

KIC 011551430

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})
011551430-01	OBS	No	329.244684	260.382423	3201.0	13.011	26.0	12.7	1.60	5648	10.39	2.73
011551430-02	OBS	No	345.982227	227.667632	1440.6	7.905	19.3	6.5	1.60	5648	6.07	2.56
011551430-03	OBS	No	422.060038	158.532752	587.4	4.098	18.8	3.8	1.60	5648	7.78	1.96
011551430-04	OBS	No	433.106981	558.832902	2054.7	3.784	19.8	9.0	1.60	5648	7.74	1.89
011551430-05	OBS	No	323.095596	329.665334	672.4	5.841	17.2	4.8	1.60	5648	4.37	2.80
011551430-06	OBS	No	322.047745	158.868707	1693.2	3.849	18.1	9.3	1.60	5648	6.68	2.81
011551430-07	OBS	No	273.011498	299.244567	196.0	3.000	18.4	-1.0	1.60	5648	2.23	3.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011551430-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011551430-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
011551430-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
011551430-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011551430-05	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
011551430-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011551430-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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.

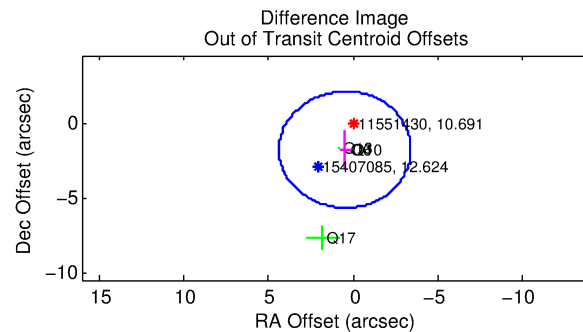
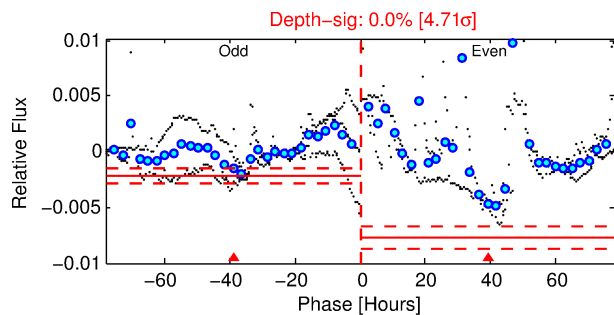
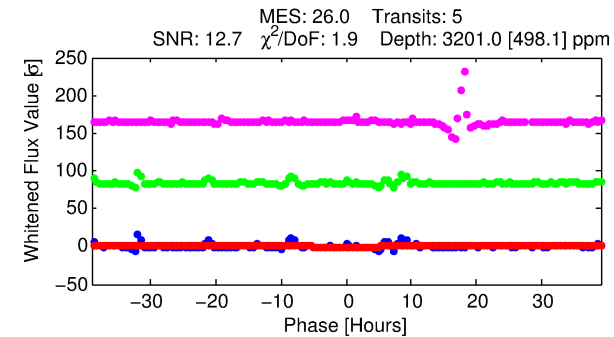
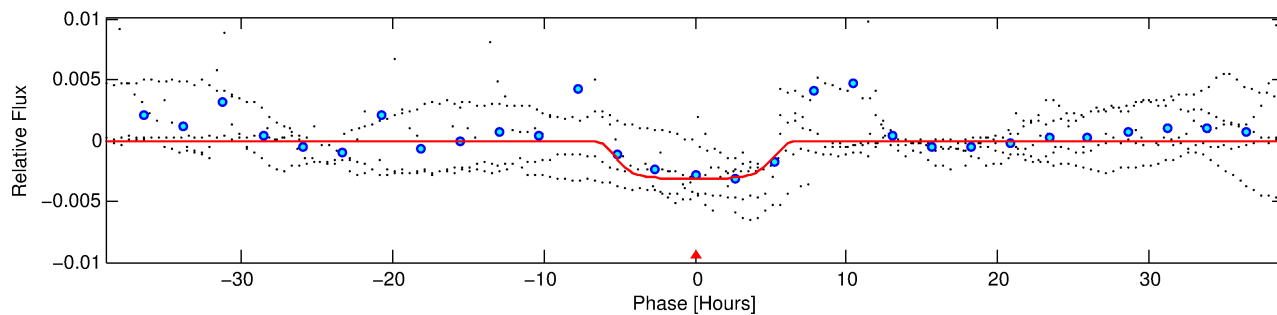
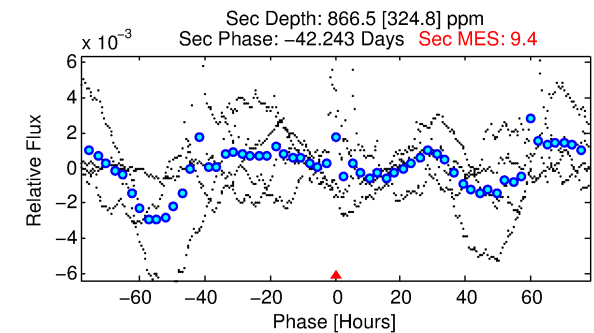
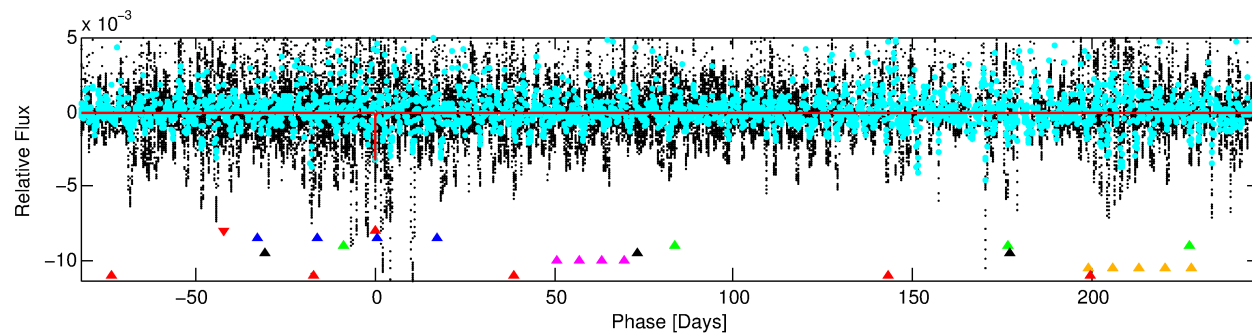
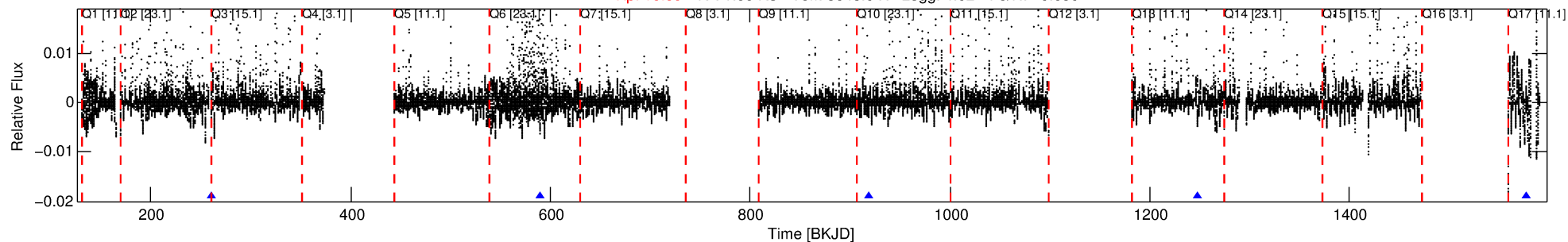
Ephemeris Match Information For 011551430-01

No Significant Match Found

DV One-Page Summary

KIC: 11551430 Candidate: 1 of 7 Period: 329.245 d

Kp: 10.69 R*: 1.60 Rs Teff: 5648.0 K Logg: 4.02 Fe/H: -0.080



DV Fit Results:

Period = 329.24468 [0.00534] d
Epoch = 260.3824 [0.0159] BKJD
Rp/R* = 0.0593 [0.0048]
a/R* = 122.64 [10.97]
b = 0.85 [0.03]
Seff = 2.73 [1.02]
Teq = 328 [31] K
Rp = 10.39 [2.50] Re
a = 0.9276 [0.2084] AU
Ag = 3802.30 [2086.05] [1.82σ]
Teffp = 3979 [415] K [8.78σ]

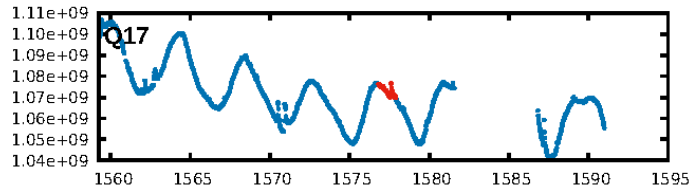
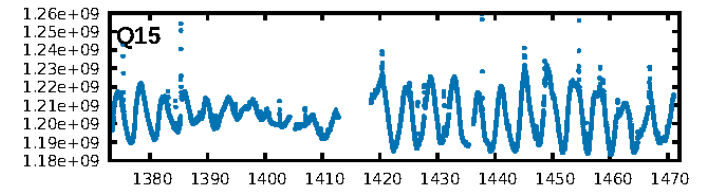
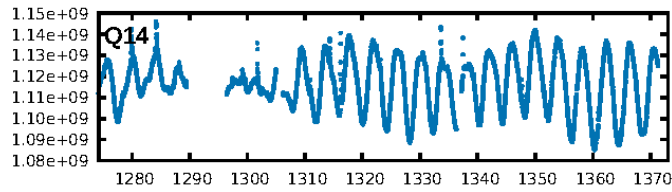
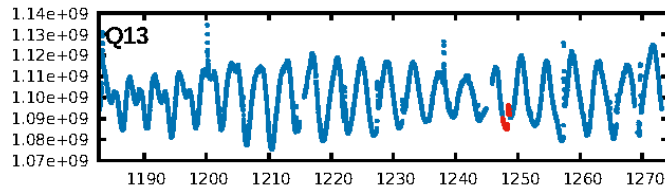
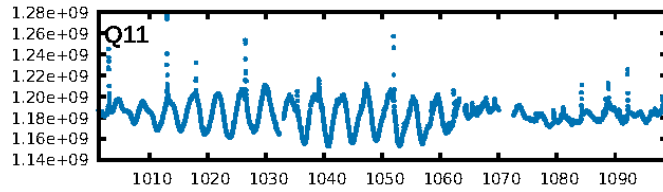
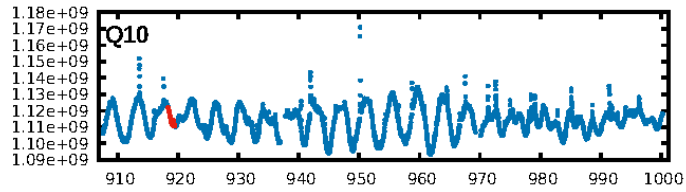
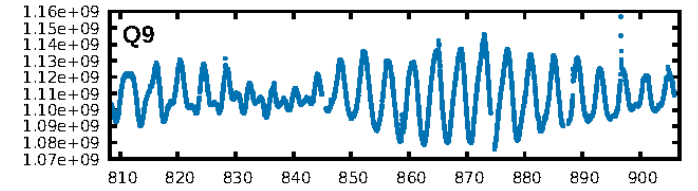
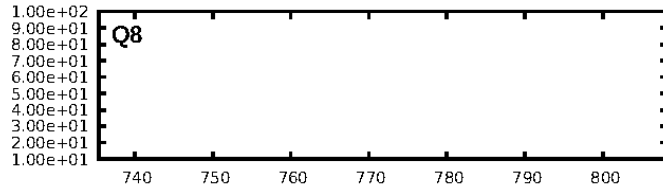
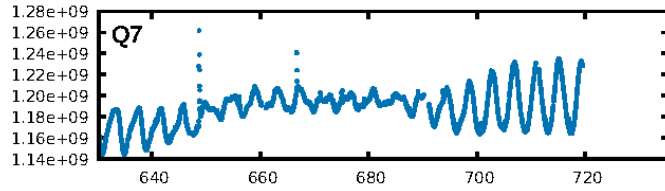
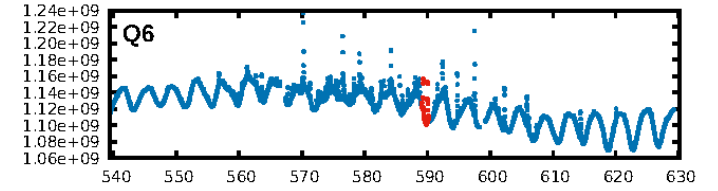
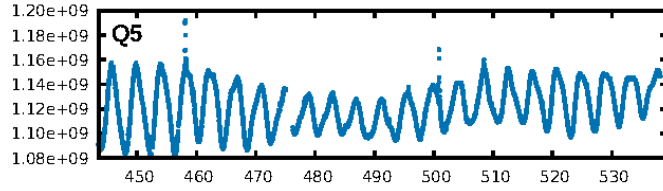
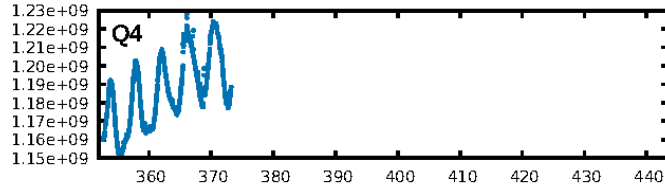
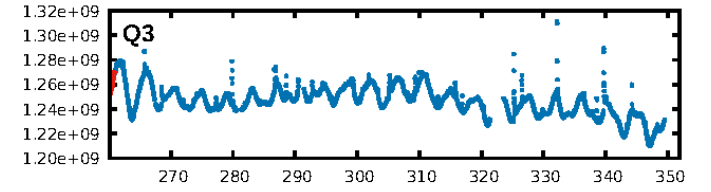
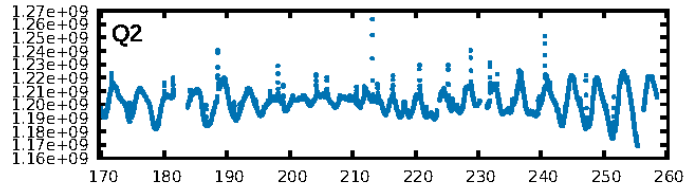
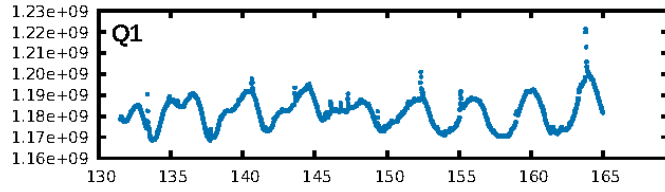
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [10.35σ]
LongPeriod-sig: 100.0% [26.39σ]
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 1.5%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 0.8552
Centroid-sig: N/A
Centroid-so: 0.388 arcsec [5.69σ]
OotOffset-rm: 1.859 arcsec [1.44σ]
KicOffset-rm: 2.667 arcsec [1.75σ]
OotOffset-st: 2/0/0/2 [4]
KicOffset-st: 2/0/0/2 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.75 [3/4]

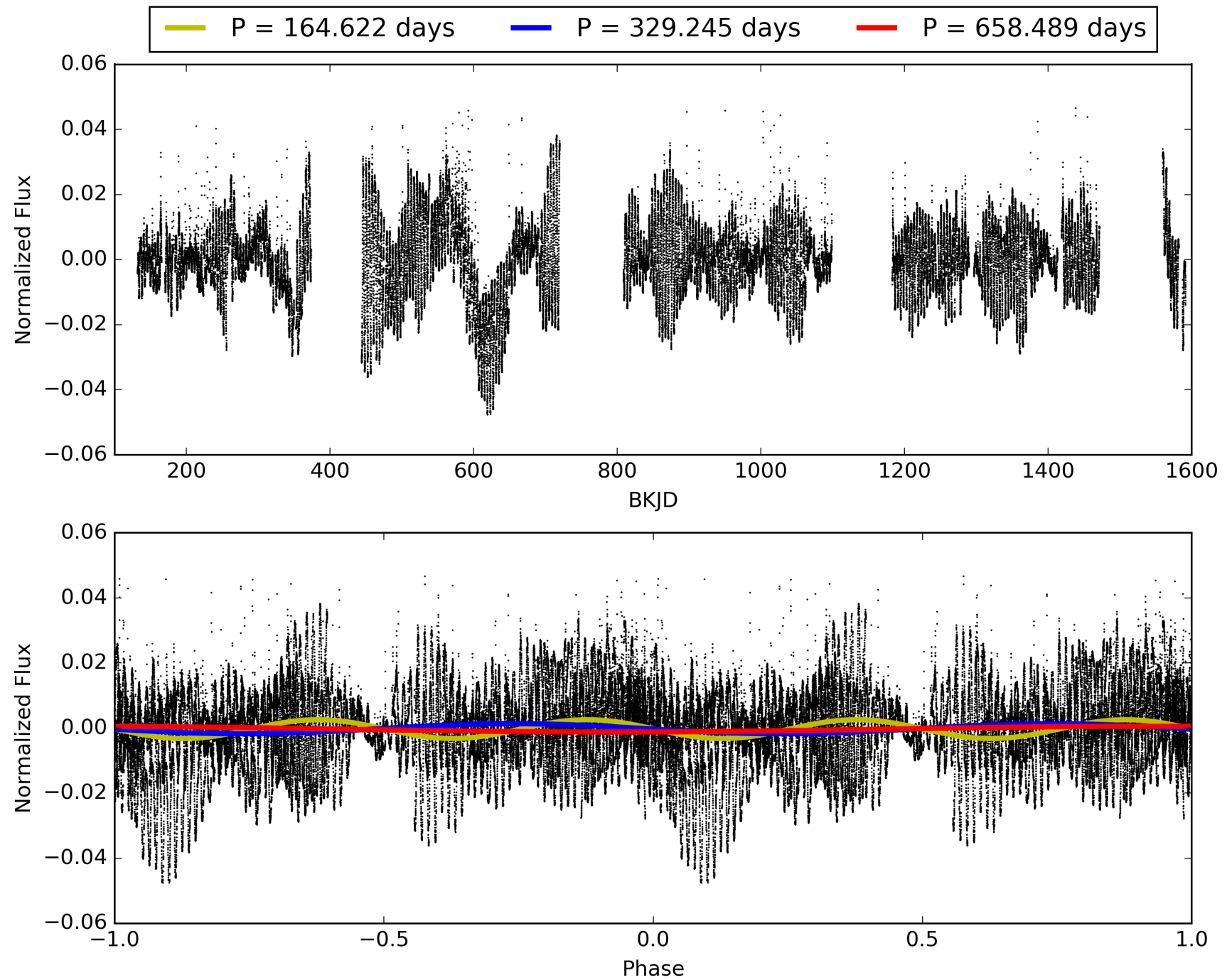
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:10:56 Z

