

KIC 010128033

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})
010128033-01	OBS	No	0.656657	132.034110	132.6	2.000	12.3	-1.0	1.82	7296	2.13	28918.67
010128033-02	OBS	No	0.652477	131.903081	7.1	4.657	10.5	4.6	1.82	7296	0.50	29165.94
010128033-03	OBS	No	17.600189	147.811937	250.3	2.116	15.5	14.4	1.82	7296	3.36	360.53
010128033-04	OBS	No	9.891488	135.292290	214.5	1.638	14.6	18.8	1.82	7296	3.09	777.35
010128033-05	OBS	No	18.663500	140.435482	217.4	1.484	14.8	14.6	1.82	7296	2.96	333.40
010128033-06	OBS	No	8.211909	137.726951	81.5	6.535	12.7	11.0	1.82	7296	1.90	996.26
010128033-07	OBS	No	9.203685	137.129745	540.9	1.500	15.2	-1.0	1.82	7296	4.30	855.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010128033-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
010128033-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010128033-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010128033-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010128033-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

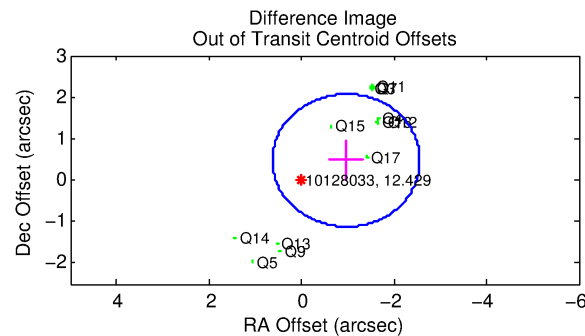
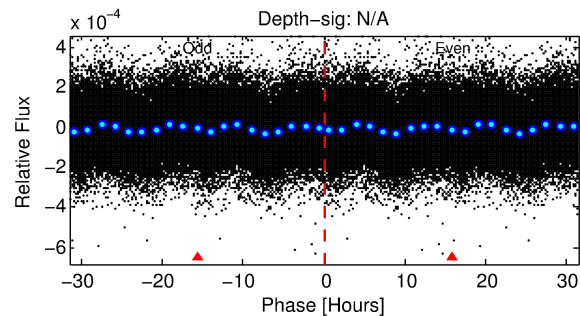
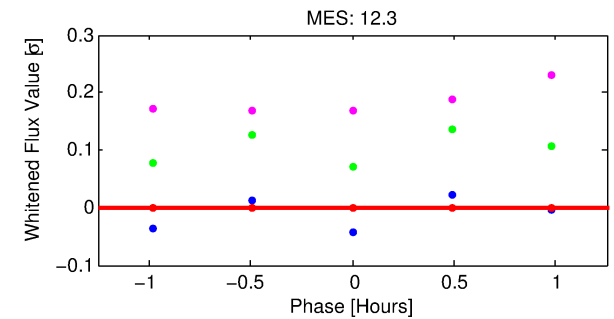
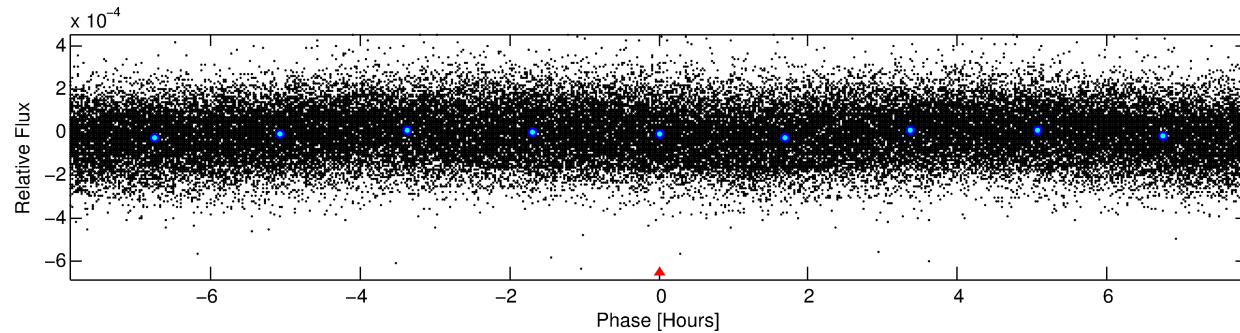
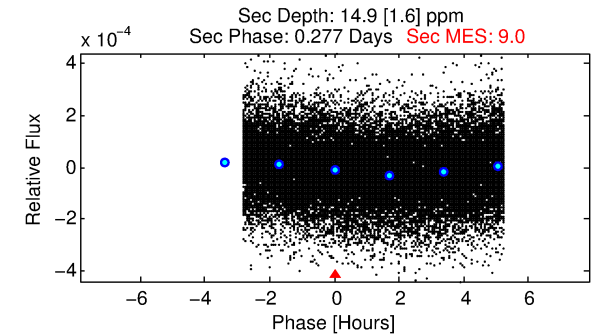
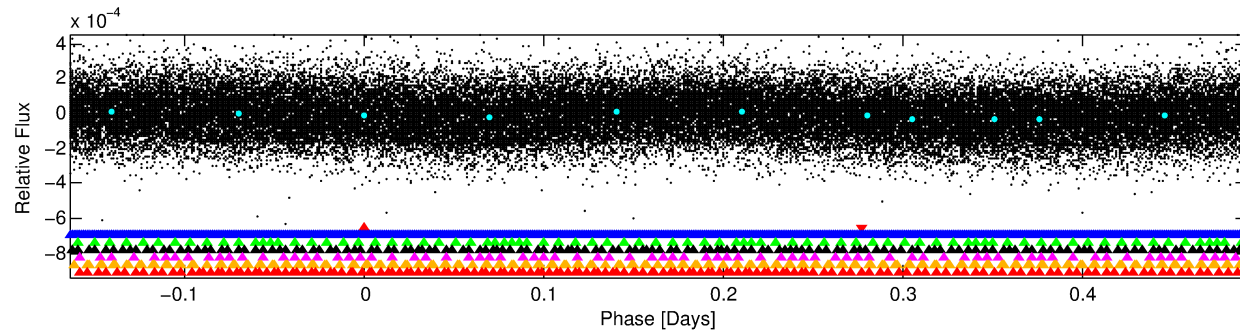
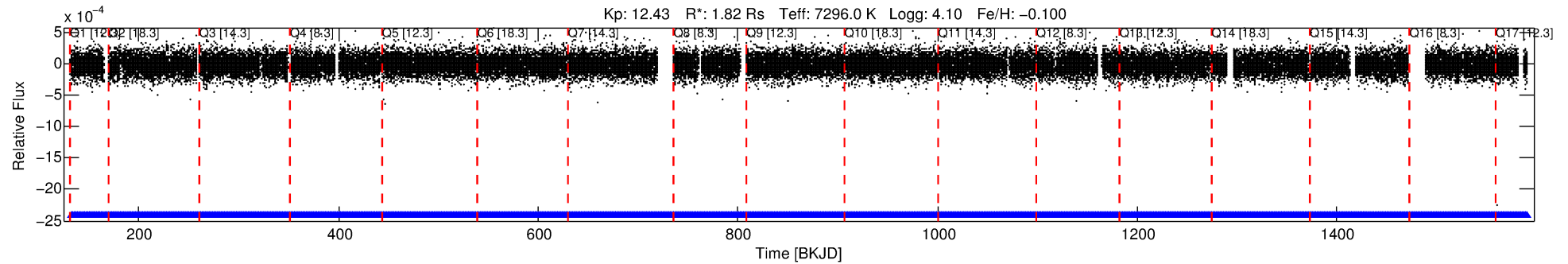
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010128033-01

No Significant Match Found

DV One-Page Summary

KIC: 10128033 Candidate: 1 of 7 Period: 0.657 d



TPS TCE Results:

Period = 0.65666 d
Epoch = 132.0341 BKJD

DV fit results are unavailable

DV Diagnostic Results:

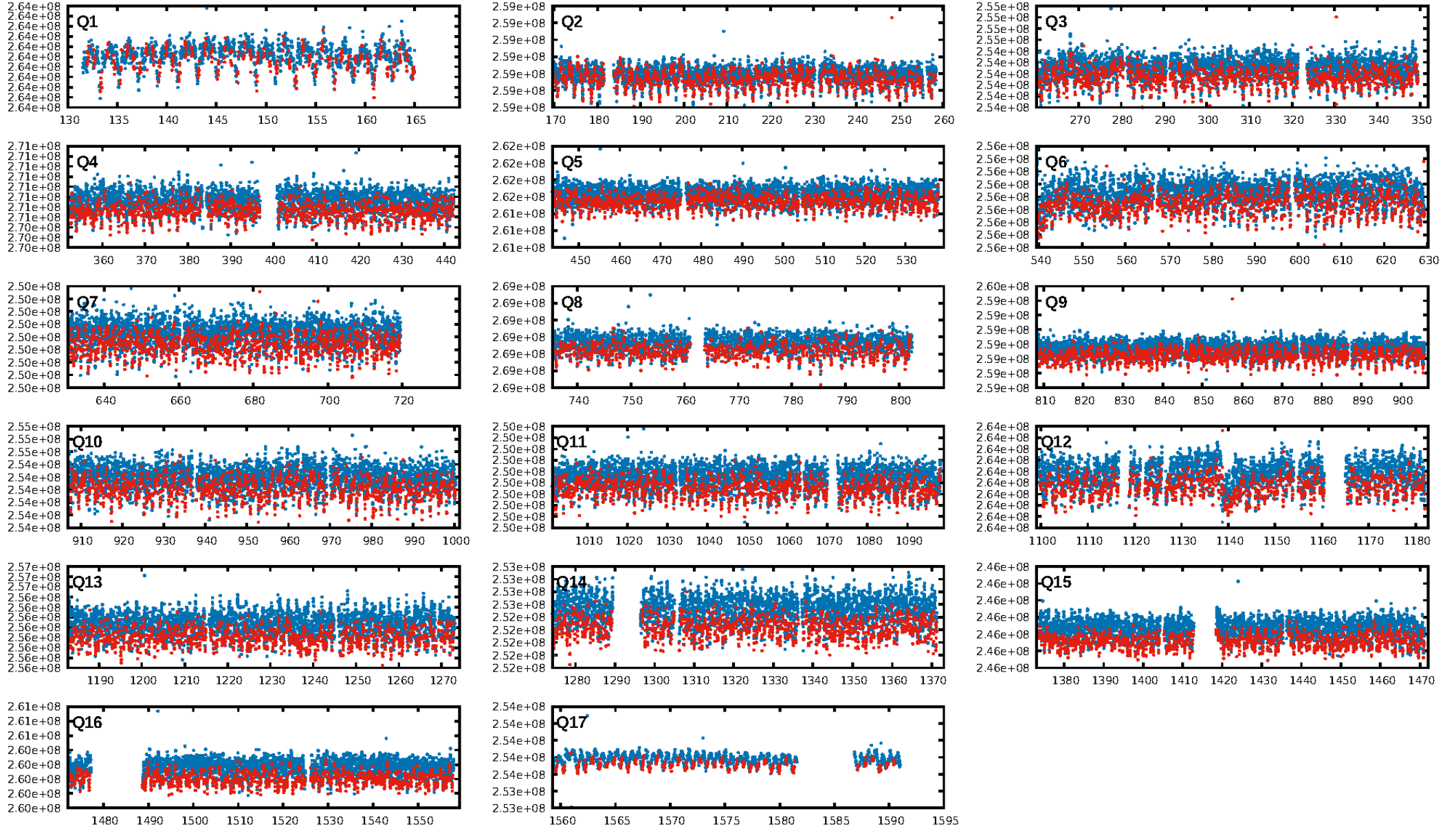
ShortPeriod-sig: 1.6% [0.02σ]
LongPeriod-sig: 100.0% [26.53σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1962/1962]
GhostDiagnostic-chr: 2.055

Centroid-sig: 0.0%
Centroid-so: 0.131 arcsec [4.23σ]
OotOffset-rm: 1.076 arcsec [2.02σ]
KicOffset-rm: 1.122 arcsec [2.18σ]
OotOffset-st: 1/4/3/4 [12]
KicOffset-st: 1/4/3/4 [12]
DiffImageQuality-fgm: 1.00 [12/12]
DiffImageOverlap-fno: 0.00 [0/17]

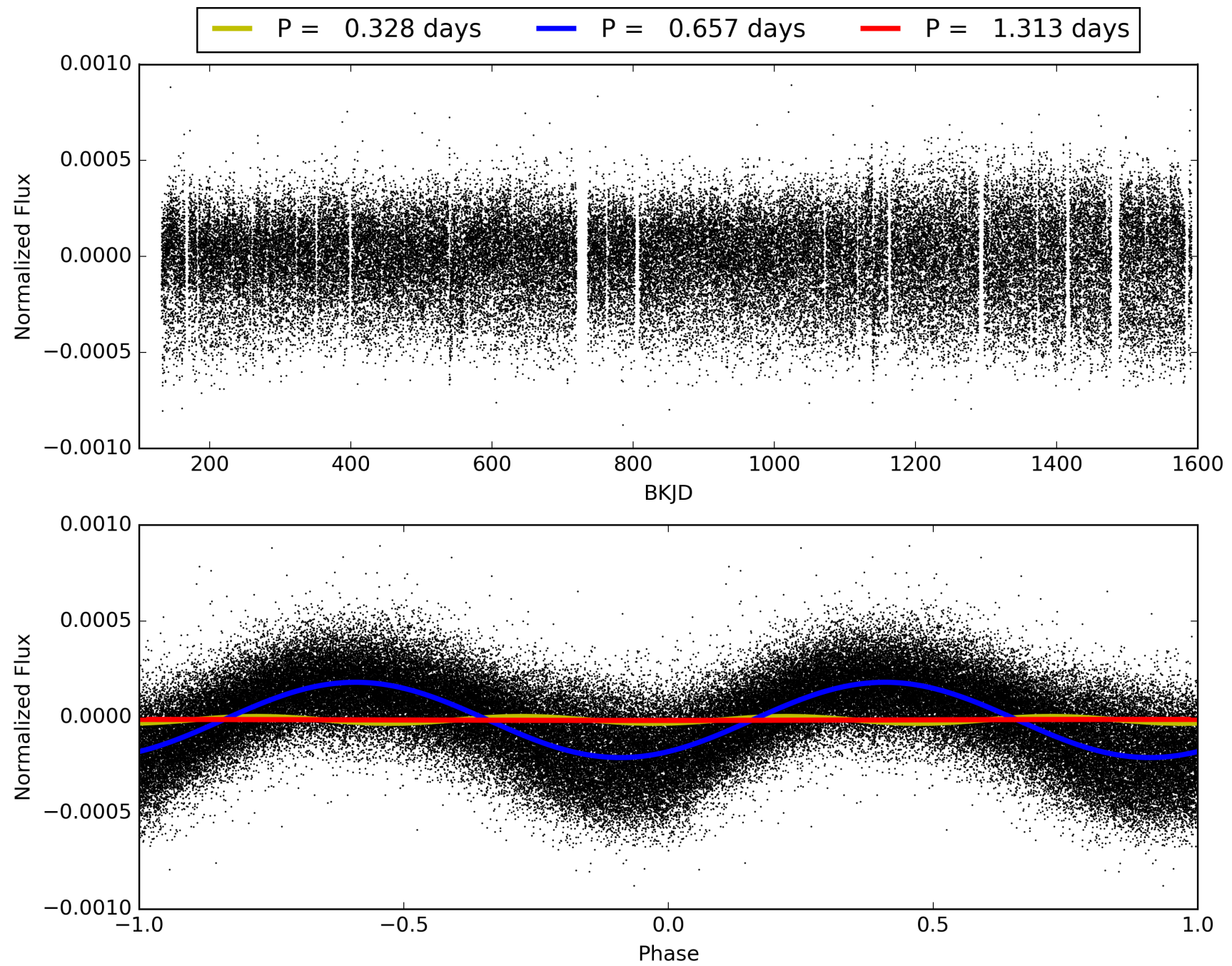
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:49:52 Z

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

TCE 010128033-01, PDC Light Curves

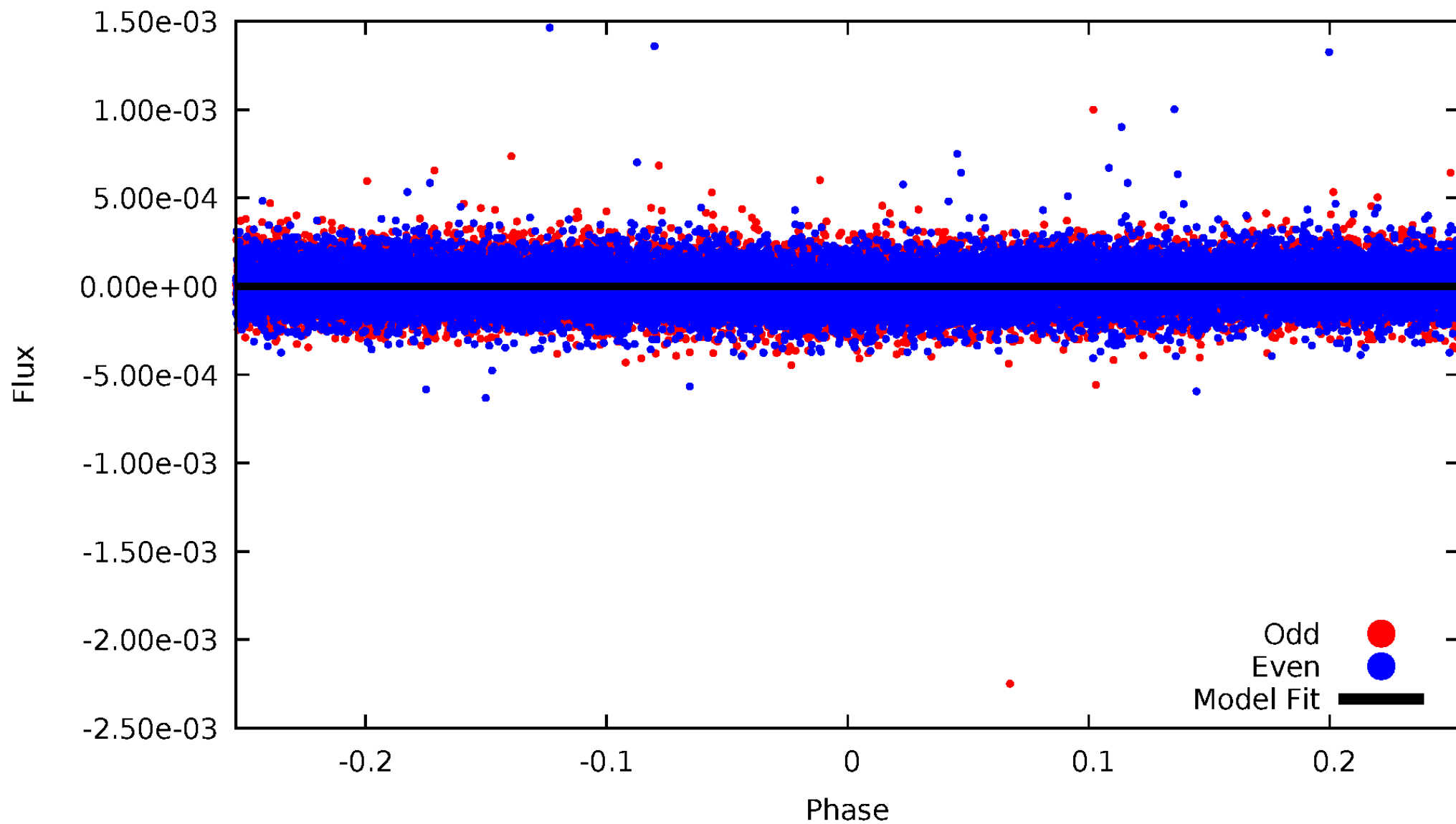


TCE 010128033-01



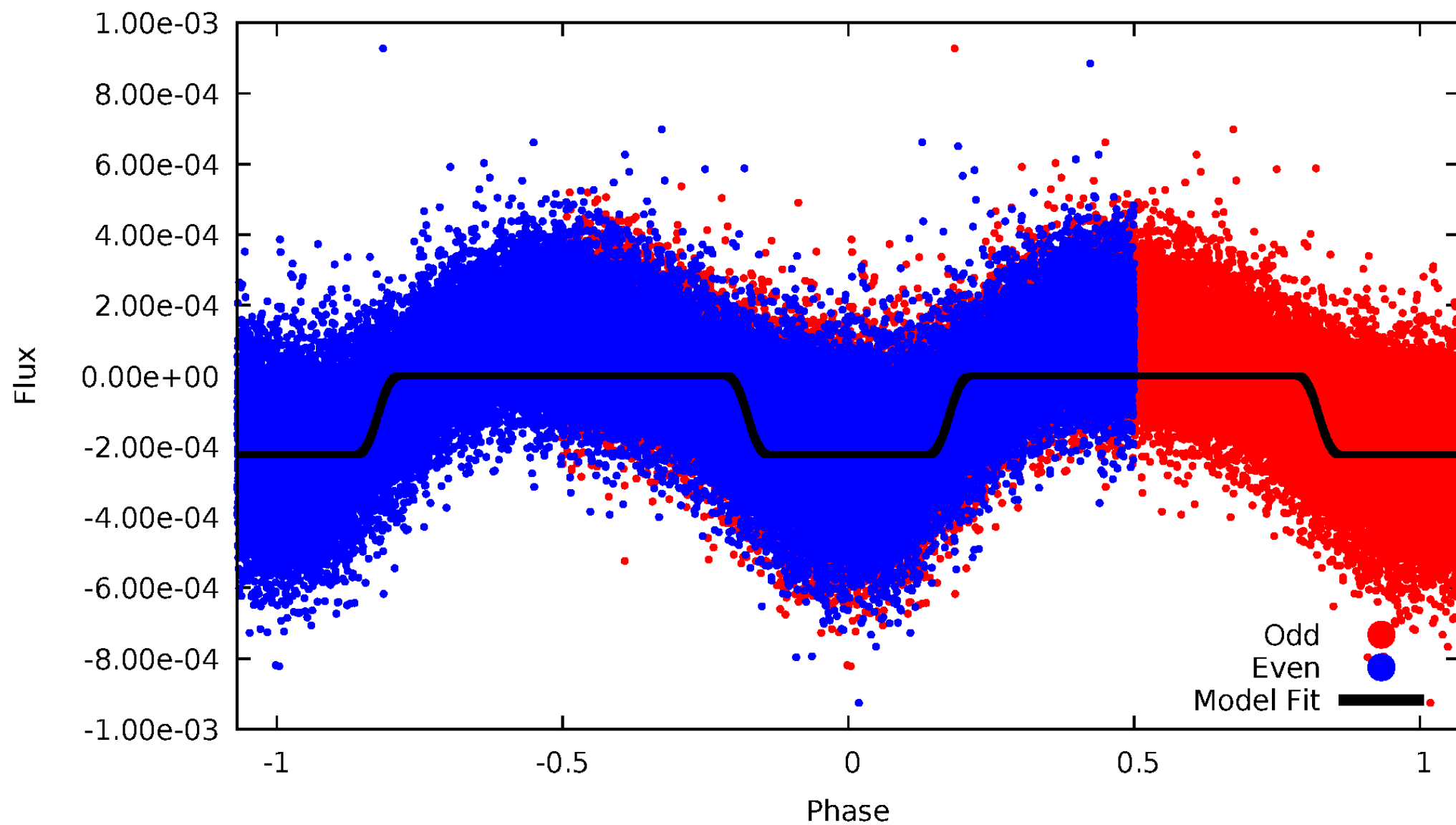
DV Odd/Even

TCE 010128033-01

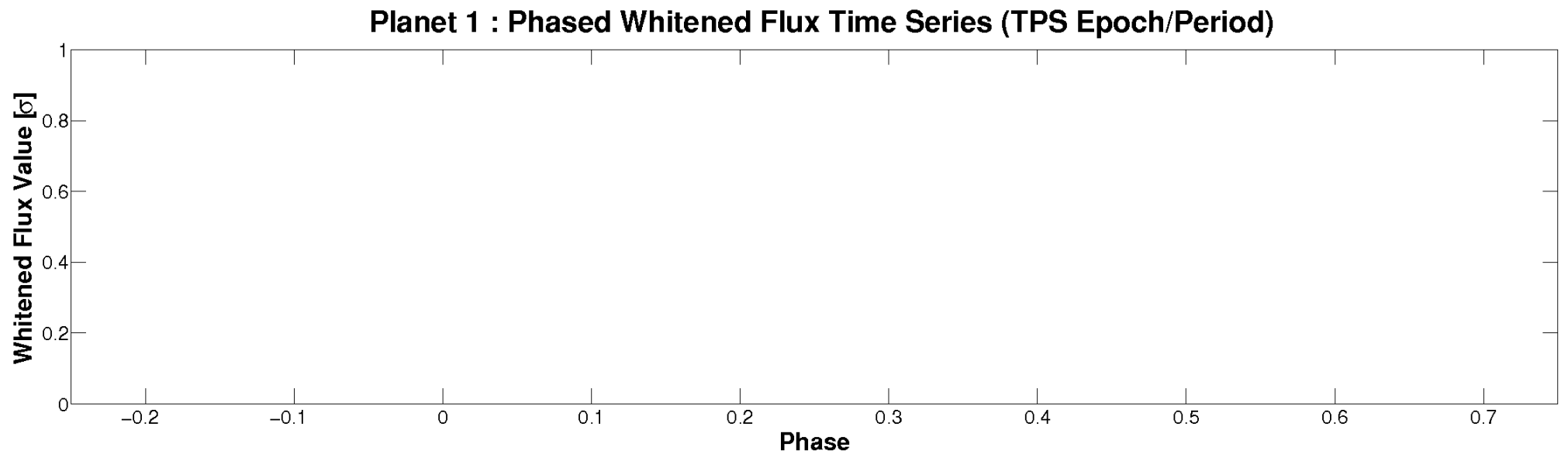
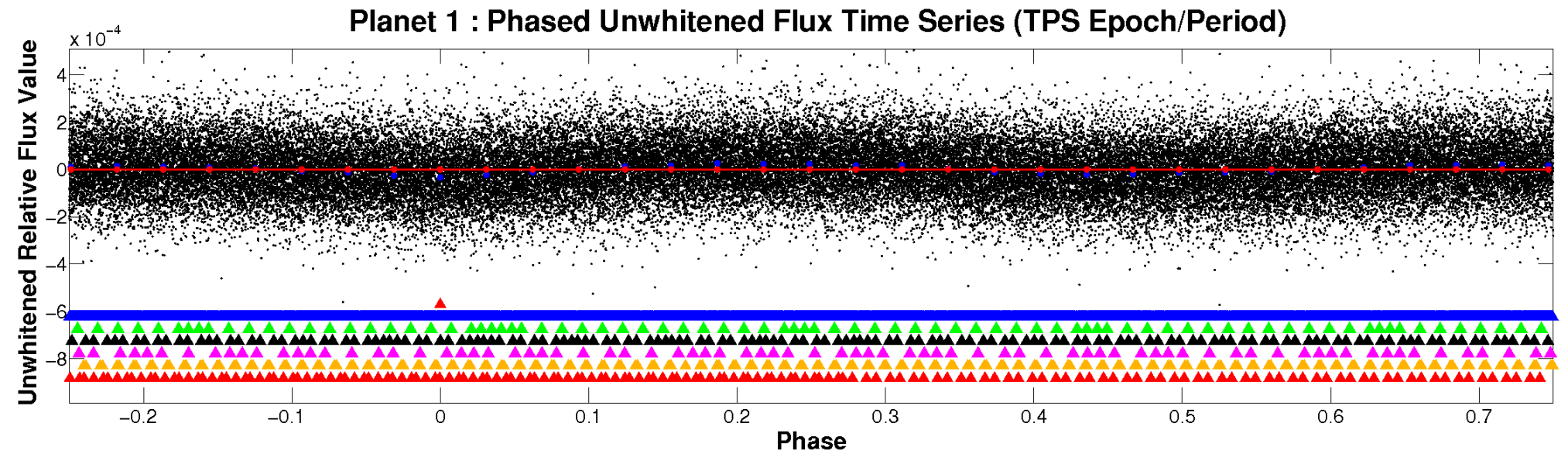


ALT Odd/Even

TCE 010128033-01

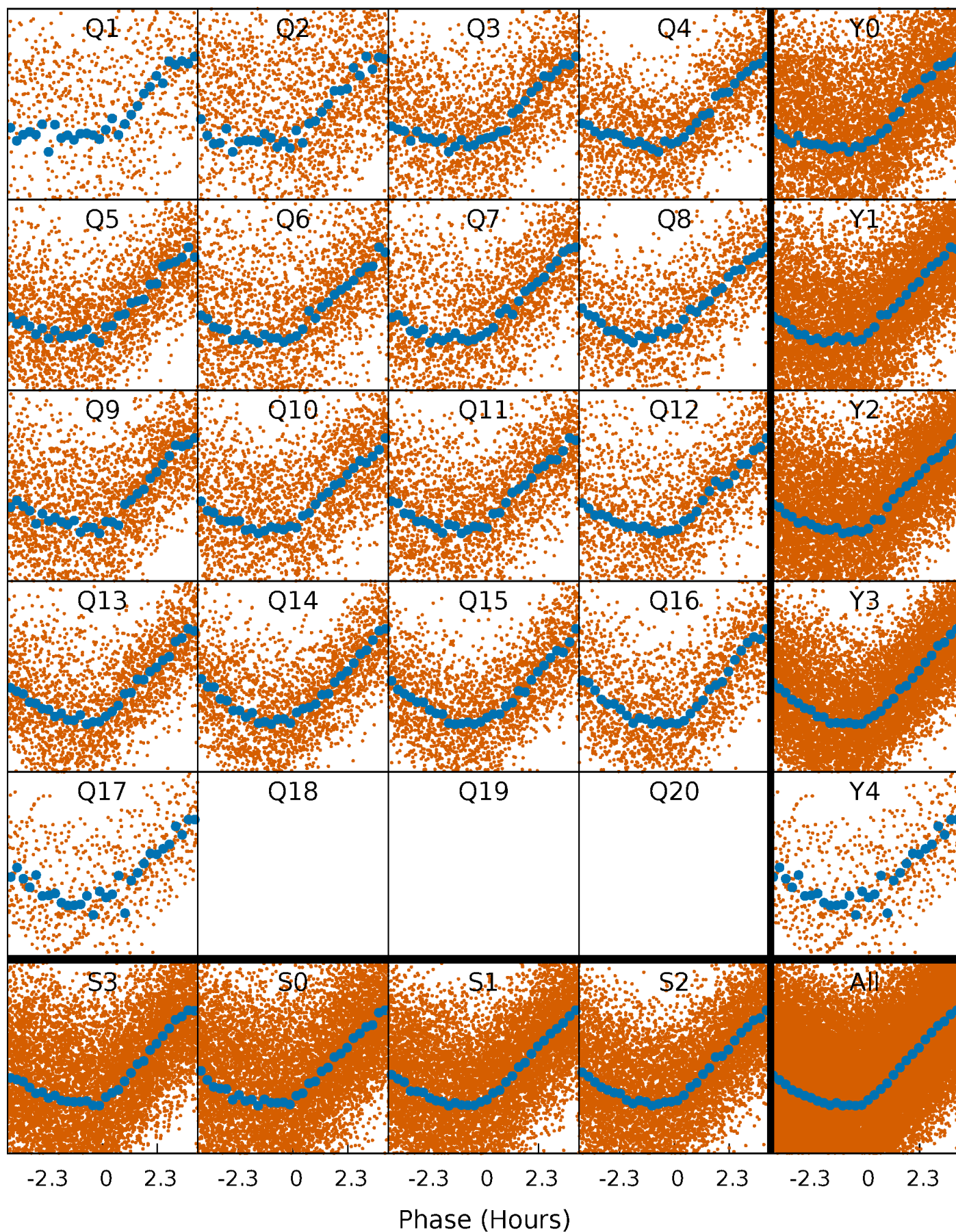


Non-Whitened Vs. Whitened Light Curve



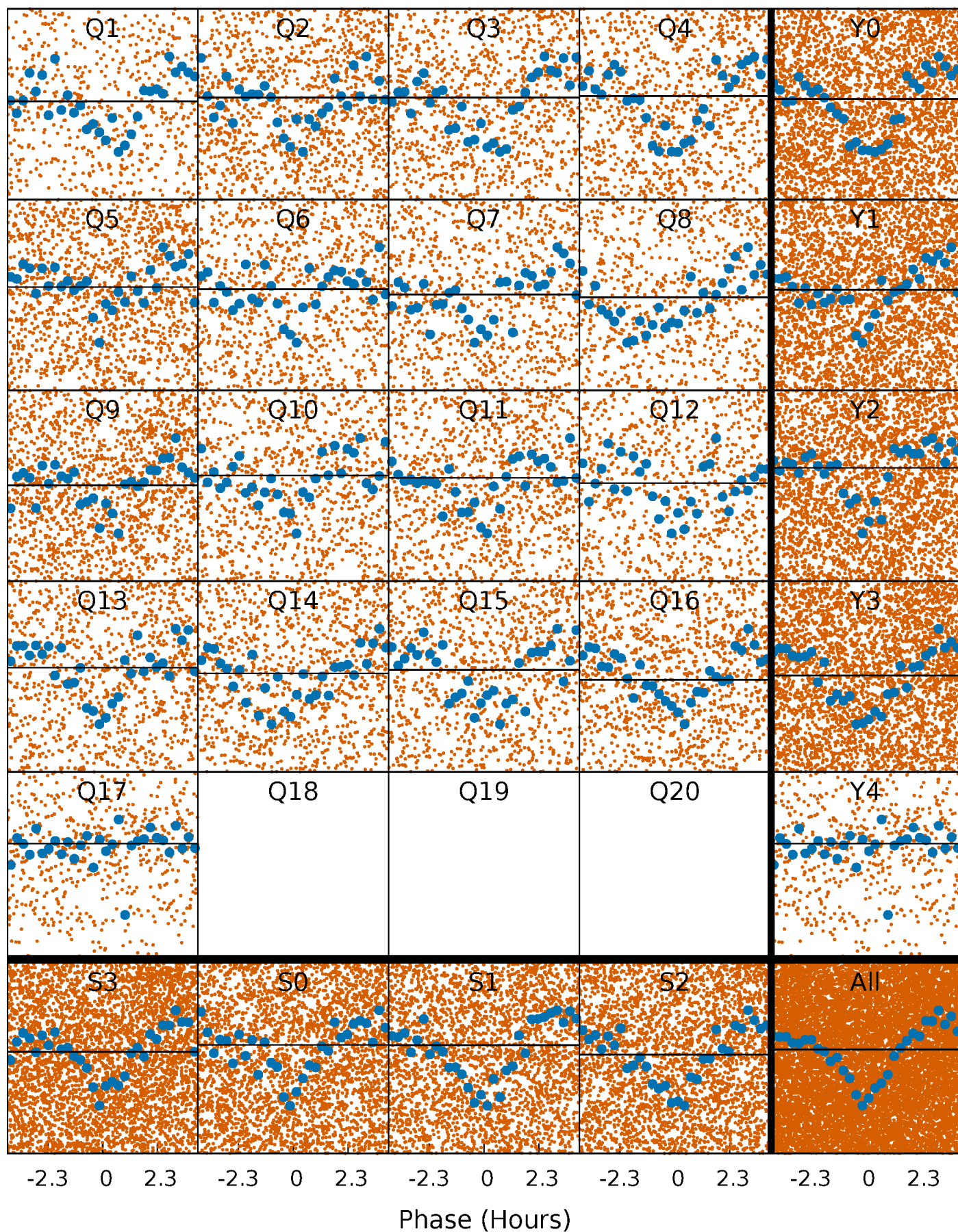
PDC Quarter-Phased Transit Curves

TCE 010128033-01 P= 0.656657 Days $T_0=132.034110$ (BKJD)



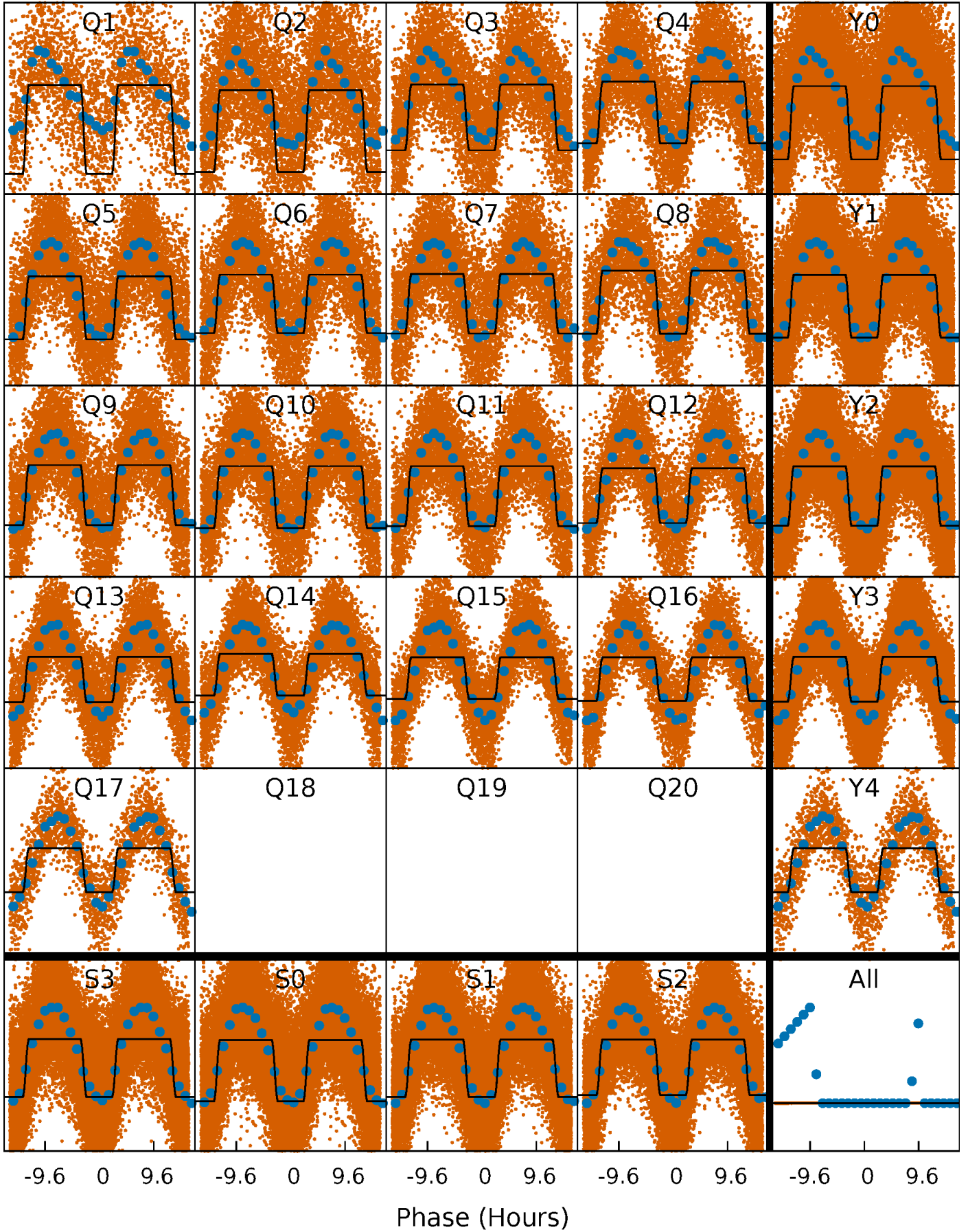
DV Quarter-Phased Transit Curves

TCE 010128033-01 P= 0.656657 Days $T_0=132.034110$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

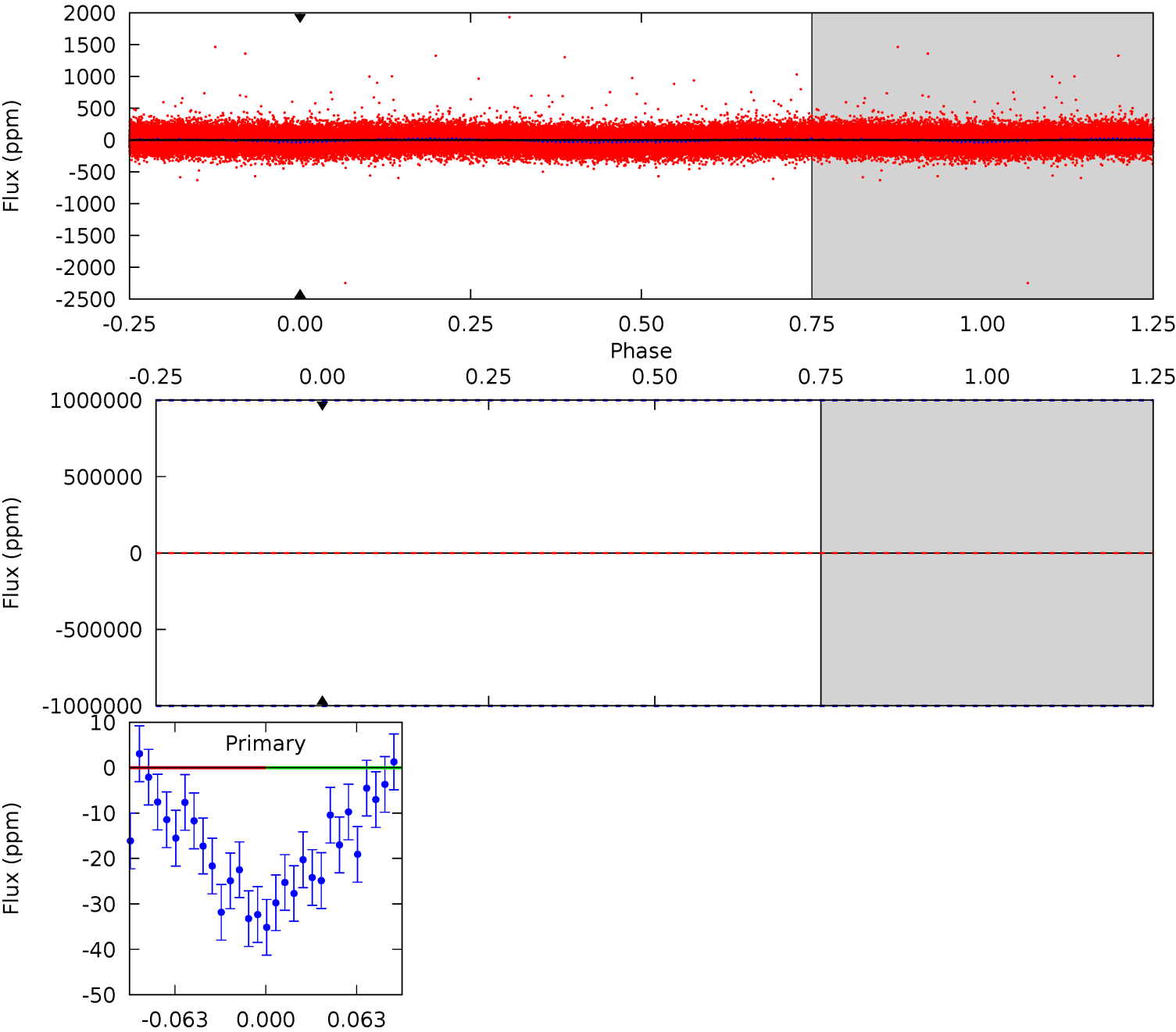
TCE 010128033-01 P= 0.656657 Days $T_0=131.979066$ (BKJD)



DV Model-Shift Uniqueness Test

010128033-01, P = 0.656657 Days, E = 131.377453 Days

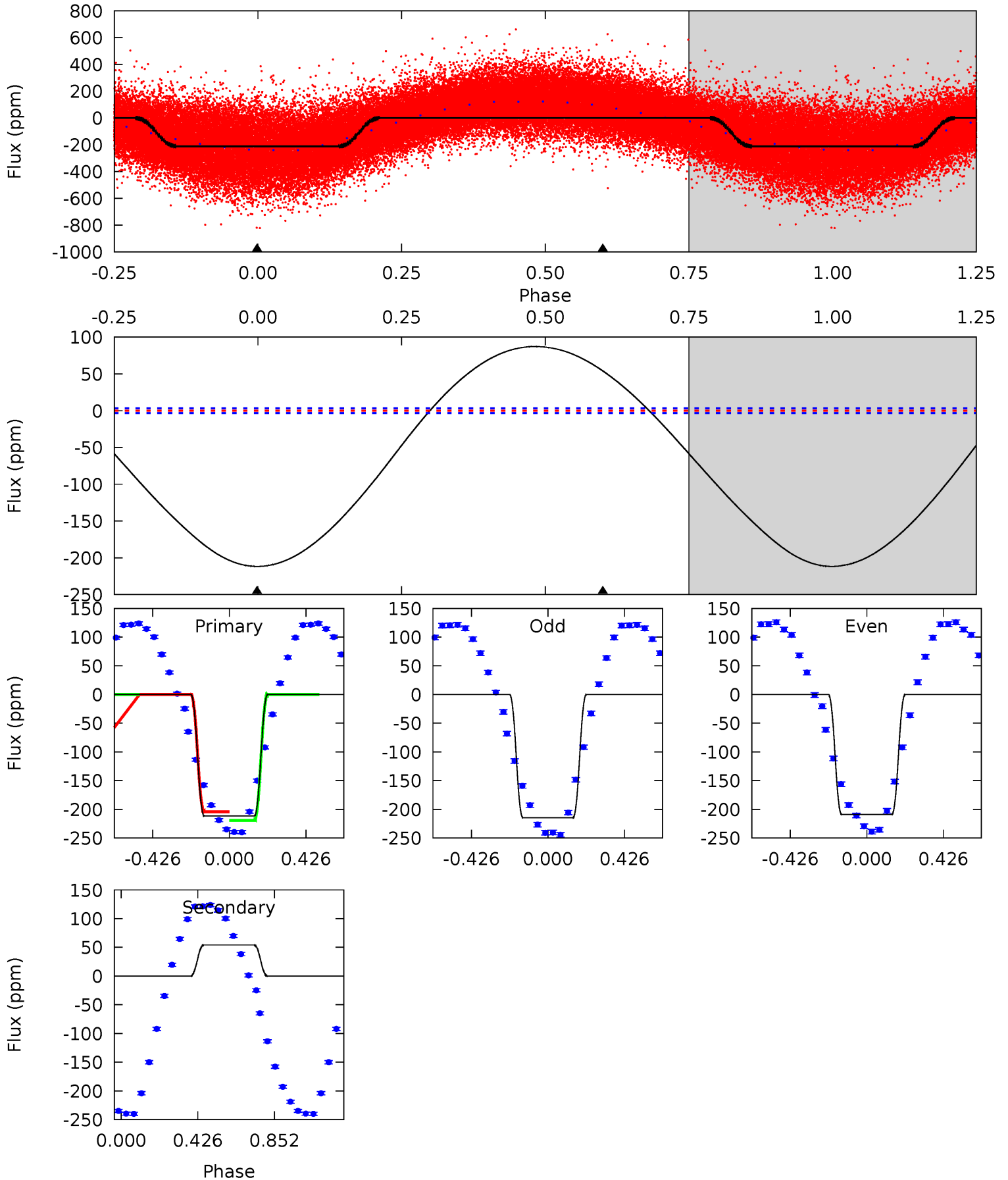
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010128033-01, P = 0.656657 Days, E = 131.322409 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
280.6	-71.8	0	0	4.25	0.80	34.8	280.6	280.6	-71.8	-71.8	3.59	1.06	0.29	10.1



Stellar Parameters For KIC 010128033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+228}_{-330}	$4.103^{+0.165}_{-0.182}$	$-0.100^{+0.200}_{-0.350}$	$1.818^{+0.576}_{-0.384}$	$1.526^{+0.234}_{-0.257}$	$0.358^{+0.319}_{-0.179}$
	+3%/-5%	+4%/-4%	+200%/-350%	+32%/-21%	+15%/-17%	+89%/-50%
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 010128033-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	0 ± 1000000	$14.11^{+15.68}_{-9.78}$	4623^{+384}_{-345}	5358^{+38730}_{-38721}	$1.683^{+150.006}_{-106.419}$
Alt.	54 ± 1	$14.61^{+15.29}_{-10.09}$	4645^{+365}_{-347}	-4254^{+289}_{-633}	$-0.042^{+0.033}_{-0.381}$

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

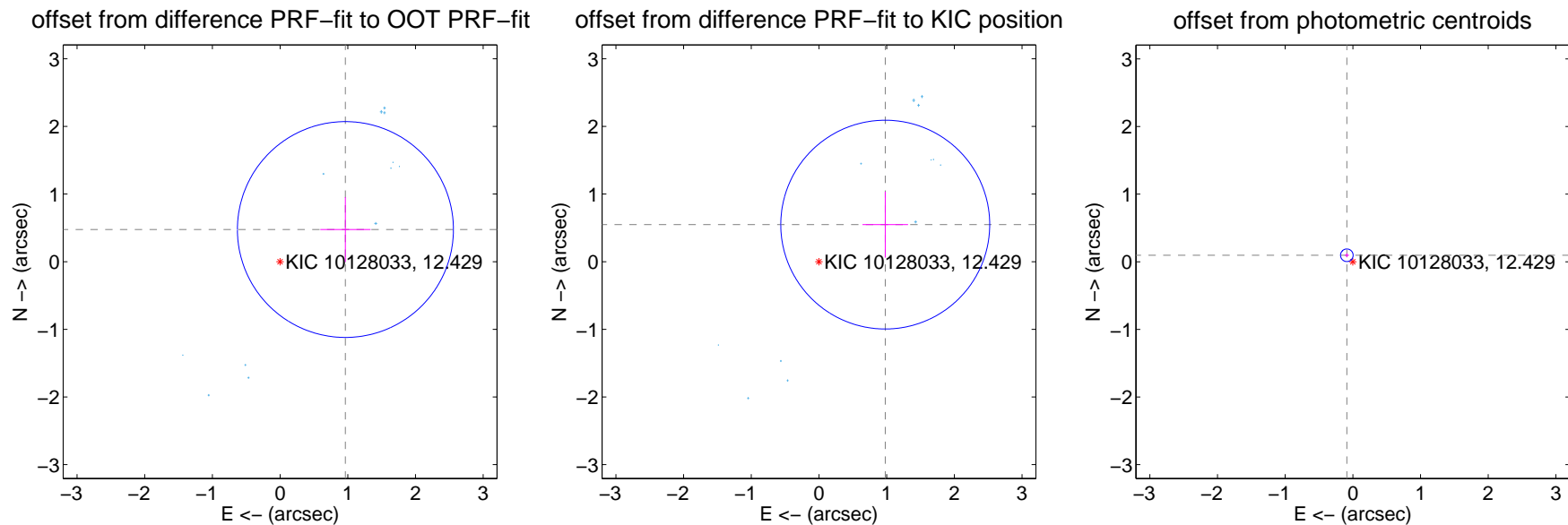
DV Centroid Data

Supplemental centroid analysis for 010128033-01. Kepler magnitude: 12.43. Transit SNR -1.00

There are 12 quarters with good PRF difference image offsets

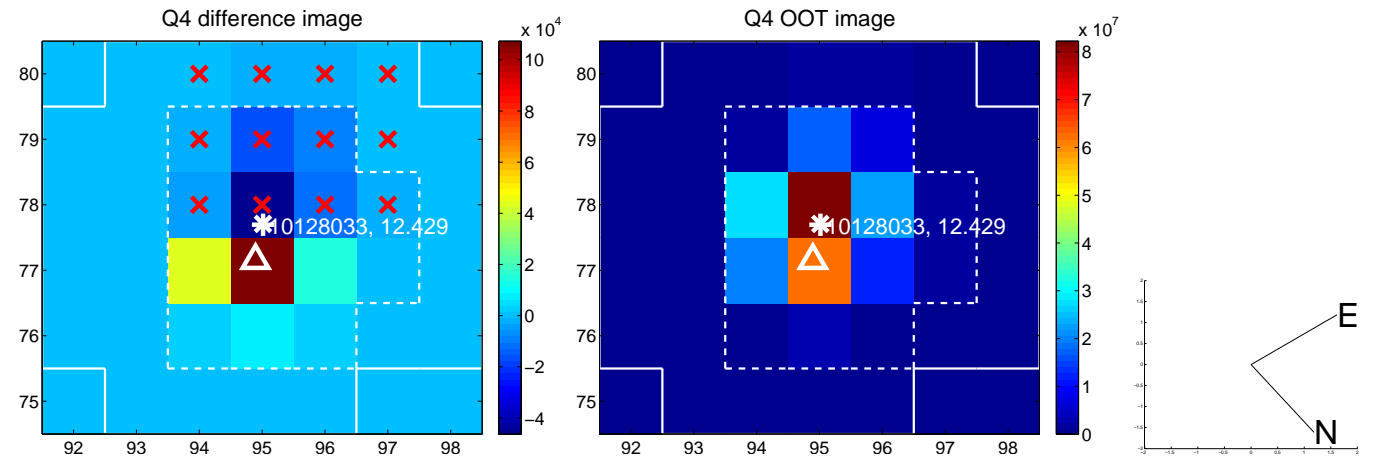
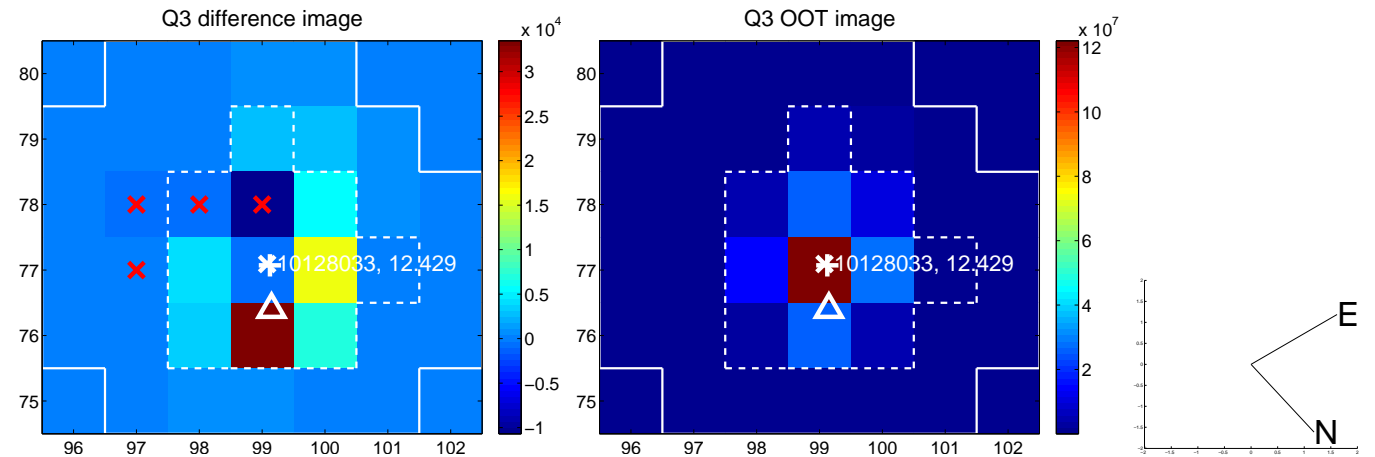
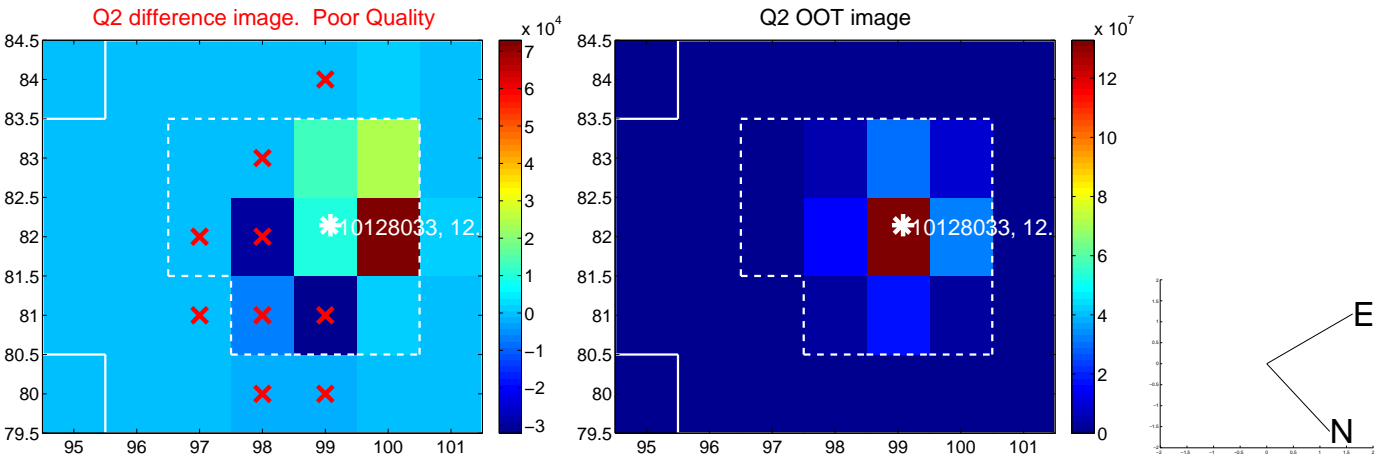
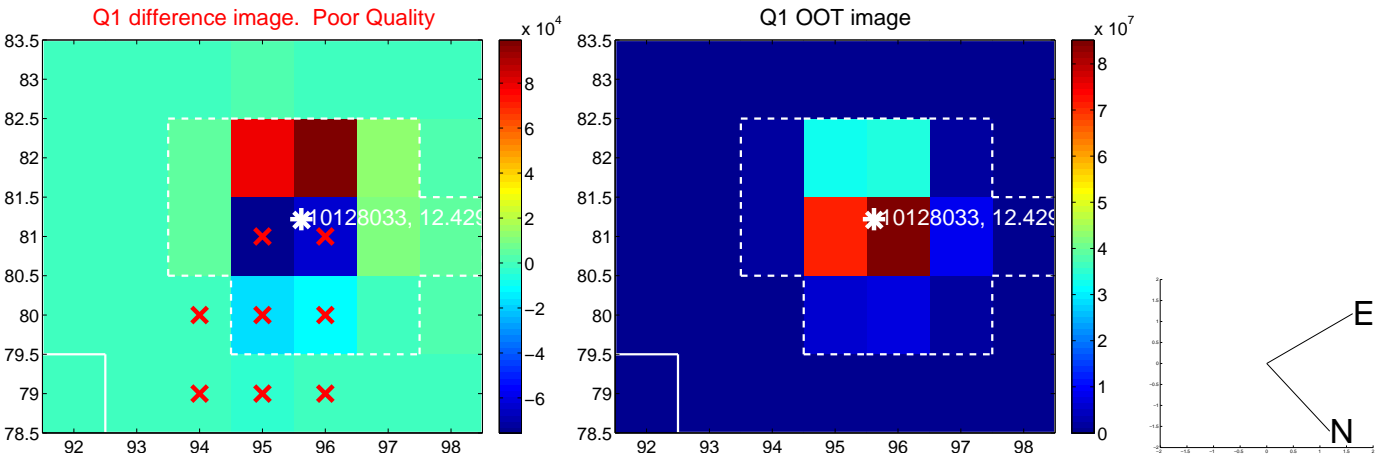
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.076 ± 0.532	2.02	-0.965 ± 0.371	0.476 ± 0.479
PRF-fit source offset from KIC position	1.122 ± 0.515	2.18	-0.979 ± 0.336	0.548 ± 0.488
photometric centroid source offset	0.13 ± 0.03	4.23	0.09 ± 0.03	0.10 ± 0.03

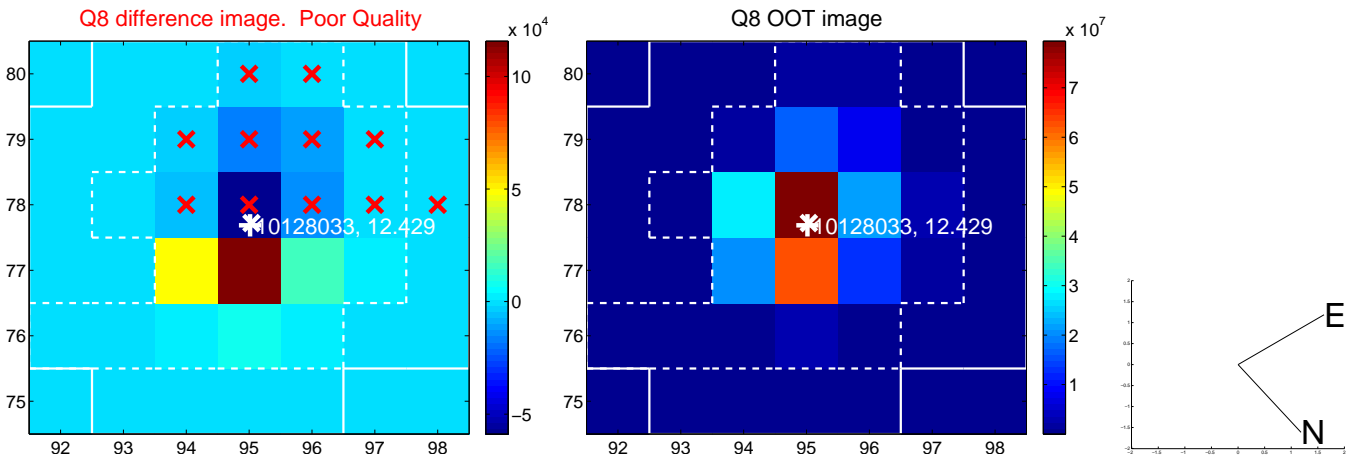
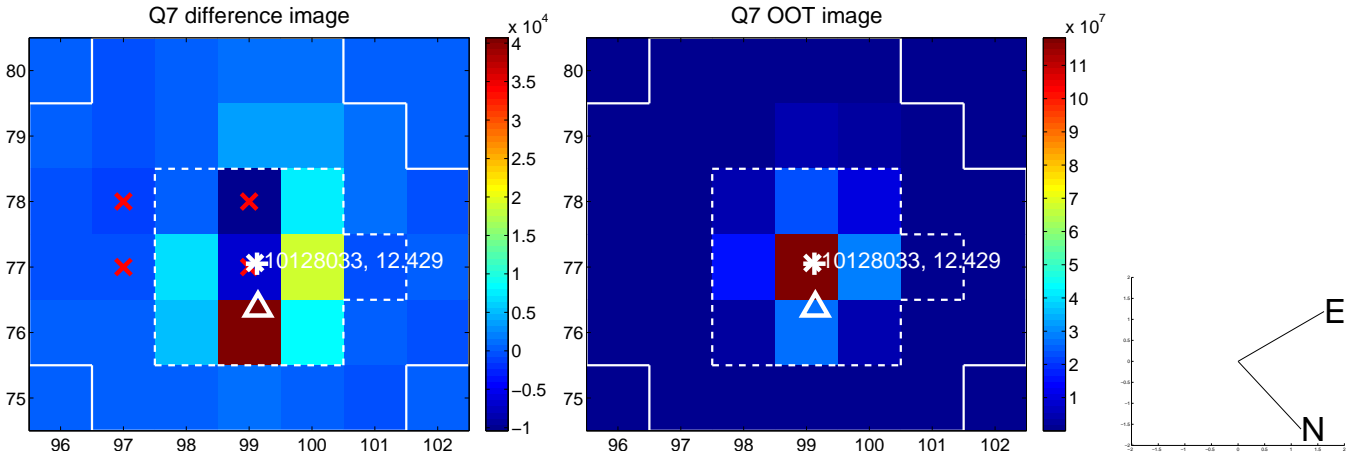
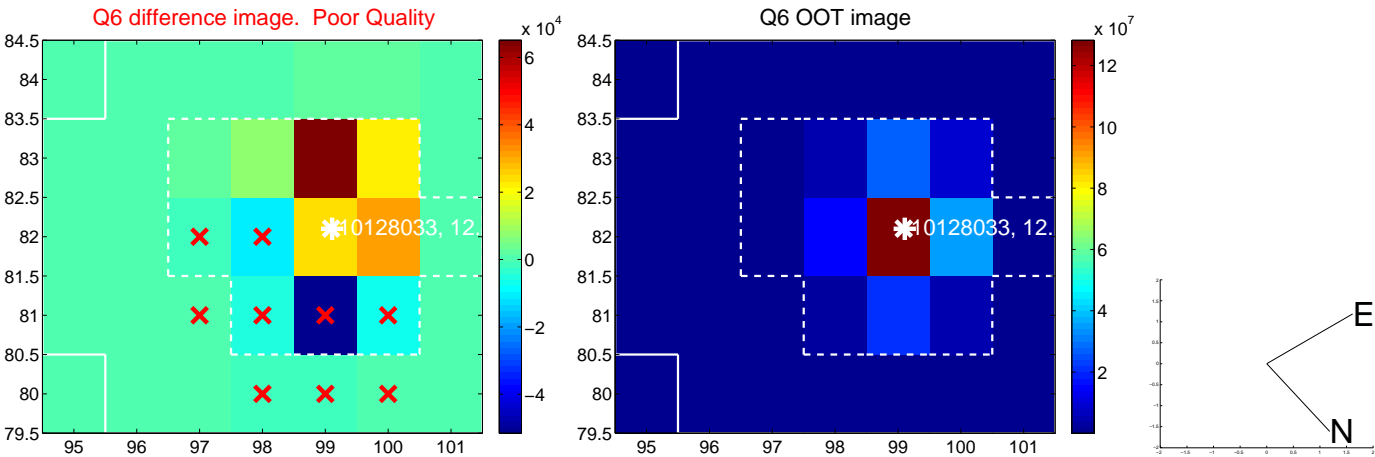
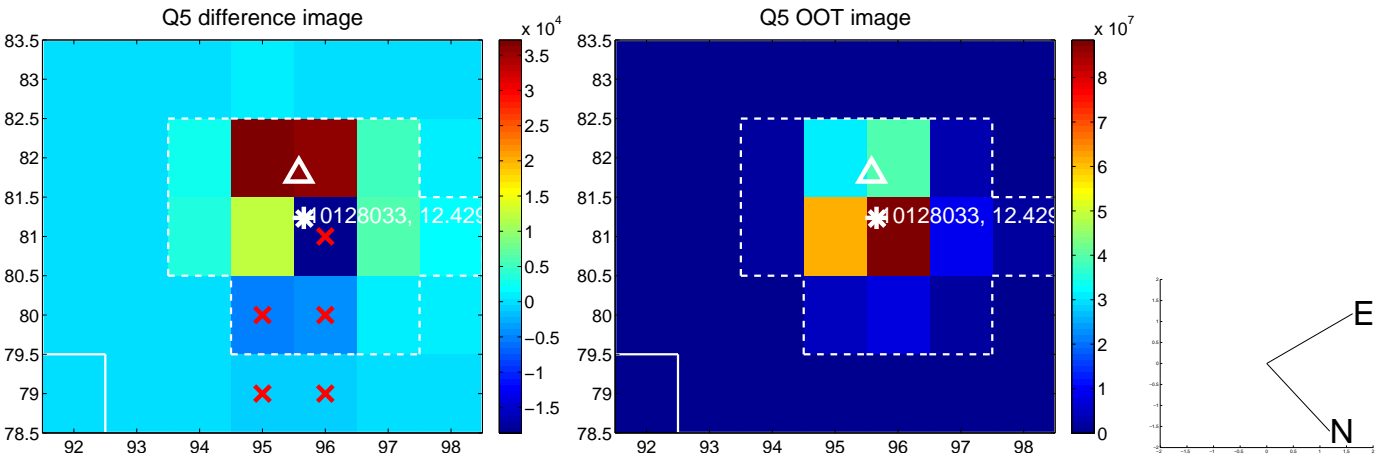


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

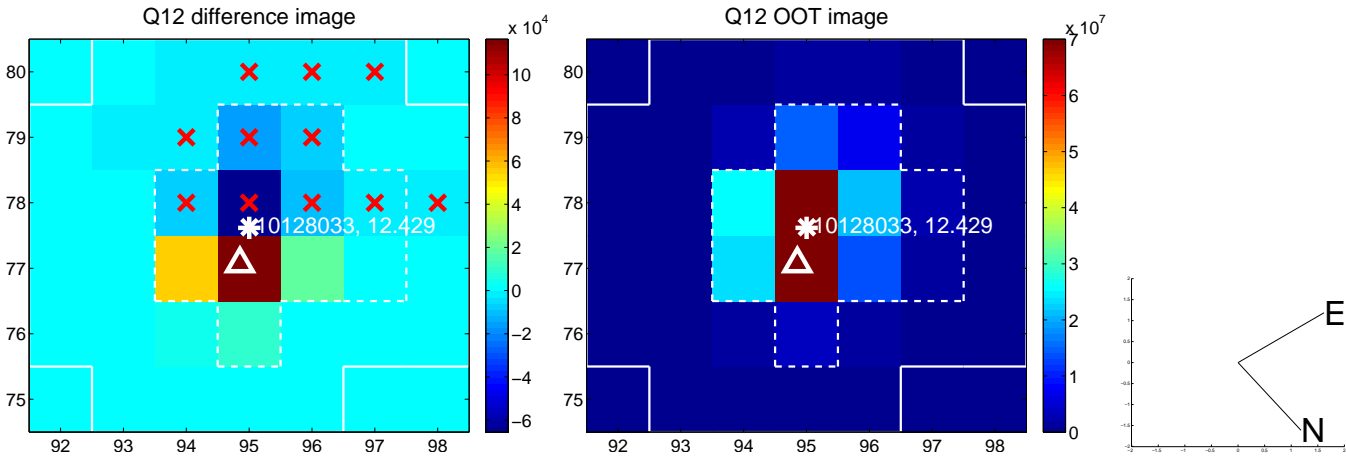
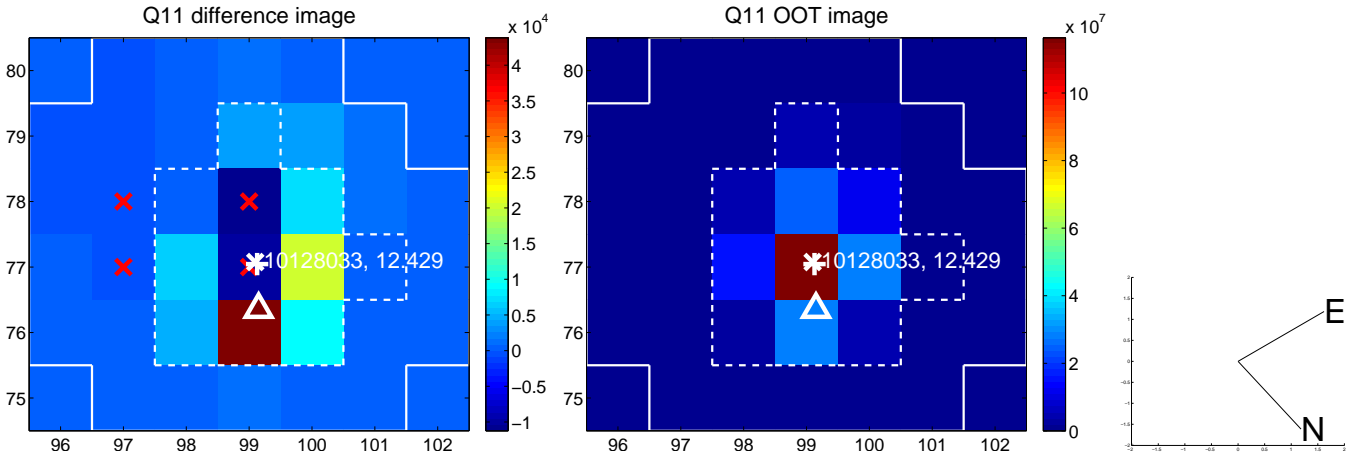
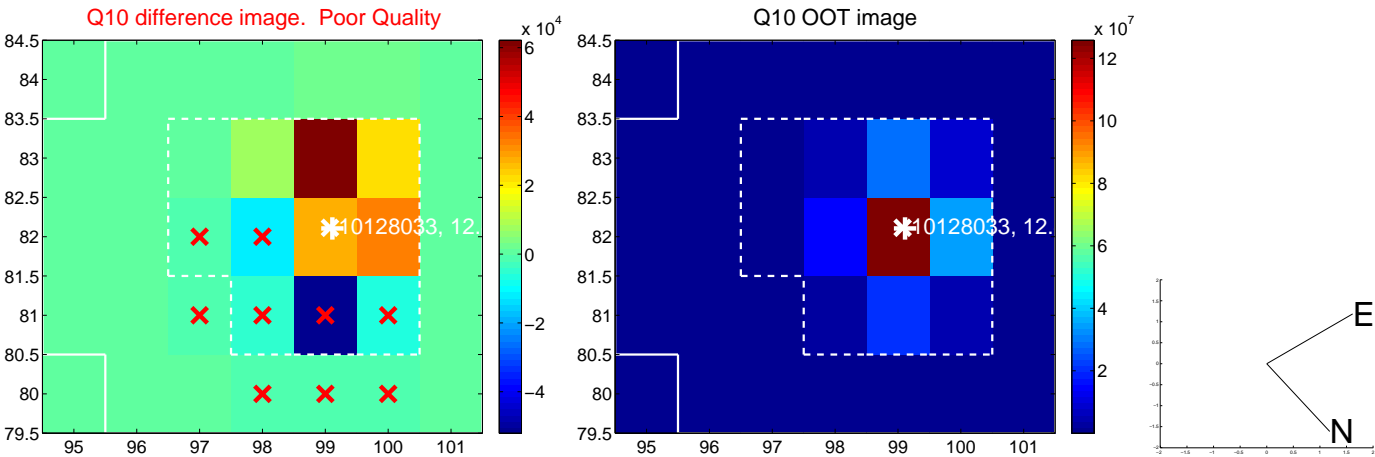
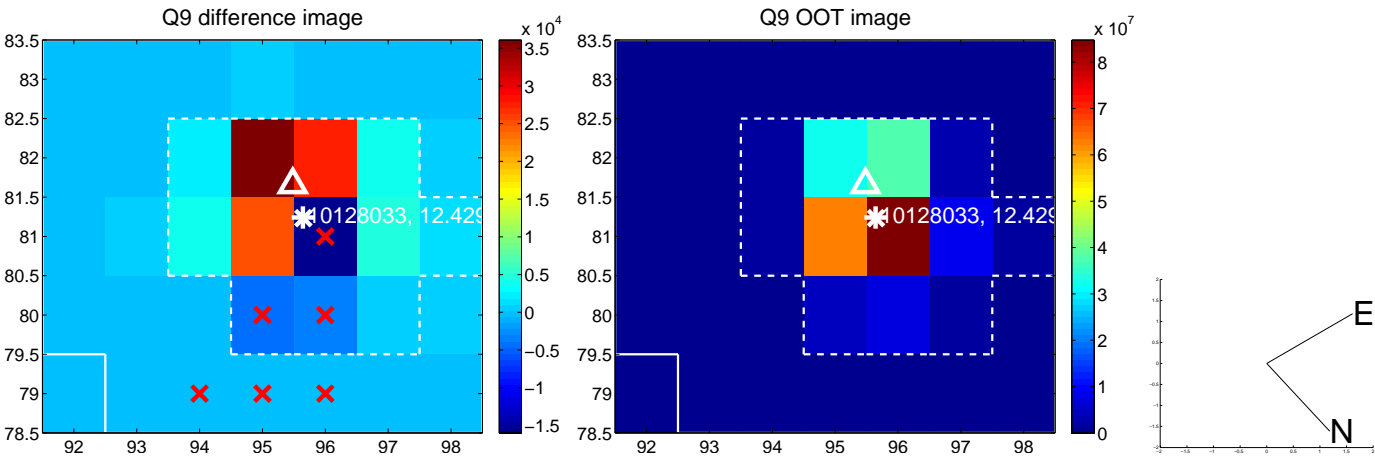
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



