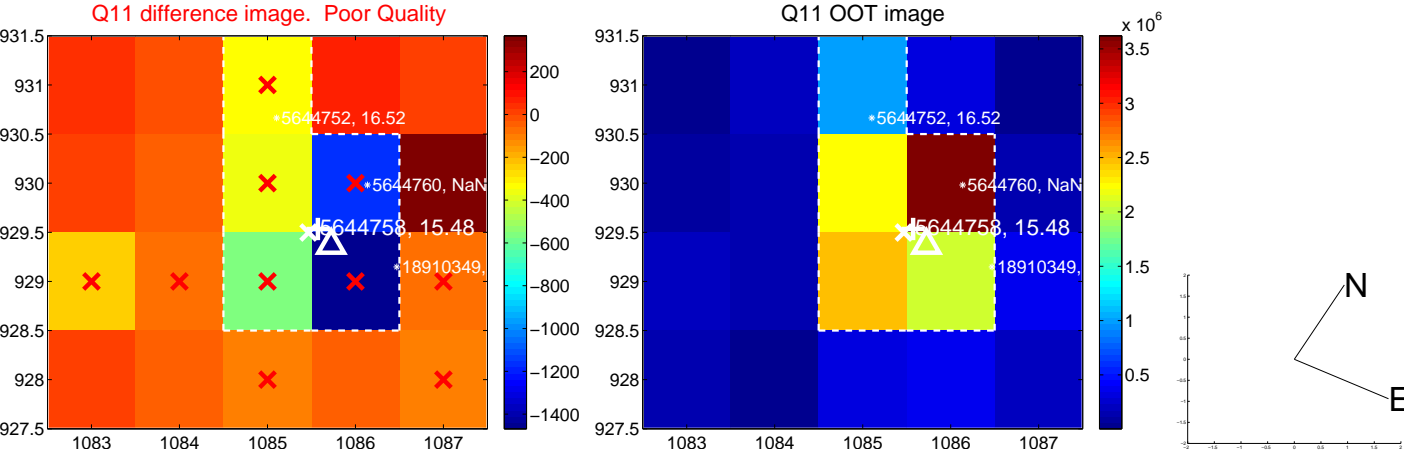
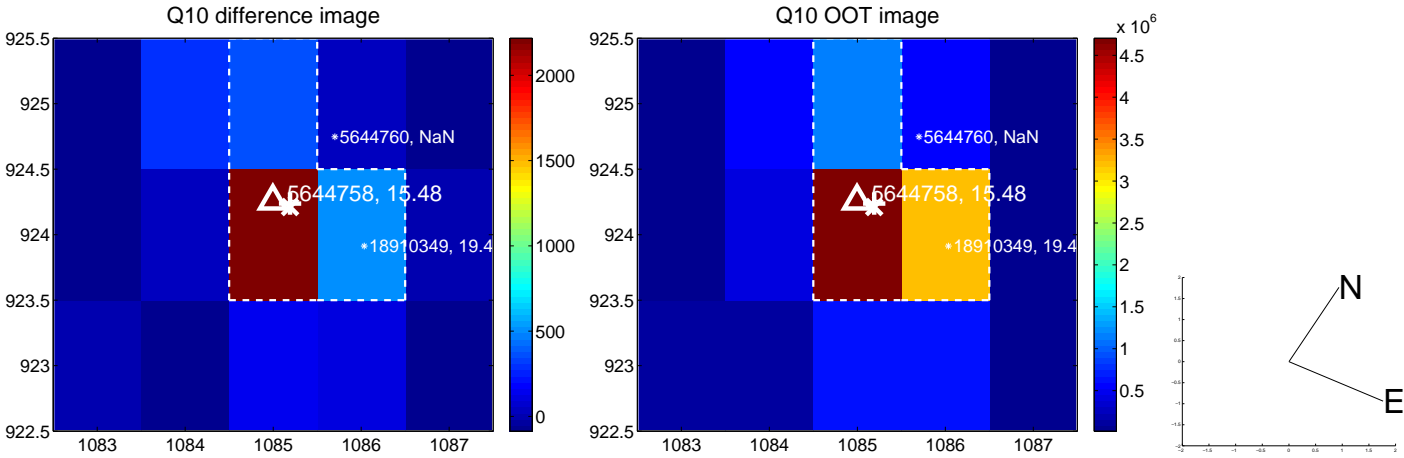
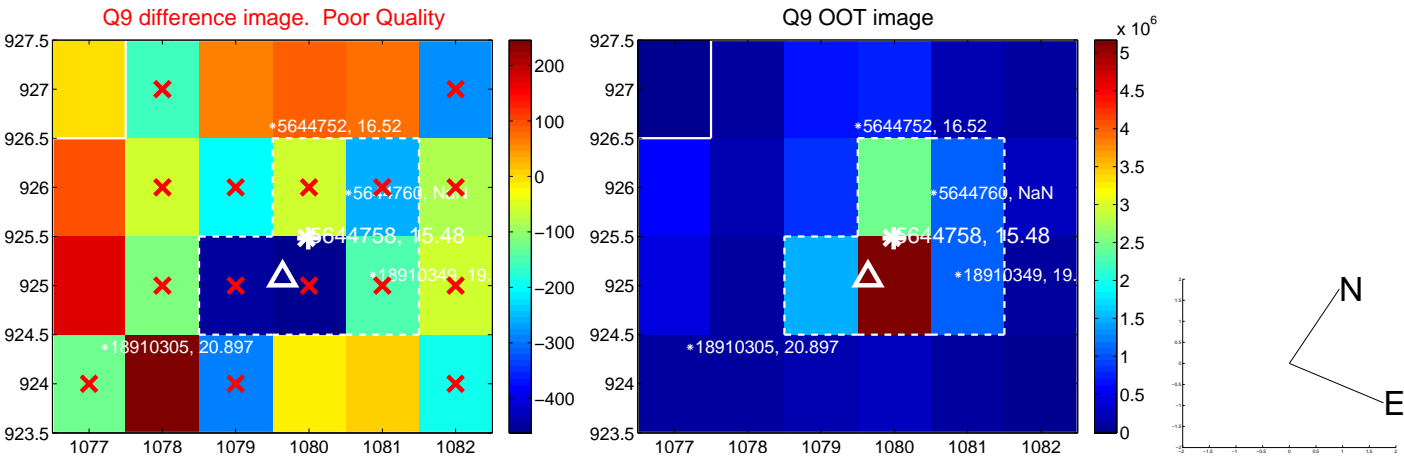
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



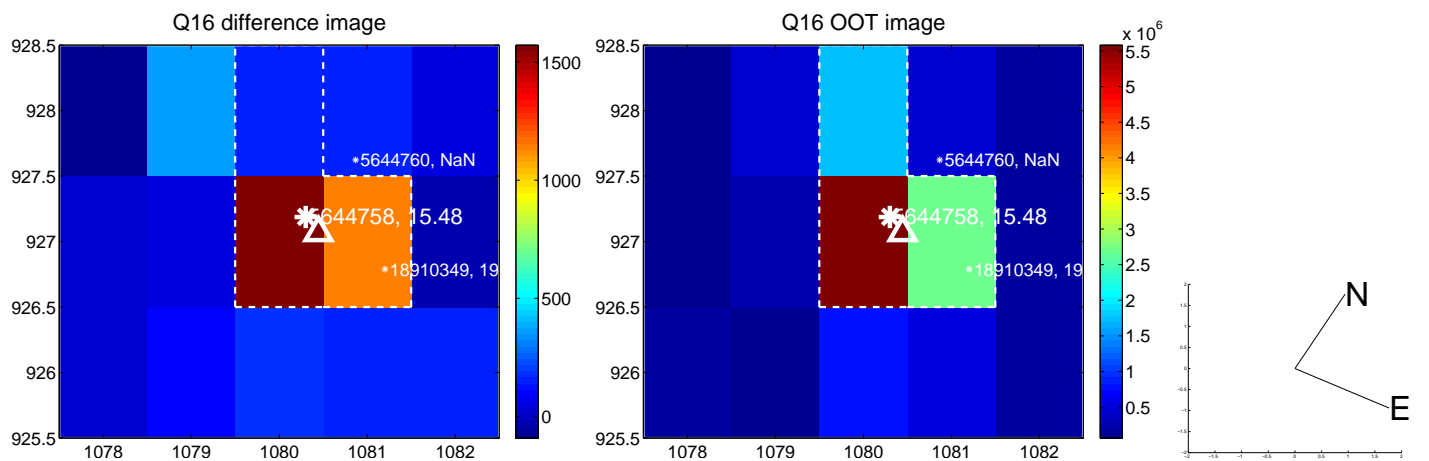
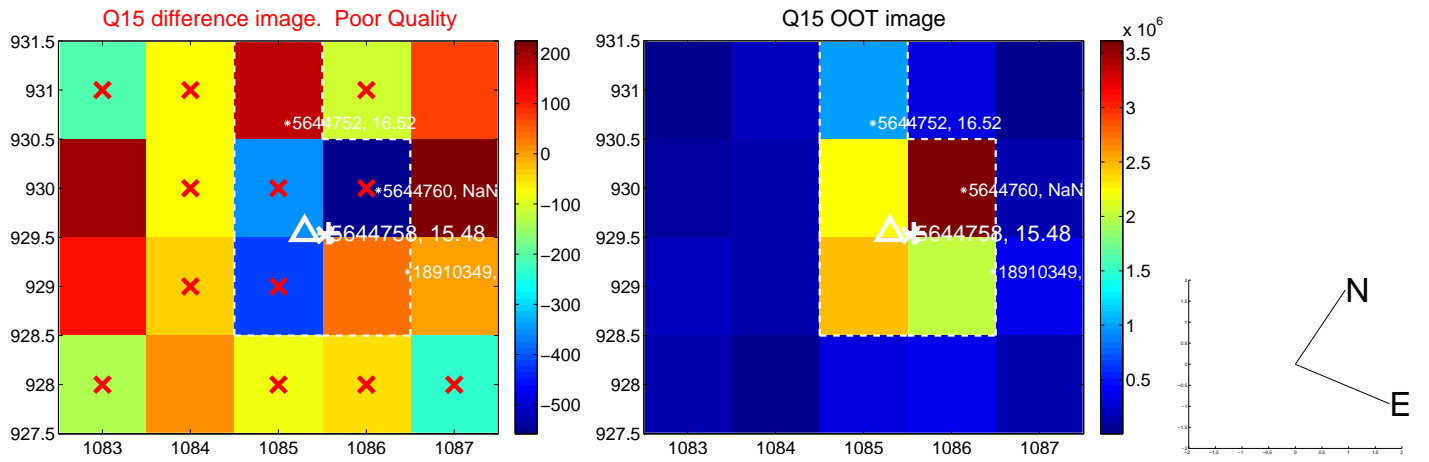
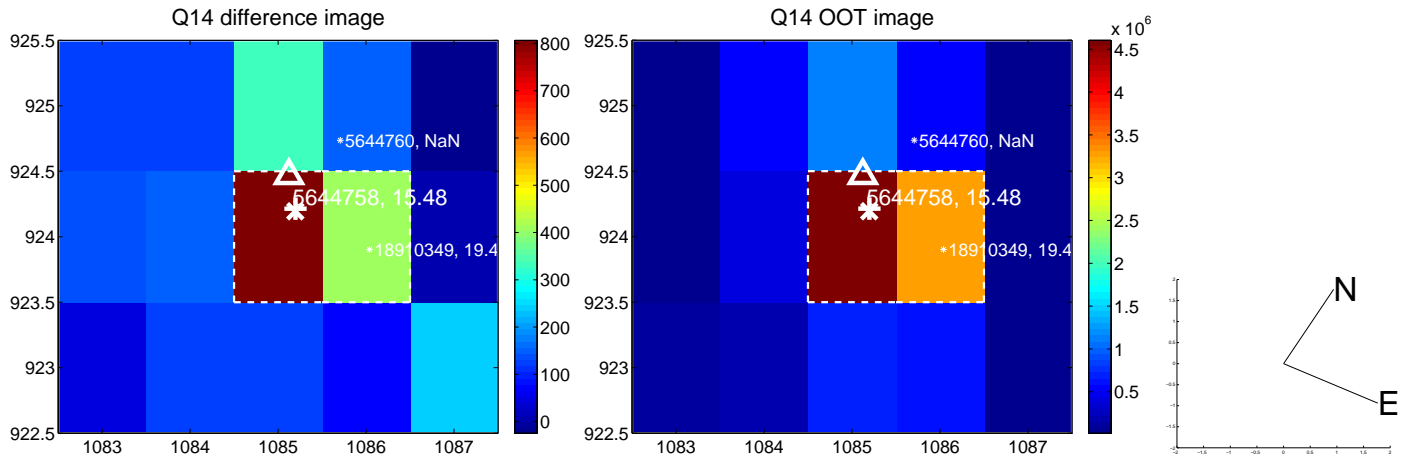
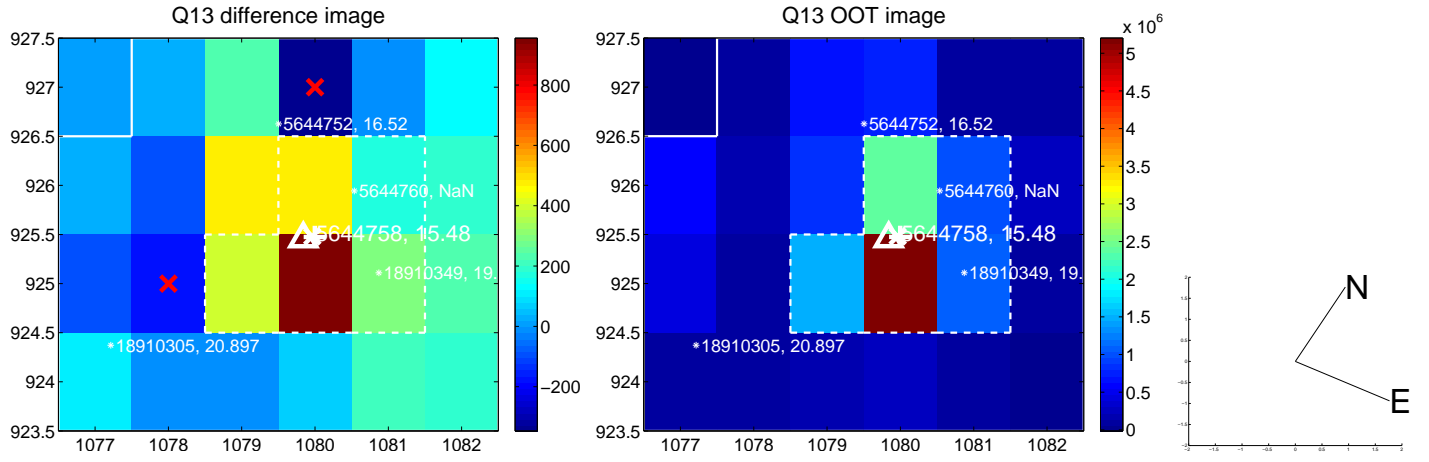
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