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

TCE 011551430-01, PDC Light Curves

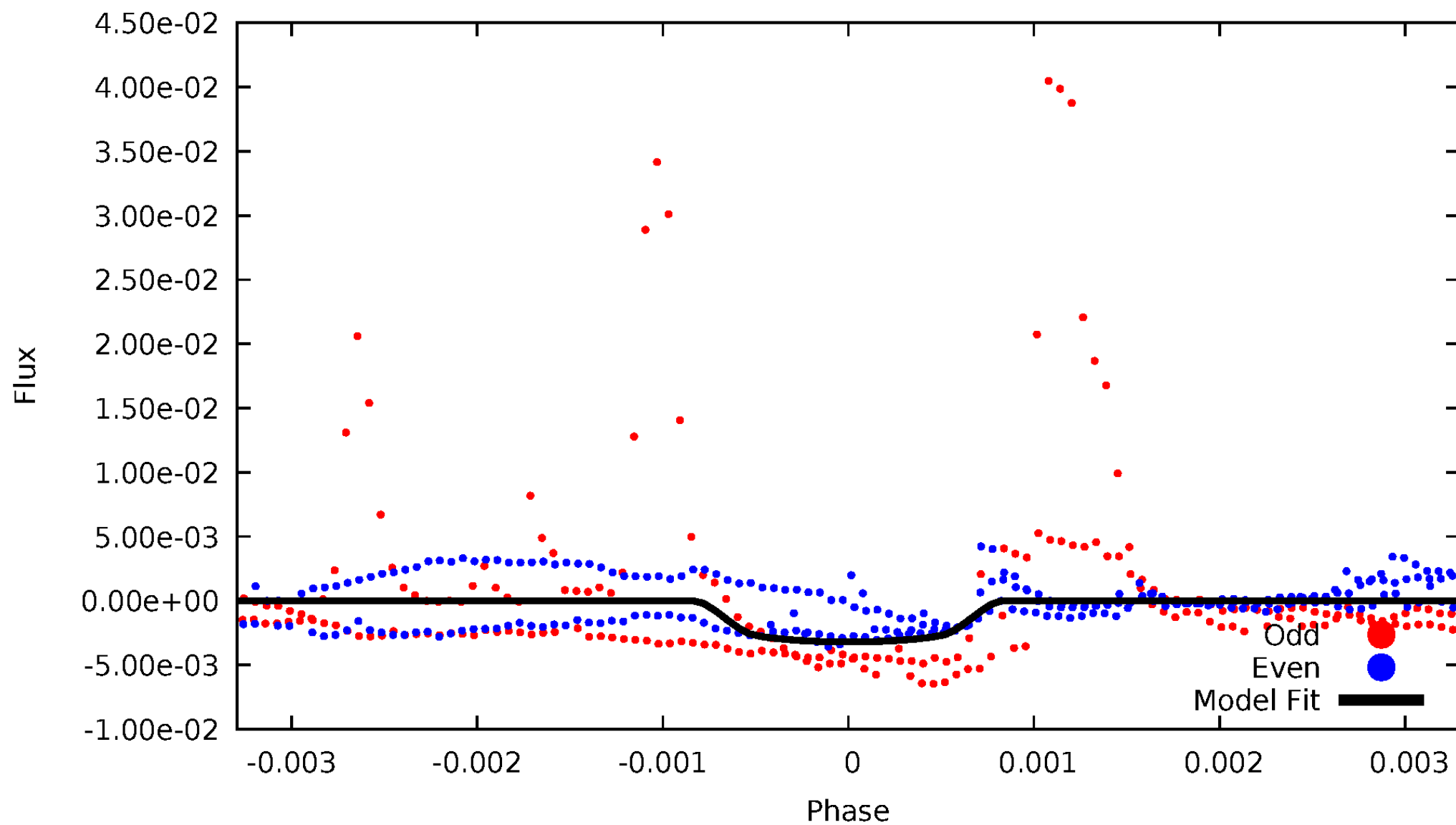


TCE 011551430-01



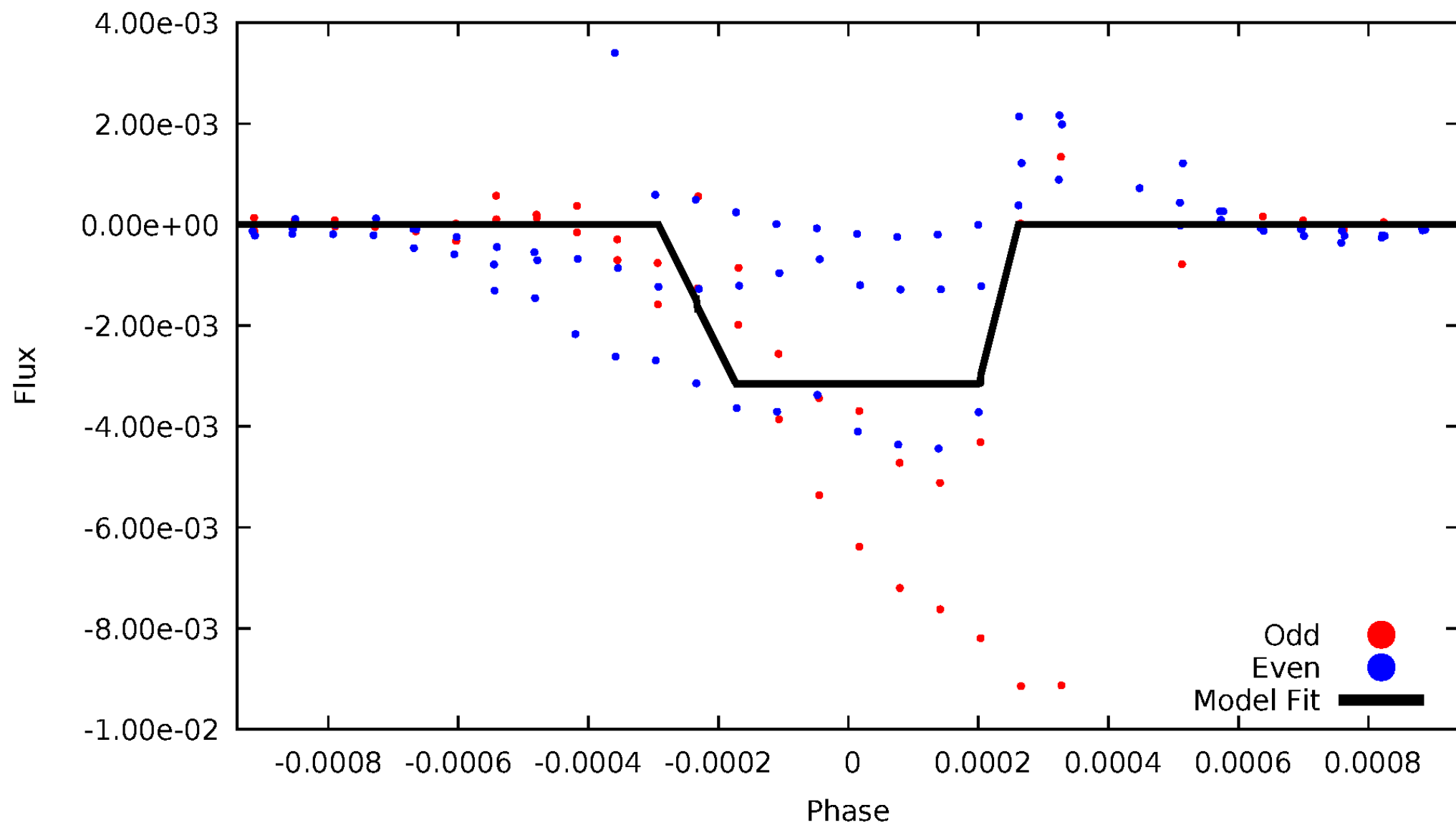
DV Odd/Even

TCE 011551430-01



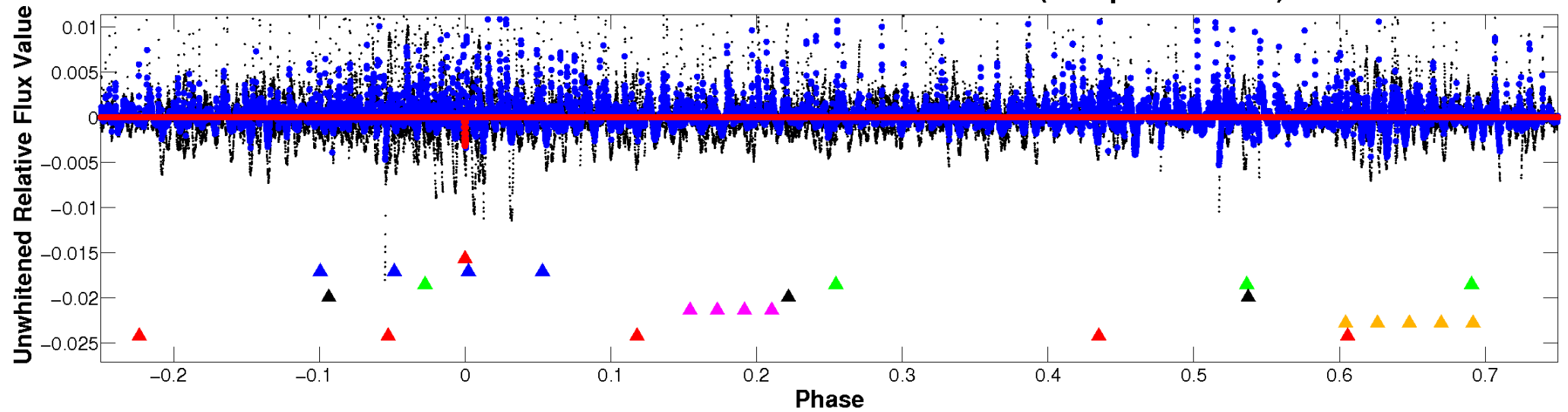
ALT Odd/Even

TCE 011551430-01

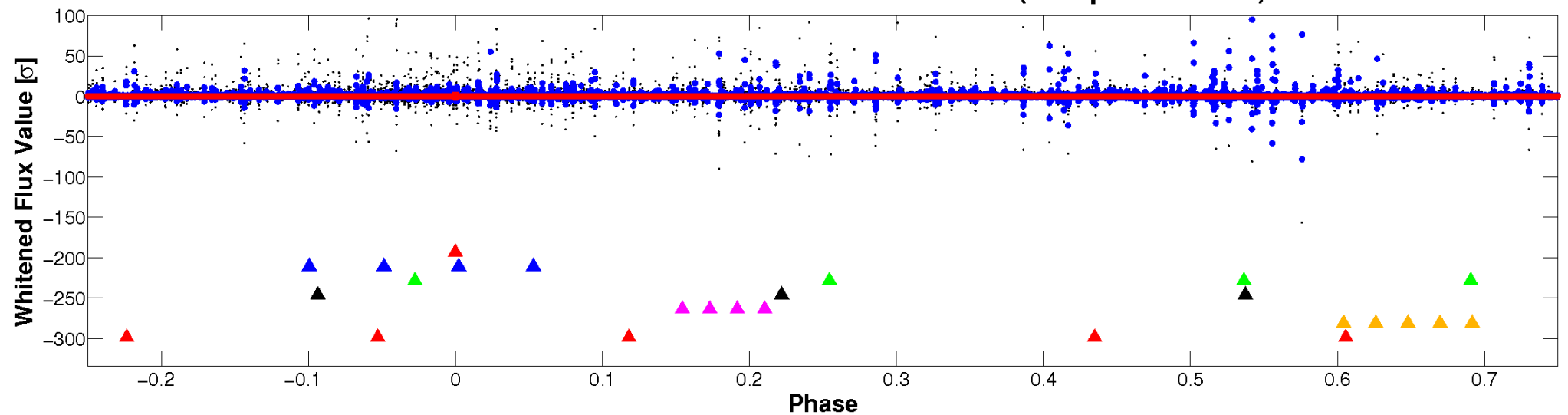


Non-Whitened Vs. Whitened Light Curve

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

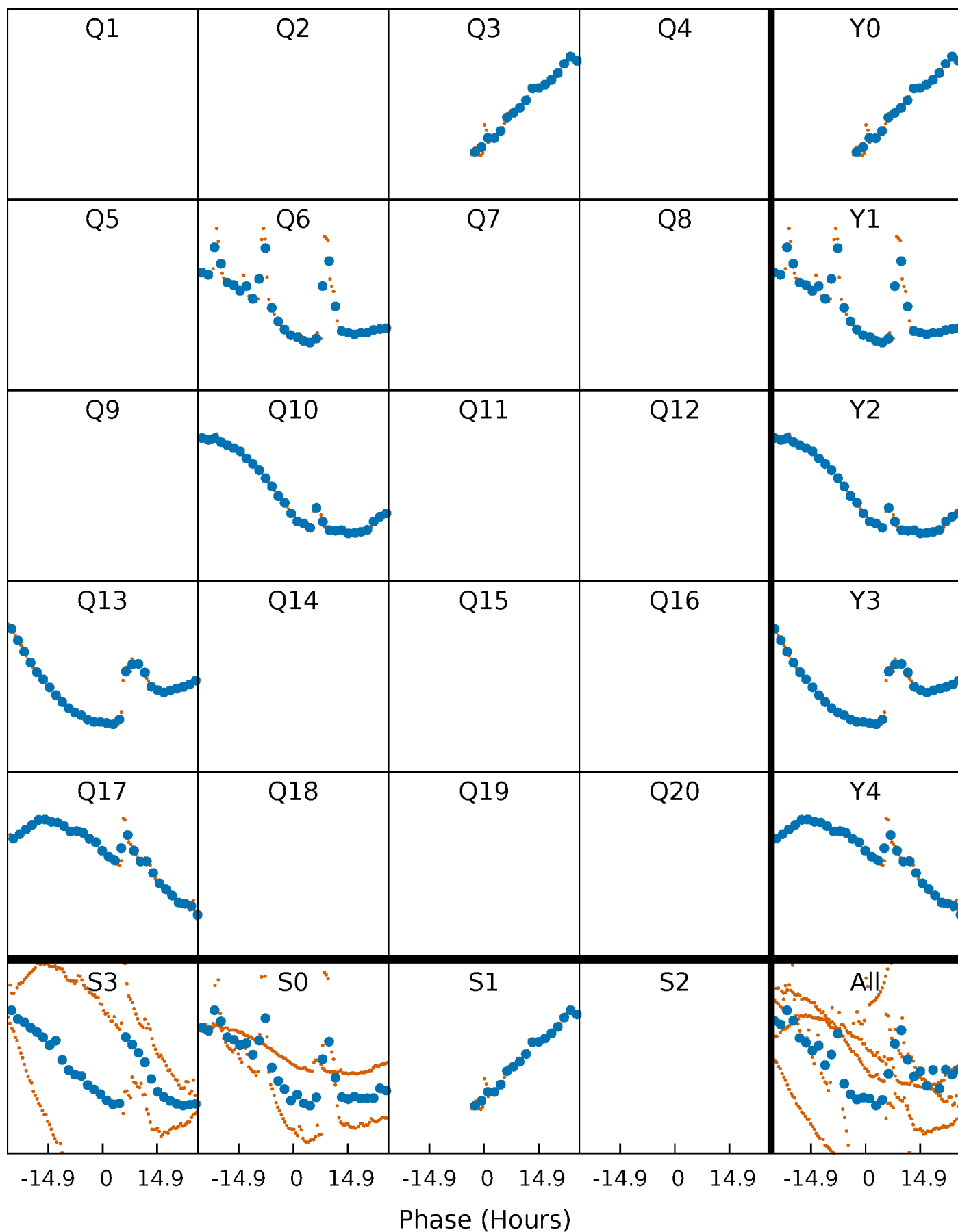


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



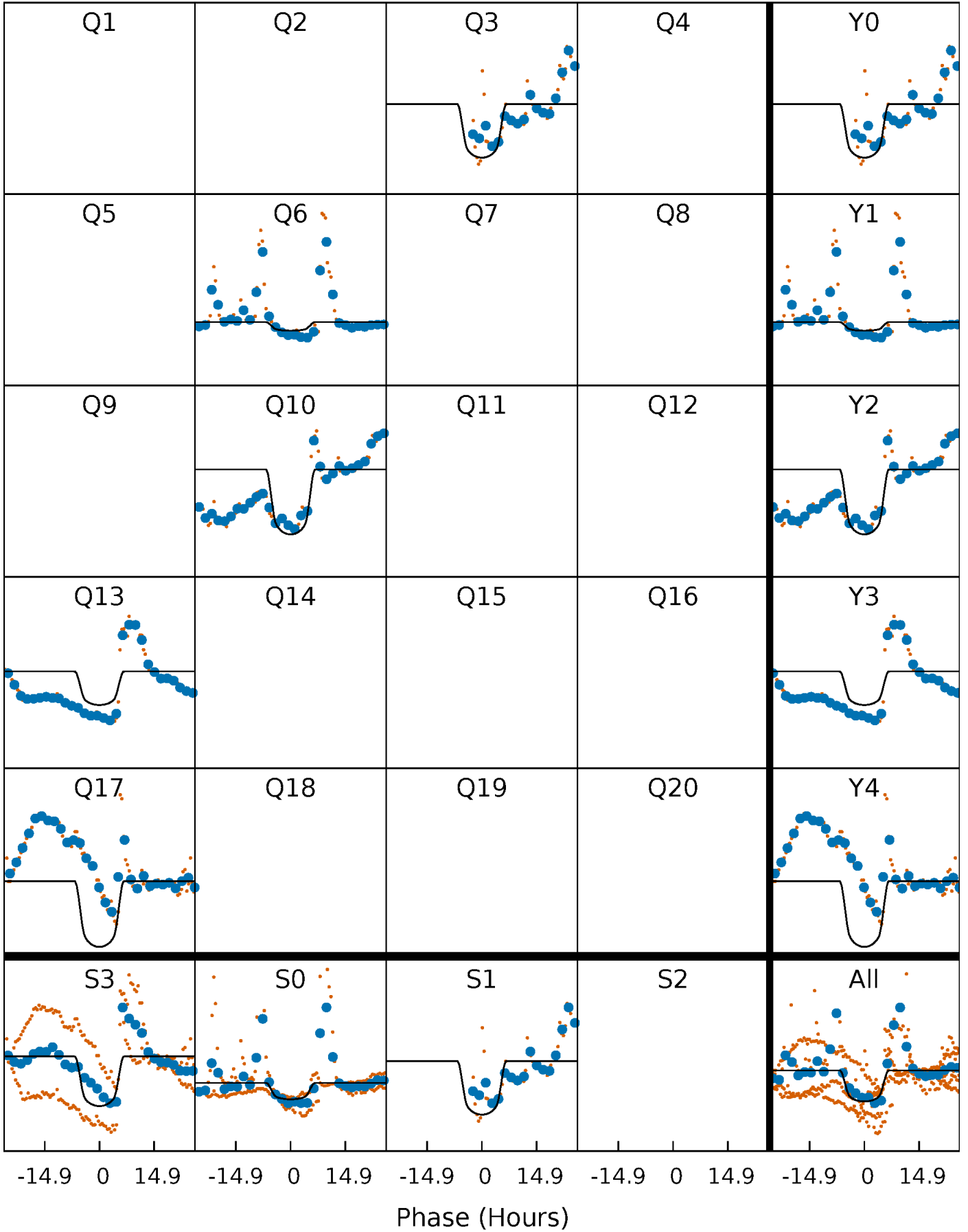
PDC Quarter-Phased Transit Curves

TCE 011551430-01 P=329.244684 Days $T_0=260.382423$ (BKJD)