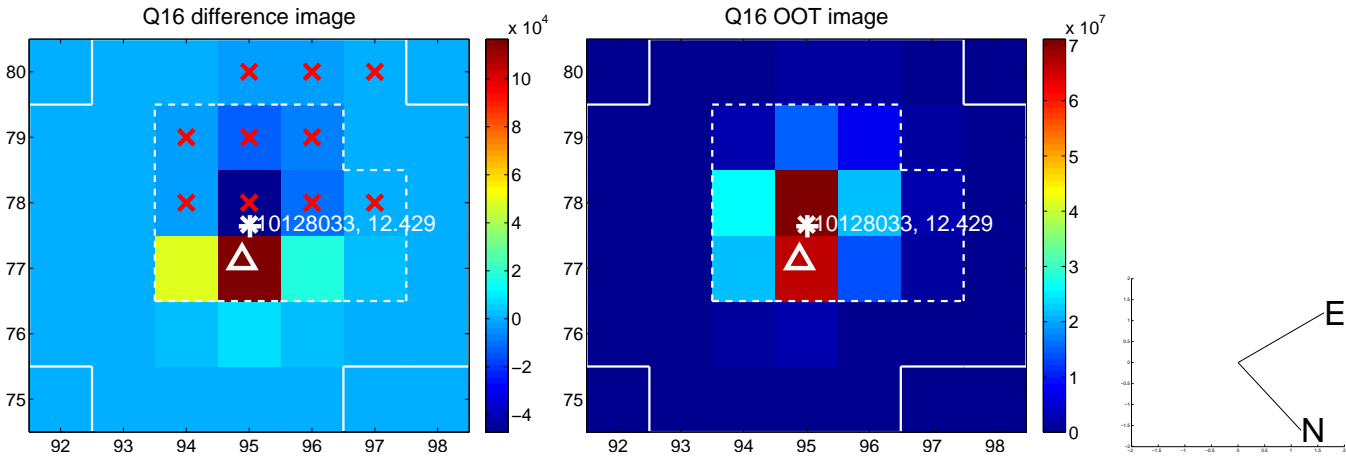
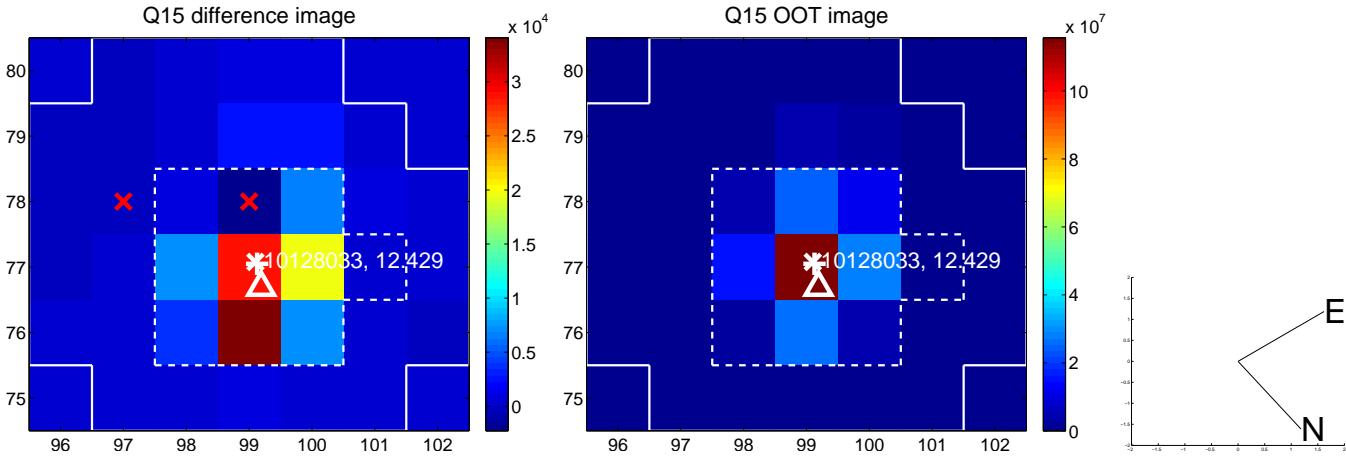
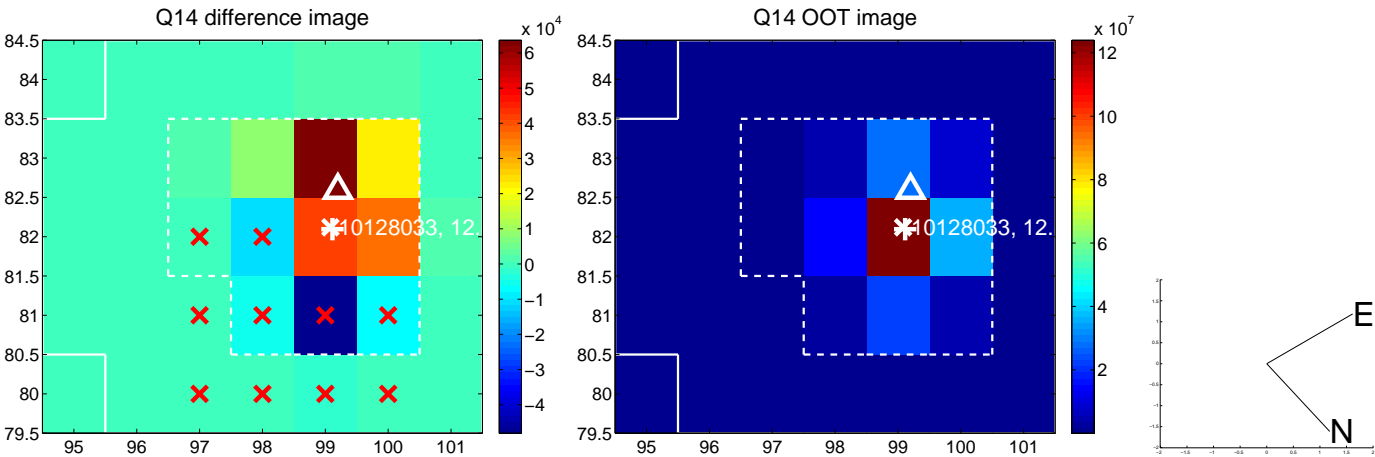
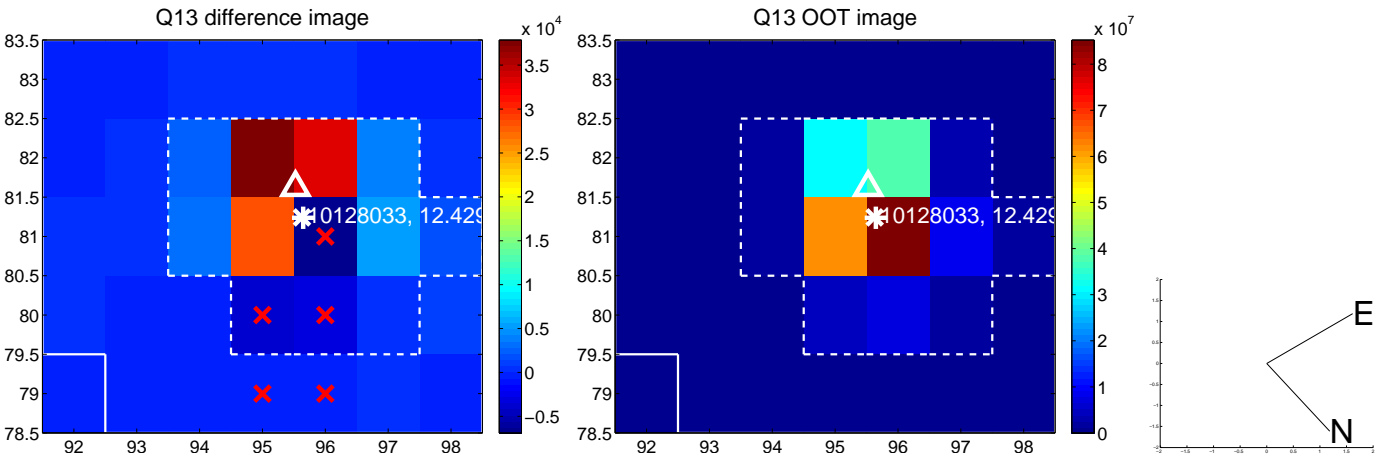
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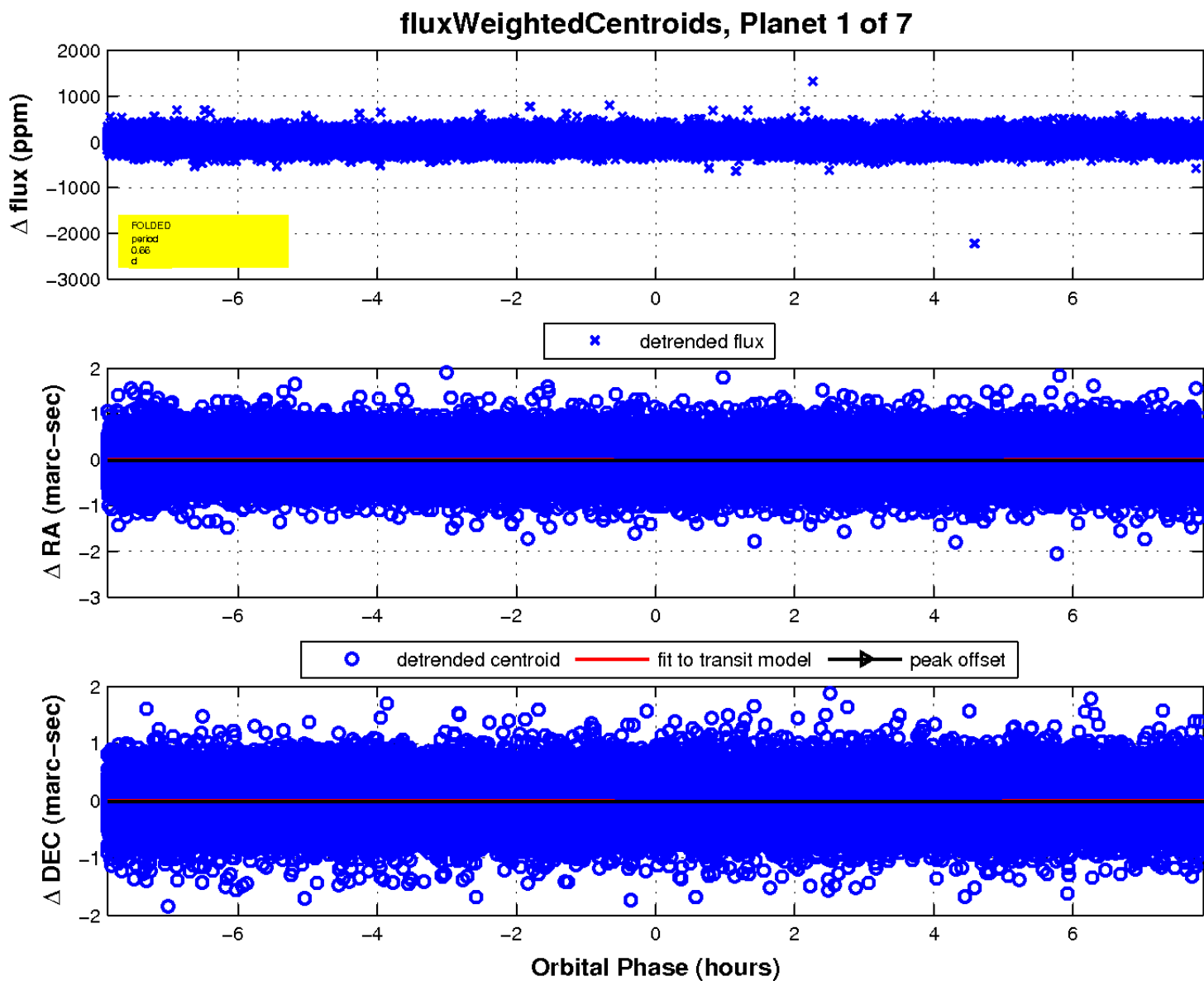
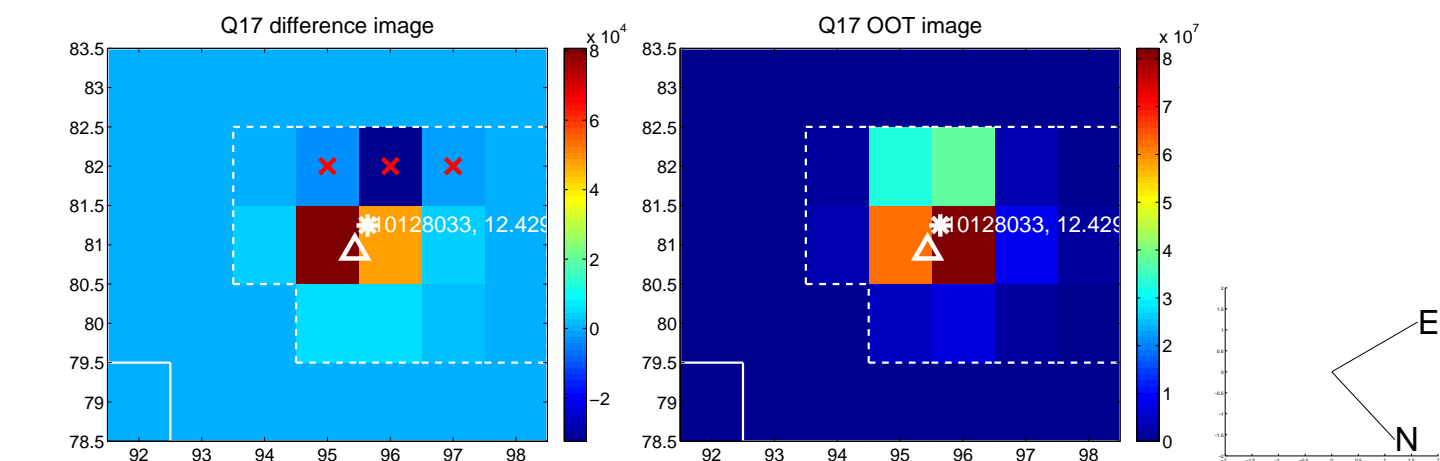
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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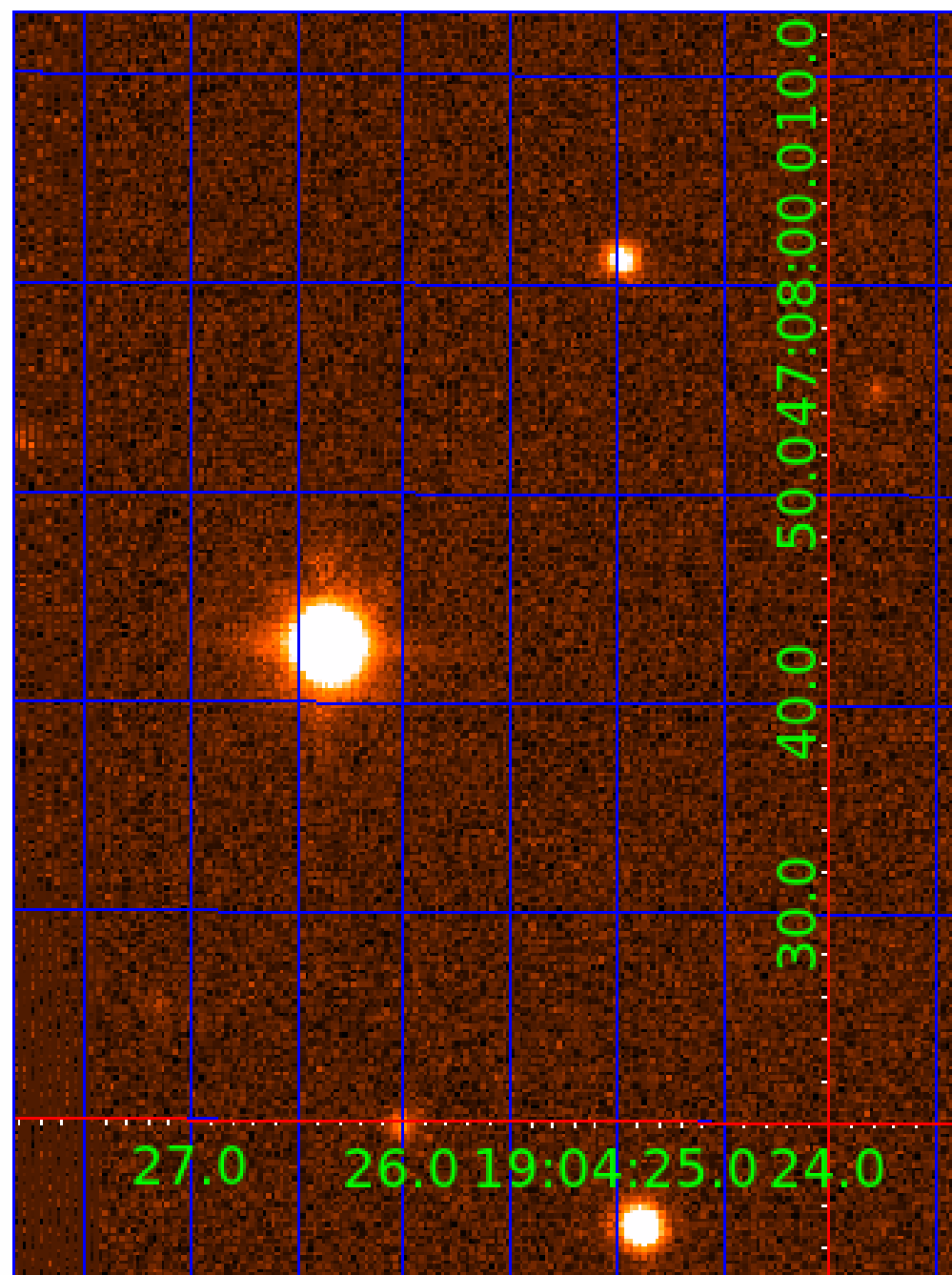


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 010128033

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})
010128033-01	OBS	No	0.656657	132.034110	132.6	2.000	12.3	-1.0	1.82	7296	2.13	28918.67
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Robovetter Results

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010128033-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010128033-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010128033-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010128033-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

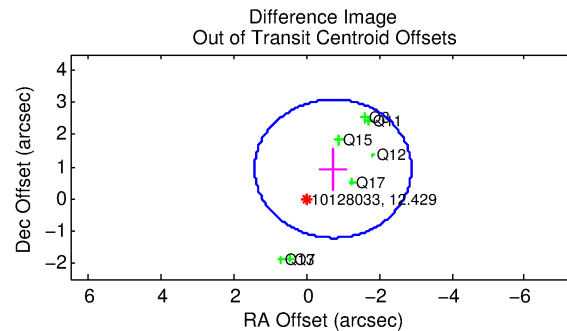
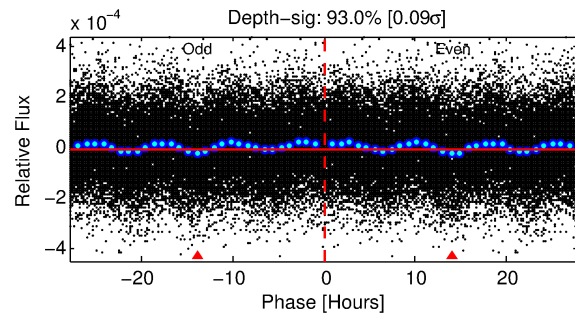
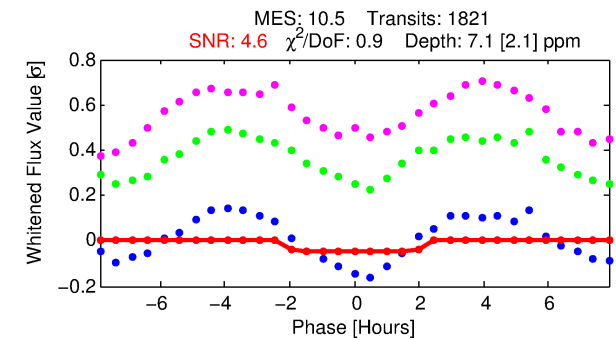
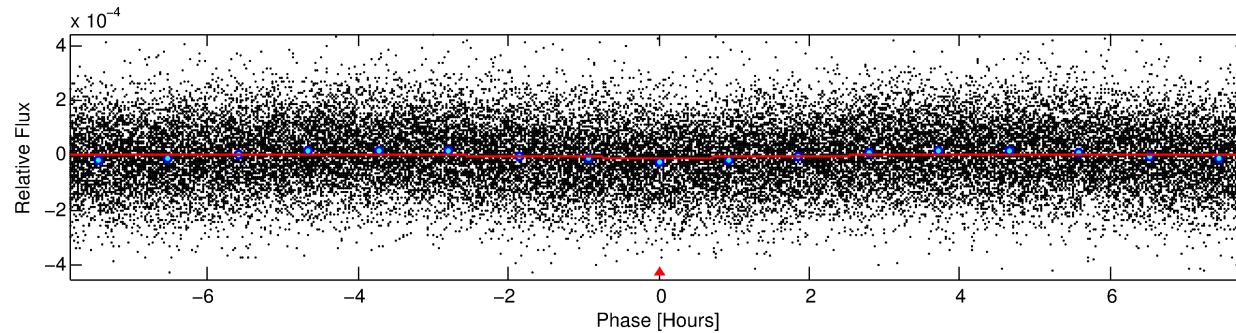
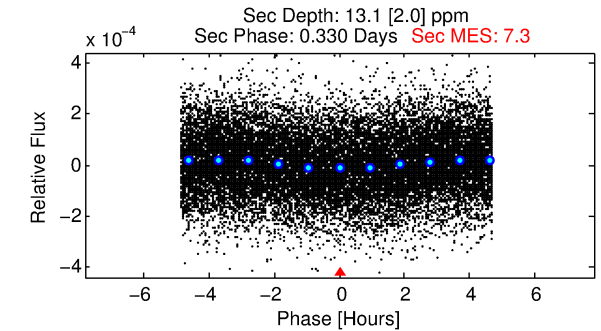
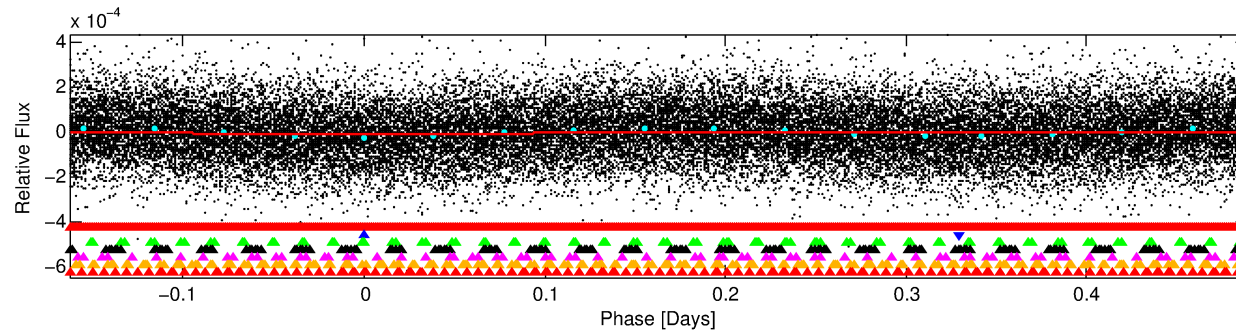
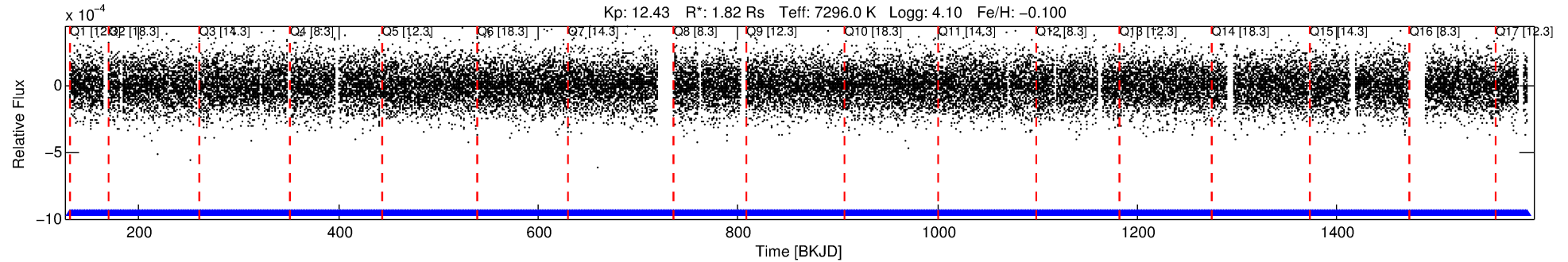
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010128033-02

No Significant Match Found

DV One-Page Summary

KIC: 10128033 Candidate: 2 of 7 Period: 0.652 d



DV Fit Results:

Period = 0.65248 [0.00002] d
Epoch = 131.9031 [0.0091] BKJD
Rp/R* = 0.0025 [0.0039]
a/R* = 1.23 [3.82]
b = 0.31 [27.74]
Seff = 29165.93 [11497.45]
Teq = 3332 [328] K
Rp = 0.50 [0.78] Re
a = 0.0170 [0.0043] AU
Ag = 8.42 [26.26] [0.28σ]
Teffp = 8776 [6811] K [0.80σ]

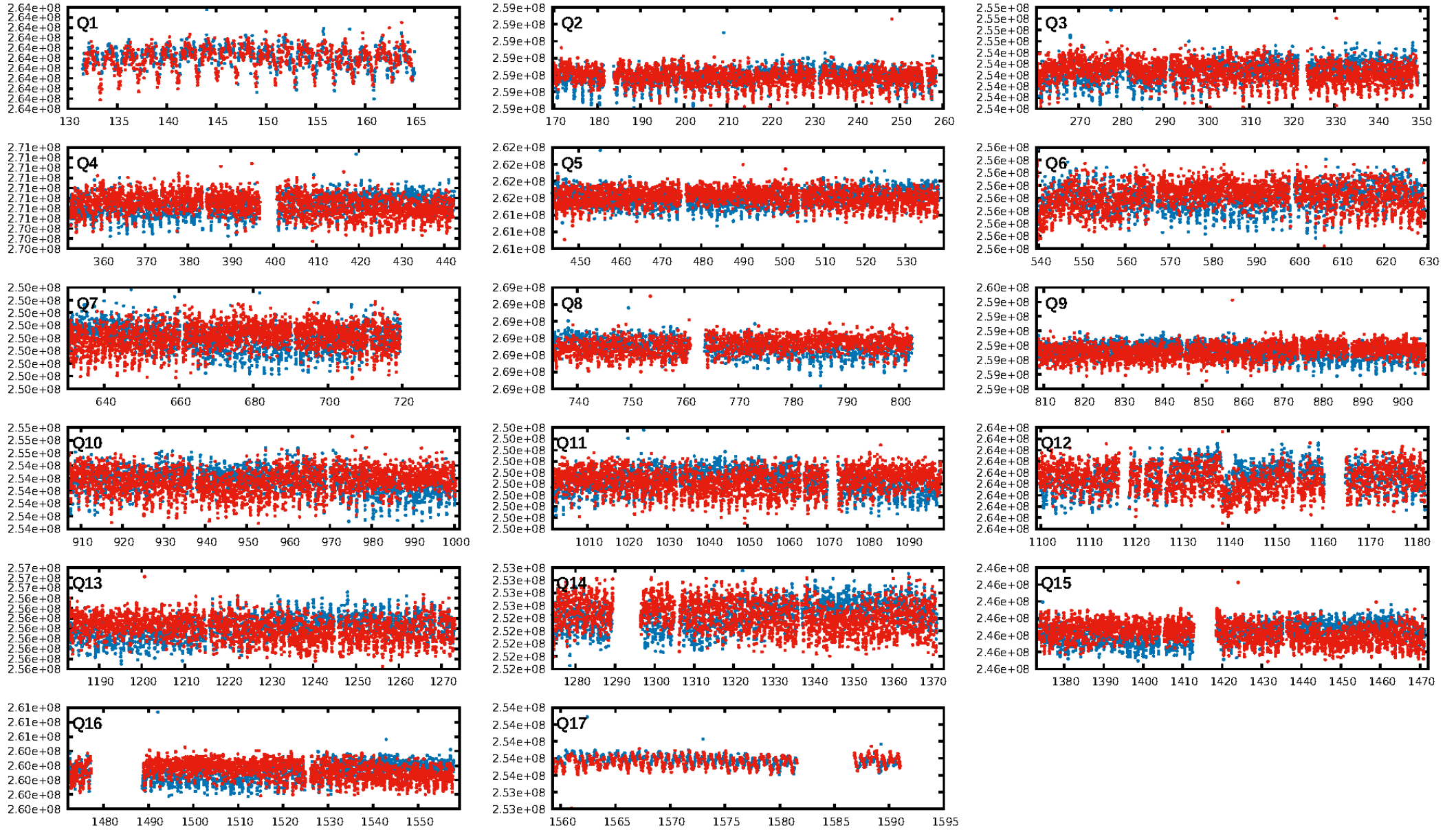
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 1.6% [0.02σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1729/1729]
GhostDiagnostic-chr: 20.31
Centroid-sig: 97.2%
Centroid-so: 0.117 arcsec [0.10σ]
OotOffset-rm: 1.187 arcsec [1.65σ]
KicOffset-rm: 1.165 arcsec [1.66σ]
OotOffset-st: 0/4/1/2 [7]
KicOffset-st: 0/4/1/2 [7]
DiffImageQuality-fgm: 0.71 [5/7]
DiffImageOverlap-fno: 0.00 [0/17]

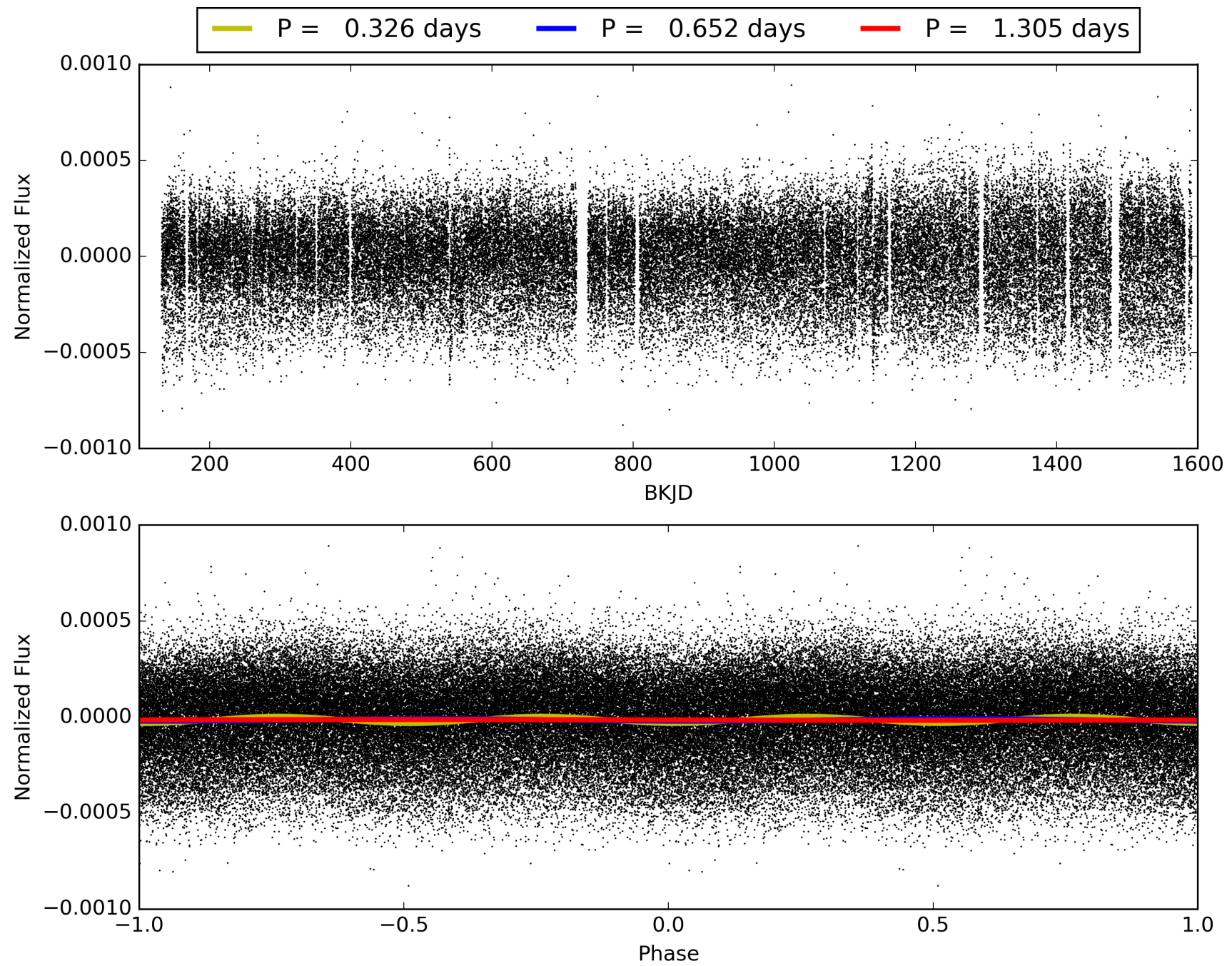
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:50:07 Z

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

TCE 010128033-02, PDC Light Curves

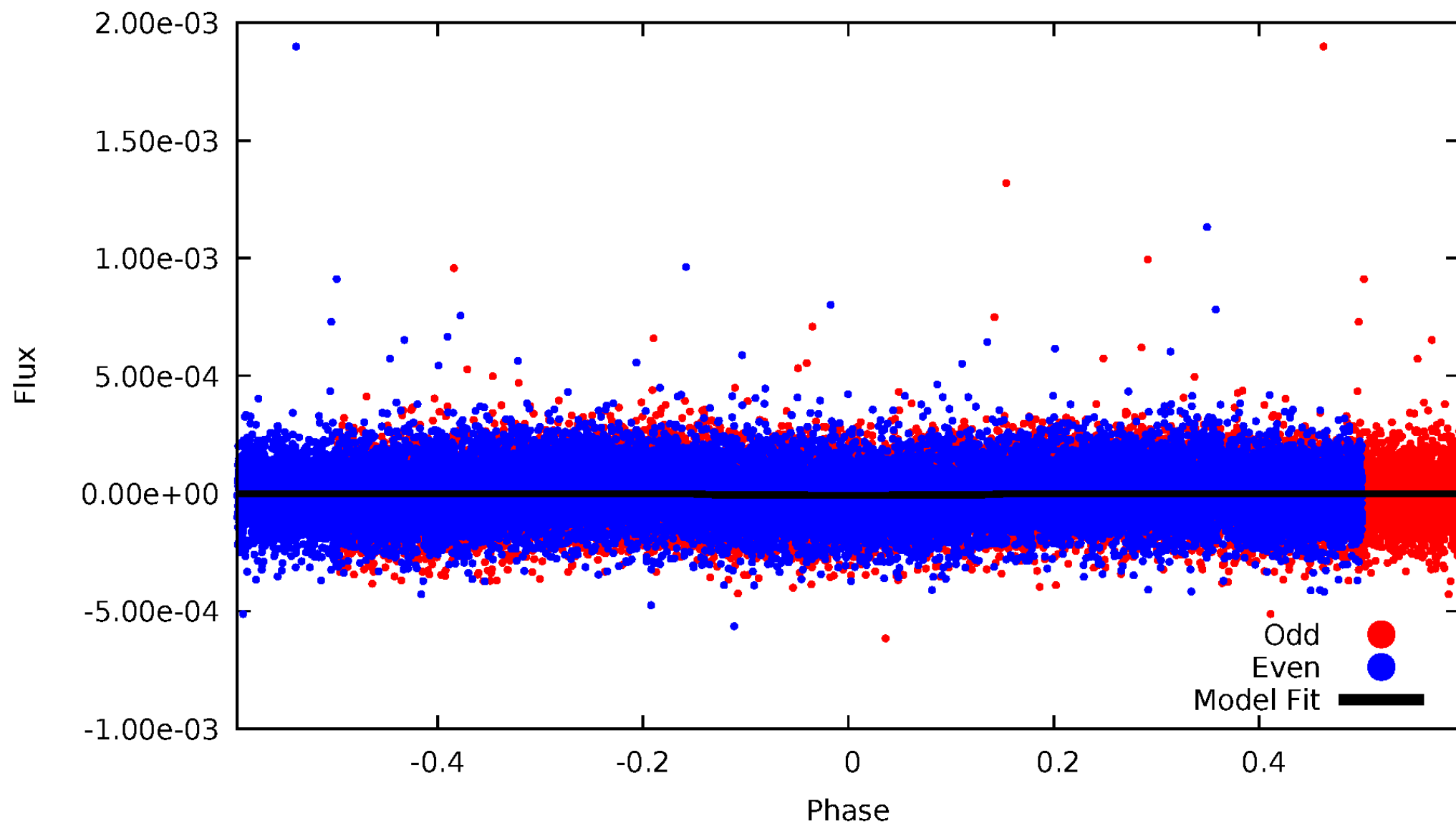


TCE 010128033-02



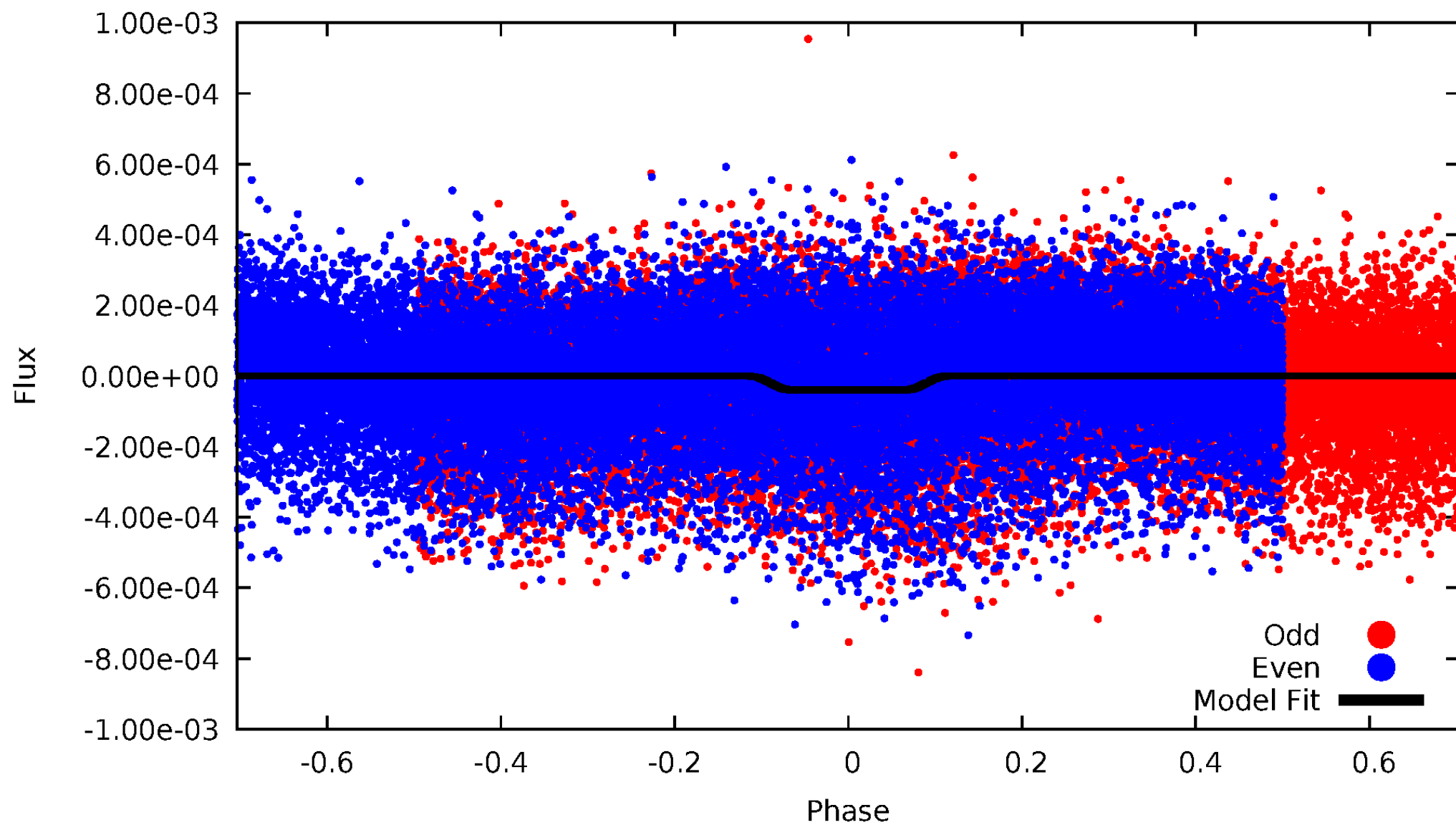
DV Odd/Even

TCE 010128033-02



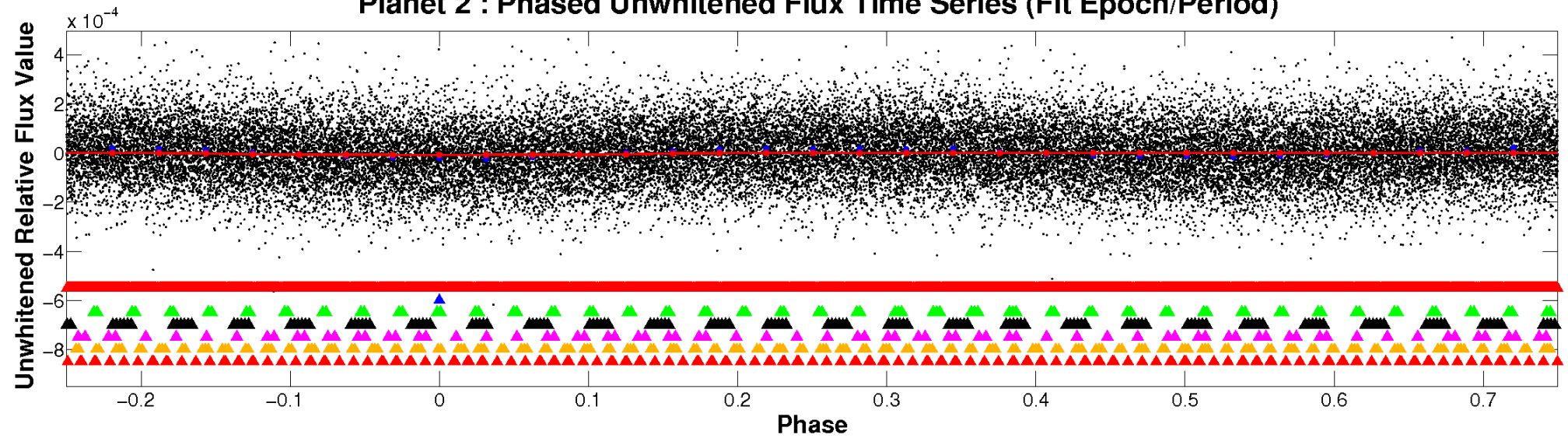
ALT Odd/Even

TCE 010128033-02

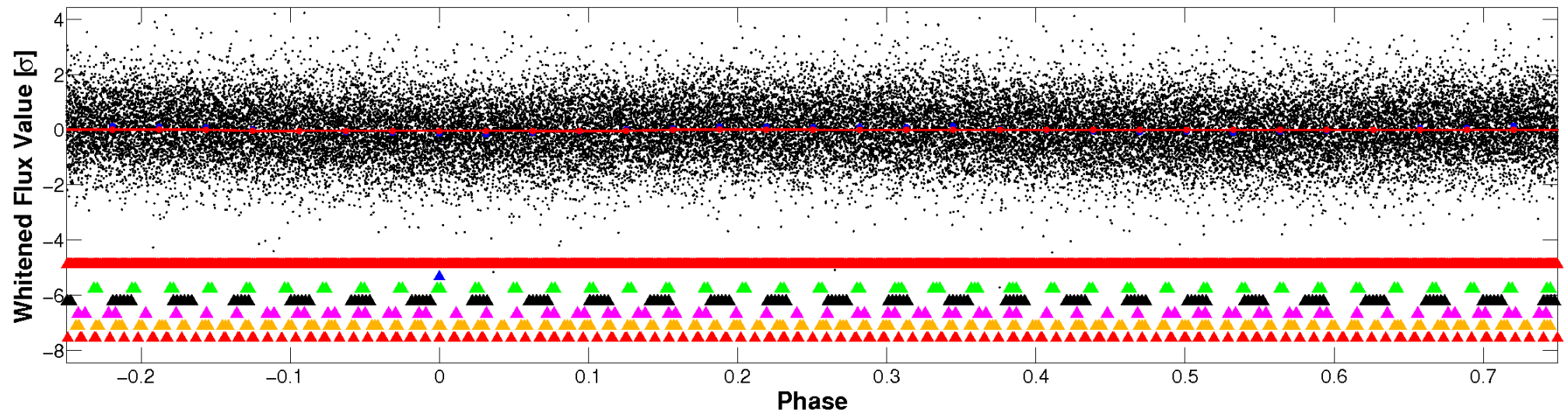


Non-Whitened Vs. Whitened Light Curve

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

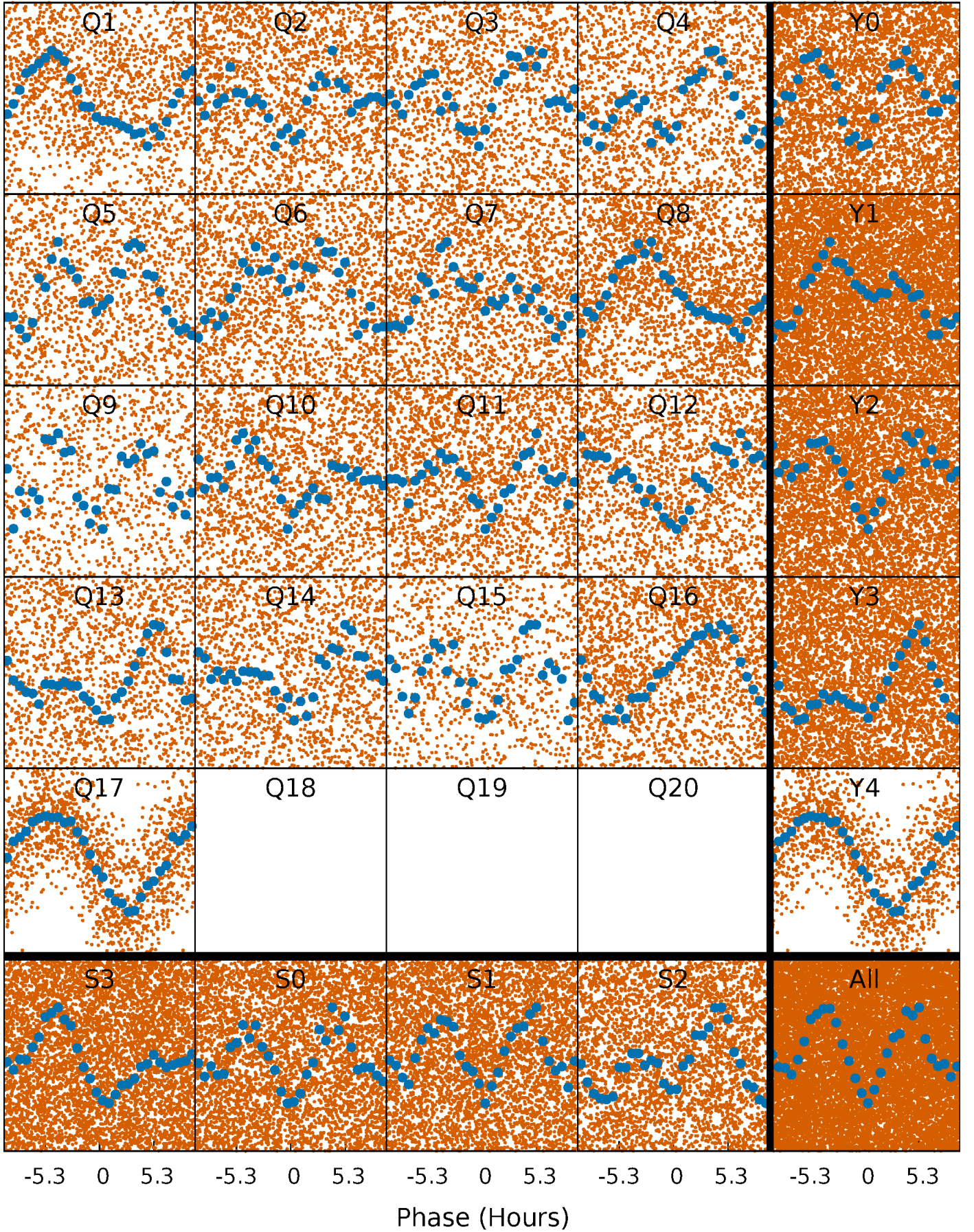


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



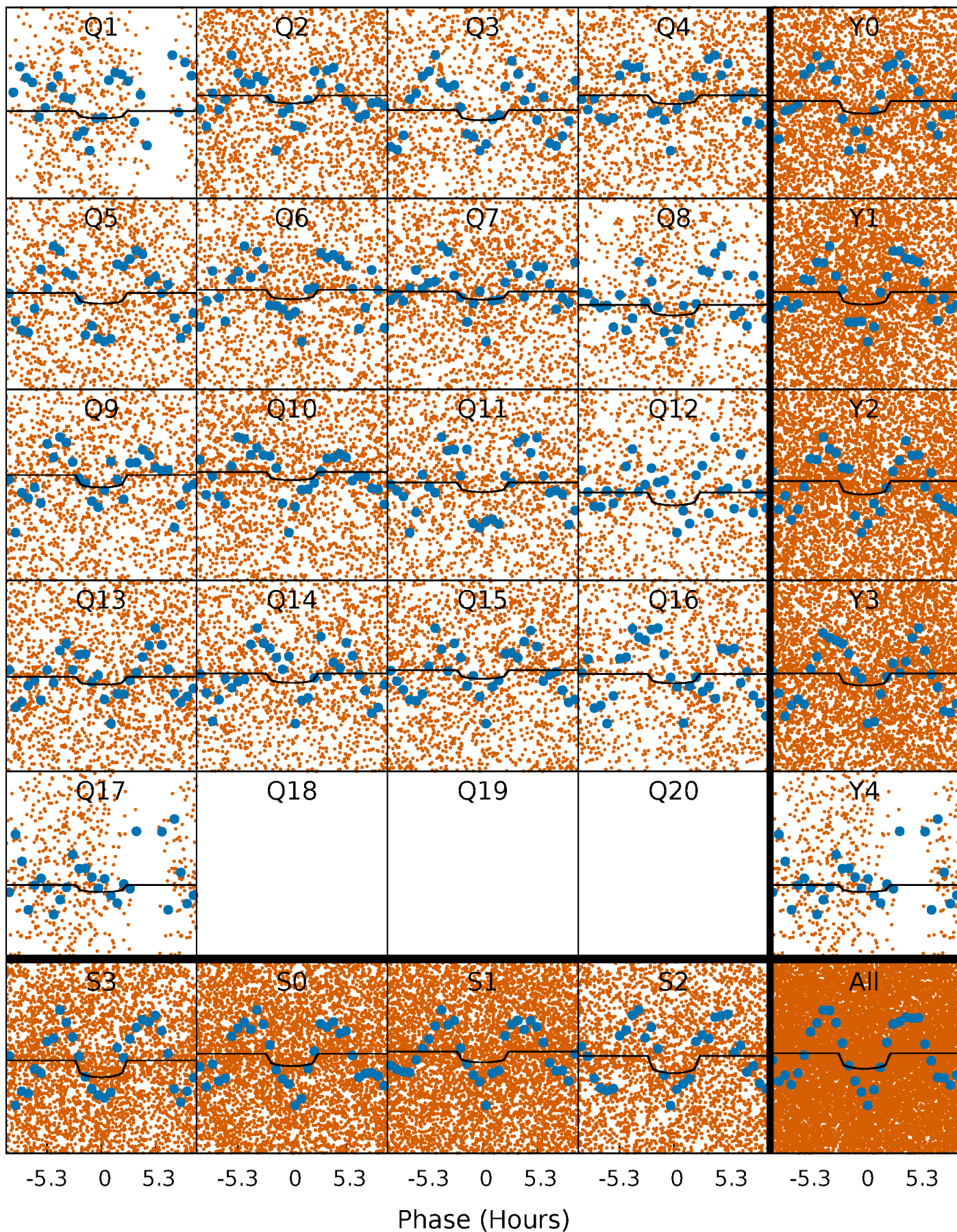
PDC Quarter-Phased Transit Curves

TCE 010128033-02 P= 0.652477 Days $T_0=131.903081$ (BKJD)



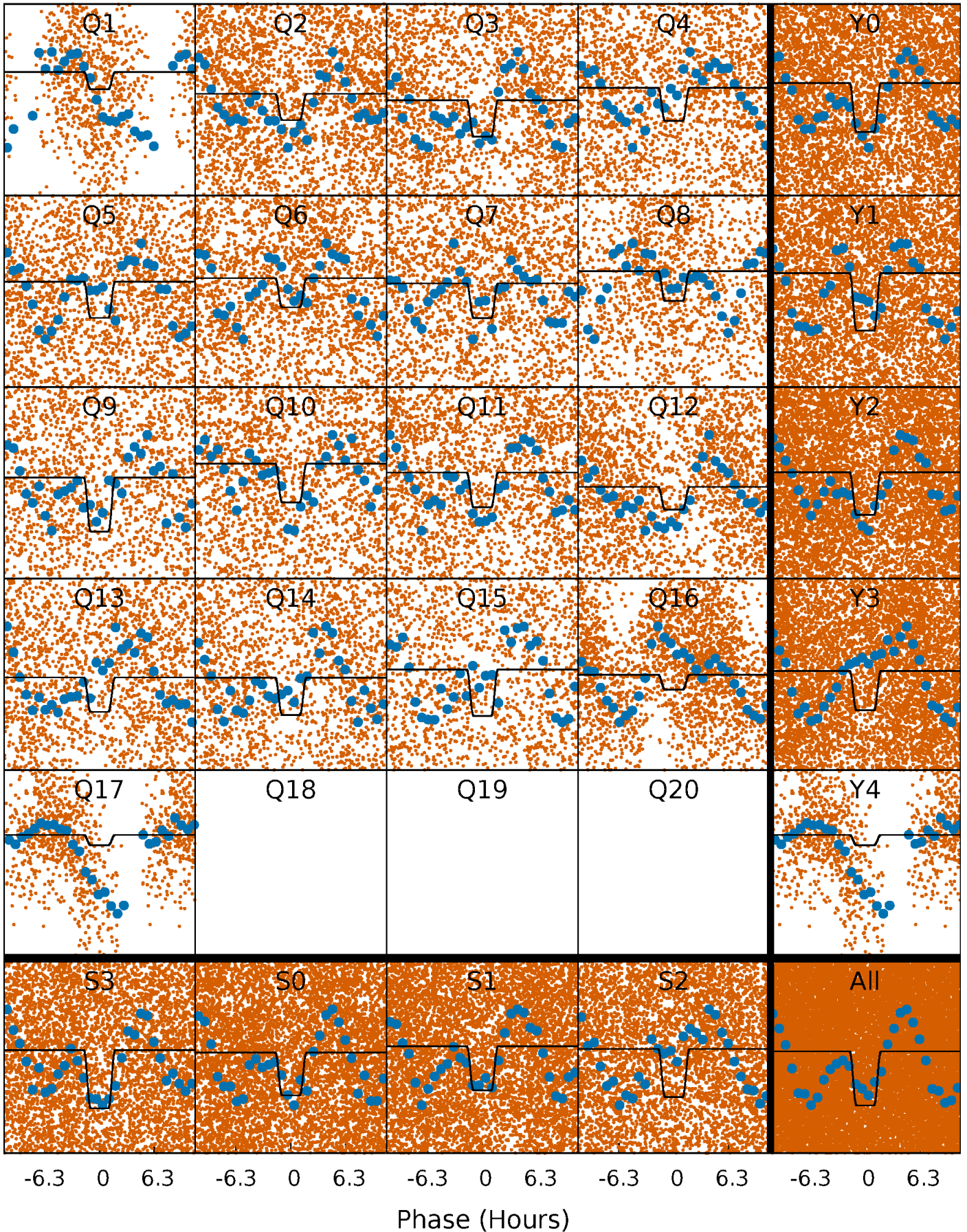
DV Quarter-Phased Transit Curves

TCE 010128033-02 P= 0.652477 Days $T_0=131.903081$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

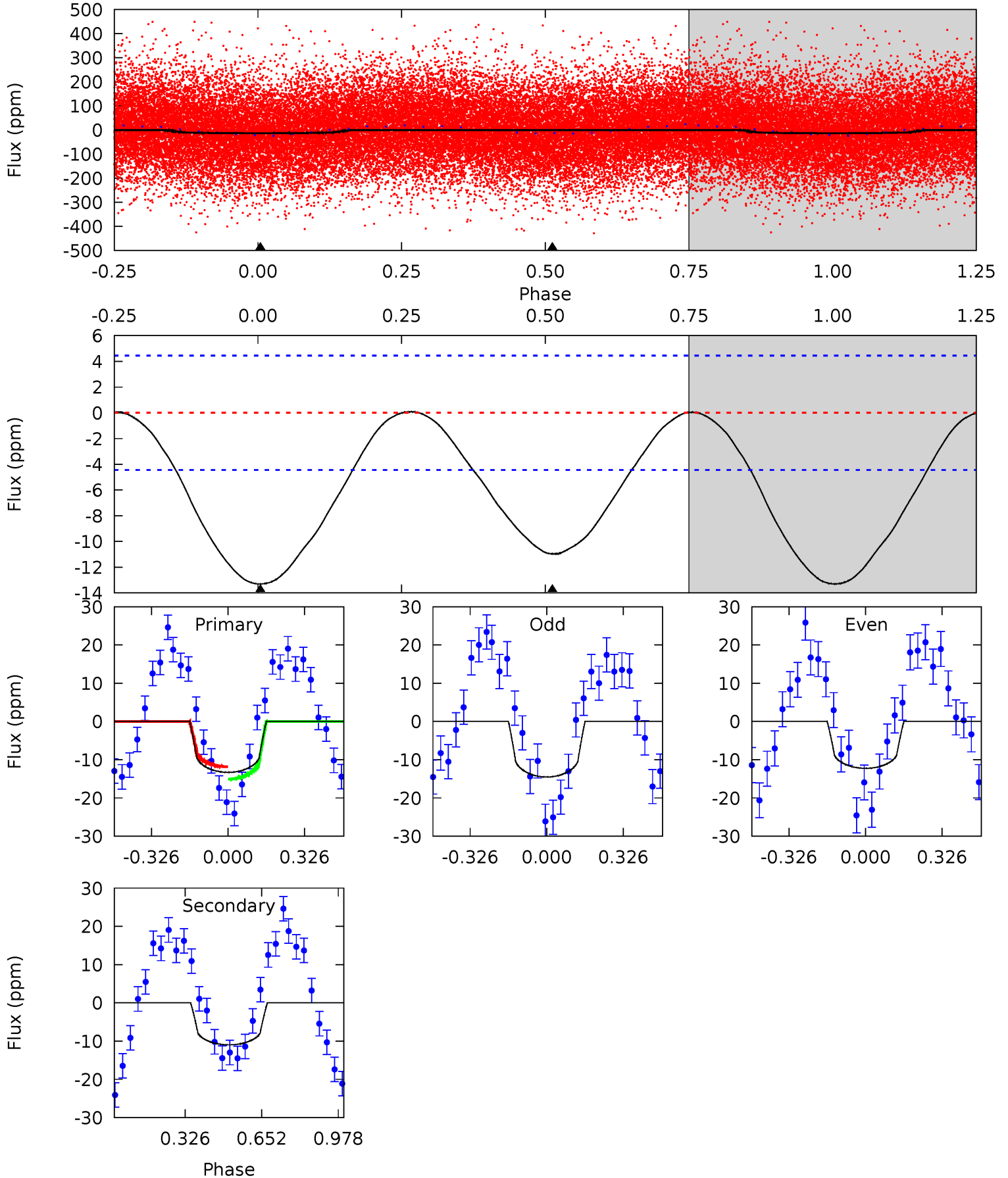
TCE 010128033-02 P= 0.652521 Days $T_0=131.839007$ (BKJD)



DV Model-Shift Uniqueness Test

010128033-02, P = 0.652477 Days, E = 131.250604 Days

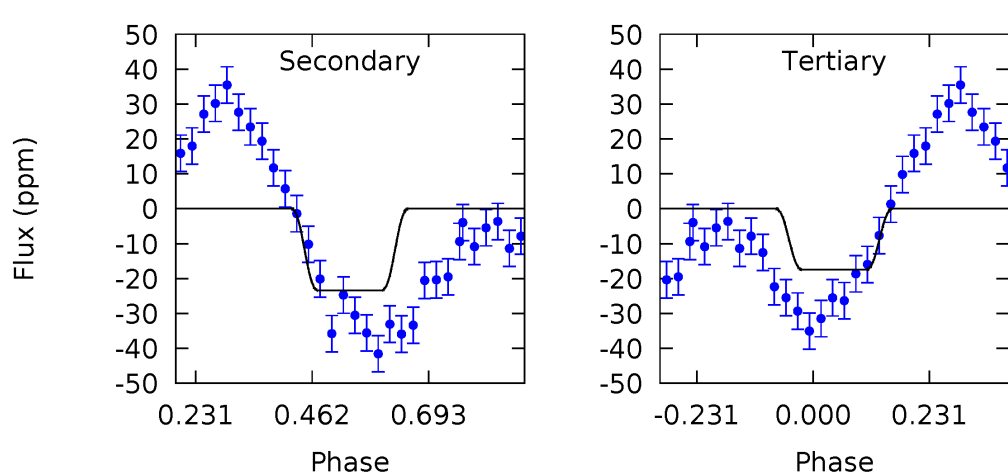
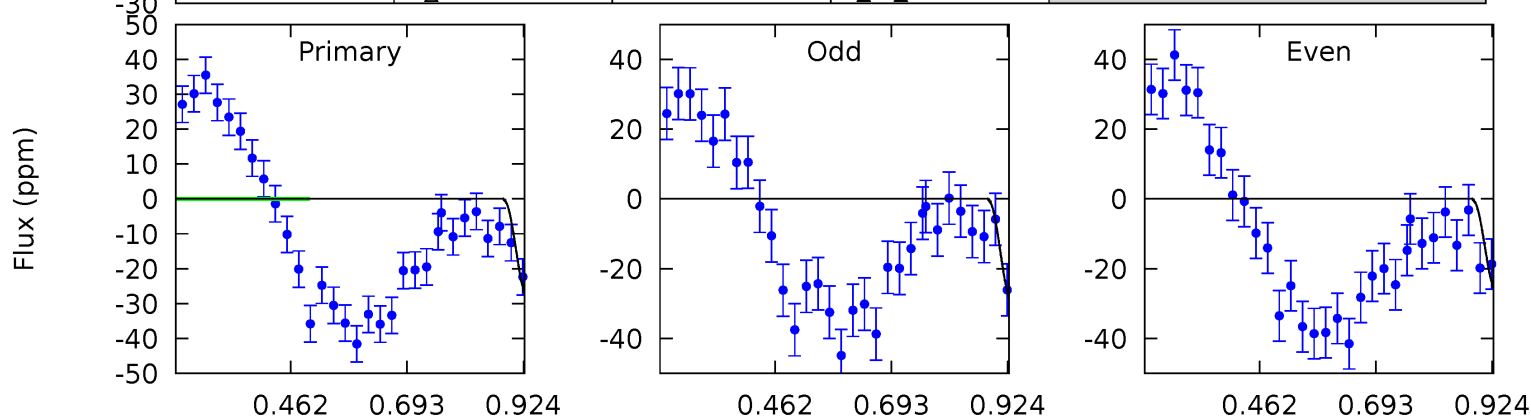
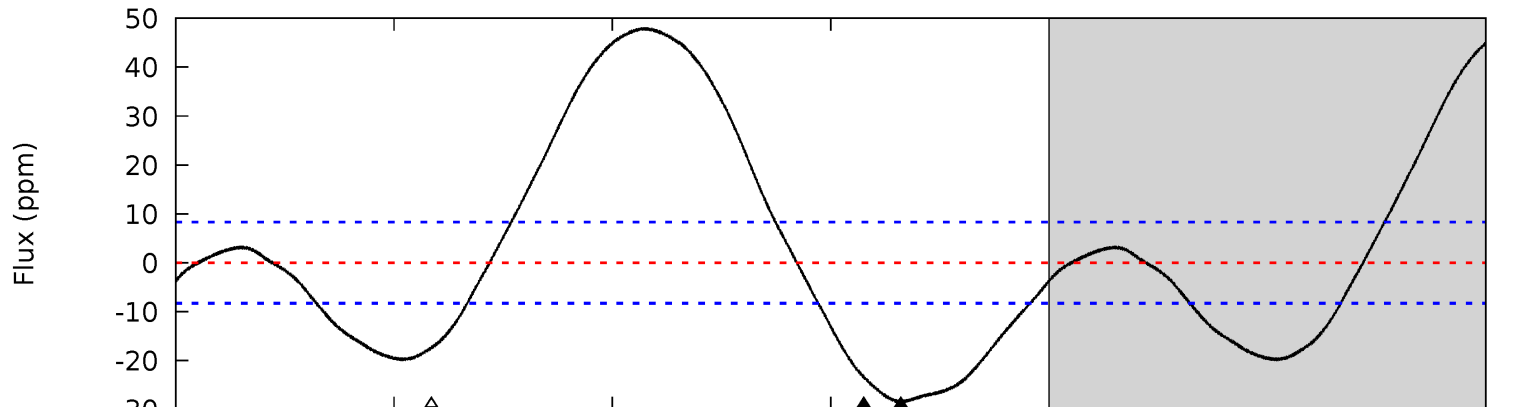
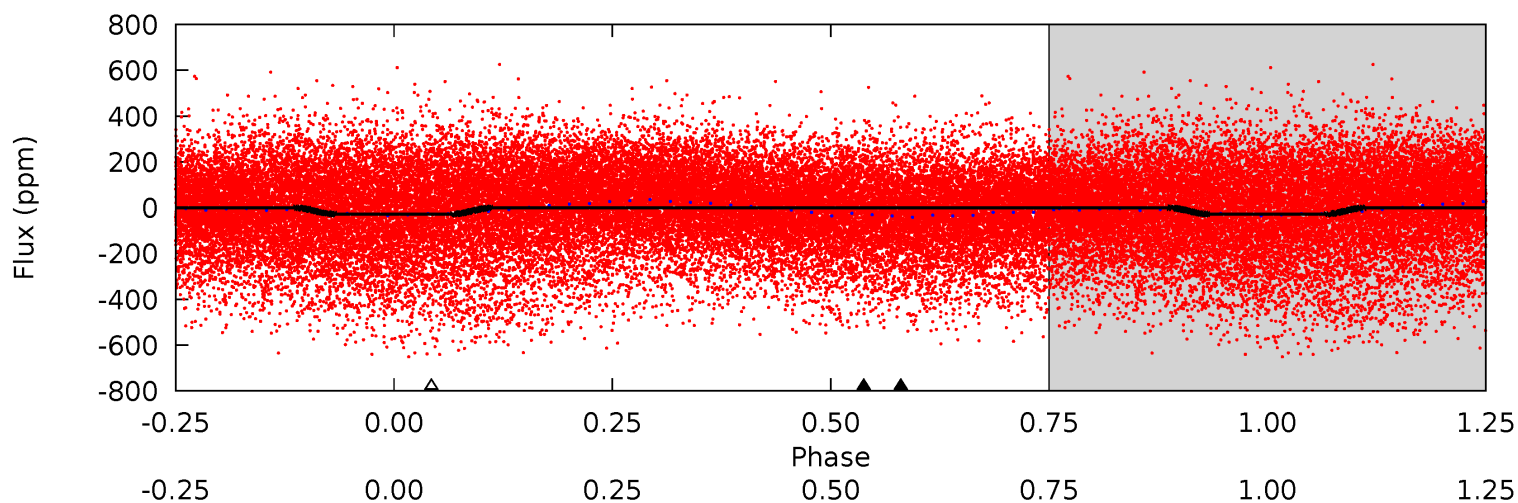
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.9	10.6	0	0	4.31	0.98	0.12	12.9	12.9	10.6	10.6	1.10	0.81	0.01	1.58



Alt Model-Shift Uniqueness Test

010128033-02, P = 0.652521 Days, E = 131.186486 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
15.0	12.3	9.23	0	4.39	1.20	12.1	5.78	15.0	3.10	12.3	0.74	2.08	0.63	0.01



Stellar Parameters For KIC 010128033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+228}_{-330}	$4.103^{+0.165}_{-0.182}$	$-0.100^{+0.200}_{-0.350}$	$1.818^{+0.576}_{-0.384}$	$1.526^{+0.234}_{-0.257}$	$0.358^{+0.319}_{-0.179}$
	+3%/-5%	+4%/-4%	+200%/-350%	+32%/-21%	+15%/-17%	+89%/-50%
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 010128033-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-11 ± 1	$0.72^{+0.71}_{-0.48}$	4653^{+352}_{-344}	6676^{+8569}_{-2141}	$3.281^{+28.991}_{-2.477}$
Alt.	-23 ± 2	$1.27^{+0.80}_{-0.70}$	4640^{+397}_{-329}	6019^{+3839}_{-1439}	$2.296^{+8.189}_{-1.447}$

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

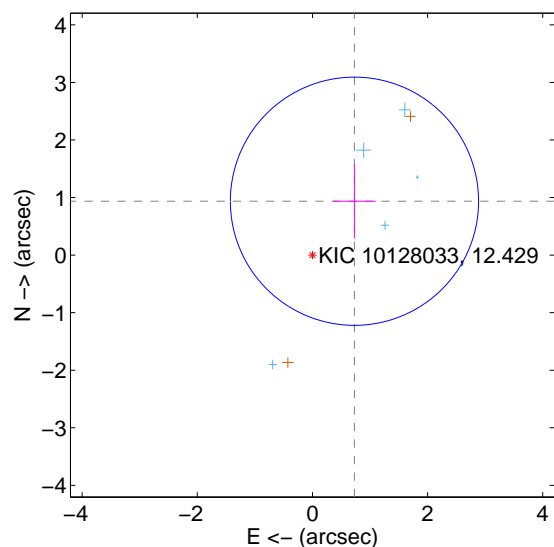
Supplemental centroid analysis for 010128033-02. Kepler magnitude: 12.43. Transit SNR 4.58

There are 5 quarters with good PRF difference image offsets

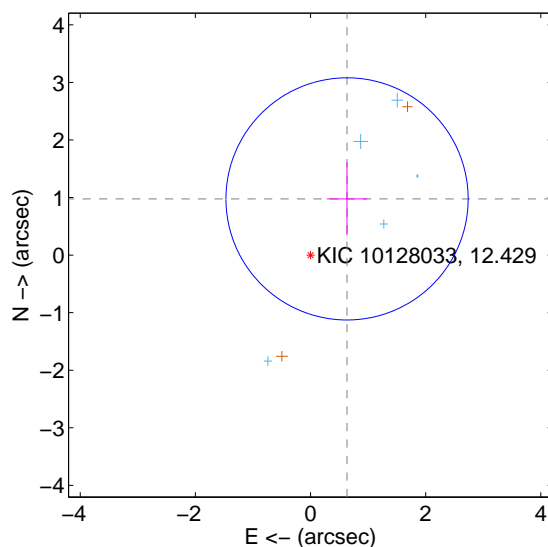
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.187 ± 0.719	1.65	-0.730 ± 0.371	0.936 ± 0.645
PRF-fit source offset from KIC position	1.165 ± 0.701	1.66	-0.635 ± 0.350	0.977 ± 0.634
photometric centroid source offset	0.12 ± 1.13	0.10	-0.02 ± 1.15	-0.11 ± 1.13

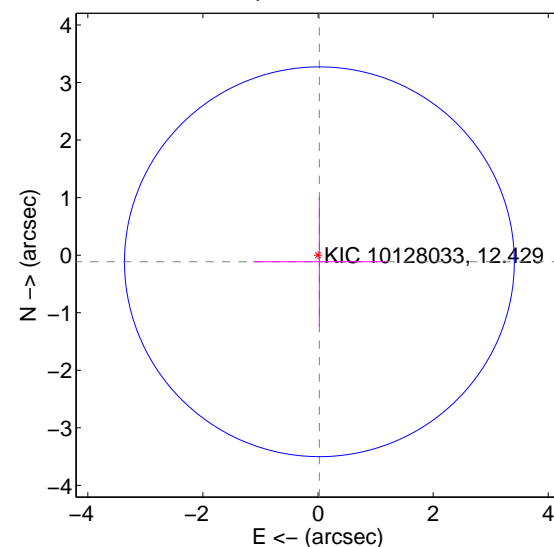
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