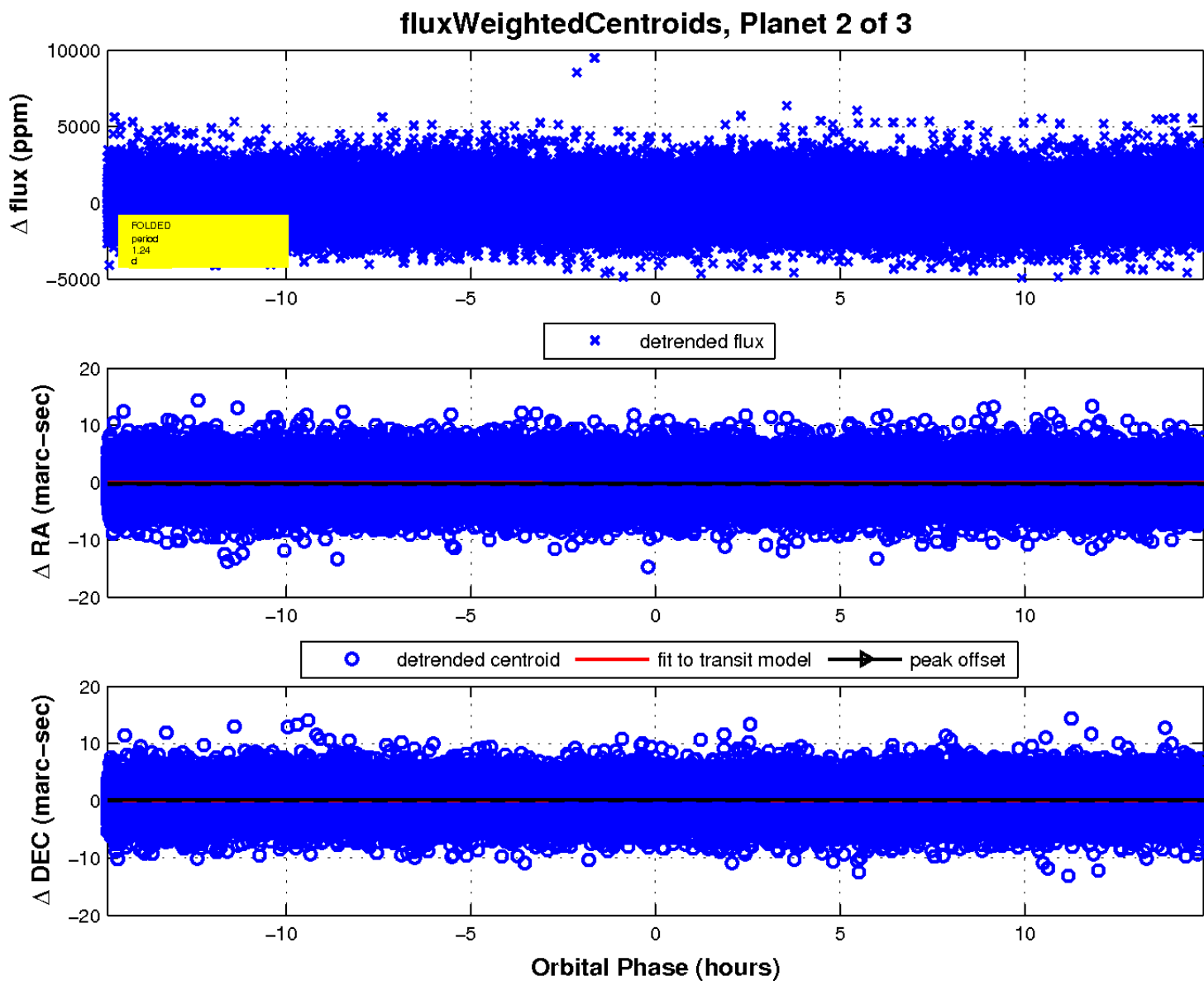
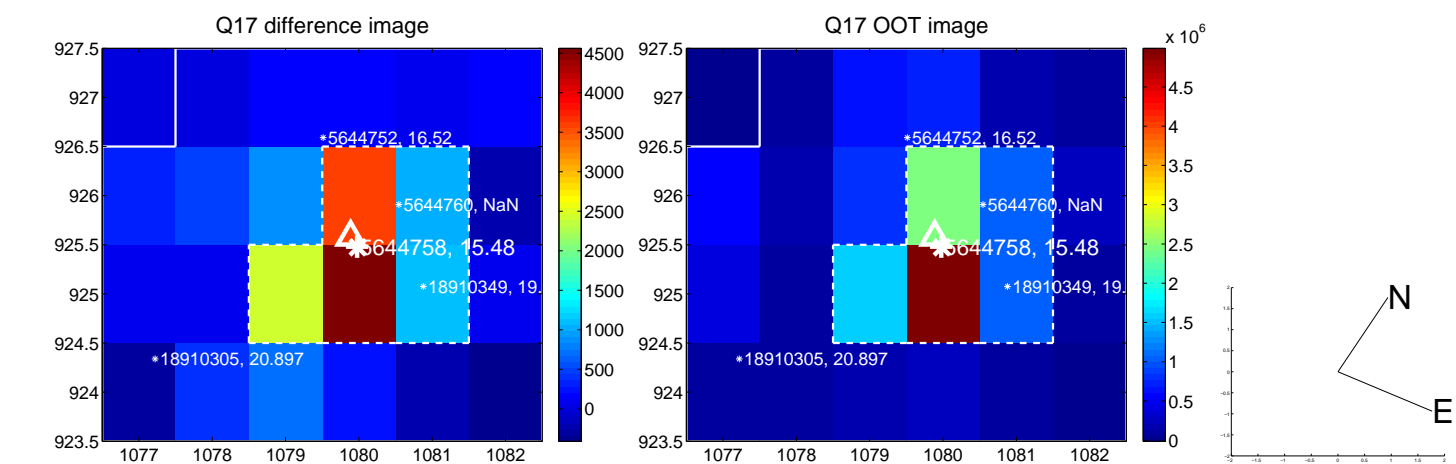
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

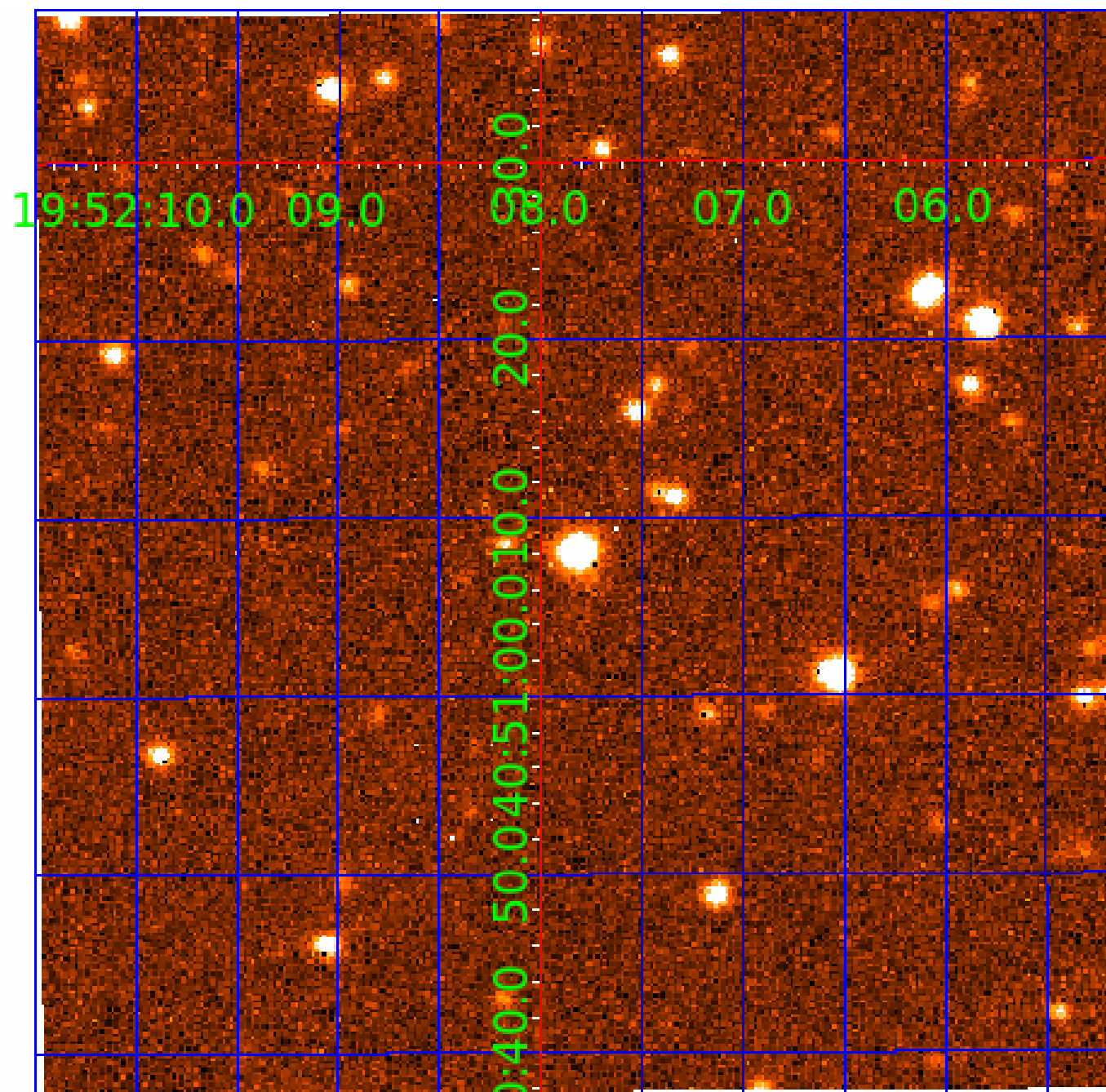


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 005644758

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})
005644758-01	OBS	No	2.060889	132.218545	201.3	5.277	9.0	9.4	0.86	6075	1.43	936.12
005644758-02	OBS	No	1.236536	131.778832	162.6	6.479	8.3	8.0	0.86	6075	1.17	1849.82
005644758-03	OBS	No	77.532013	172.494940	1459.0	7.472	7.6	6.2	0.86	6075	3.41	7.43

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005644758-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005644758-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005644758-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—MOD_NONUNIQ_DV—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.

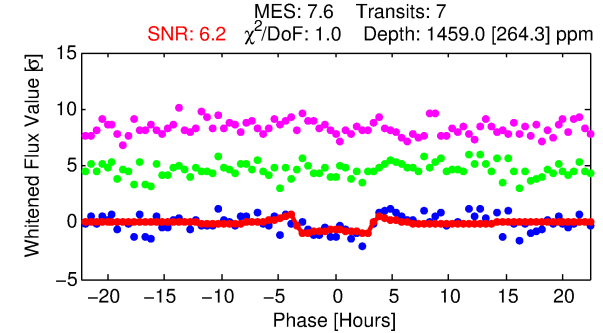
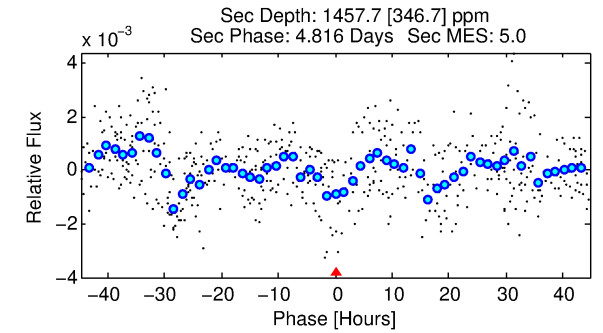
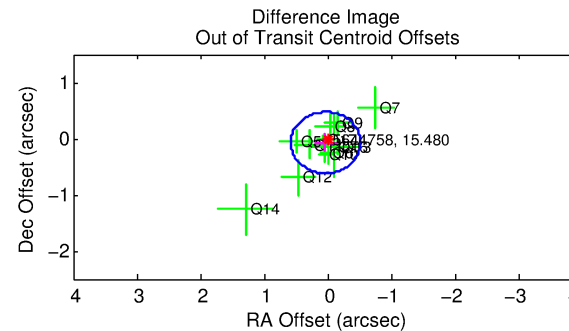
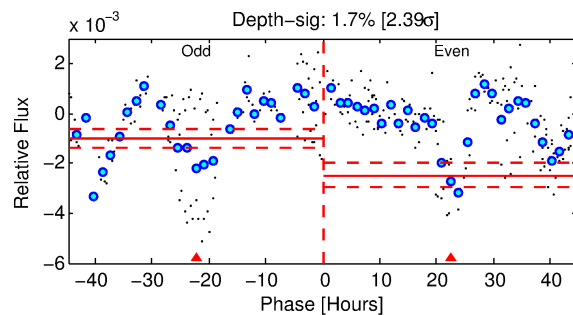
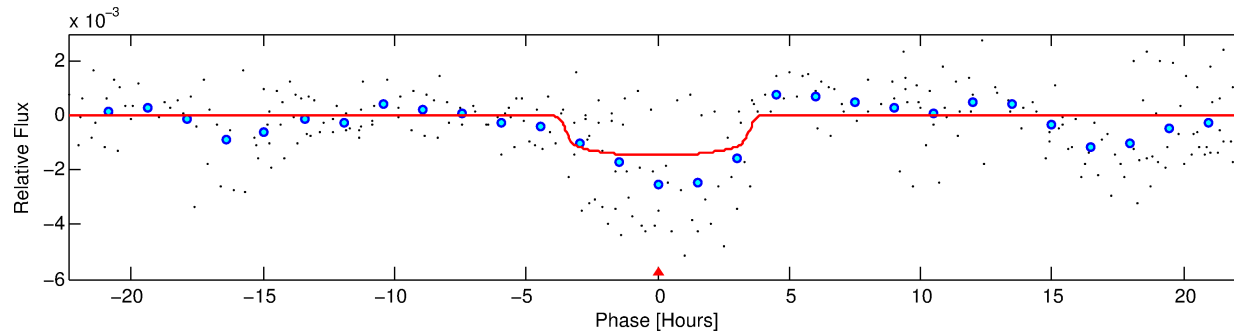
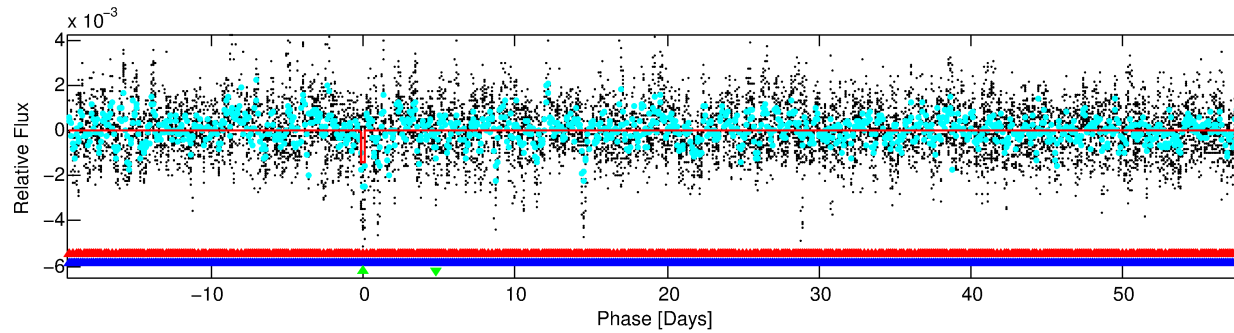
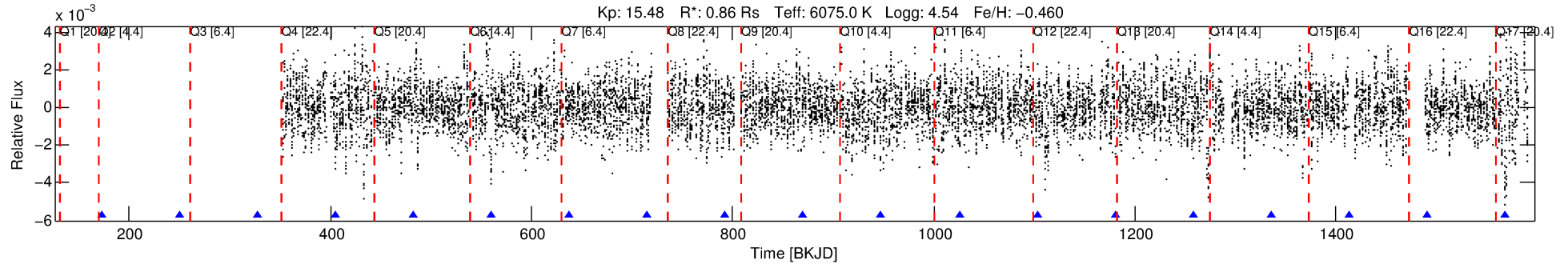
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005644758-03