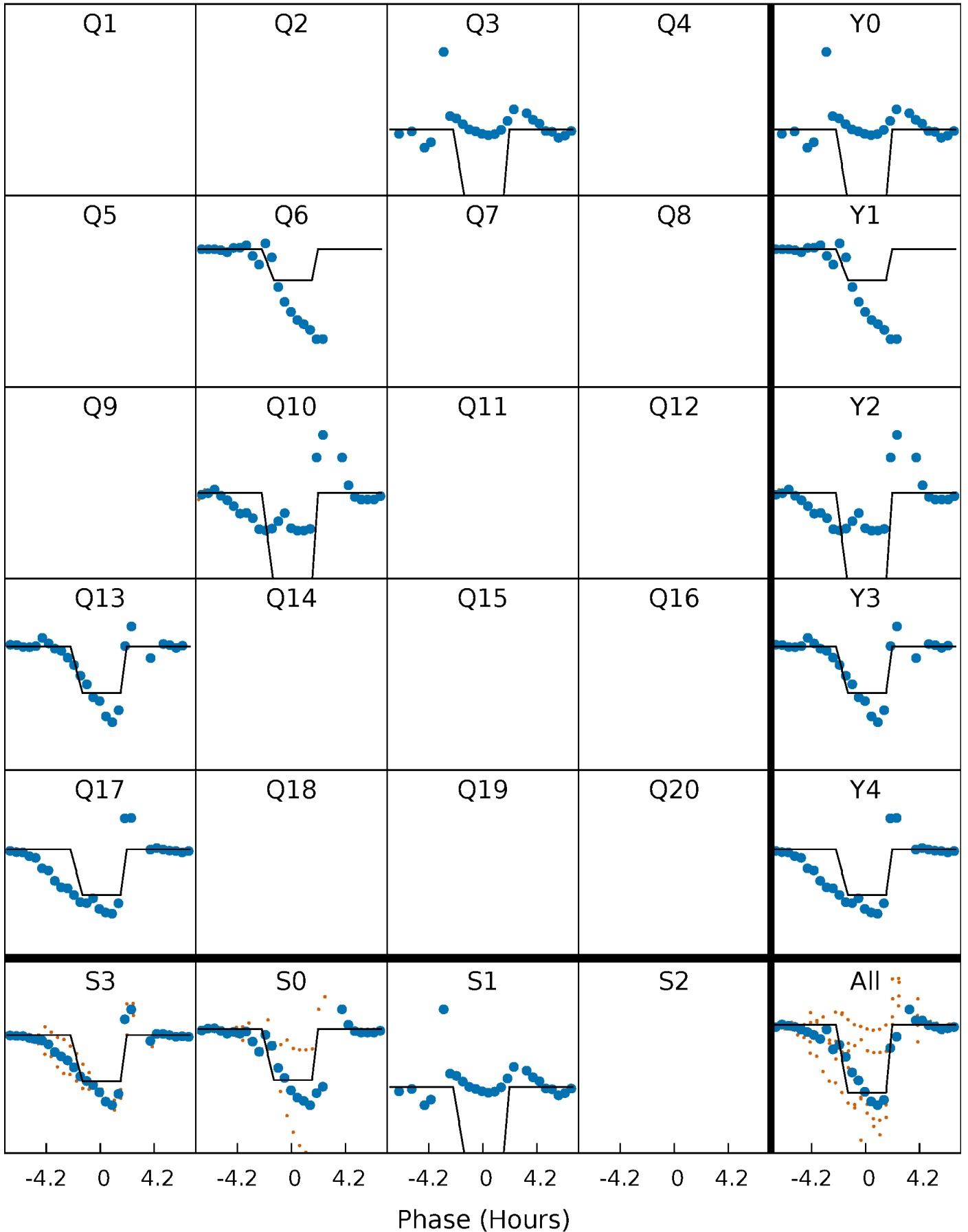
DV Quarter-Phased Transit Curves

TCE 011551430-01 $P=329.244684$ Days $T_0=260.382423$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

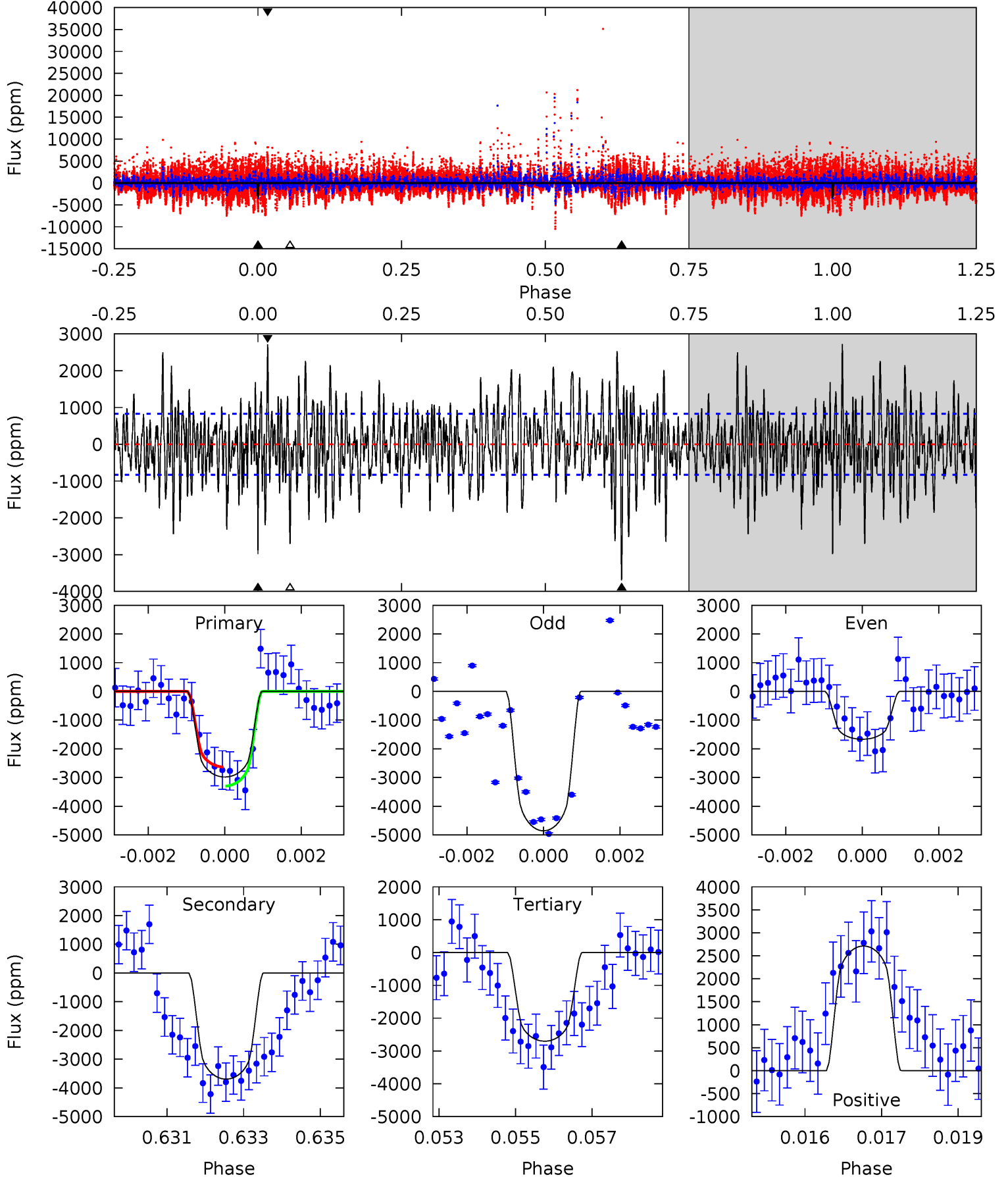
TCE 011551430-01 P=329.245952 Days $T_0=260.526413$ (BKJD)



DV Model-Shift Uniqueness Test

011551430-01, P = 329.244684 Days, E = 260.382423 Days

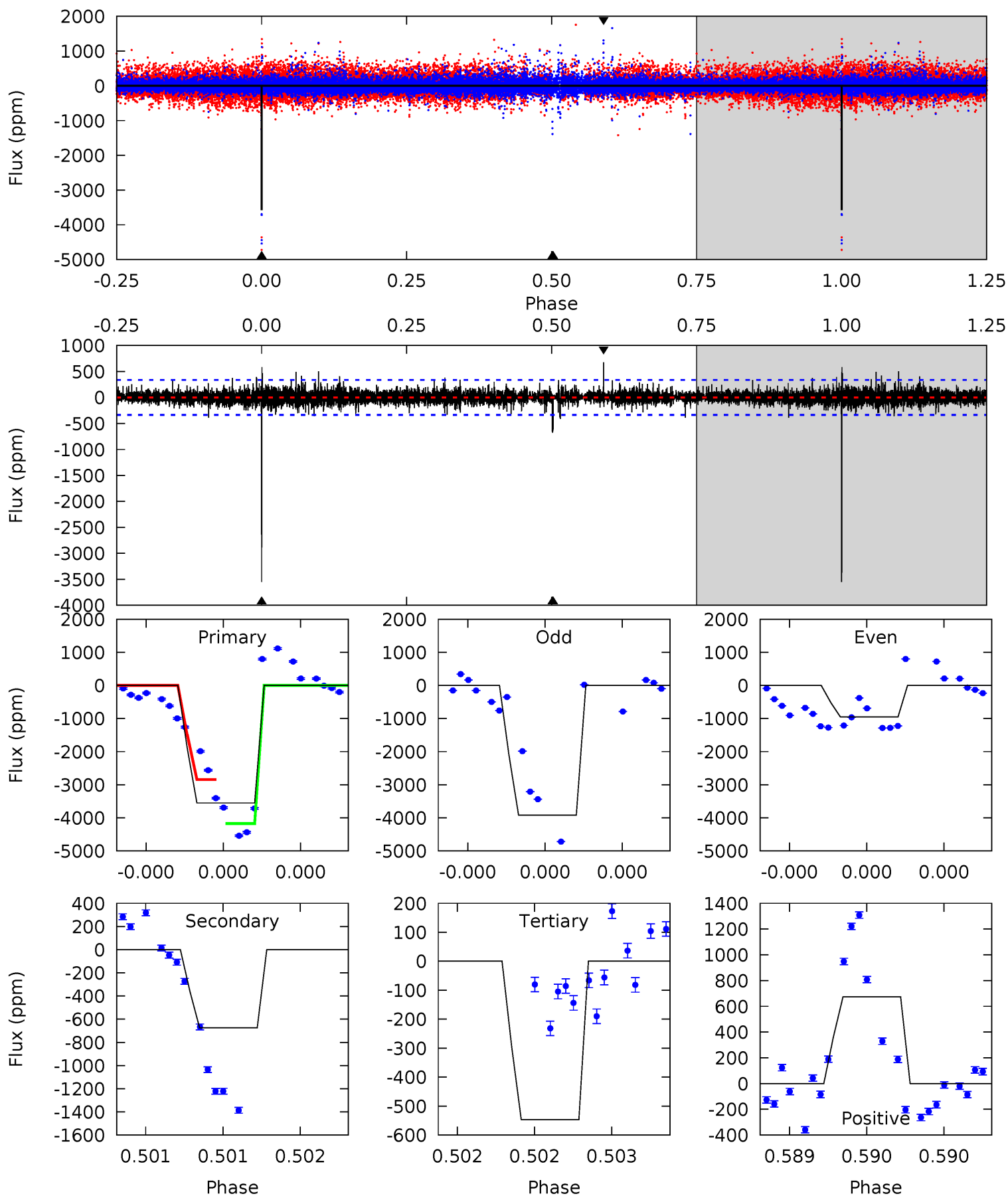
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.2	23.8	17.4	17.5	5.35	3.13	5.18	1.80	1.74	6.39	6.33	8.16	1.05	0.42	2.13



Alt Model-Shift Uniqueness Test

011551430-01, P = 329.245952 Days, E = 260.526413 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
58.5	11.1	9.01	11.1	5.57	3.48	1.26	49.5	47.4	2.10	0.02	27.0	0.78	0.16	0



Stellar Parameters For KIC 011551430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (g \cdot \text{cm}^{-3})$
	5648^{+113}_{-90}	$4.019^{+0.217}_{-0.109}$	$-0.080^{+0.150}_{-0.100}$	$1.605^{+0.297}_{-0.363}$	$0.983^{+0.102}_{-0.084}$	$0.335^{+0.360}_{-0.109}$
	+2%/-2%	+5%/-3%	+188%/-125%	+19%/-23%	+10%/-9%	+108%/-32%
Source	SPE13	SPE13	SPE13	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011551430-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-3695 ± 155	$10.10^{+1.55}_{-1.50}$	454^{+23}_{-31}	5729^{+274}_{-243}	17275^{+6154}_{-4081}
Alt.	-674 ± 61	$9.60^{+1.29}_{-1.40}$	452^{+27}_{-27}	4123^{+174}_{-148}	3511^{+1272}_{-853}

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

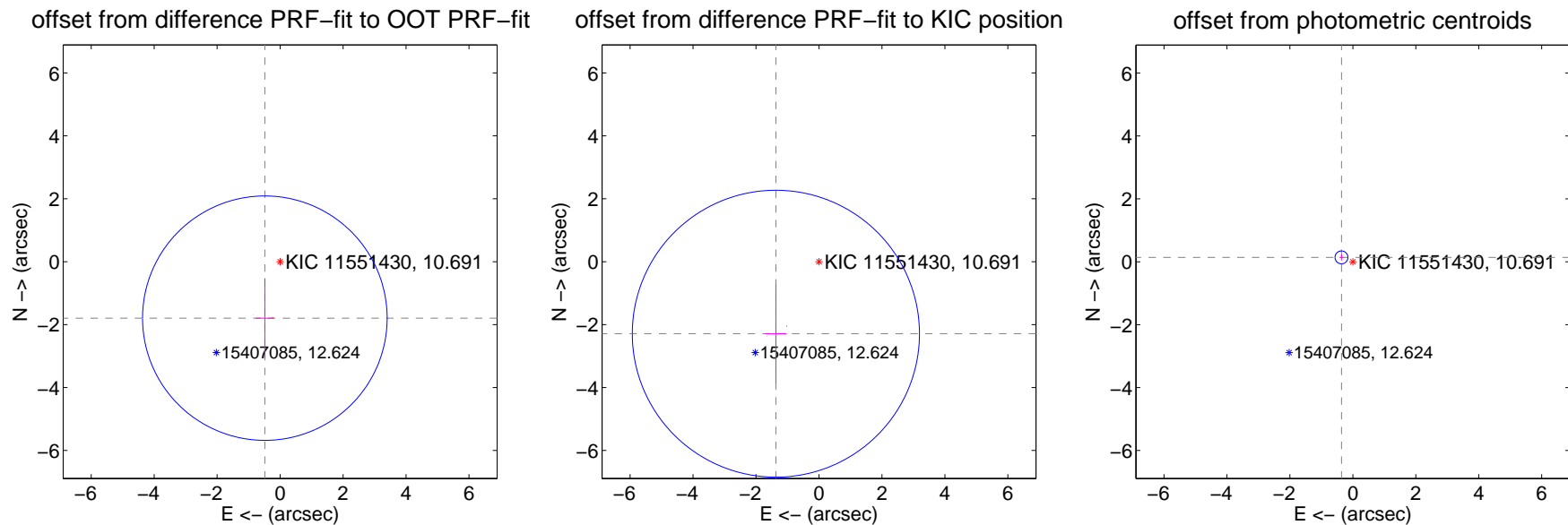
DV Centroid Data

Supplemental centroid analysis for 011551430-01. **Kepler magnitude: 10.69.** Transit SNR 12.67

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.859 ± 1.295	1.44	0.485 ± 0.287	-1.794 ± 1.268
PRF-fit source offset from KIC position	2.667 ± 1.520	1.75	1.369 ± 0.343	-2.289 ± 1.578
photometric centroid source offset	0.39 ± 0.07	5.69	0.36 ± 0.06	0.14 ± 0.10