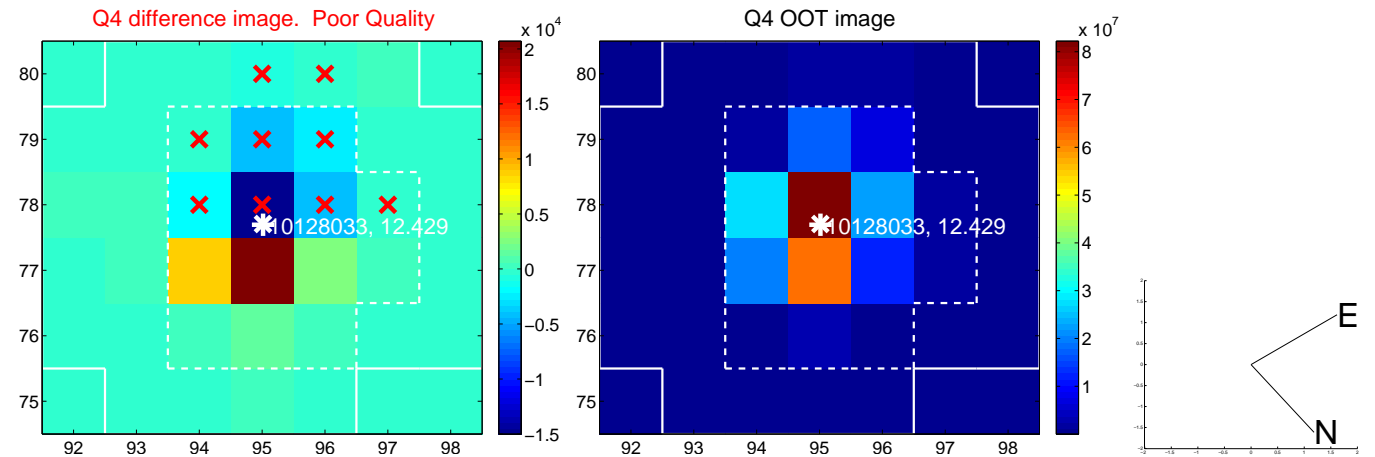
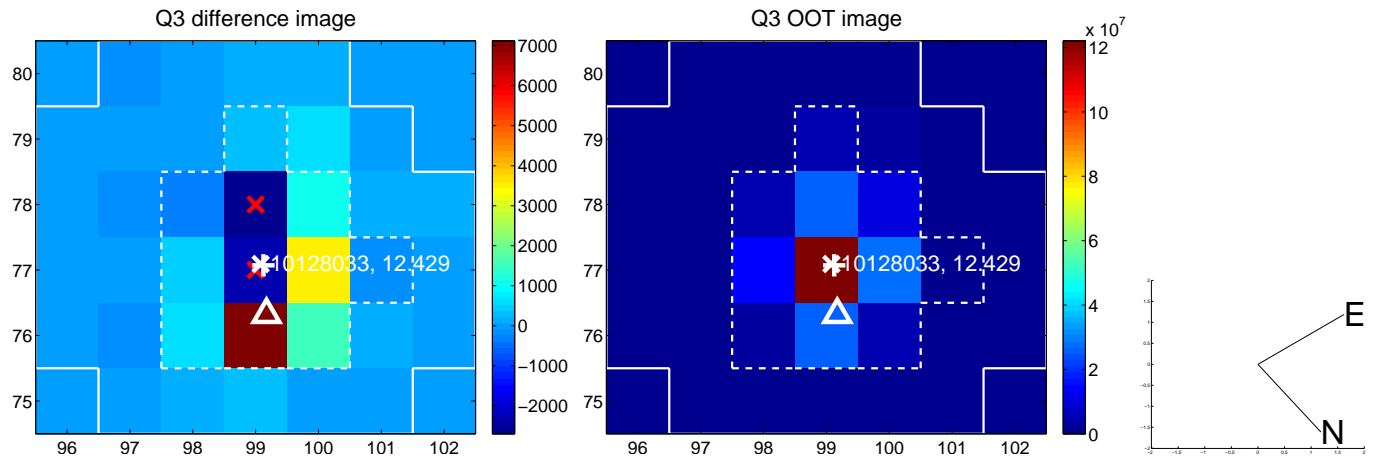
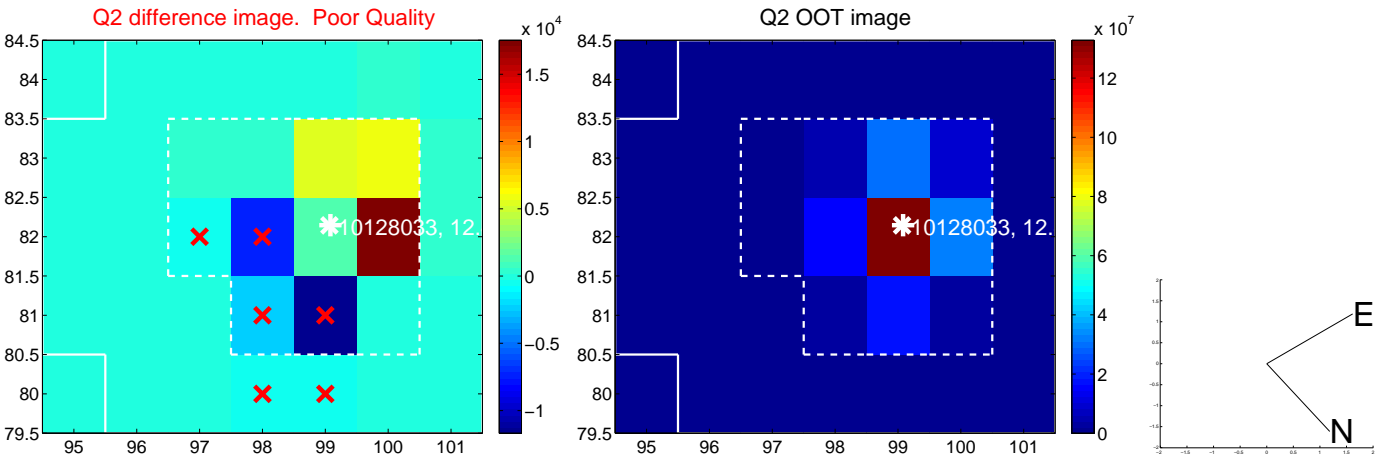
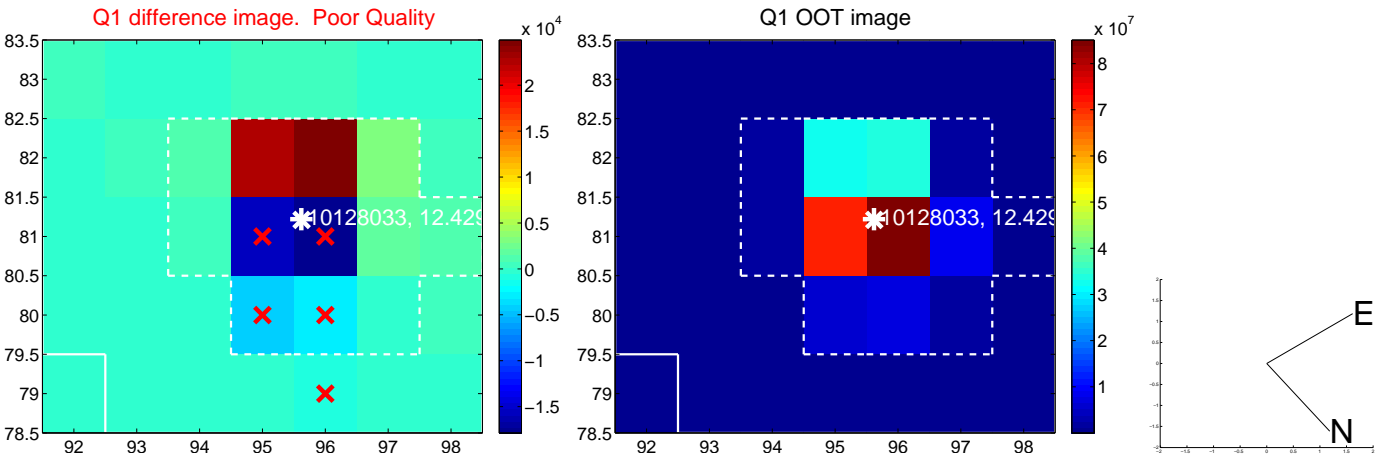


offset from photometric centroids

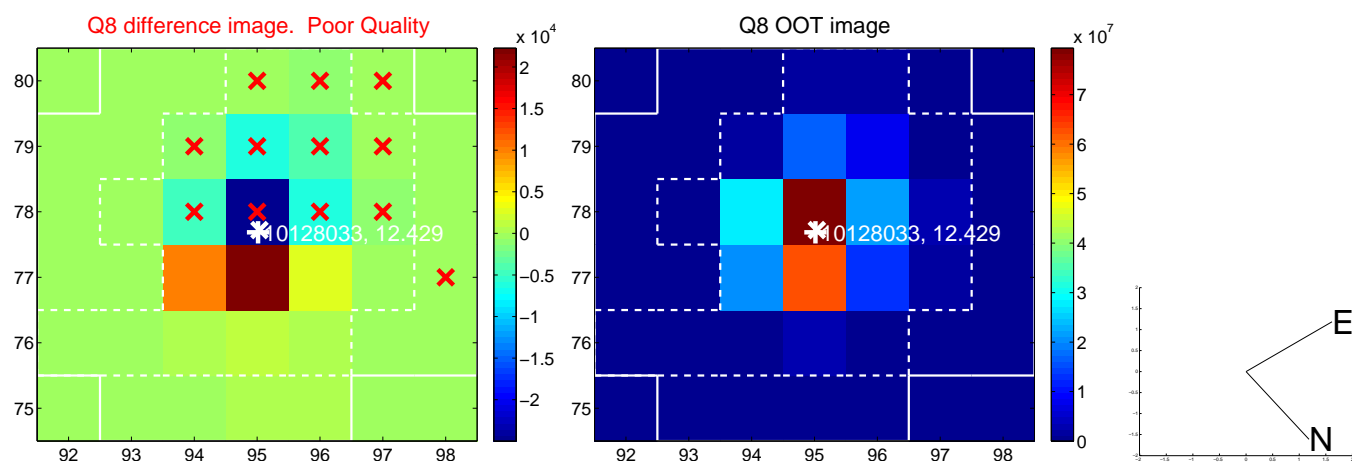
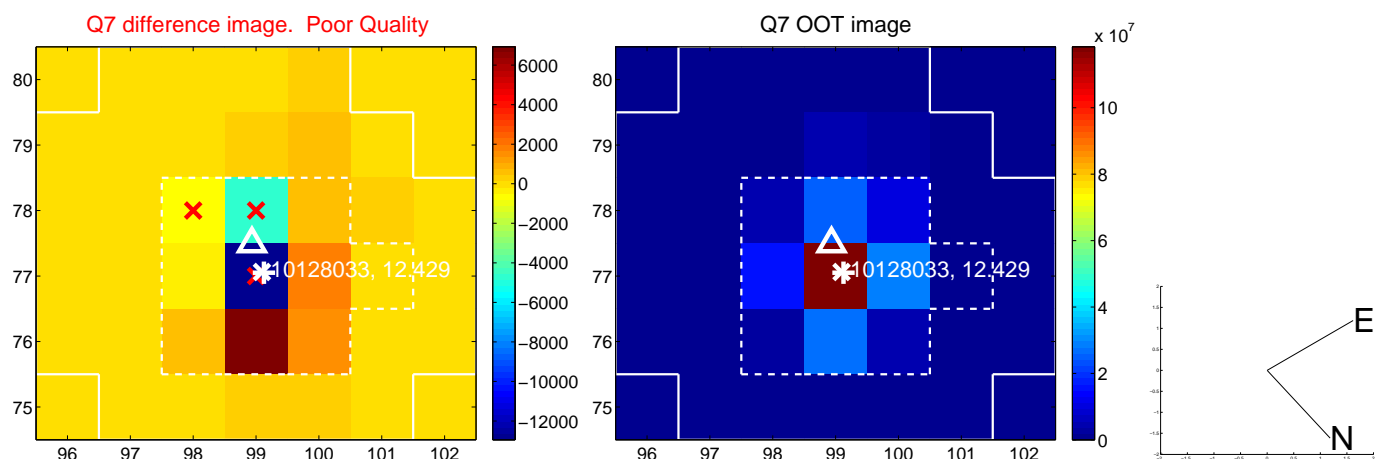
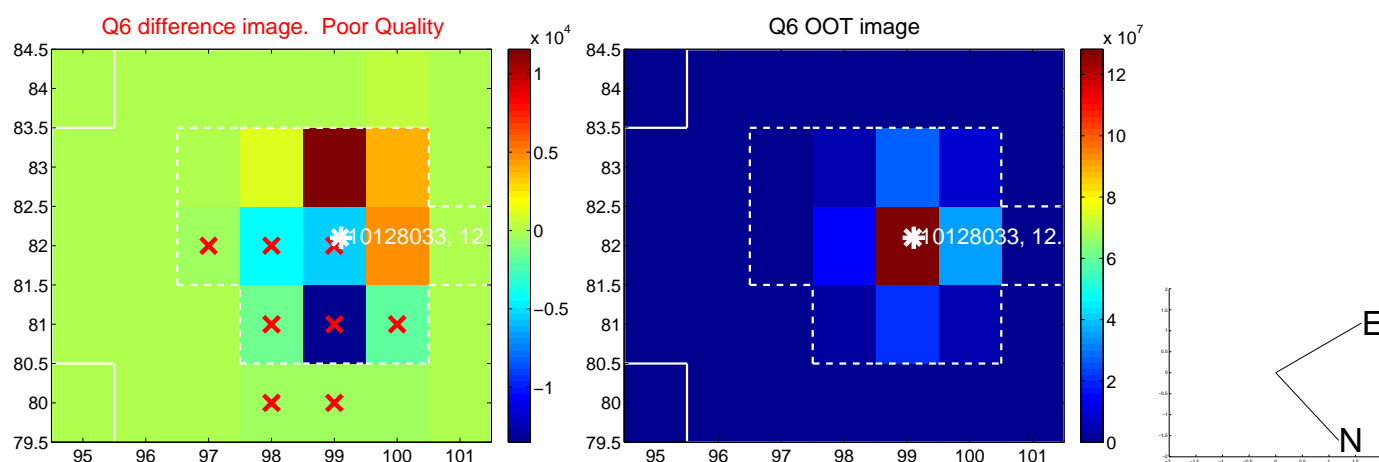
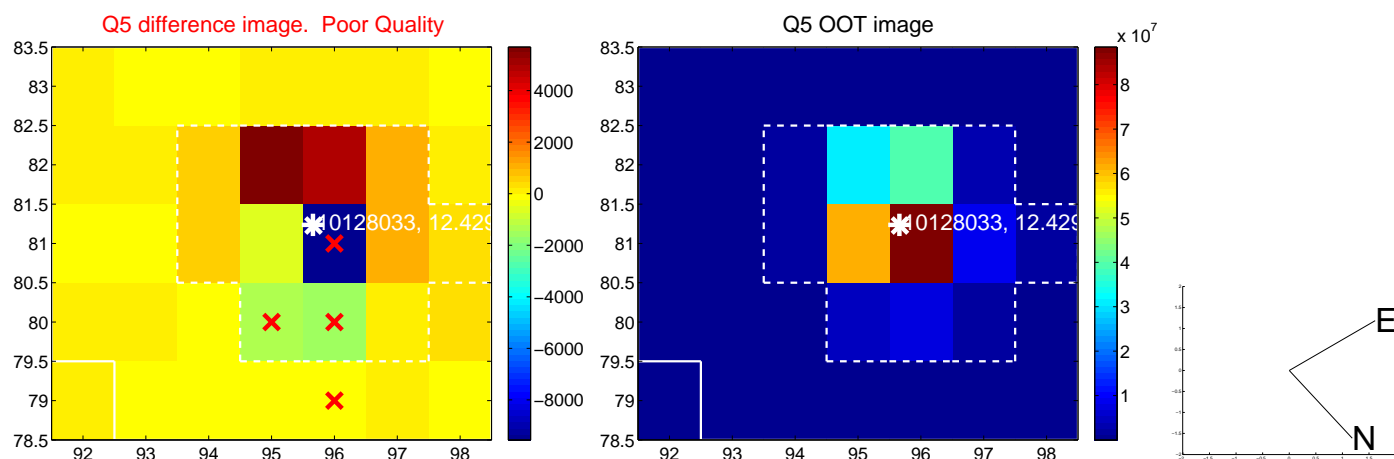


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

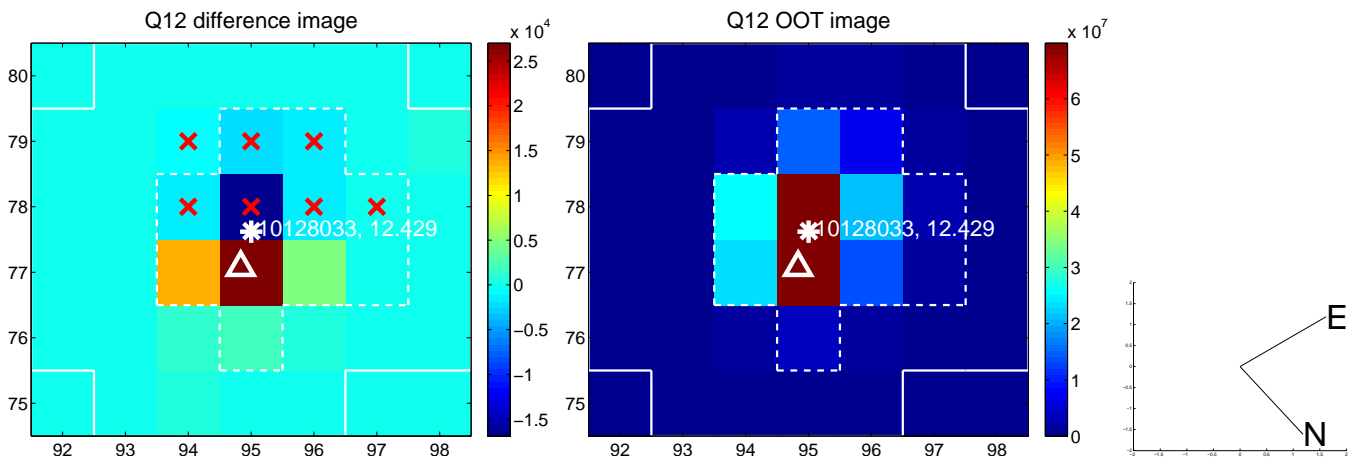
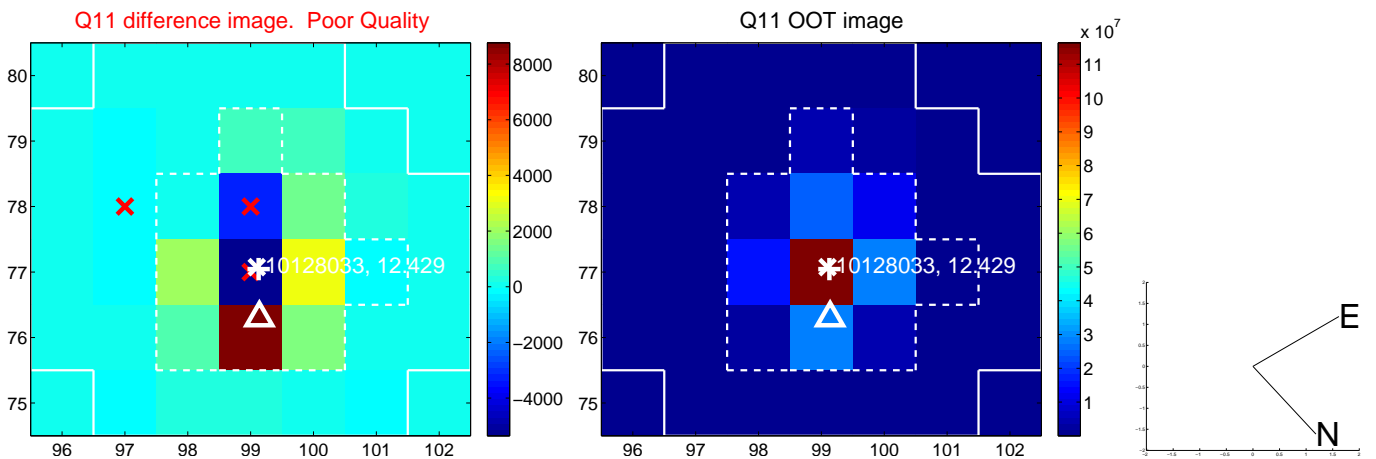
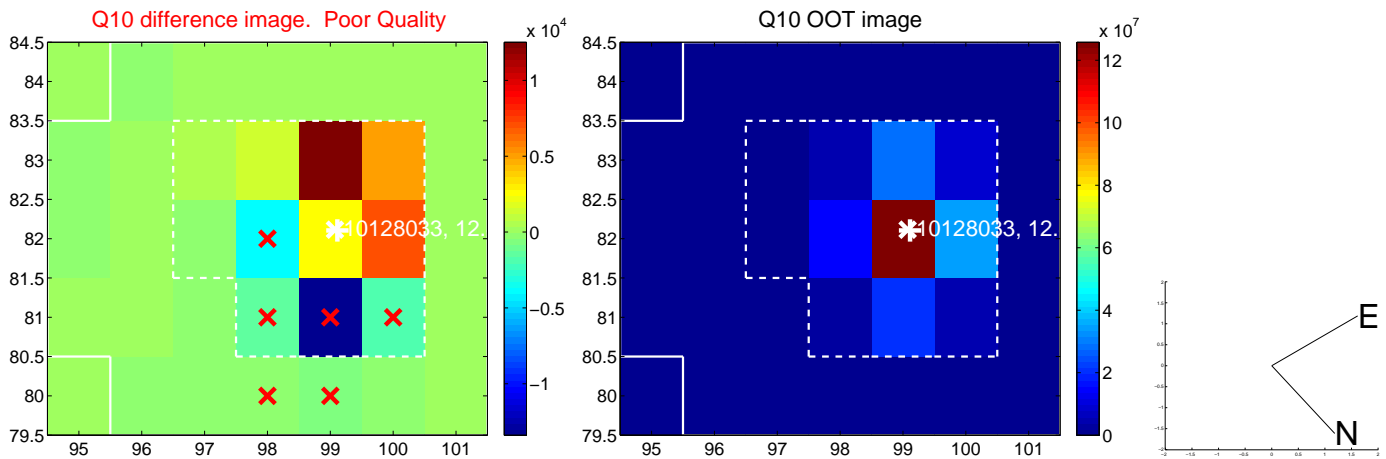
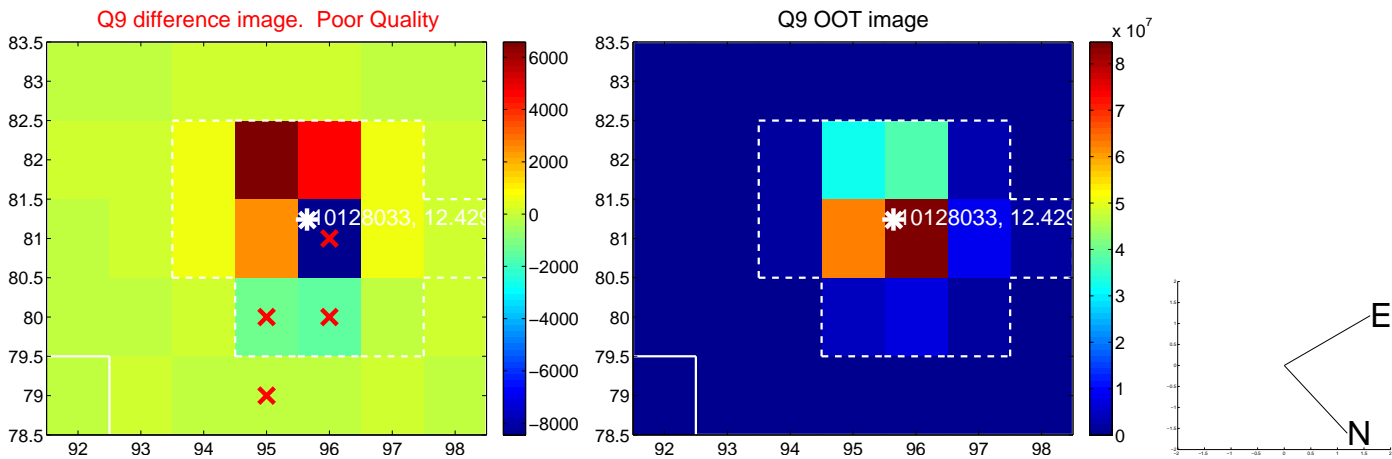
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



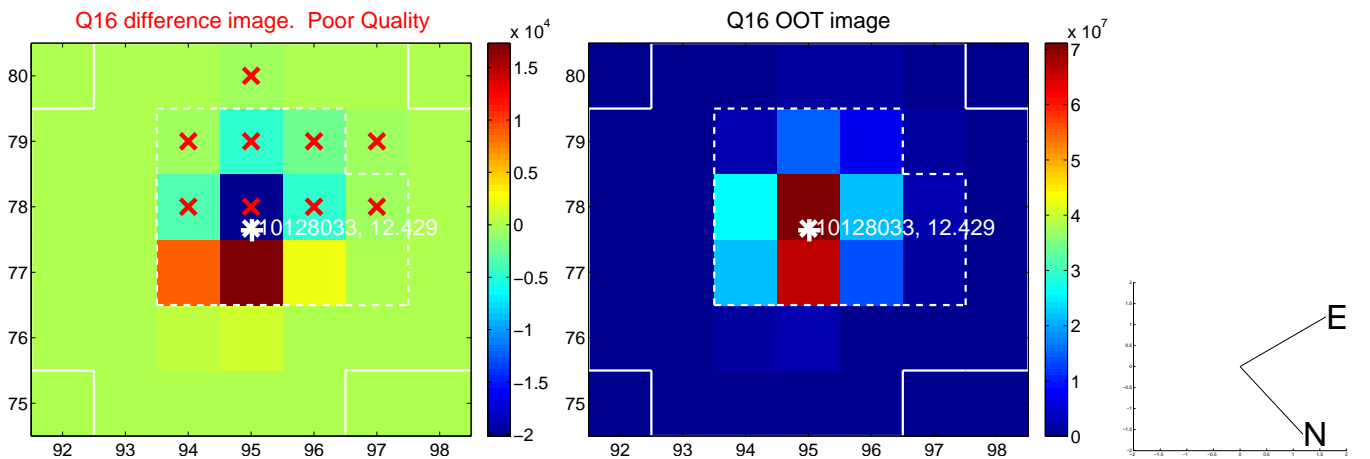
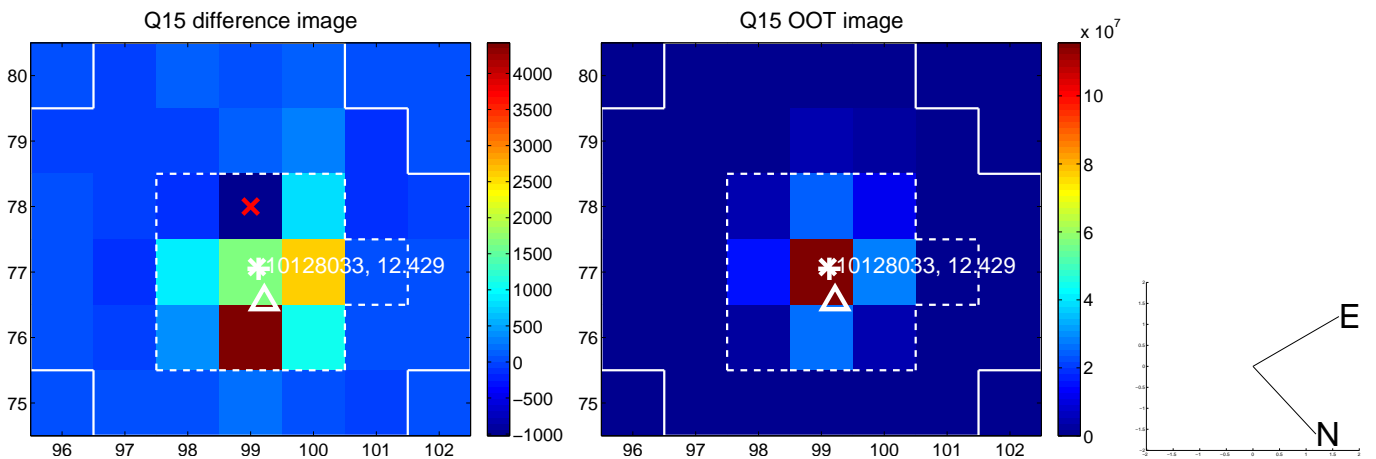
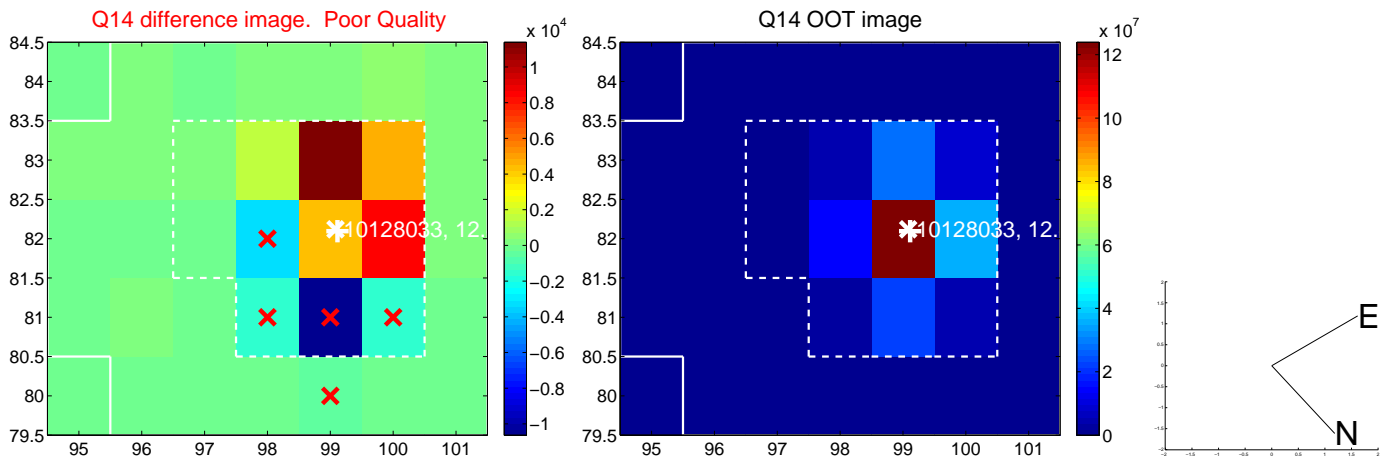
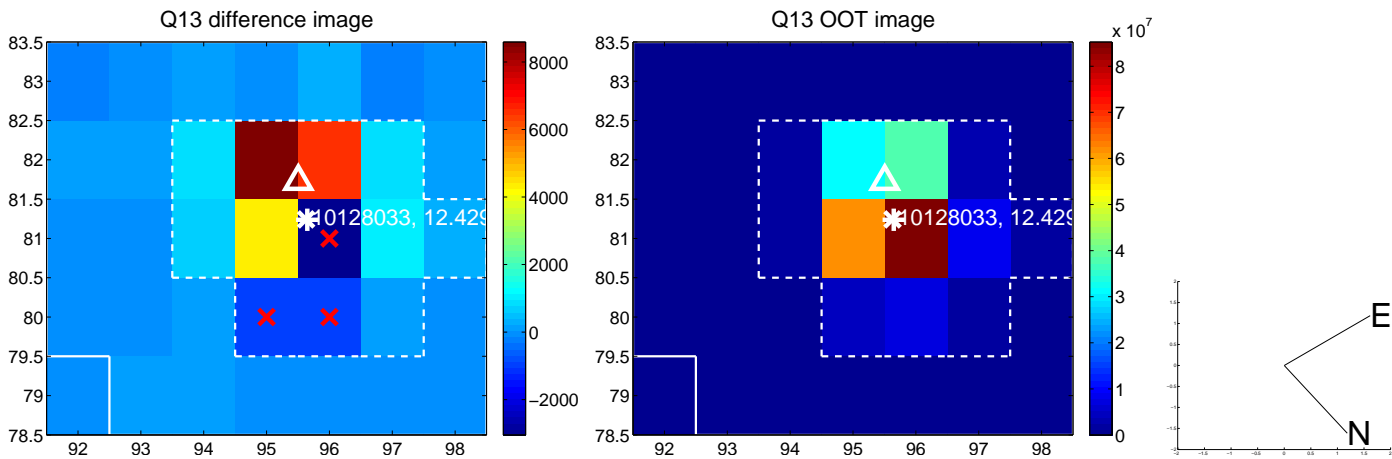
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



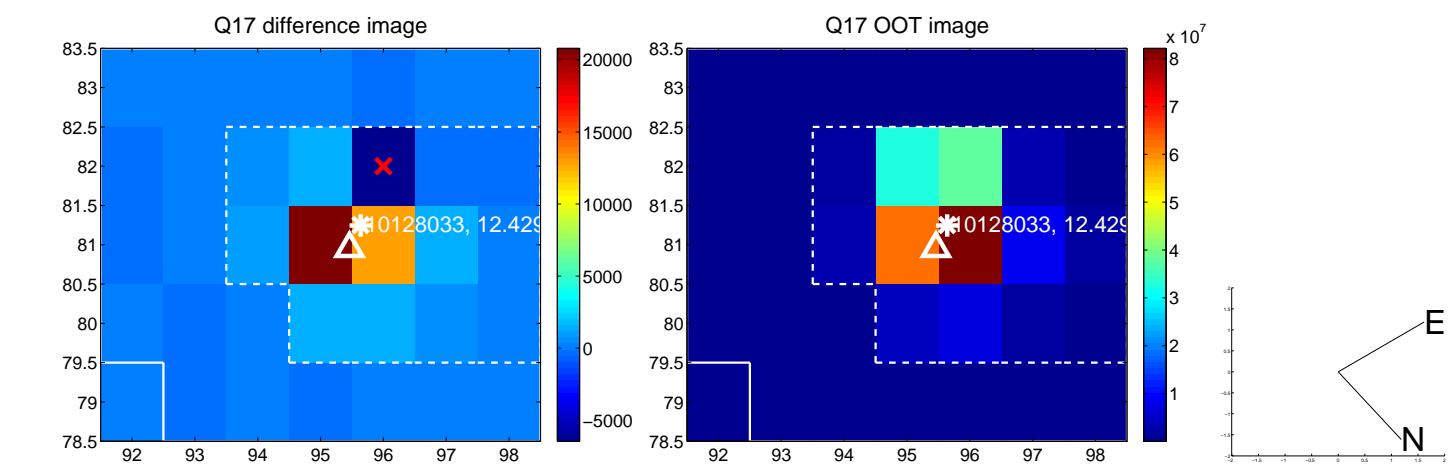
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



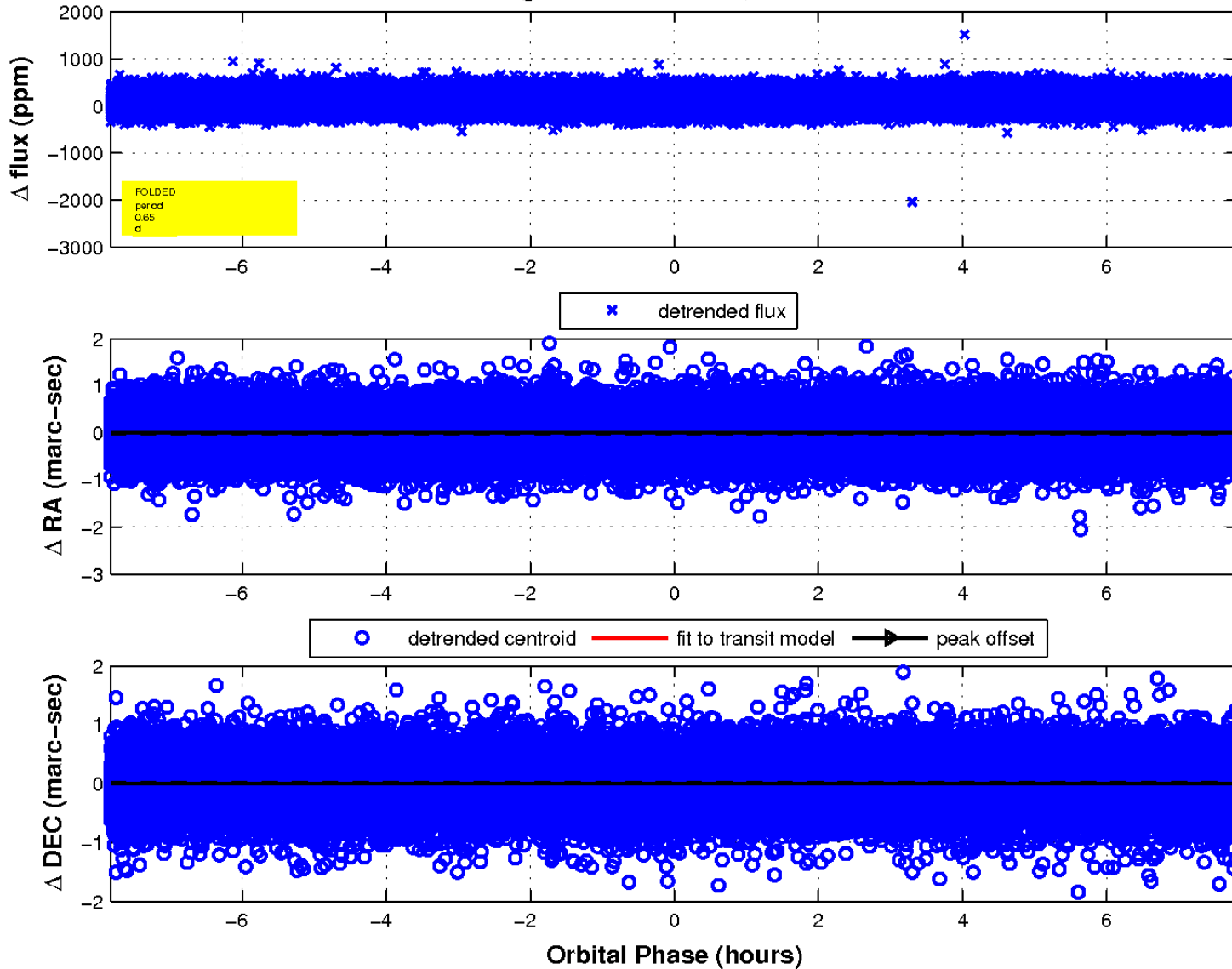
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

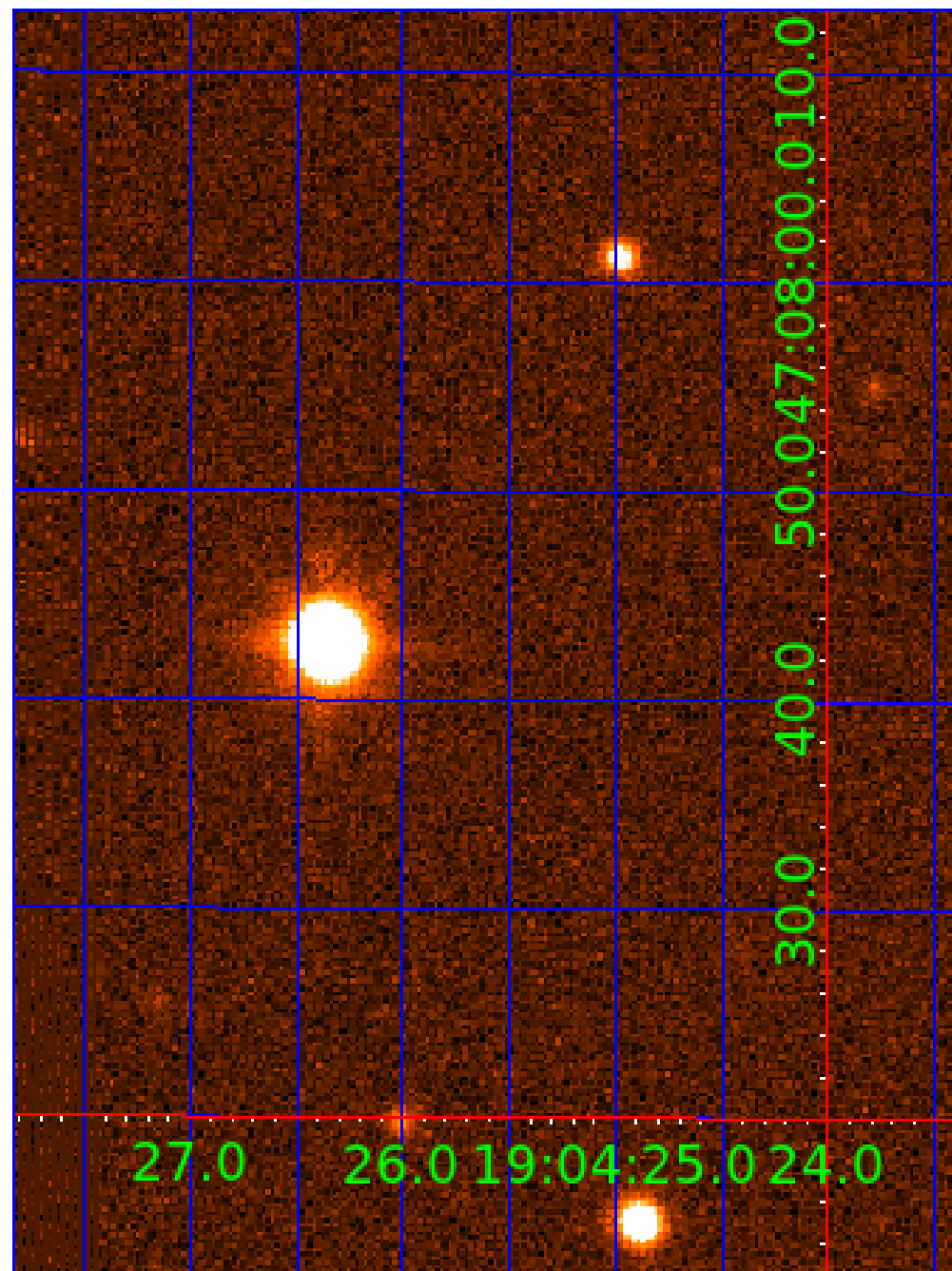


fluxWeightedCentroids, Planet 2 of 7



UKIRT Image

Declination



KIC 010128033

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})
010128033-01	OBS	No	0.656657	132.034110	132.6	2.000	12.3	-1.0	1.82	7296	2.13	28918.67
010128033-02	OBS	No	0.652477	131.903081	7.1	4.657	10.5	4.6	1.82	7296	0.50	29165.94
010128033-03	OBS	No	17.600189	147.811937	250.3	2.116	15.5	14.4	1.82	7296	3.36	360.53
010128033-04	OBS	No	9.891488	135.292290	214.5	1.638	14.6	18.8	1.82	7296	3.09	777.35
010128033-05	OBS	No	18.663500	140.435482	217.4	1.484	14.8	14.6	1.82	7296	2.96	333.40
010128033-06	OBS	No	8.211909	137.726951	81.5	6.535	12.7	11.0	1.82	7296	1.90	996.26
010128033-07	OBS	No	9.203685	137.129745	540.9	1.500	15.2	-1.0	1.82	7296	4.30	855.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010128033-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
010128033-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010128033-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010128033-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010128033-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

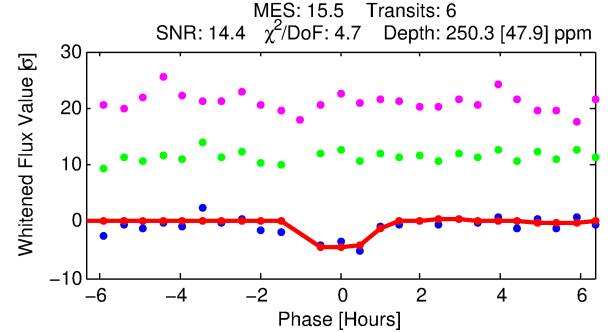
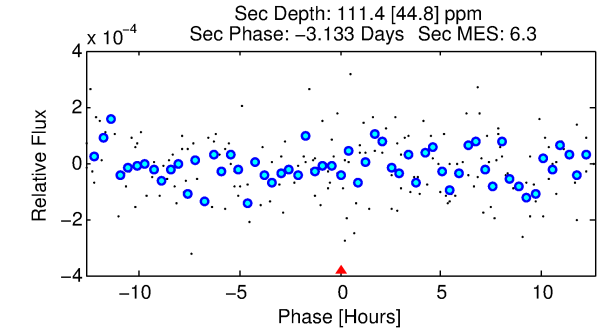
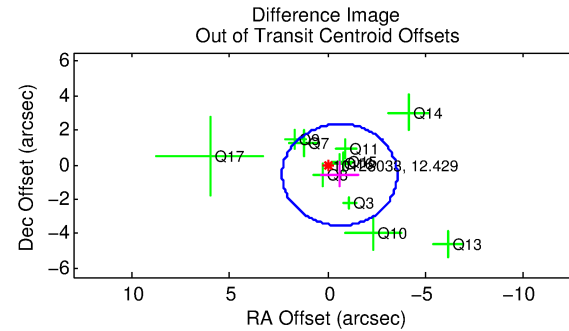
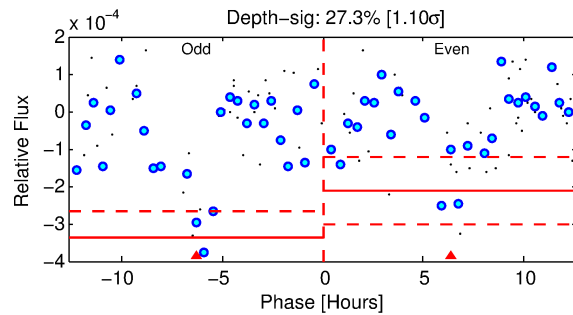
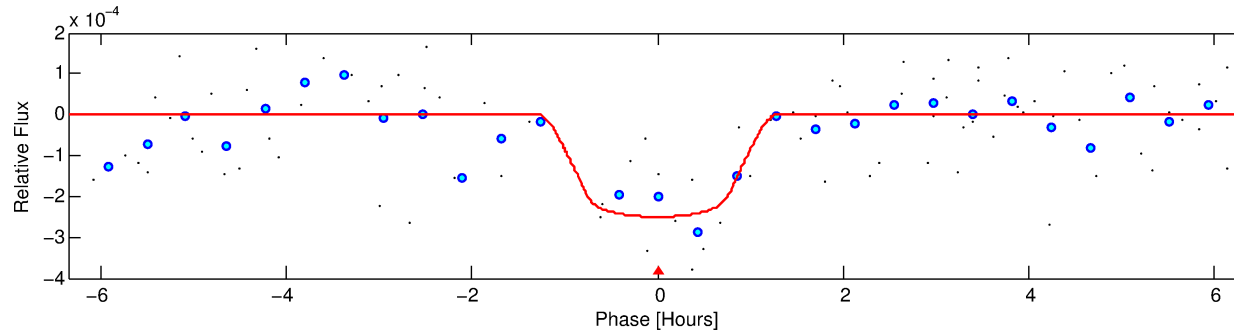
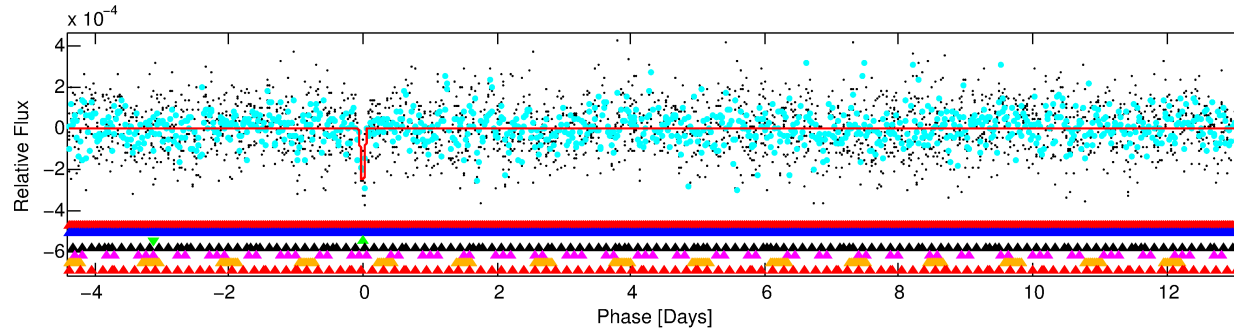
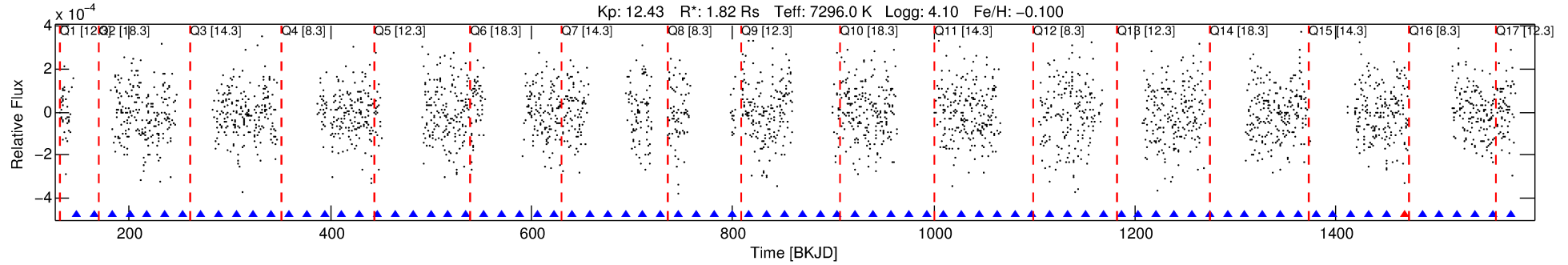
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010128033-03

No Significant Match Found

DV One-Page Summary

KIC: 10128033 Candidate: 3 of 7 Period: 17.600 d



DV Fit Results:

Period = 17.60019 [0.00028] d
Epoch = 147.8119 [0.0225] BKJD
Rp/R* = 0.0169 [0.0148]
a/R* = 29.18 [164.38]
b = 0.91 [1.09]
Seff = 360.53 [142.12]
Teq = 1111 [110] K
Rp = 3.36 [3.12] Re
a = 0.1526 [0.0386] AU
Ag = 126.65 [231.24] [0.54 σ]
Teffp = 5763 [2595] K [1.79 σ]

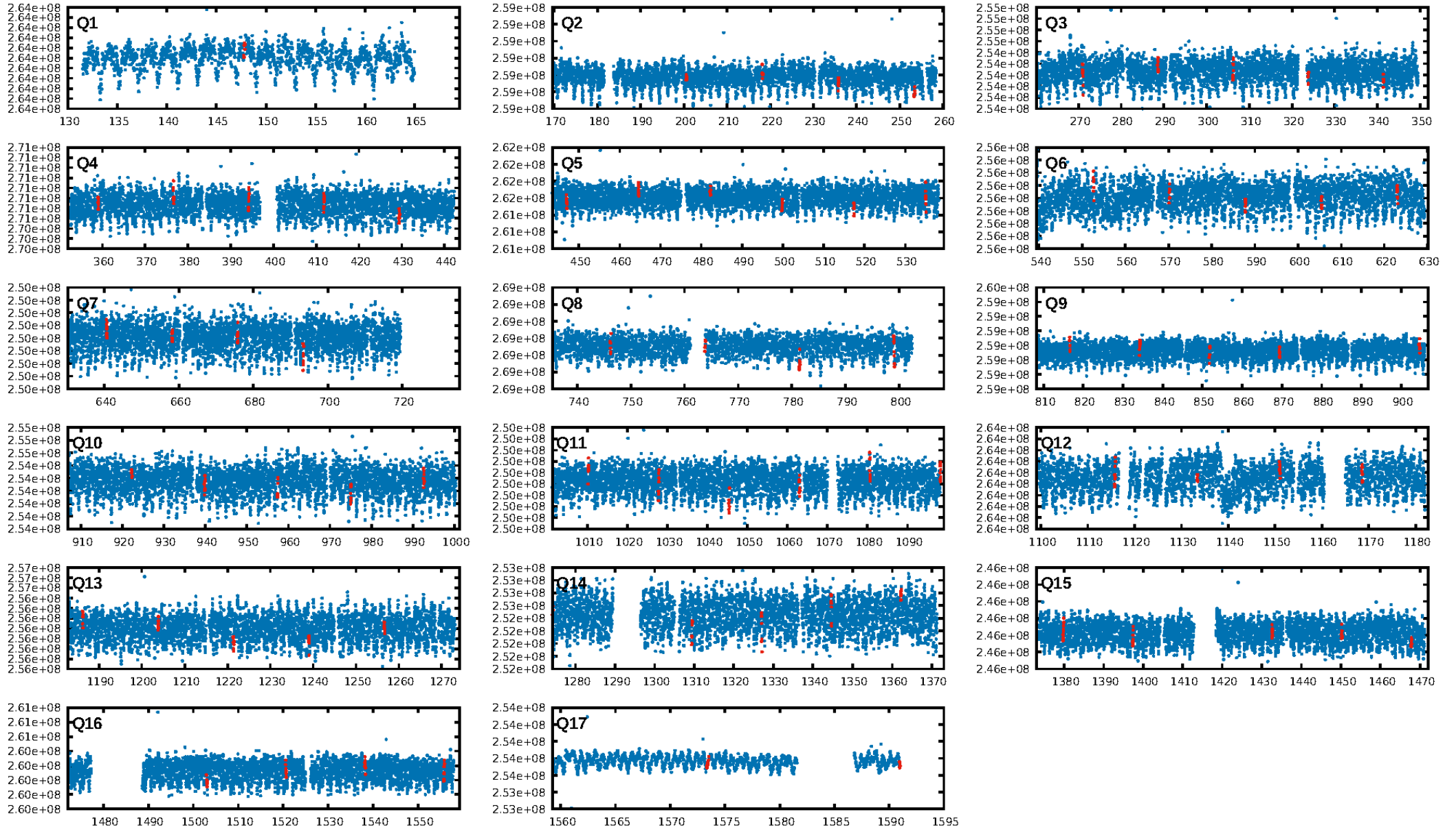
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [69.14 σ]
LongPeriod-sig: 100.0% [9.87 σ]
ModelChiSquare2-sig: 3.1%
ModelChiSquareGof-sig: 19.8%
Bootstrap-pfa: N/A
RollingBand-fgt: 0.83 [5/6]
GhostDiagnostic-chr: 0.6257
Centroid-sig: 6.9%
Centroid-so: 0.445 arcsec [1.79 σ]
OotOffset-rm: 0.855 arcsec [0.87 σ]
KicOffset-rm: 0.745 arcsec [0.81 σ]
OotOffset-st: 2/4/2/3 [11]
KicOffset-st: 2/4/2/3 [11]
DiffImageQuality-fgm: 0.36 [4/11]
DiffImageOverlap-fno: 0.00 [0/17]

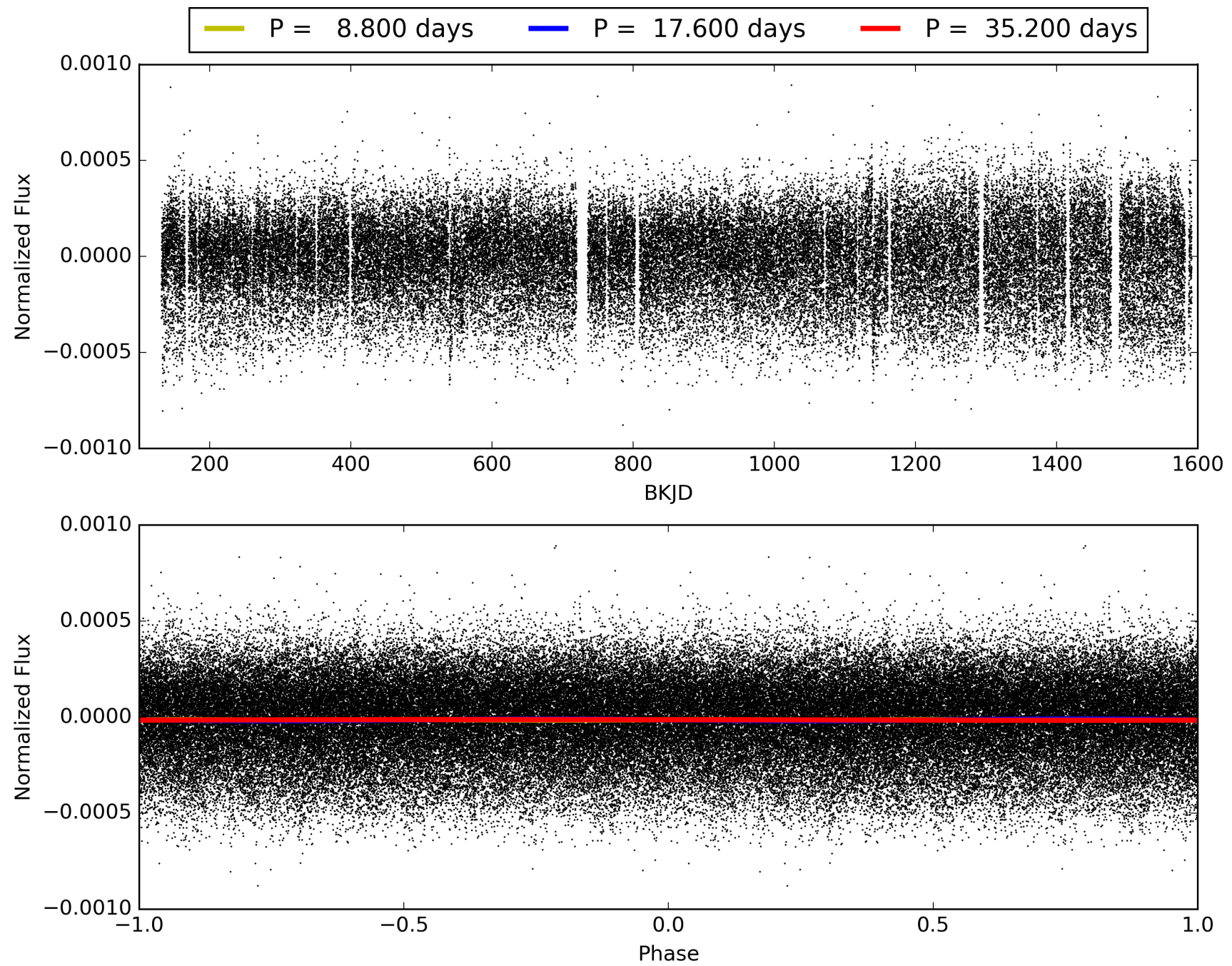
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:50:16 Z

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

TCE 010128033-03, PDC Light Curves

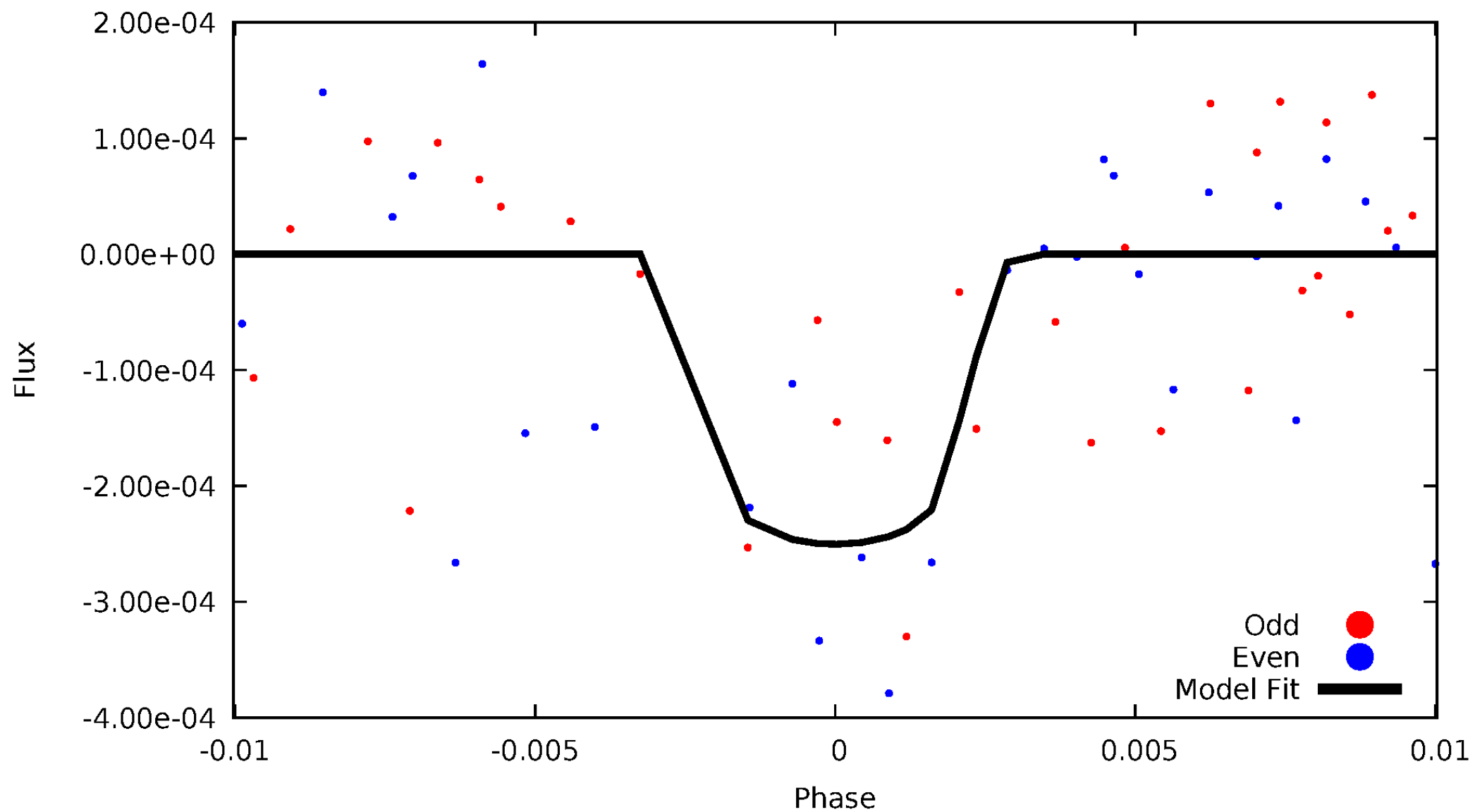


TCE 010128033-03



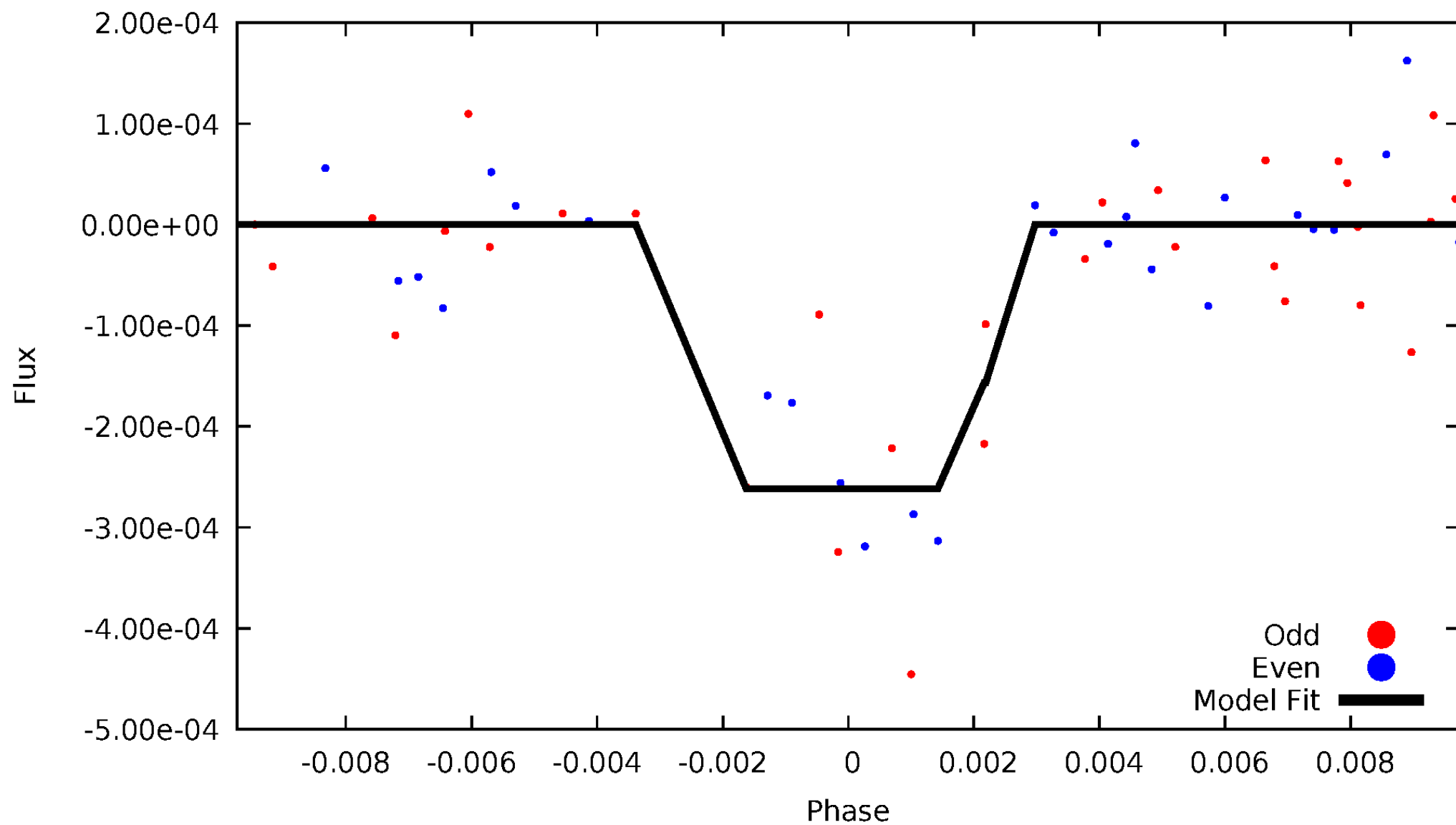
DV Odd/Even

TCE 010128033-03



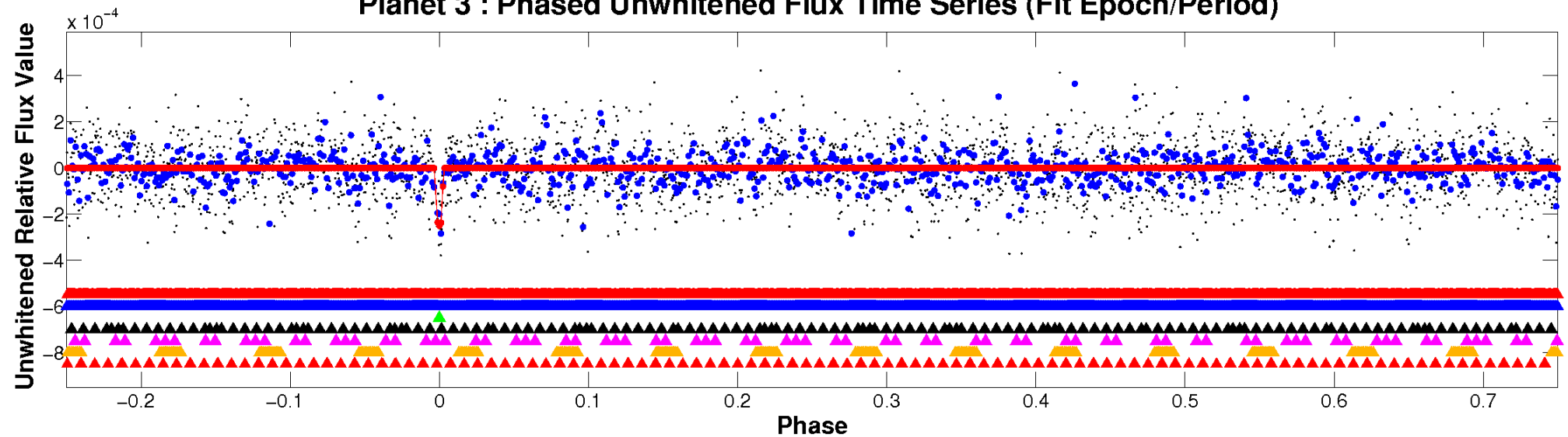
ALT Odd/Even

TCE 010128033-03

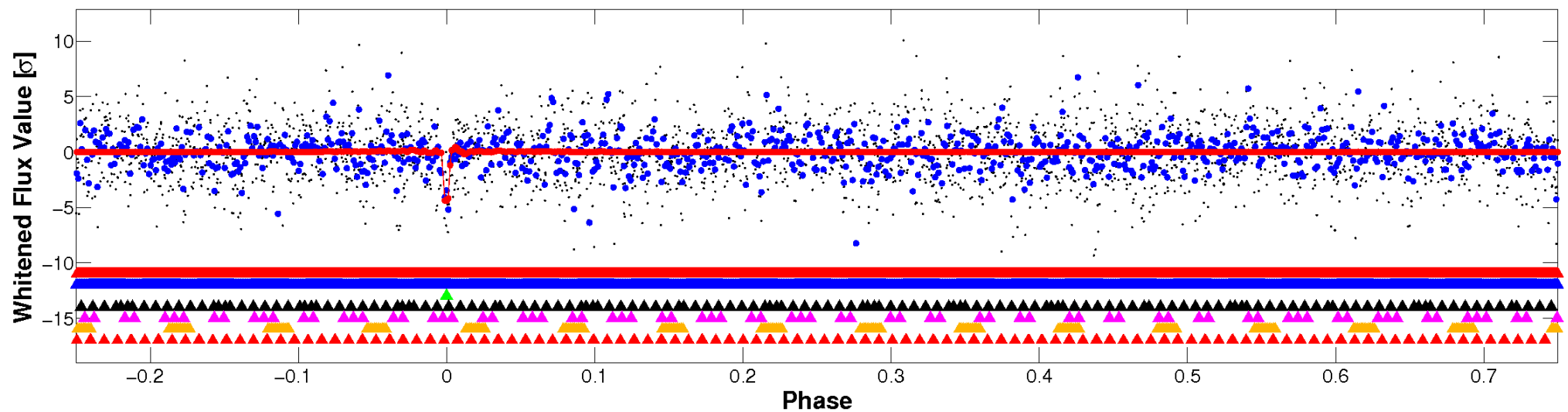


Non-Whitened Vs. Whitened Light Curve

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

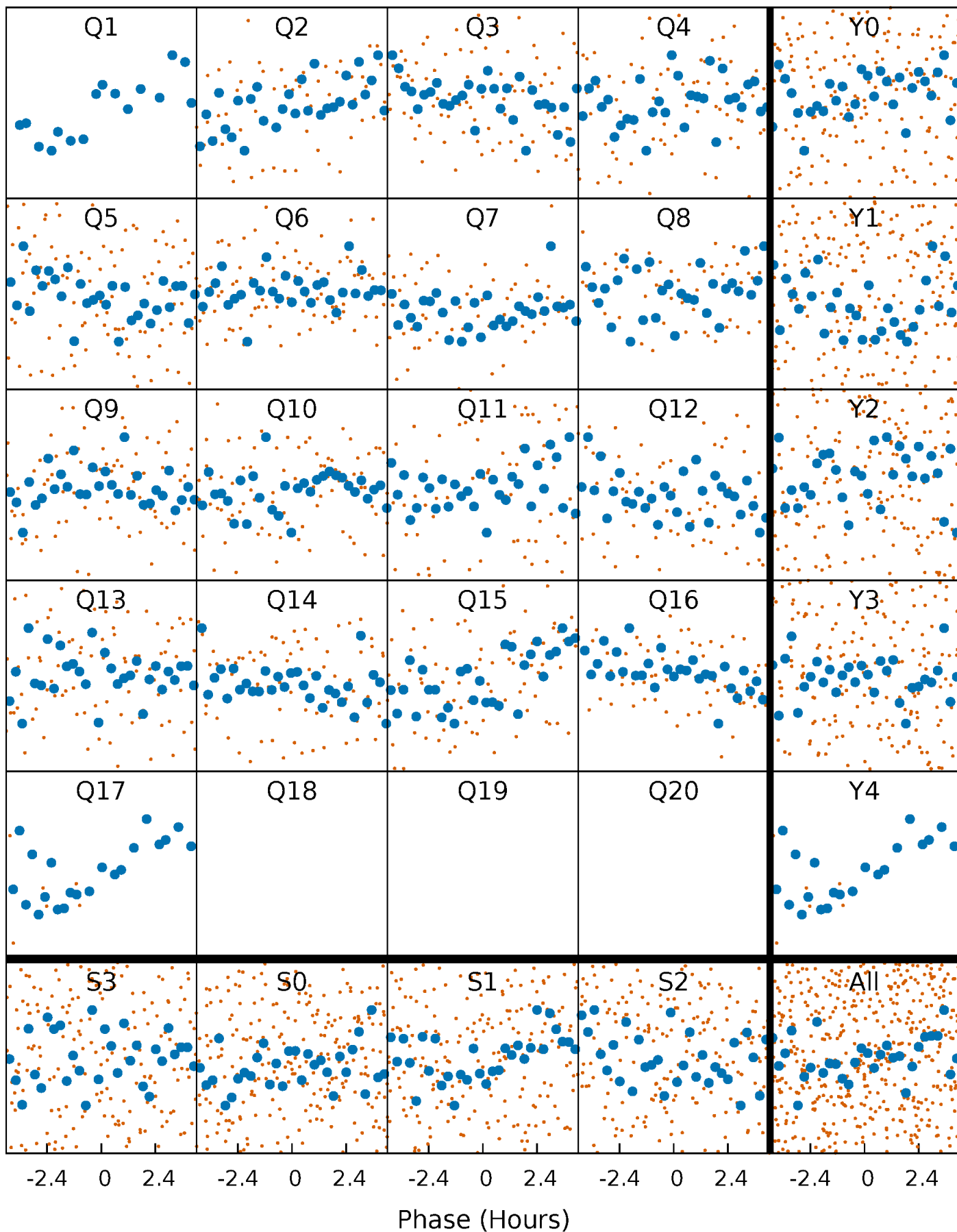


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



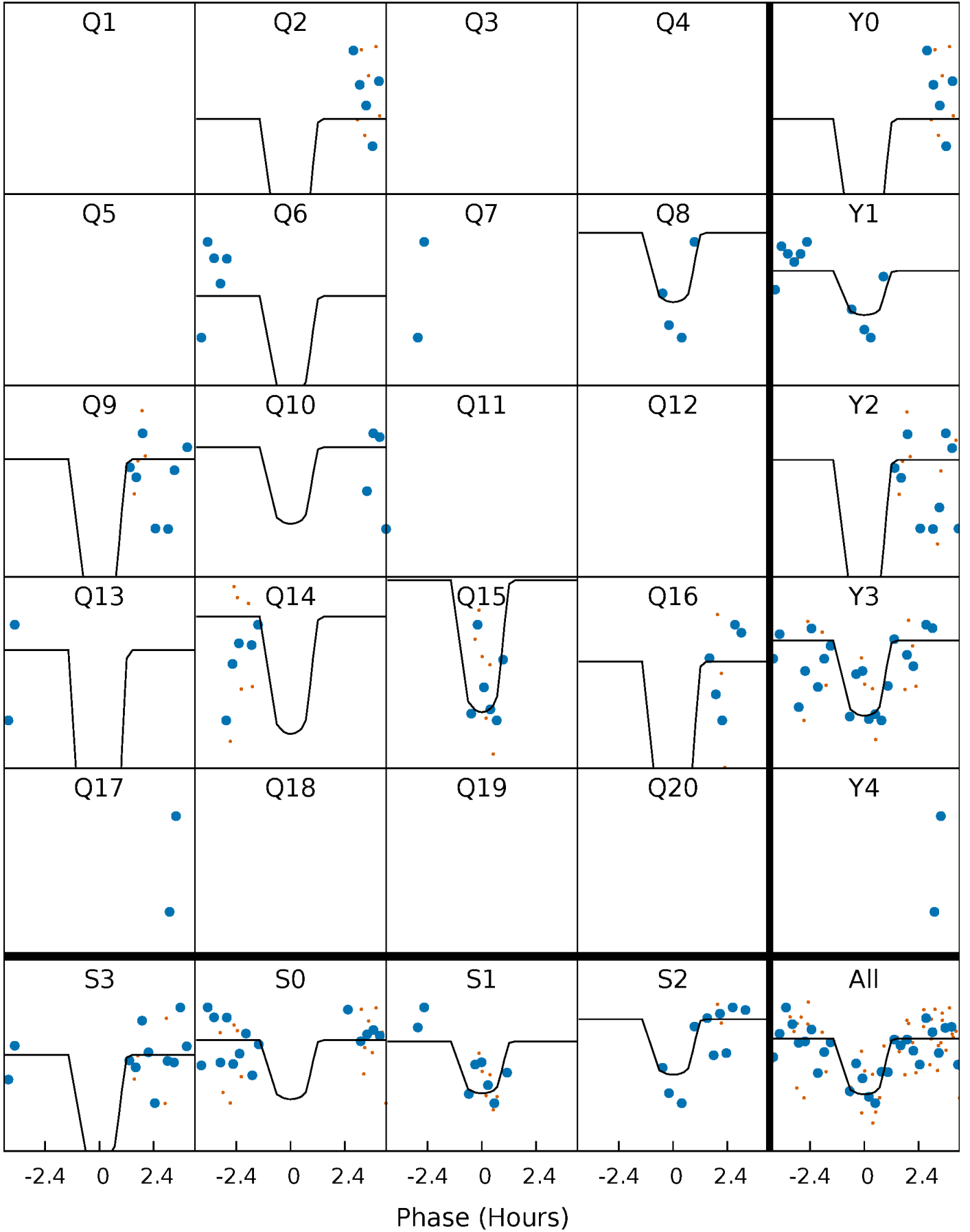
PDC Quarter-Phased Transit Curves

TCE 010128033-03 P= 17.600189 Days $T_0=147.811937$ (BKJD)