No Significant Match Found

DV One-Page Summary

KIC: 5644758 Candidate: 3 of 3 Period: 77.532 d



DV Fit Results:

Period = 77.53201 [0.00141] d
Epoch = 172.4949 [0.0167] BKJD
Rp/R* = 0.0364 [0.0142]
a/R* = 68.42 [125.73]
b = 0.57 [2.16]
Seff = 7.43 [3.01]
Teq = 421 [43] K
Rp = 3.41 [1.66] Re
a = 0.3478 [0.0883] AU
Ag = 8330.15 [7503.98] [1.11 σ]
Teffp = 6218 [1288] K [4.50 σ]

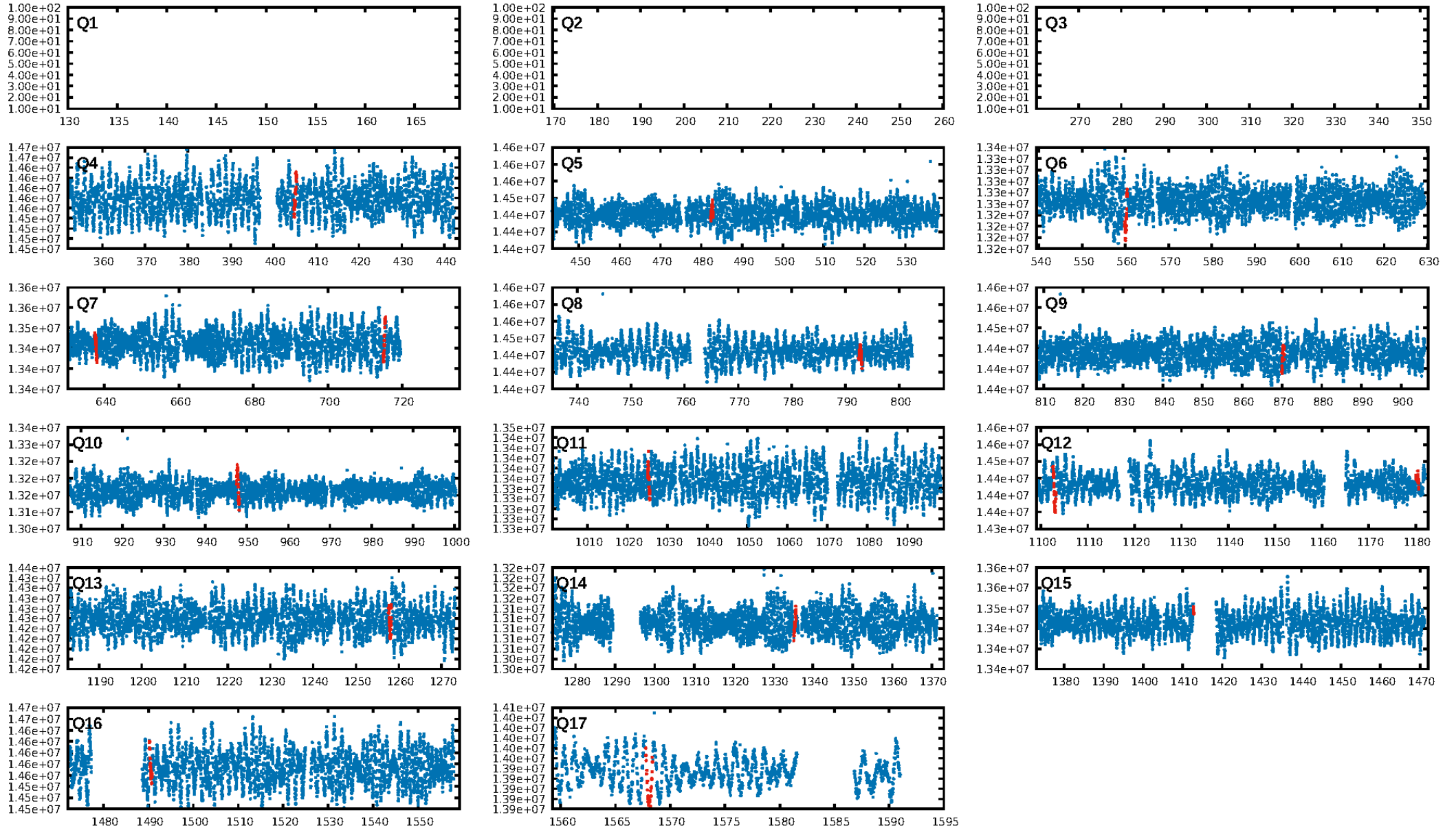
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [198.01 σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.52e-09
RollingBand-fgt: 1.00 [6/6]
GhostDiagnostic-chr: -1.385
Centroid-sig: 20.7%
Centroid-so: 0.309 arcsec [0.83 σ]
OotOffset-rm: 0.081 arcsec [0.45 σ]
KicOffset-rm: 0.039 arcsec [0.20 σ]
OotOffset-st: 3/2/3/4 [12]
KicOffset-st: 3/2/3/4 [12]
DiffImageQuality-fgm: 0.42 [5/12]
DiffImageOverlap-fno: 0.00 [0/13]

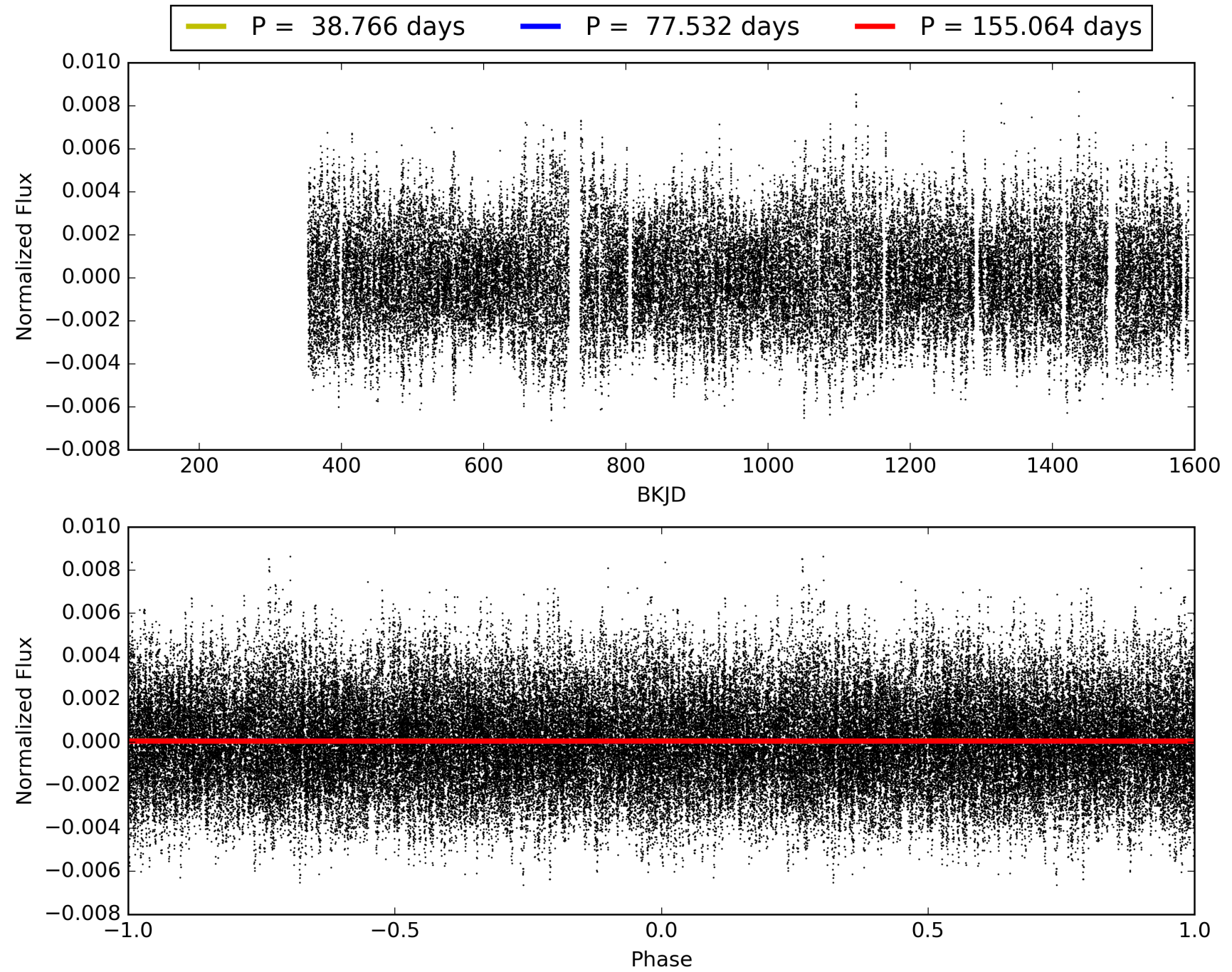
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 10:48:50 Z