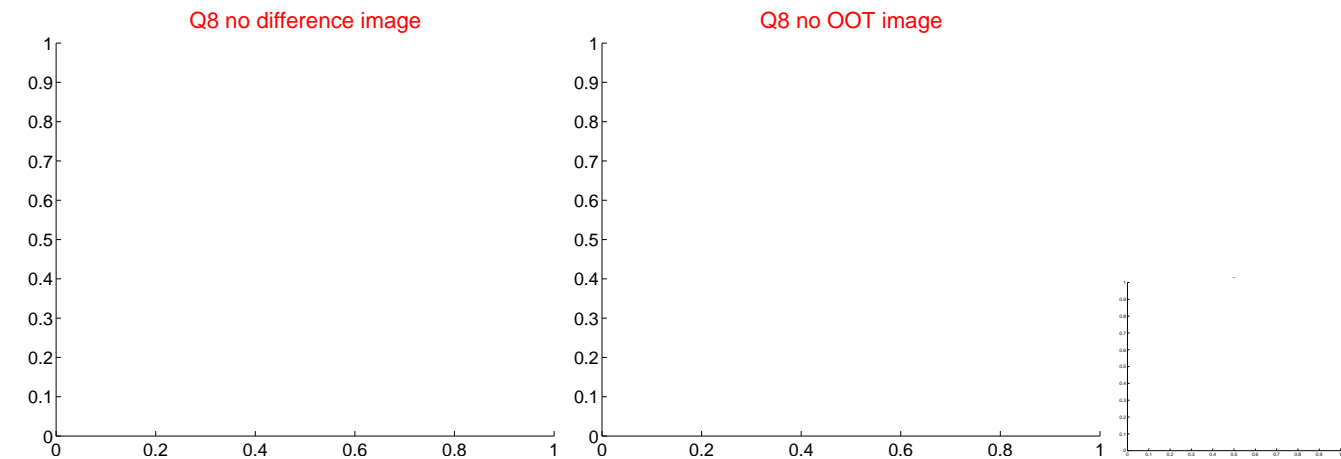
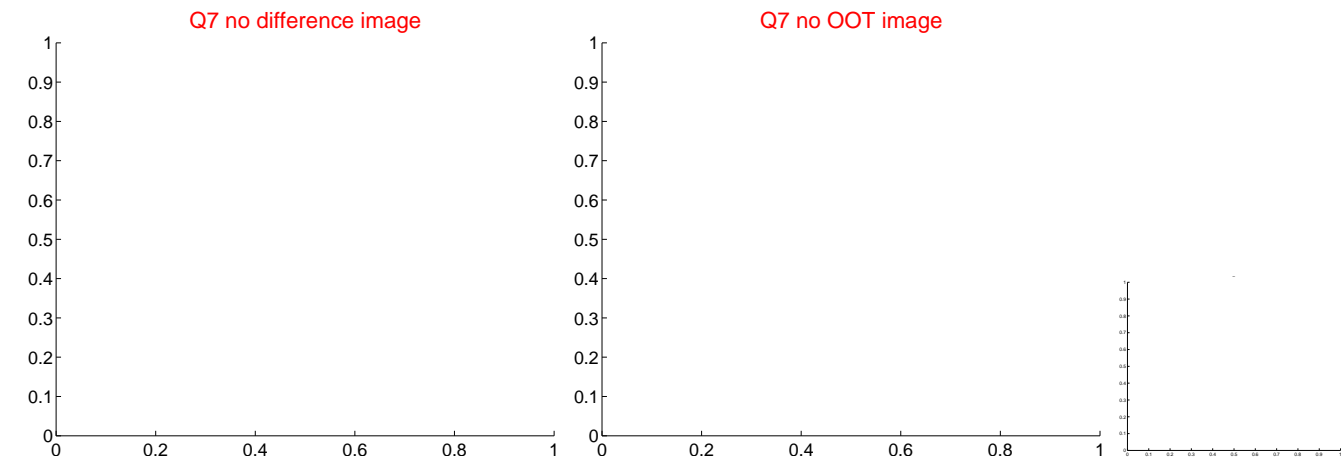
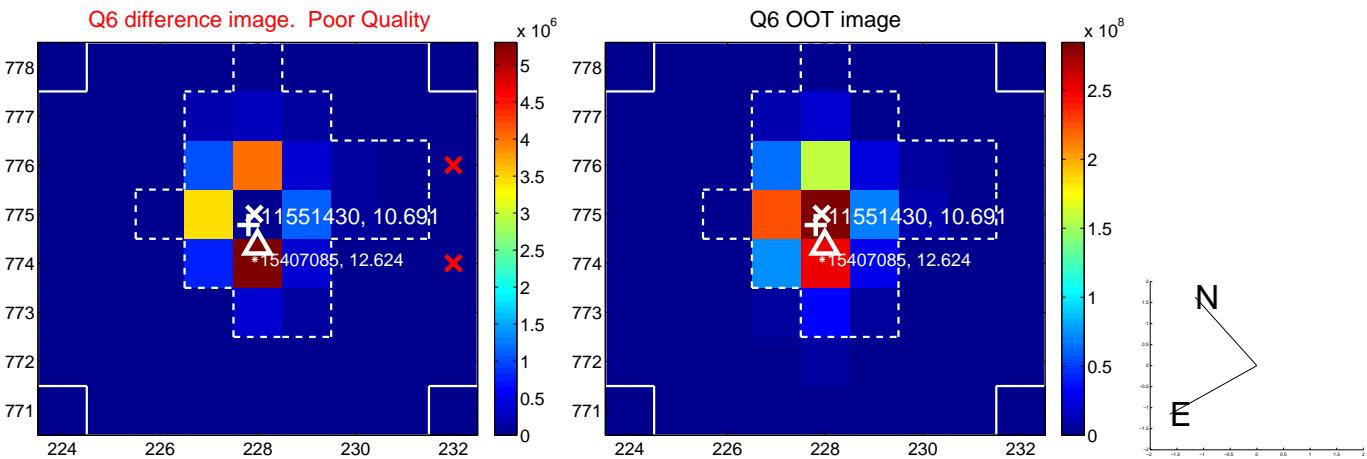


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

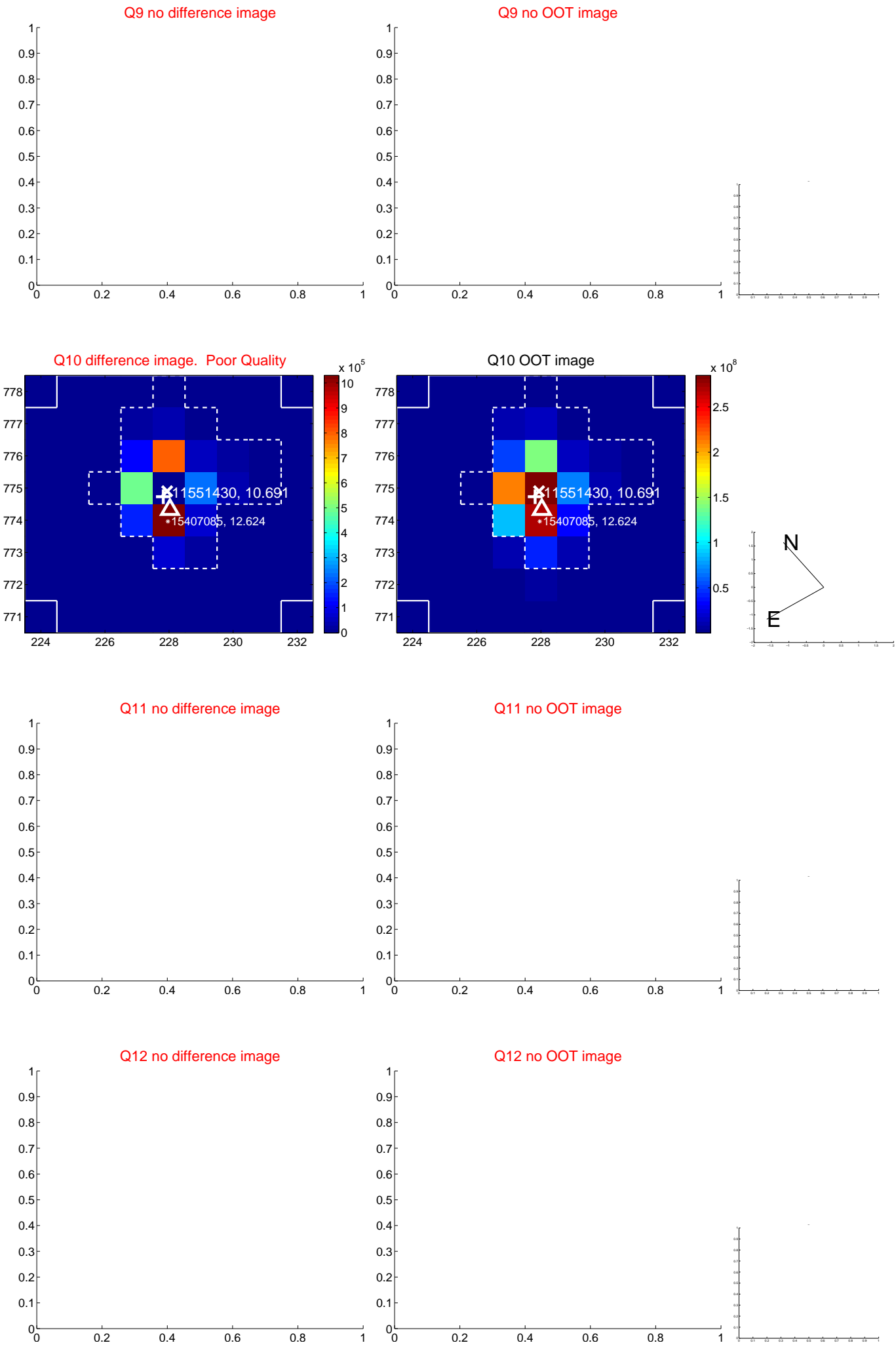
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



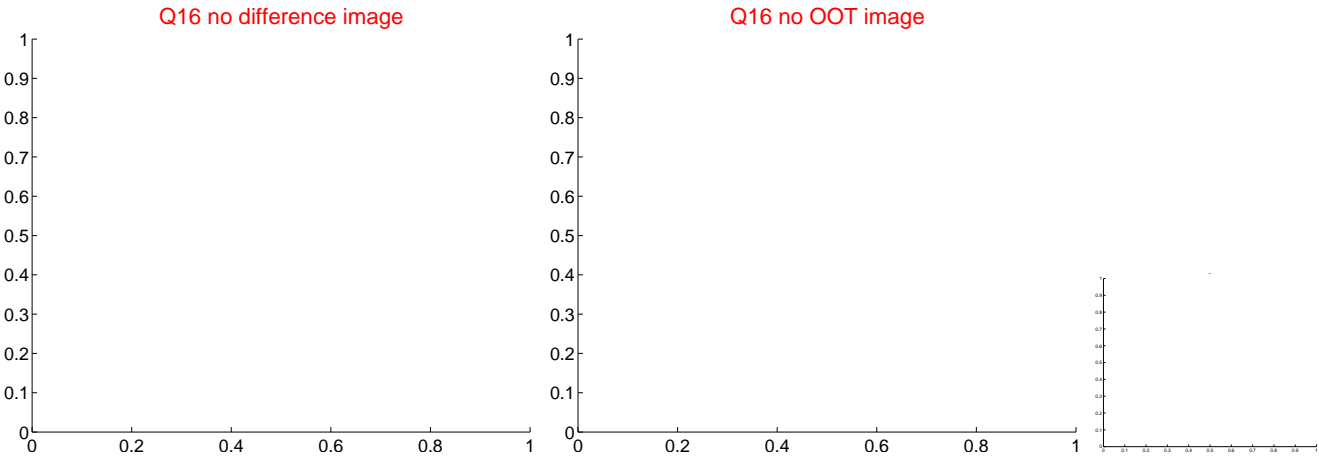
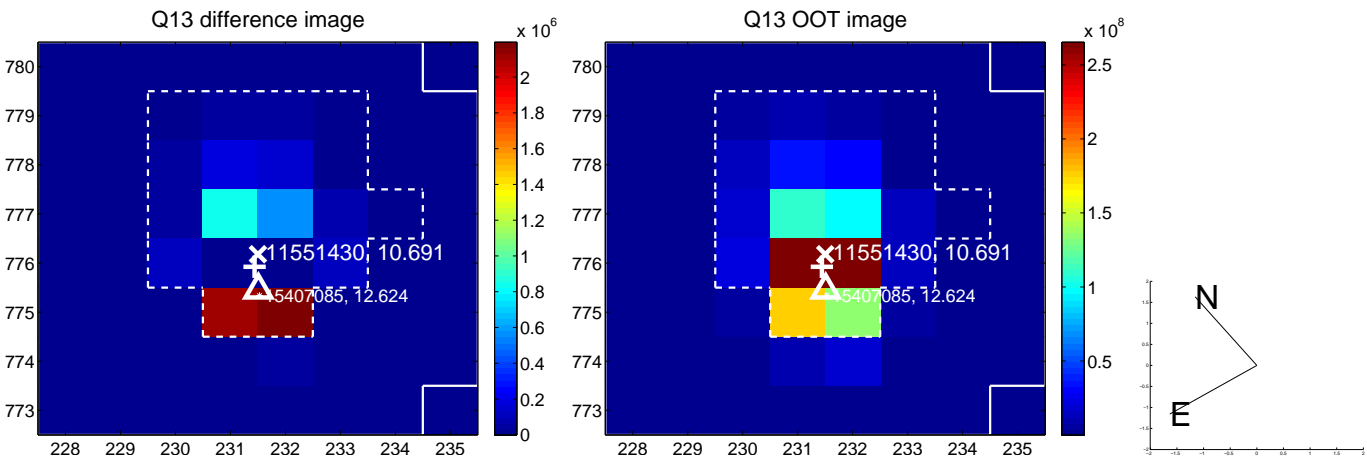
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



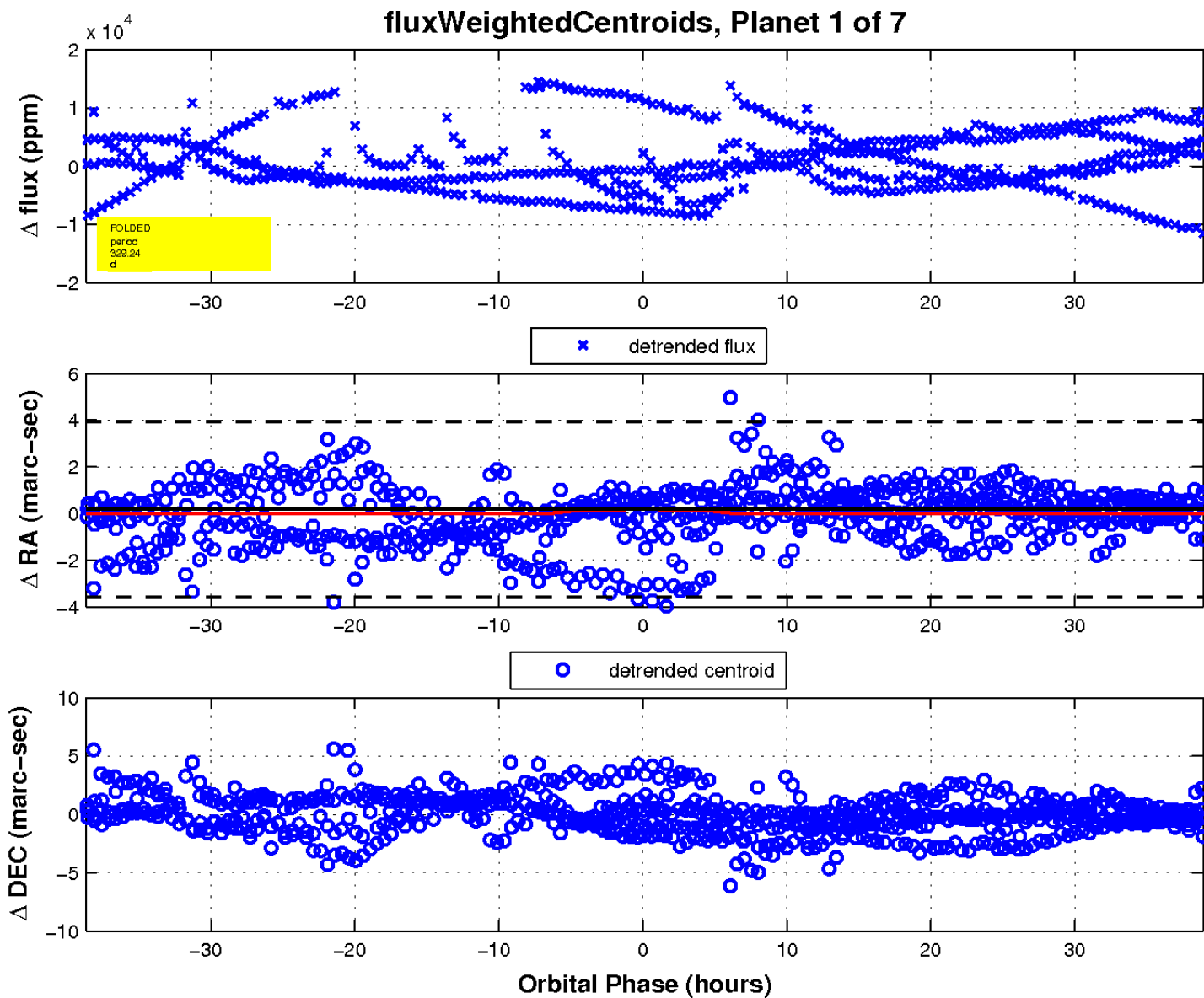
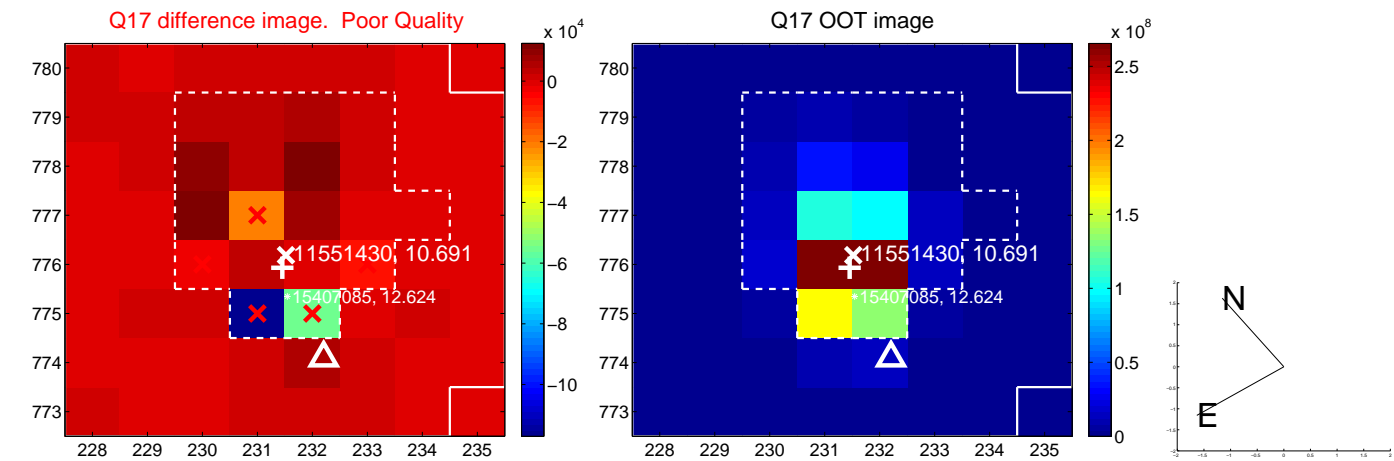
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



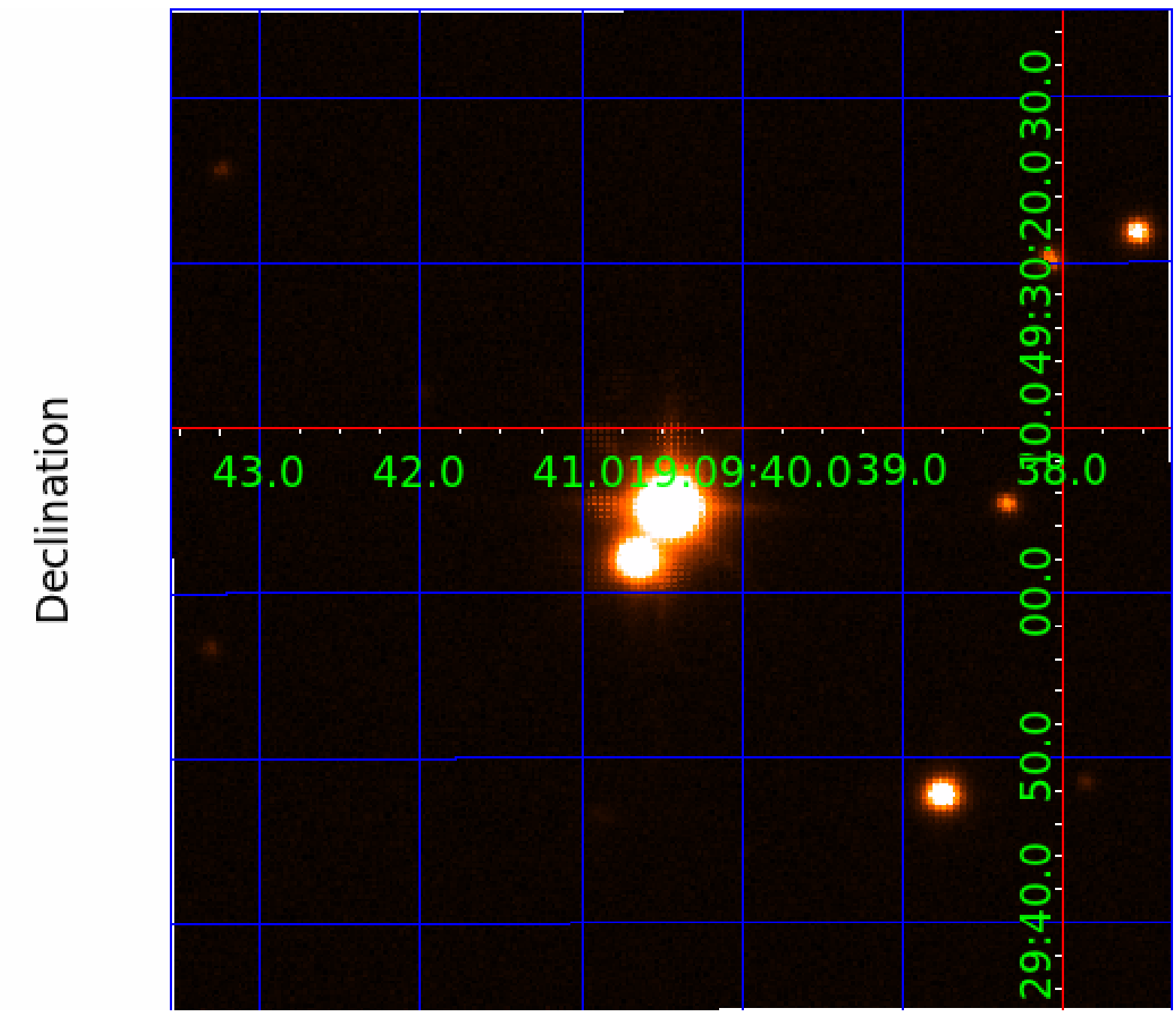
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011551430