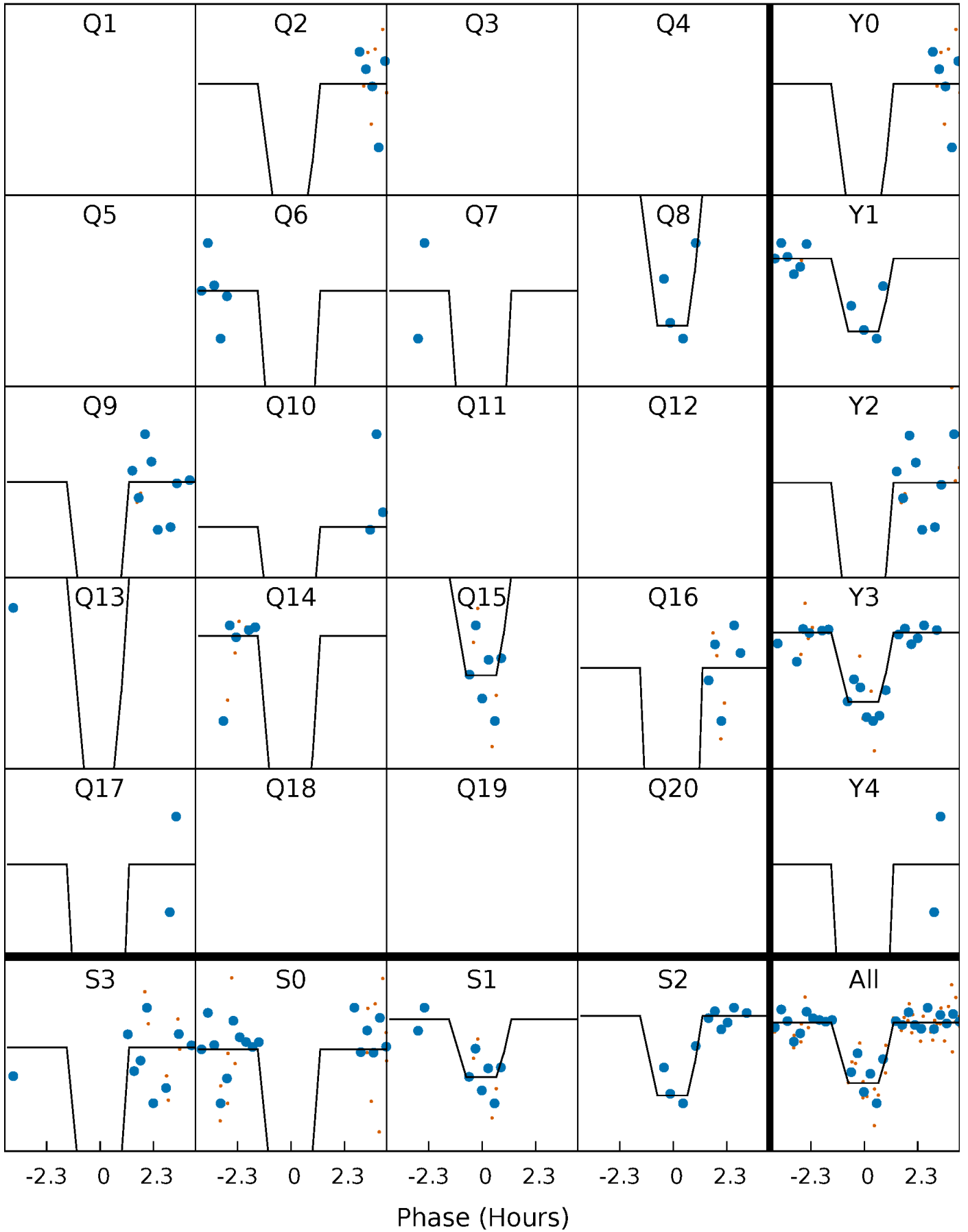
DV Quarter-Phased Transit Curves

TCE 010128033-03 P= 17.600189 Days $T_0=147.811937$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

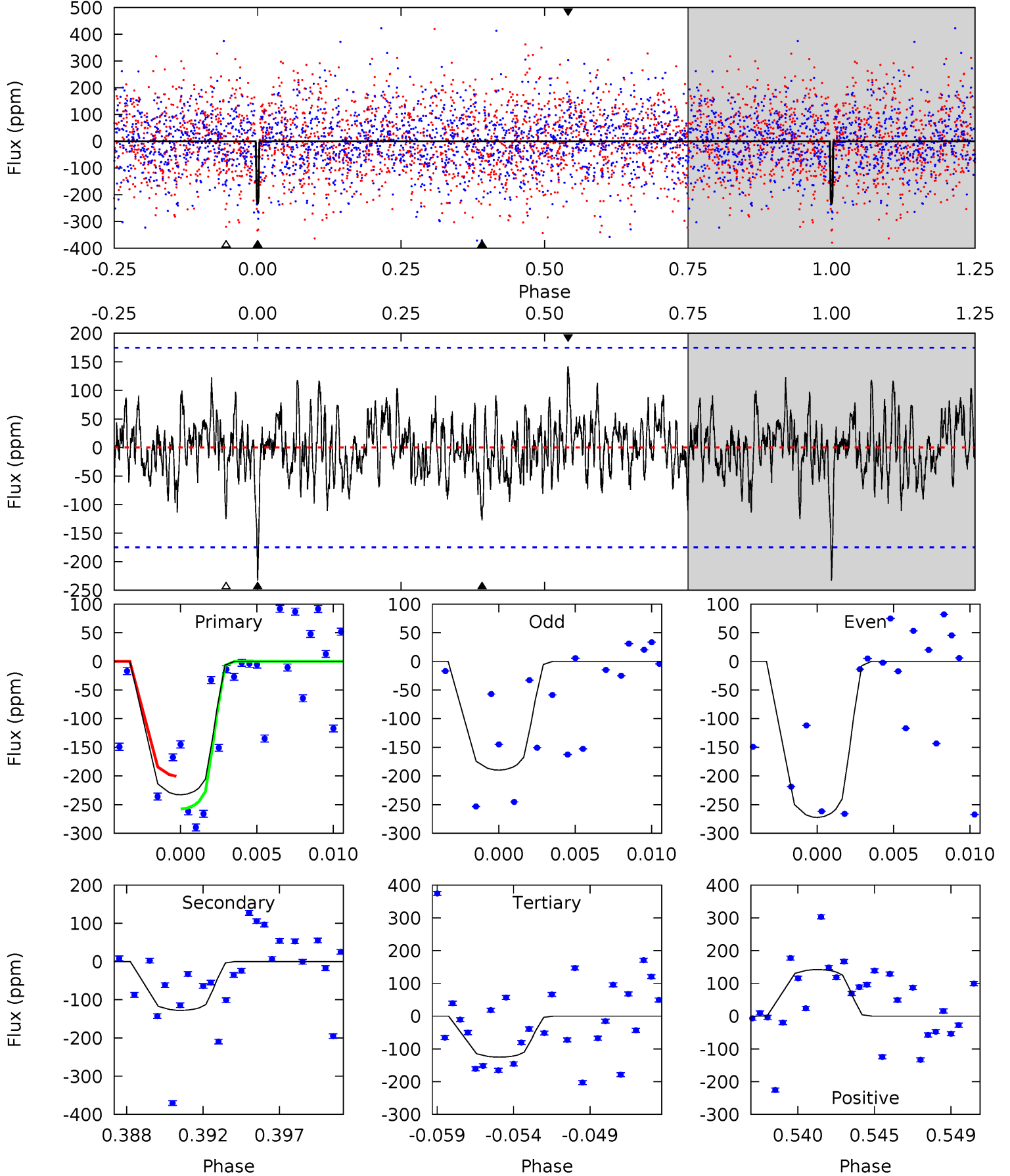
TCE 010128033-03 P= 17.600331 Days $T_0=147.804582$ (BKJD)



DV Model-Shift Uniqueness Test

010128033-03, P = 17.600189 Days, E = 130.211748 Days

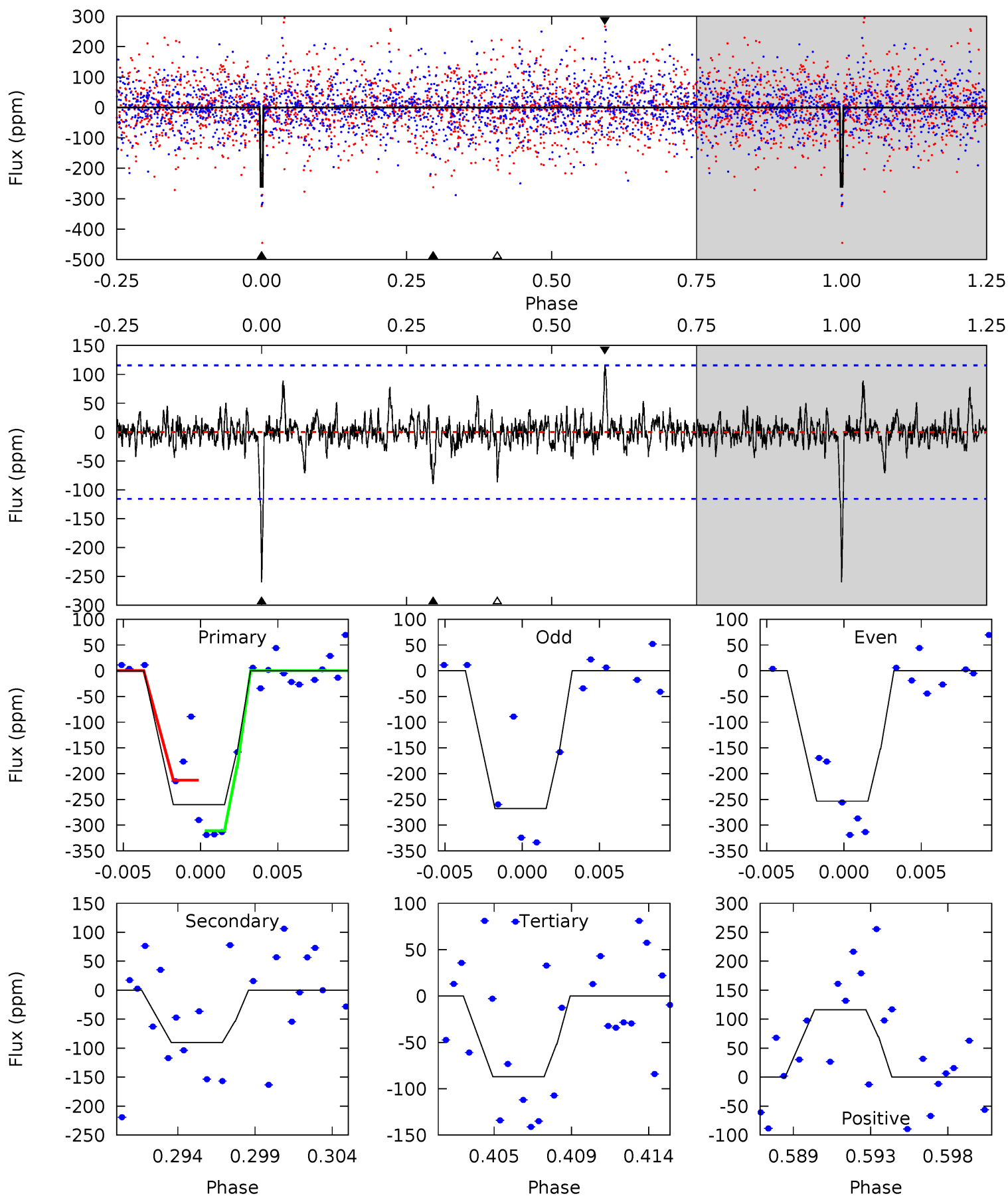
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.89	3.78	3.70	4.20	5.16	2.81	1.23	3.19	2.68	0.08	-0.43	1.23	1.01	0.38	0.74



Alt Model-Shift Uniqueness Test

010128033-03, P = 17.600331 Days, E = 130.204251 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.6	4.03	3.89	5.21	5.17	2.83	0.87	7.75	6.44	0.14	-1.18	0.33	1.06	0.31	2.18



Stellar Parameters For KIC 010128033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+228}_{-330}	$4.103^{+0.165}_{-0.182}$	$-0.100^{+0.200}_{-0.350}$	$1.818^{+0.576}_{-0.384}$	$1.526^{+0.234}_{-0.257}$	$0.358^{+0.319}_{-0.179}$
	+3%/-5%	+4%/-4%	+200%/-350%	+32%/-21%	+15%/-17%	+89%/-50%
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 010128033-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-128 ± 34	$3.84^{+2.86}_{-2.36}$	1550^{+127}_{-114}	5438^{+4109}_{-1147}	103^{+634}_{-70}
Alt.	-90 ± 22	$3.52^{+2.88}_{-2.22}$	1547^{+123}_{-109}	5245^{+3859}_{-1127}	88^{+587}_{-61}

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 $A_{obs} \gg 1.0$

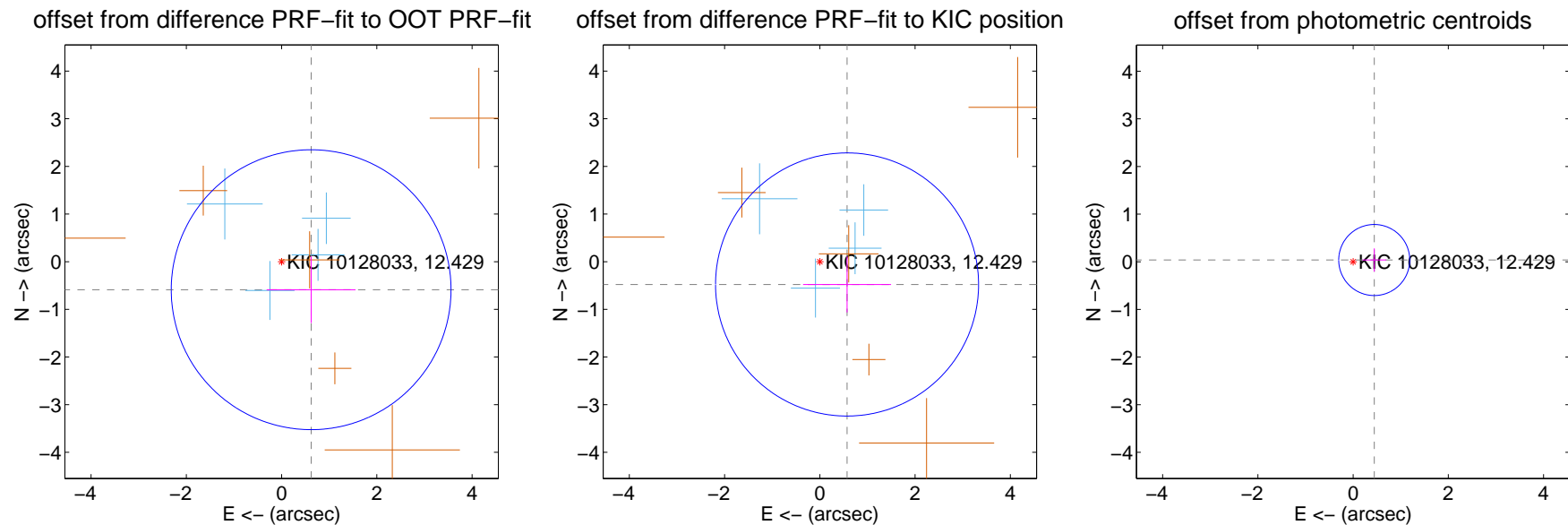
DV Centroid Data

Supplemental centroid analysis for 010128033-03. Kepler magnitude: 12.43. Transit SNR 14.41

There are 4 quarters with good PRF difference image offsets

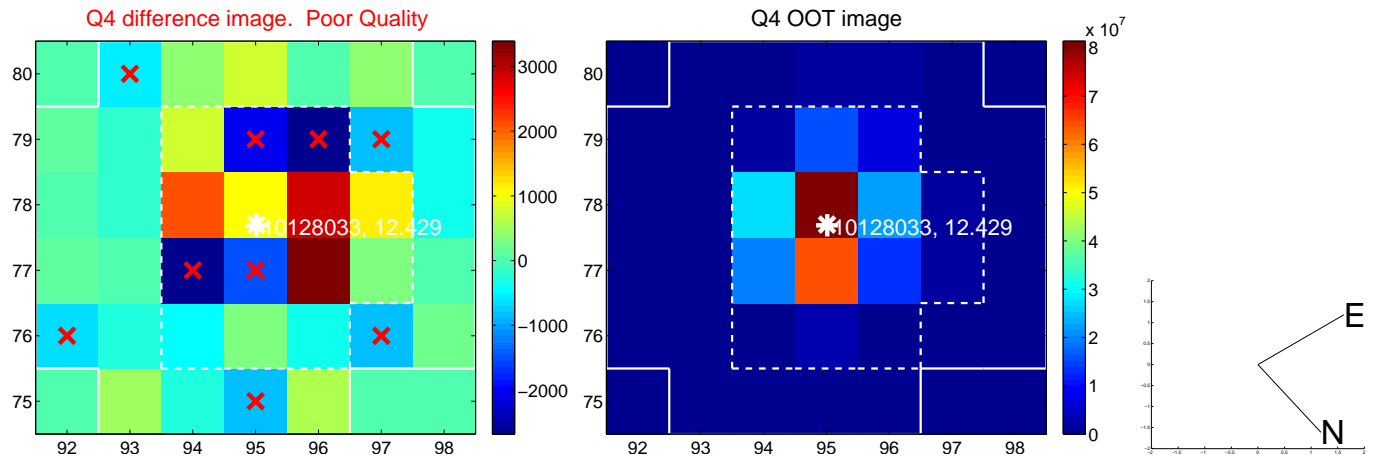
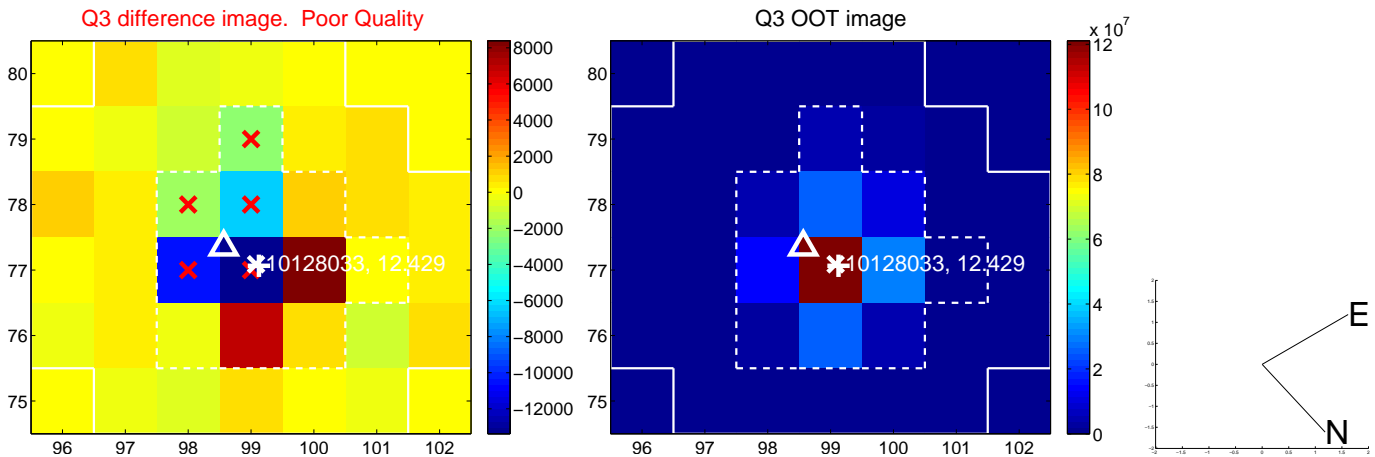
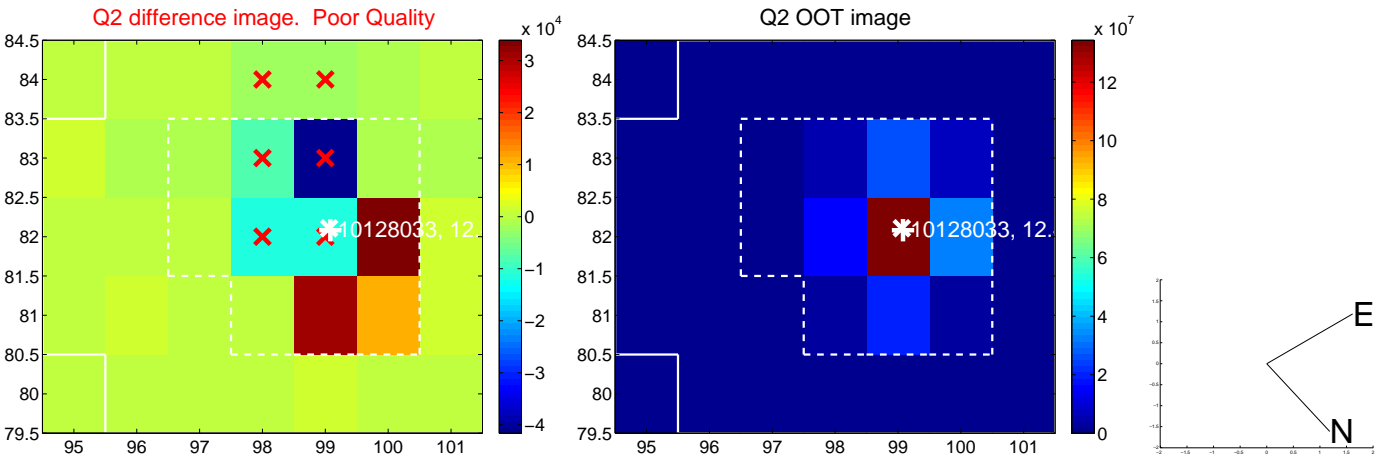
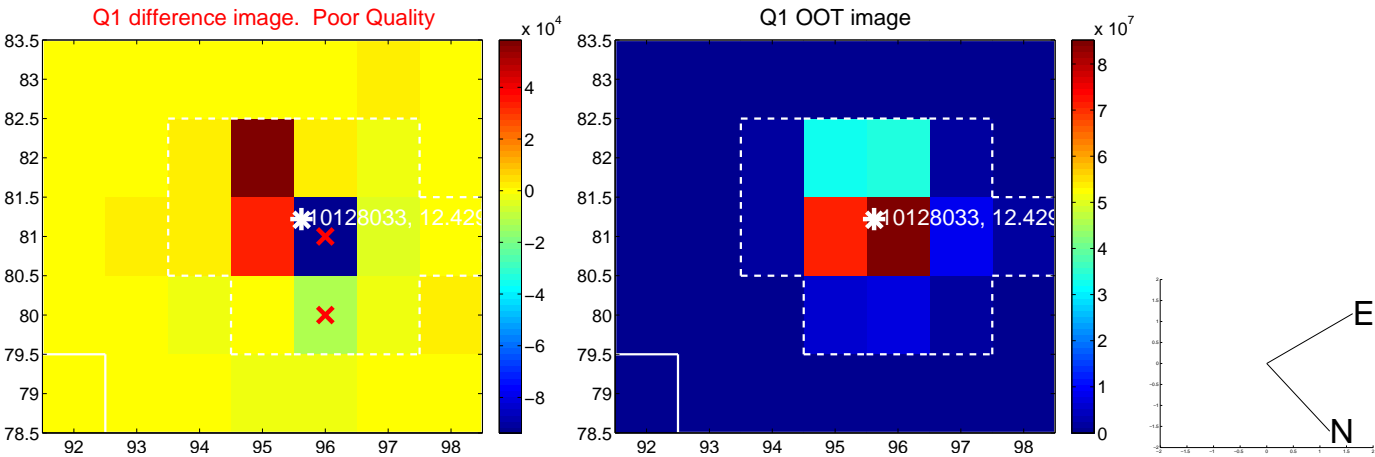
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.855 ± 0.979	0.87	-0.621 ± 0.934	-0.588 ± 0.699
PRF-fit source offset from KIC position	0.745 ± 0.920	0.81	-0.571 ± 0.924	-0.478 ± 0.586
photometric centroid source offset	0.45 ± 0.25	1.79	-0.44 ± 0.25	0.04 ± 0.24

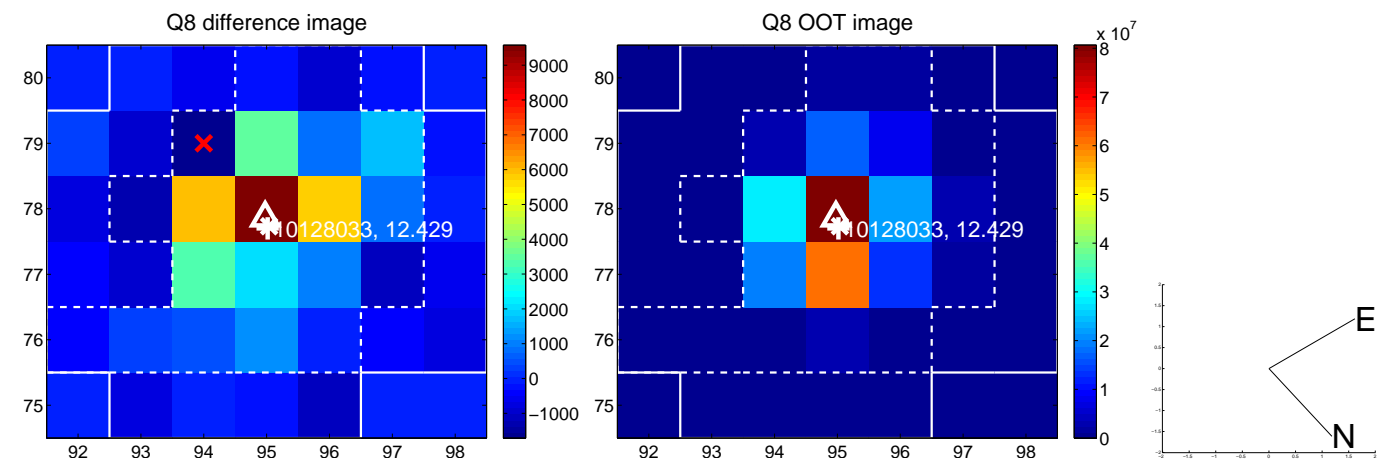
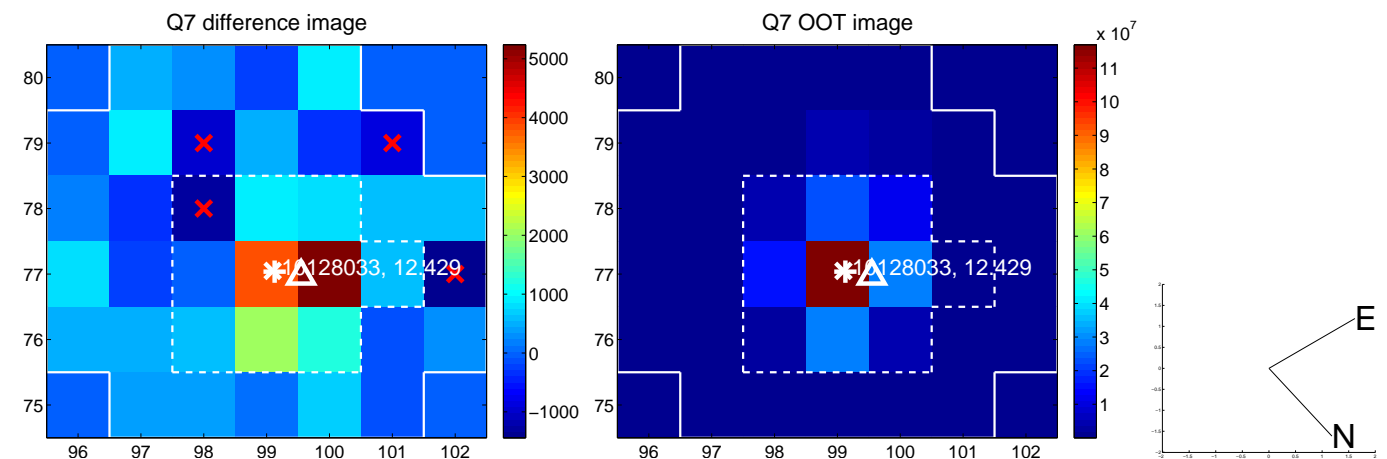
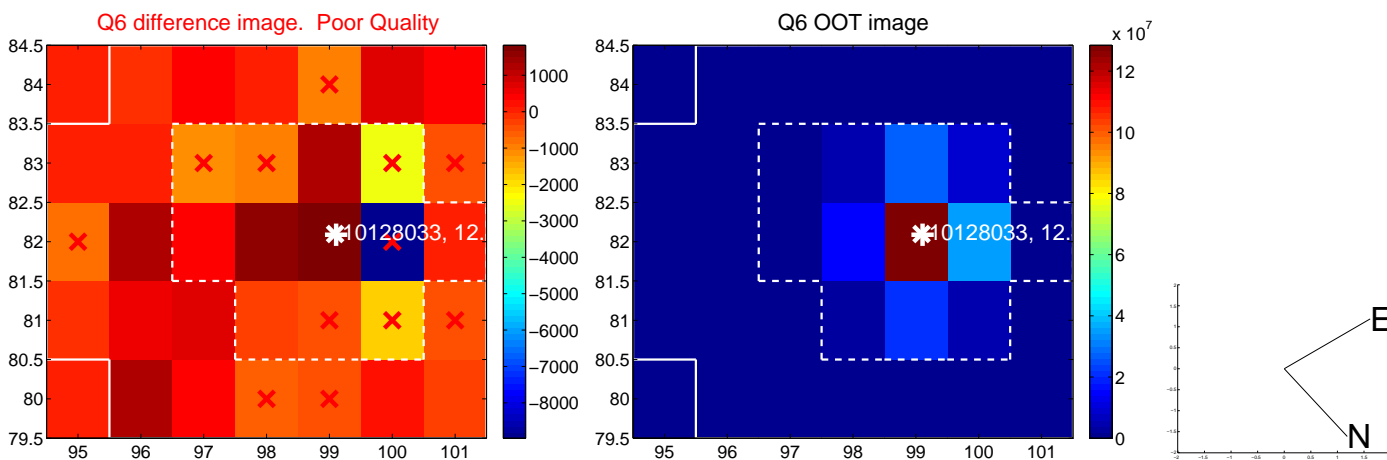
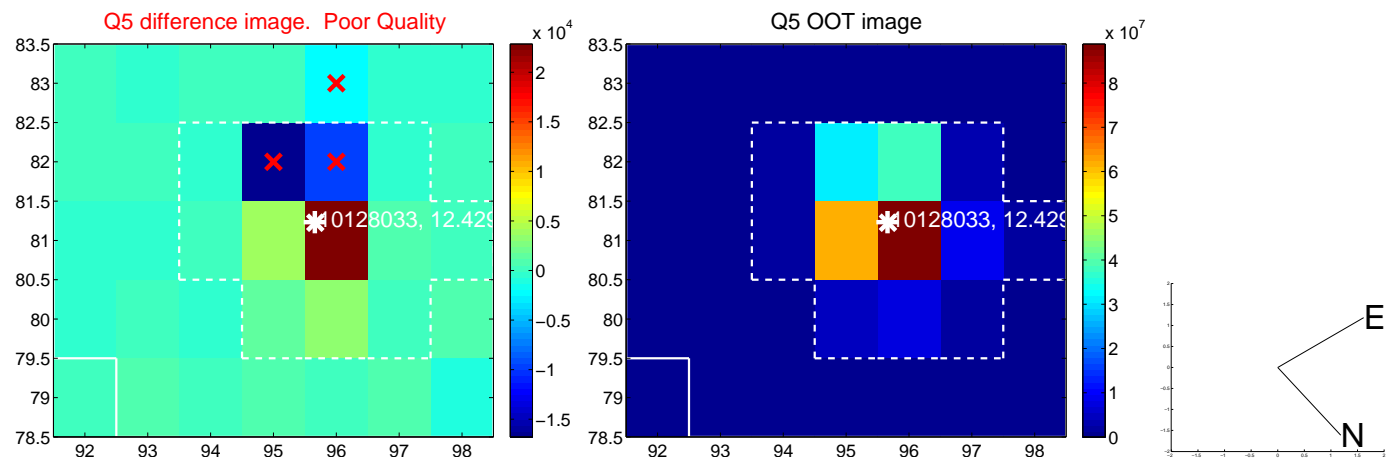


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

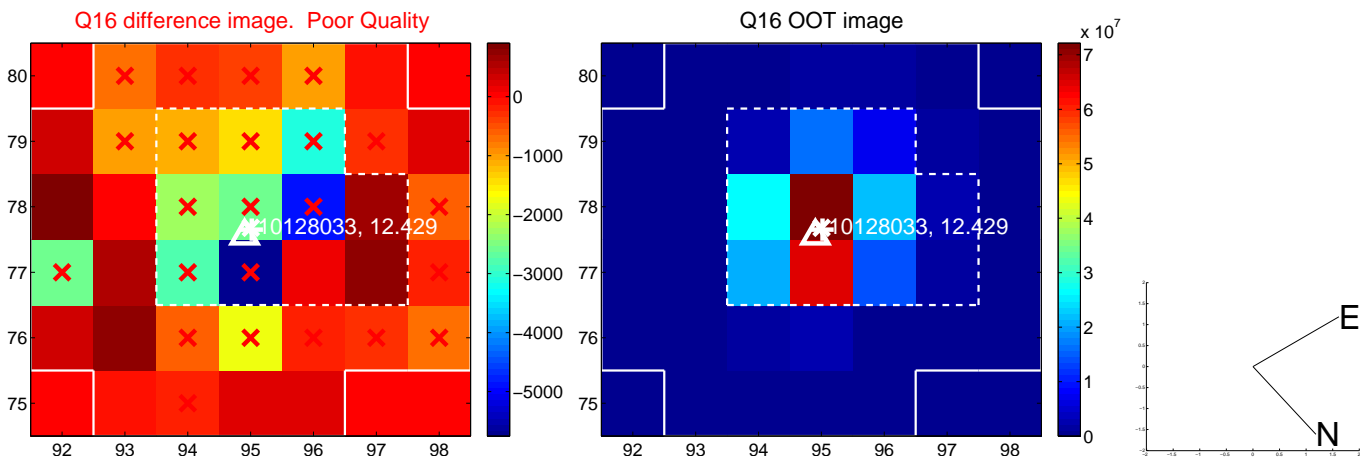
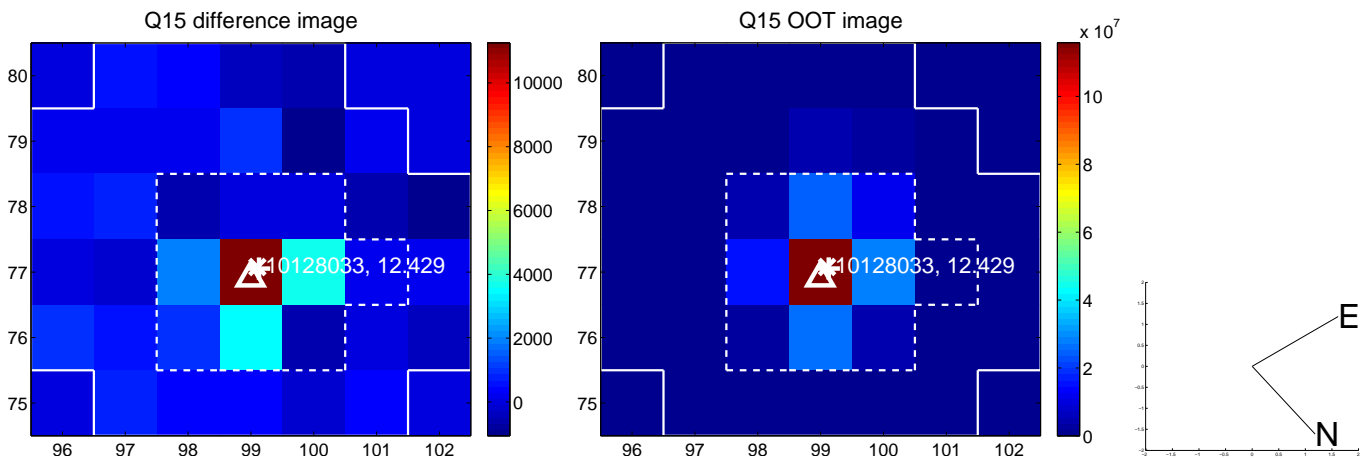
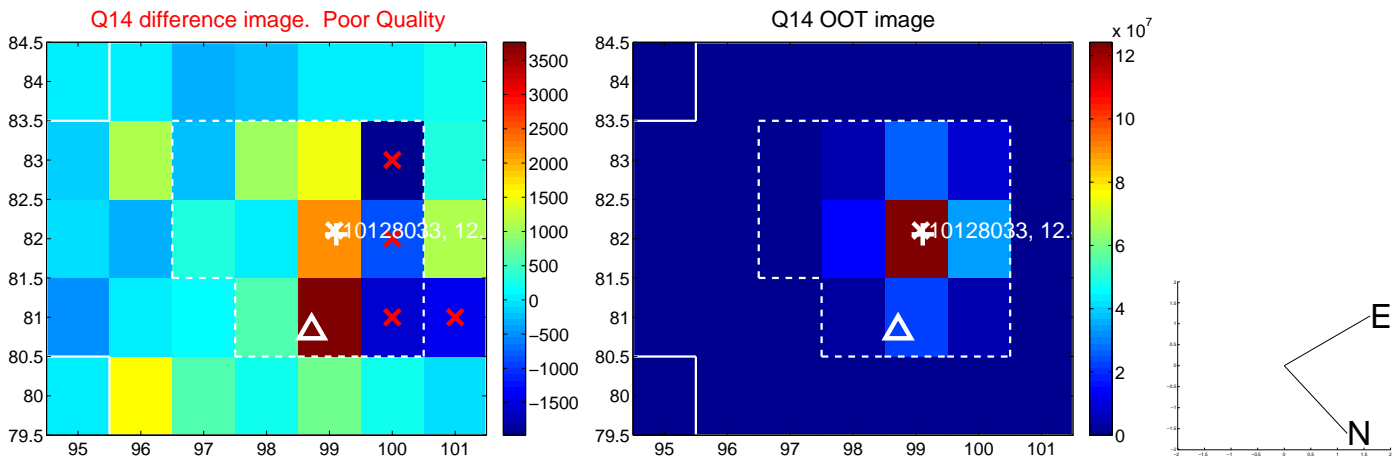
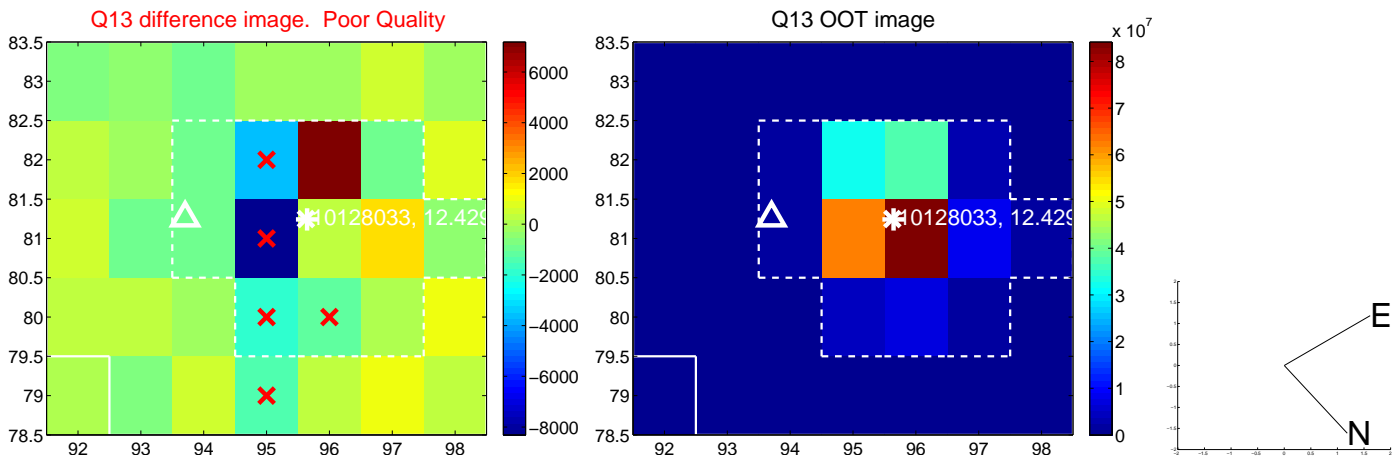
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



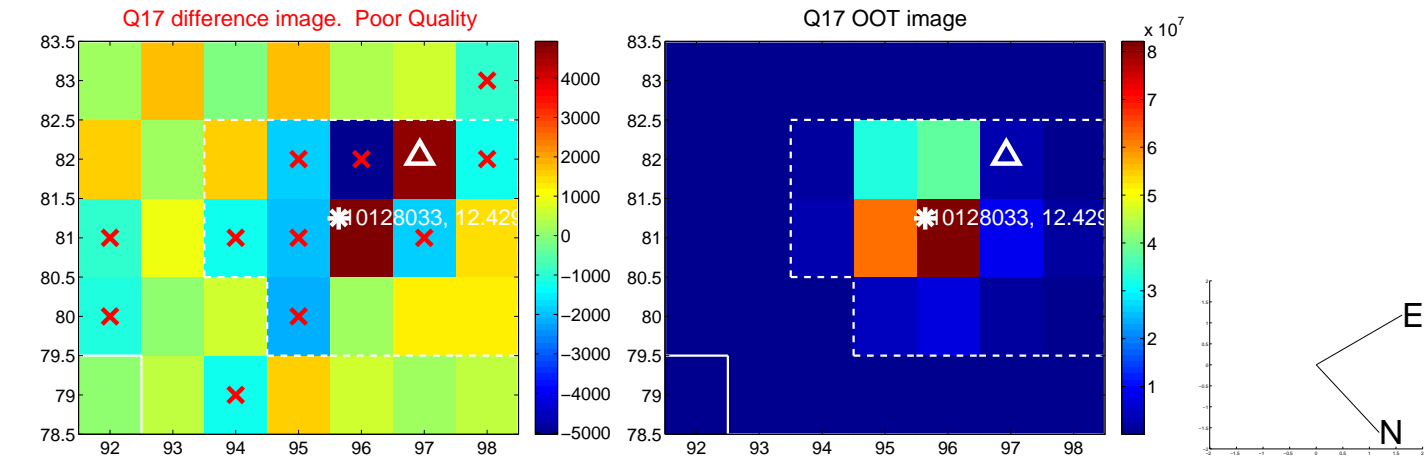
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



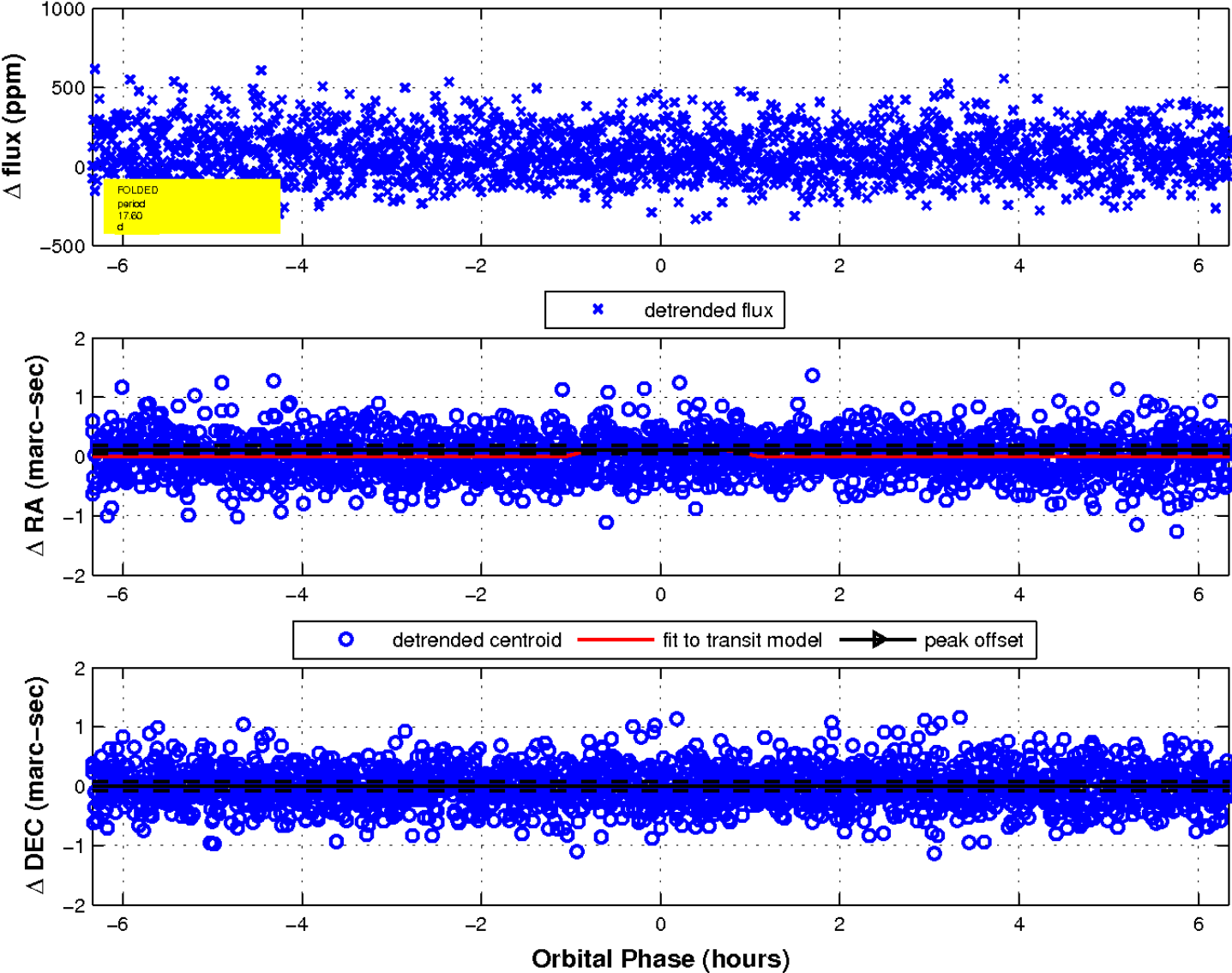
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

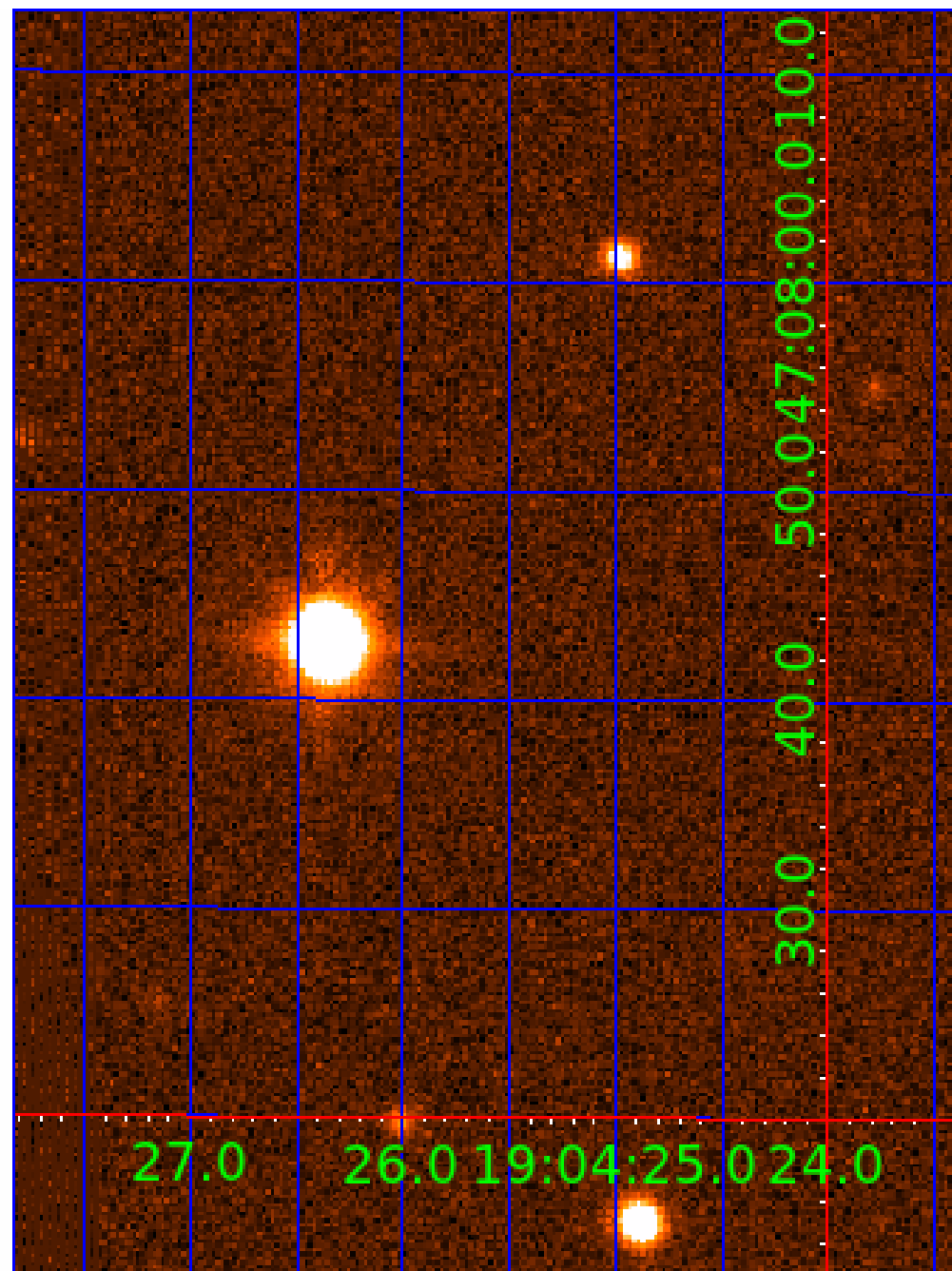


fluxWeightedCentroids, Planet 3 of 7



UKIRT Image

Declination



KIC 010128033

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})
010128033-01	OBS	No	0.656657	132.034110	132.6	2.000	12.3	-1.0	1.82	7296	2.13	28918.67
010128033-02	OBS	No	0.652477	131.903081	7.1	4.657	10.5	4.6	1.82	7296	0.50	29165.94
010128033-03	OBS	No	17.600189	147.811937	250.3	2.116	15.5	14.4	1.82	7296	3.36	360.53
010128033-04	OBS	No	9.891488	135.292290	214.5	1.638	14.6	18.8	1.82	7296	3.09	777.35
010128033-05	OBS	No	18.663500	140.435482	217.4	1.484	14.8	14.6	1.82	7296	2.96	333.40
010128033-06	OBS	No	8.211909	137.726951	81.5	6.535	12.7	11.0	1.82	7296	1.90	996.26
010128033-07	OBS	No	9.203685	137.129745	540.9	1.500	15.2	-1.0	1.82	7296	4.30	855.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010128033-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
010128033-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010128033-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010128033-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010128033-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

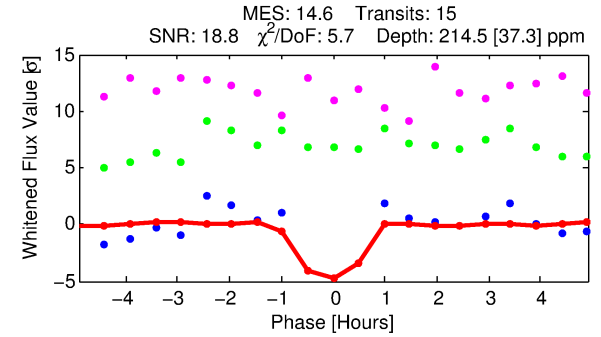
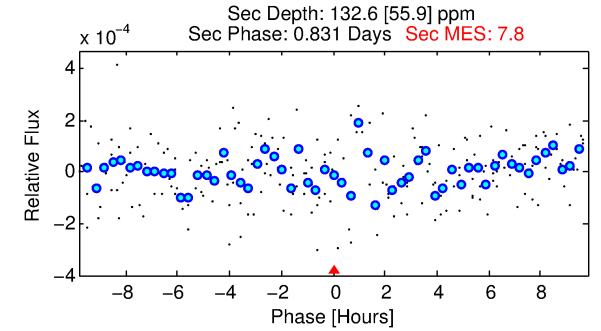
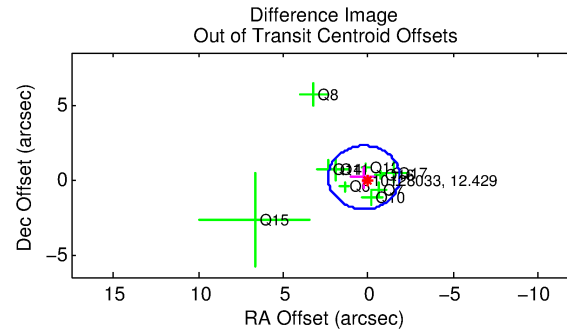
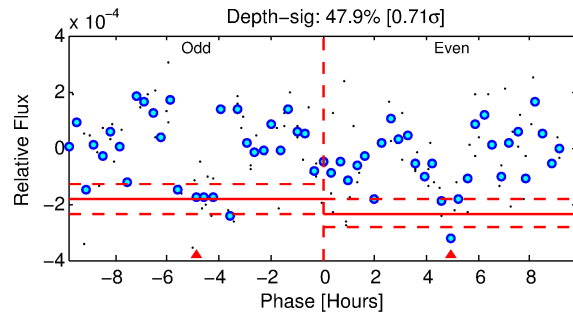
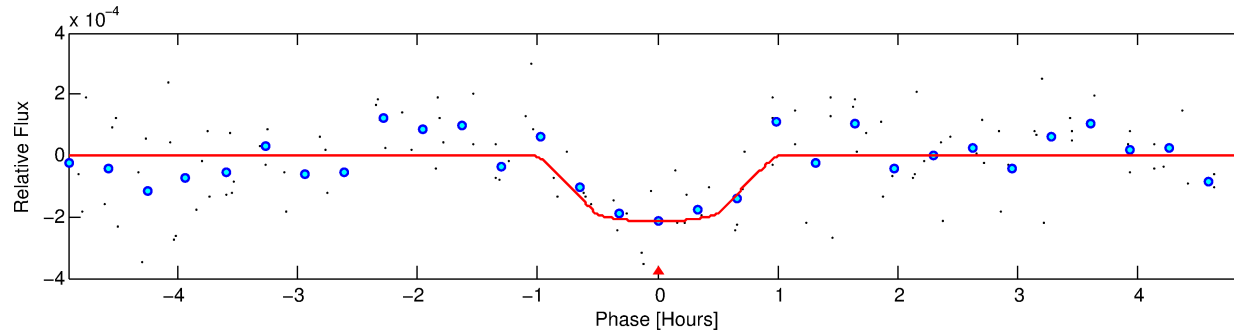
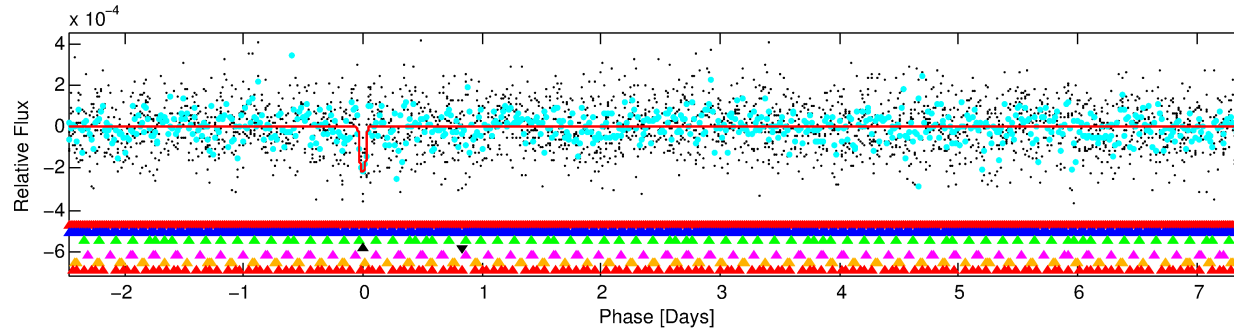
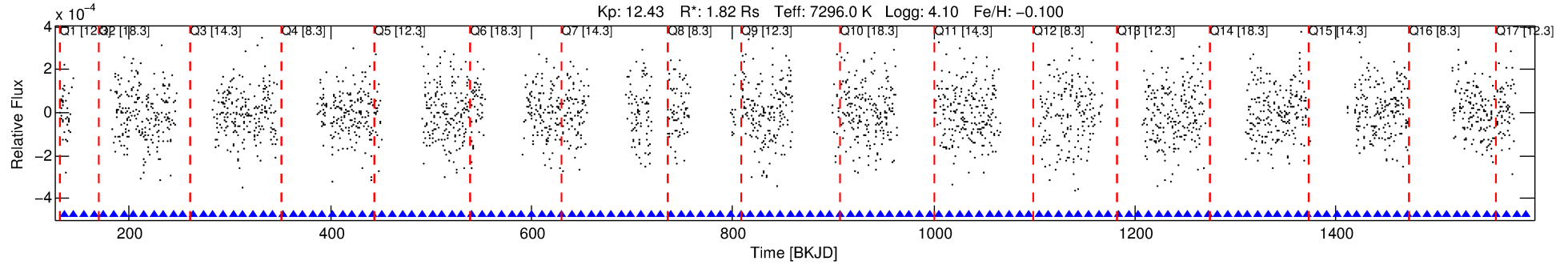
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010128033-04

No Significant Match Found

DV One-Page Summary

KIC: 10128033 Candidate: 4 of 7 Period: 9.891 d



DV Fit Results:

Period = 9.89149 [0.00009] d
Epoch = 135.2923 [0.0063] BKJD
Rp/R* = 0.0156 [0.0194]
a/R* = 21.78 [173.36]
b = 0.90 [1.71]
Seff = 777.35 [306.44]
Teq = 1346 [133] K
Rp = 3.09 [3.96] Re
a = 0.1039 [0.0263] AU
Ag = 82.38 [209.58] [0.39 σ]
Teffp = 6272 [3961] K [1.24 σ]

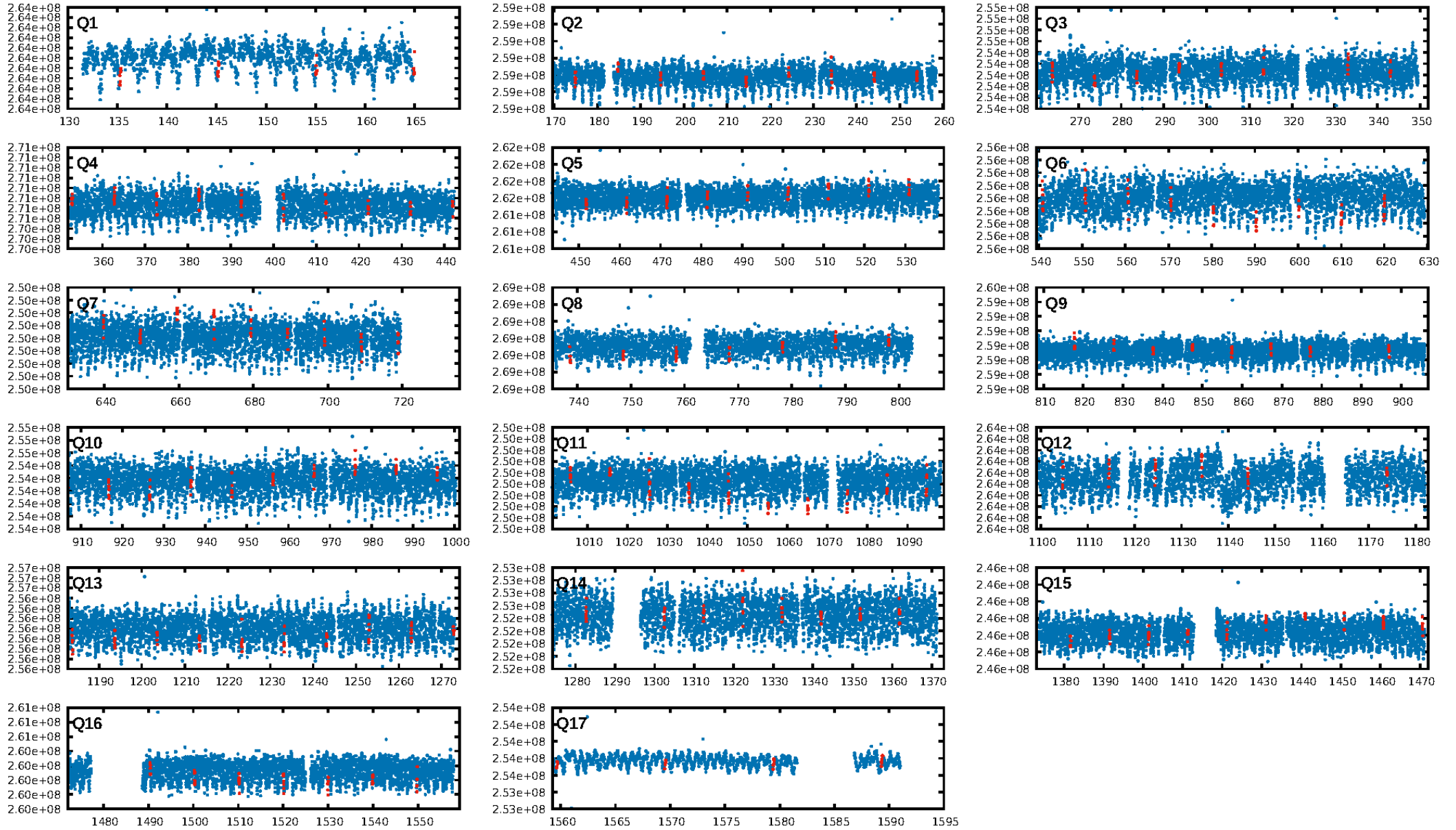
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [7.43 σ]
LongPeriod-sig: 100.0% [69.14 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 22.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [15/15]
GhostDiagnostic-chr: 2.542
Centroid-sig: 98.4%
Centroid-so: 0.005 arcsec [0.02 σ]
OotOffset-rm: 0.286 arcsec [0.41 σ]
OotOffset-st: 3/3/3/1 [10]
KicOffset-rm: 0.345 arcsec [0.52 σ]
KicOffset-st: 3/3/3/1 [10]
DiffImageQuality-fgm: 0.40 [4/10]
DiffImageOverlap-fno: 0.00 [0/17]

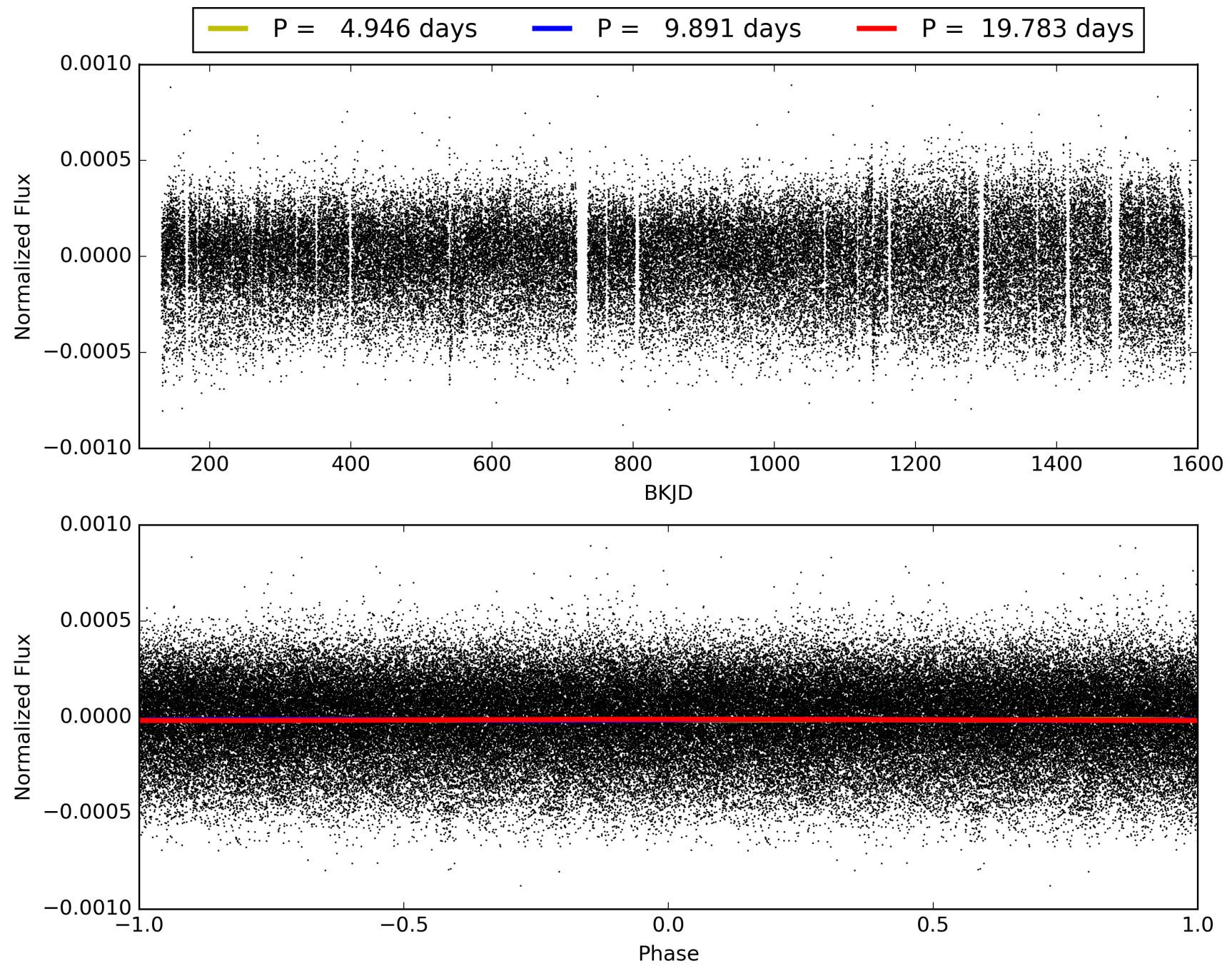
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:50:19 Z