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

TCE 005644758-03, PDC Light Curves

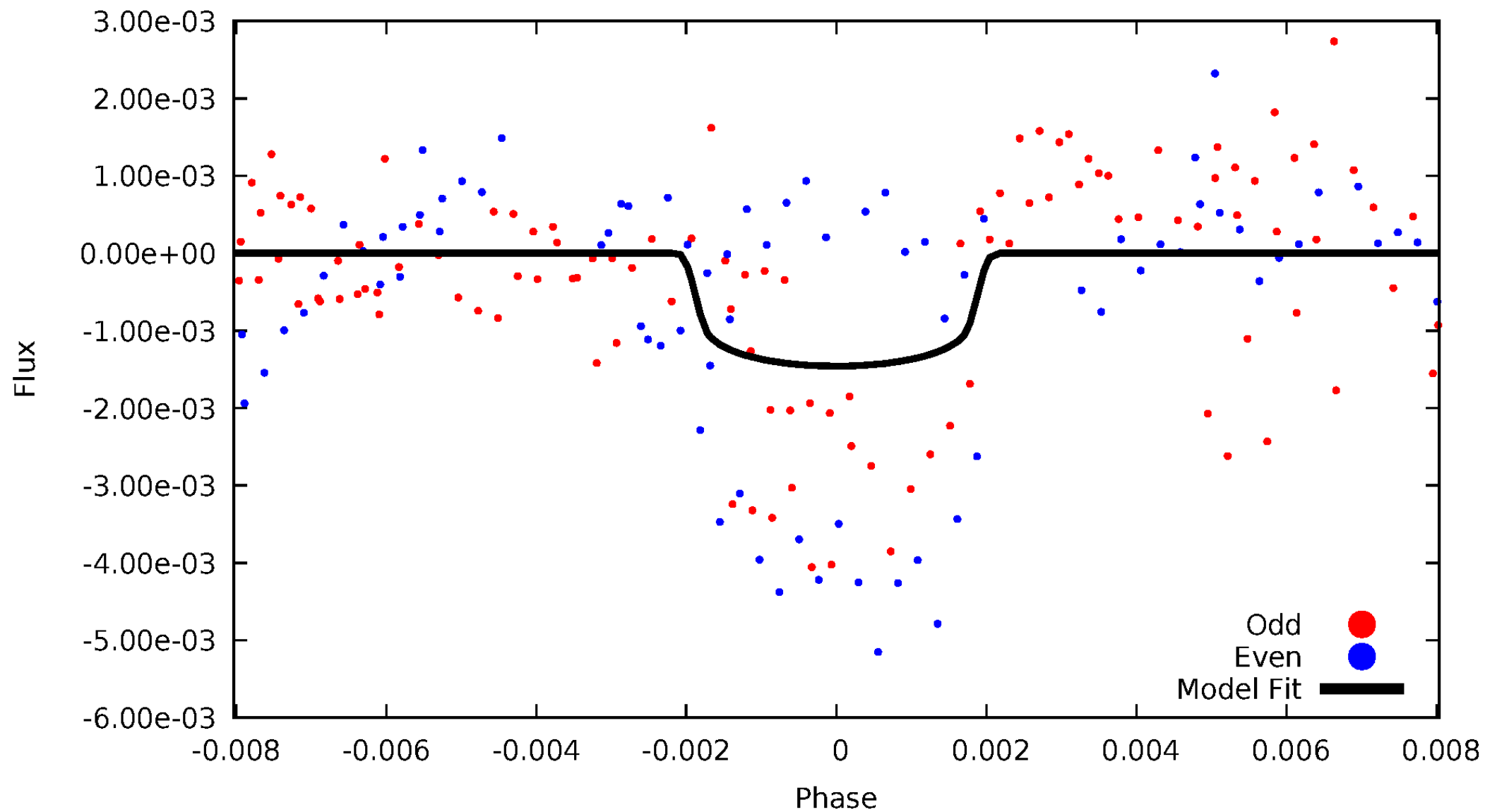


TCE 005644758-03



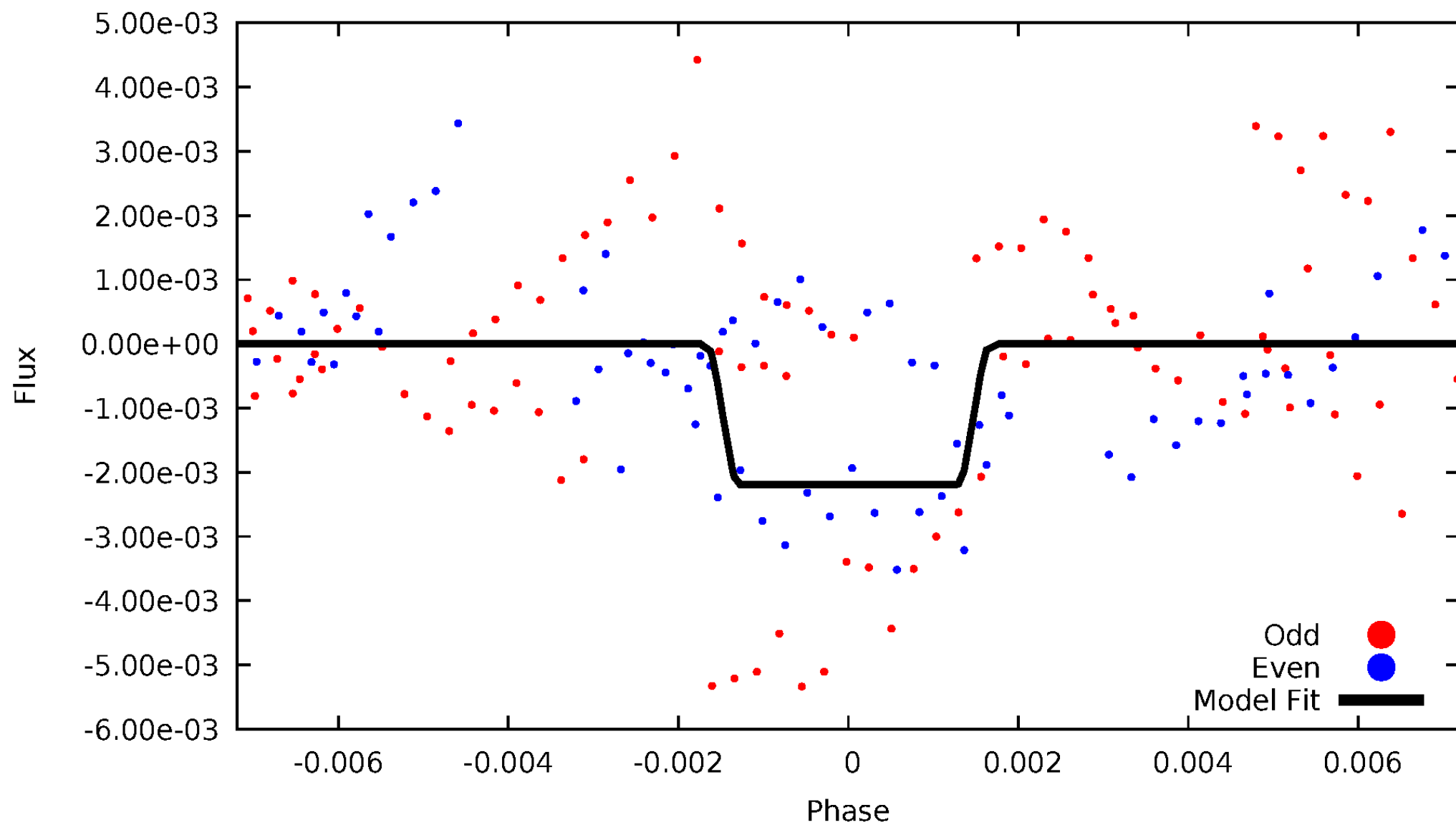
DV Odd/Even

TCE 005644758-03



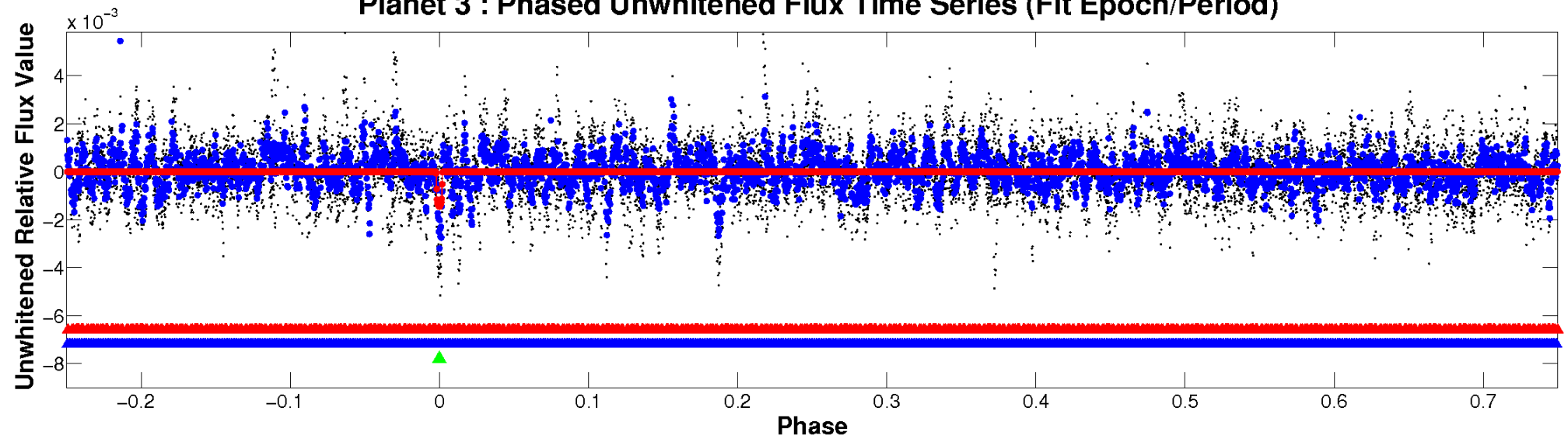
ALT Odd/Even

TCE 005644758-03

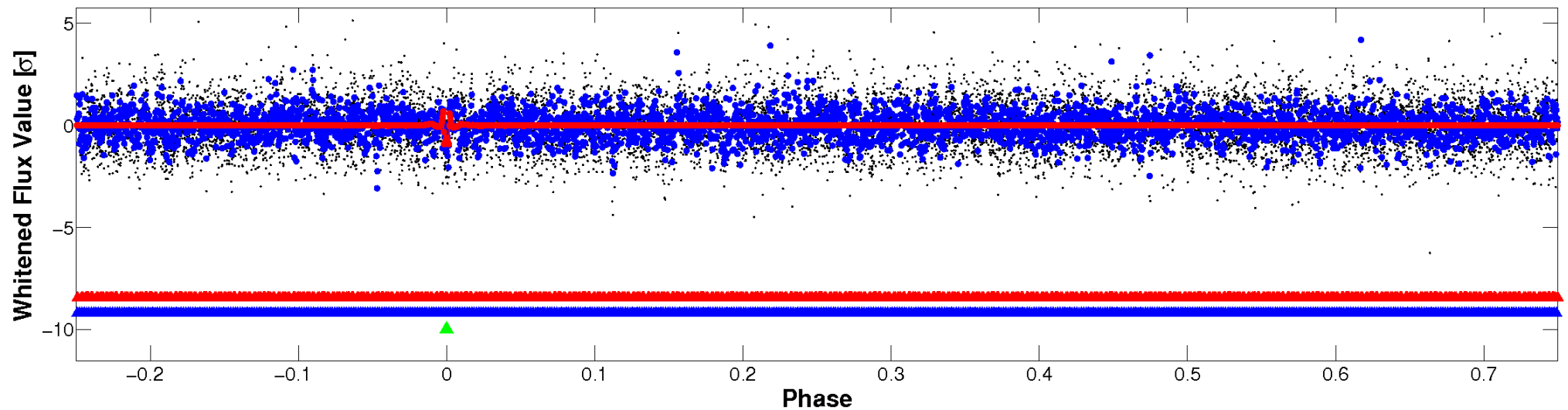


Non-Whitened Vs. Whitened Light Curve

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

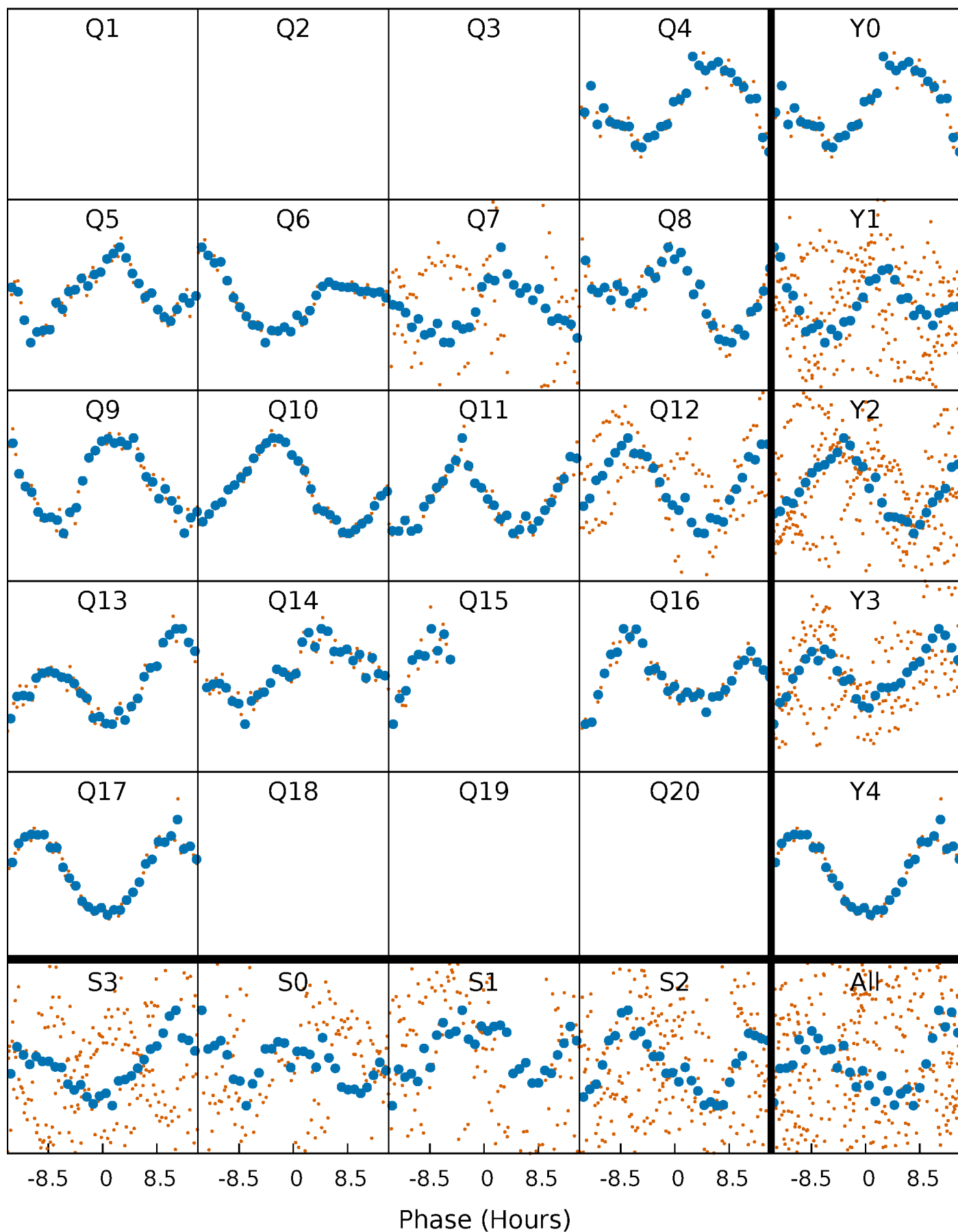


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



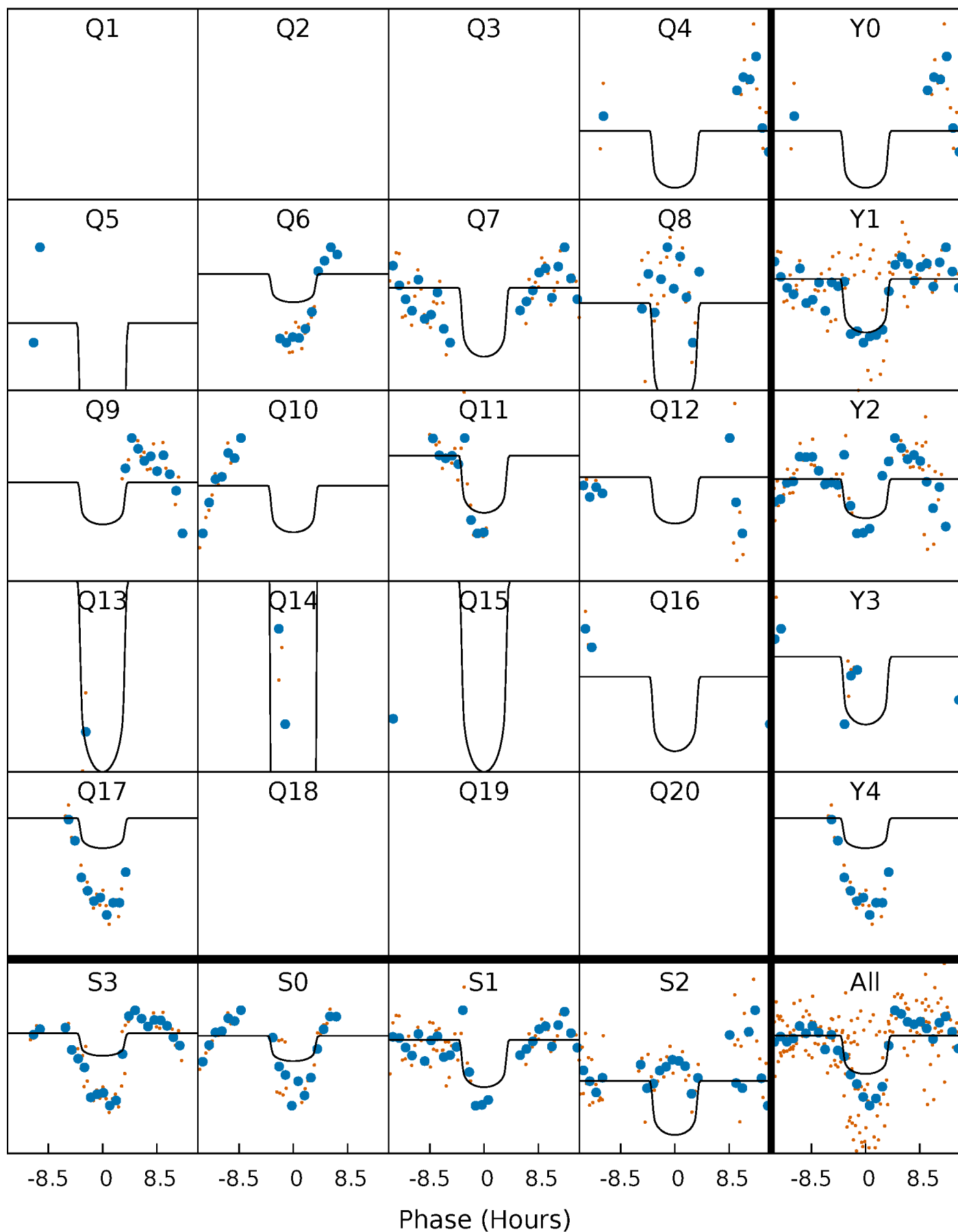
PDC Quarter-Phased Transit Curves

TCE 005644758-03 P= 77.532013 Days $T_0=172.494940$ (BKJD)



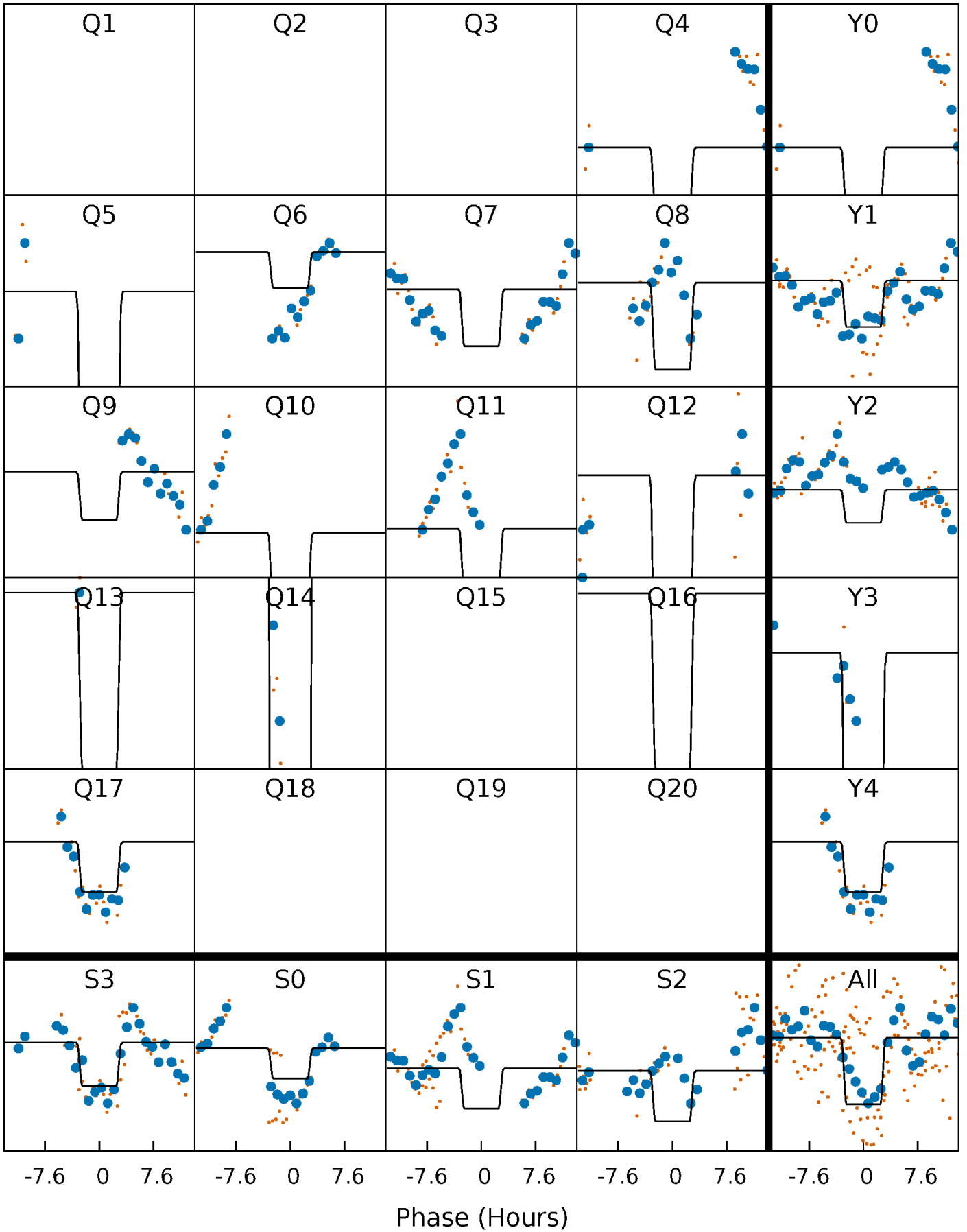