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})
011551430-01	OBS	No	329.244684	260.382423	3201.0	13.011	26.0	12.7	1.60	5648	10.39	2.73
011551430-02	OBS	No	345.982227	227.667632	1440.6	7.905	19.3	6.5	1.60	5648	6.07	2.56
011551430-03	OBS	No	422.060038	158.532752	587.4	4.098	18.8	3.8	1.60	5648	7.78	1.96
011551430-04	OBS	No	433.106981	558.832902	2054.7	3.784	19.8	9.0	1.60	5648	7.74	1.89
011551430-05	OBS	No	323.095596	329.665334	672.4	5.841	17.2	4.8	1.60	5648	4.37	2.80
011551430-06	OBS	No	322.047745	158.868707	1693.2	3.849	18.1	9.3	1.60	5648	6.68	2.81
011551430-07	OBS	No	273.011498	299.244567	196.0	3.000	18.4	-1.0	1.60	5648	2.23	3.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011551430-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011551430-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
011551430-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
011551430-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011551430-05	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
011551430-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011551430-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

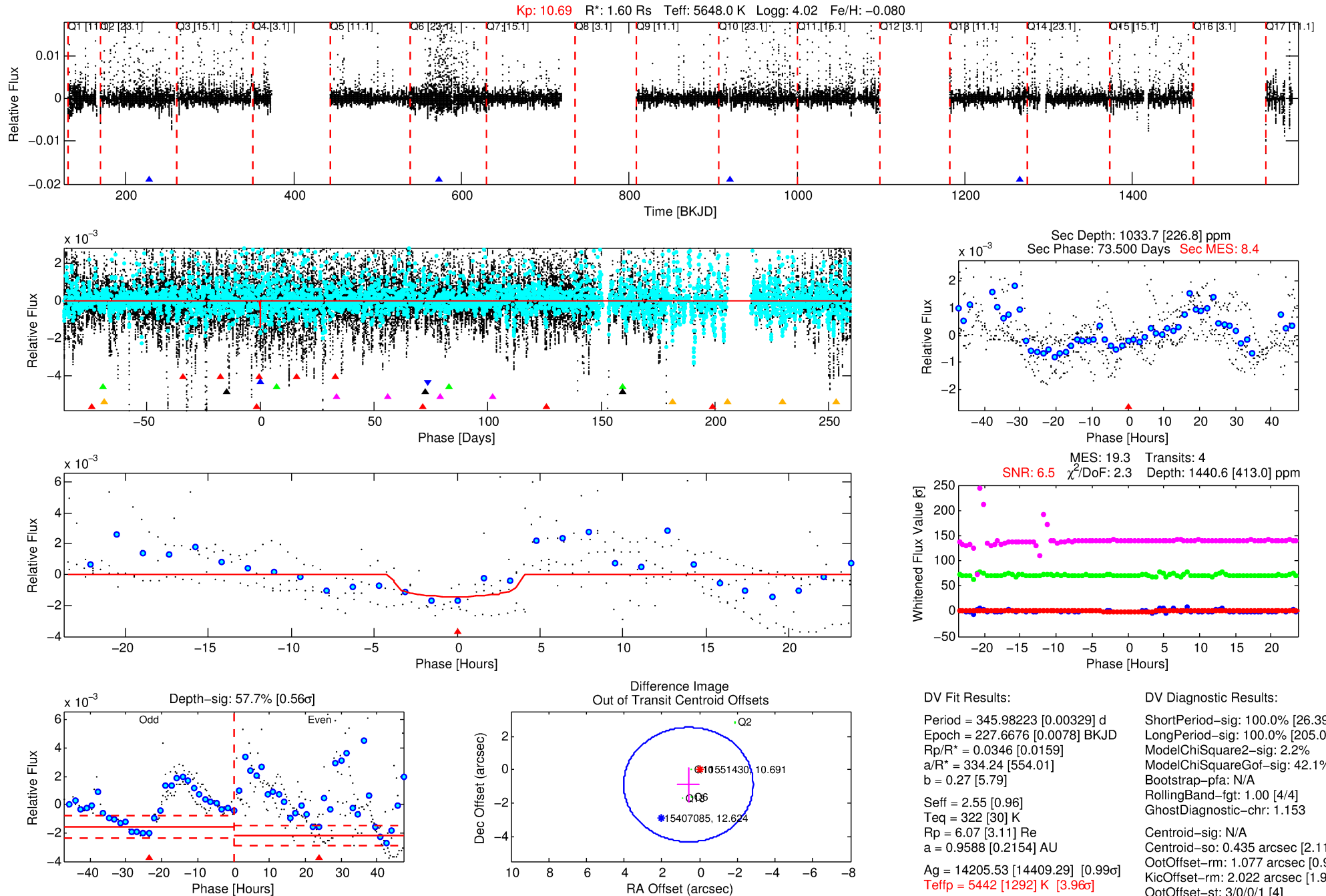
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011551430-02

No Significant Match Found

DV One-Page Summary

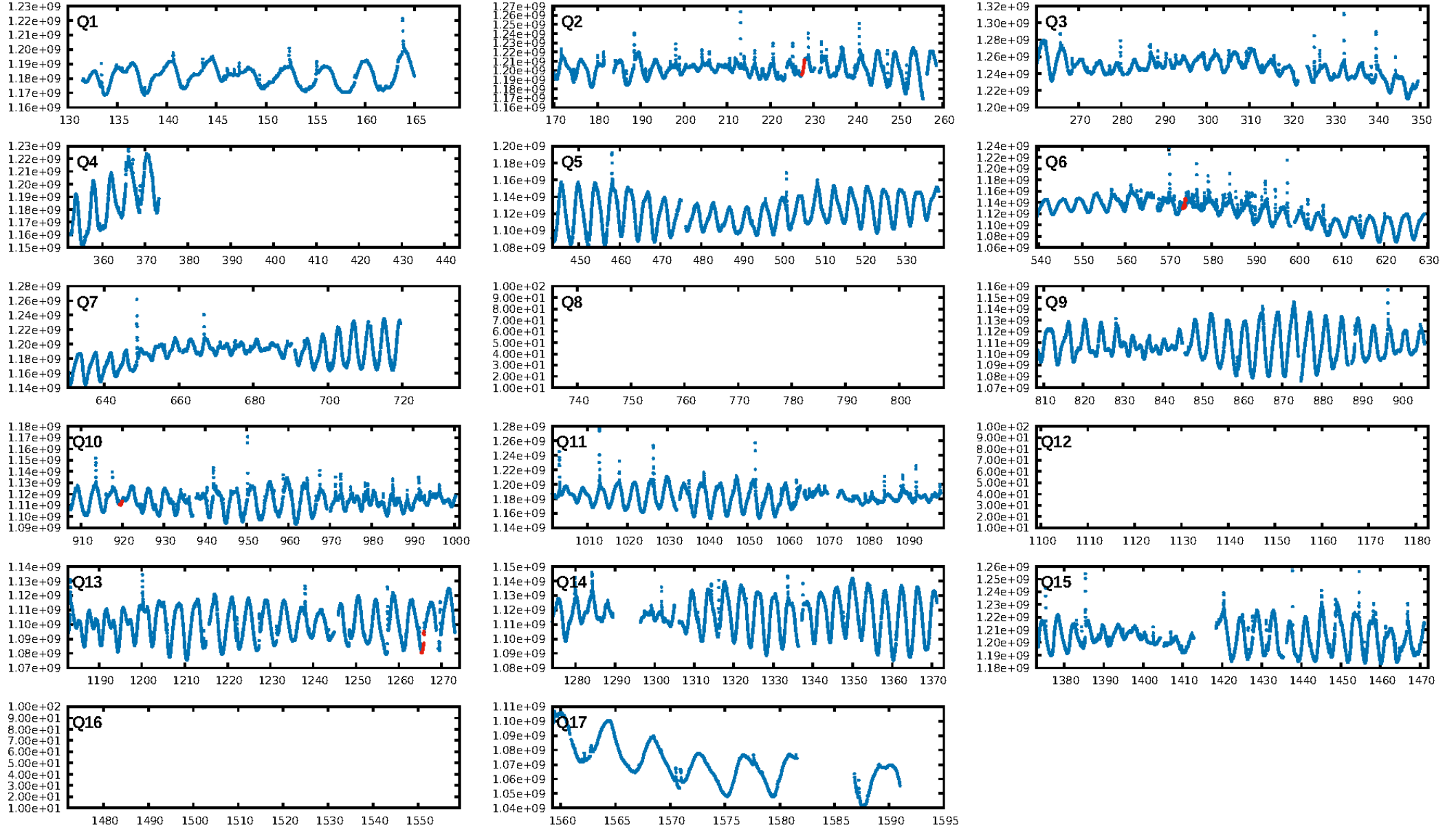
KIC: 11551430 Candidate: 2 of 7 Period: 345.982 d



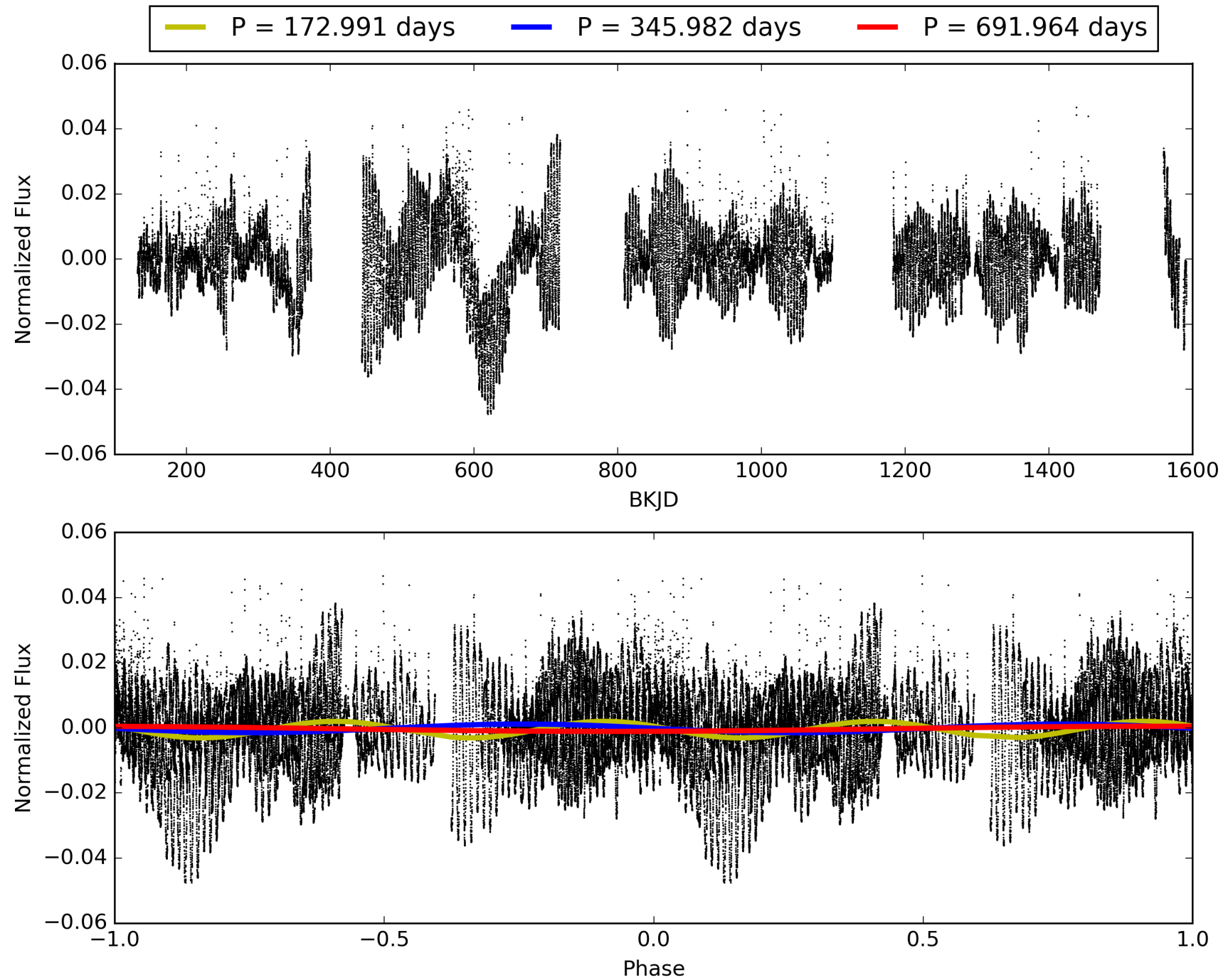
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:11:05 Z