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

TCE 010128033-04, PDC Light Curves

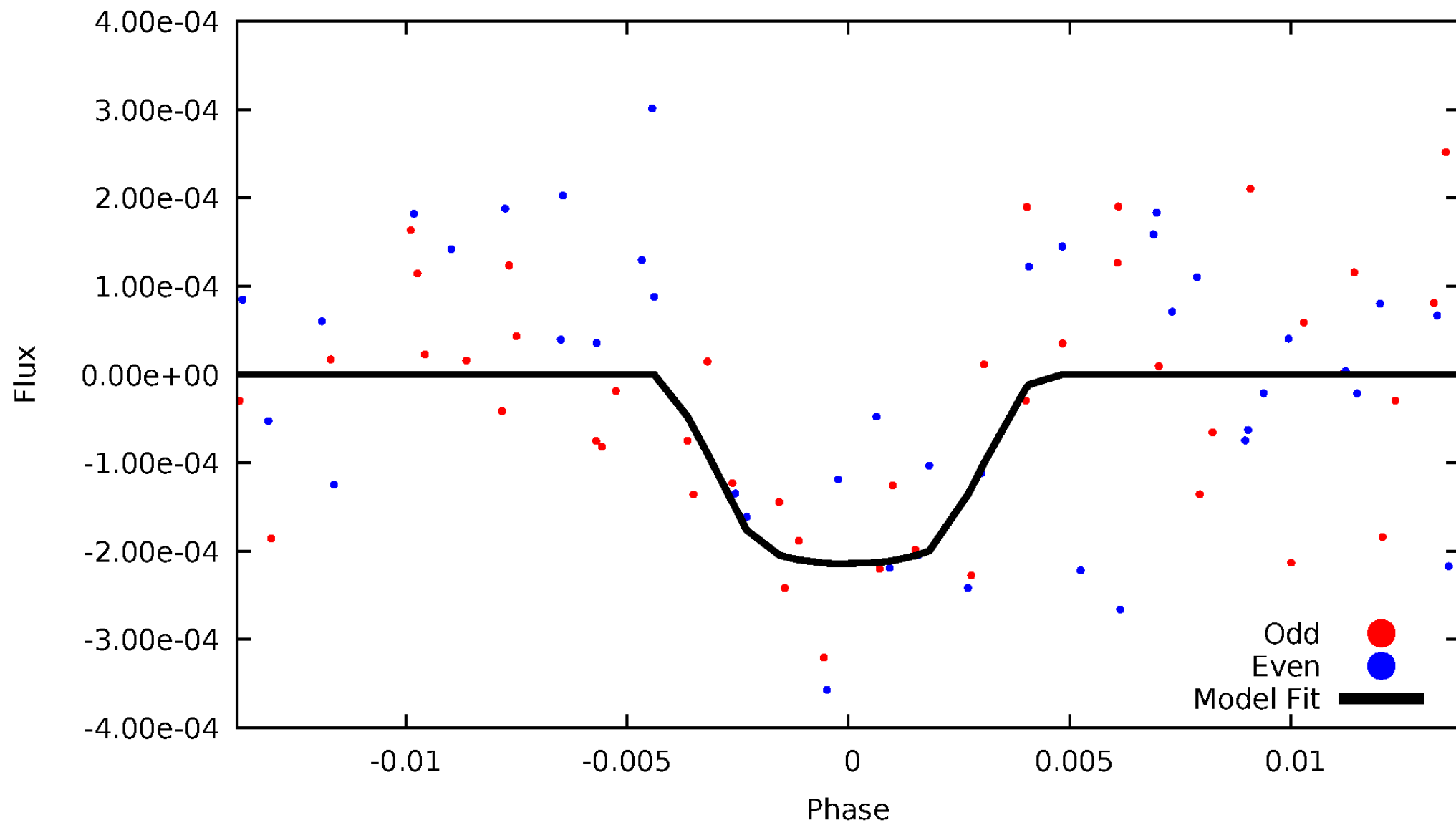


TCE 010128033-04



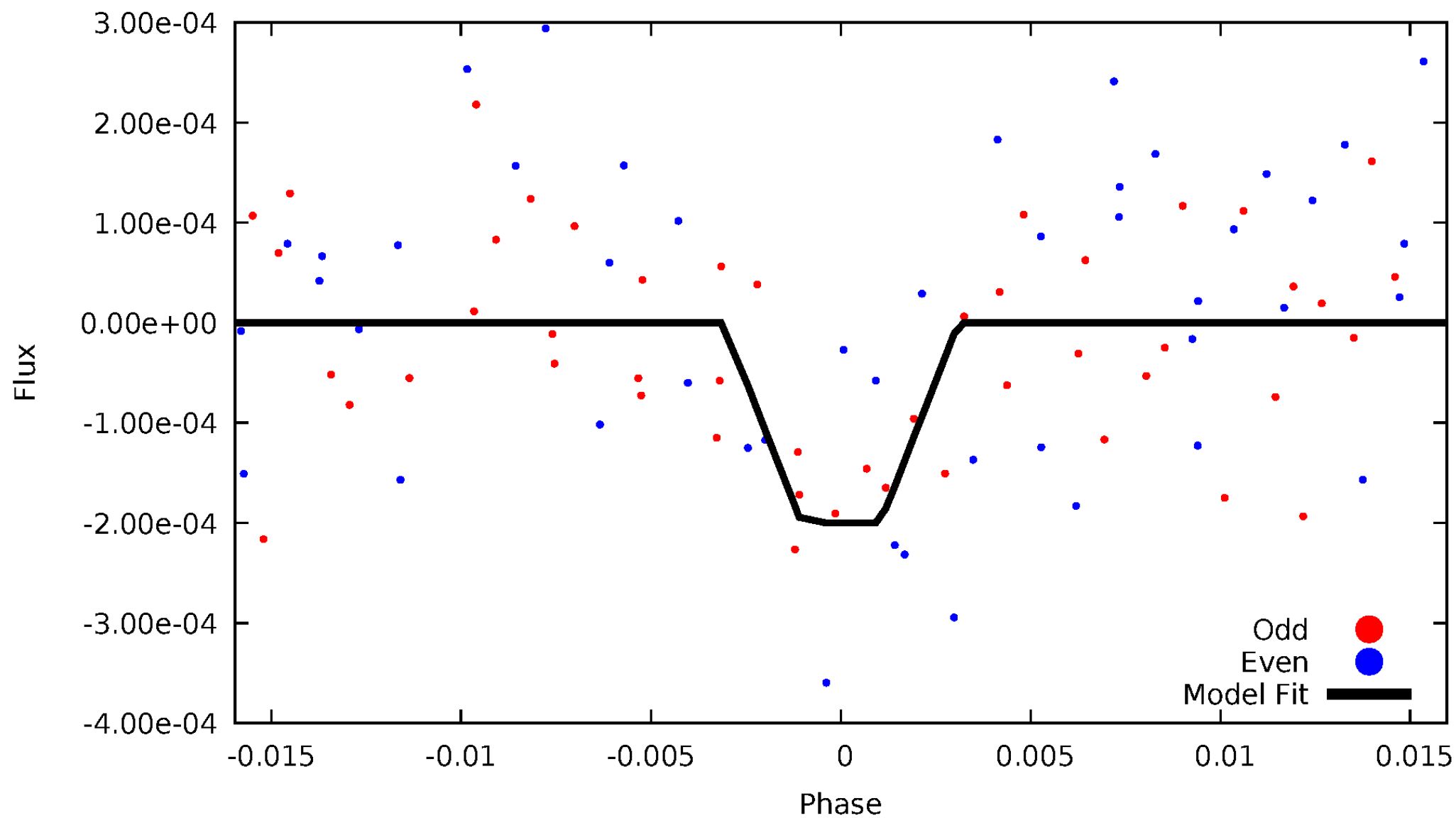
DV Odd/Even

TCE 010128033-04



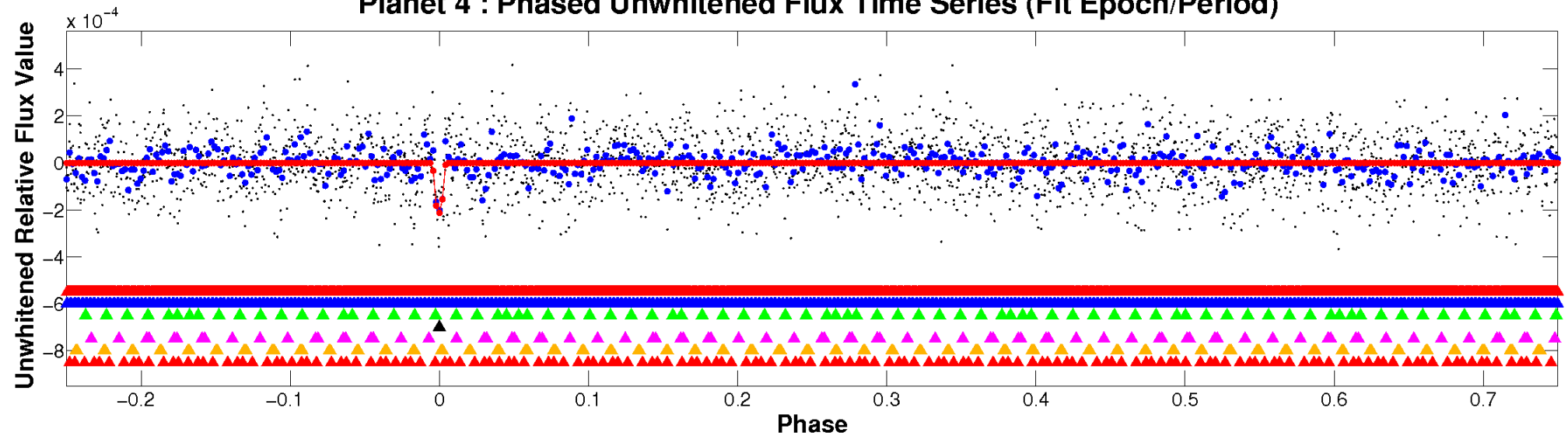
ALT Odd/Even

TCE 010128033-04

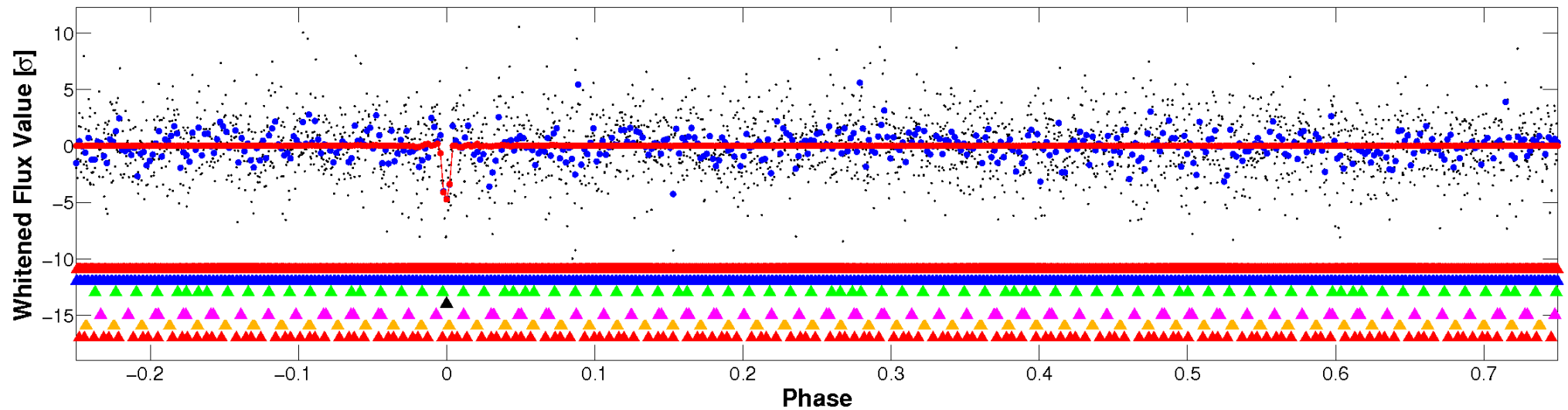


Non-Whitened Vs. Whitened Light Curve

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

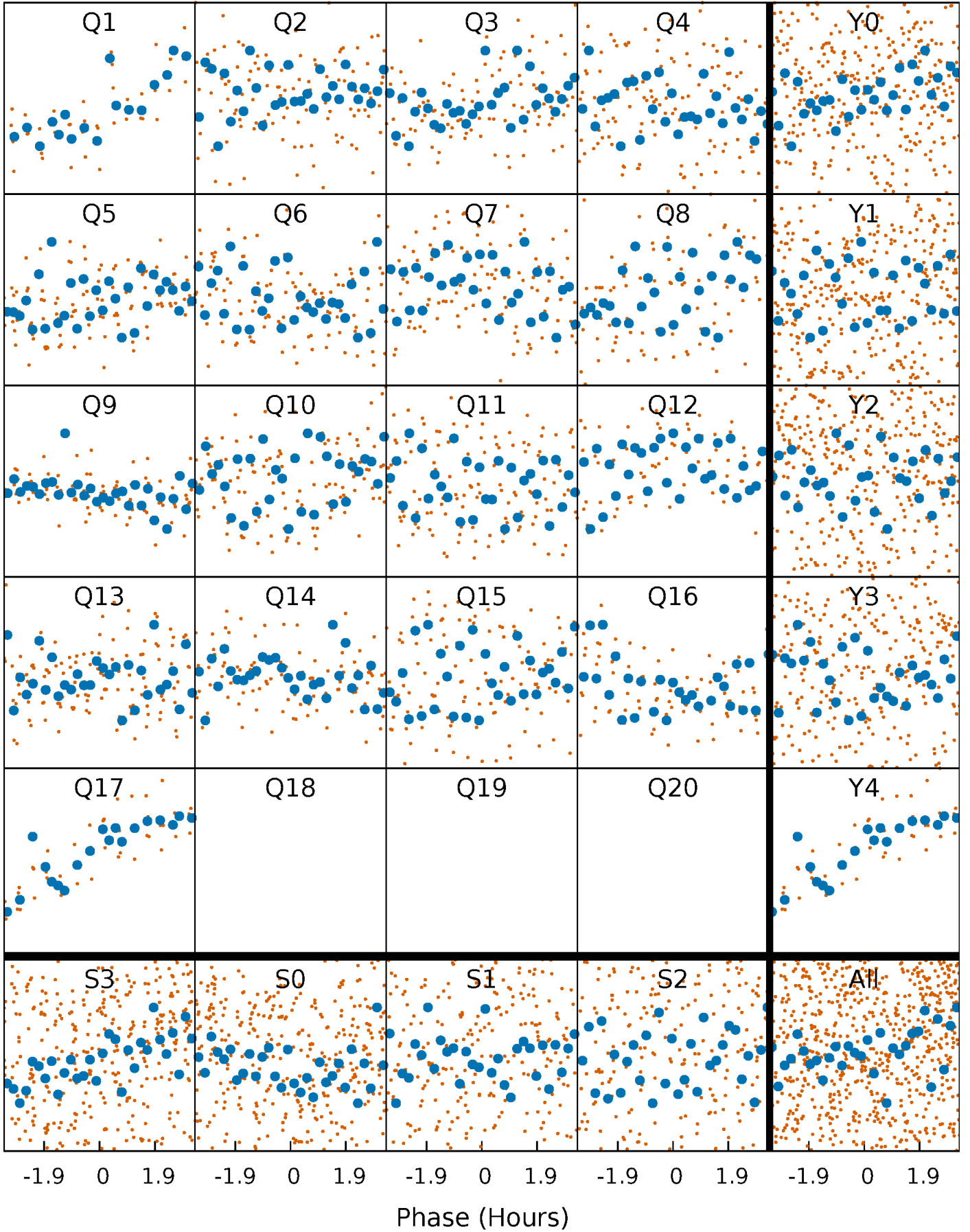


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



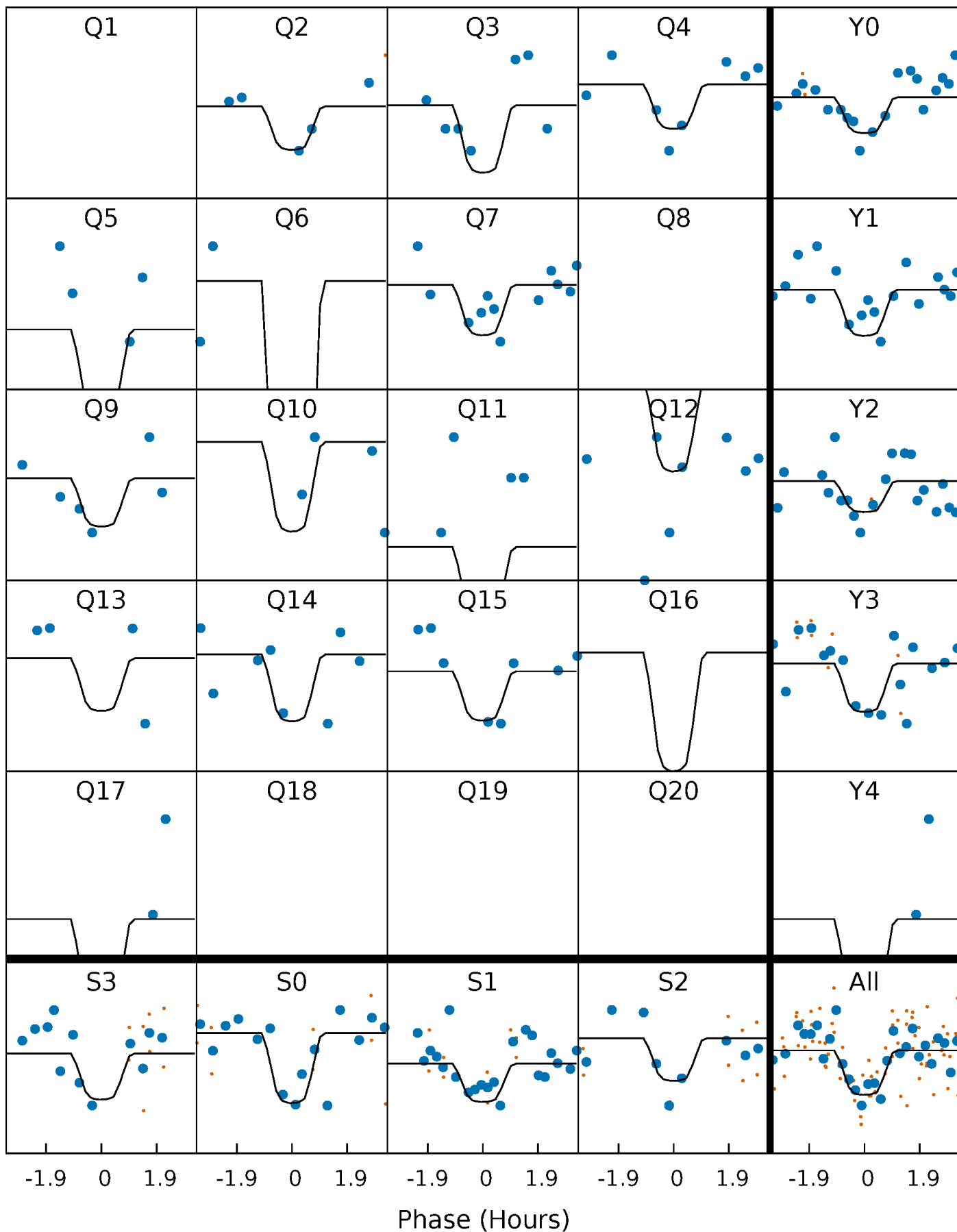
PDC Quarter-Phased Transit Curves

TCE 010128033-04 P= 9.891488 Days $T_0=135.292290$ (BKJD)



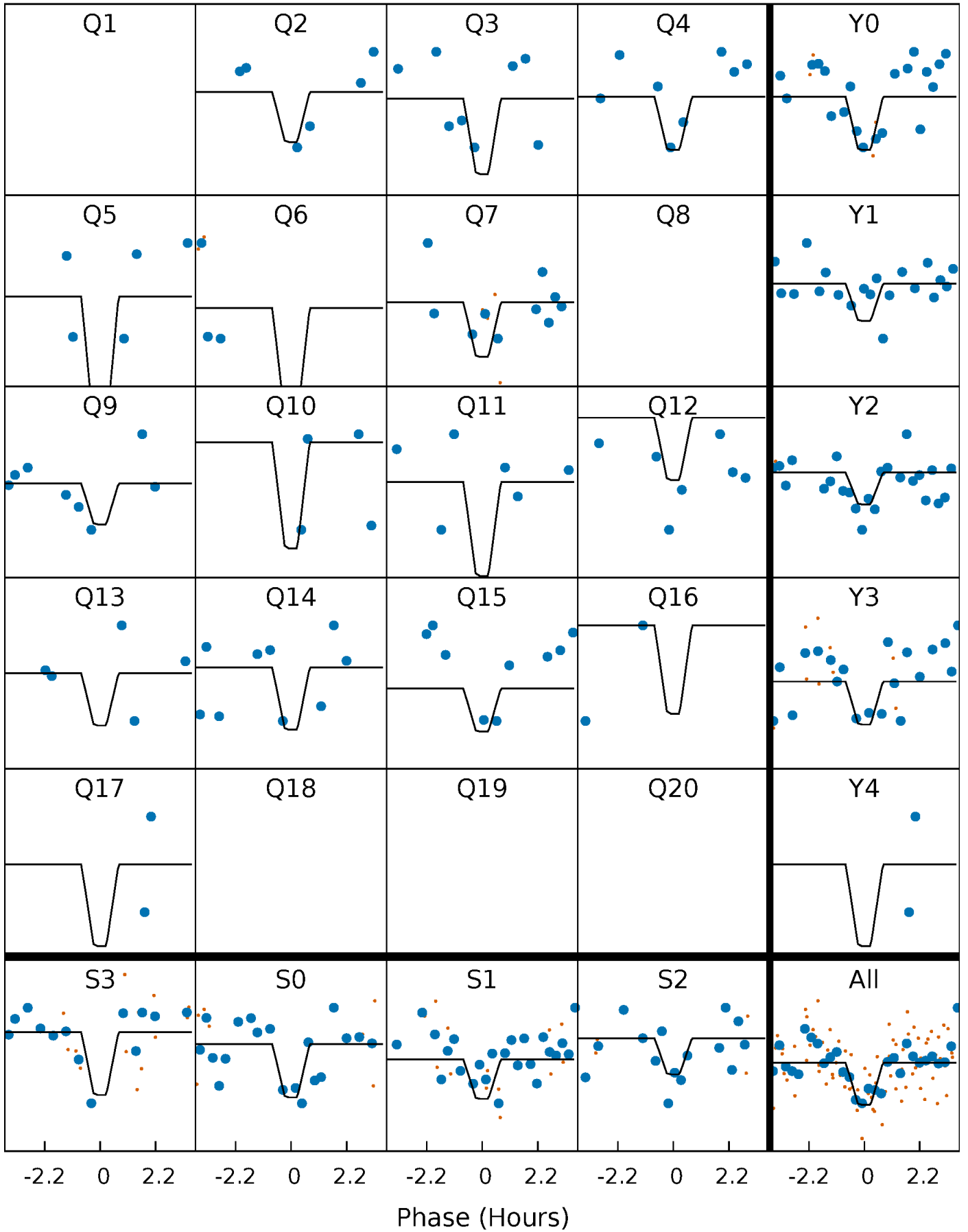
DV Quarter-Phased Transit Curves

TCE 010128033-04 P= 9.891488 Days $T_0=135.292290$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

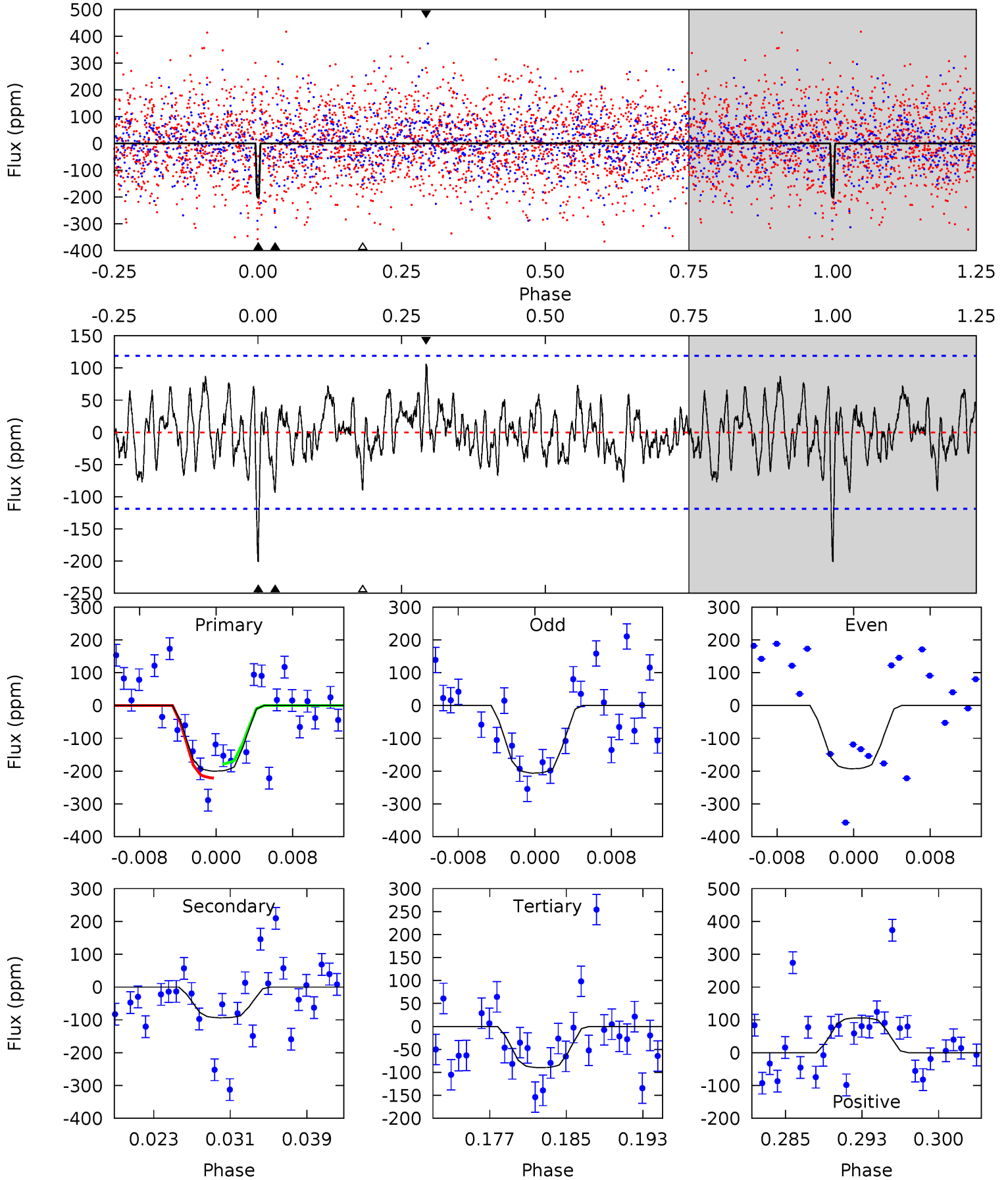
TCE 010128033-04 P= 9.891528 Days $T_0=135.287170$ (BKJD)



DV Model-Shift Uniqueness Test

010128033-04, P = 9.891488 Days, E = 125.400802 Days

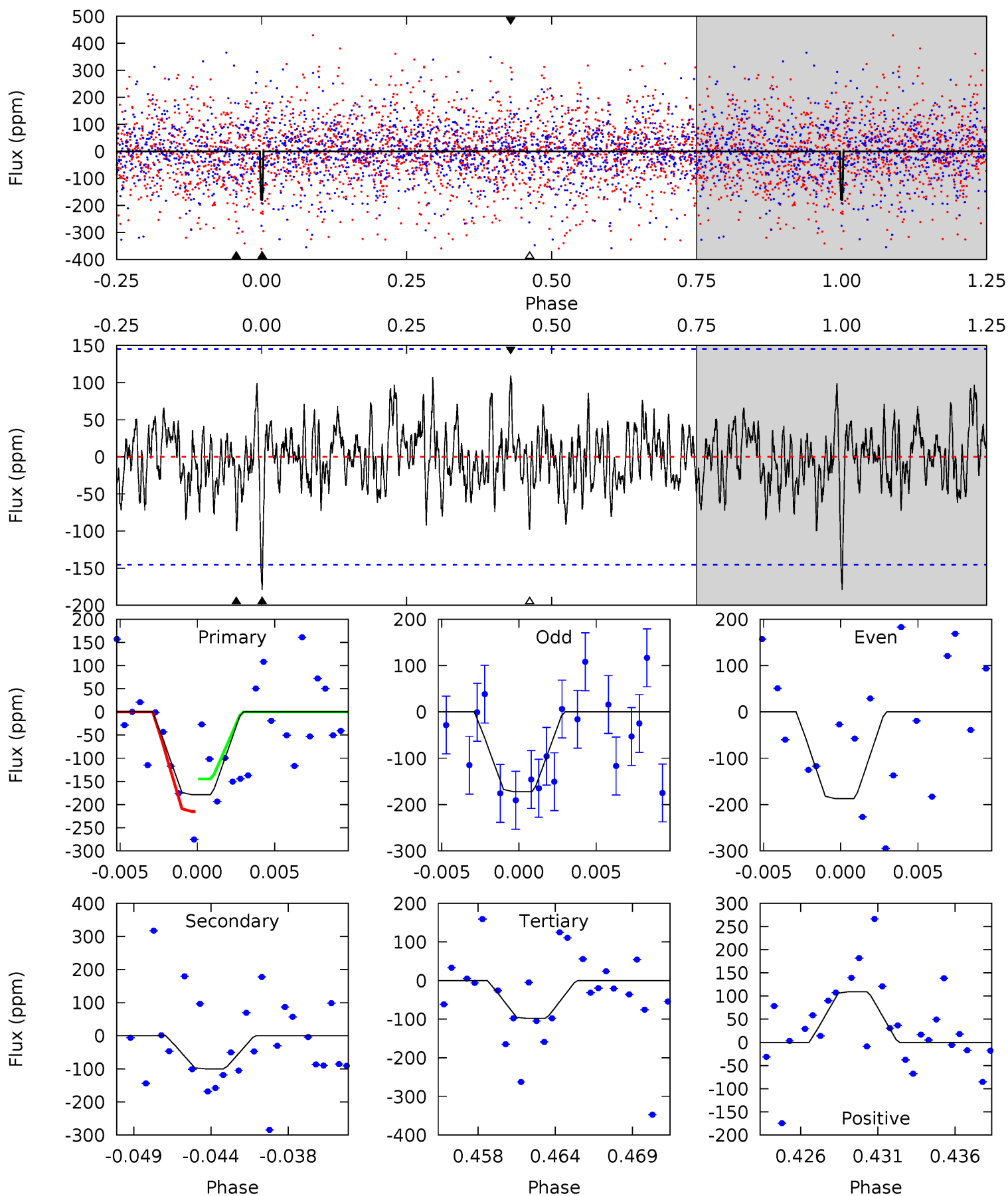
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.55	4.00	3.84	4.54	5.08	2.66	1.39	4.71	4.02	0.16	-0.54	0.28	1.03	0.35	0.91



Alt Model-Shift Uniqueness Test

010128033-04, P = 9.891528 Days, E = 125.395642 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.33	3.54	3.46	3.87	5.14	2.78	1.21	2.87	2.46	0.08	-0.33	0.26	1.05	0.38	1.22



Stellar Parameters For KIC 010128033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+228}_{-330}	$4.103^{+0.165}_{-0.182}$	$-0.100^{+0.200}_{-0.350}$	$1.818^{+0.576}_{-0.384}$	$1.526^{+0.234}_{-0.257}$	$0.358^{+0.319}_{-0.179}$
	+3%/-5%	+4%/-4%	+200%/-350%	+32%/-21%	+15%/-17%	+89%/-50%
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 010128033-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-94 ± 23	$3.91^{+3.67}_{-2.58}$	1876^{+135}_{-136}	4980^{+4073}_{-1076}	33^{+253}_{-25}
Alt.	-100 ± 28	$3.97^{+3.68}_{-2.70}$	1867^{+162}_{-122}	5085^{+4152}_{-1119}	35^{+329}_{-26}

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 $A_{obs} \gg 1.0$

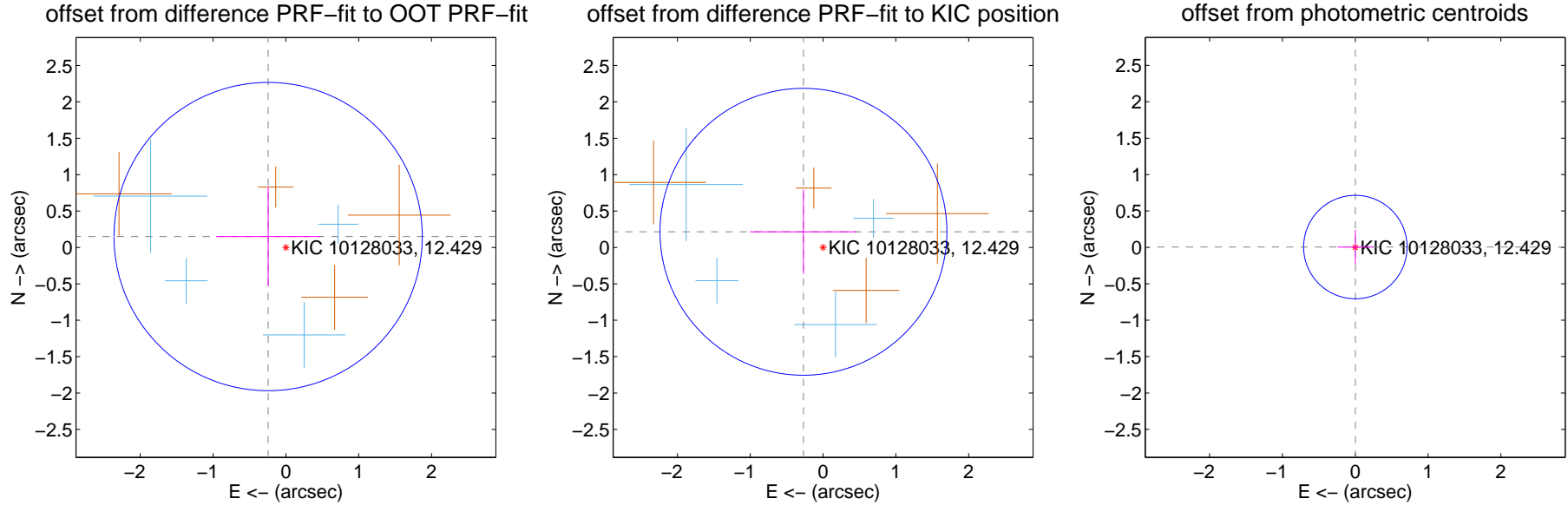
DV Centroid Data

Supplemental centroid analysis for 010128033-04. Kepler magnitude: 12.43. Transit SNR 18.82

There are 4 quarters with good PRF difference image offsets

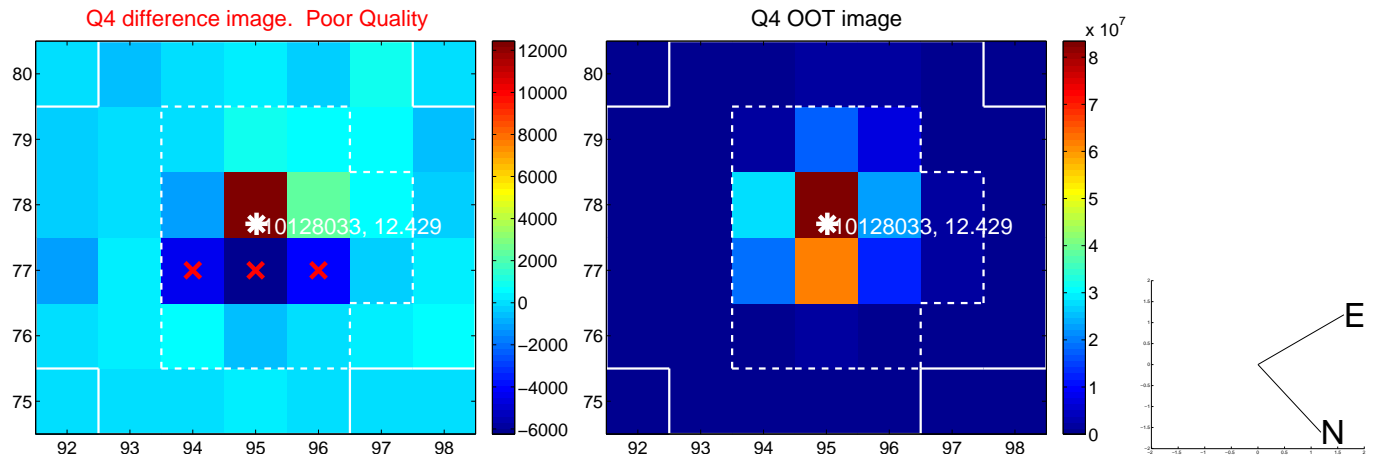
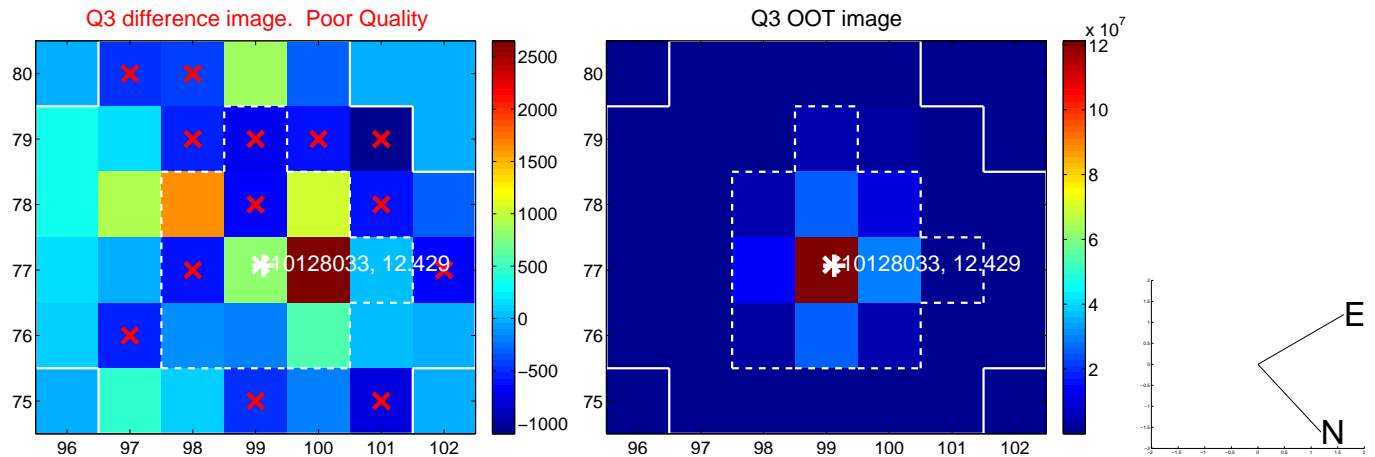
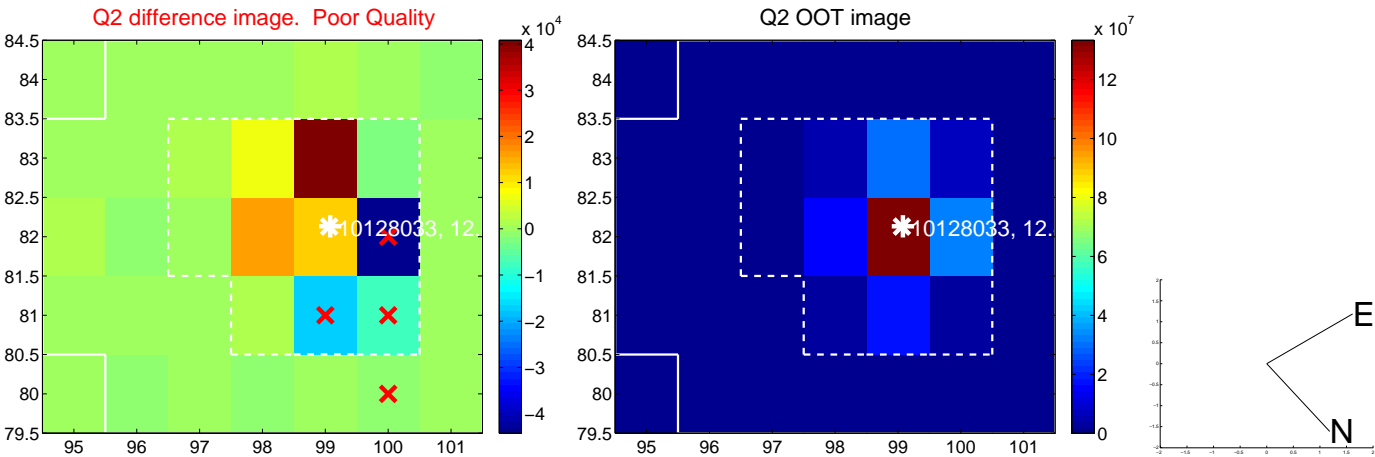
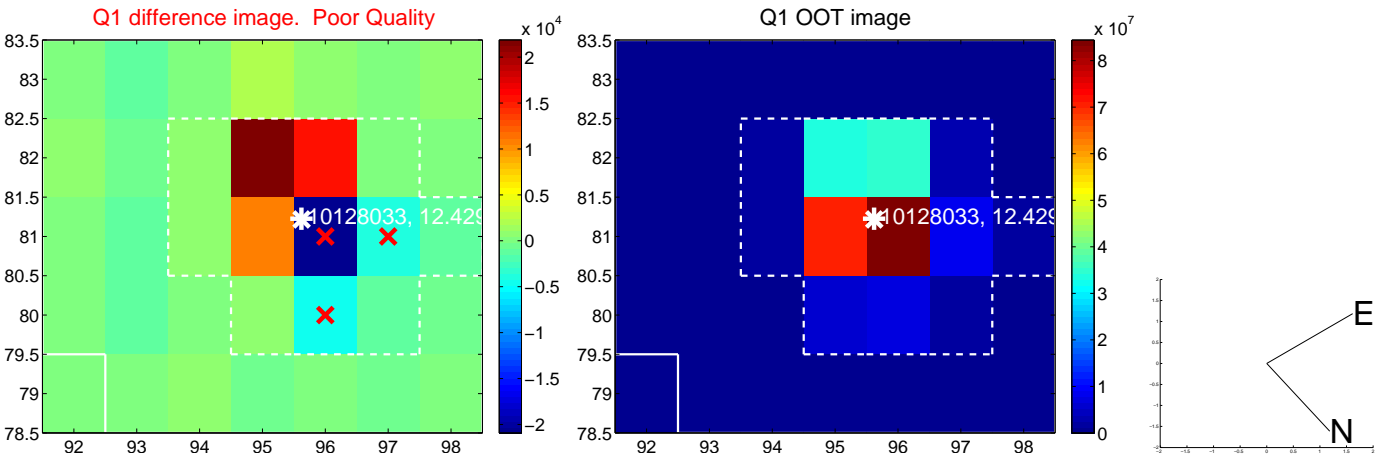
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.286 ± 0.706	0.41	0.244 ± 0.714	0.150 ± 0.680
PRF-fit source offset from KIC position	0.345 ± 0.657	0.52	0.270 ± 0.733	0.215 ± 0.579
photometric centroid source offset	0.00 ± 0.24	0.02	-0.00 ± 0.24	0.00 ± 0.24

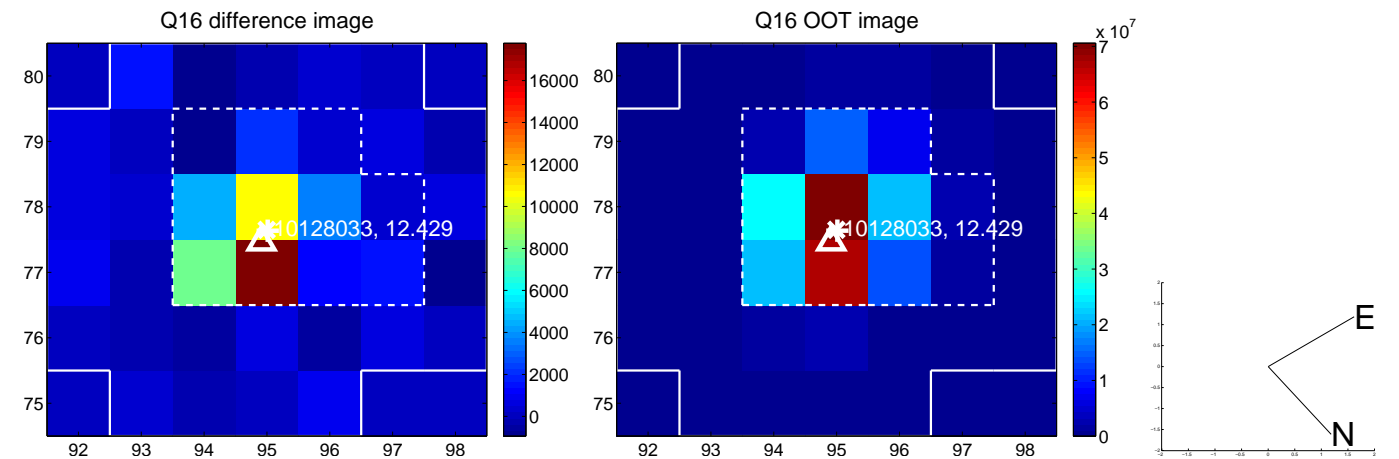
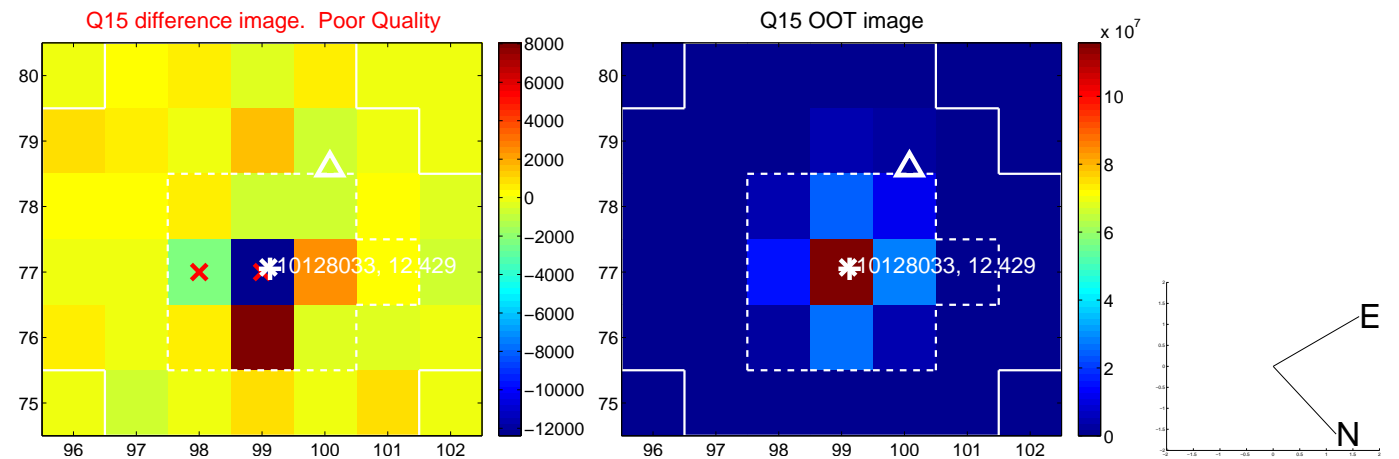
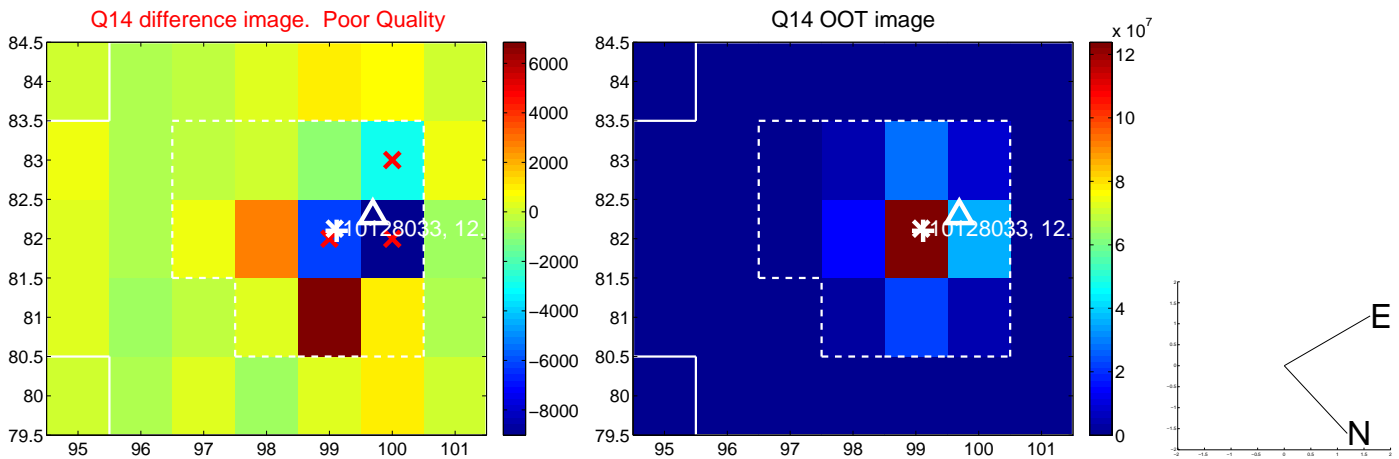
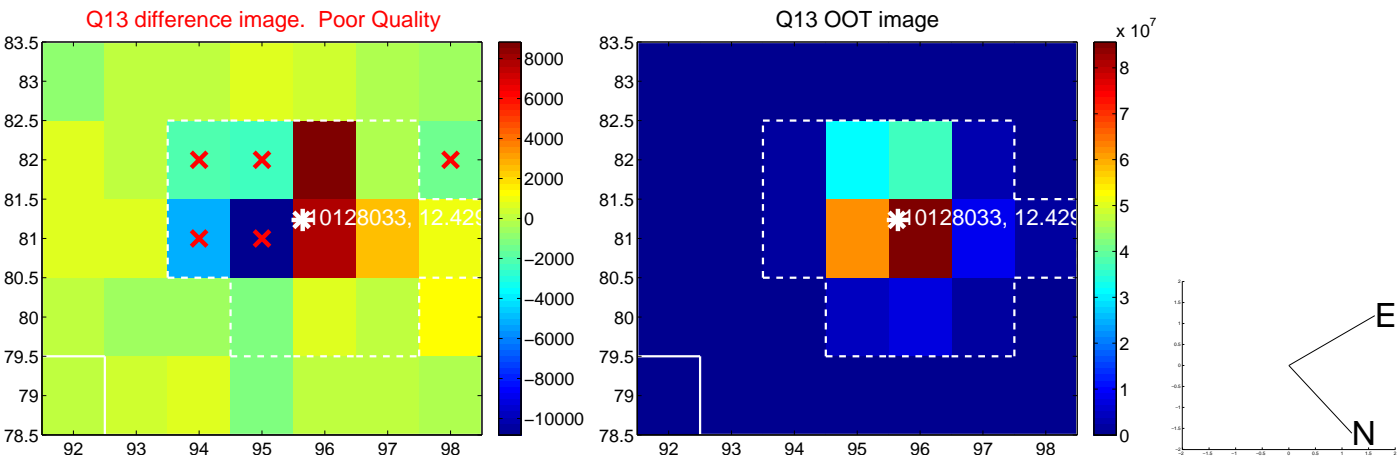


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

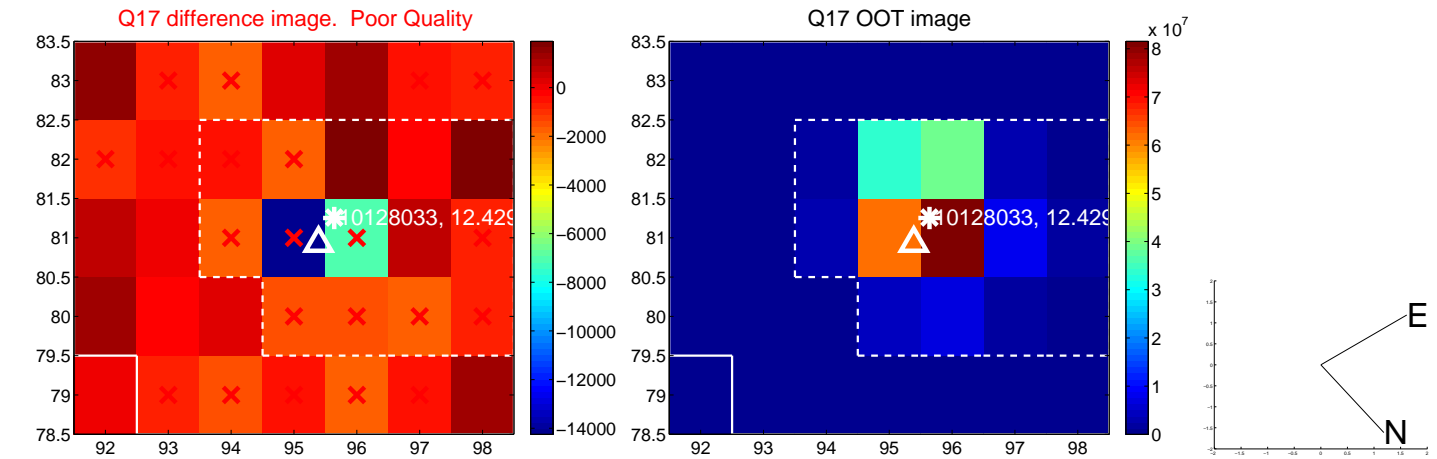
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



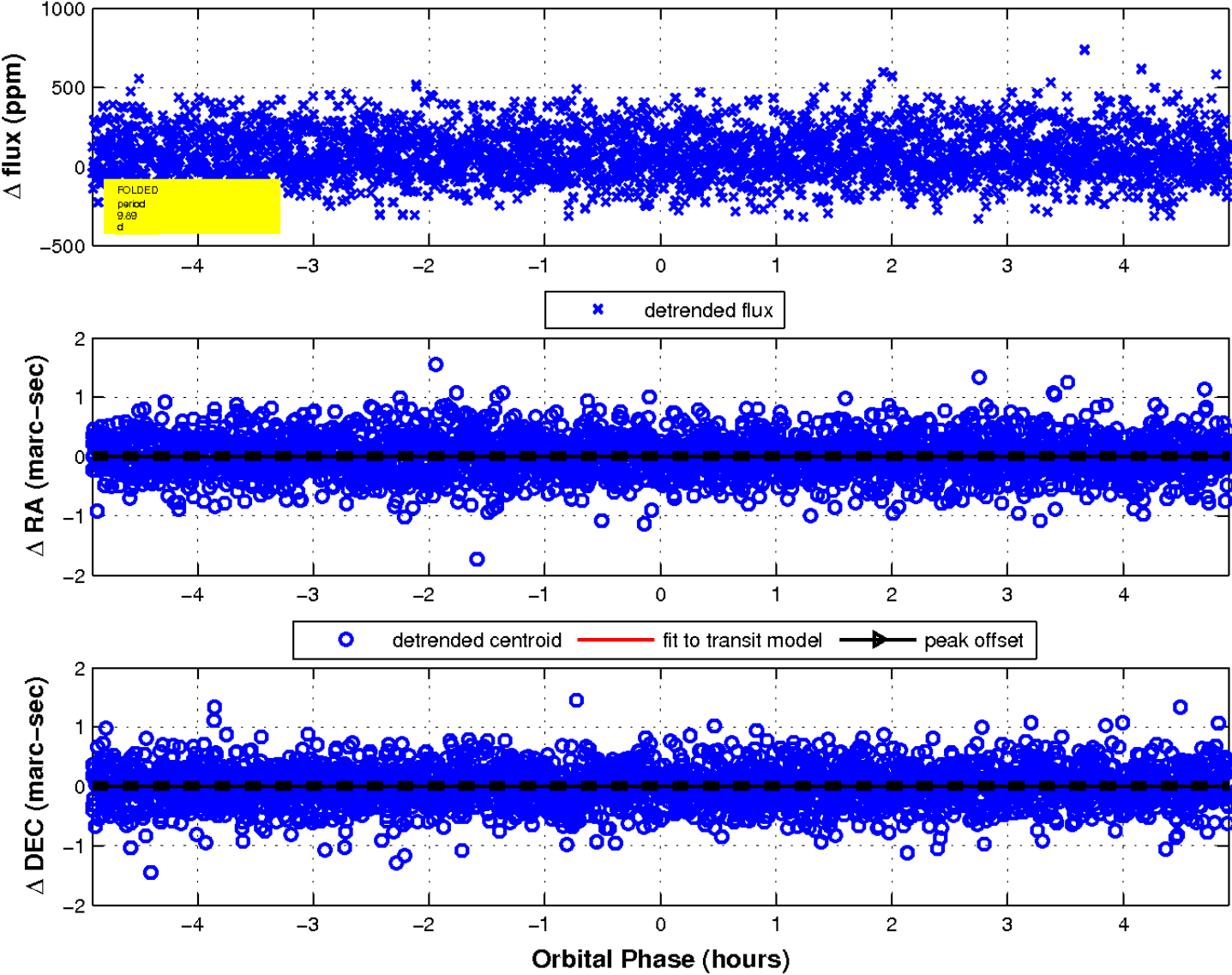
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

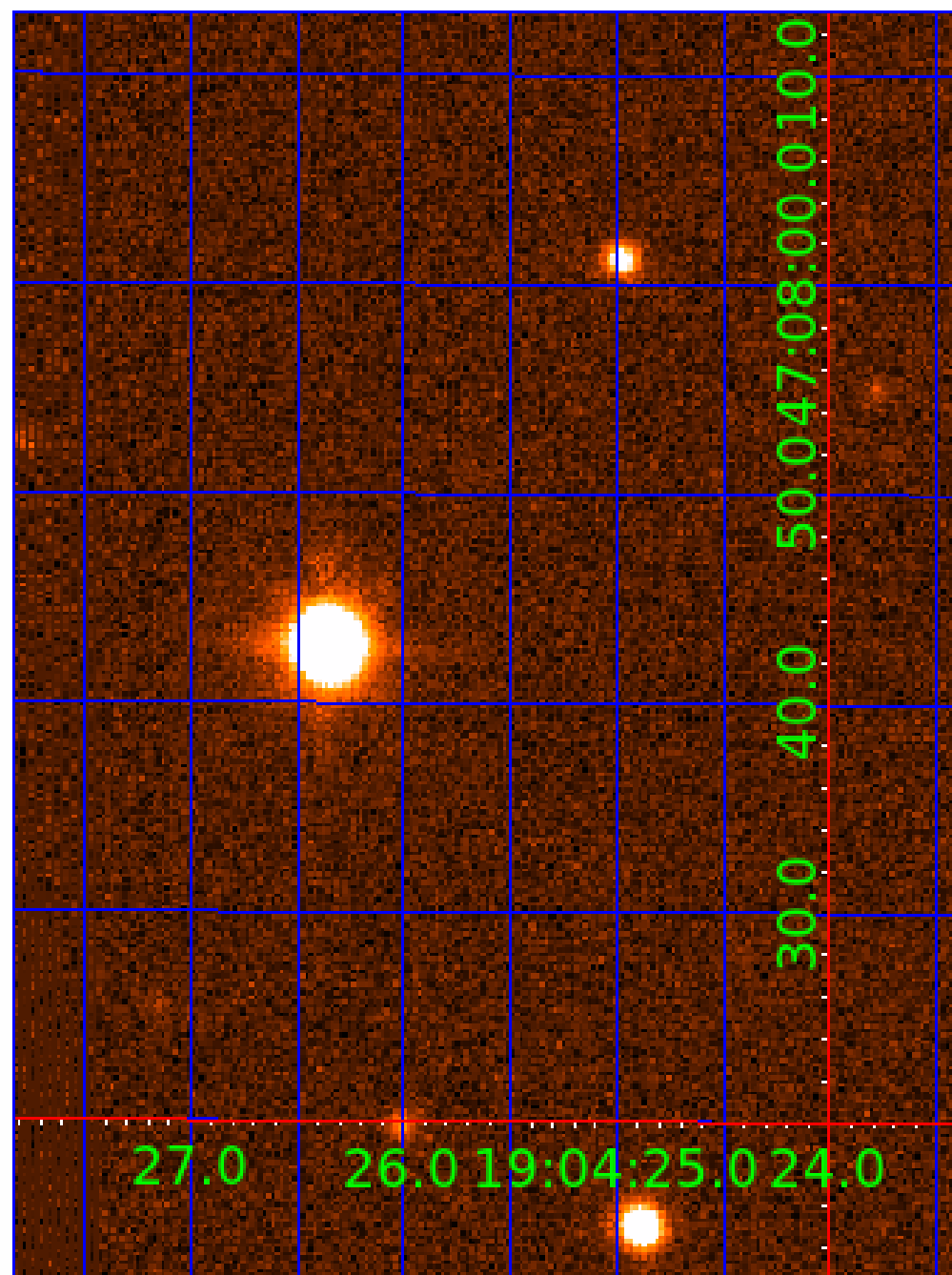


fluxWeightedCentroids, Planet 4 of 7



UKIRT Image

Declination



KIC 010128033

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})
010128033-01	OBS	No	0.656657	132.034110	132.6	2.000	12.3	-1.0	1.82	7296	2.13	28918.67
010128033-02	OBS	No	0.652477	131.903081	7.1	4.657	10.5	4.6	1.82	7296	0.50	29165.94
010128033-03	OBS	No	17.600189	147.811937	250.3	2.116	15.5	14.4	1.82	7296	3.36	360.53
010128033-04	OBS	No	9.891488	135.292290	214.5	1.638	14.6	18.8	1.82	7296	3.09	777.35
010128033-05	OBS	No	18.663500	140.435482	217.4	1.484	14.8	14.6	1.82	7296	2.96	333.40
010128033-06	OBS	No	8.211909	137.726951	81.5	6.535	12.7	11.0	1.82	7296	1.90	996.26
010128033-07	OBS	No	9.203685	137.129745	540.9	1.500	15.2	-1.0	1.82	7296	4.30	855.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010128033-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
010128033-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010128033-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010128033-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010128033-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

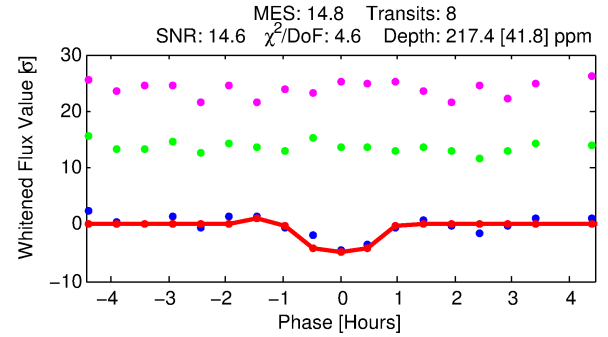
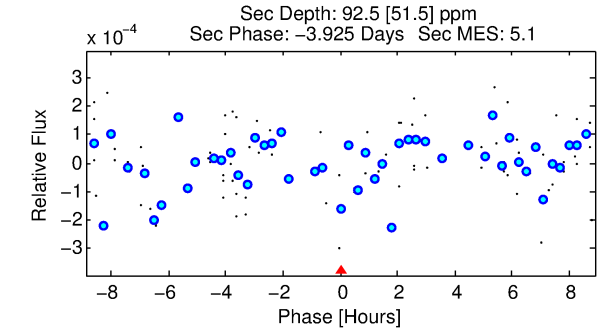
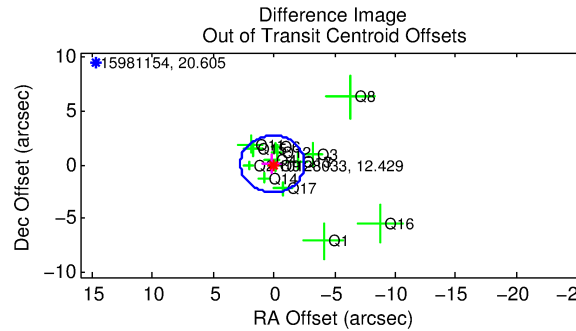
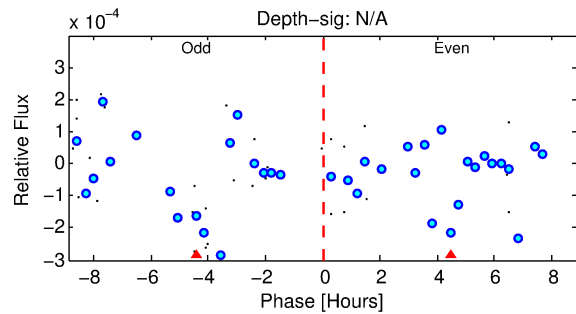
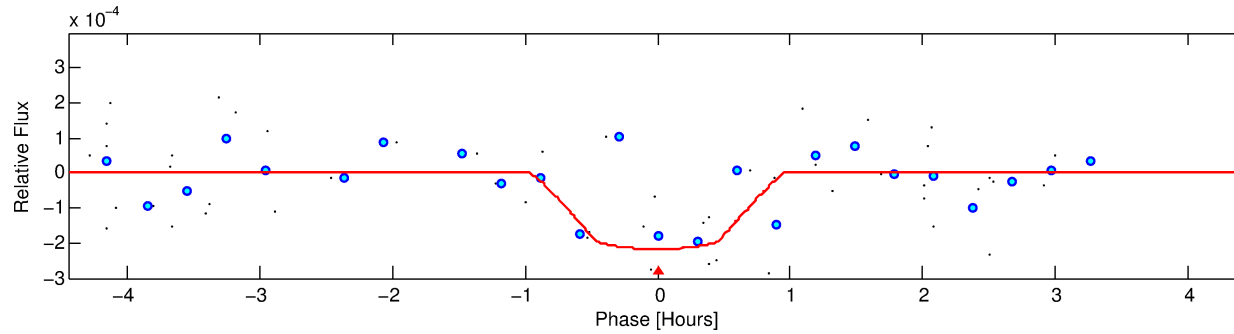
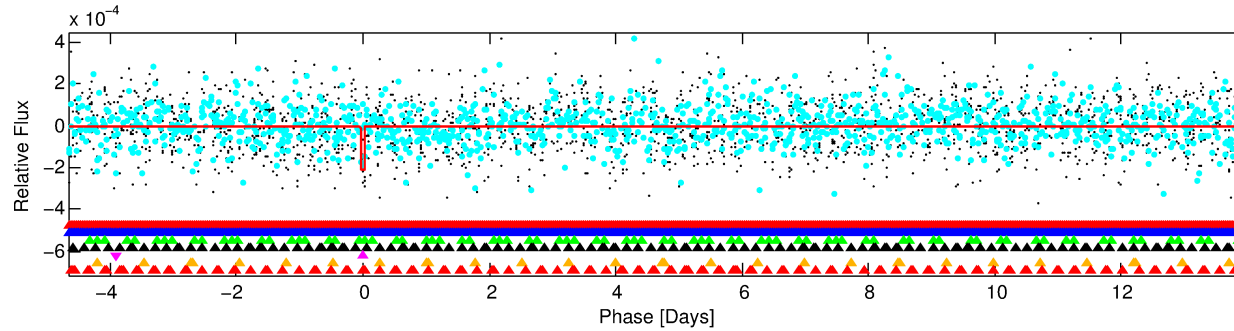
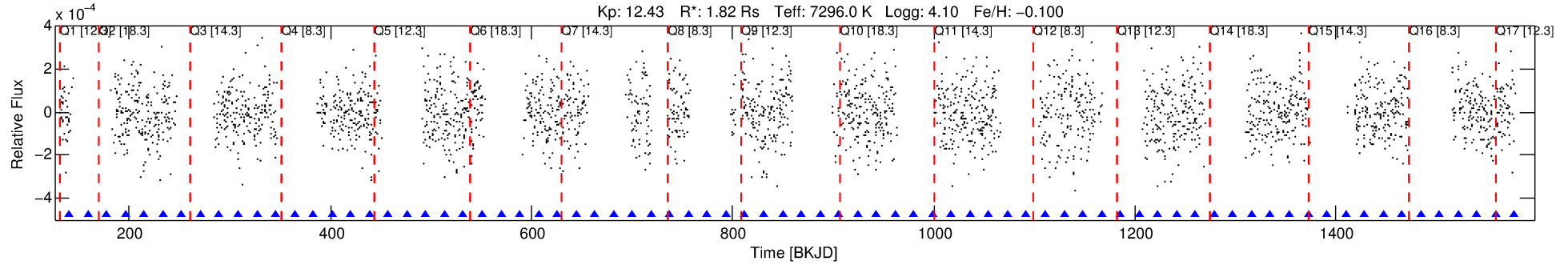
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010128033-05

No Significant Match Found

DV One-Page Summary

KIC: 10128033 Candidate: 5 of 7 Period: 18.664 d



DV Fit Results:

Period = 18.66350 [0.00056] d
Epoch = 140.4355 [0.0171] BKJD
Rp/R* = 0.0149 [0.0317]
a/R* = 60.68 [840.94]
b = 0.79 [6.35]
Seff = 333.40 [131.43]
Teq = 1090 [107] K
Rp = 2.96 [6.36] Re
a = 0.1586 [0.0402] AU
Ag = 146.54 [630.77] [0.23σ]
Teffp = 5861 [6292] K [0.76σ]

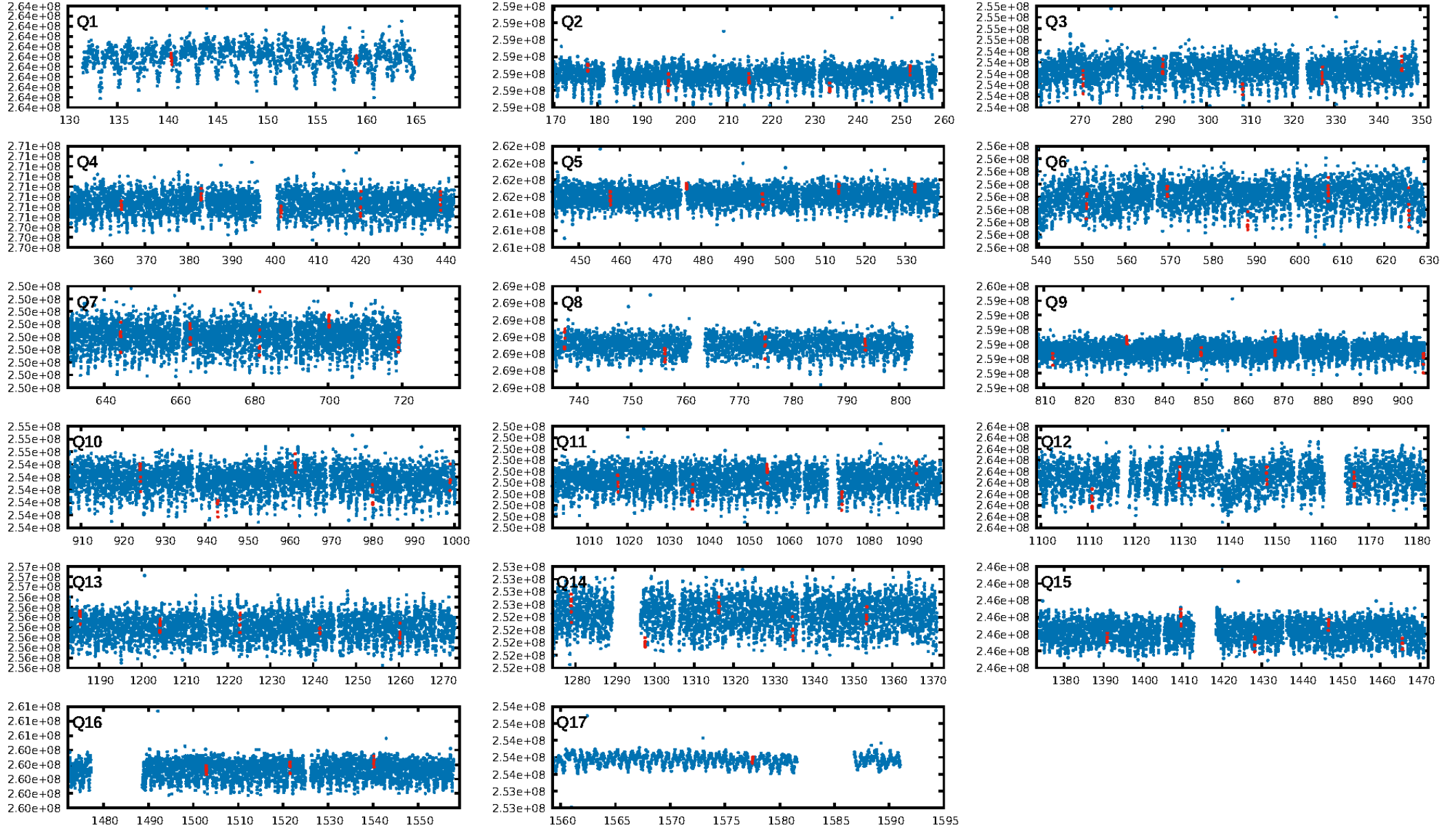
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [9.87σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 1.6%
ModelChiSquareGof-sig: 50.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [8/8]
GhostDiagnostic-chr: -1.579
Centroid-sig: 4.3%
Centroid-so: 0.571 arcsec [1.70σ]
OotOffset-rm: 0.144 arcsec [0.16σ]
KicOffset-rm: 0.186 arcsec [0.20σ]
OotOffset-st: 3/3/4/4 [14]
KicOffset-st: 3/3/4/4 [14]
DiffImageQuality-fgm: 0.50 [7/14]
DiffImageOverlap-fno: 0.00 [0/17]

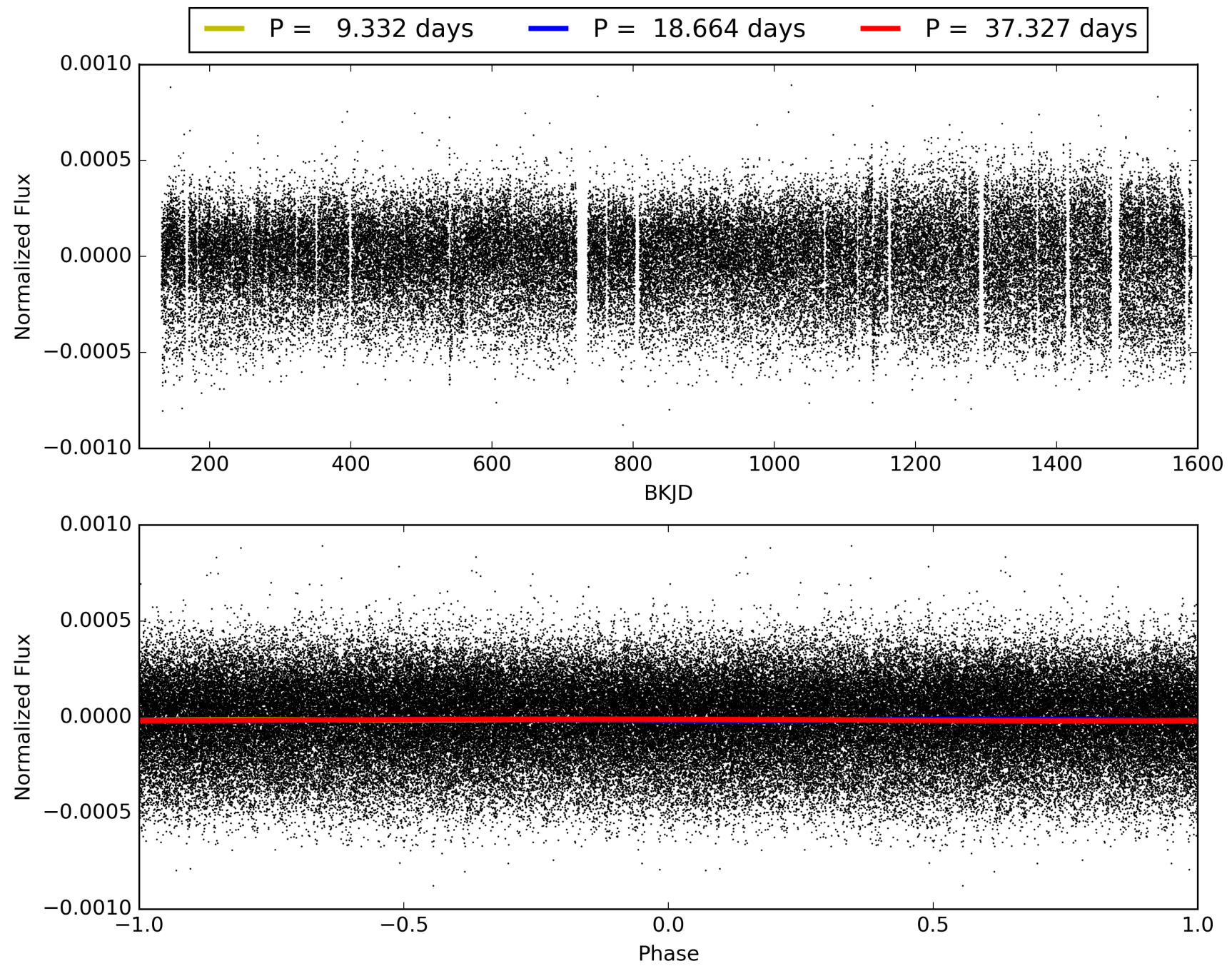
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:50:21 Z

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

TCE 010128033-05, PDC Light Curves

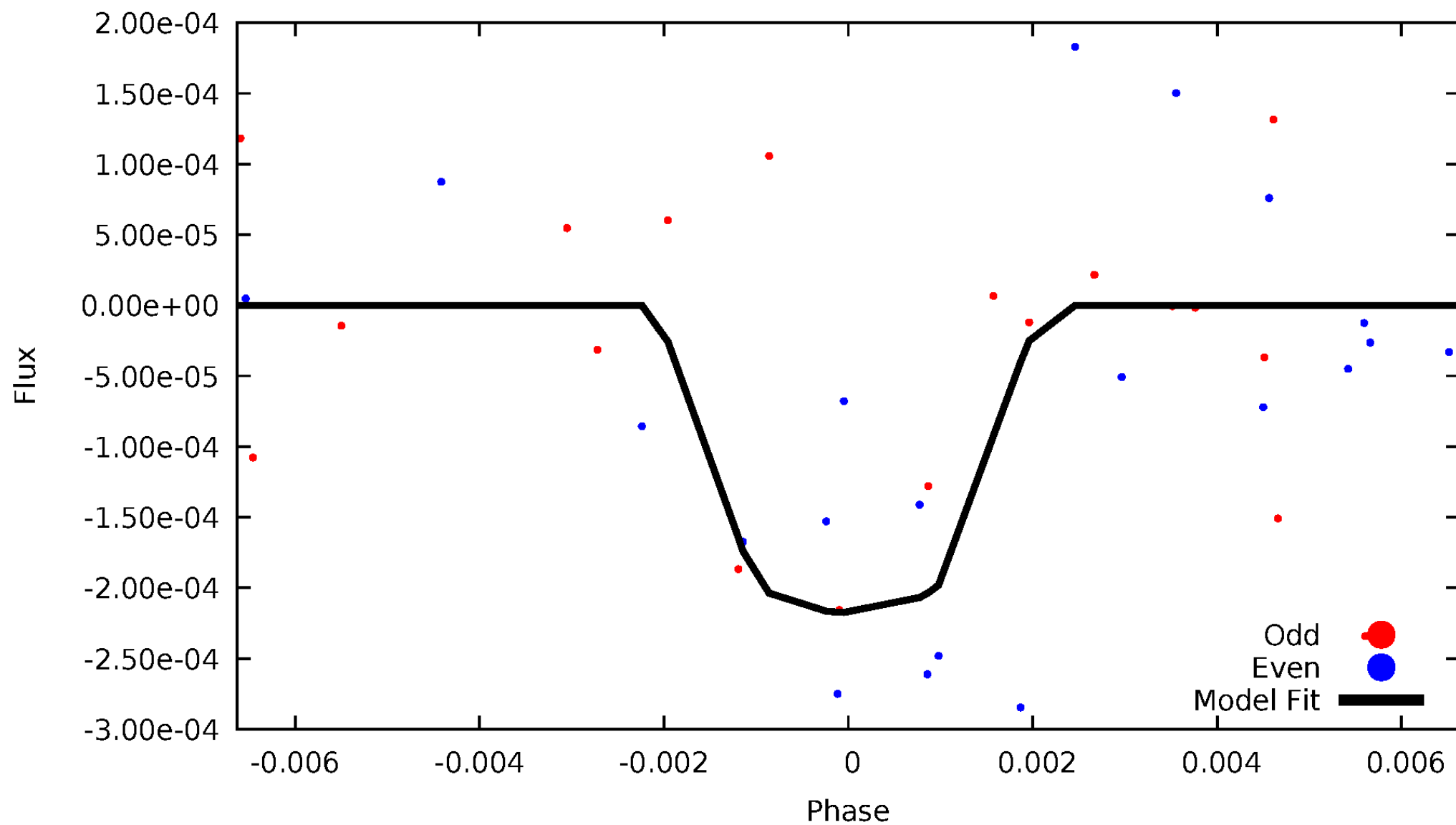


TCE 010128033-05



DV Odd/Even

TCE 010128033-05

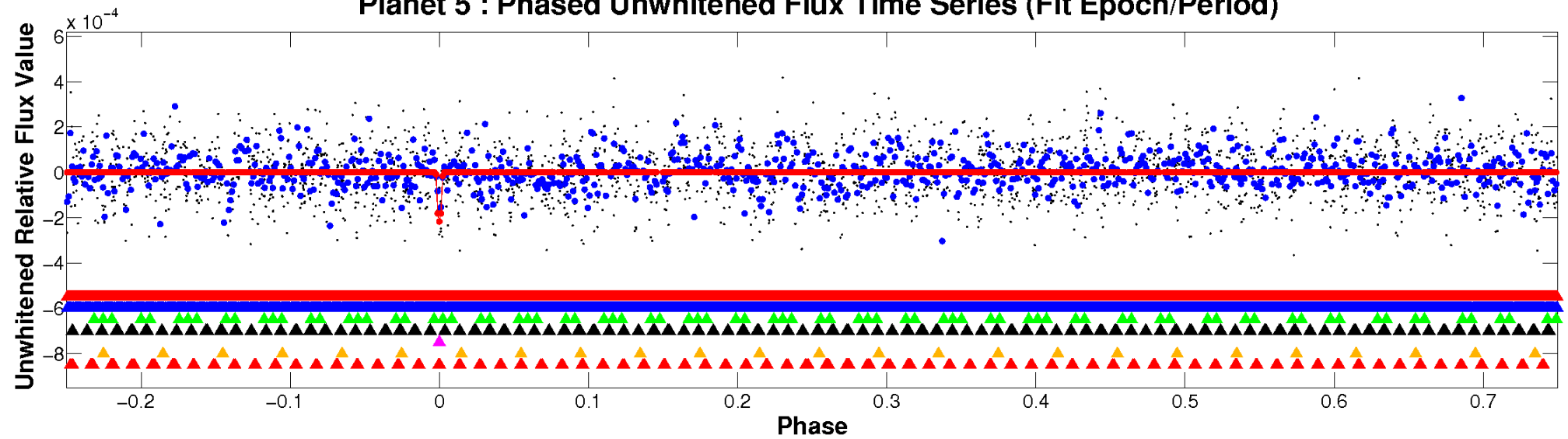


ALT Odd/Even

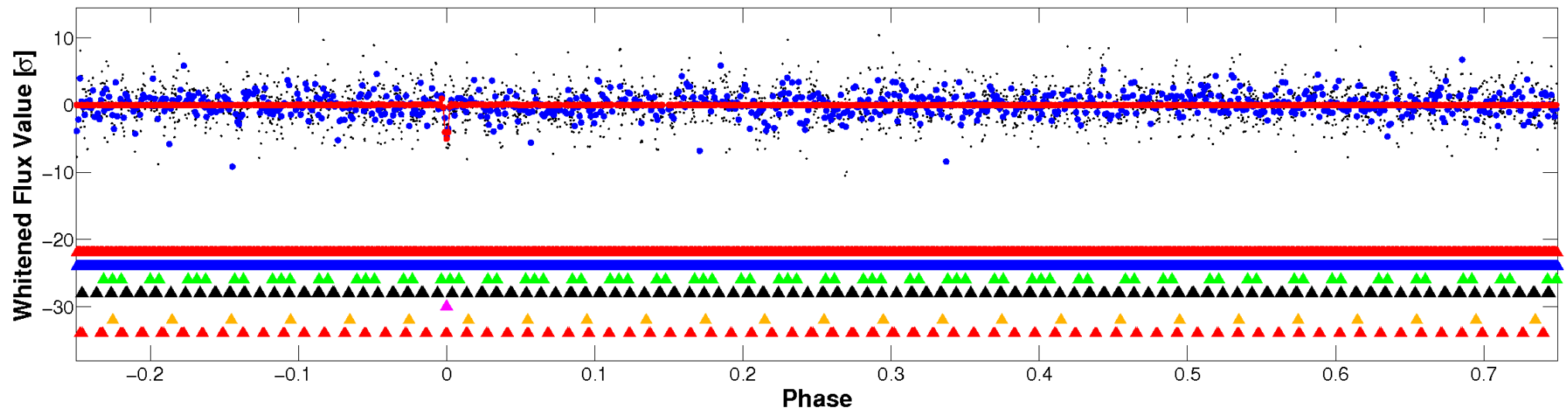
This plot does not exist for this TCE.