DV Quarter-Phased Transit Curves

TCE 005644758-03 P= 77.532013 Days $T_0=172.494940$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

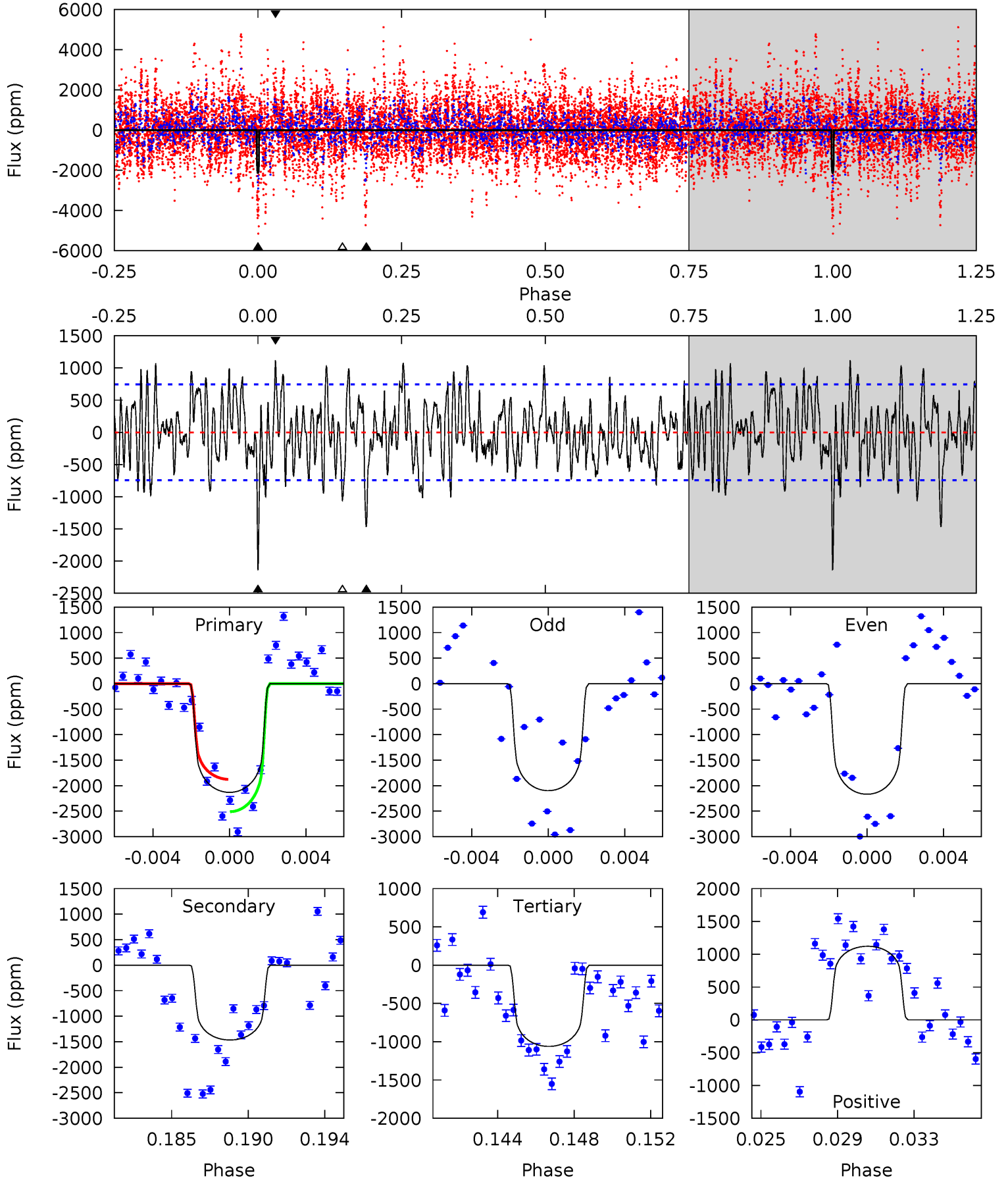
TCE 005644758-03 P= 77.530616 Days $T_0=172.518867$ (BKJD)



DV Model-Shift Uniqueness Test

005644758-03, P = 77.532013 Days, E = 172.494940 Days

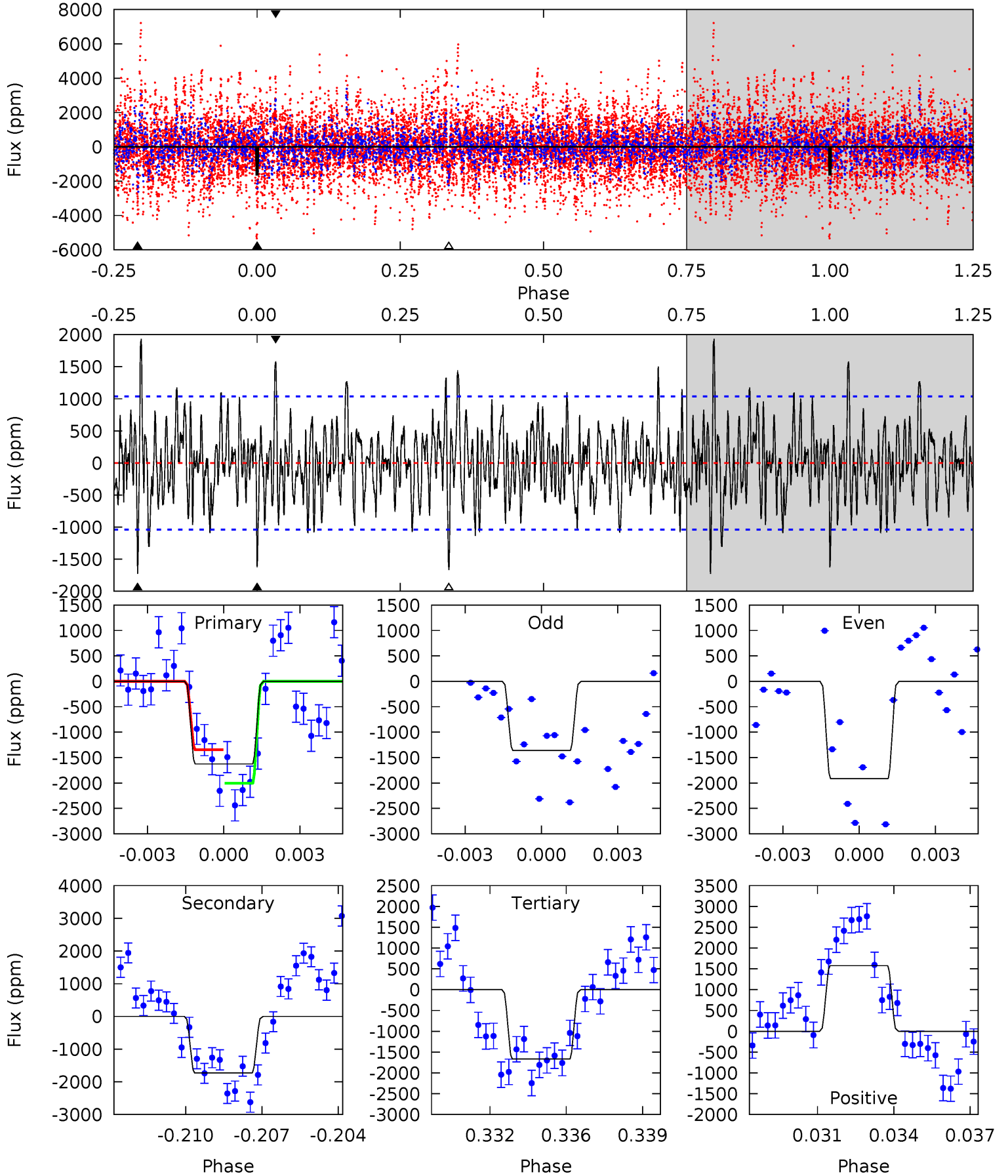
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.9	10.2	7.40	7.82	5.19	2.87	2.92	7.47	7.05	2.83	2.40	0.24	1.03	0.34	2.17



Alt Model-Shift Uniqueness Test

005644758-03, P = 77.530616 Days, E = 172.518867 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.19	8.71	8.40	7.94	5.23	2.93	2.40	-0.21	0.25	0.31	0.77	1.38	3.29	0.53	1.67