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

TCE 011551430-02, PDC Light Curves

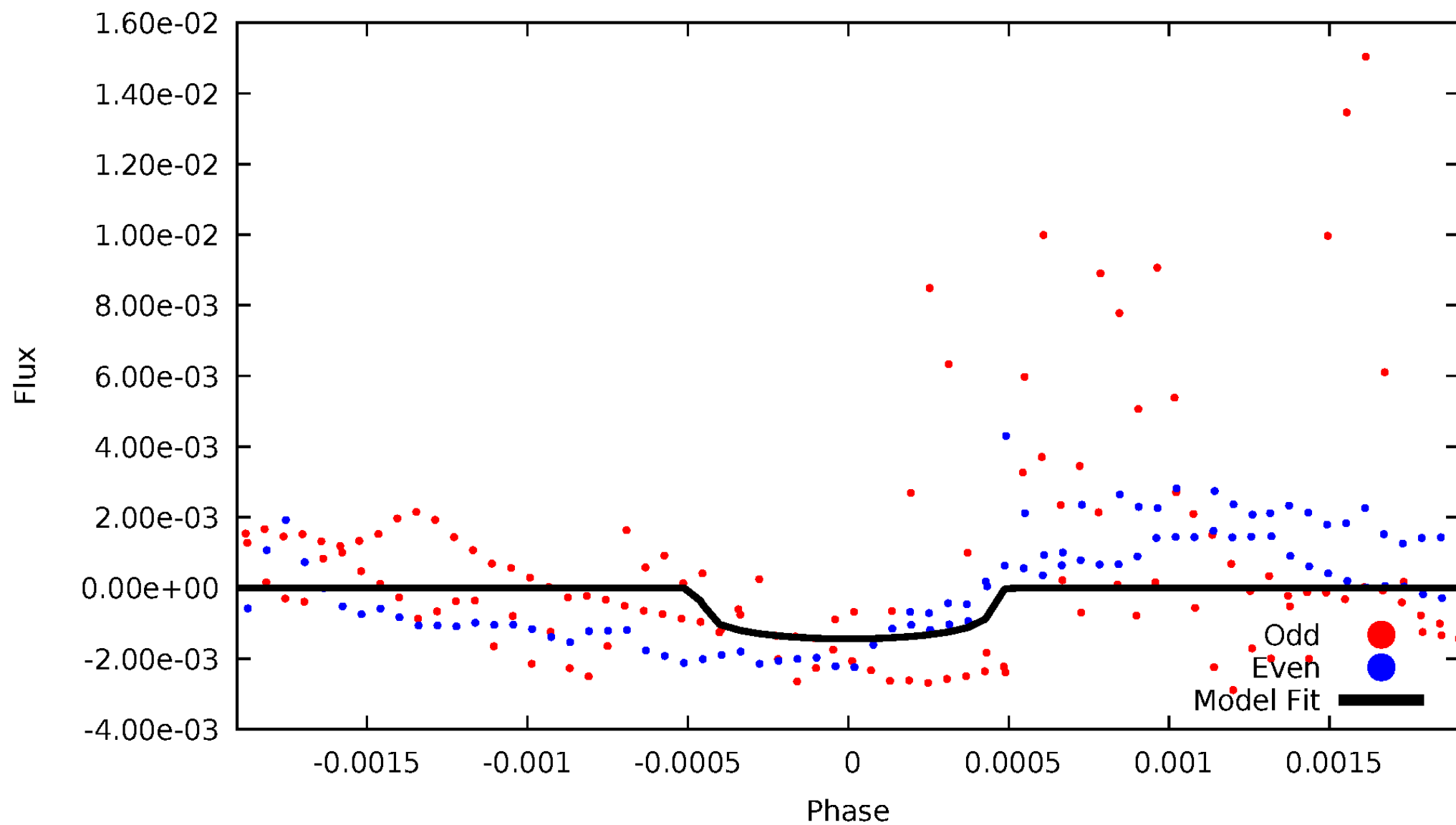


TCE 011551430-02



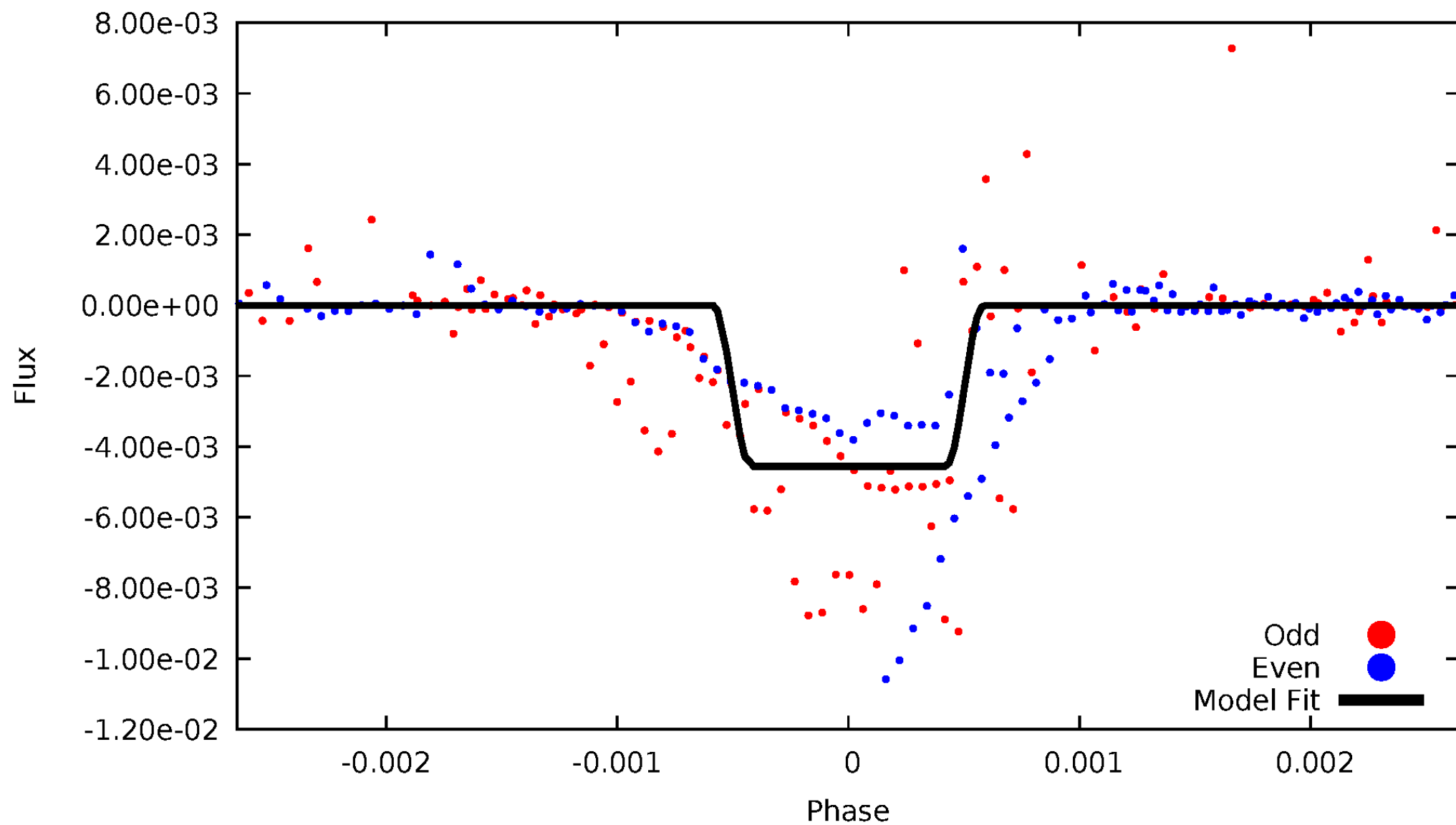
DV Odd/Even

TCE 011551430-02



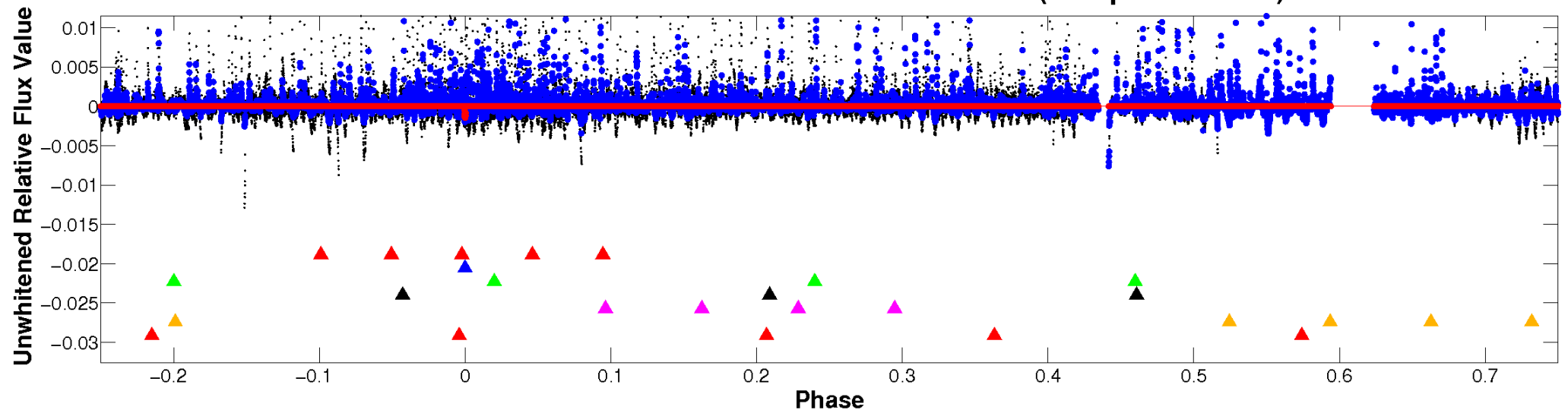
ALT Odd/Even

TCE 011551430-02

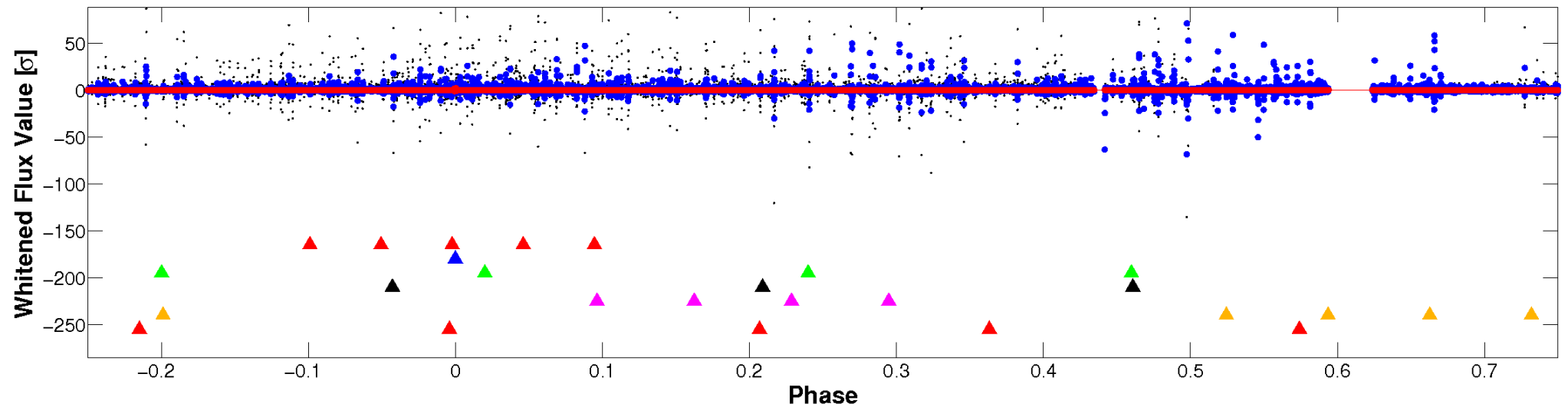


Non-Whitened Vs. Whitened Light Curve

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

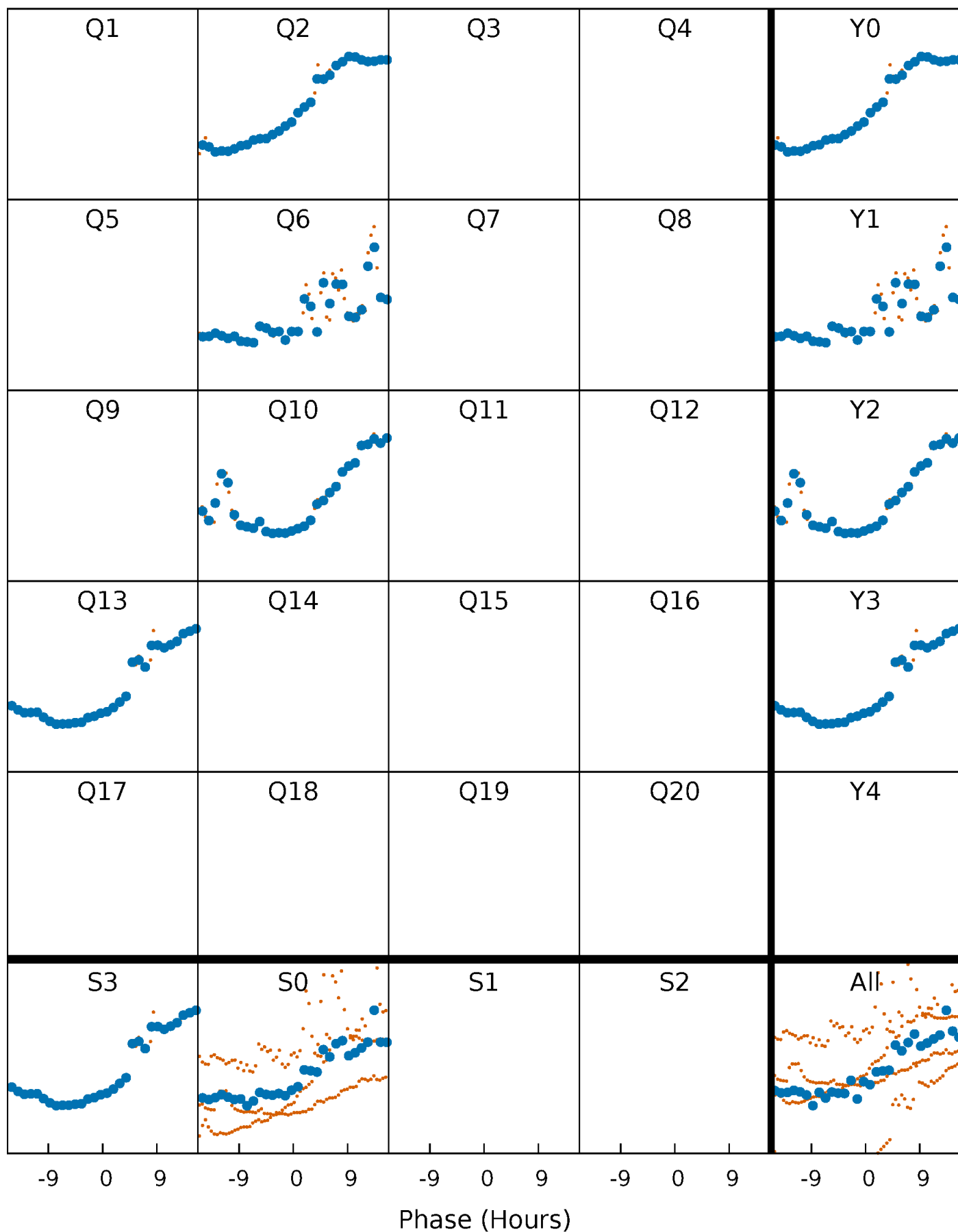


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



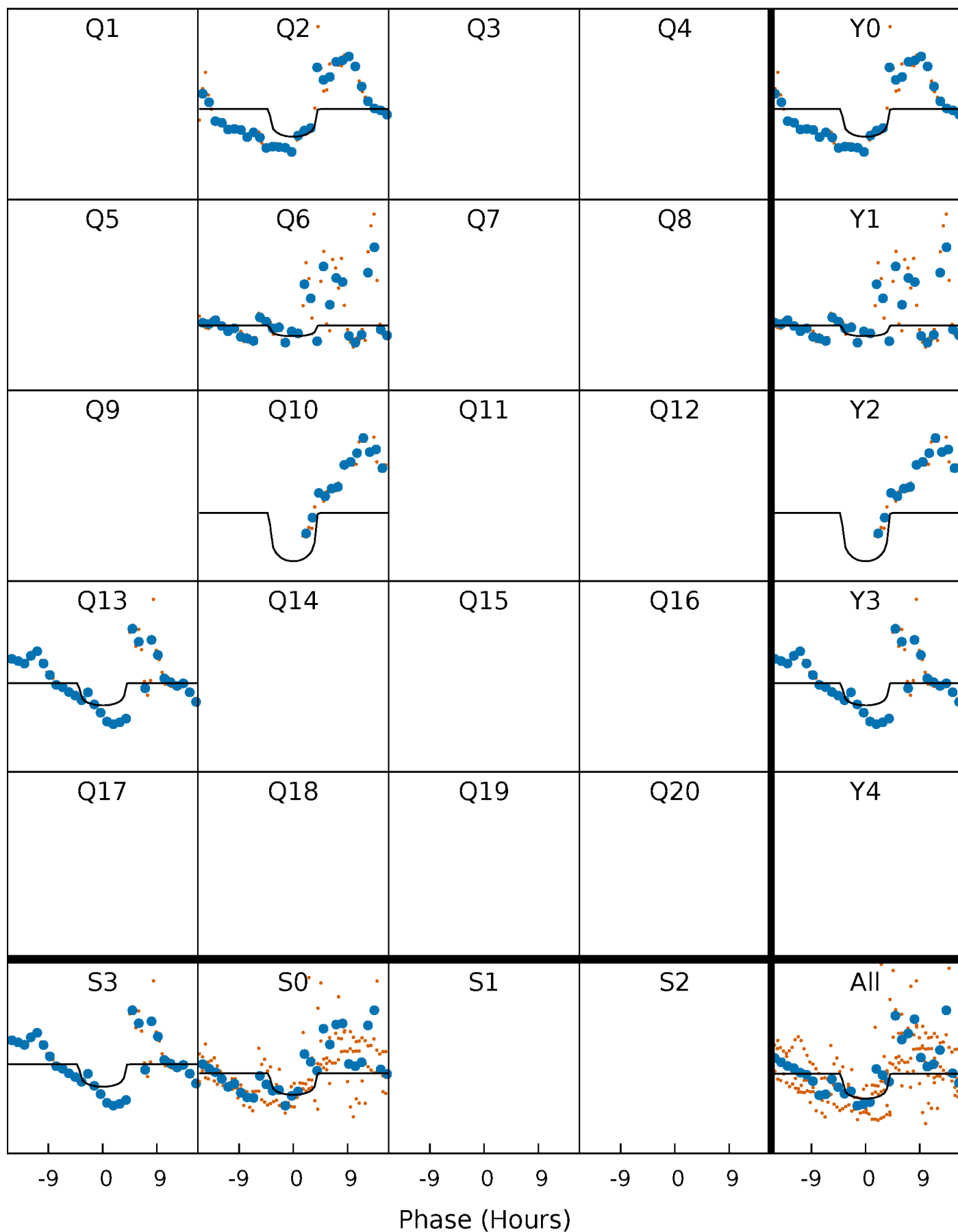
PDC Quarter-Phased Transit Curves

TCE 011551430-02 P=345.982227 Days $T_0=227.667632$ (BKJD)



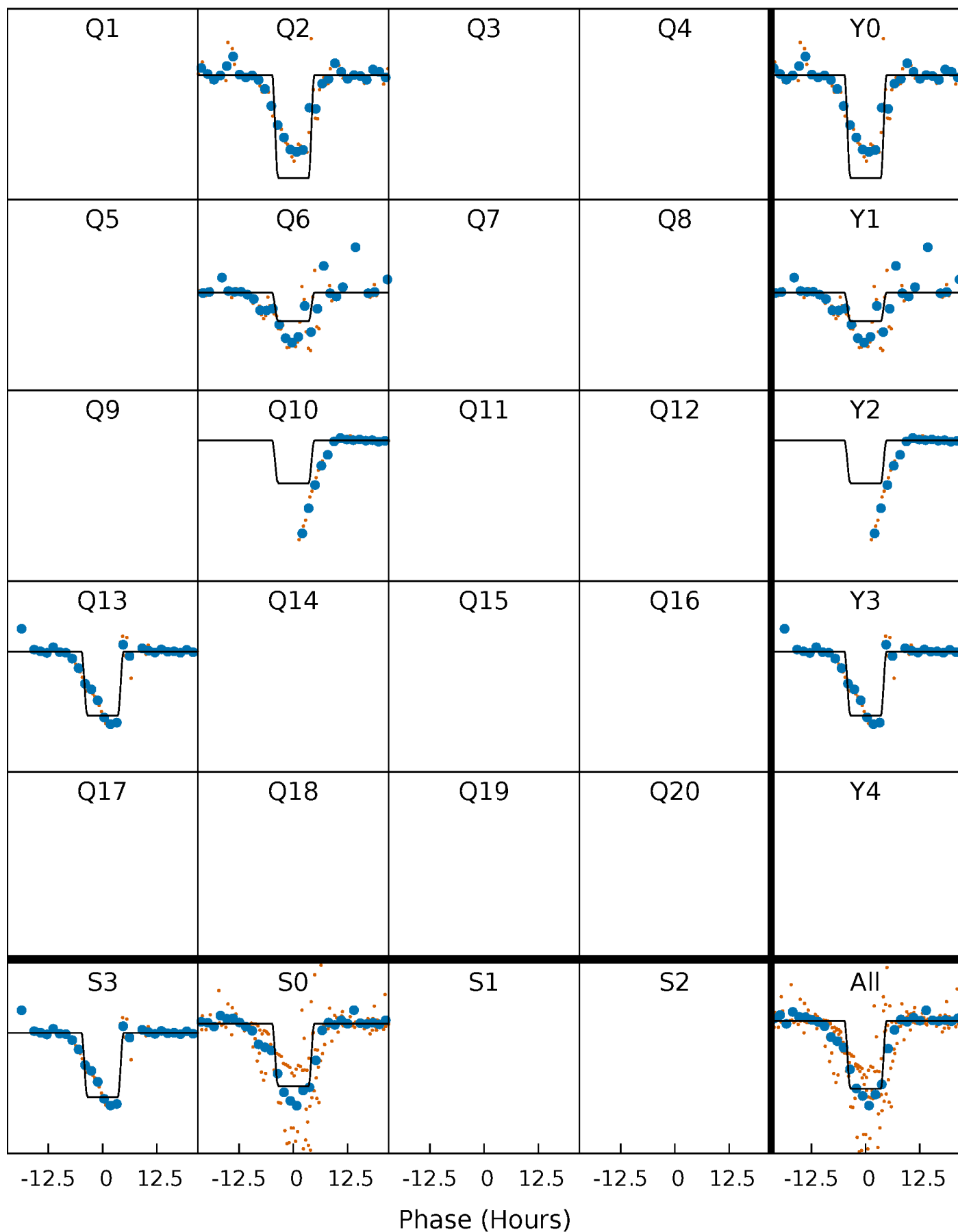
DV Quarter-Phased Transit Curves

TCE 011551430-02 P=345.982227 Days $T_0=227.667632$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