Non-Whitened Vs. Whitened Light Curve

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

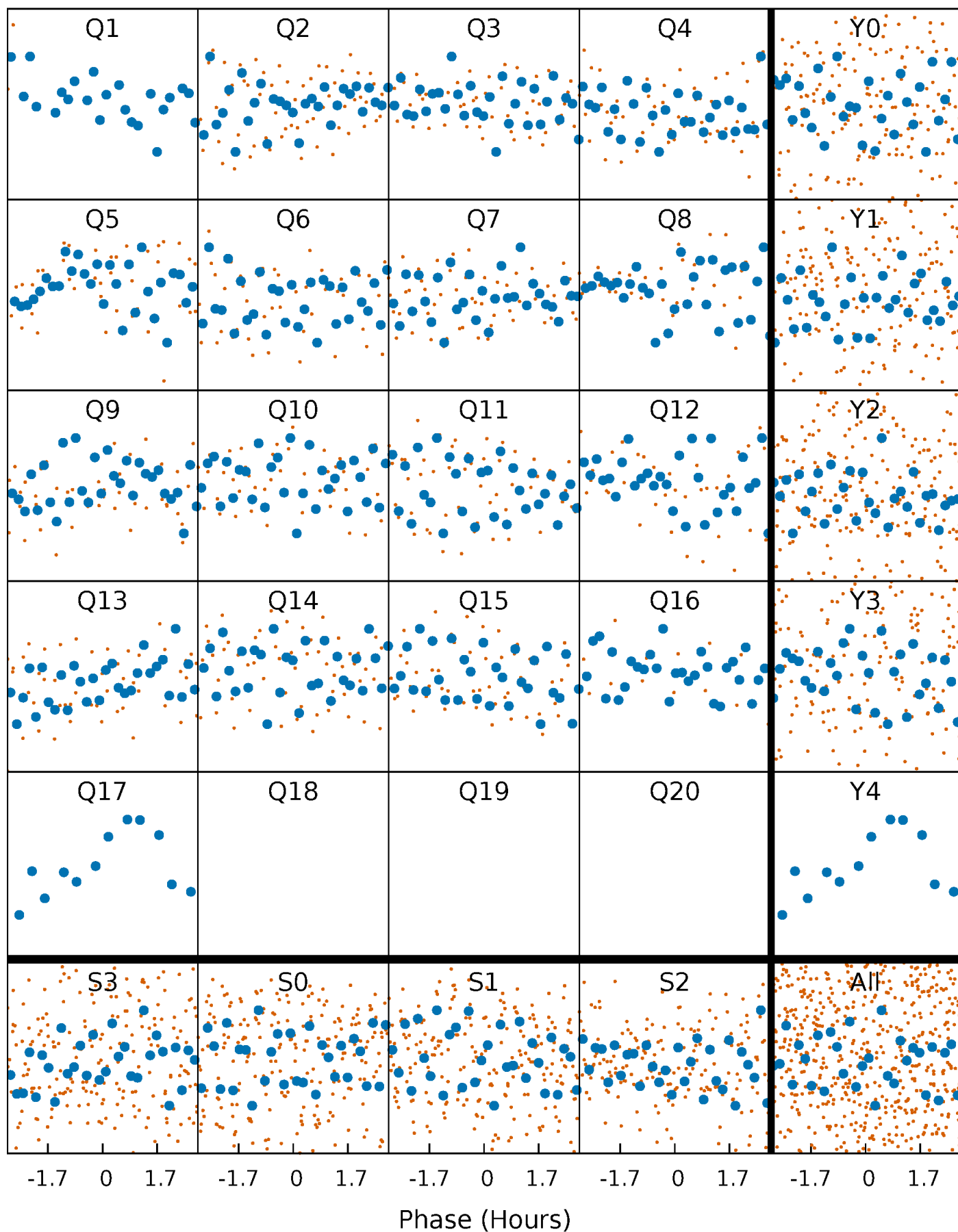


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



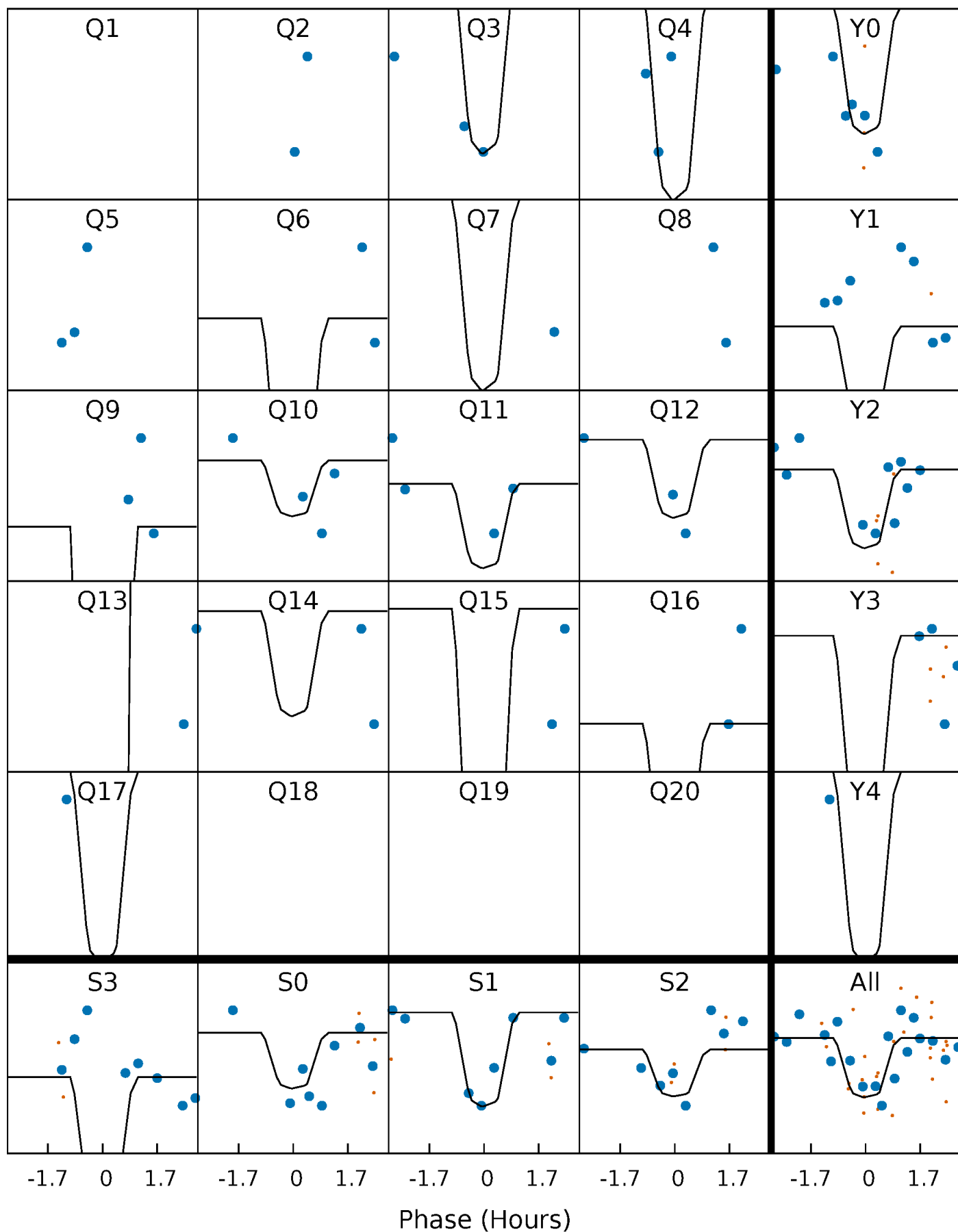
PDC Quarter-Phased Transit Curves

TCE 010128033-05 $P = 18.663500$ Days $T_0 = 140.435482$ (BKJD)



DV Quarter-Phased Transit Curves

TCE 010128033-05 P= 18.663500 Days $T_0=140.435482$ (BKJD)

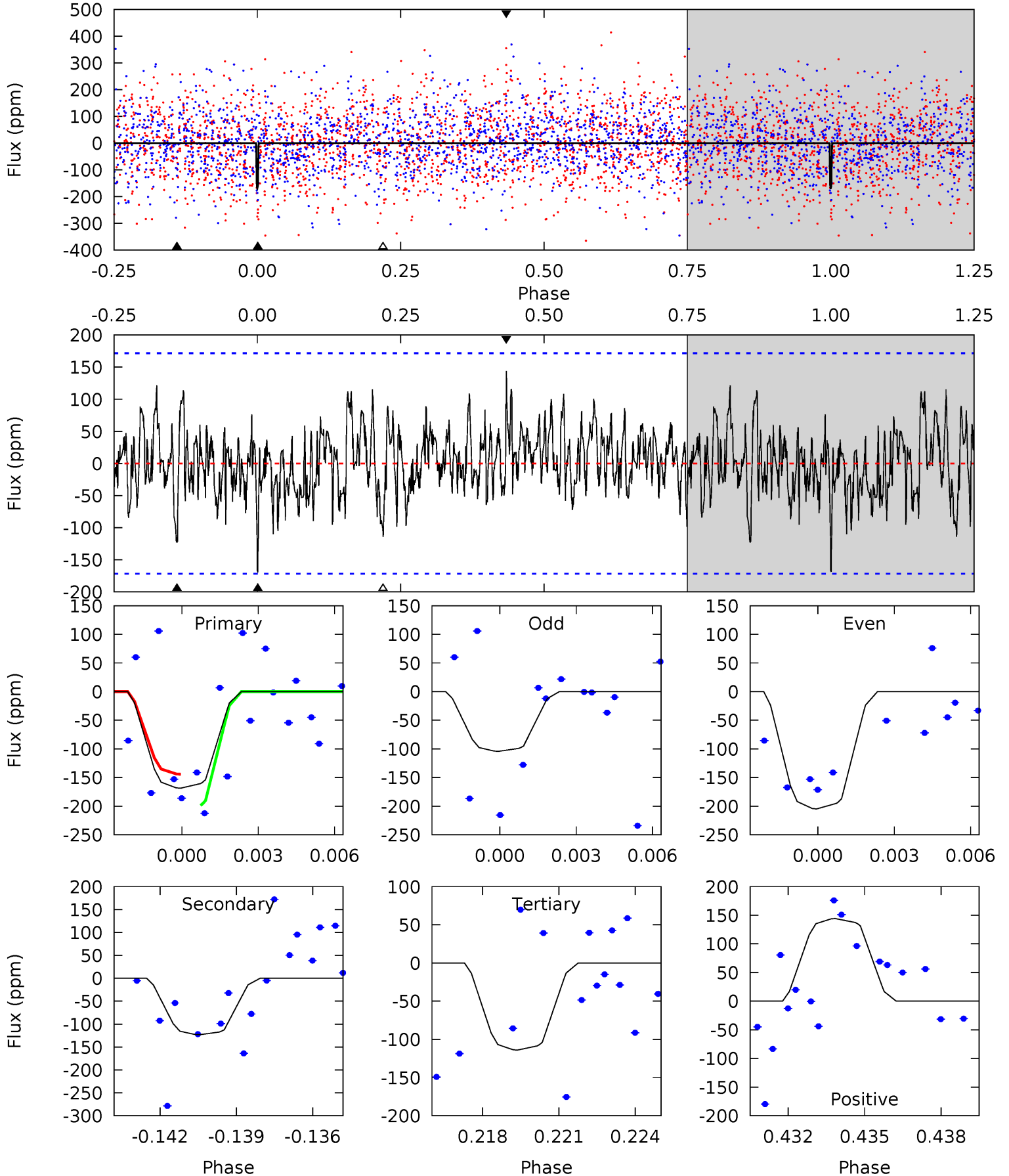


This plot does not exist for this TCE.

DV Model-Shift Uniqueness Test

010128033-05, P = 18.663500 Days, E = 121.771982 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.15	3.76	3.48	4.40	5.24	2.95	1.29	1.67	0.75	0.28	-0.64	1.44	0.76	0.46	0.83



Alt Model-Shift Uniqueness Test

This plot does not exist for this TCE.

Stellar Parameters For KIC 010128033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+228}_{-330}	$4.103^{+0.165}_{-0.182}$	$-0.100^{+0.200}_{-0.350}$	$1.818^{+0.576}_{-0.384}$	$1.526^{+0.234}_{-0.257}$	$0.358^{+0.319}_{-0.179}$
	+3%/-5%	+4%/-4%	+200%/-350%	+32%/-21%	+15%/-17%	+89%/-50%
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 010128033-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-123 ± 33	$5.73^{+5.34}_{-3.78}$	1524^{+118}_{-112}	4589^{+3213}_{-934}	51^{+344}_{-38}
Alt.	N/A	N/A	N/A	N/A	N/A

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

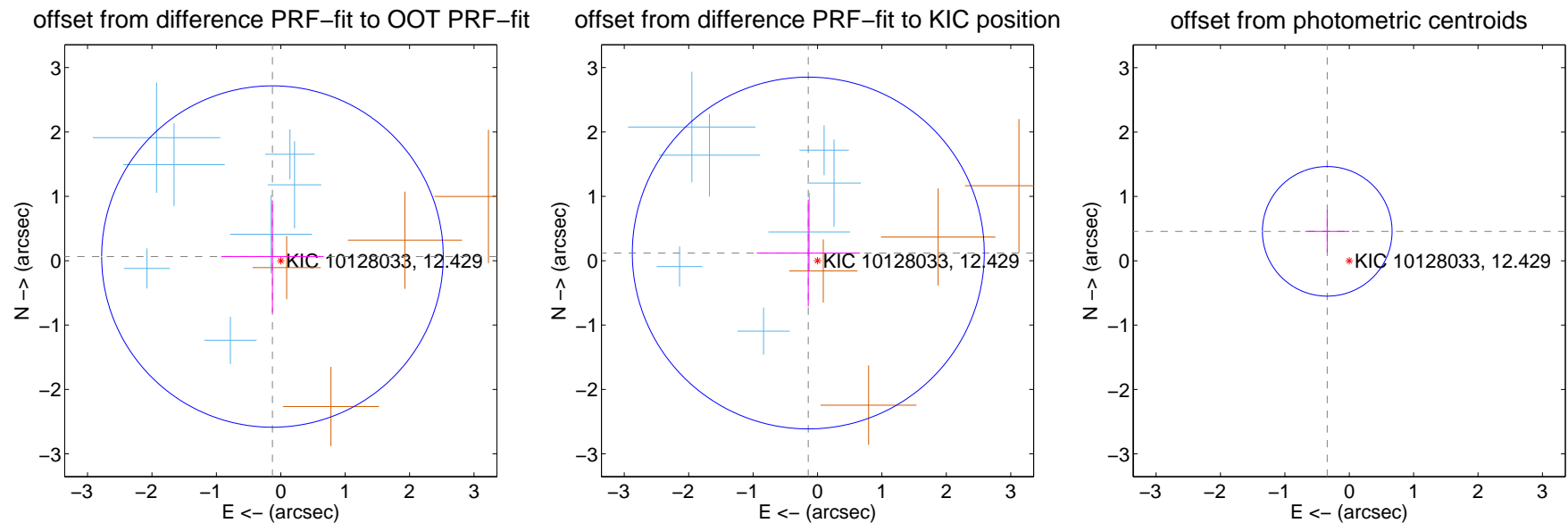
DV Centroid Data

Supplemental centroid analysis for 010128033-05. Kepler magnitude: 12.43. Transit SNR 14.64

There are 7 quarters with good PRF difference image offsets

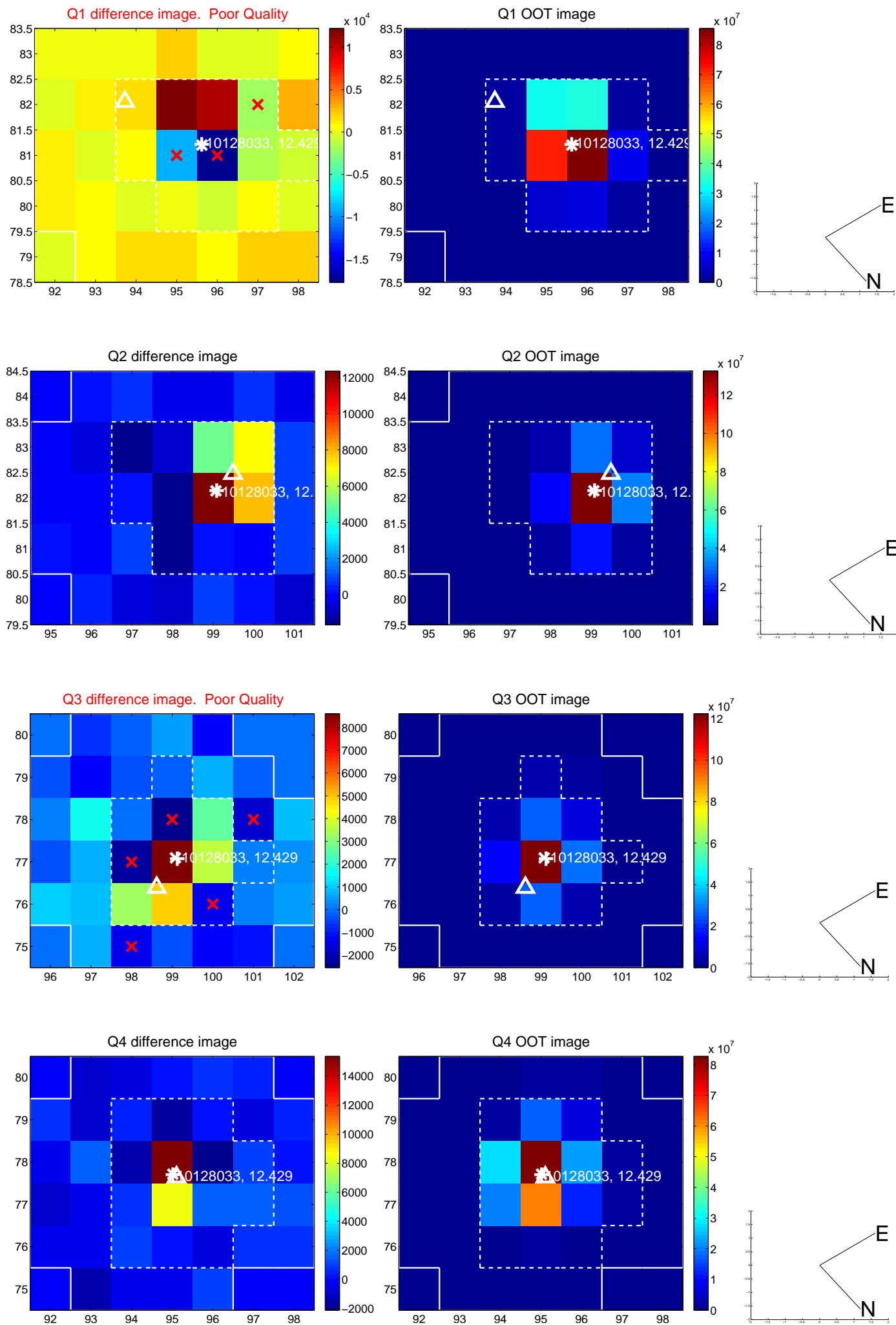
The direct PRF centroid is offset from the target star catalog position by about 0.02 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.144 ± 0.884	0.16	0.129 ± 0.796	0.065 ± 0.873
PRF-fit source offset from KIC position	0.186 ± 0.911	0.20	0.143 ± 0.801	0.119 ± 0.830
photometric centroid source offset	0.57 ± 0.34	1.70	0.34 ± 0.34	0.46 ± 0.33

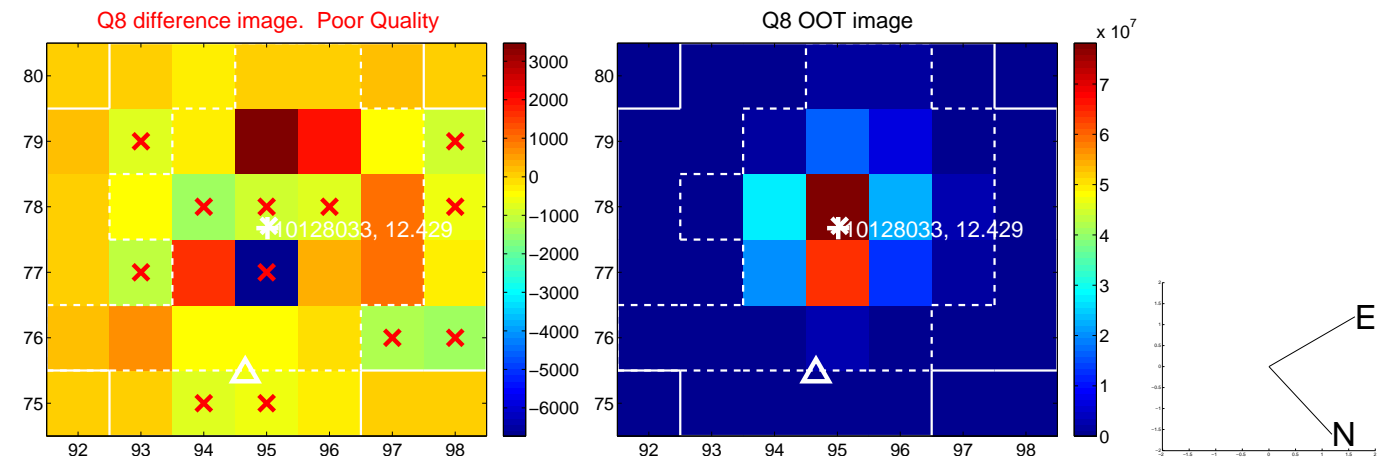
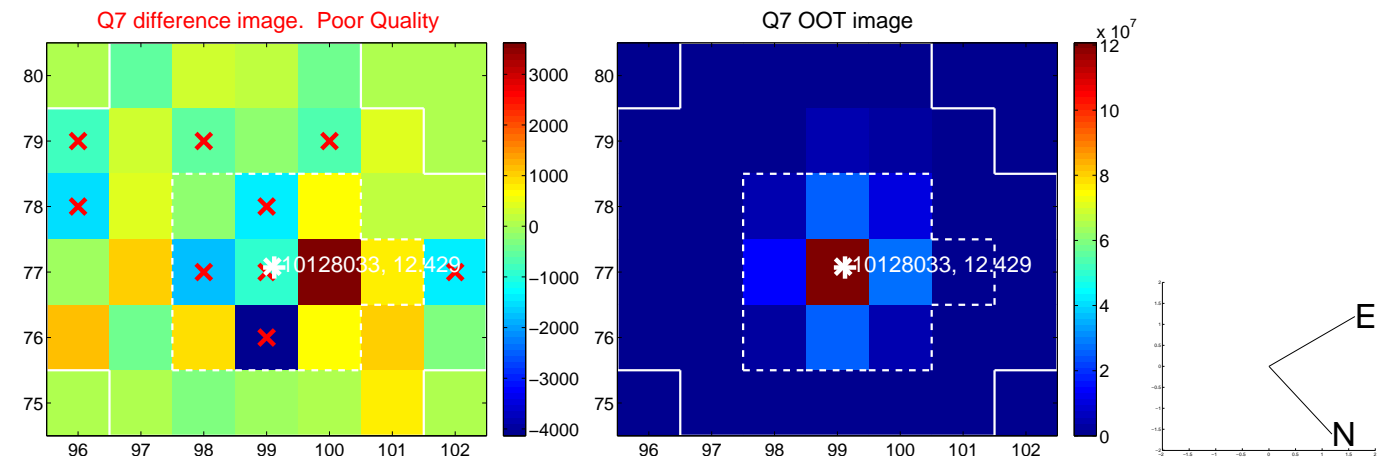
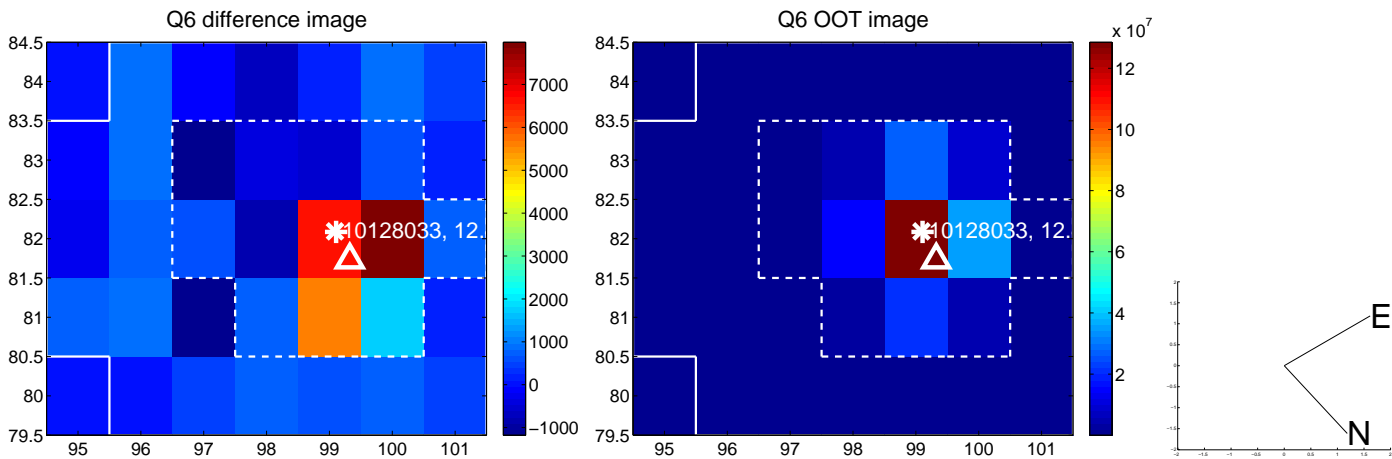
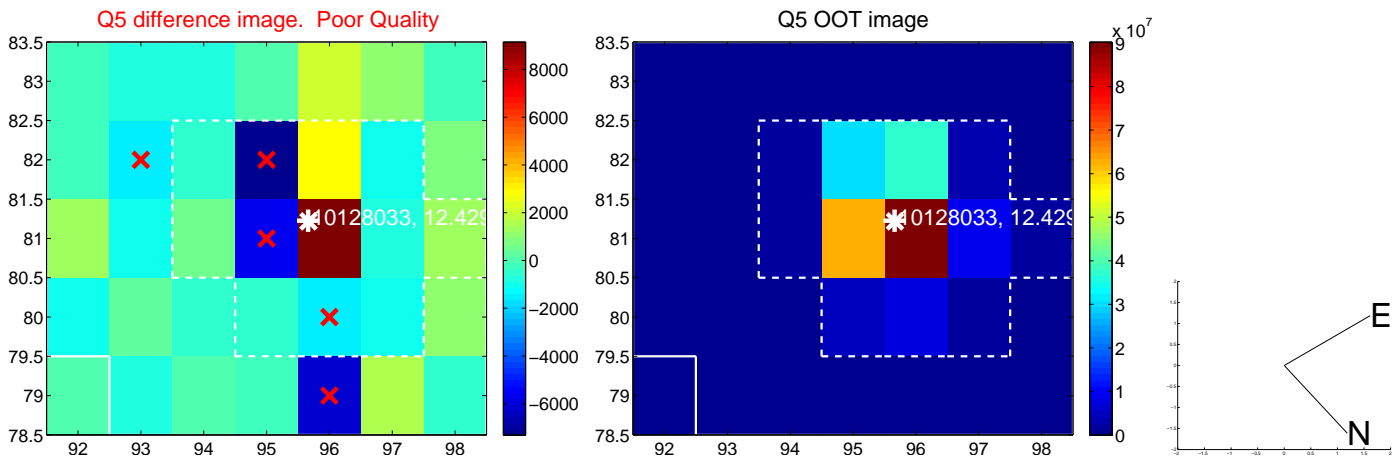


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

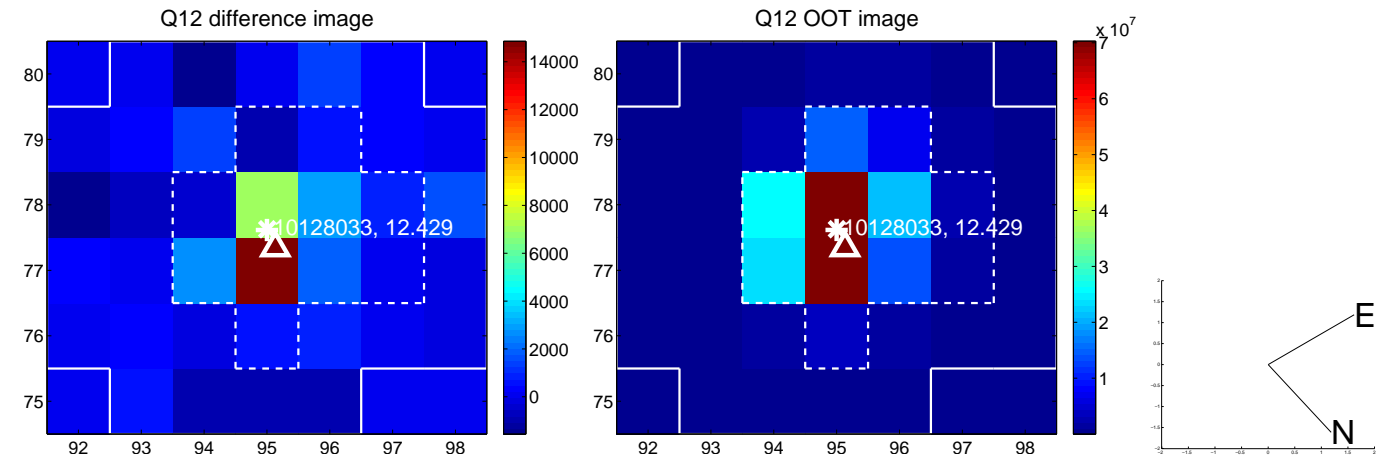
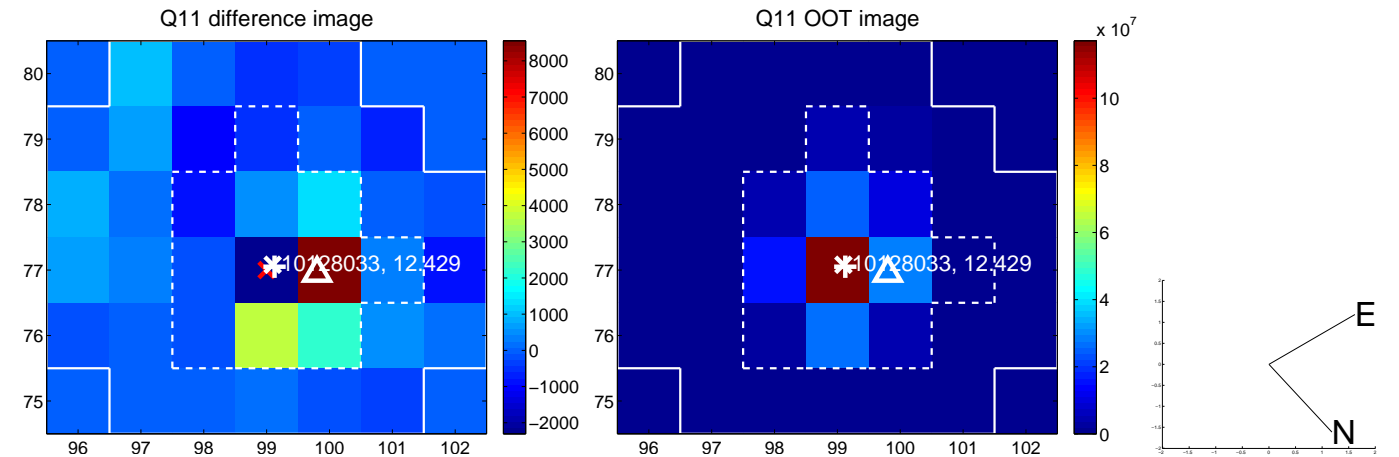
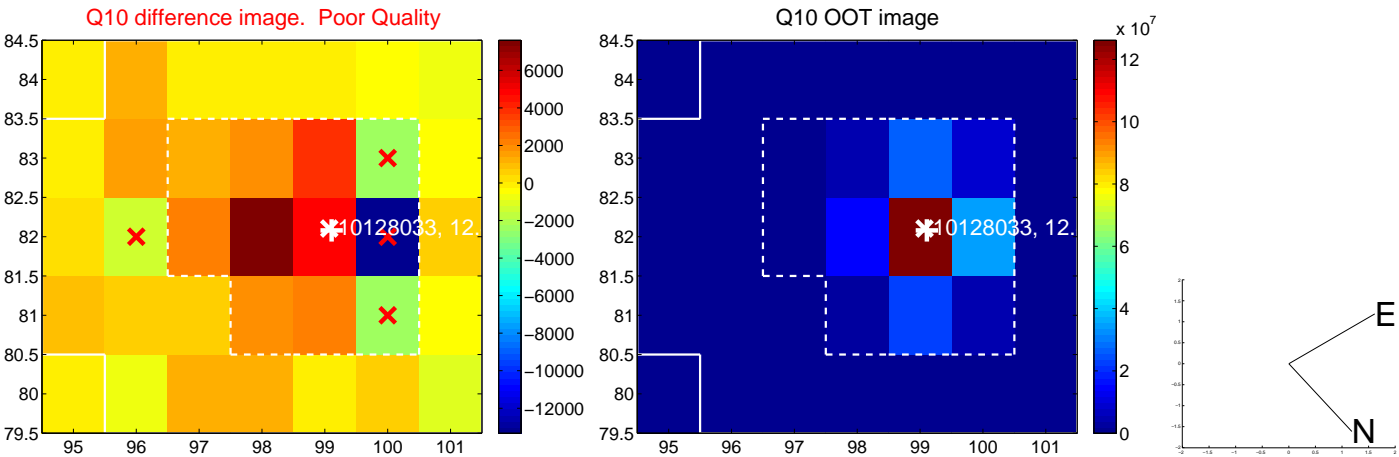
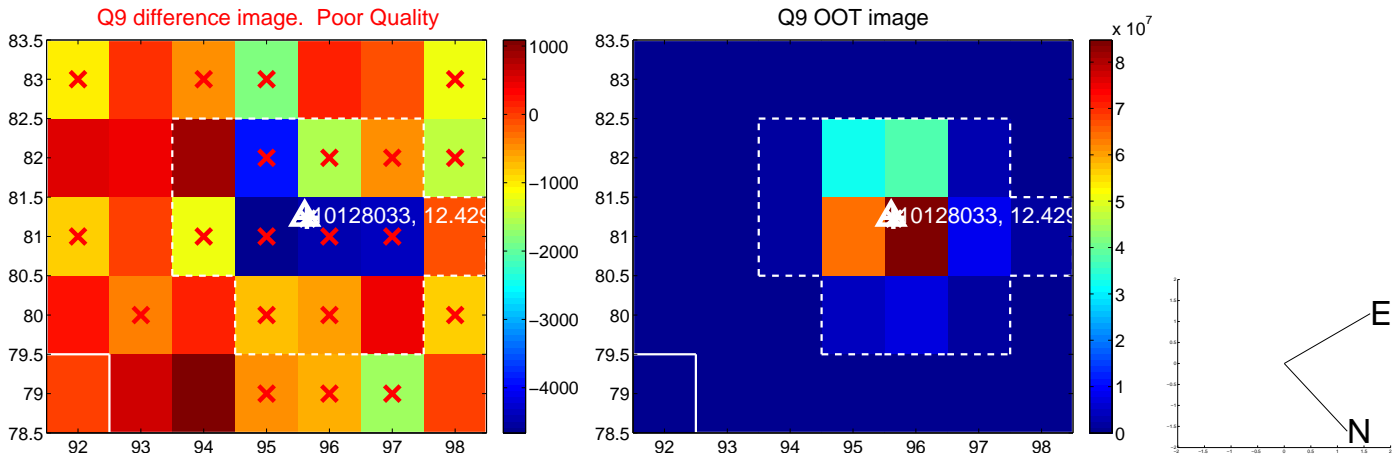
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



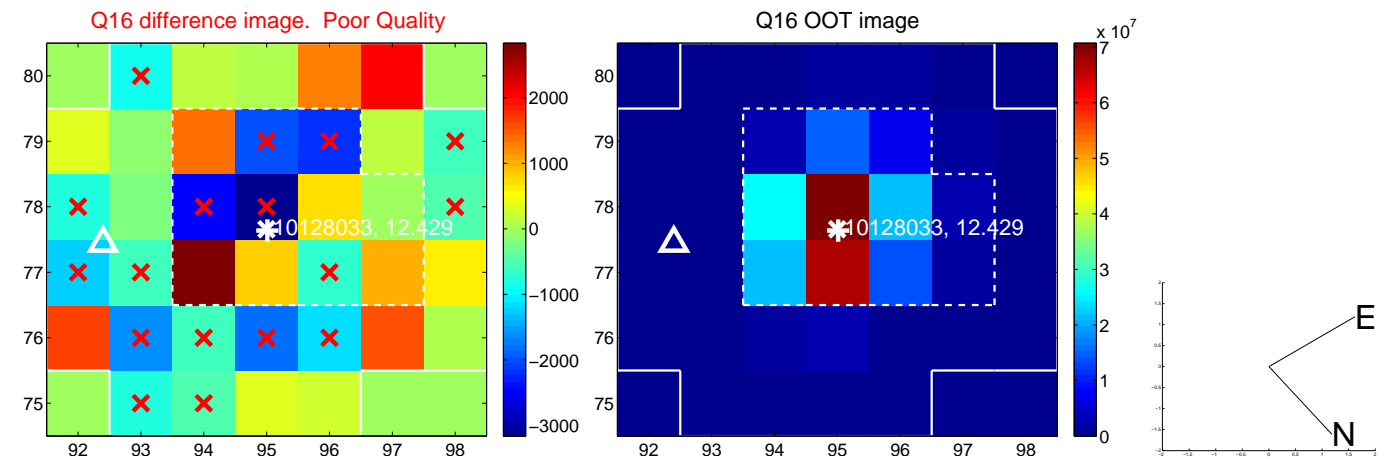
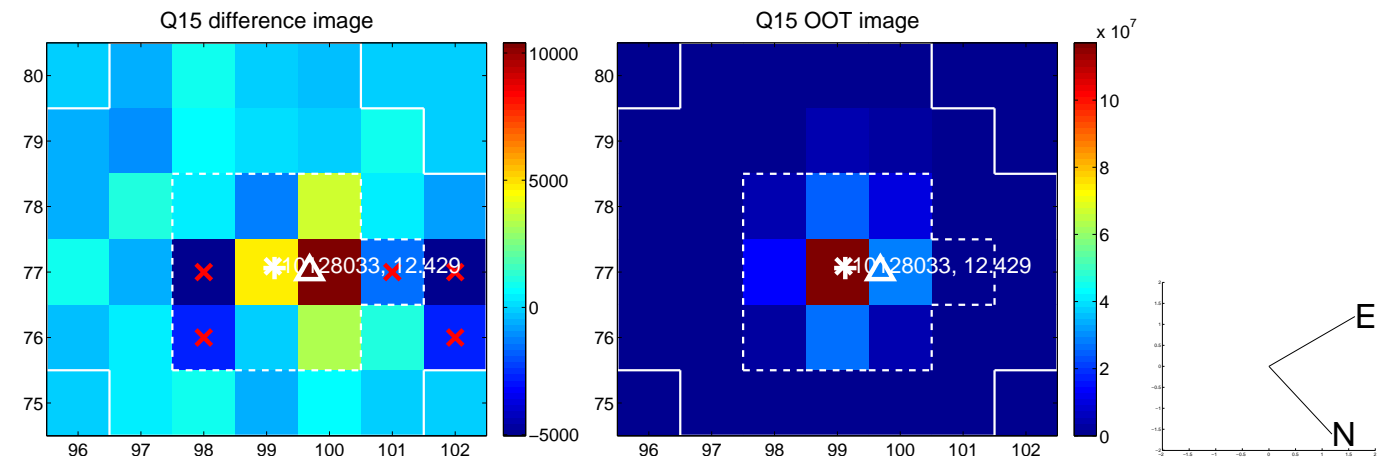
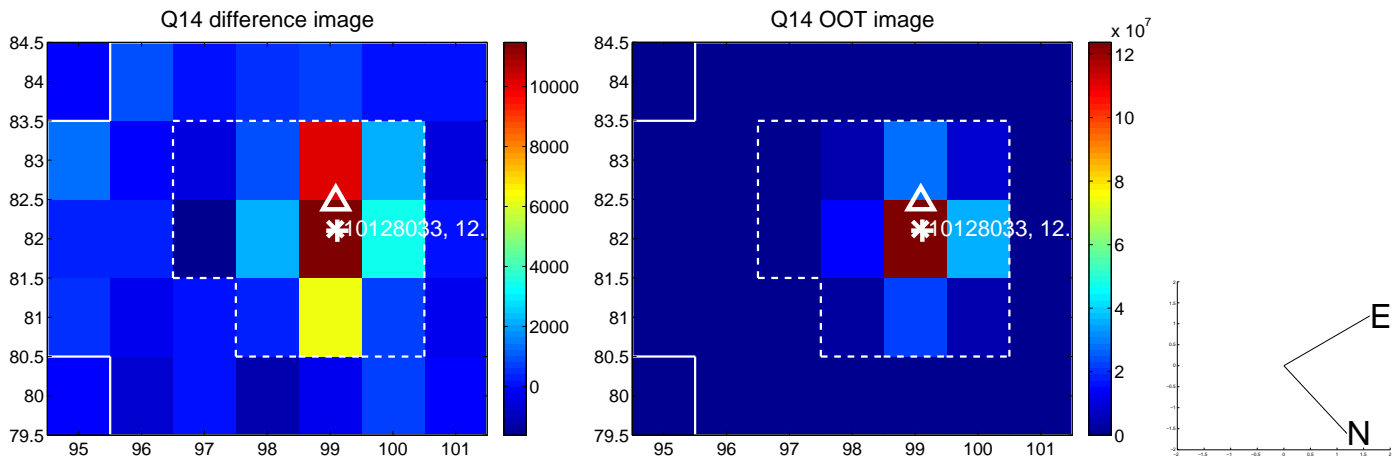
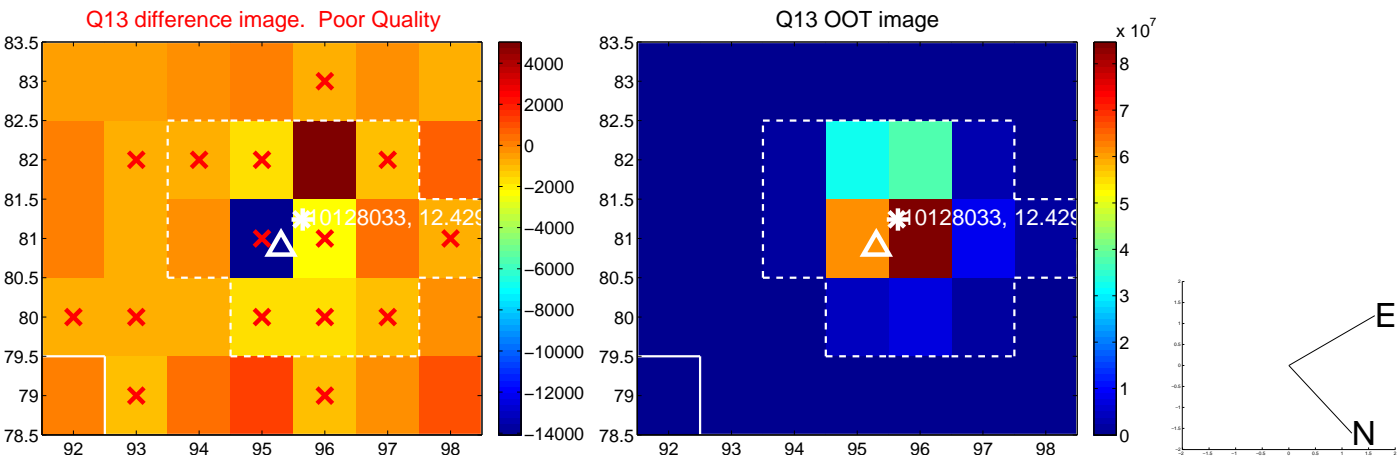
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



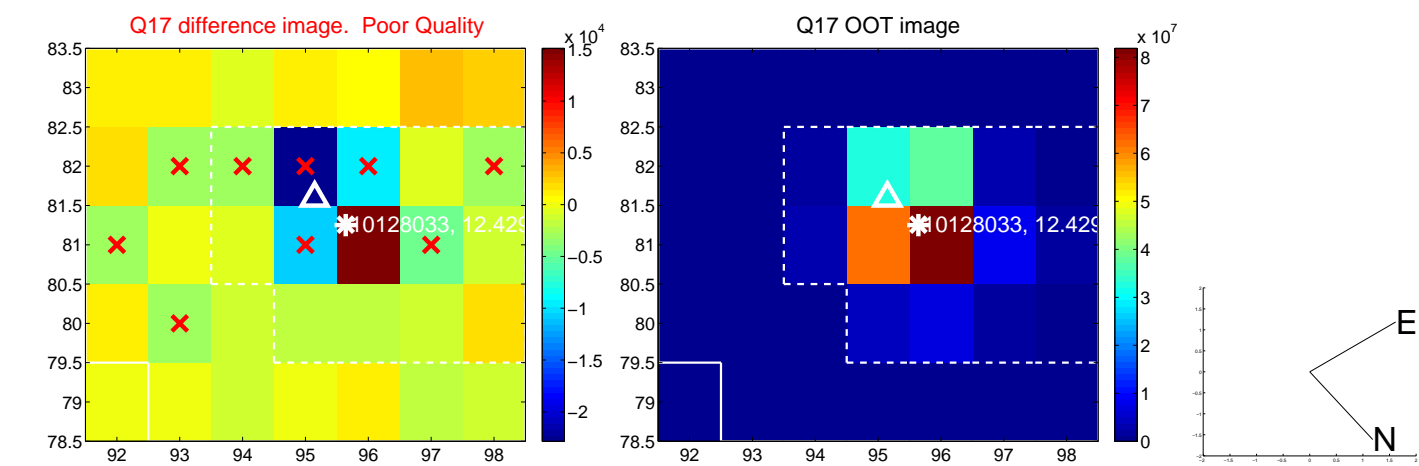
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



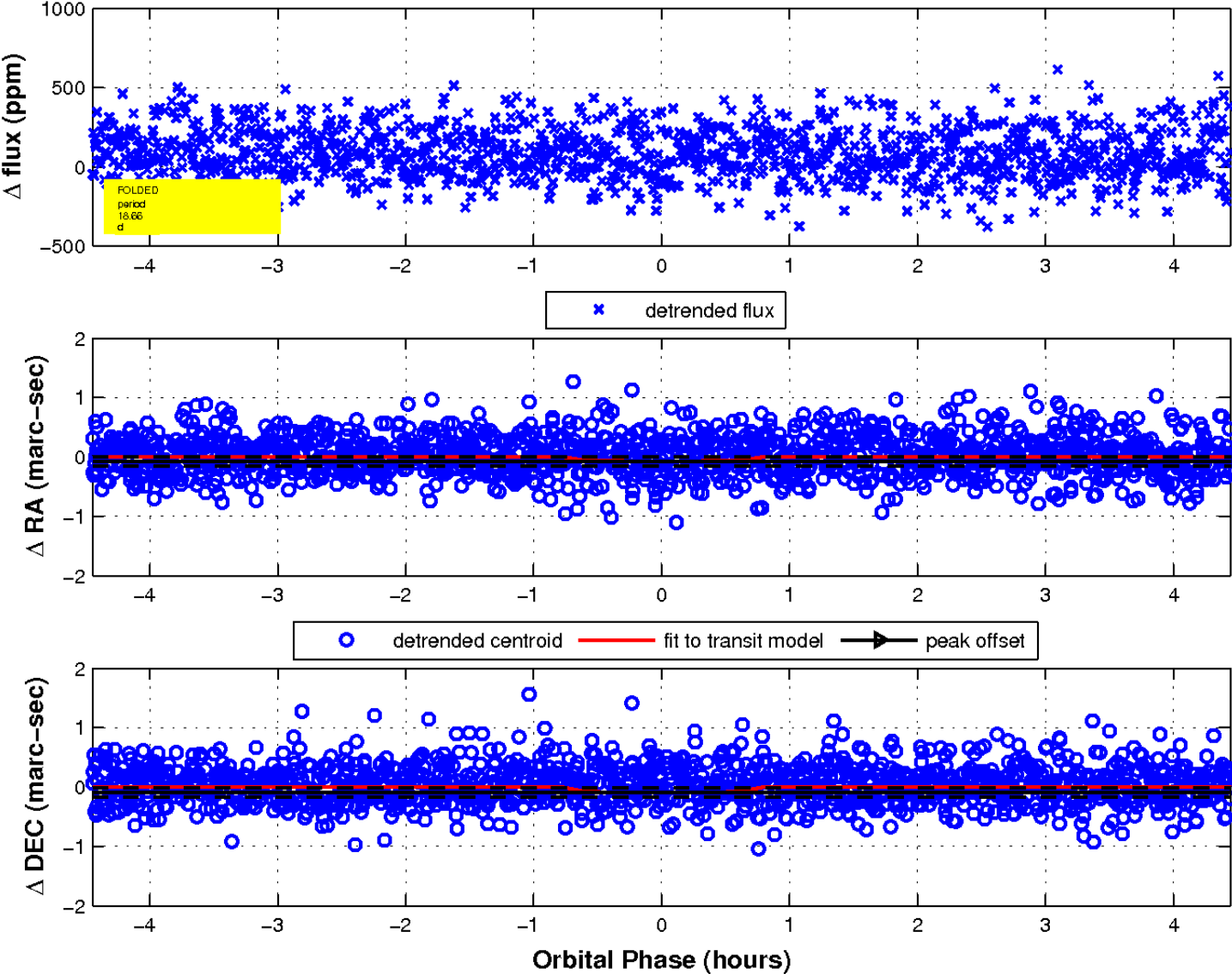
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

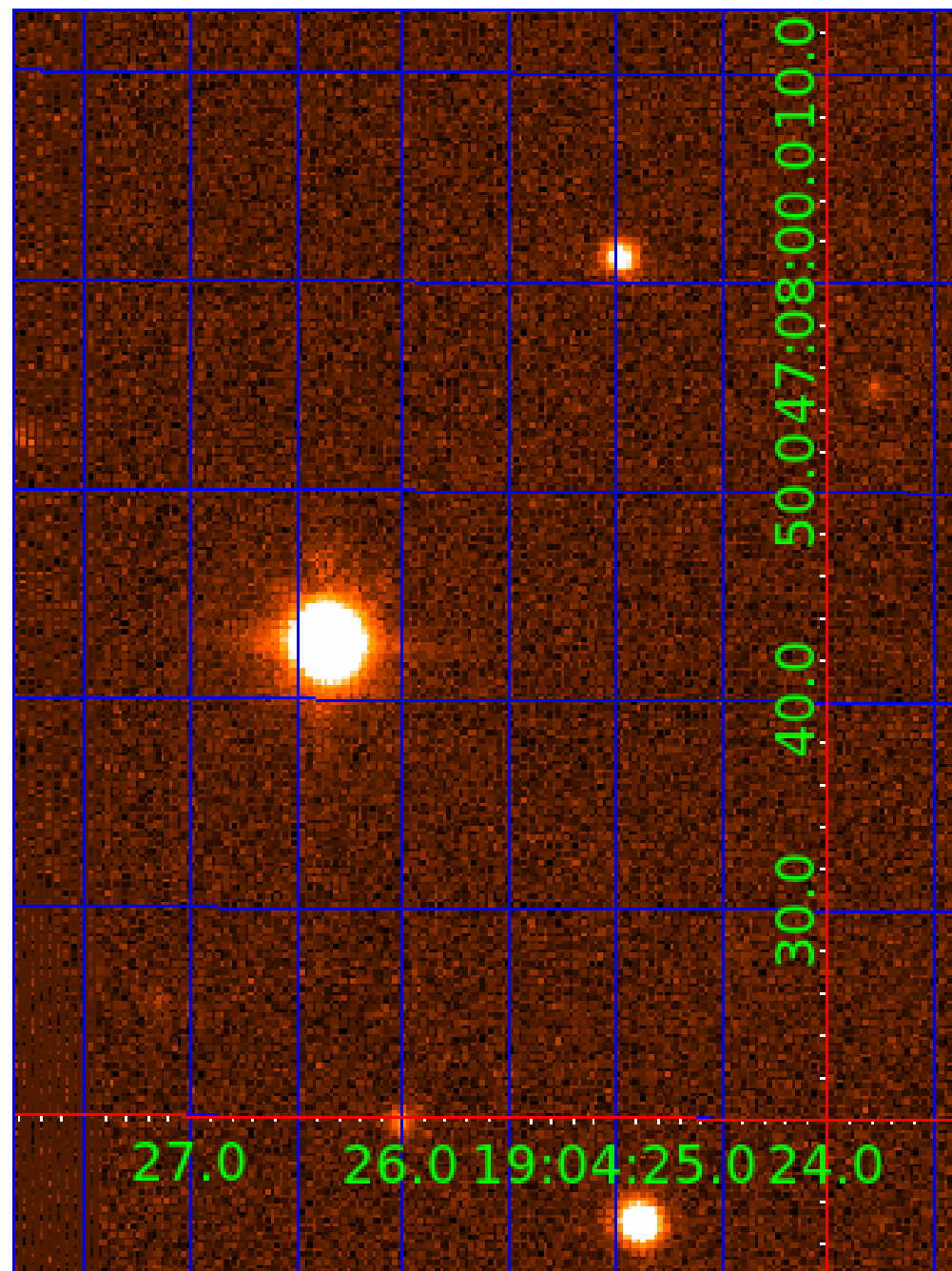


fluxWeightedCentroids, Planet 5 of 7



UKIRT Image

Declination



KIC 010128033

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})
010128033-01	OBS	No	0.656657	132.034110	132.6	2.000	12.3	-1.0	1.82	7296	2.13	28918.67
010128033-02	OBS	No	0.652477	131.903081	7.1	4.657	10.5	4.6	1.82	7296	0.50	29165.94
010128033-03	OBS	No	17.600189	147.811937	250.3	2.116	15.5	14.4	1.82	7296	3.36	360.53
010128033-04	OBS	No	9.891488	135.292290	214.5	1.638	14.6	18.8	1.82	7296	3.09	777.35
010128033-05	OBS	No	18.663500	140.435482	217.4	1.484	14.8	14.6	1.82	7296	2.96	333.40
010128033-06	OBS	No	8.211909	137.726951	81.5	6.535	12.7	11.0	1.82	7296	1.90	996.26
010128033-07	OBS	No	9.203685	137.129745	540.9	1.500	15.2	-1.0	1.82	7296	4.30	855.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010128033-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
010128033-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010128033-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010128033-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010128033-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

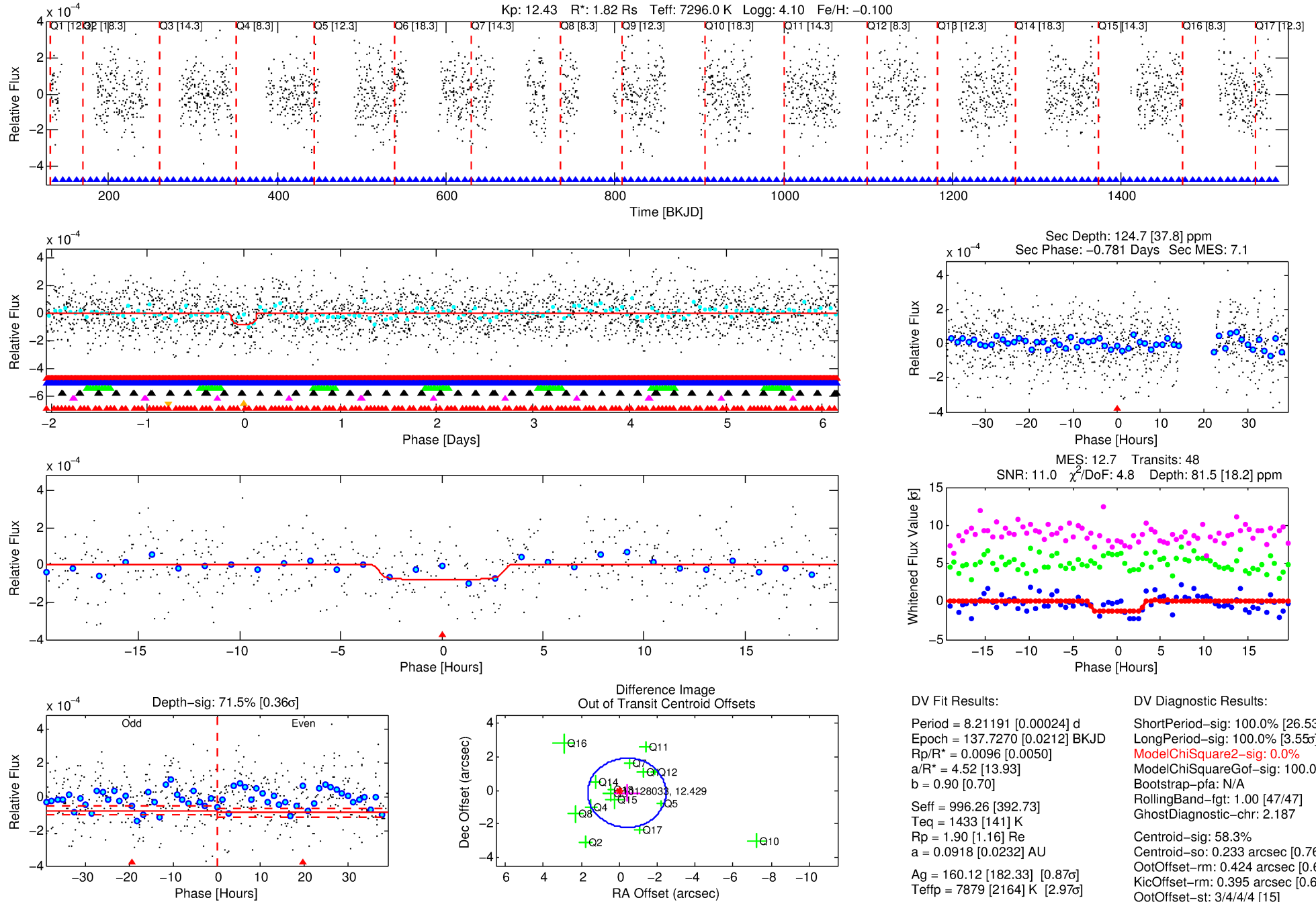
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010128033-06

No Significant Match Found

DV One-Page Summary

KIC: 10128033 Candidate: 6 of 7 Period: 8.212 d



DV Fit Results:

Period = 8.21191 [0.00024] d
Epoch = 137.7270 [0.0212] BKJD
Rp/R* = 0.0096 [0.0050]
a/R* = 4.52 [13.93]
b = 0.90 [0.70]
Seff = 996.26 [392.73]
Teq = 1433 [141] K
Rp = 1.90 [1.16] Re
a = 0.0918 [0.0232] AU
Ag = 160.12 [182.33] [0.87 σ]
Teffp = 7879 [2164] K [2.97 σ]

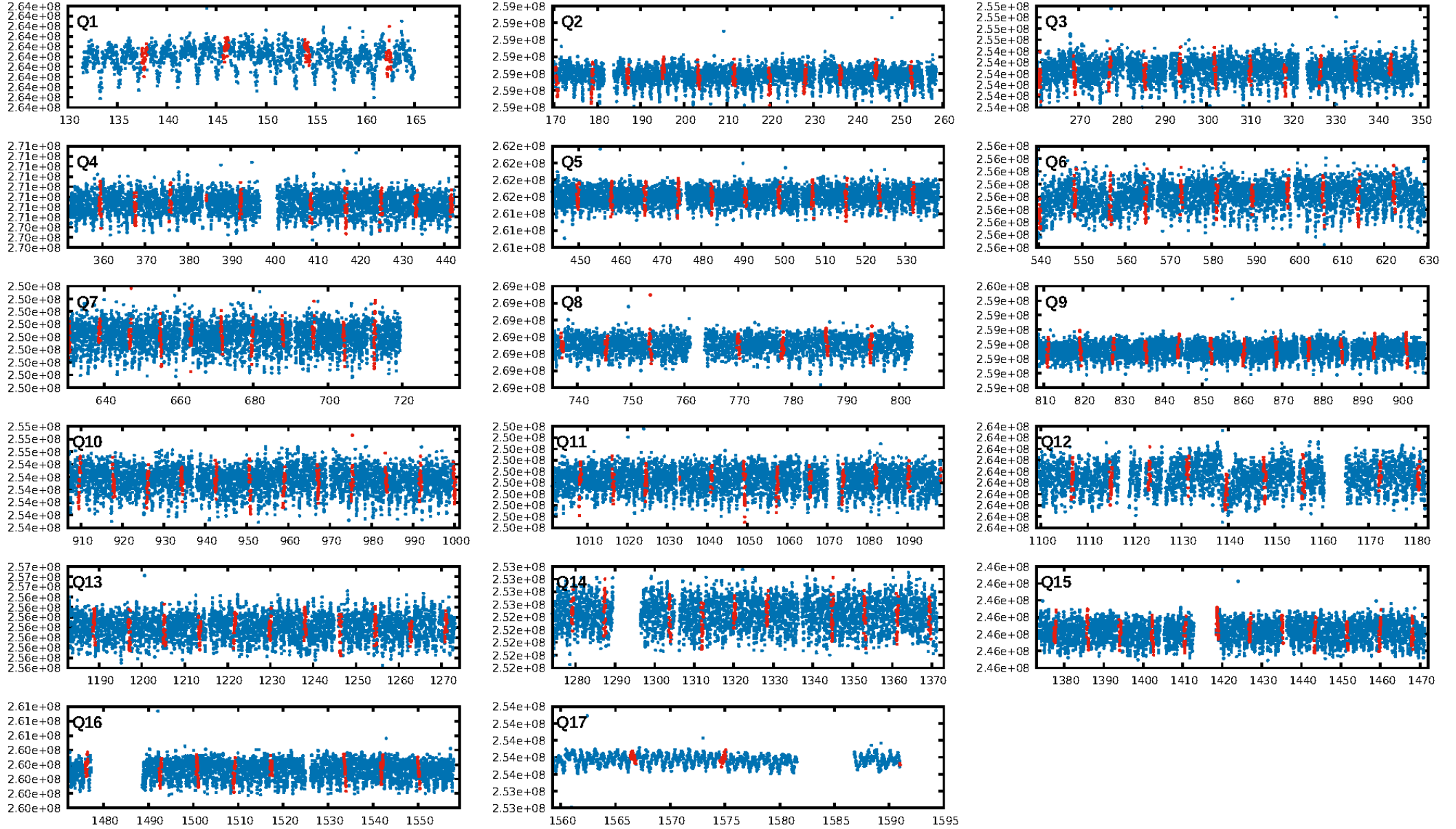
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [26.53 σ]
LongPeriod-sig: 100.0% [3.55 σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [47/47]
GhostDiagnostic-chr: 2.187
Centroid-sig: 58.3%
Centroid-so: 0.233 arcsec [0.76 σ]
OotOffset-rm: 0.424 arcsec [0.62 σ]
KicOffset-rm: 0.395 arcsec [0.67 σ]
OotOffset-st: 3/4/4/4 [15]
KicOffset-st: 3/4/4/4 [15]
DiffImageQuality-fgm: 0.27 [4/15]
DiffImageOverlap-fno: 0.00 [0/17]

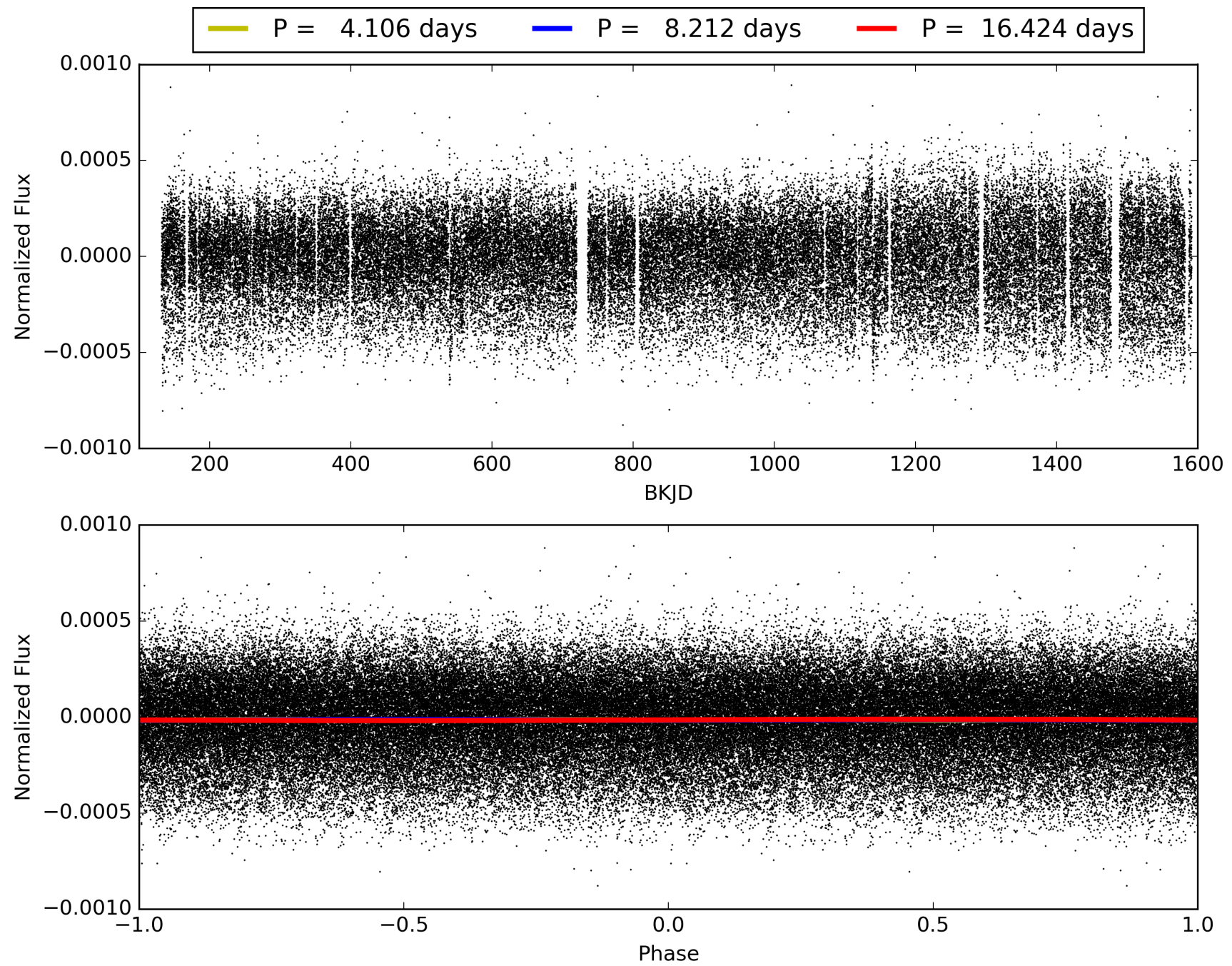
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:50:25 Z