Stellar Parameters For KIC 005644758

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6075^{+190}_{-211}	$4.541^{+0.050}_{-0.213}$	$-0.460^{+0.300}_{-0.300}$	$0.858^{+0.250}_{-0.083}$	$0.934^{+0.108}_{-0.119}$	$2.082^{+0.417}_{-1.075}$
	+3%/-3%	+1%/-5%	+65%/-65%	+29%/-10%	+12%/-13%	+20%/-52%
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 005644758-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1466 ± 143	$3.57^{+1.58}_{-1.36}$	603^{+42}_{-31}	6193^{+1836}_{-935}	7358^{+12092}_{-3632}
Alt.	-1728 ± 198	$4.58^{+1.60}_{-1.37}$	600^{+47}_{-32}	5711^{+1118}_{-689}	5440^{+5197}_{-2427}

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

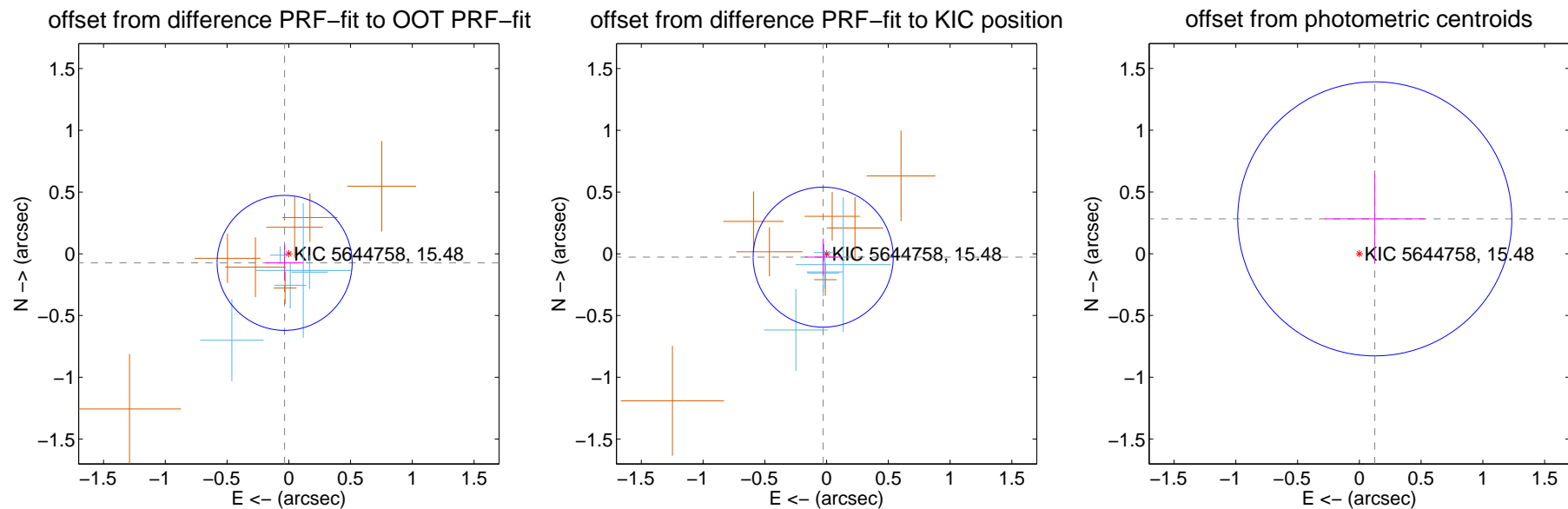
DV Centroid Data

Supplemental centroid analysis for 005644758-03. Kepler magnitude: 15.48. Transit SNR 6.19

There are 5 quarters with good PRF difference image offsets

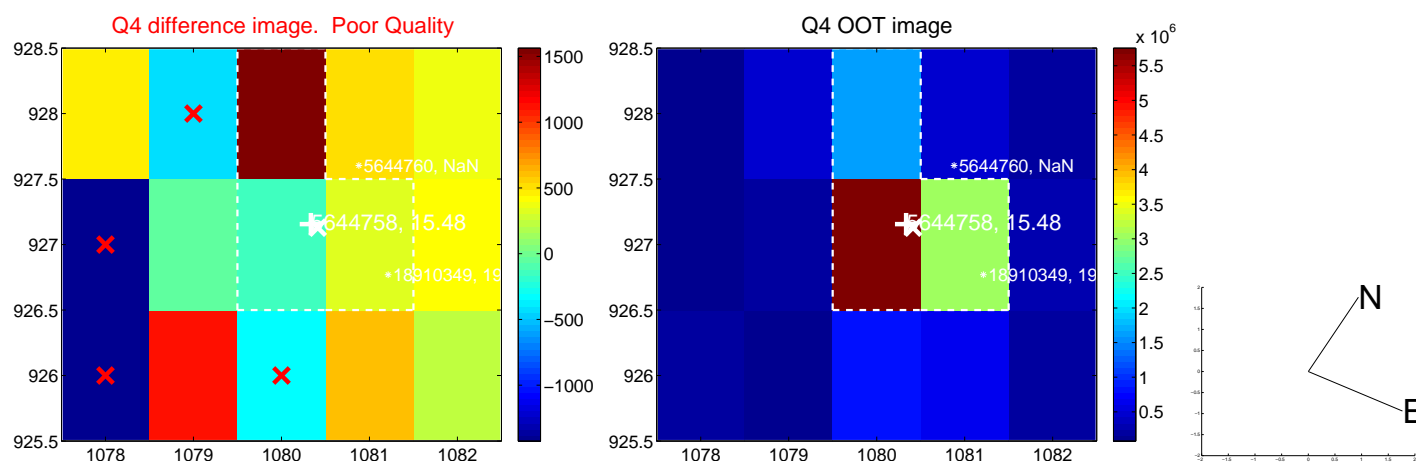
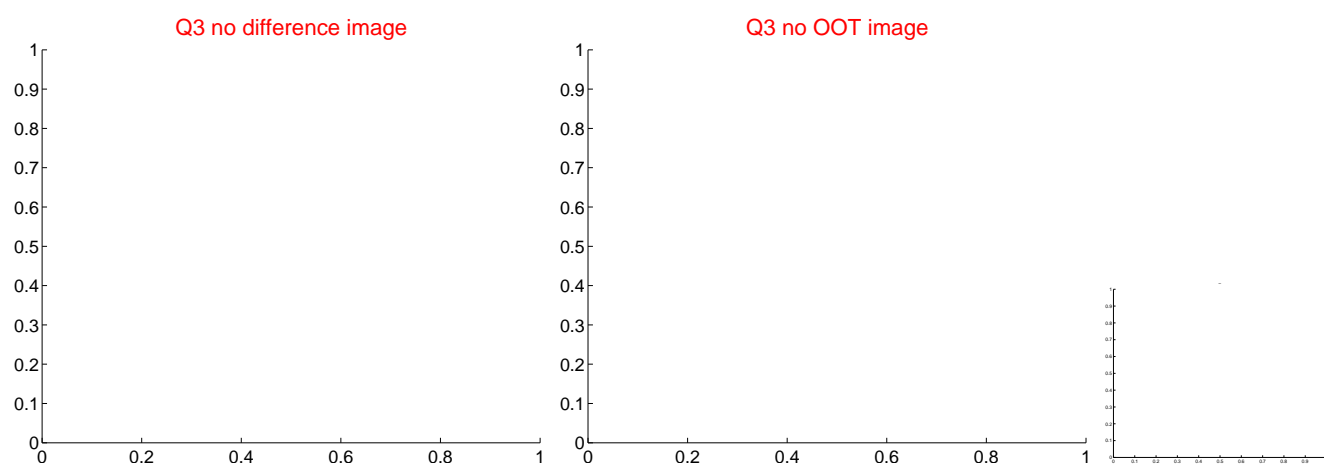
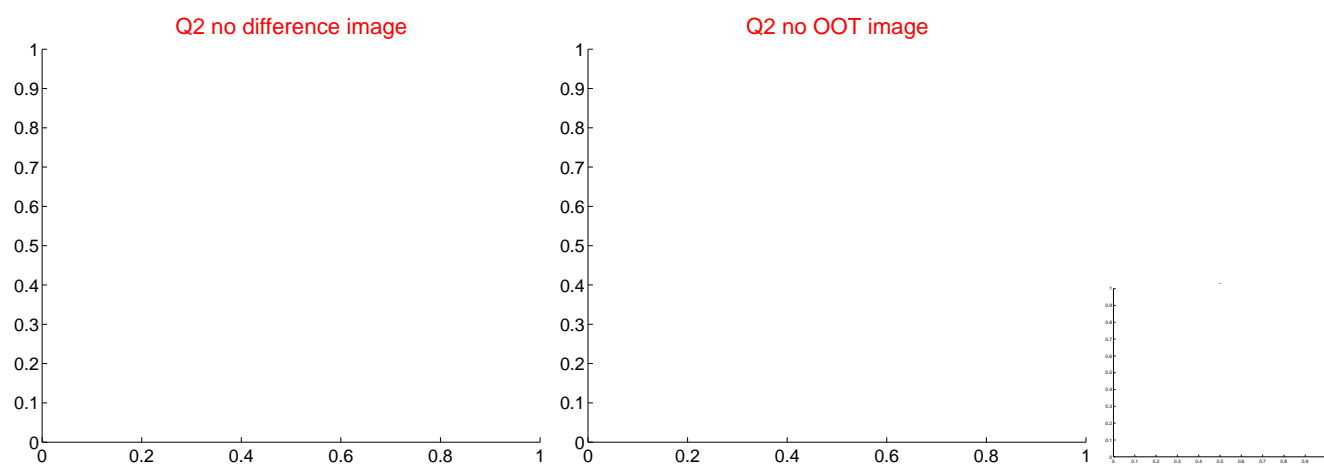
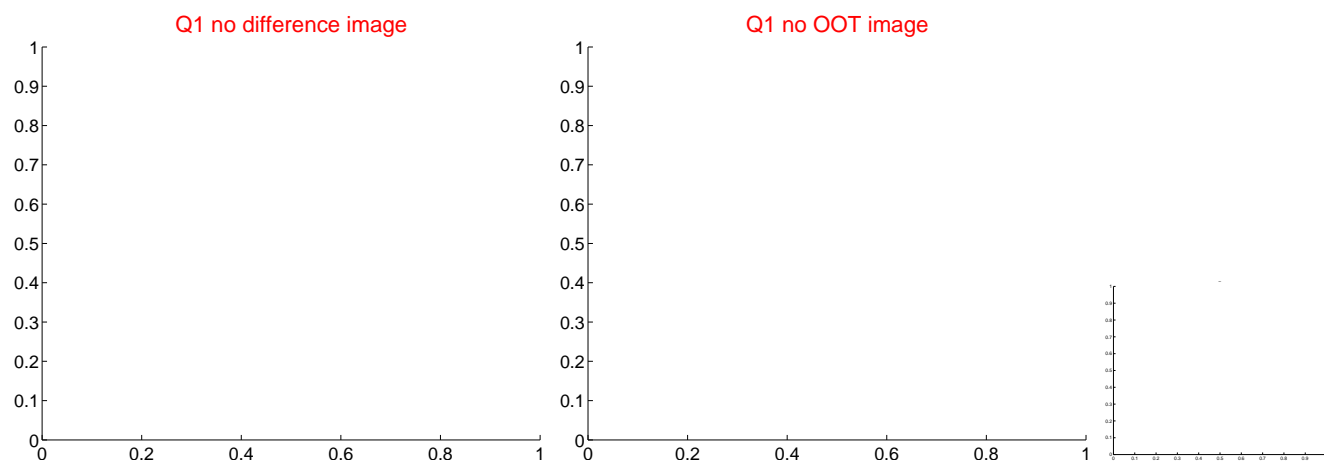
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.081 ± 0.182	0.45	0.034 ± 0.152	-0.074 ± 0.145
PRF-fit source offset from KIC position	0.039 ± 0.189	0.20	0.027 ± 0.148	-0.027 ± 0.151
photometric centroid source offset	0.31 ± 0.37	0.83	-0.12 ± 0.41	0.28 ± 0.36