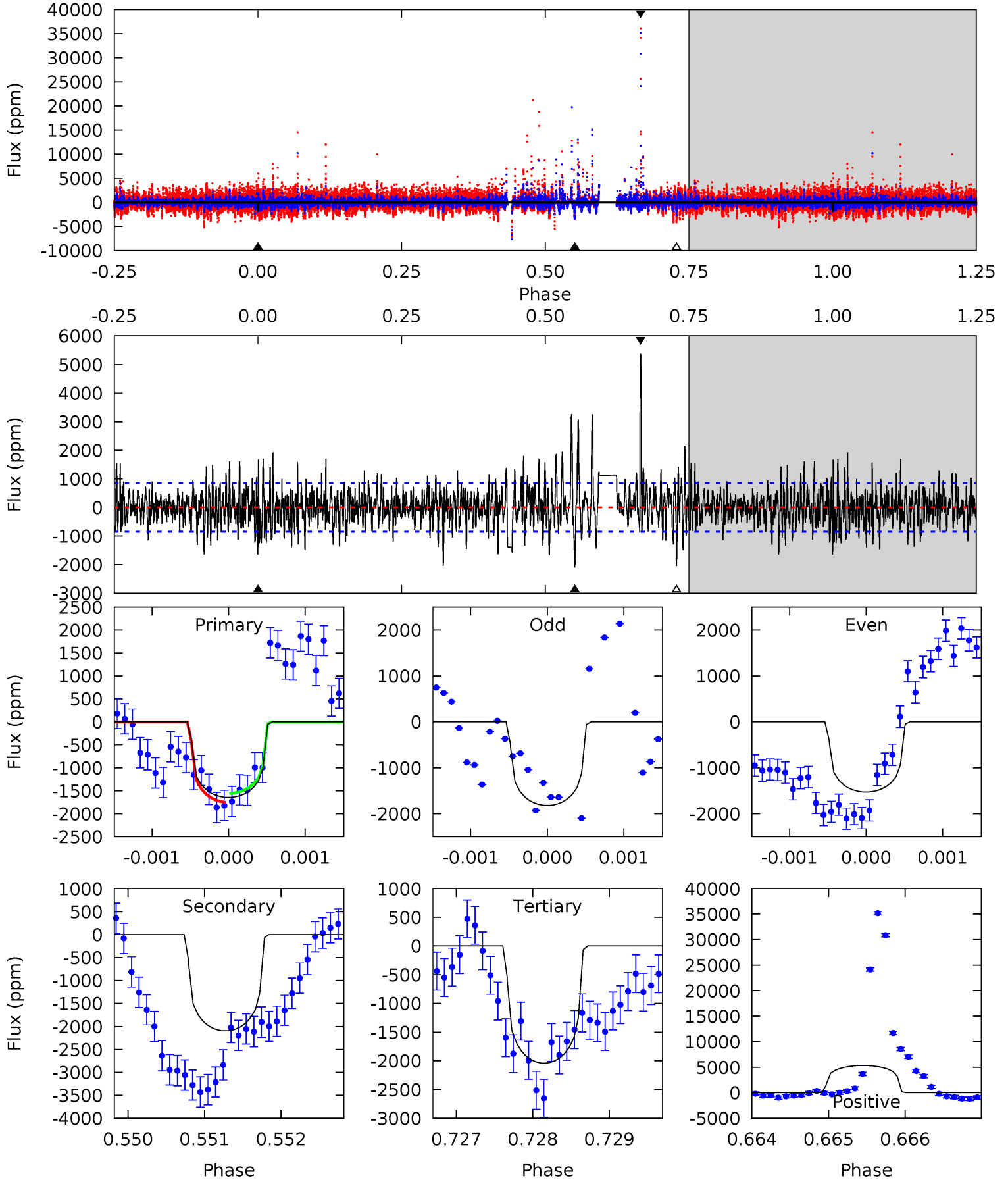
TCE 011551430-02 P=345.987849 Days $T_0=227.666497$ (BKJD)



DV Model-Shift Uniqueness Test

011551430-02, P = 345.982227 Days, E = 227.667632 Days

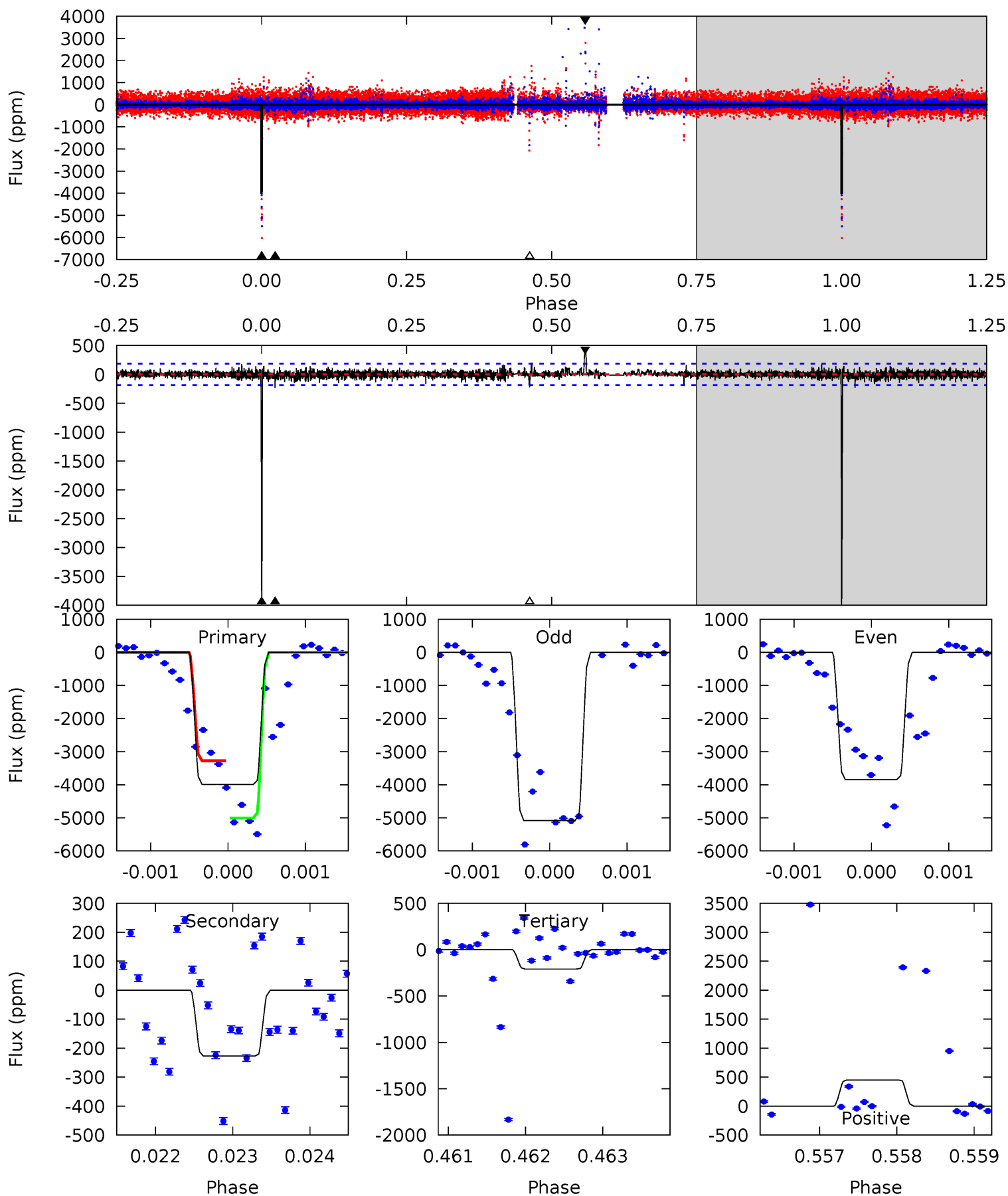
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.6	13.5	13.1	34.4	5.46	3.30	3.55	-2.55	-23.8	0.36	-20.9	0.70	0.90	0.72	0.62



Alt Model-Shift Uniqueness Test

011551430-02, P = 345.987849 Days, E = 227.666497 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
117.1	6.67	6.13	13.3	5.42	3.25	1.11	110.9	103.8	0.54	-6.59	16.0	1.06	0.10	24.5



Stellar Parameters For KIC 011551430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5648^{+113}_{-90}	$4.019^{+0.217}_{-0.109}$	$-0.080^{+0.150}_{-0.100}$	$1.605^{+0.297}_{-0.363}$	$0.983^{+0.102}_{-0.084}$	$0.335^{+0.360}_{-0.109}$
	+2%/-2%	+5%/-3%	+188%/-125%	+19%/-23%	+10%/-9%	+108%/-32%
Source	SPE13	SPE13	SPE13	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011551430-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-2096 ± 155	$5.82^{+2.84}_{-2.63}$	447^{+22}_{-31}	6500^{+2945}_{-1037}	31694^{+72077}_{-17249}
Alt.	-227 ± 34	$11.52^{+3.16}_{-2.92}$	447^{+24}_{-25}	3249^{+280}_{-217}	853^{+716}_{-328}

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

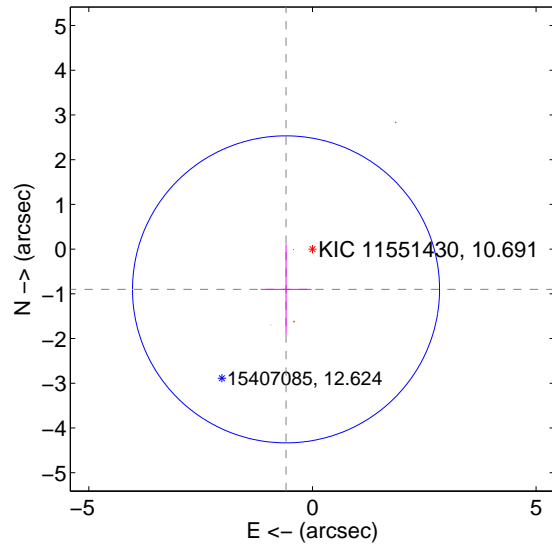
Supplemental centroid analysis for 011551430-02. **Kepler magnitude: 10.69.** Transit SNR 6.52

There are 1 quarters with good PRF difference image offsets

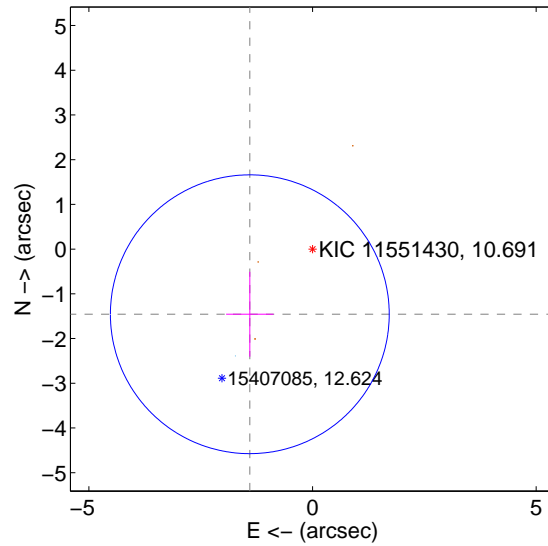
The direct PRF centroid is offset from the target star catalog position by about 1.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.077 ± 1.144	0.94	0.591 ± 0.569	-0.900 ± 1.006
PRF-fit source offset from KIC position	2.022 ± 1.039	1.95	1.402 ± 0.530	-1.457 ± 0.949
photometric centroid source offset	0.44 ± 0.21	2.11	0.42 ± 0.20	-0.11 ± 0.25

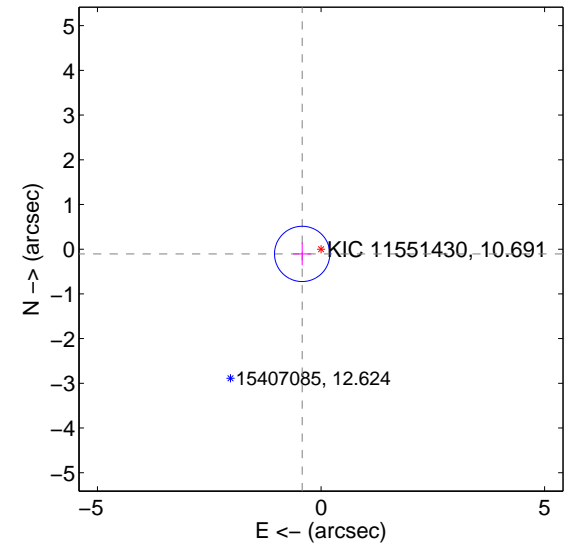
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

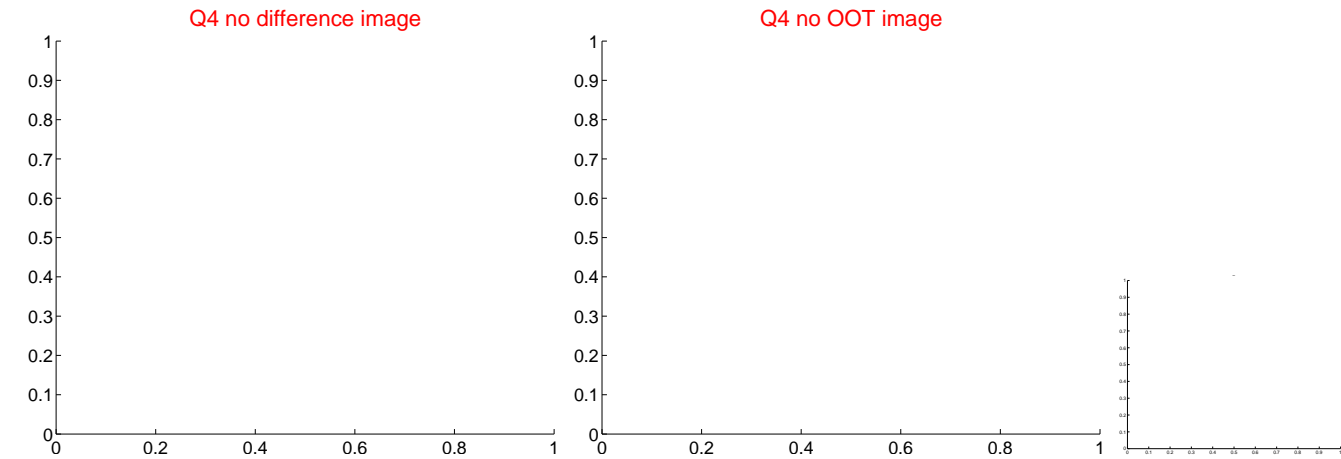
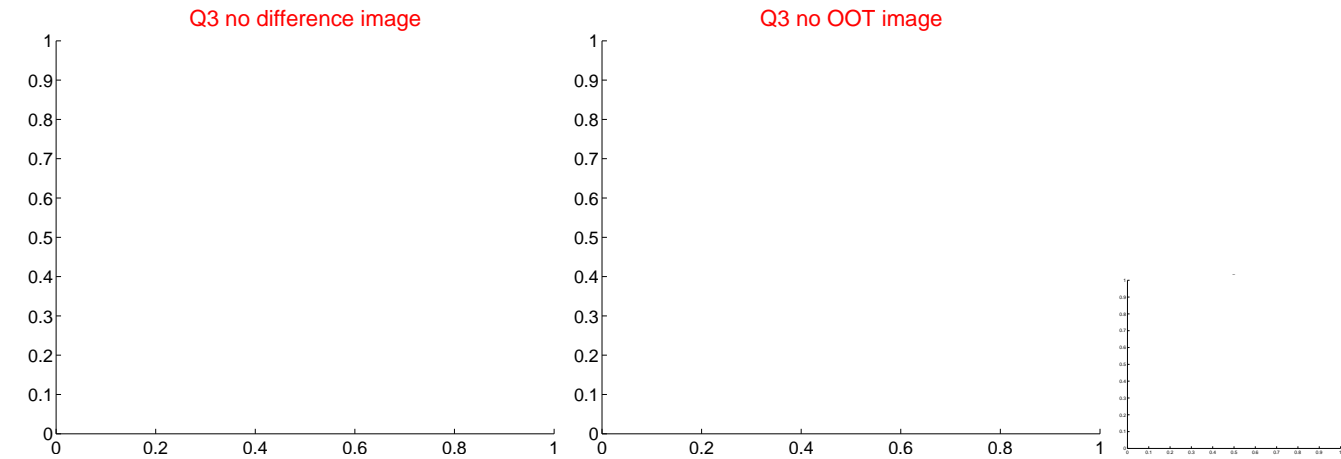
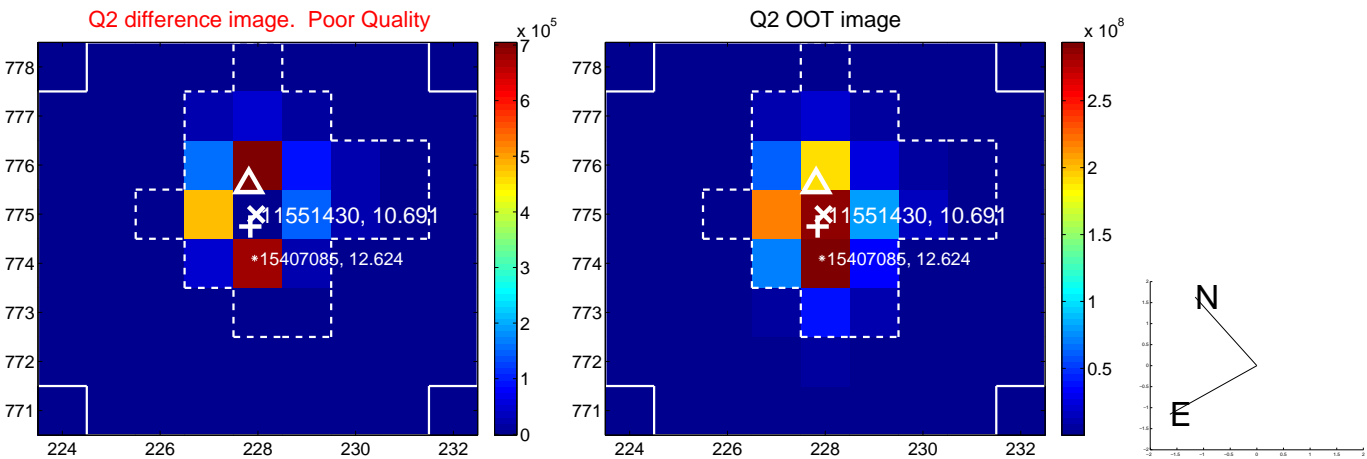
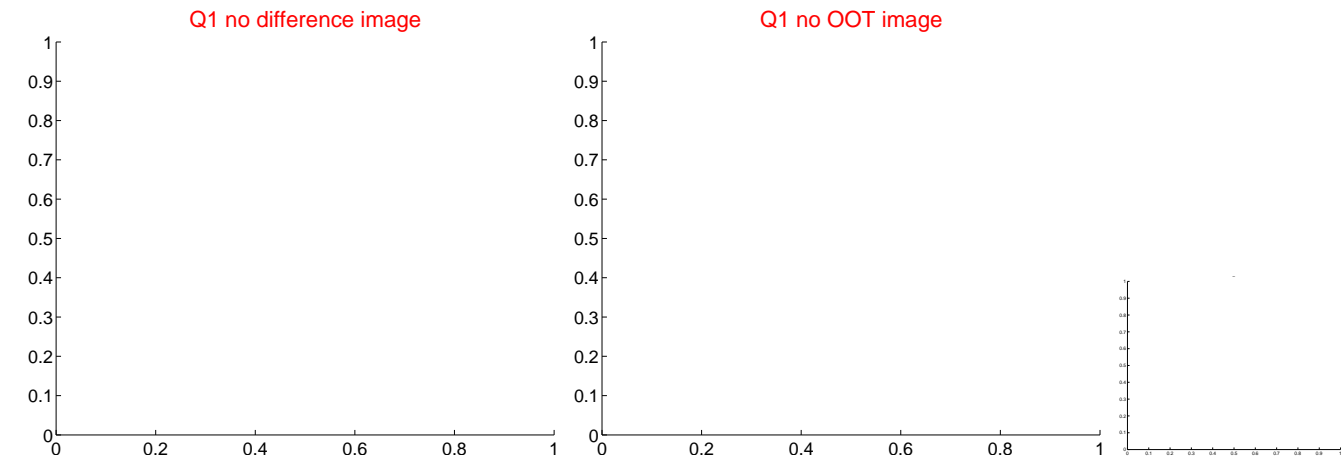