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

TCE 010128033-06, PDC Light Curves

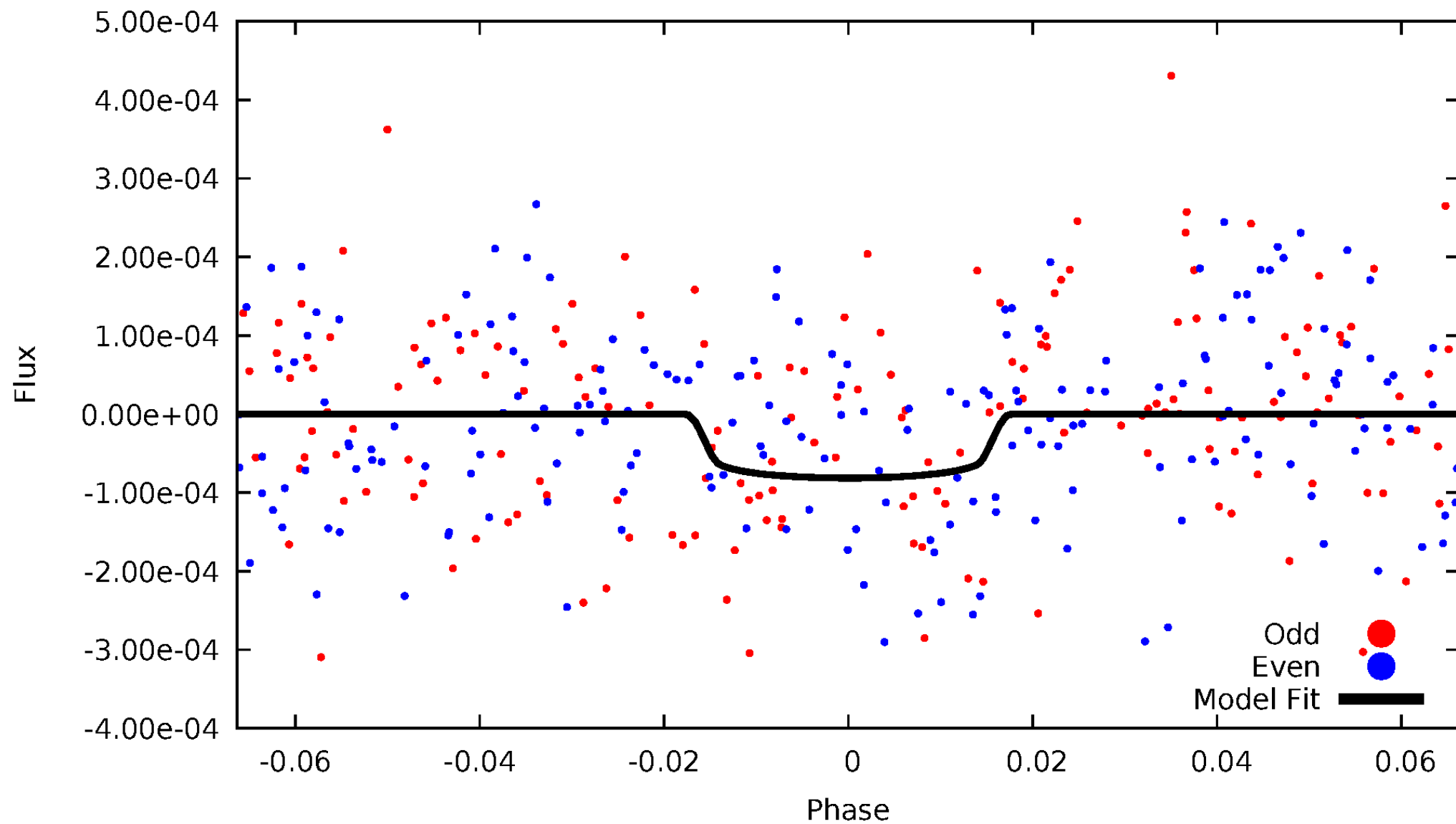


TCE 010128033-06



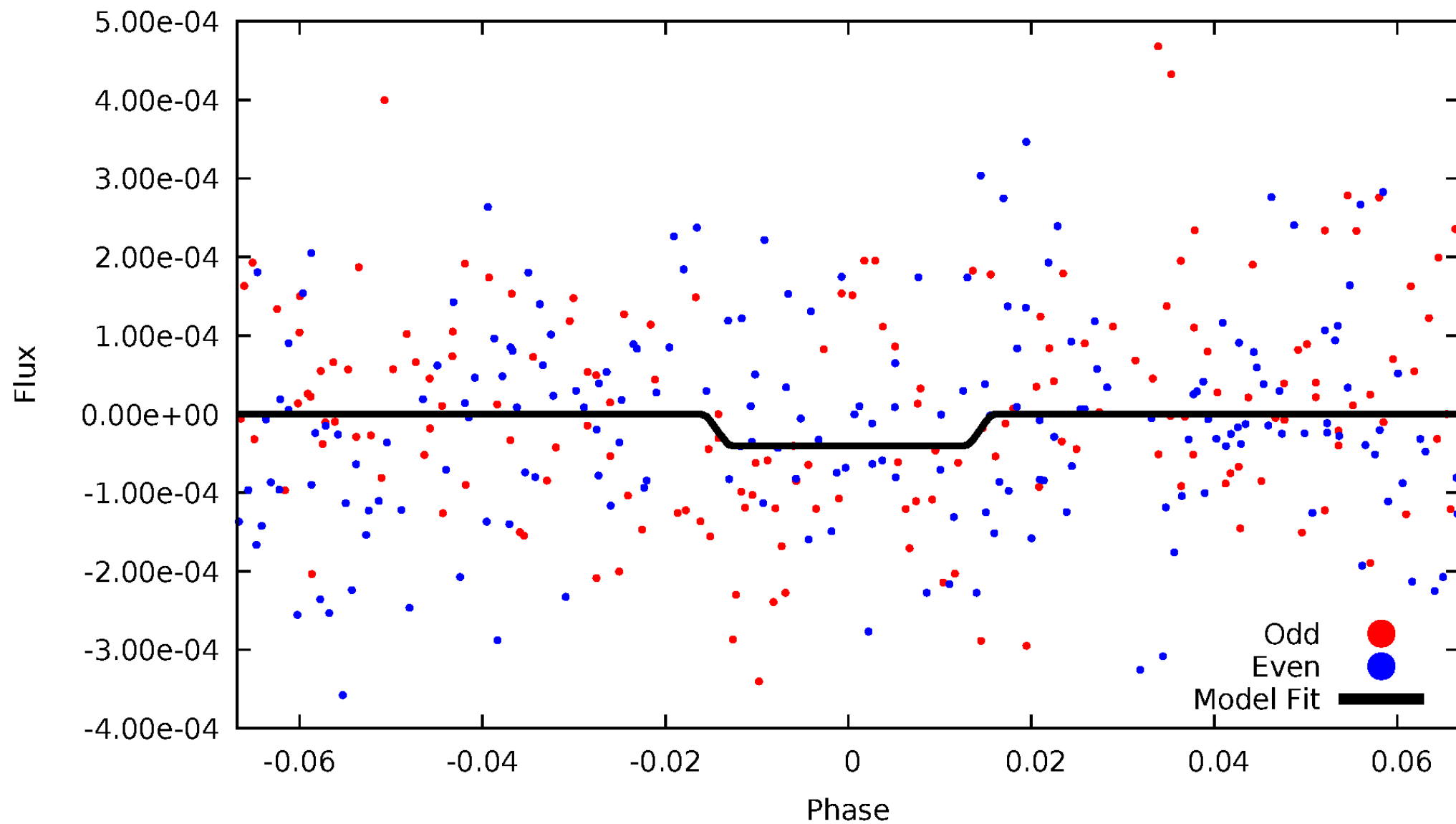
DV Odd/Even

TCE 010128033-06



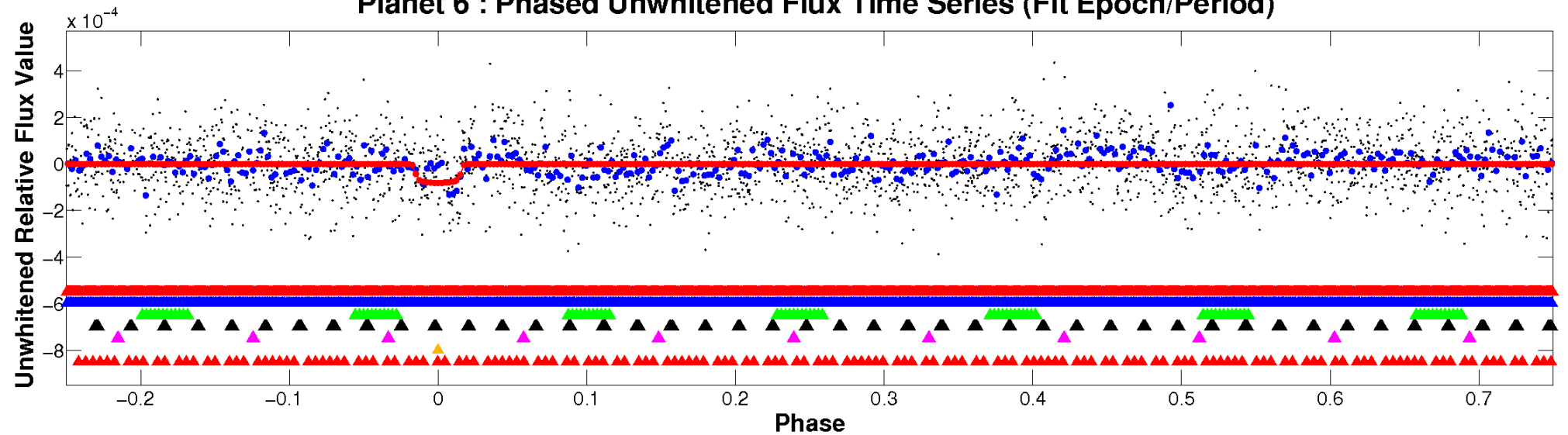
ALT Odd/Even

TCE 010128033-06

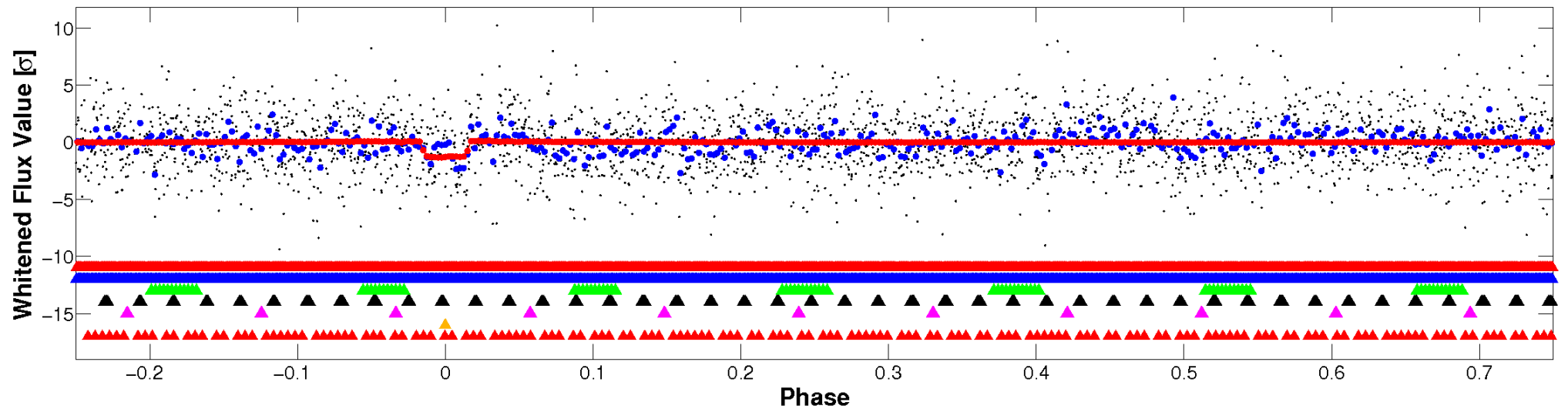


Non-Whitened Vs. Whitened Light Curve

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

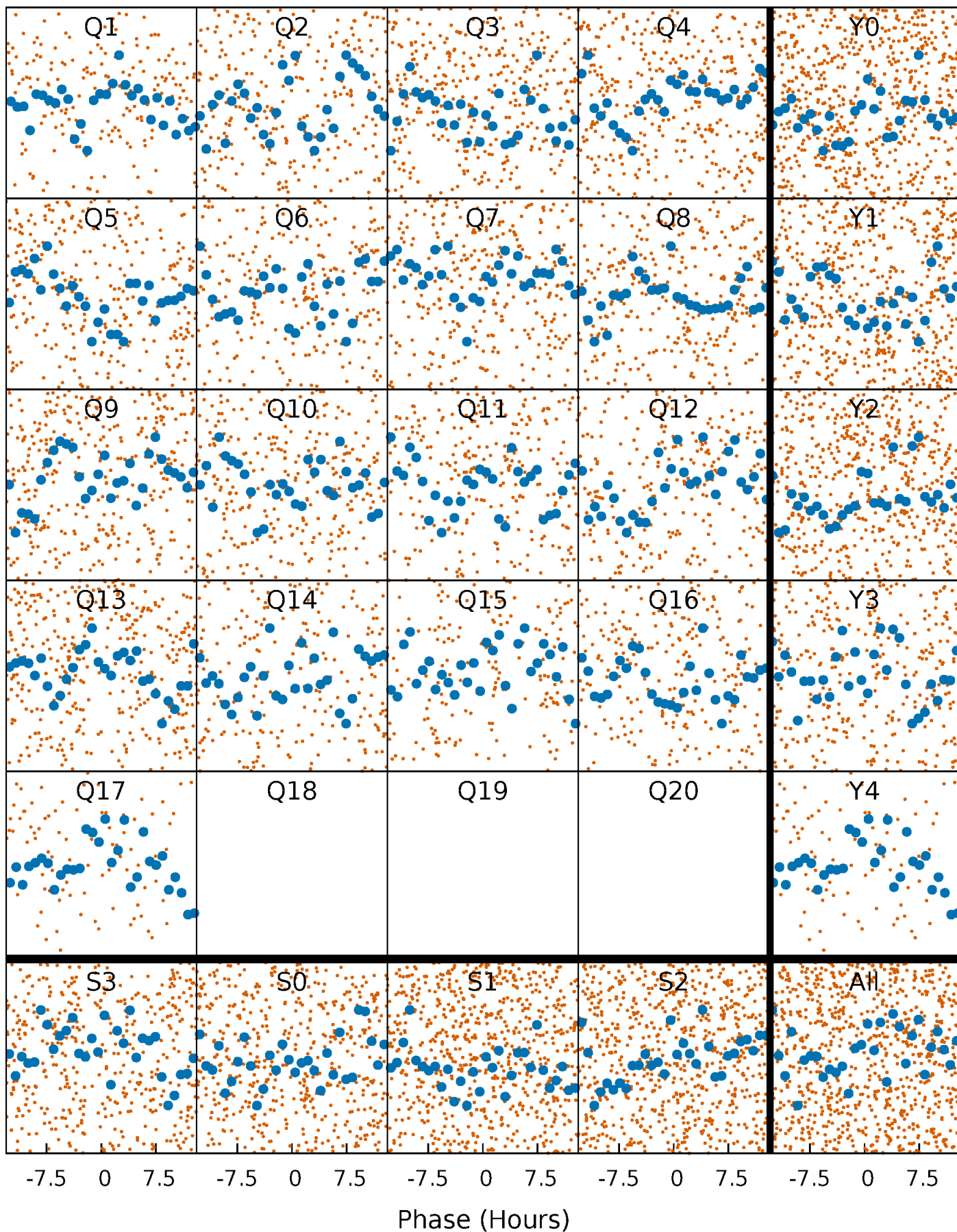


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



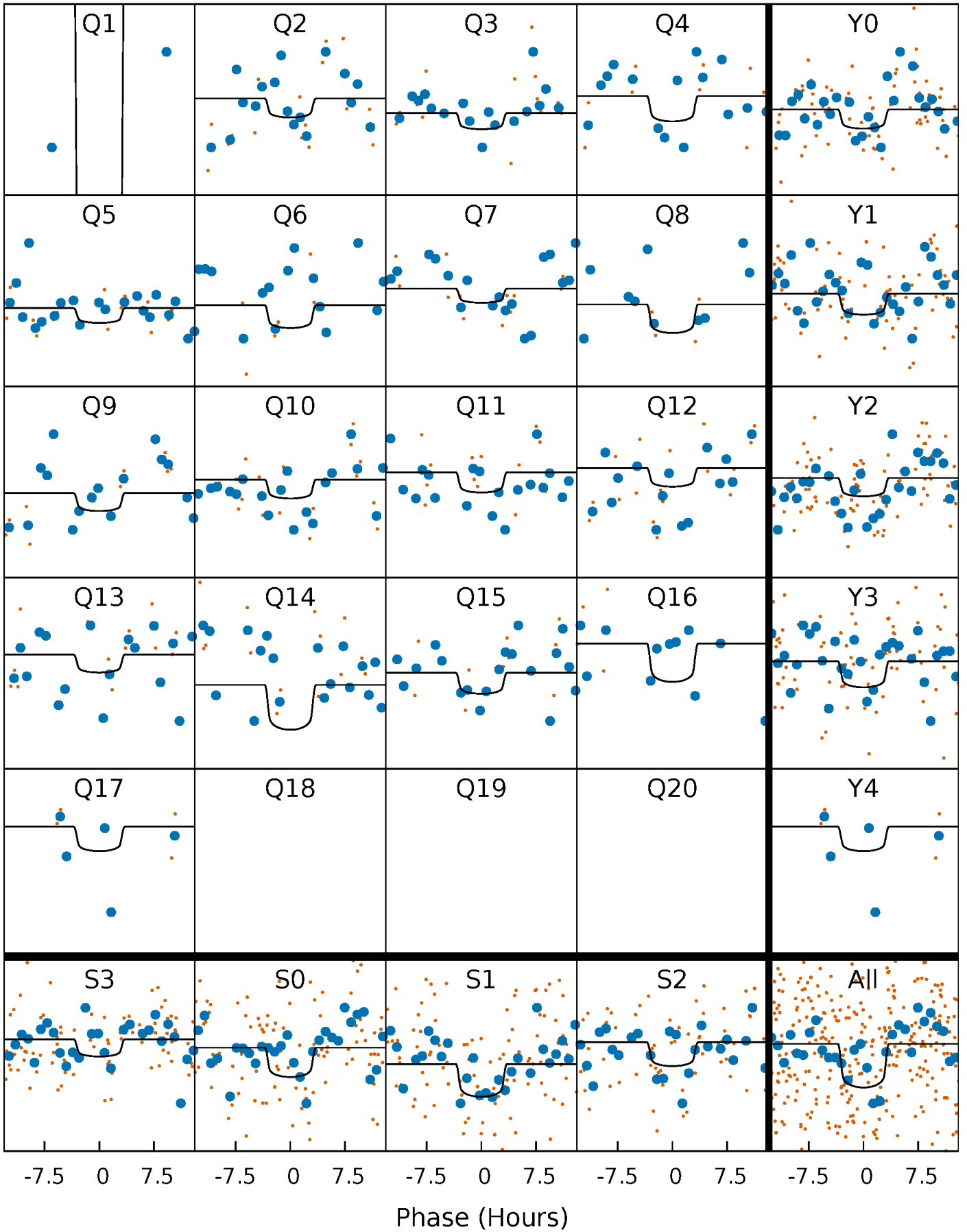
PDC Quarter-Phased Transit Curves

TCE 010128033-06 P= 8.211909 Days $T_0=137.726951$ (BKJD)



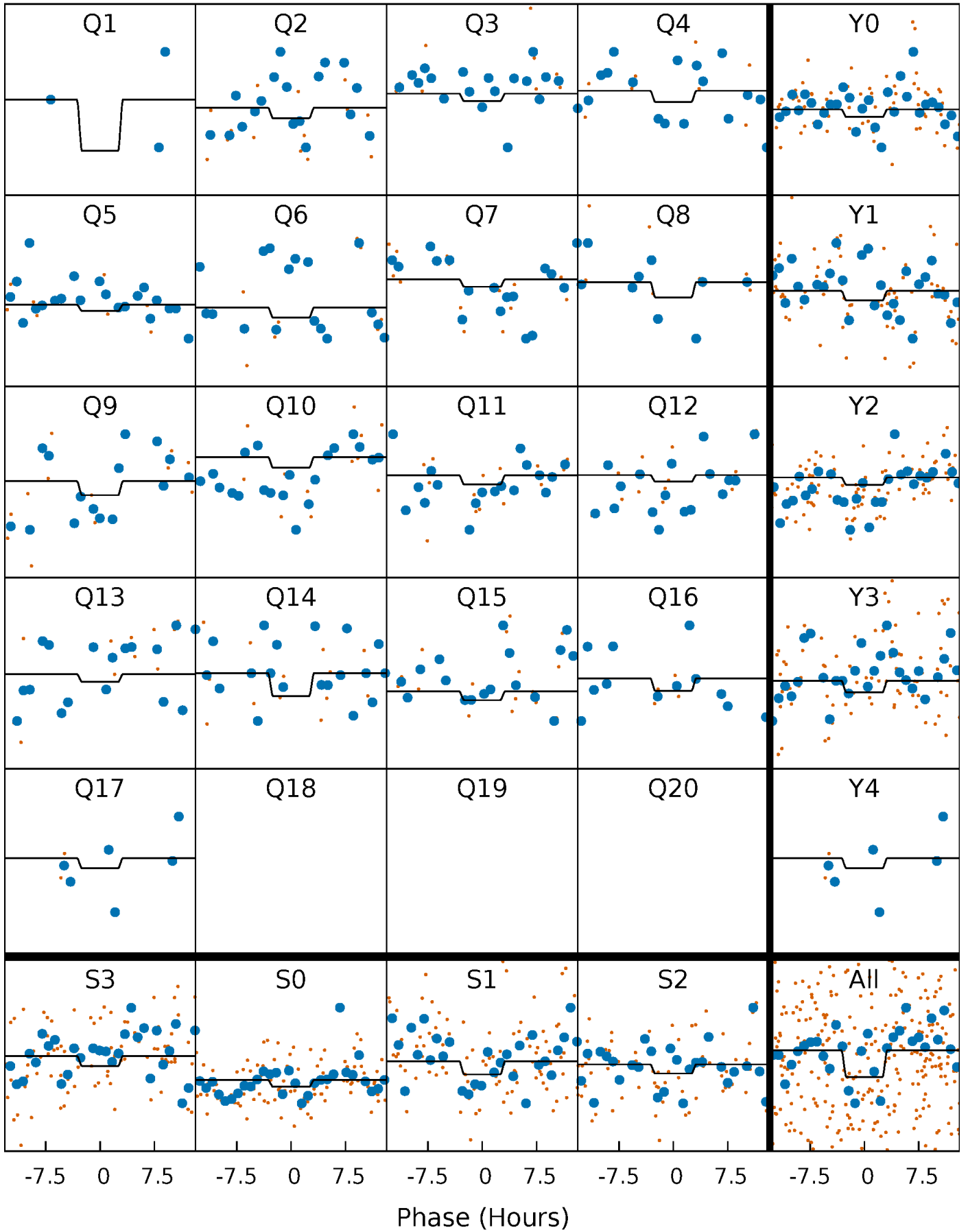
DV Quarter-Phased Transit Curves

TCE 010128033-06 P= 8.211909 Days $T_0=137.726951$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

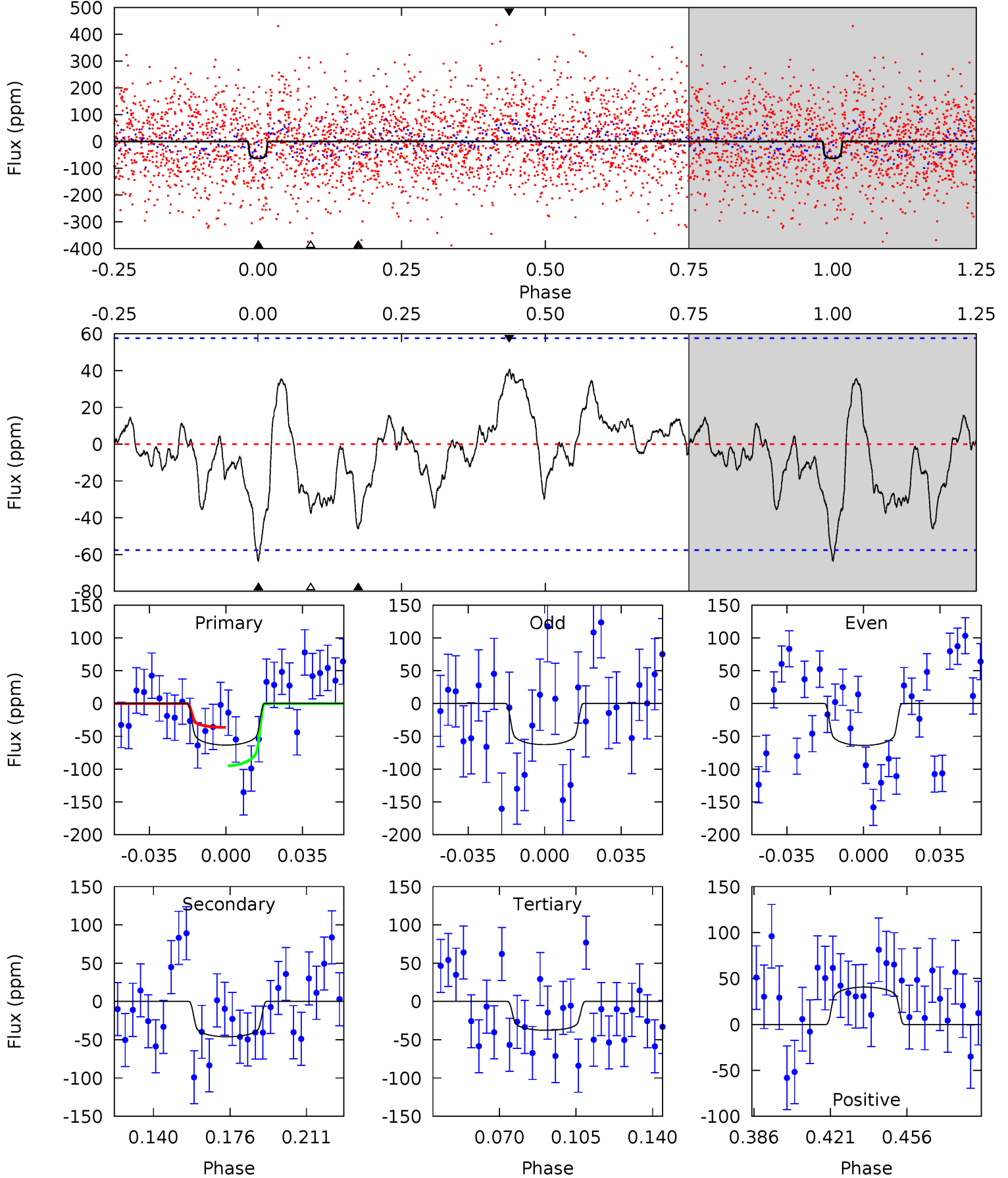
TCE 010128033-06 P= 8.211737 Days $T_0=137.739863$ (BKJD)



DV Model-Shift Uniqueness Test

010128033-06, P = 8.211909 Days, E = 129.515042 Days

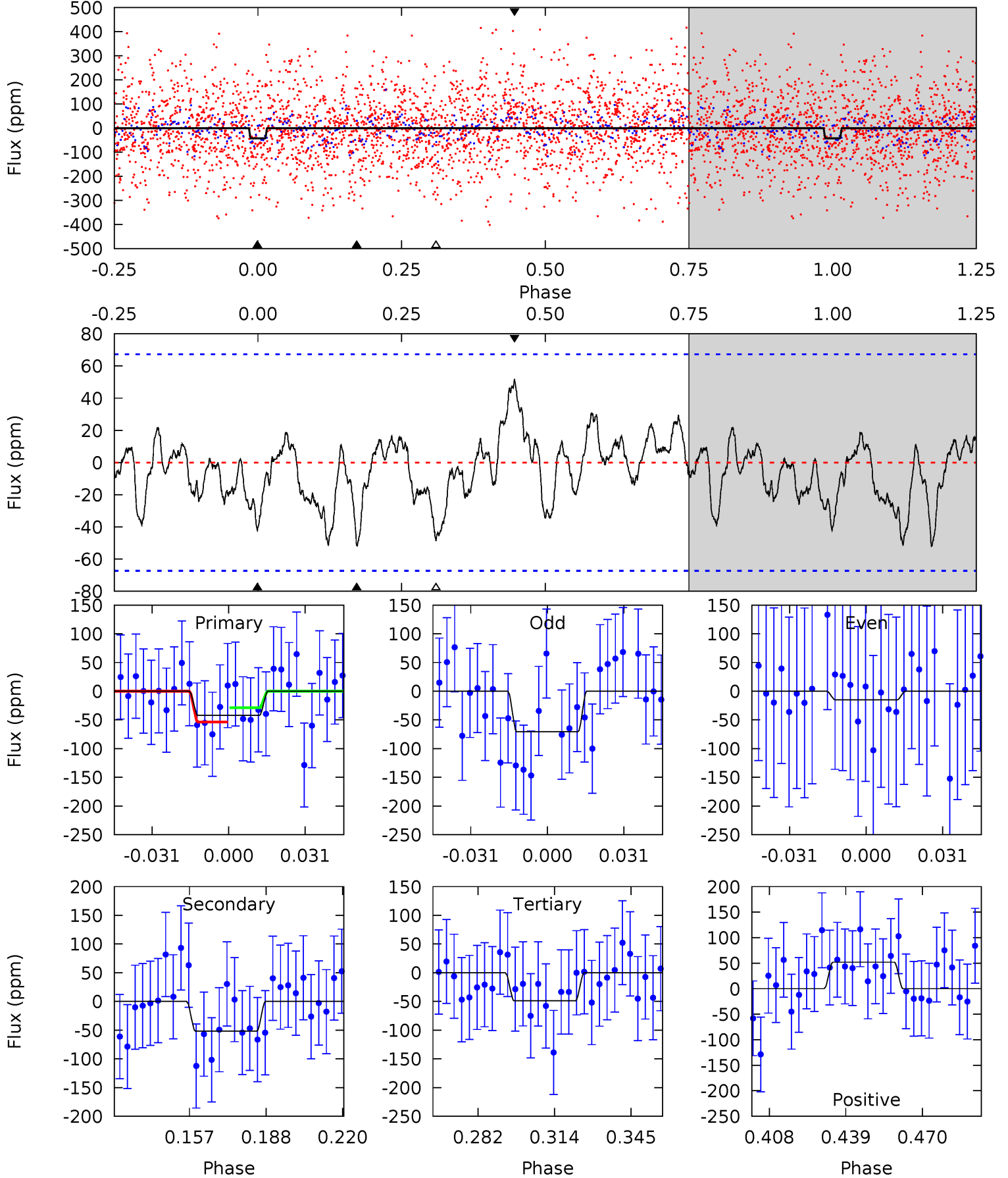
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.26	3.83	3.12	3.37	4.78	2.11	1.40	2.13	1.89	0.71	0.46	0.05	0.99	0.39	2.45



Alt Model-Shift Uniqueness Test

010128033-06, P = 8.211737 Days, E = 129.528126 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.01	3.69	3.48	3.71	4.80	2.15	1.34	-0.47	-0.70	0.21	-0.02	1.96	0.88	0.50	0.88



Stellar Parameters For KIC 010128033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+228}_{-330}	$4.103^{+0.165}_{-0.182}$	$-0.100^{+0.200}_{-0.350}$	$1.818^{+0.576}_{-0.384}$	$1.526^{+0.234}_{-0.257}$	$0.358^{+0.319}_{-0.179}$
	+3%/-5%	+4%/-4%	+200%/-350%	+32%/-21%	+15%/-17%	+89%/-50%
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 010128033-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-46 ± 12	$1.93^{+0.91}_{-0.92}$	1995^{+157}_{-144}	5991^{+2611}_{-1083}	57^{+146}_{-34}
Alt.	-52 ± 14	$1.38^{+0.90}_{-0.84}$	1998^{+156}_{-143}	7330^{+7274}_{-1717}	122^{+700}_{-81}

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

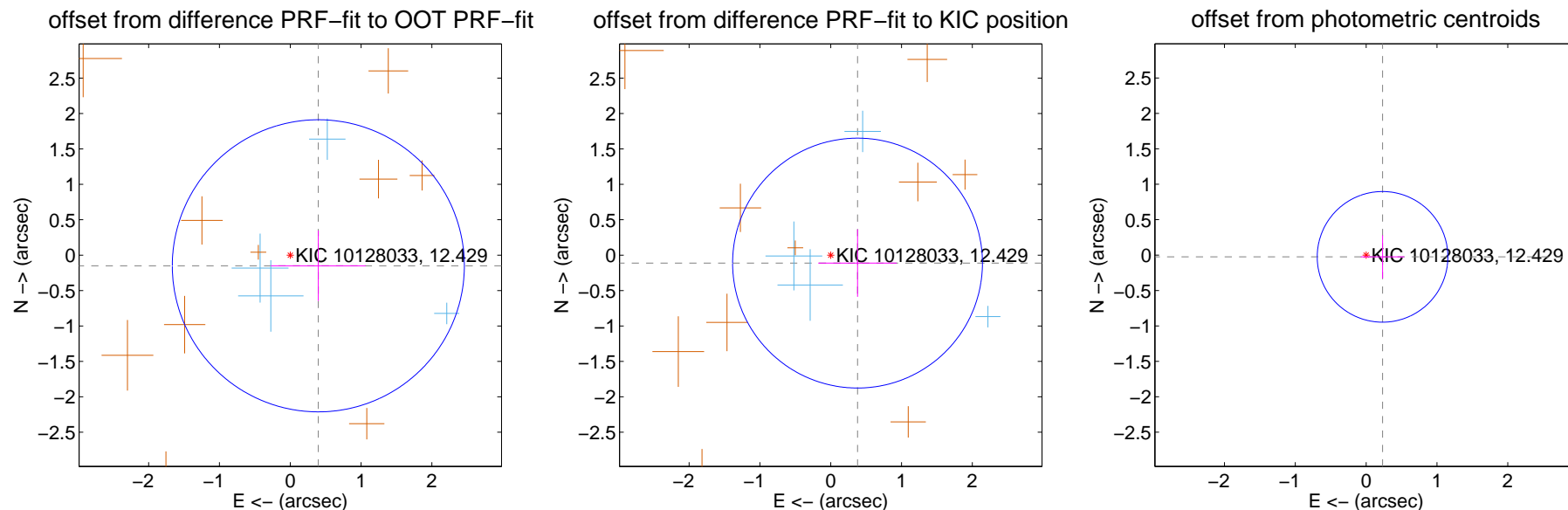
DV Centroid Data

Supplemental centroid analysis for 010128033-06. Kepler magnitude: 12.43. Transit SNR 11.03

There are 4 quarters with good PRF difference image offsets

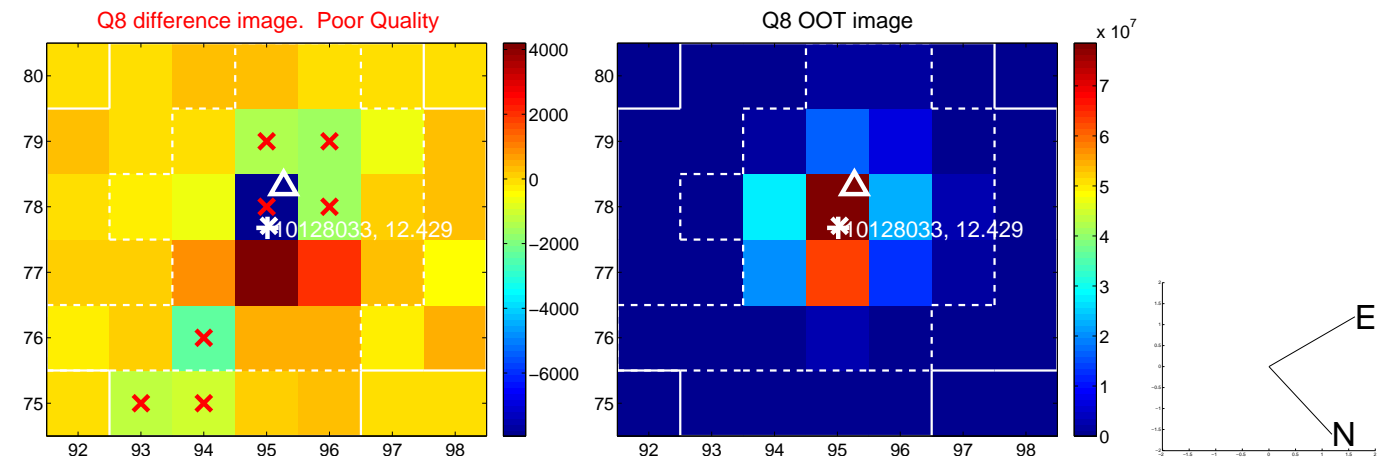
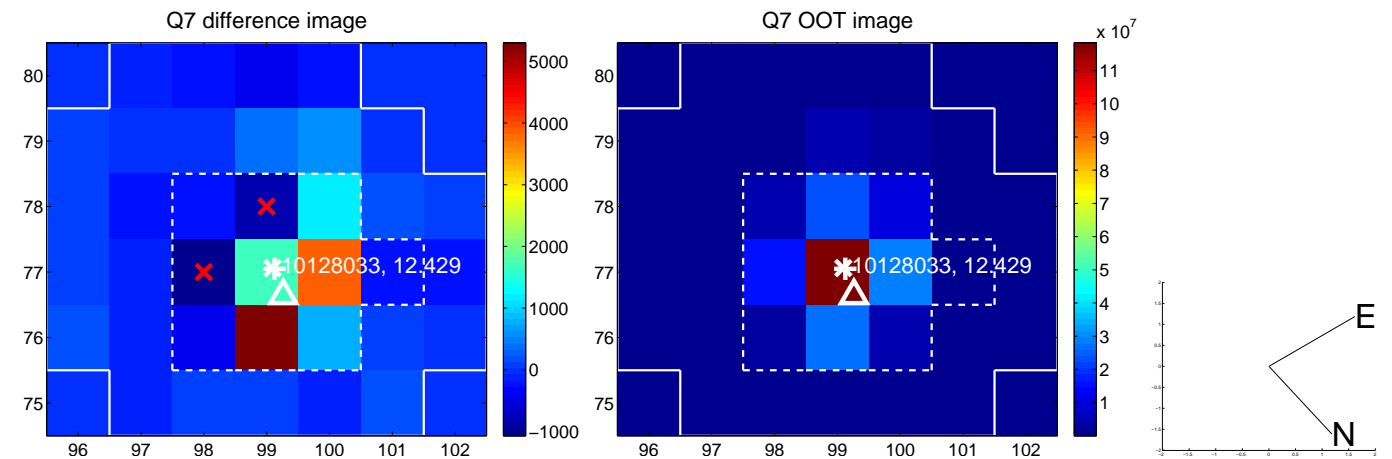
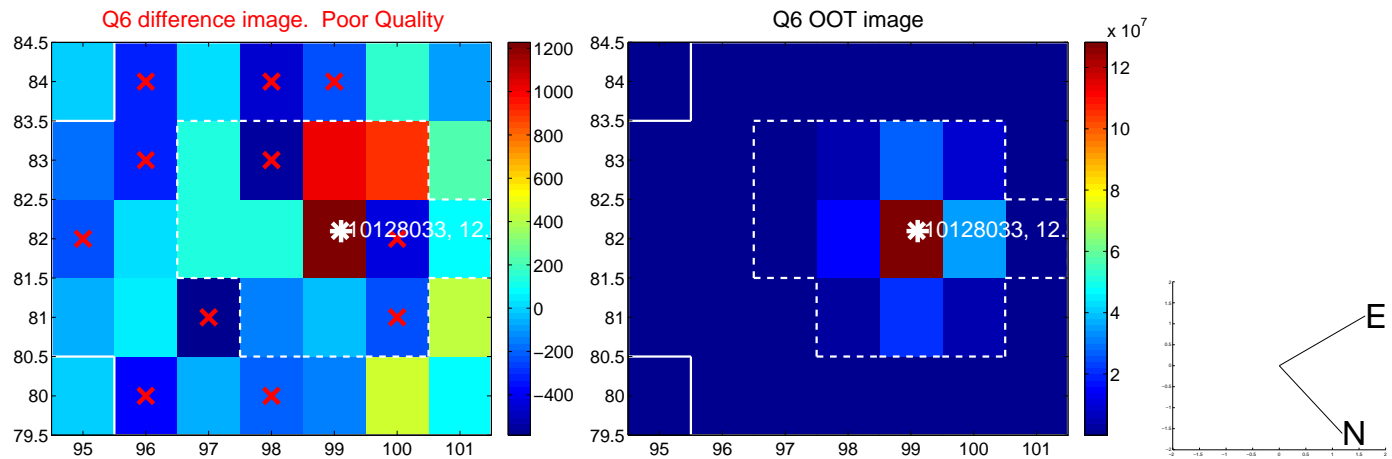
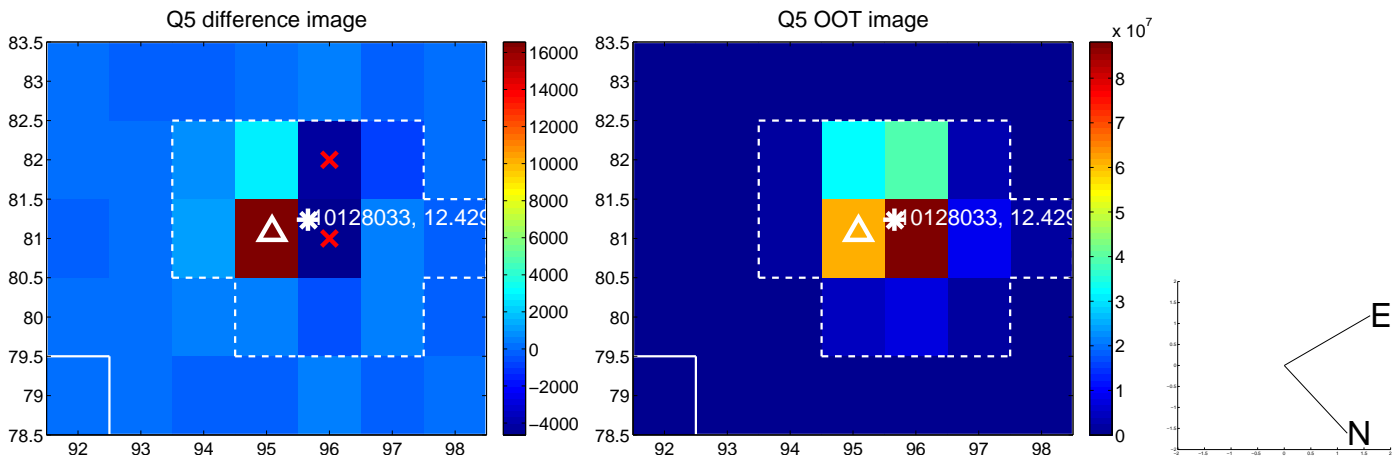
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.424 ± 0.687	0.62	-0.396 ± 0.668	-0.150 ± 0.497
PRF-fit source offset from KIC position	0.395 ± 0.588	0.67	-0.378 ± 0.554	-0.112 ± 0.476
photometric centroid source offset	0.23 ± 0.31	0.76	-0.23 ± 0.31	-0.02 ± 0.30

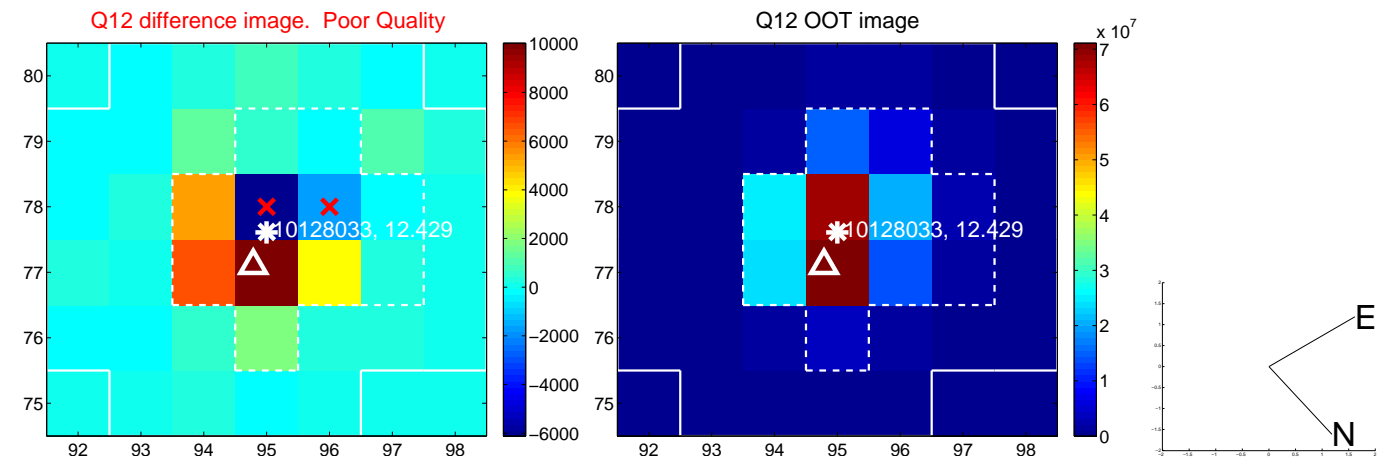
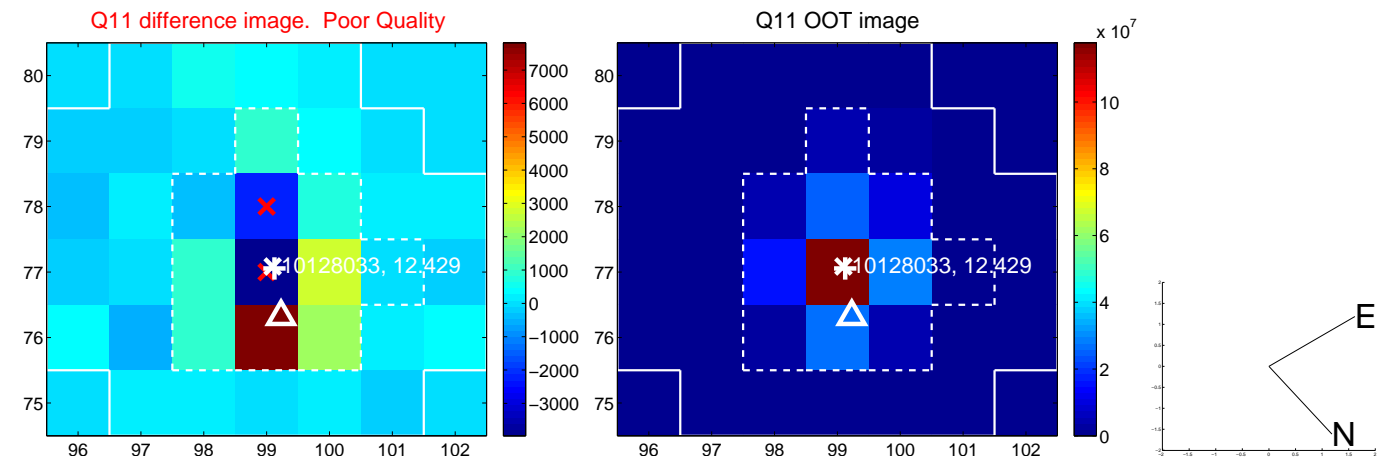
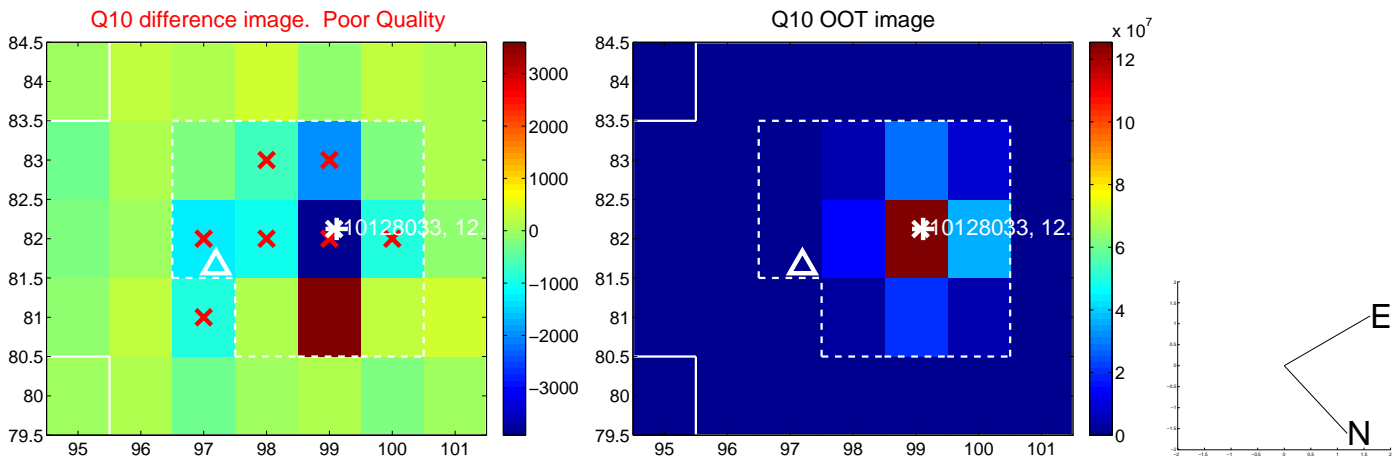
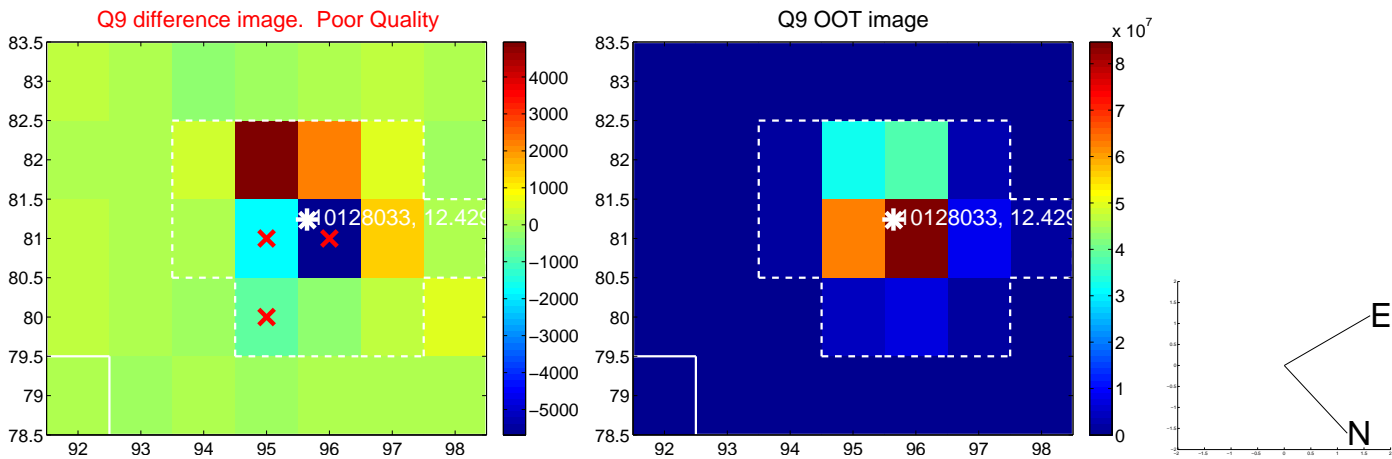


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

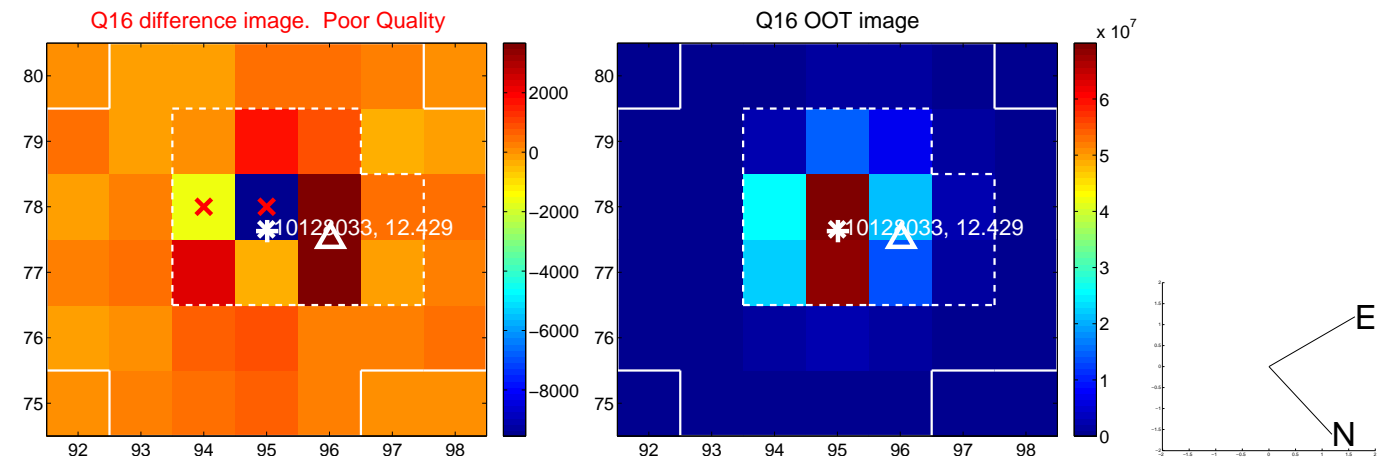
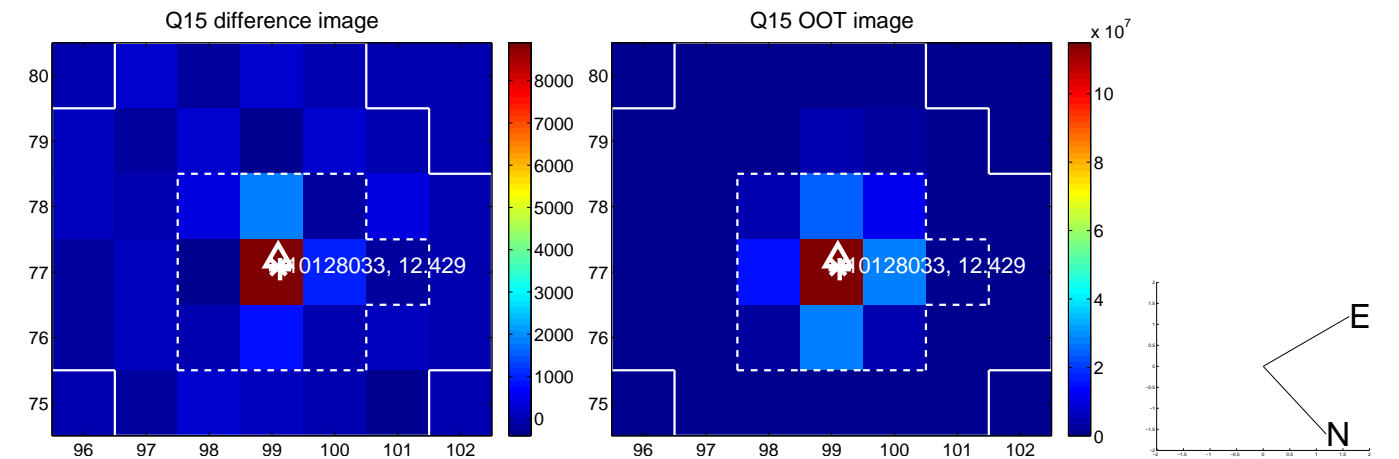
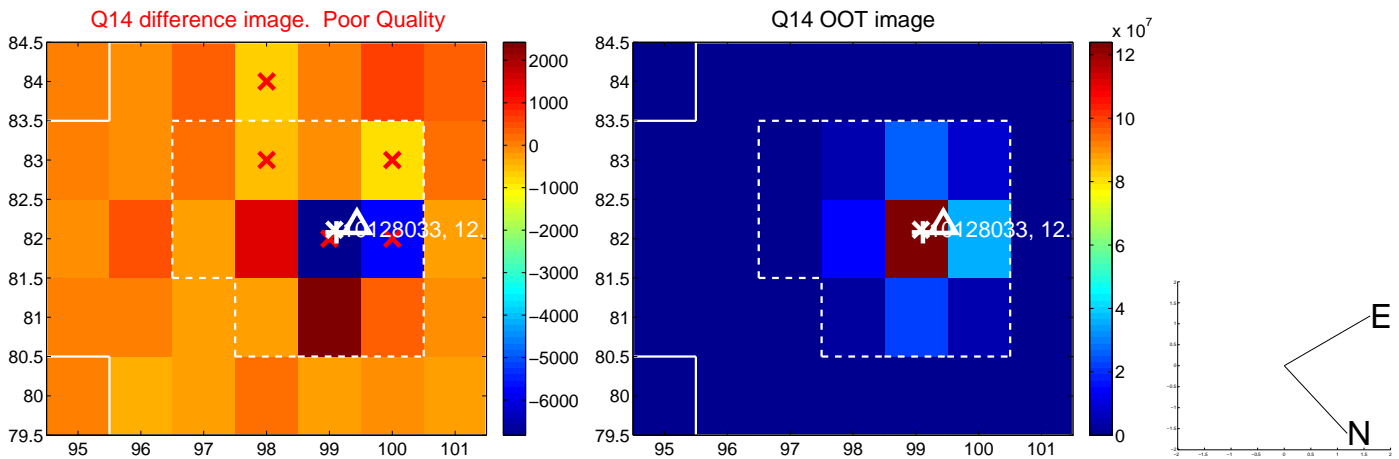
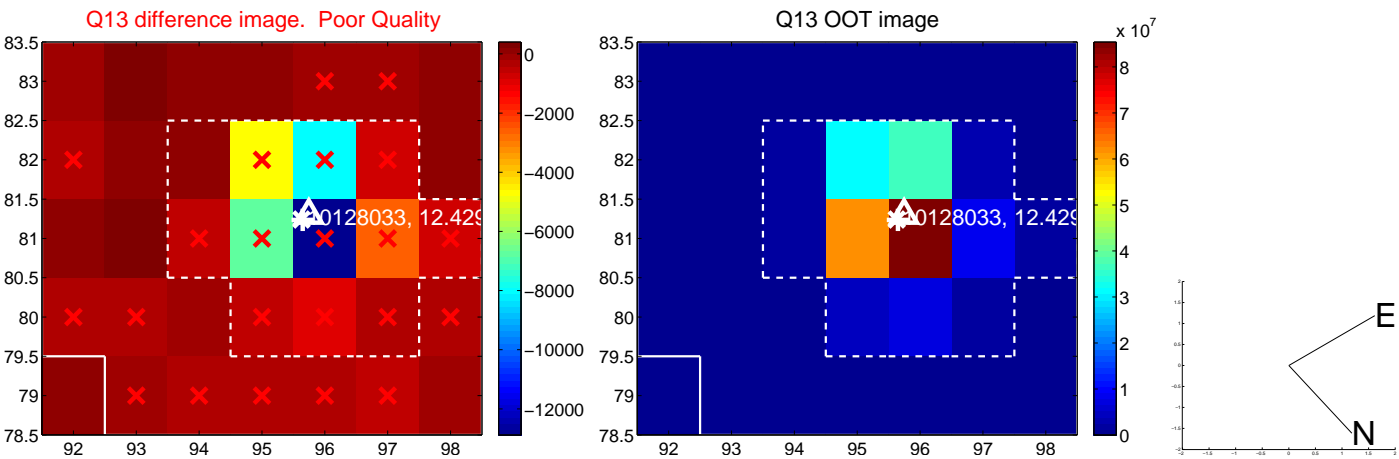
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



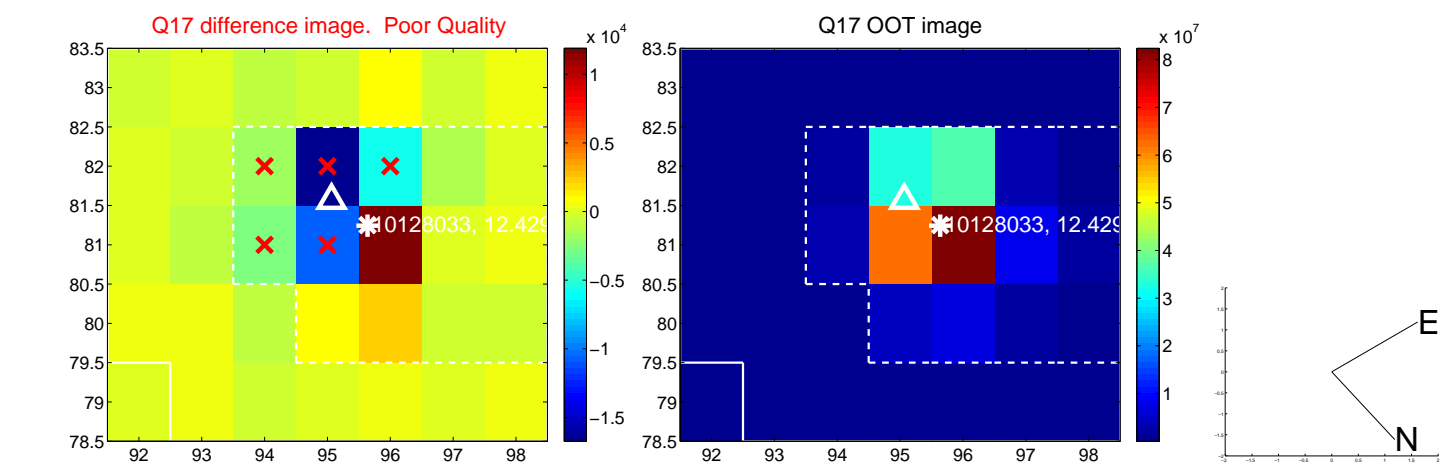
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



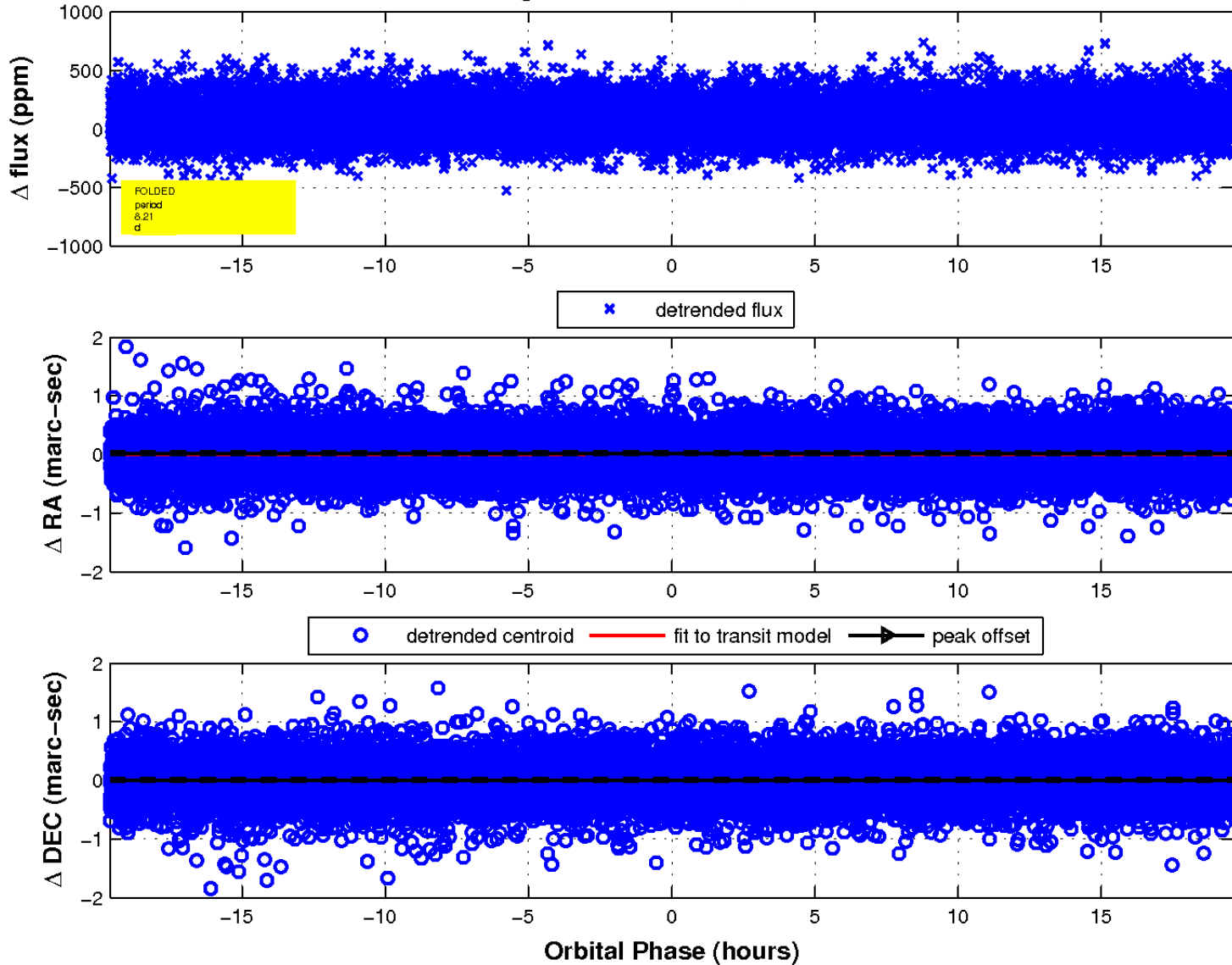
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

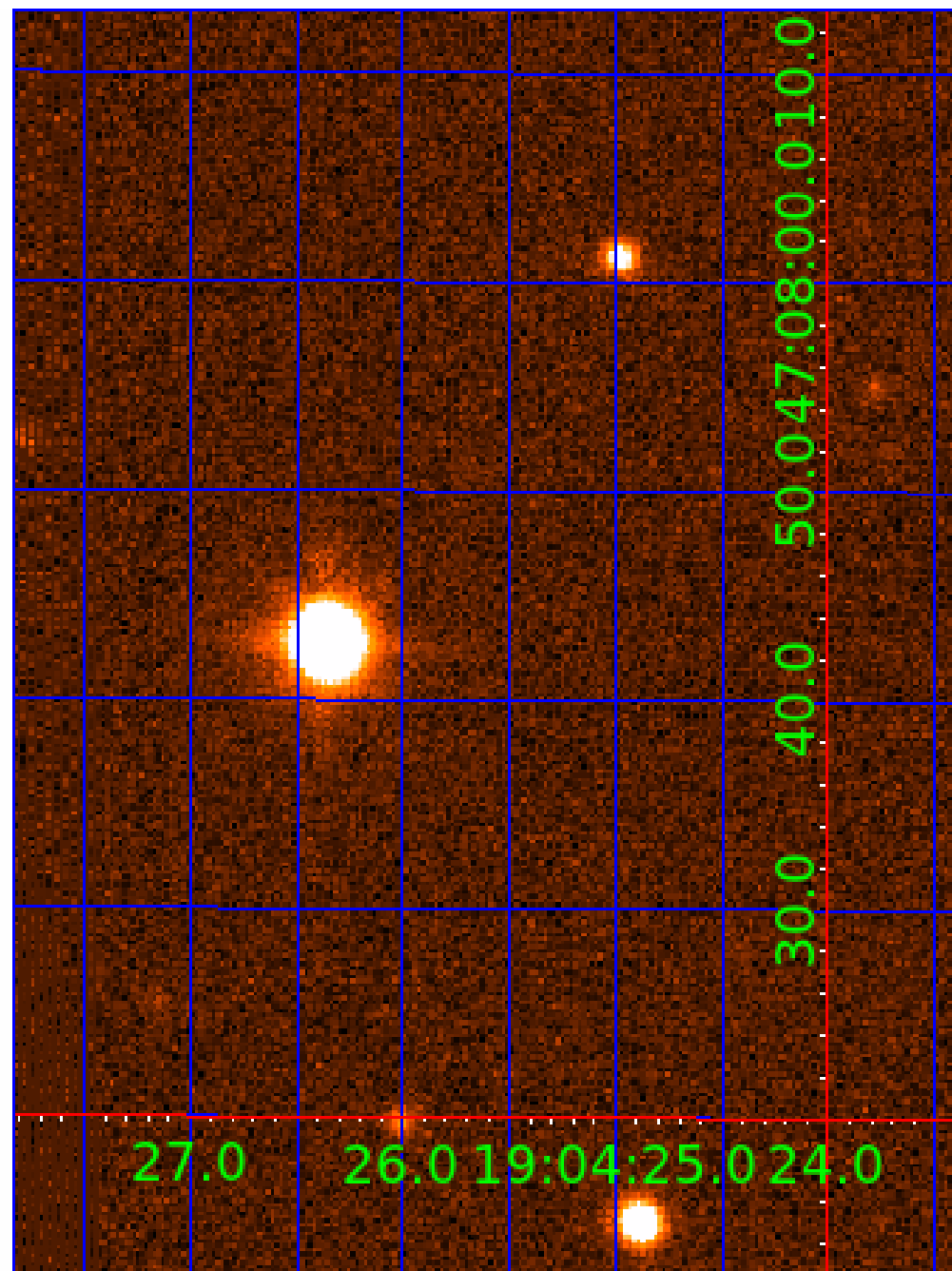


fluxWeightedCentroids, Planet 6 of 7



UKIRT Image

Declination



KIC 010128033

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})
010128033-01	OBS	No	0.656657	132.034110	132.6	2.000	12.3	-1.0	1.82	7296	2.13	28918.67
010128033-02	OBS	No	0.652477	131.903081	7.1	4.657	10.5	4.6	1.82	7296	0.50	29165.94
010128033-03	OBS	No	17.600189	147.811937	250.3	2.116	15.5	14.4	1.82	7296	3.36	360.53
010128033-04	OBS	No	9.891488	135.292290	214.5	1.638	14.6	18.8	1.82	7296	3.09	777.35
010128033-05	OBS	No	18.663500	140.435482	217.4	1.484	14.8	14.6	1.82	7296	2.96	333.40
010128033-06	OBS	No	8.211909	137.726951	81.5	6.535	12.7	11.0	1.82	7296	1.90	996.26
010128033-07	OBS	No	9.203685	137.129745	540.9	1.500	15.2	-1.0	1.82	7296	4.30	855.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010128033-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—CENT_NOFITS
010128033-02	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT—MOD_NONUNIQ_ALT
010128033-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
010128033-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_DV
010128033-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT
010128033-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—MOD_NONUNIQ_ALT—MOD_POS_ALT—CENT_NOFITS

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

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

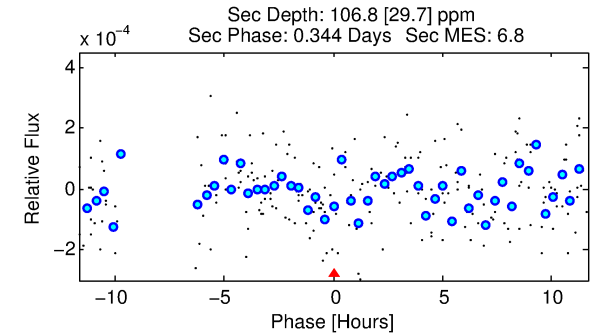
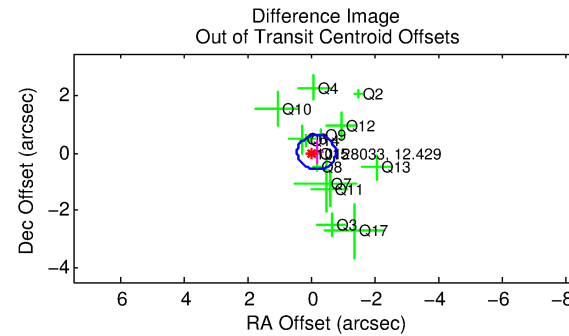
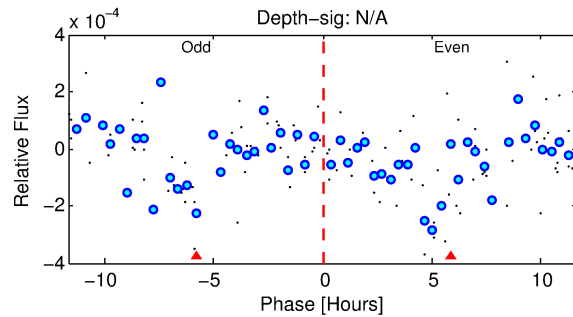
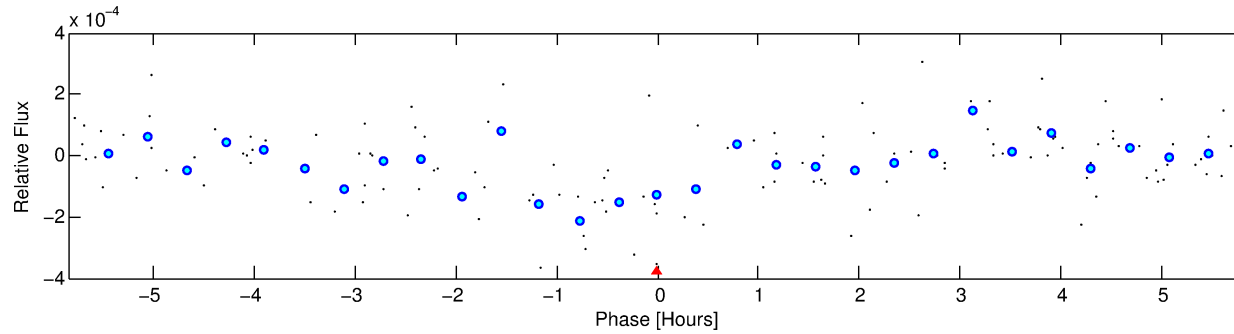
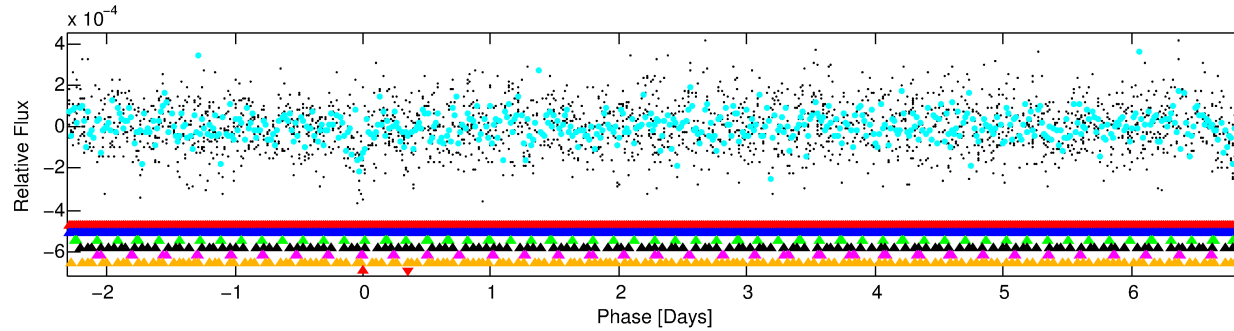
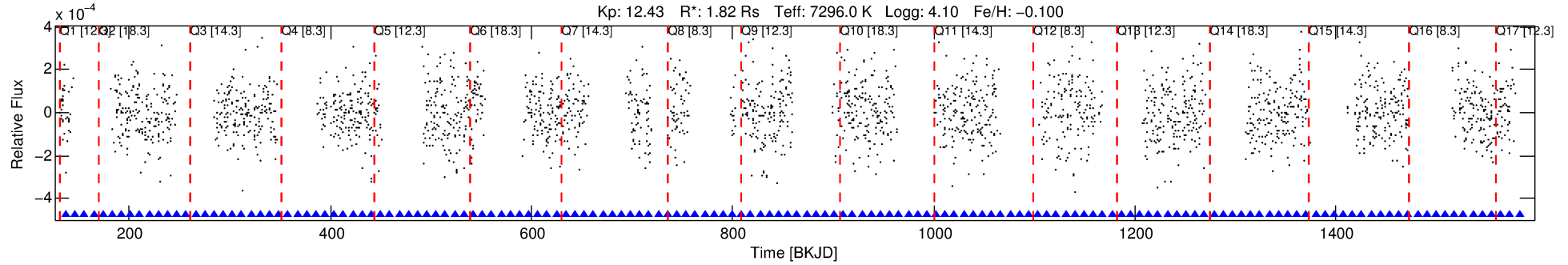
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 010128033-07

No Significant Match Found

DV One-Page Summary

KIC: 10128033 Candidate: 7 of 7 Period: 9.204 d



TPS TCE Results:

Period = 9.20368 d
Epoch = 137.1297 BKJD

DV fit results are unavailable

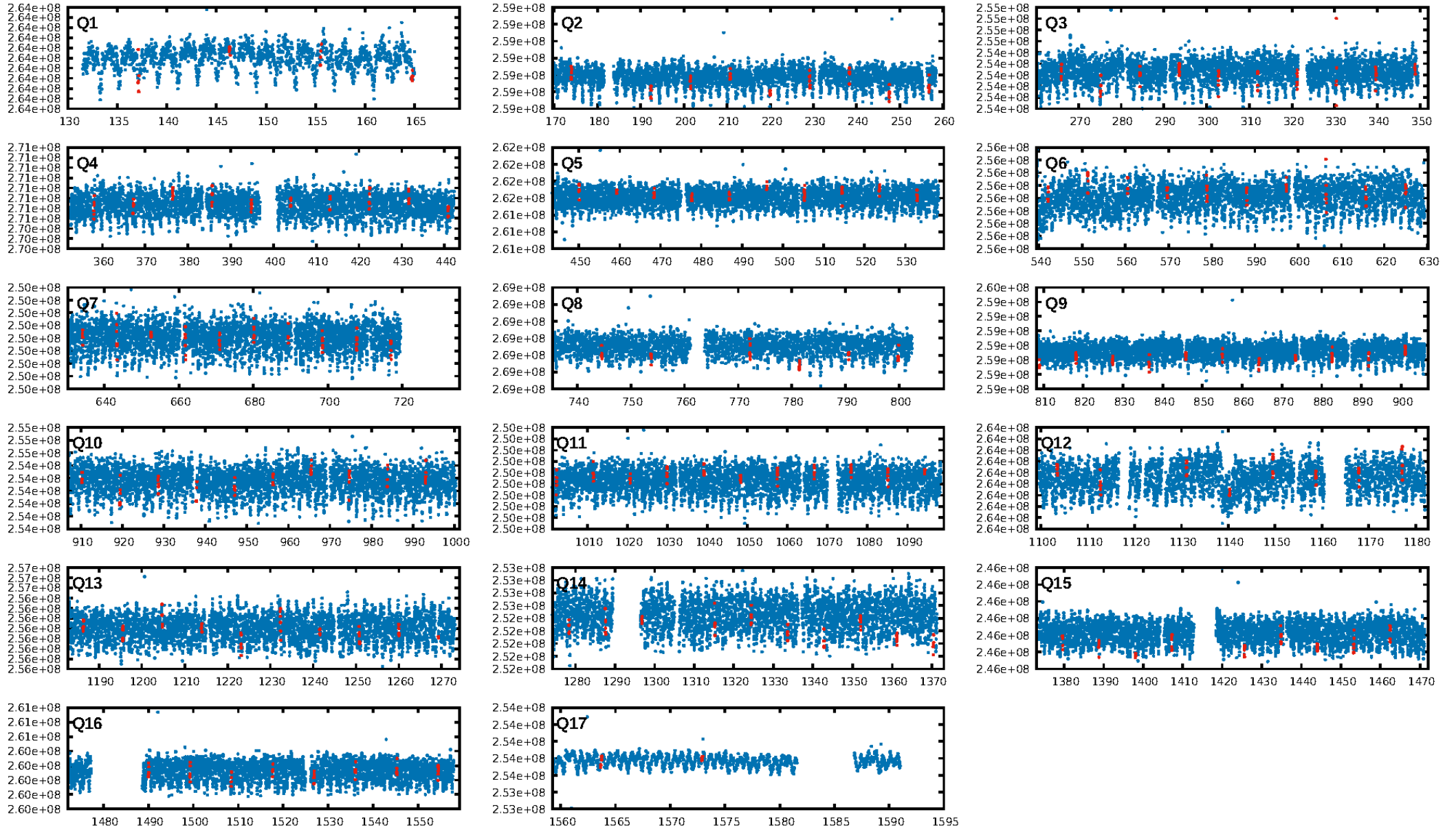
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.55 σ]
LongPeriod-sig: 100.0% [7.43 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [13/13]
GhostDiagnostic-chr: -0.567
Centroid-sig: 1.4%
Centroid-so: 0.426 arcsec [1.58 σ]
OotOffset-rm: 0.152 arcsec [0.76 σ]
KicOffset-rm: 0.215 arcsec [0.85 σ]
OotOffset-st: 4/4/3/3 [14]
KicOffset-st: 4/4/3/3 [14]
DiffImageQuality-fgm: 0.57 [8/14]
DiffImageOverlap-fno: 0.00 [0/17]

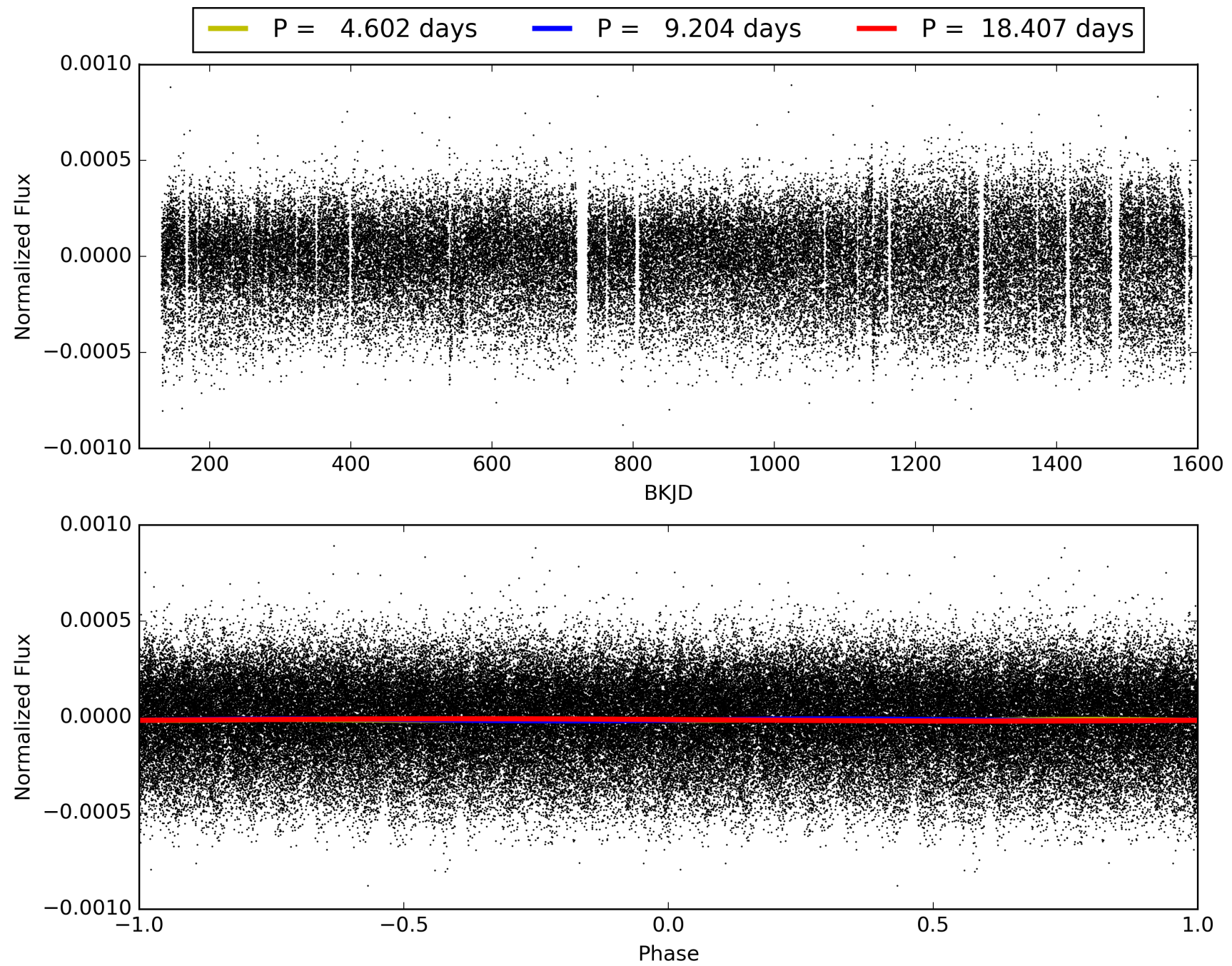
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:50:28 Z