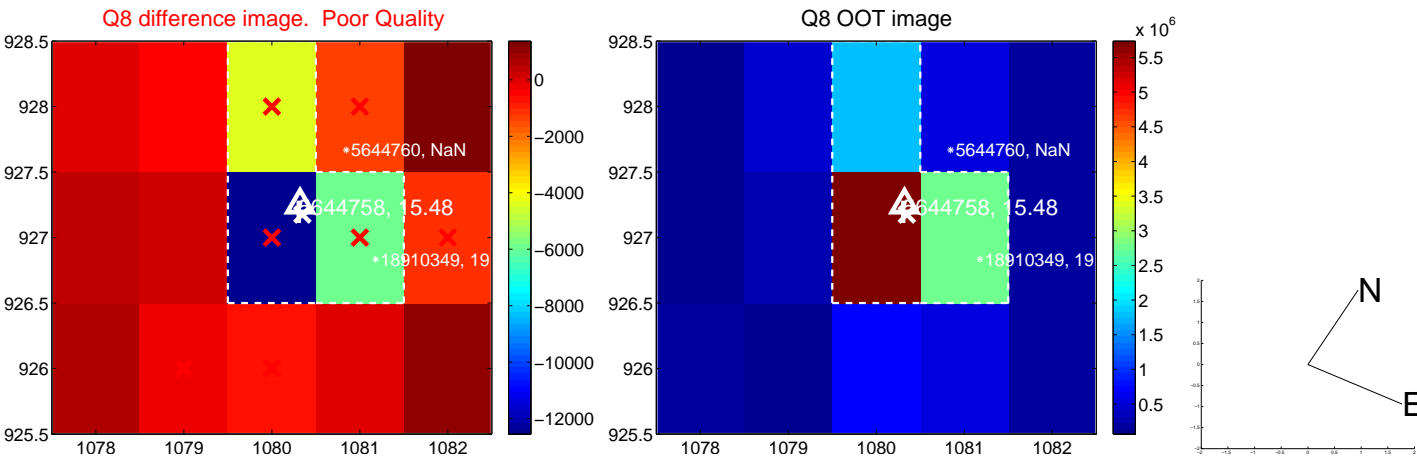
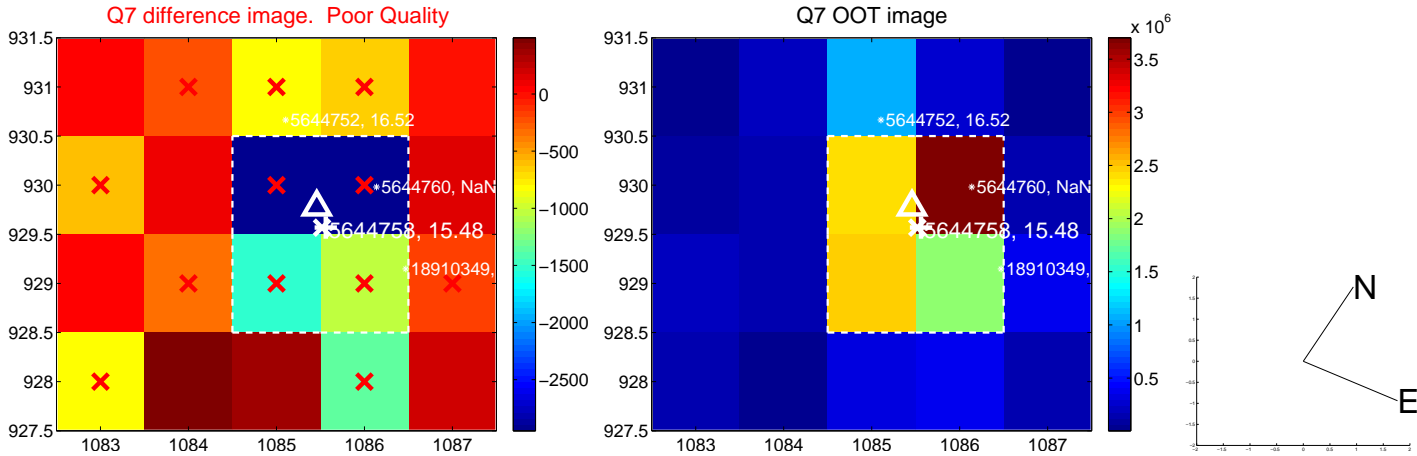
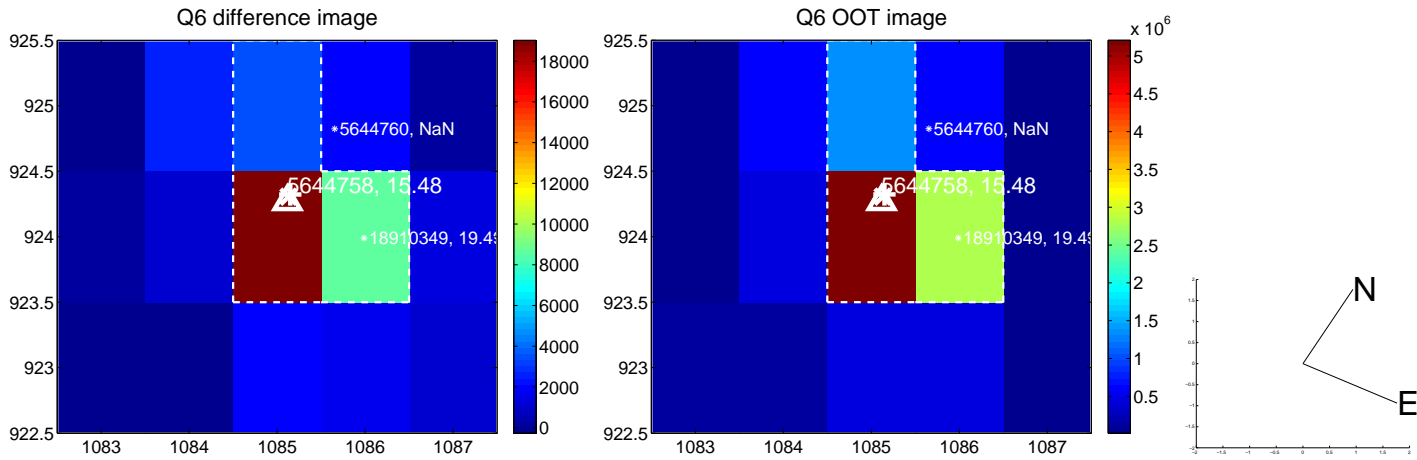
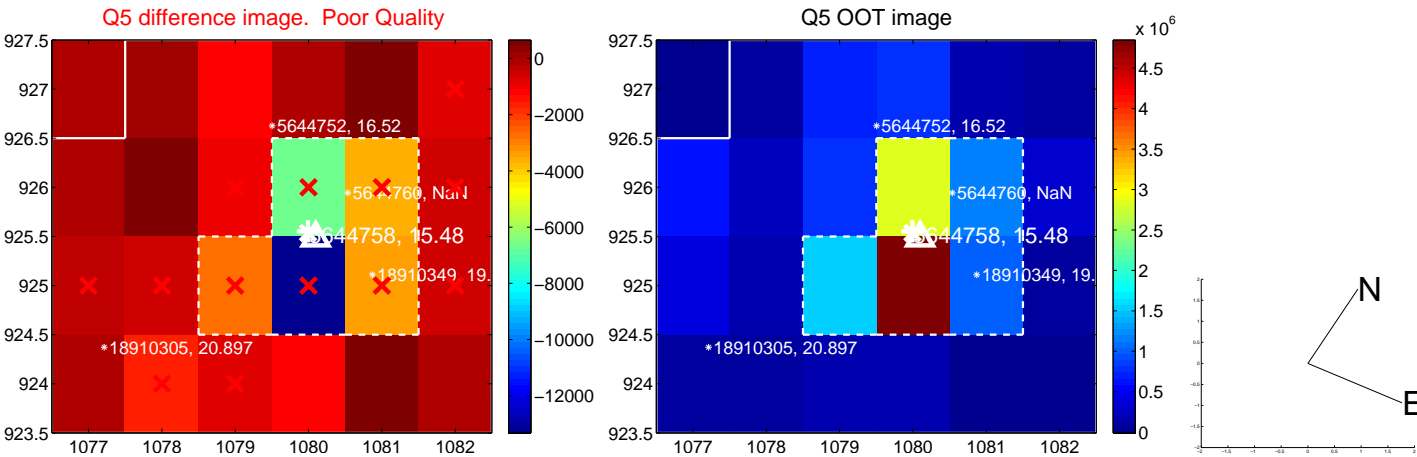


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

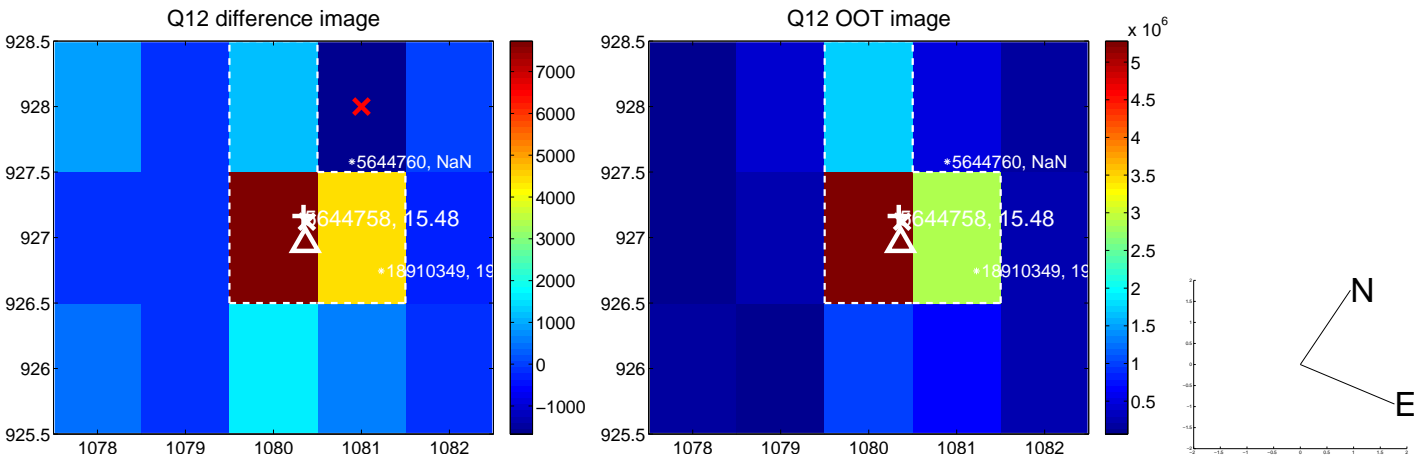
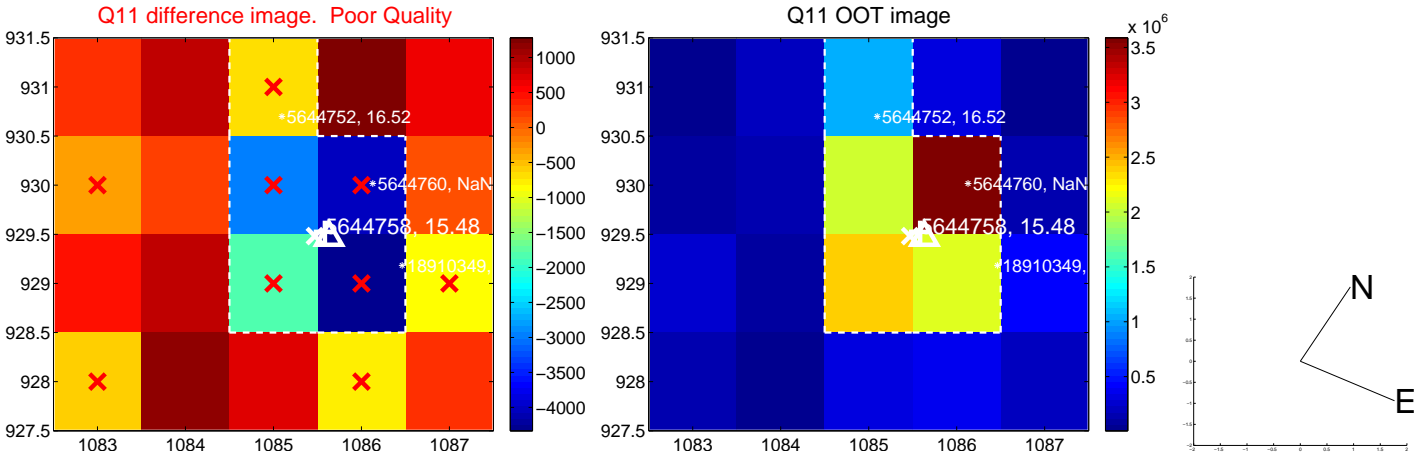
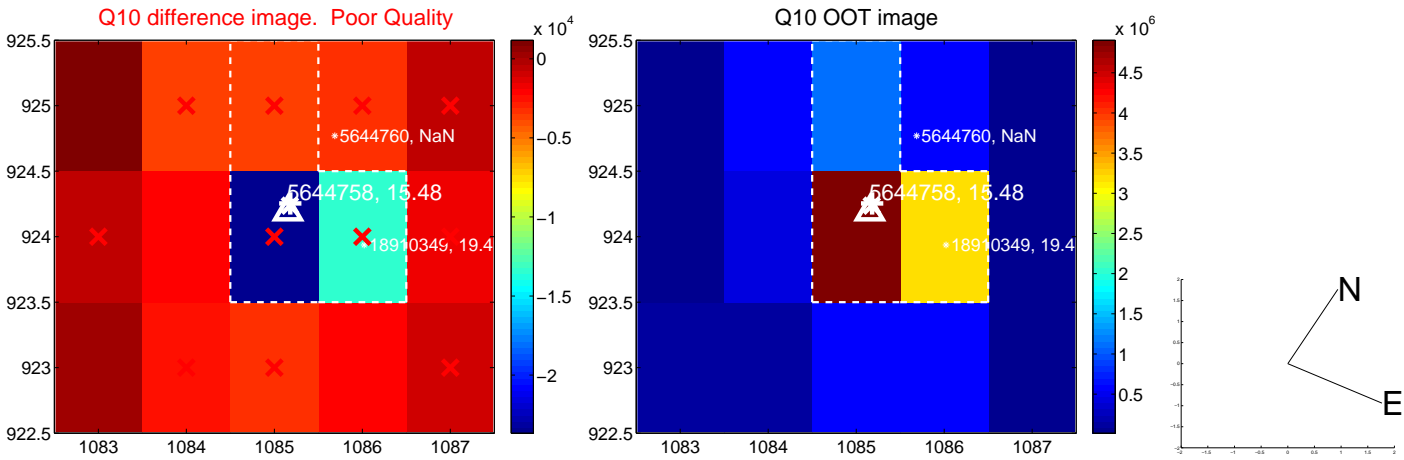
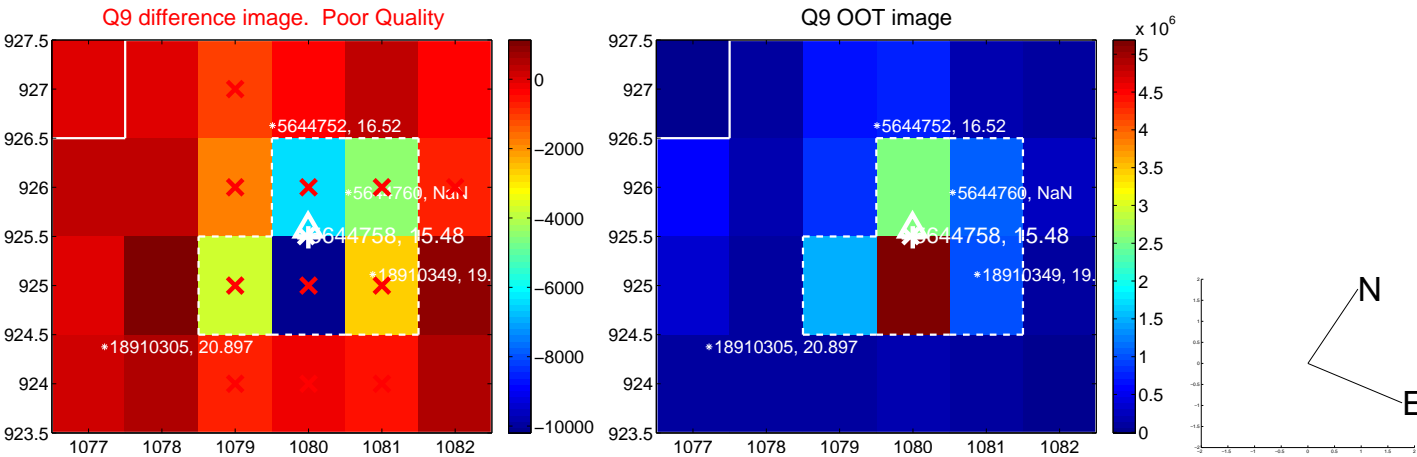
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