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

TCE 010128033-07, PDC Light Curves

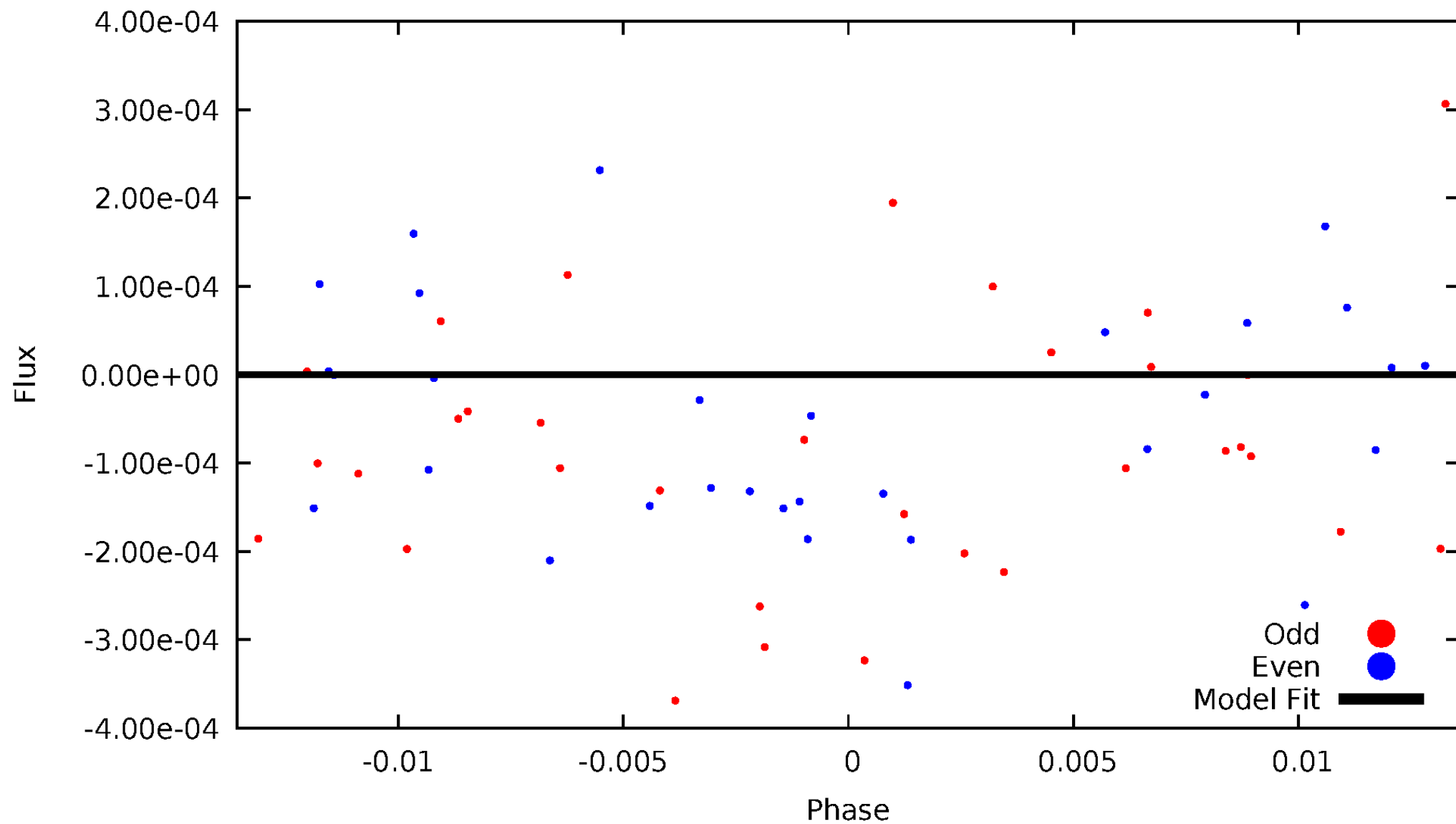


TCE 010128033-07



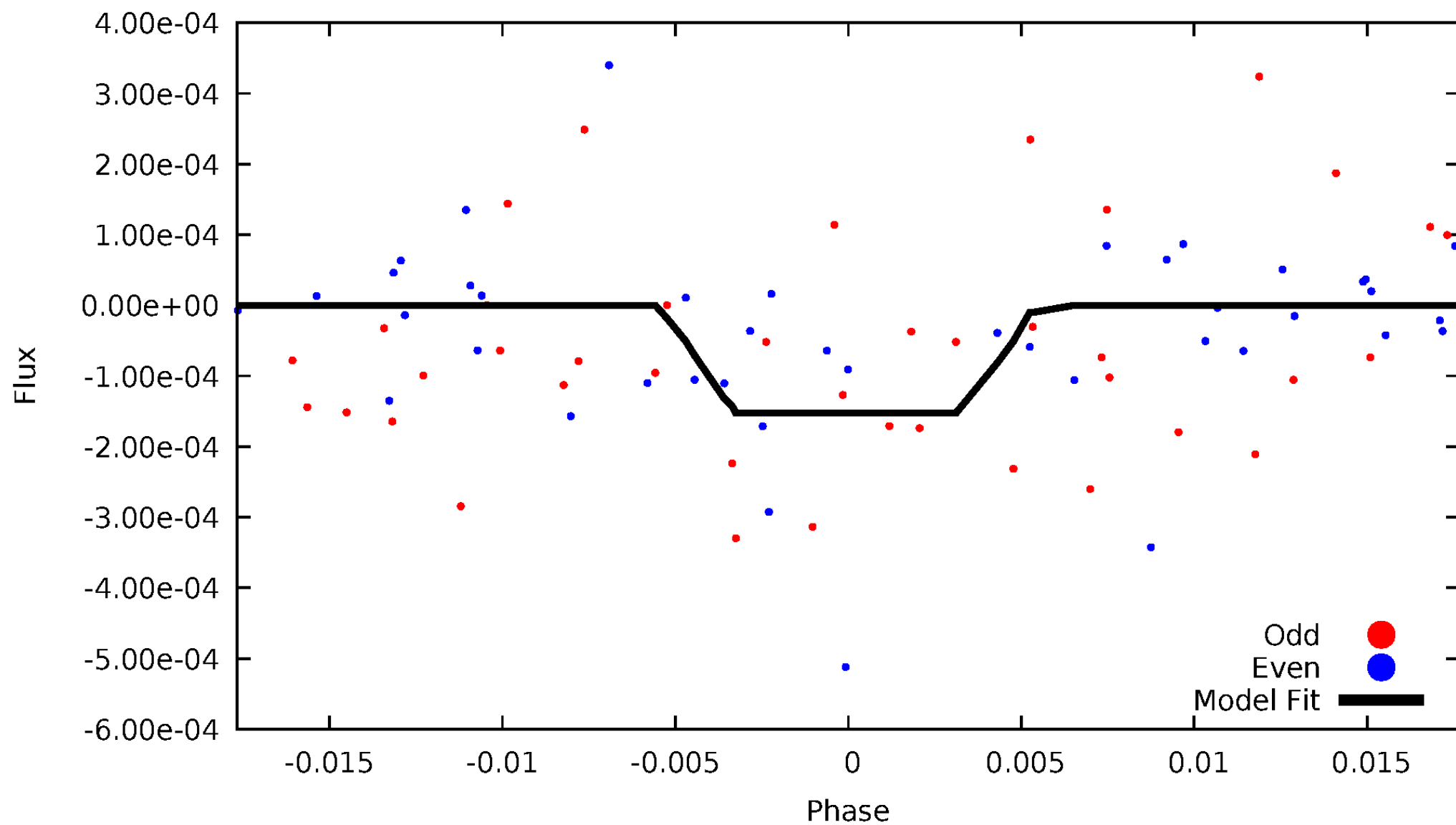
DV Odd/Even

TCE 010128033-07



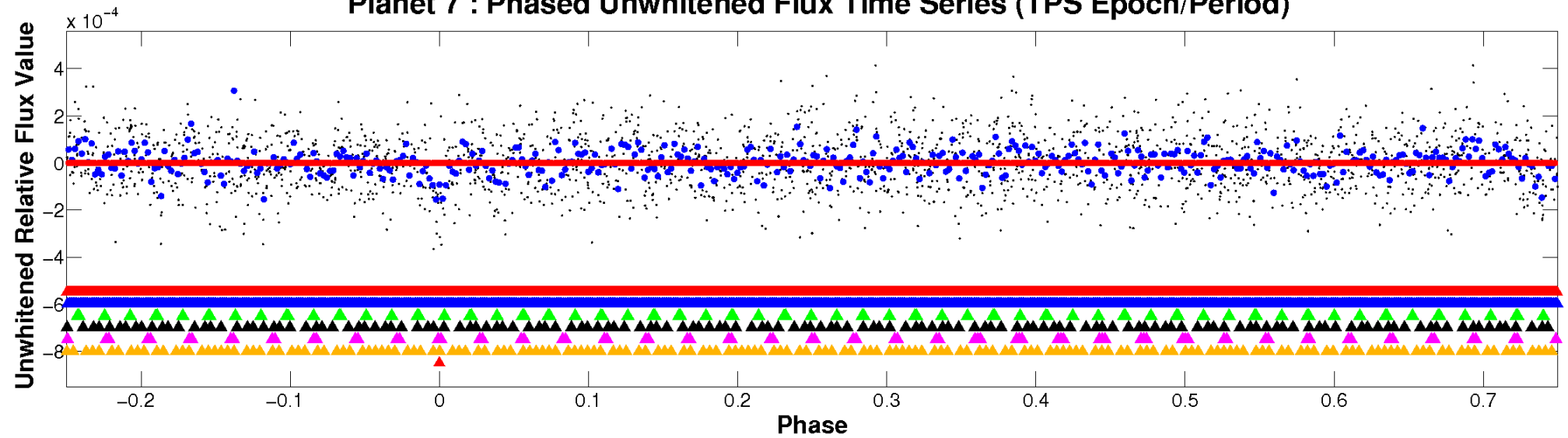
ALT Odd/Even

TCE 010128033-07

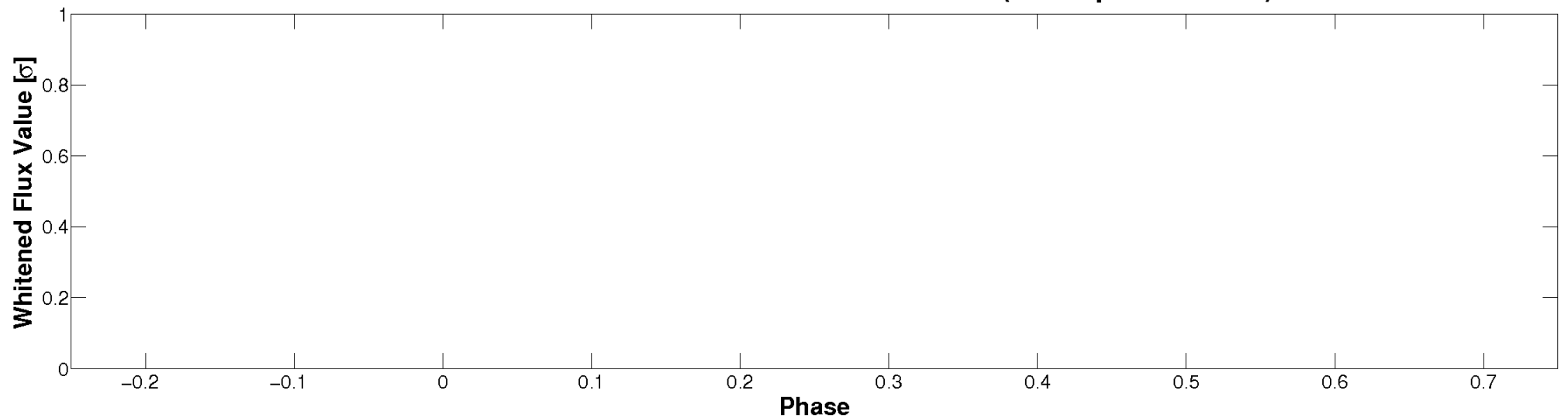


Non-Whitened Vs. Whitened Light Curve

Planet 7 : Phased Unwhitened Flux Time Series (TPS Epoch/Period)

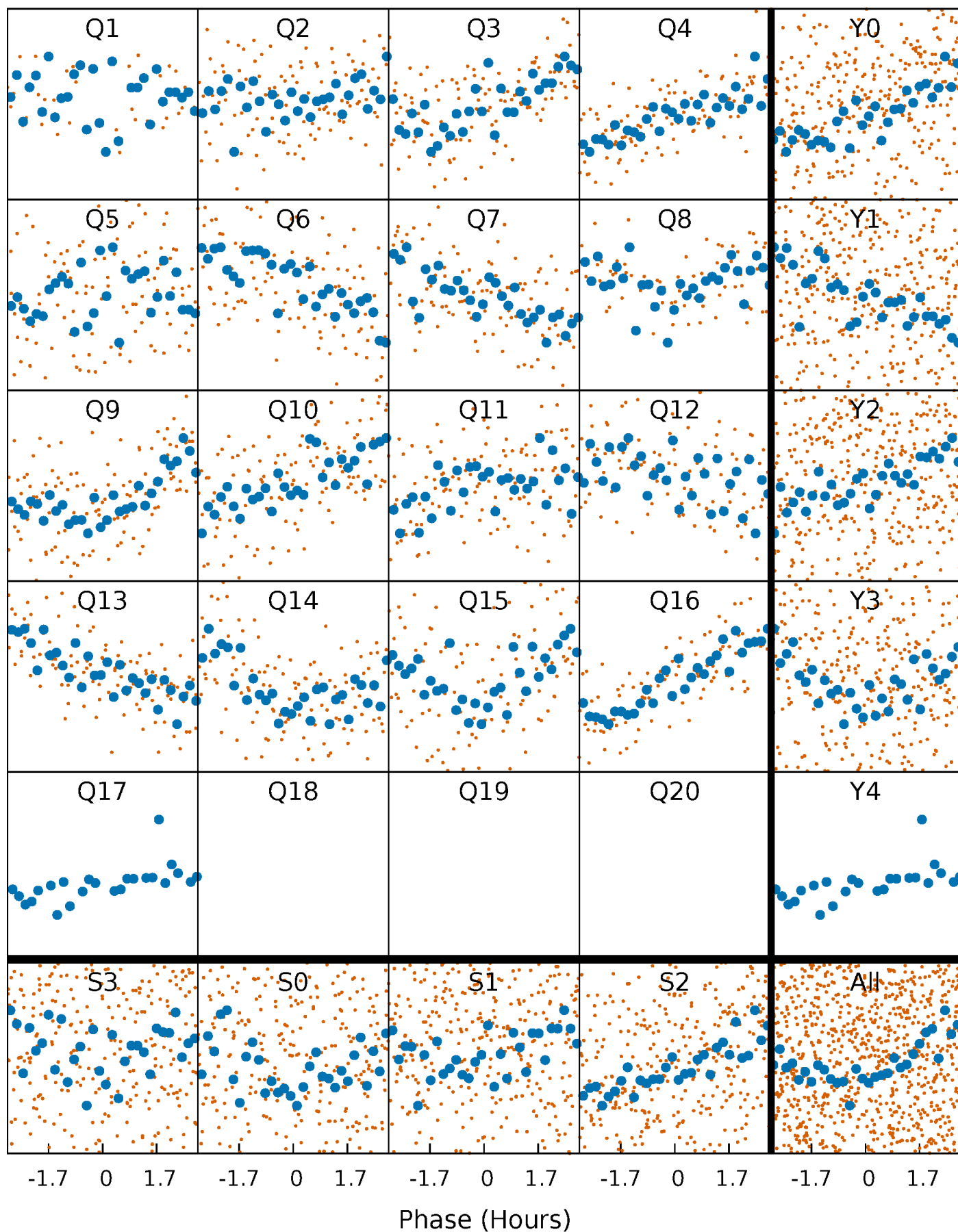


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



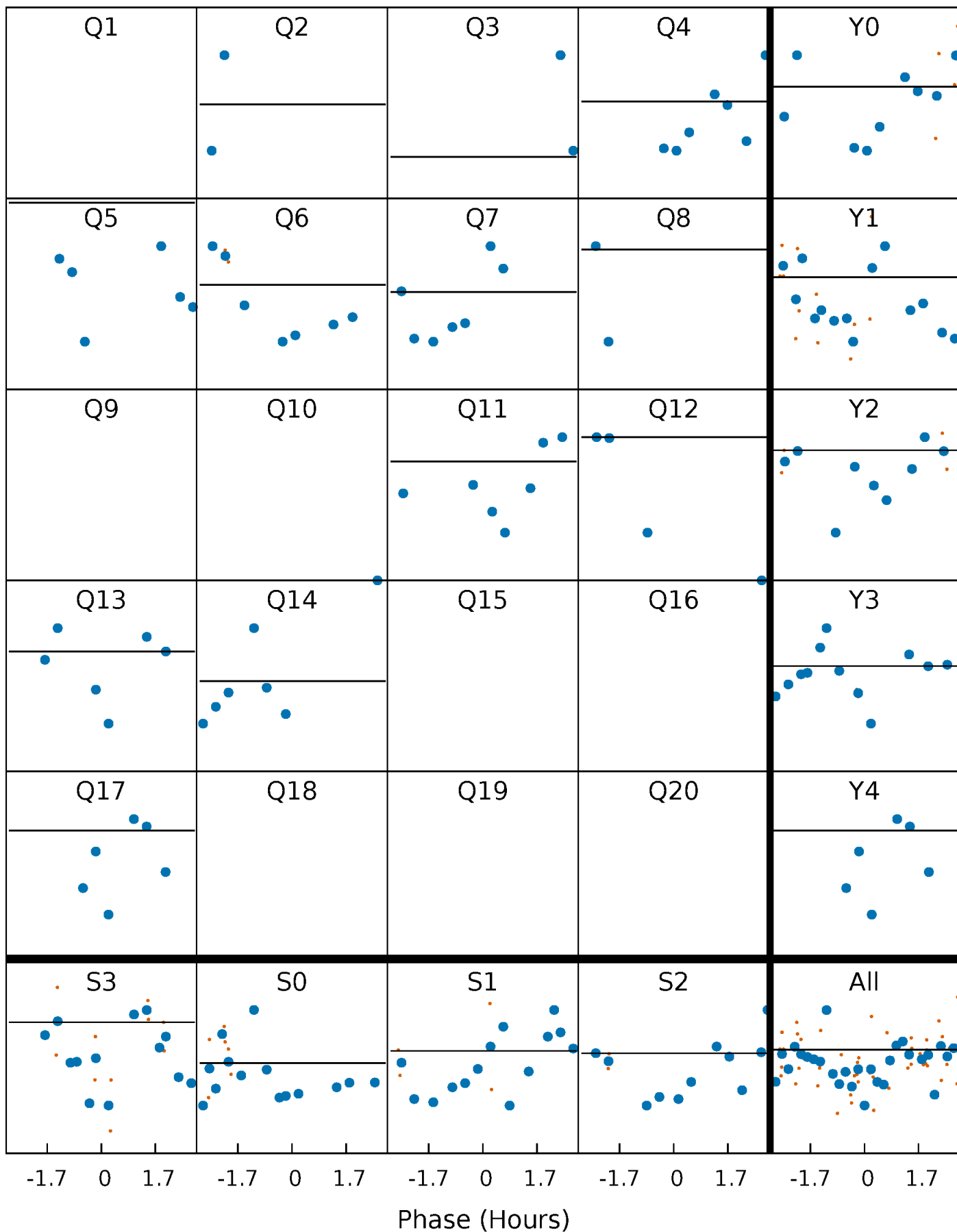
PDC Quarter-Phased Transit Curves

TCE 010128033-07 P= 9.203685 Days $T_0=137.129745$ (BKJD)



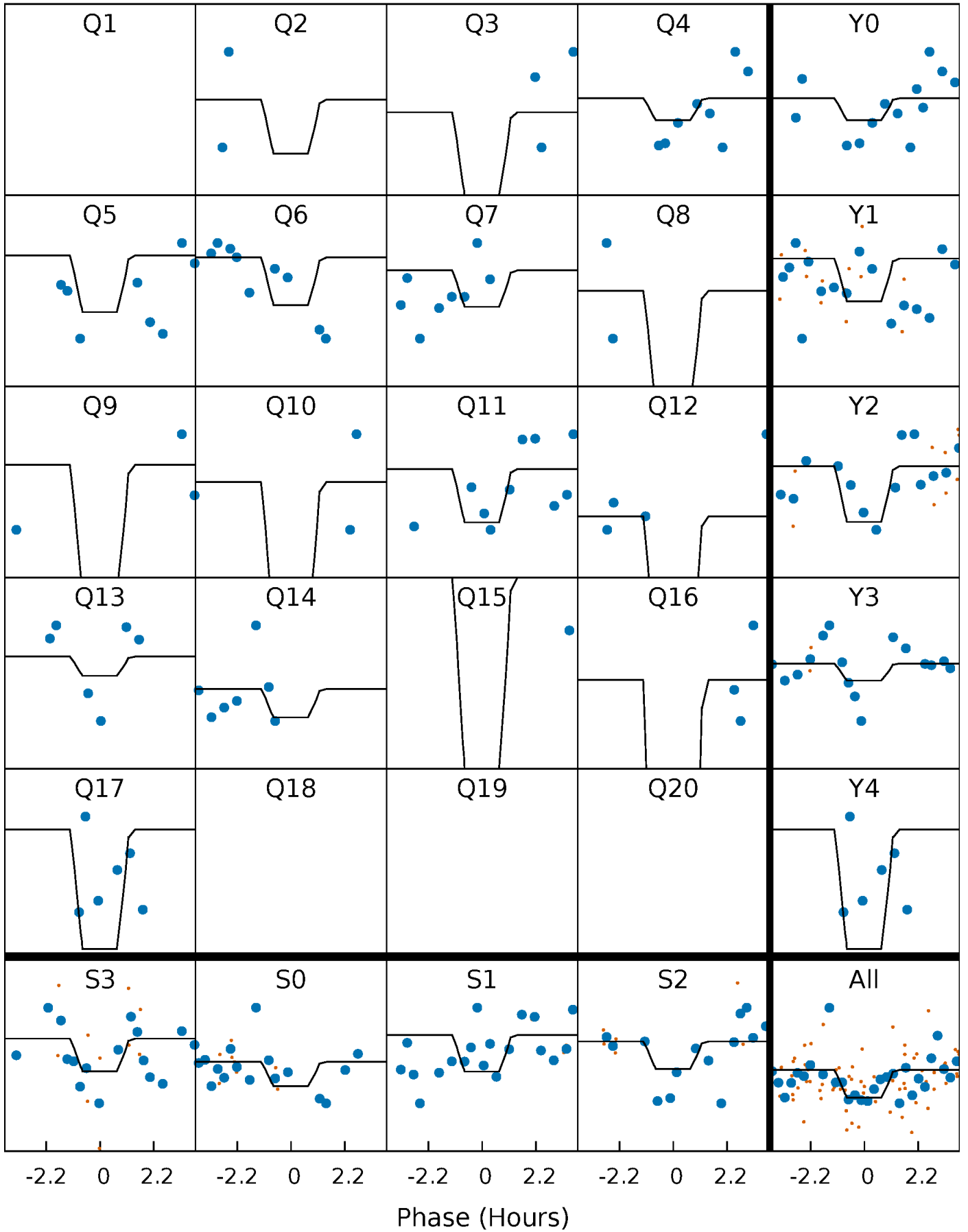
DV Quarter-Phased Transit Curves

TCE 010128033-07 P= 9.203685 Days $T_0=137.129745$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

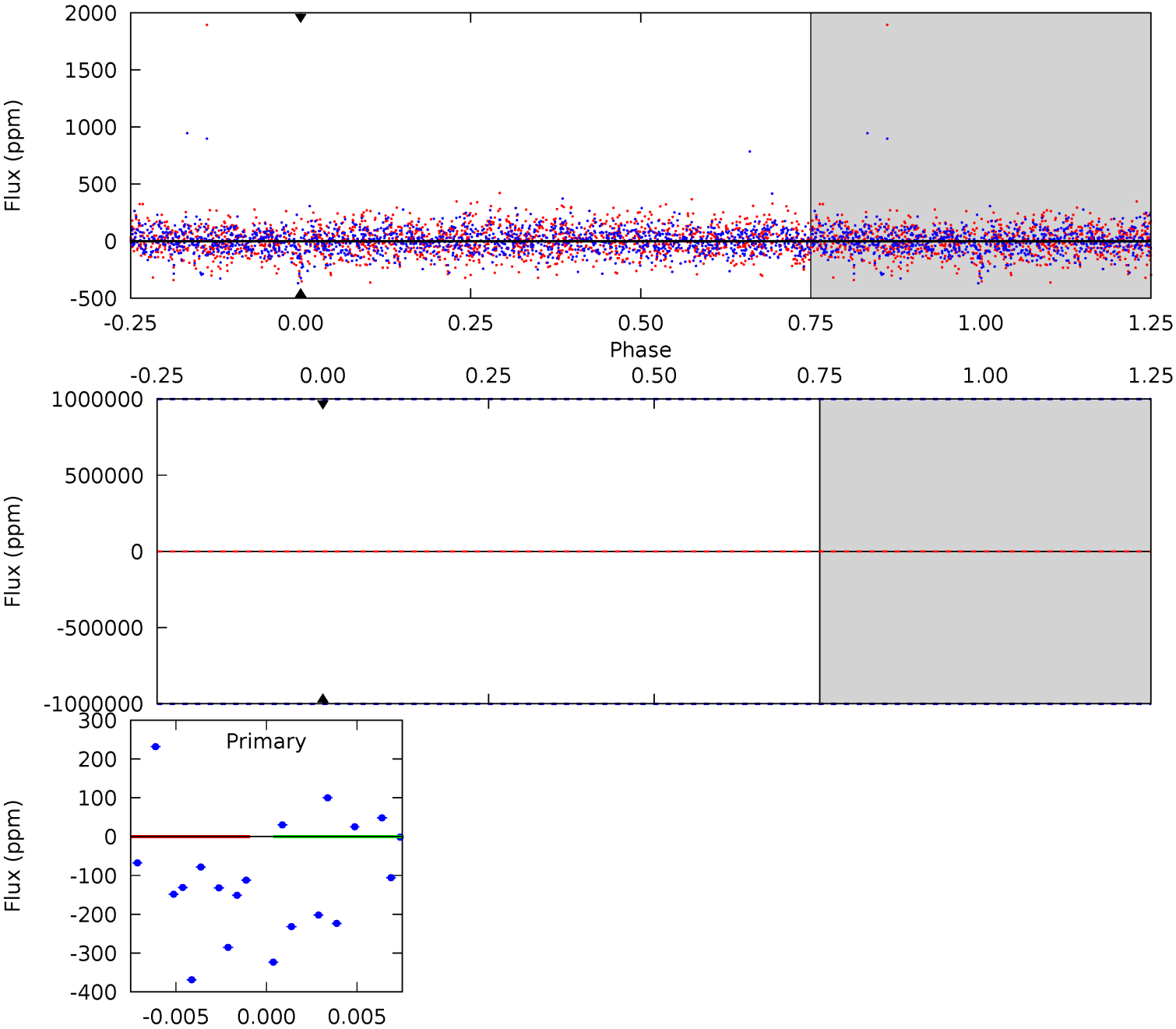
TCE 010128033-07 P= 9.203685 Days $T_0=137.142588$ (BKJD)



DV Model-Shift Uniqueness Test

010128033-07, P = 9.203685 Days, E = 127.926060 Days

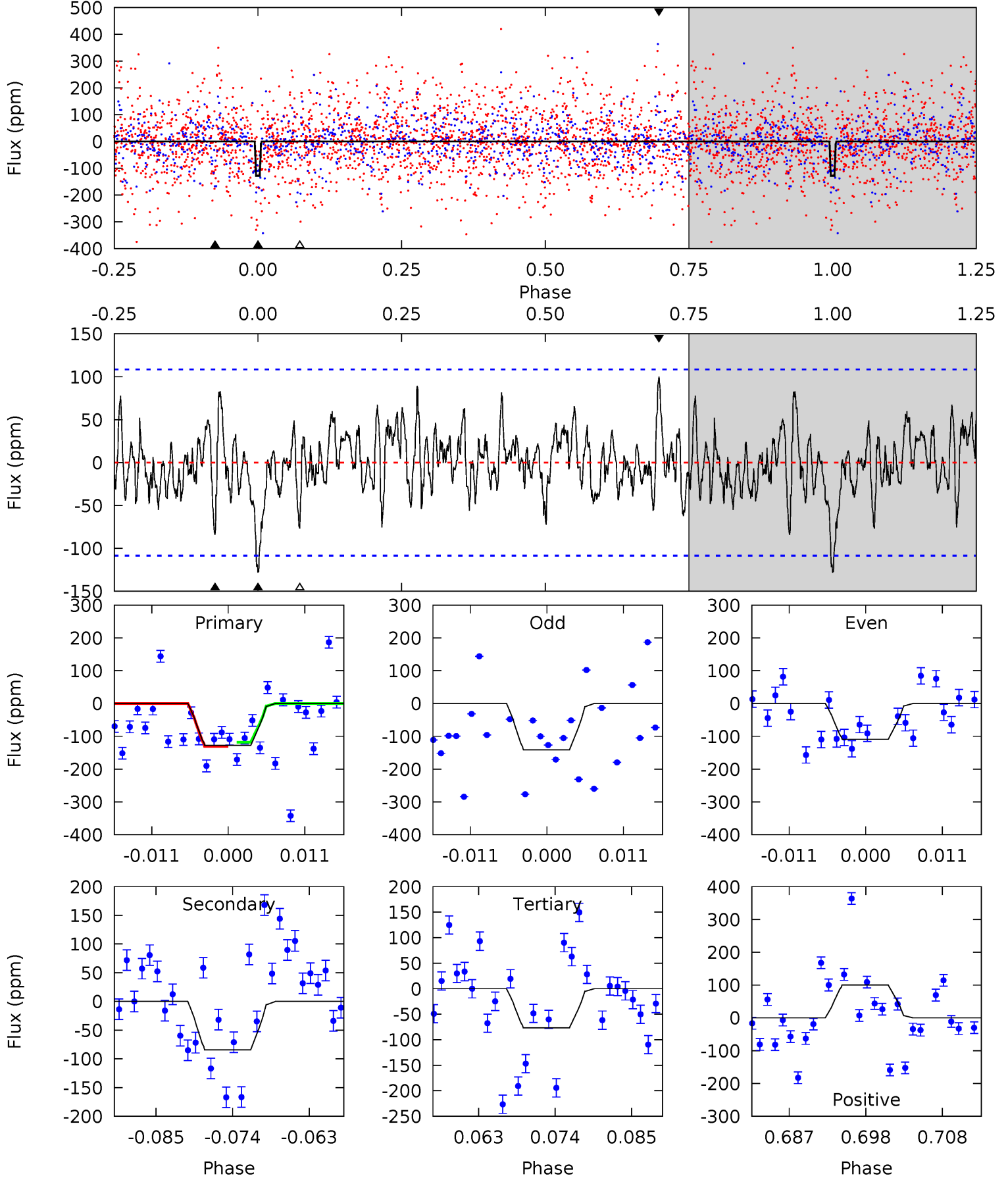
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

010128033-07, P = 9.203685 Days, E = 127.938903 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.91	3.89	3.56	4.63	5.02	2.56	1.30	2.35	1.27	0.34	-0.74	0.74	1.53	0.44	0.28



Stellar Parameters For KIC 010128033

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	7296^{+228}_{-330}	$4.103^{+0.165}_{-0.182}$	$-0.100^{+0.200}_{-0.350}$	$1.818^{+0.576}_{-0.384}$	$1.526^{+0.234}_{-0.257}$	$0.358^{+0.319}_{-0.179}$
	+3%/-5%	+4%/-4%	+200%/-350%	+32%/-21%	+15%/-17%	+89%/-50%
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 010128033-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$15.35^{+16.51}_{-10.46}$	1917^{+160}_{-139}	5530^{+33647}_{-34954}	44^{+4762}_{-3268}
Alt.	-84 ± 22	$13.98^{+15.73}_{-9.60}$	1922^{+167}_{-141}	3100^{+1695}_{-812}	$2.154^{+20.776}_{-1.683}$

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 $A_{obs} \gg 1.0$

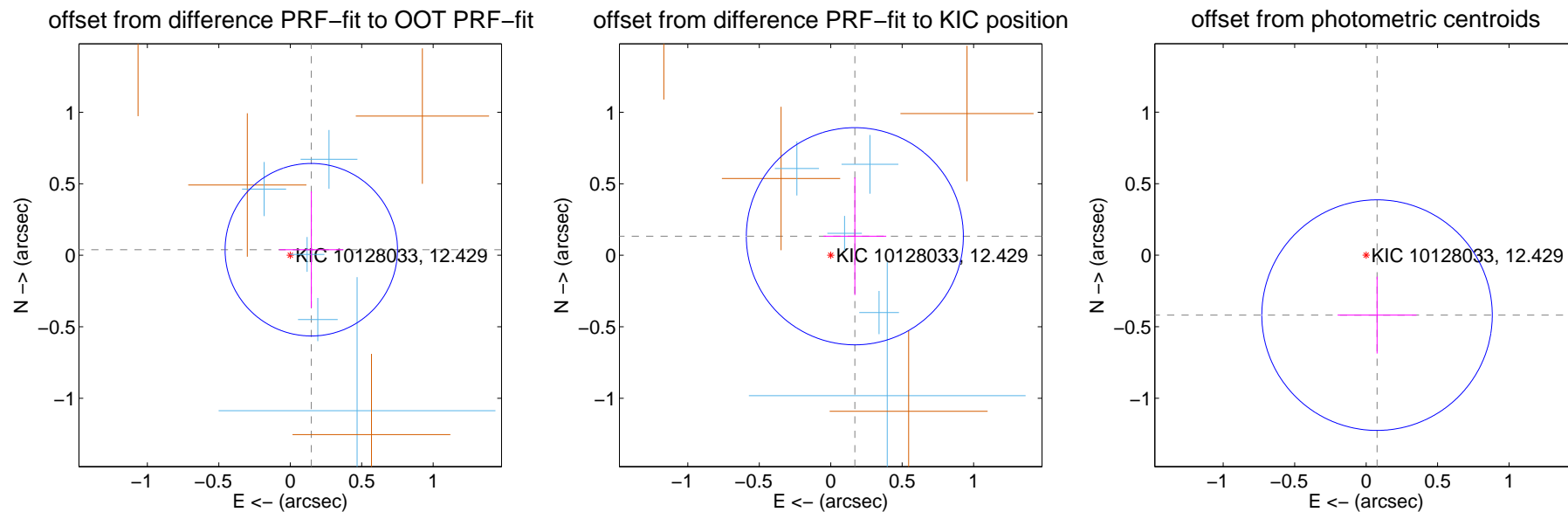
DV Centroid Data

Supplemental centroid analysis for 010128033-07. Kepler magnitude: 12.43. Transit SNR -1.00

There are 8 quarters with good PRF difference image offsets

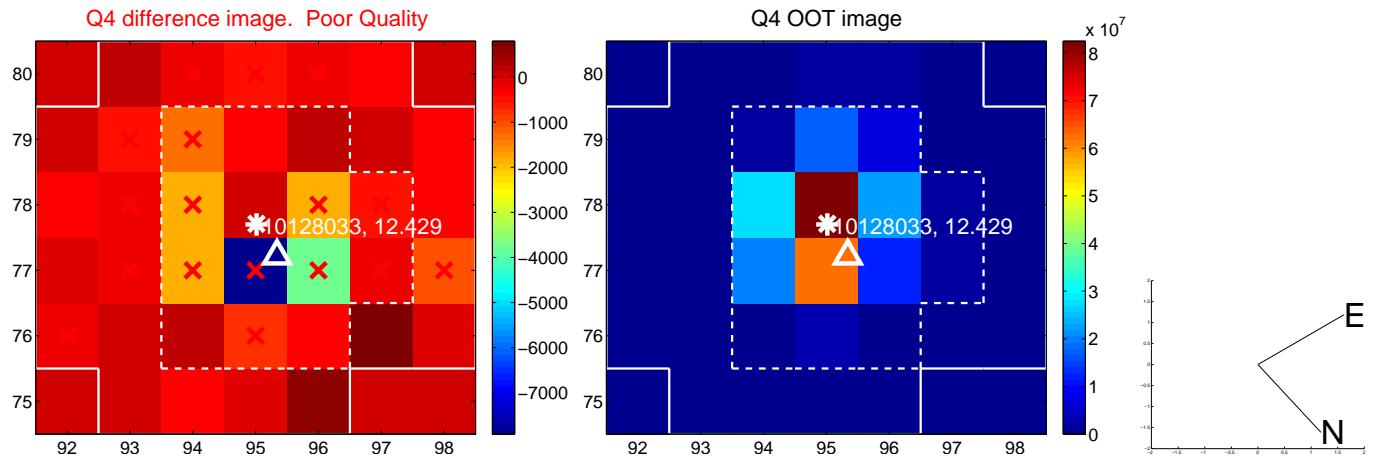
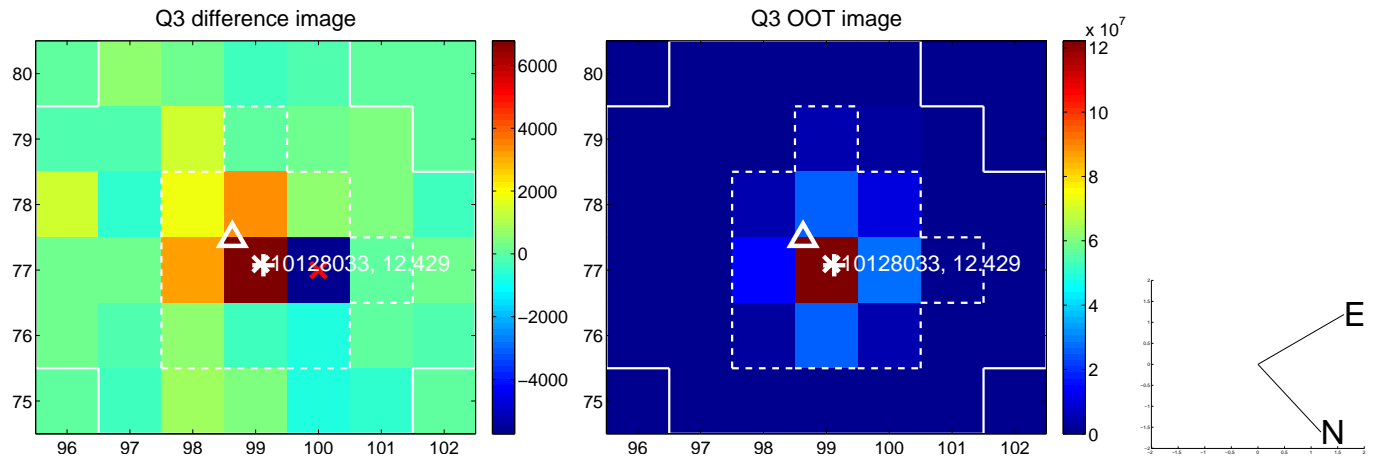
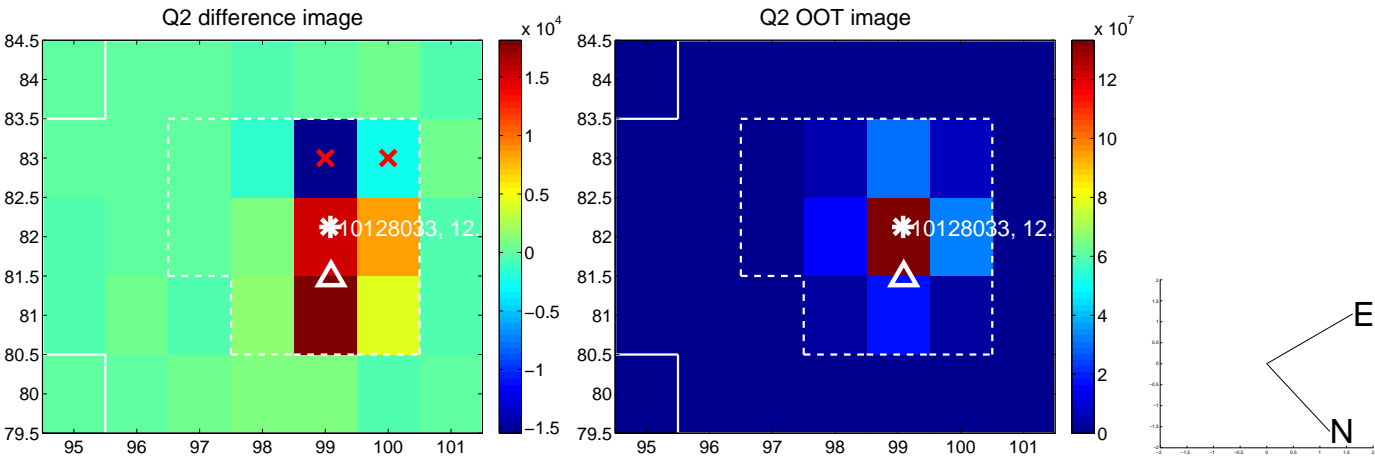
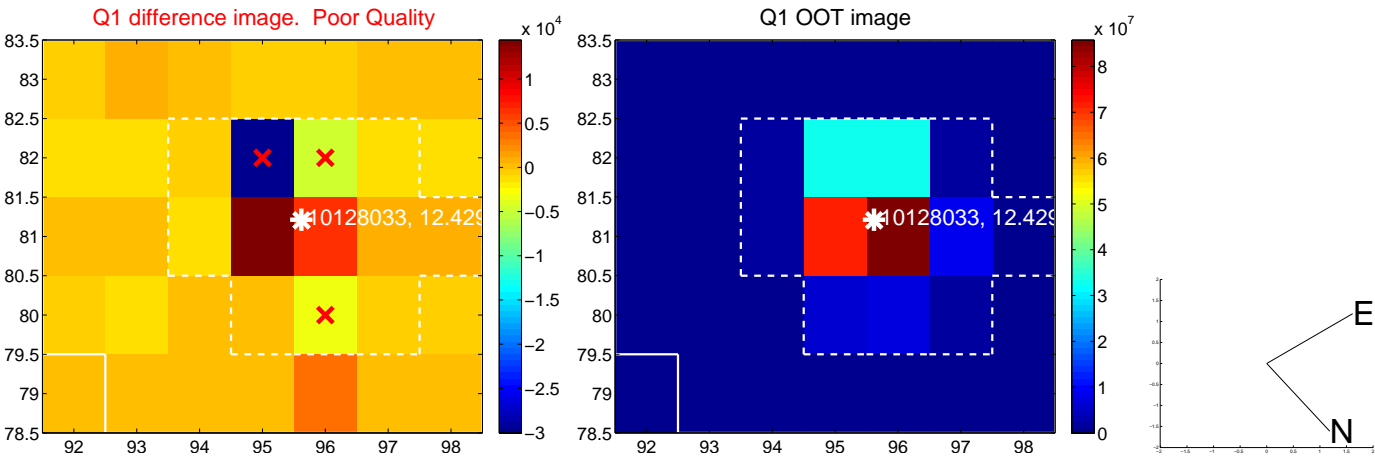
The direct PRF centroid is offset from the target star catalog position by about 0.03 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.152 ± 0.201	0.76	-0.147 ± 0.225	0.039 ± 0.408
PRF-fit source offset from KIC position	0.215 ± 0.253	0.85	-0.169 ± 0.220	0.133 ± 0.411
photometric centroid source offset	0.43 ± 0.27	1.58	-0.08 ± 0.28	-0.42 ± 0.27

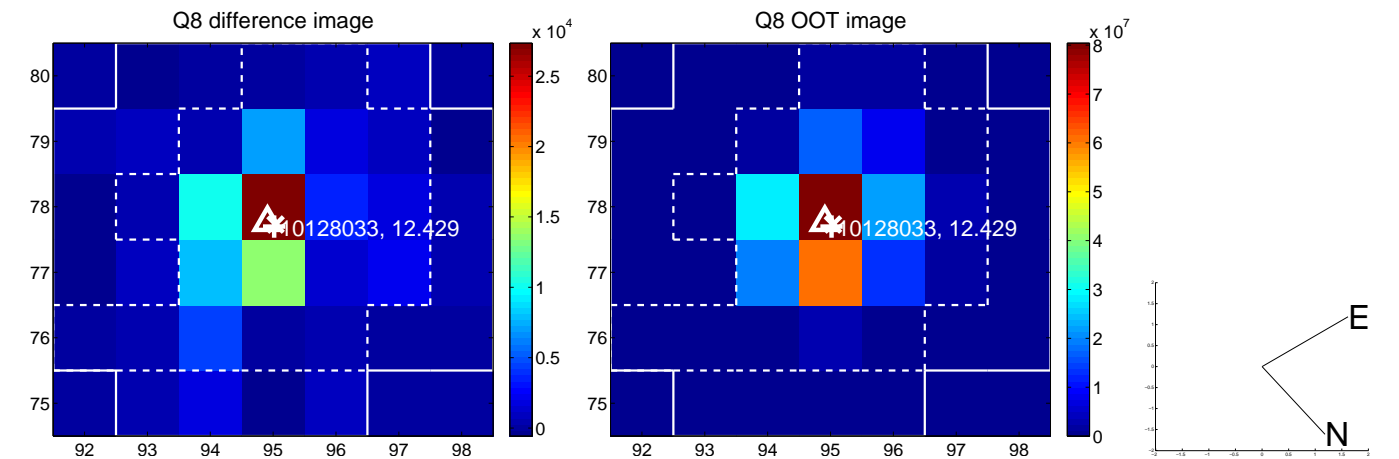
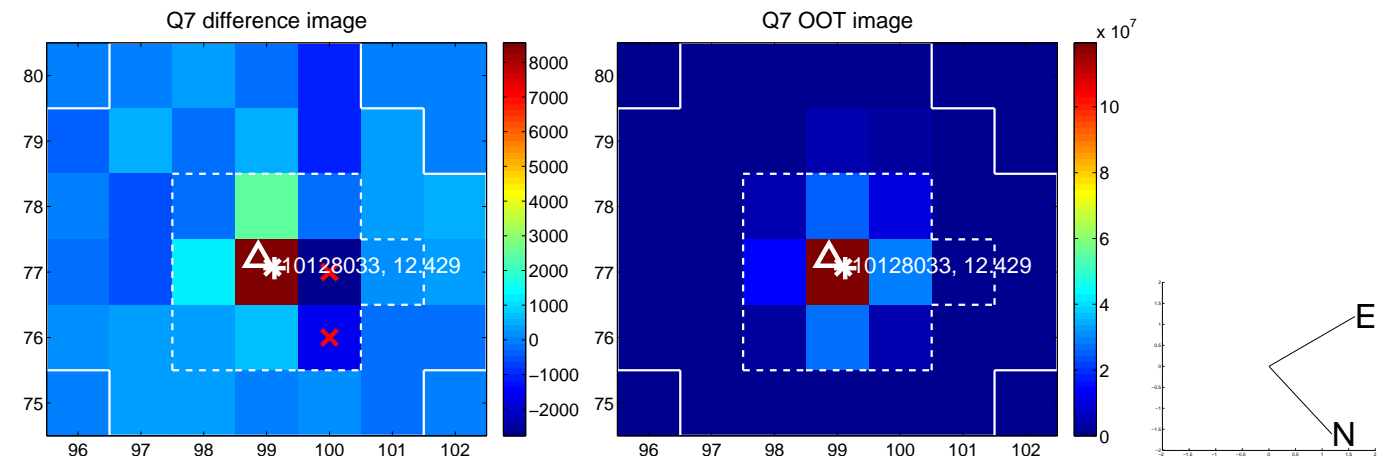
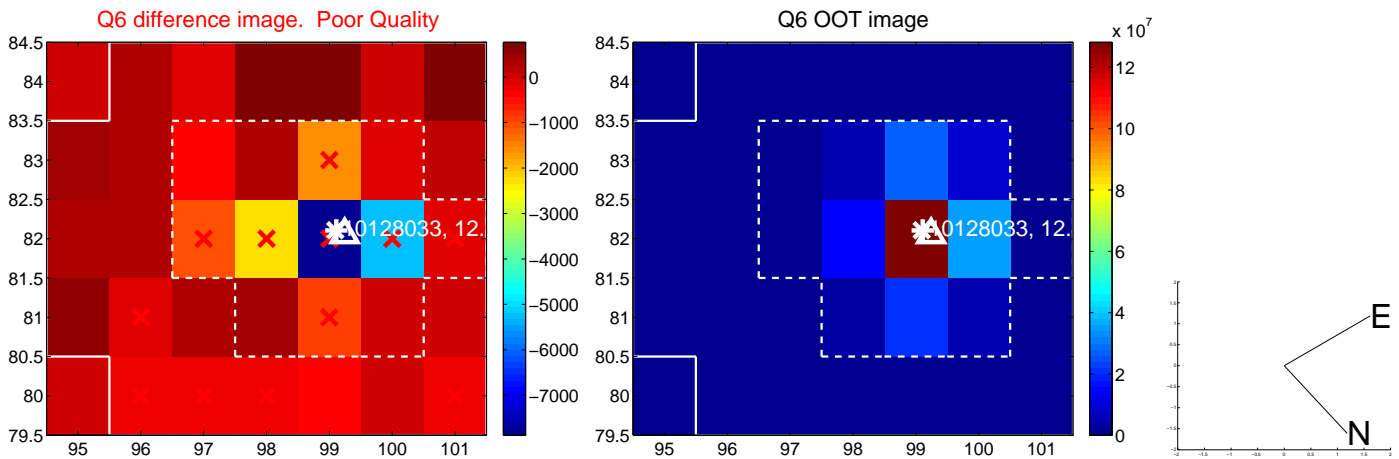
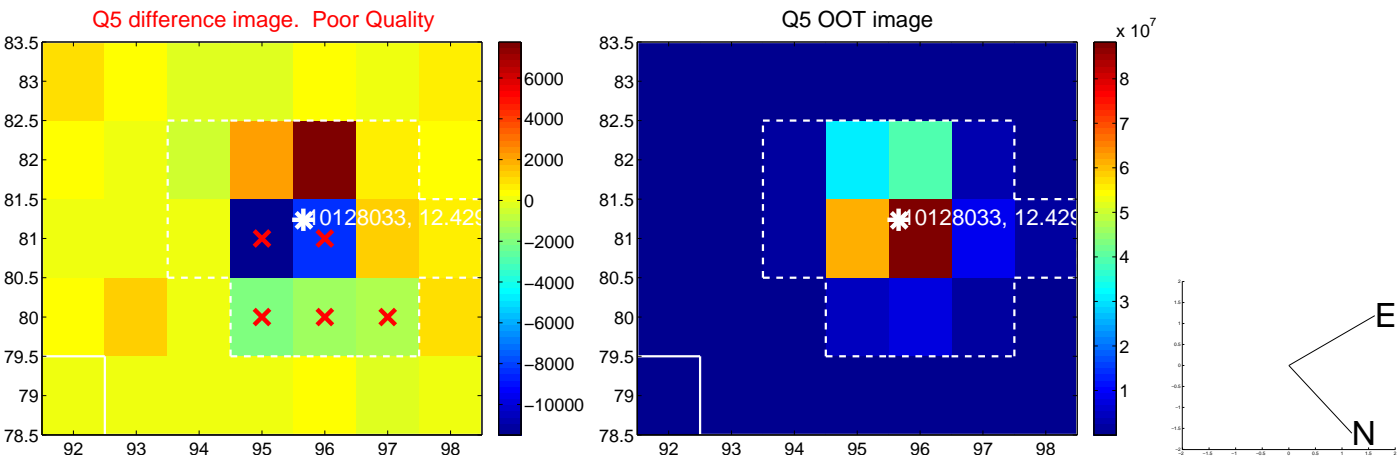


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

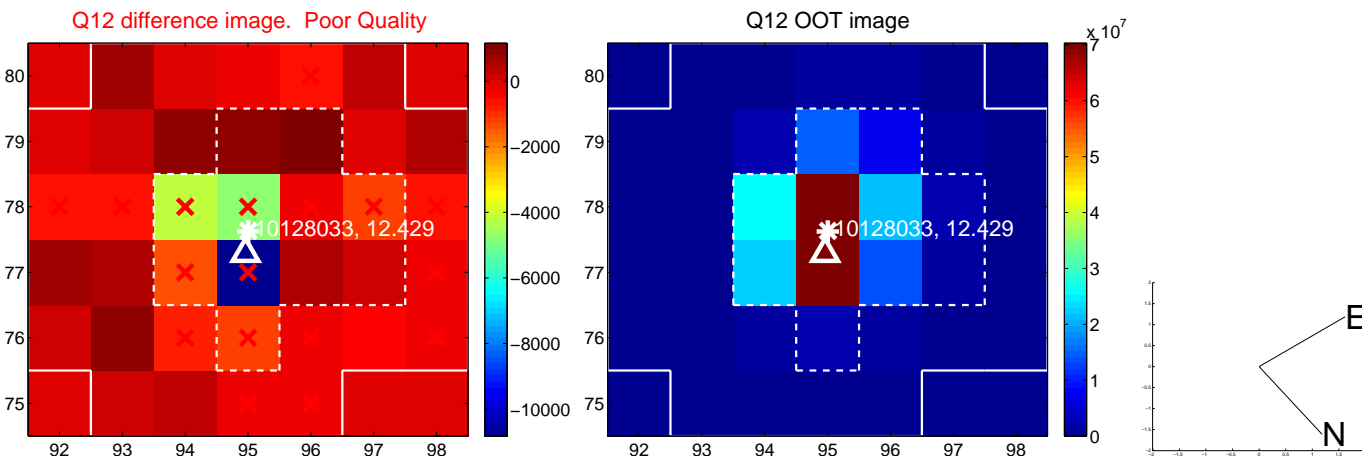
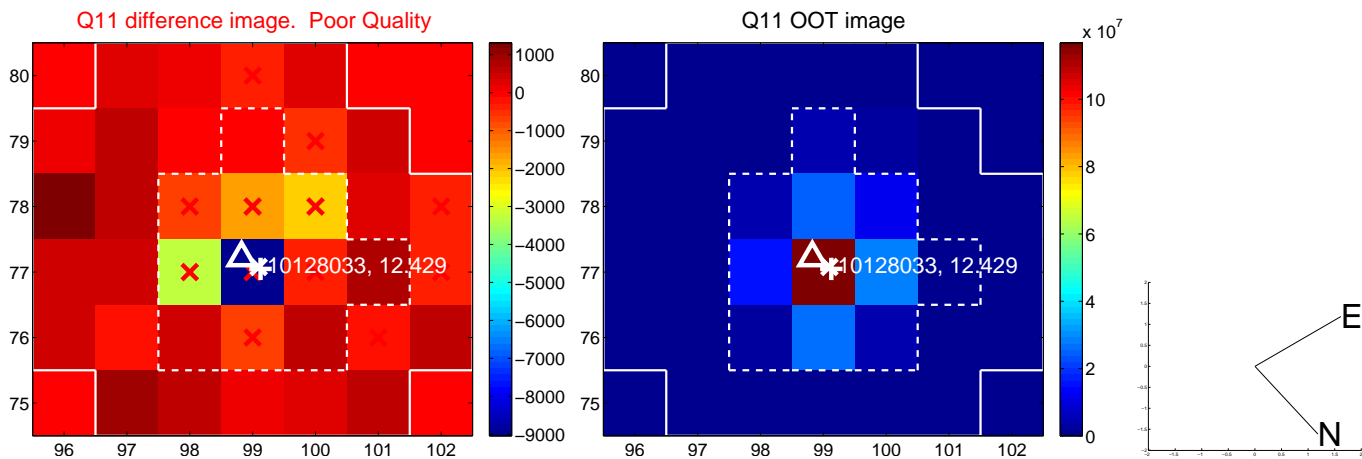
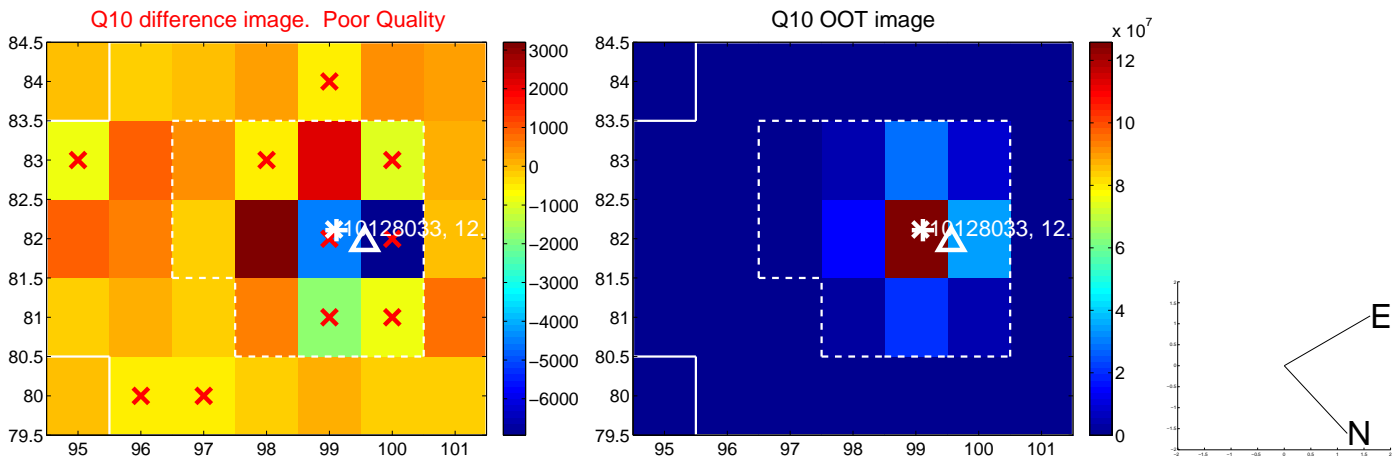
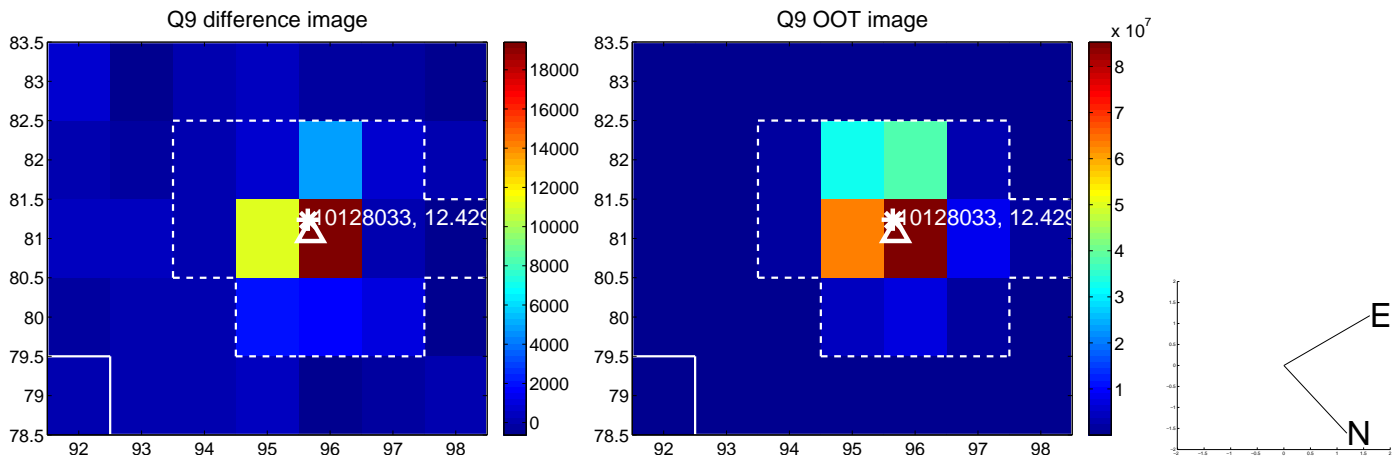
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



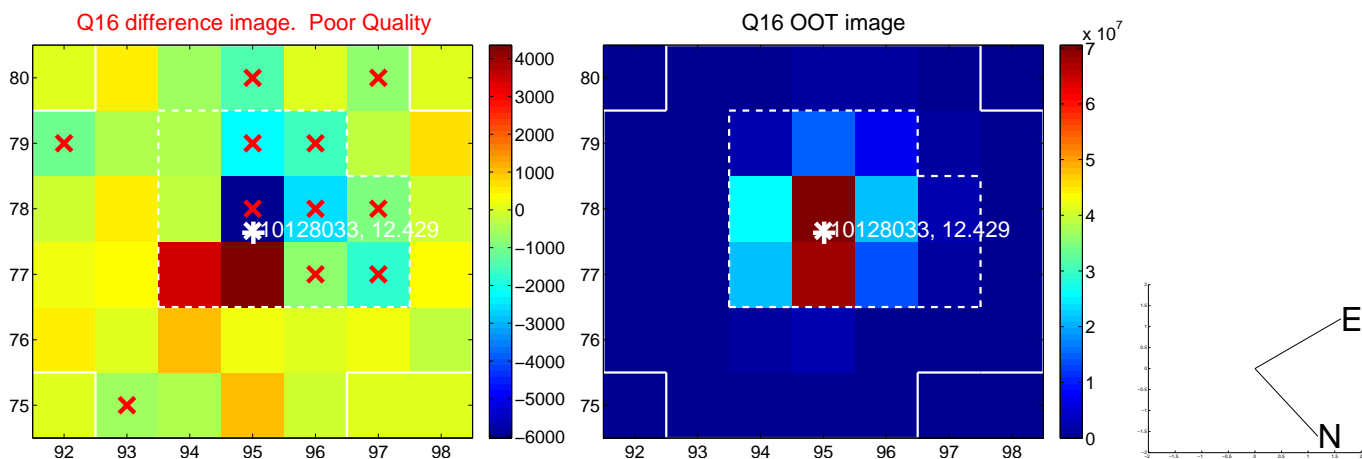
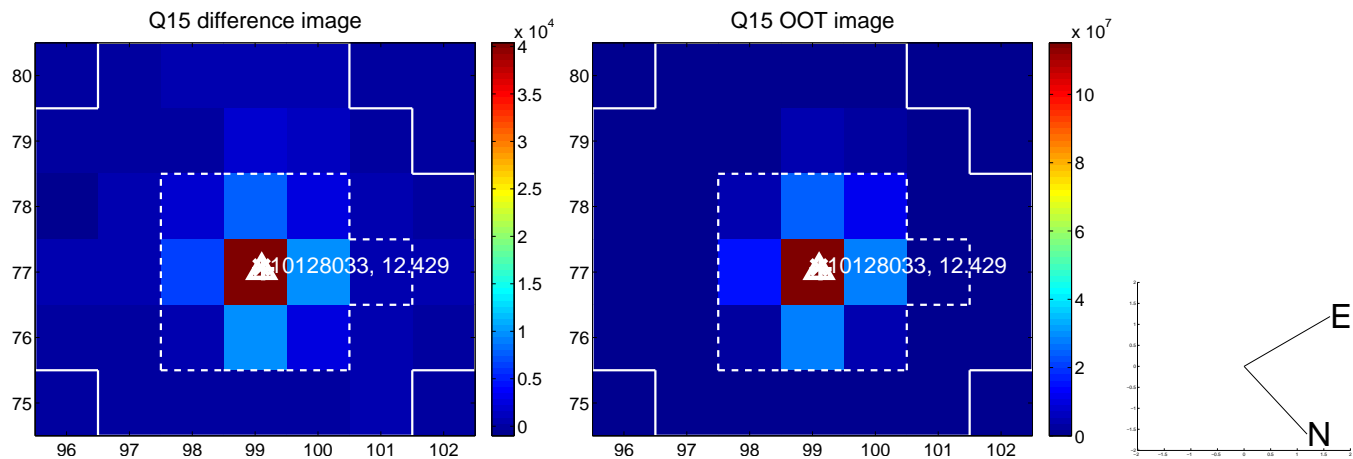
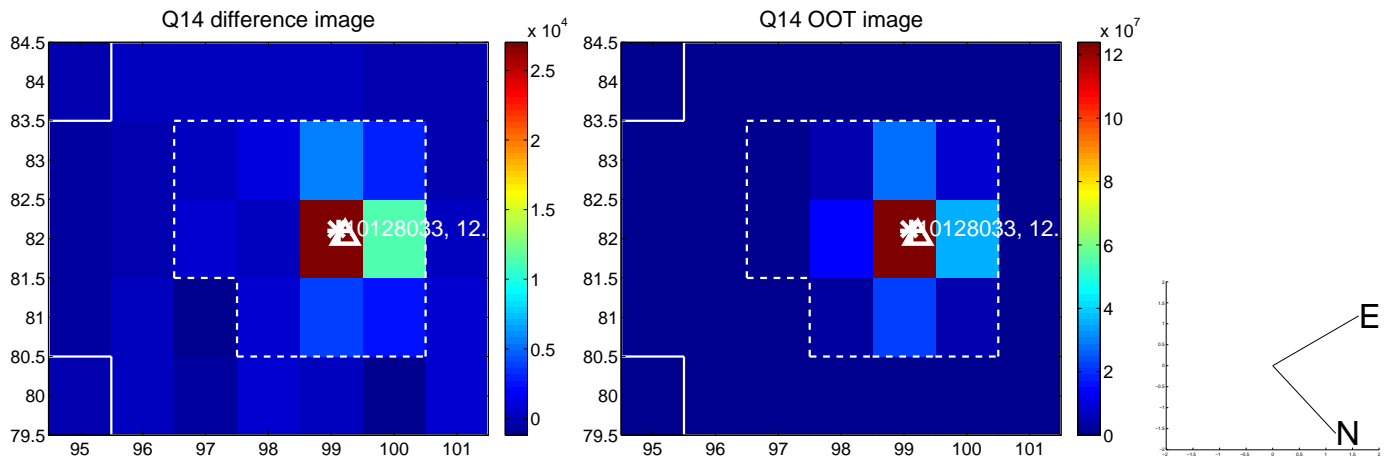
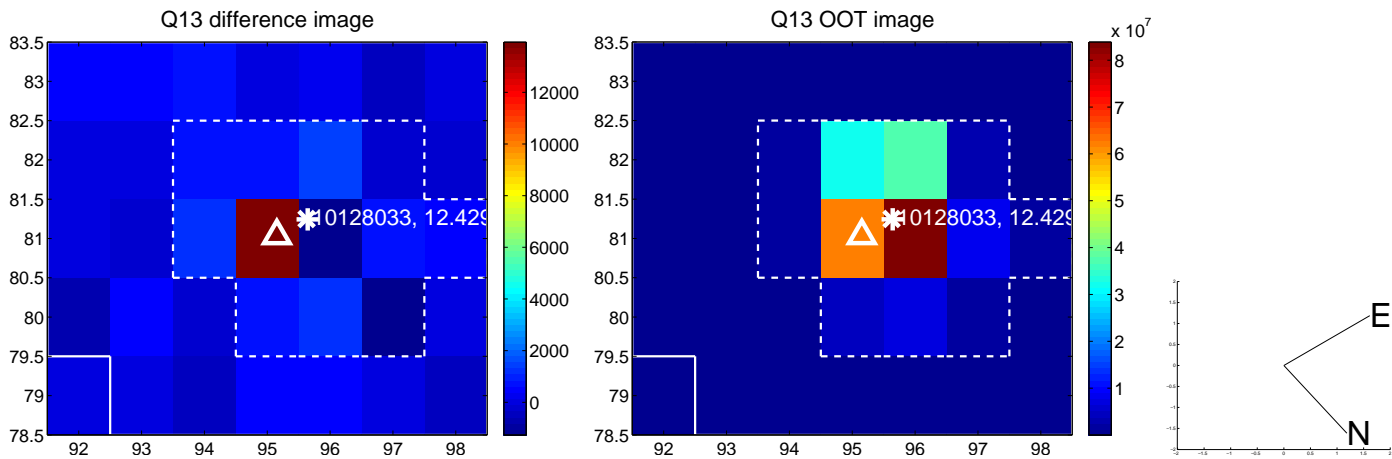
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



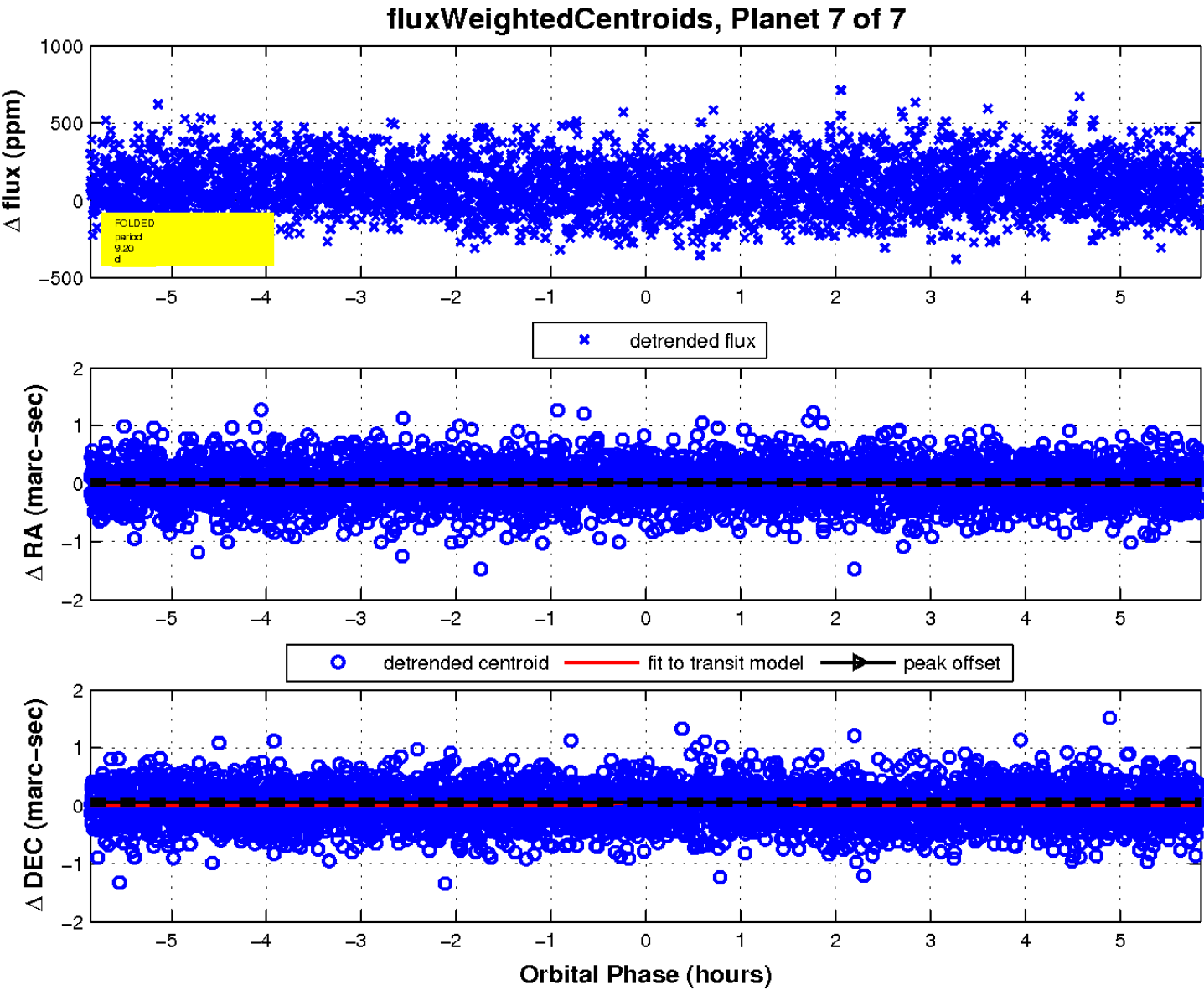
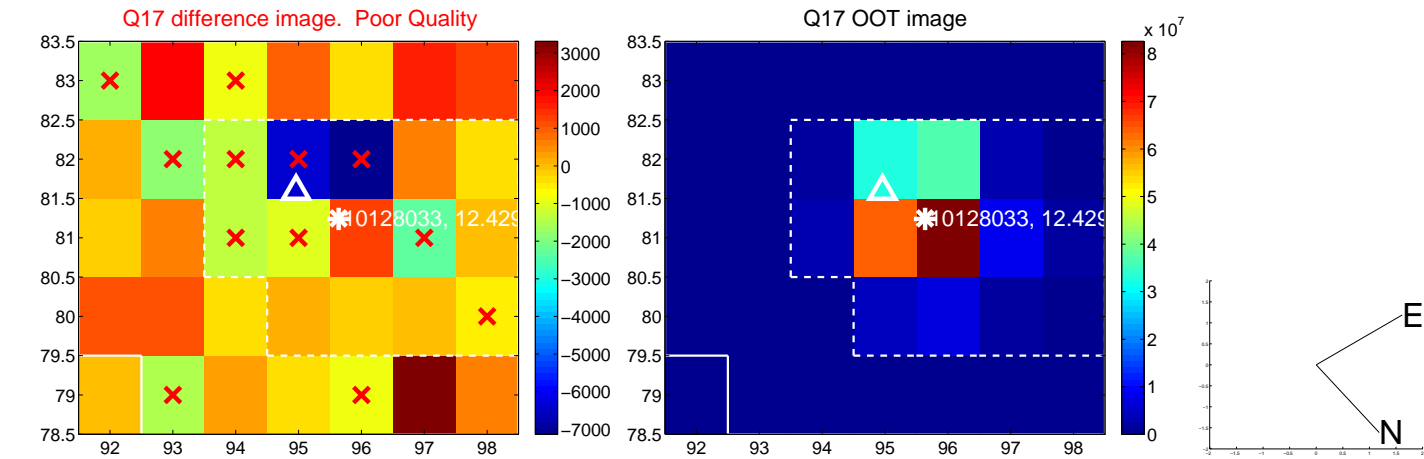
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