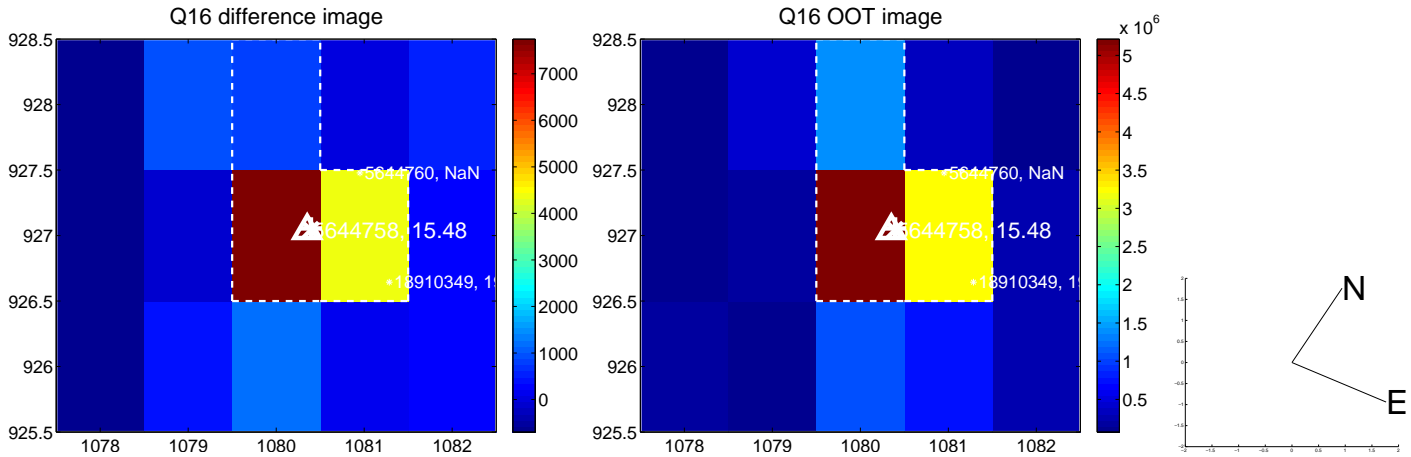
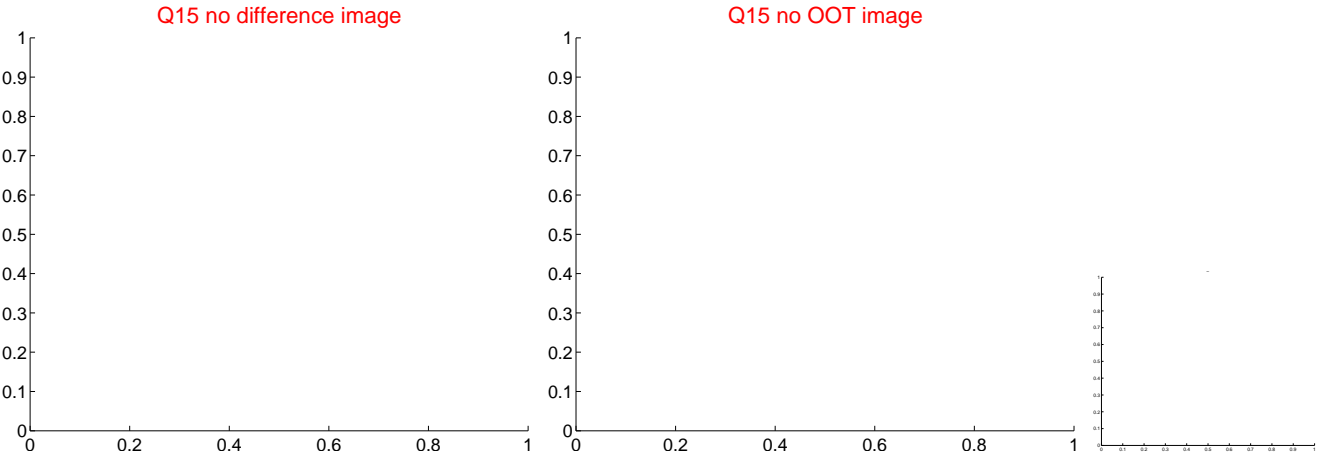
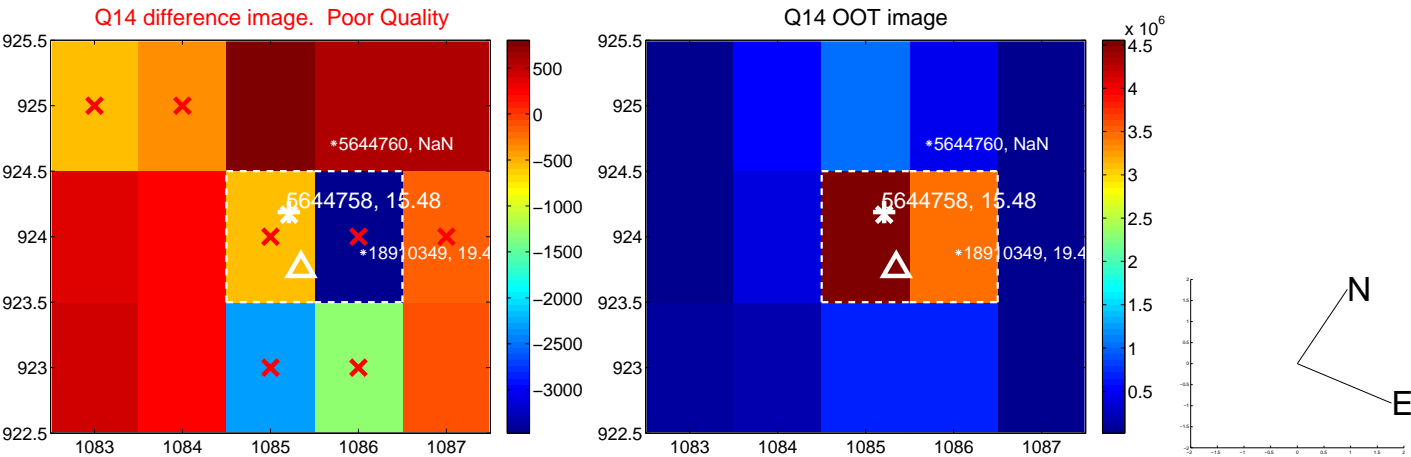
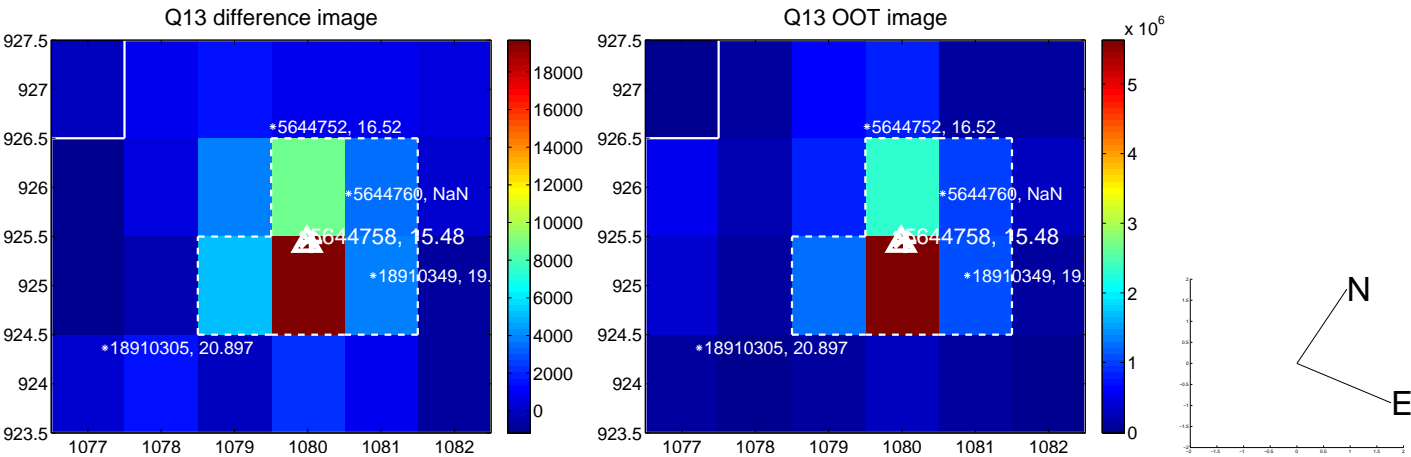
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



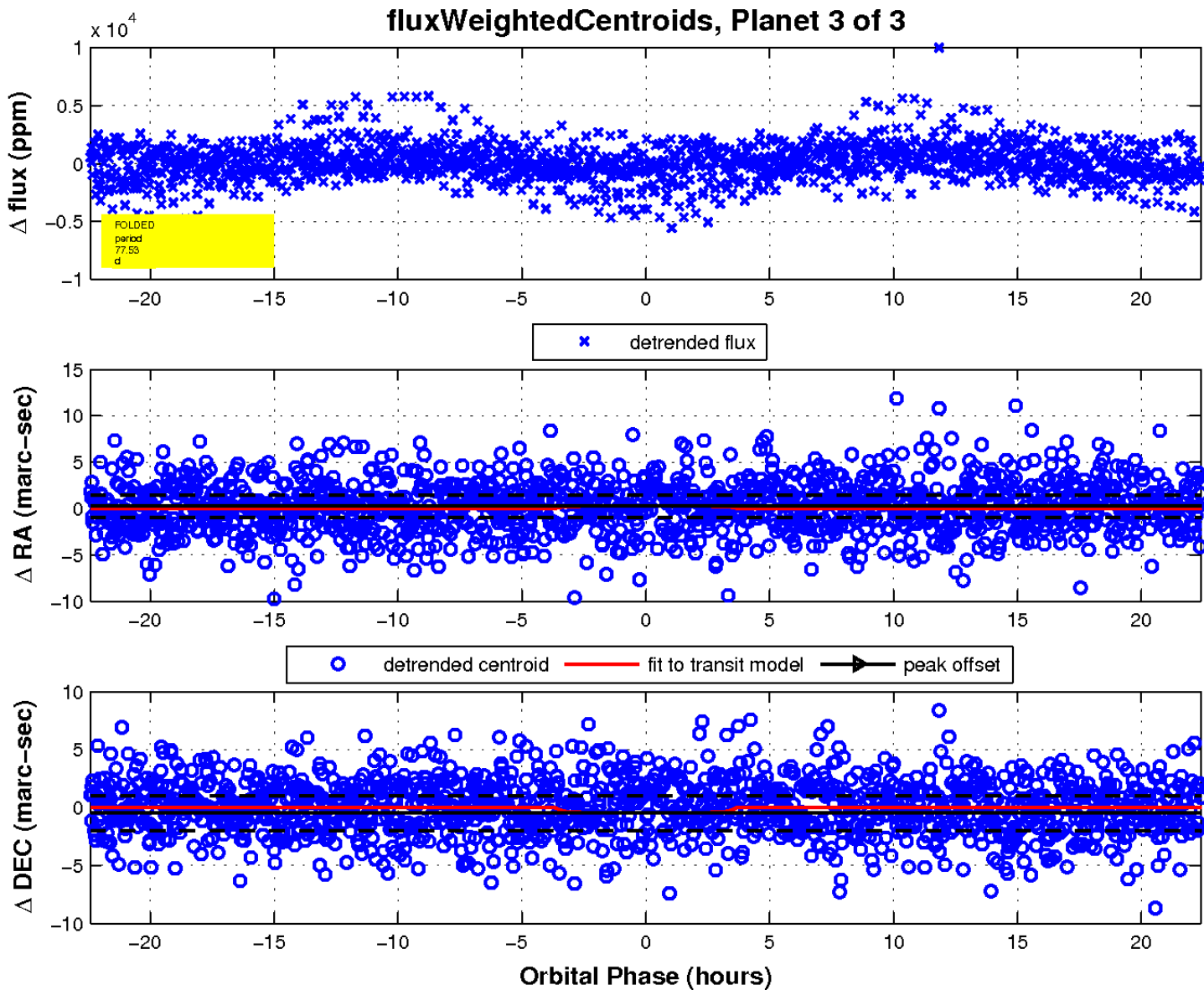
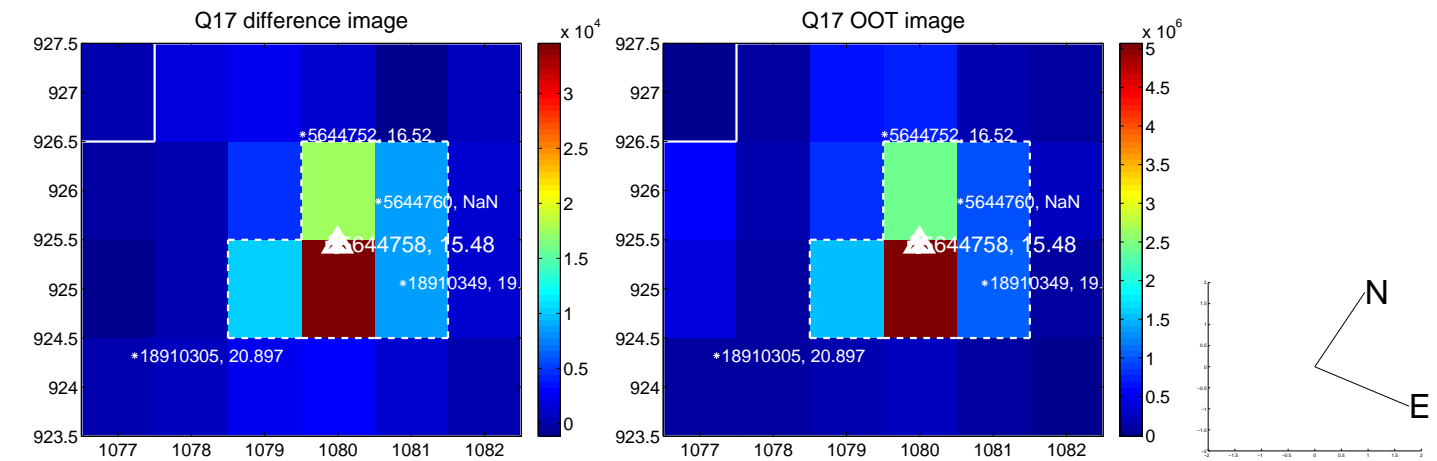
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