offset from photometric centroids

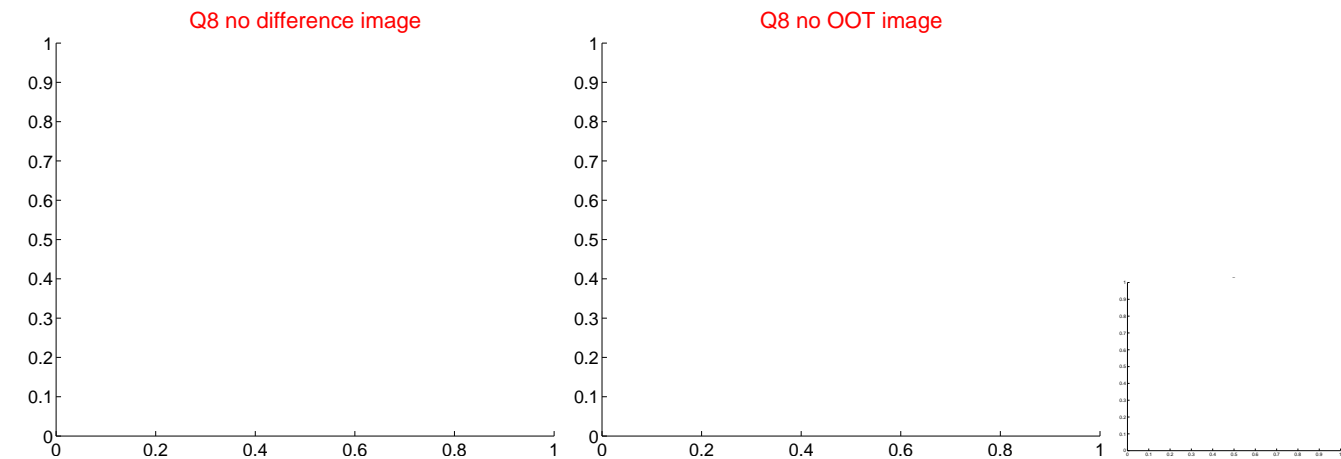
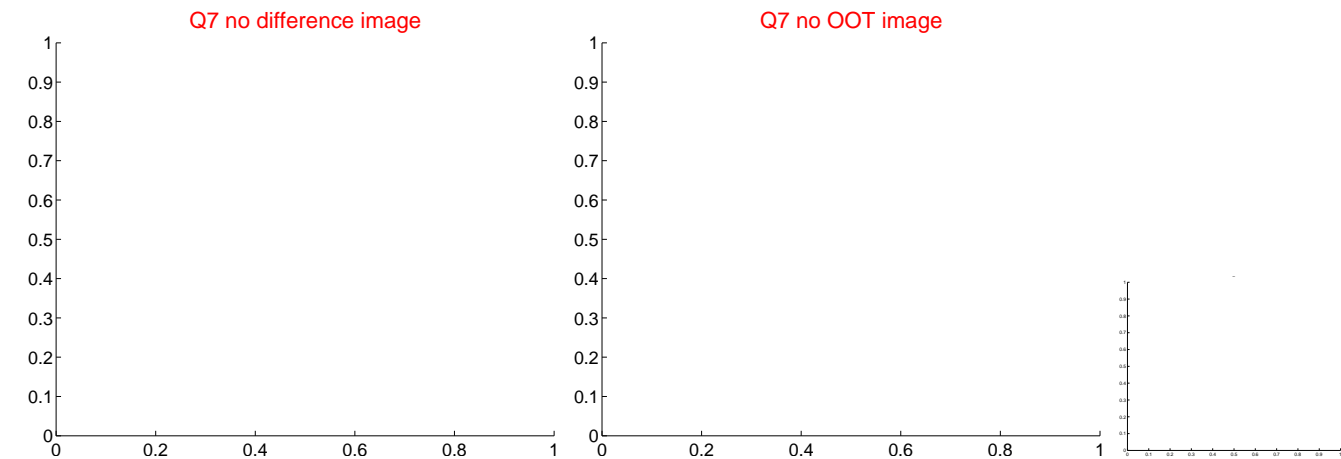
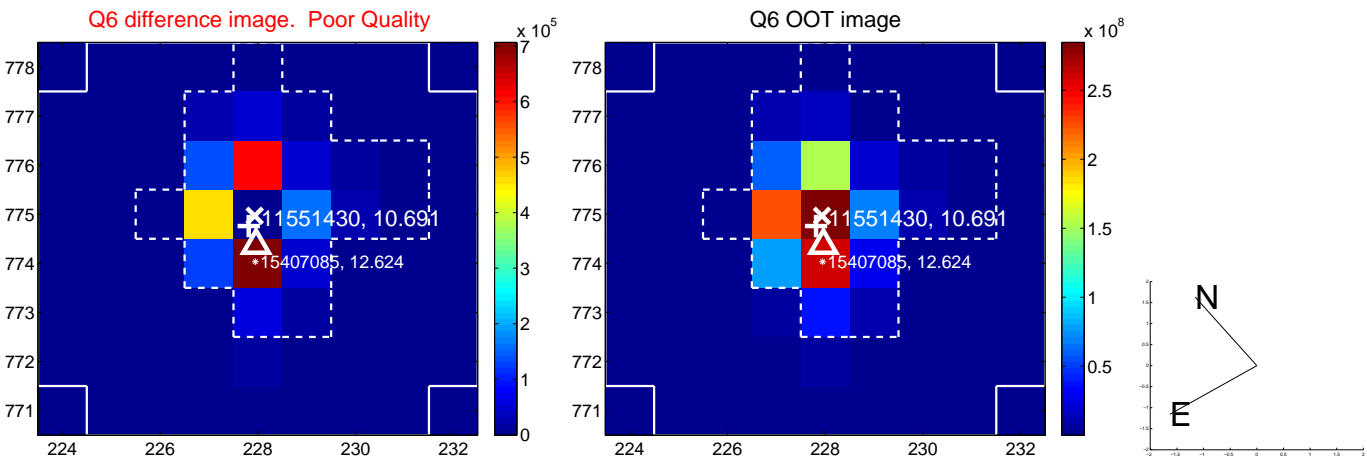


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

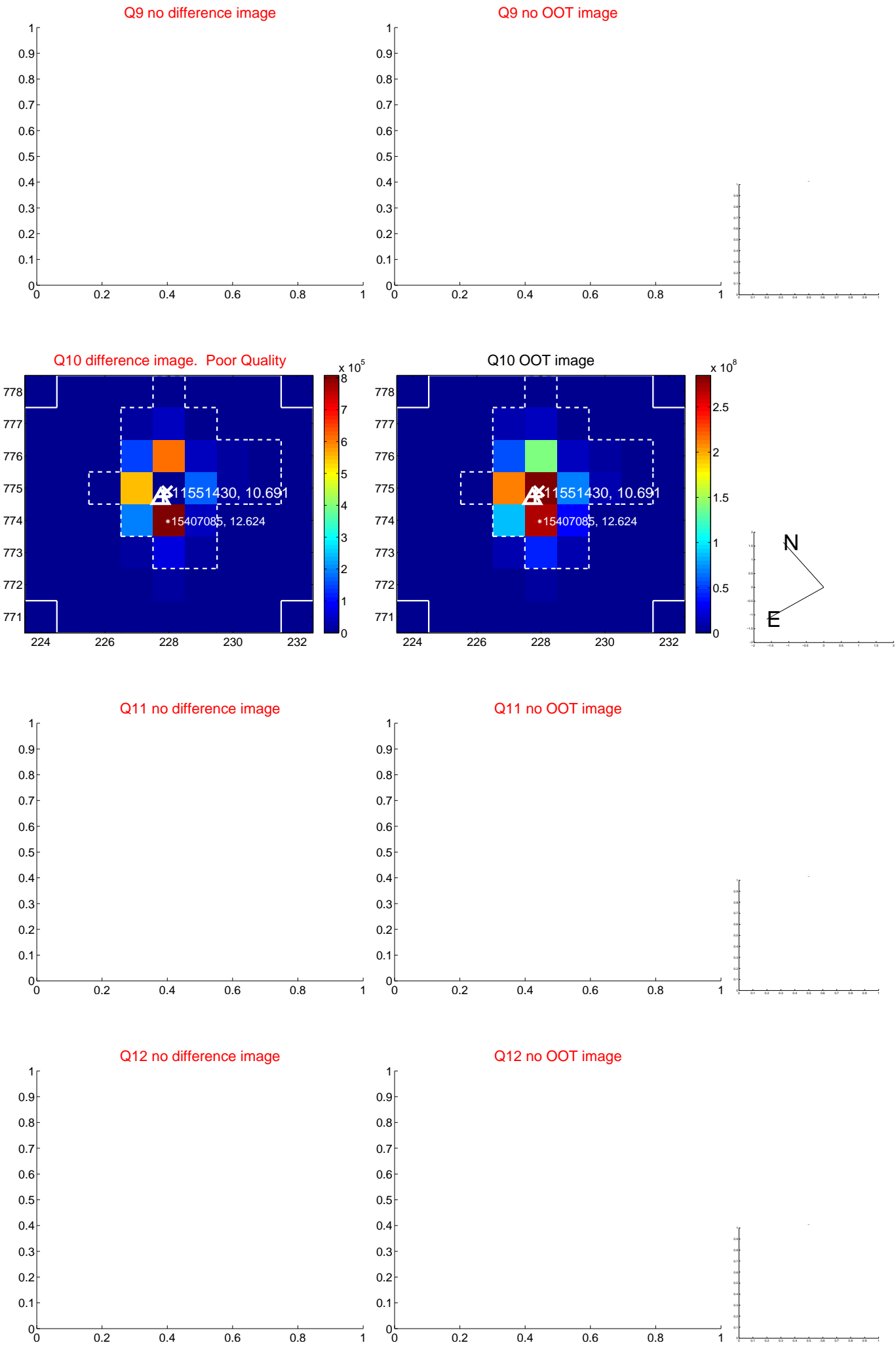
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



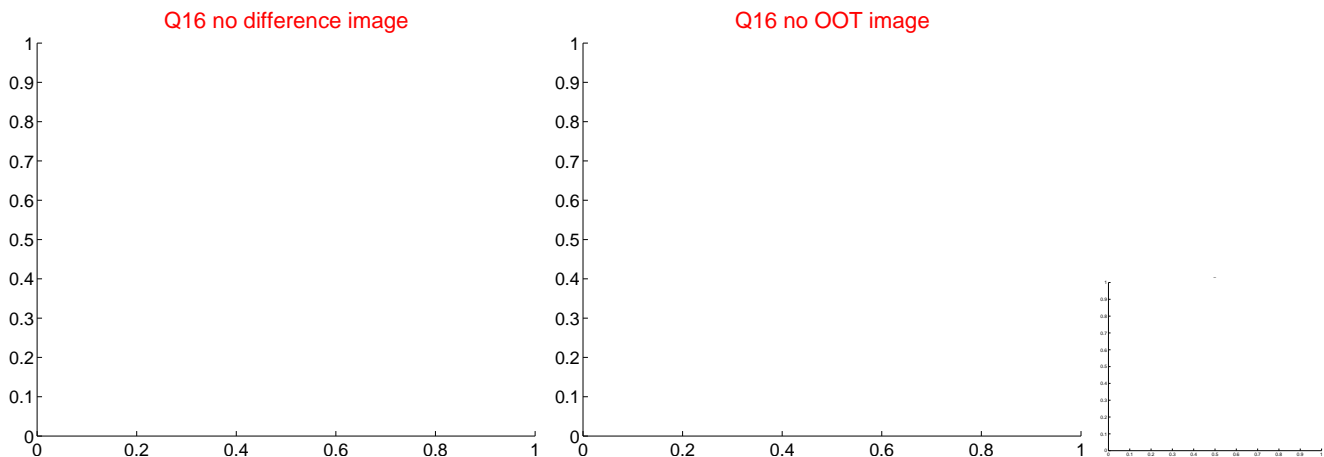
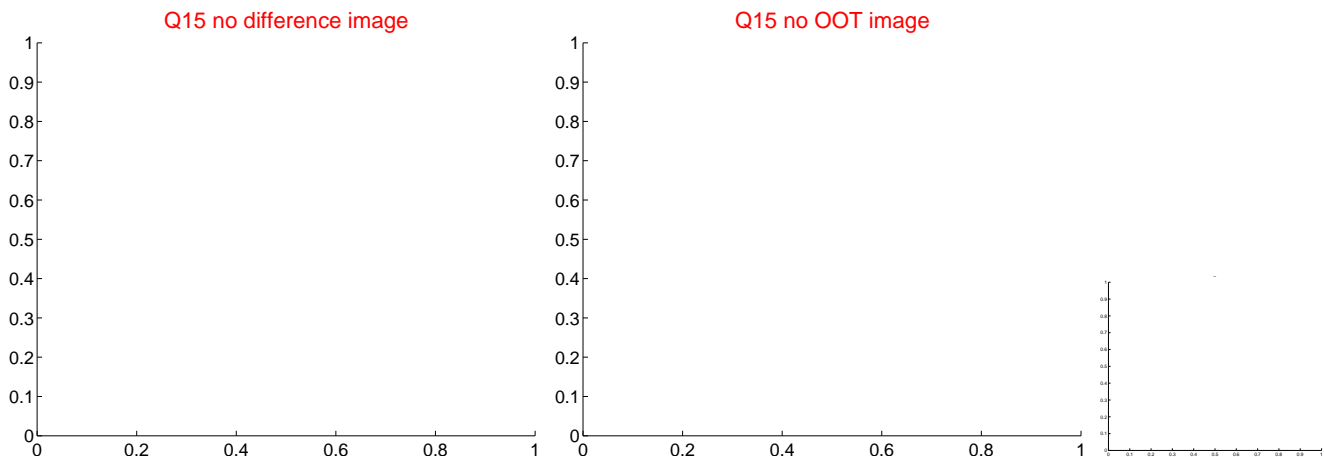
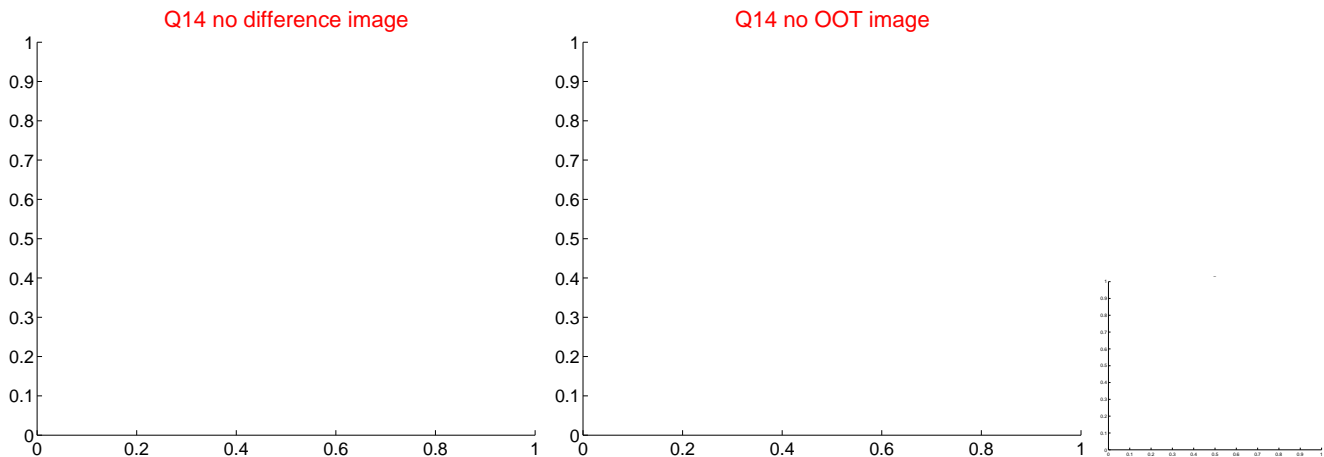
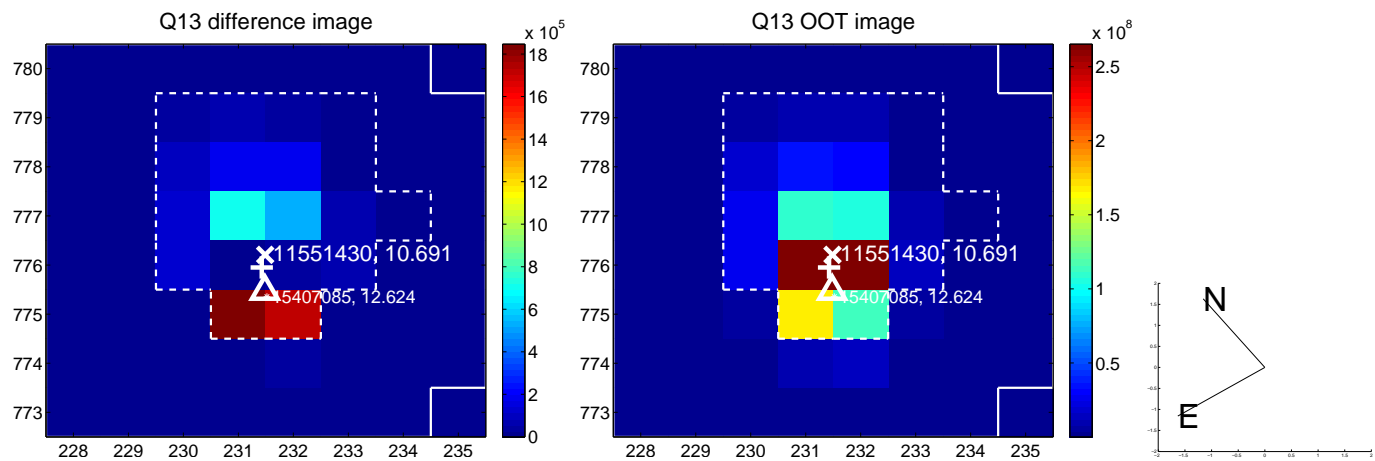
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



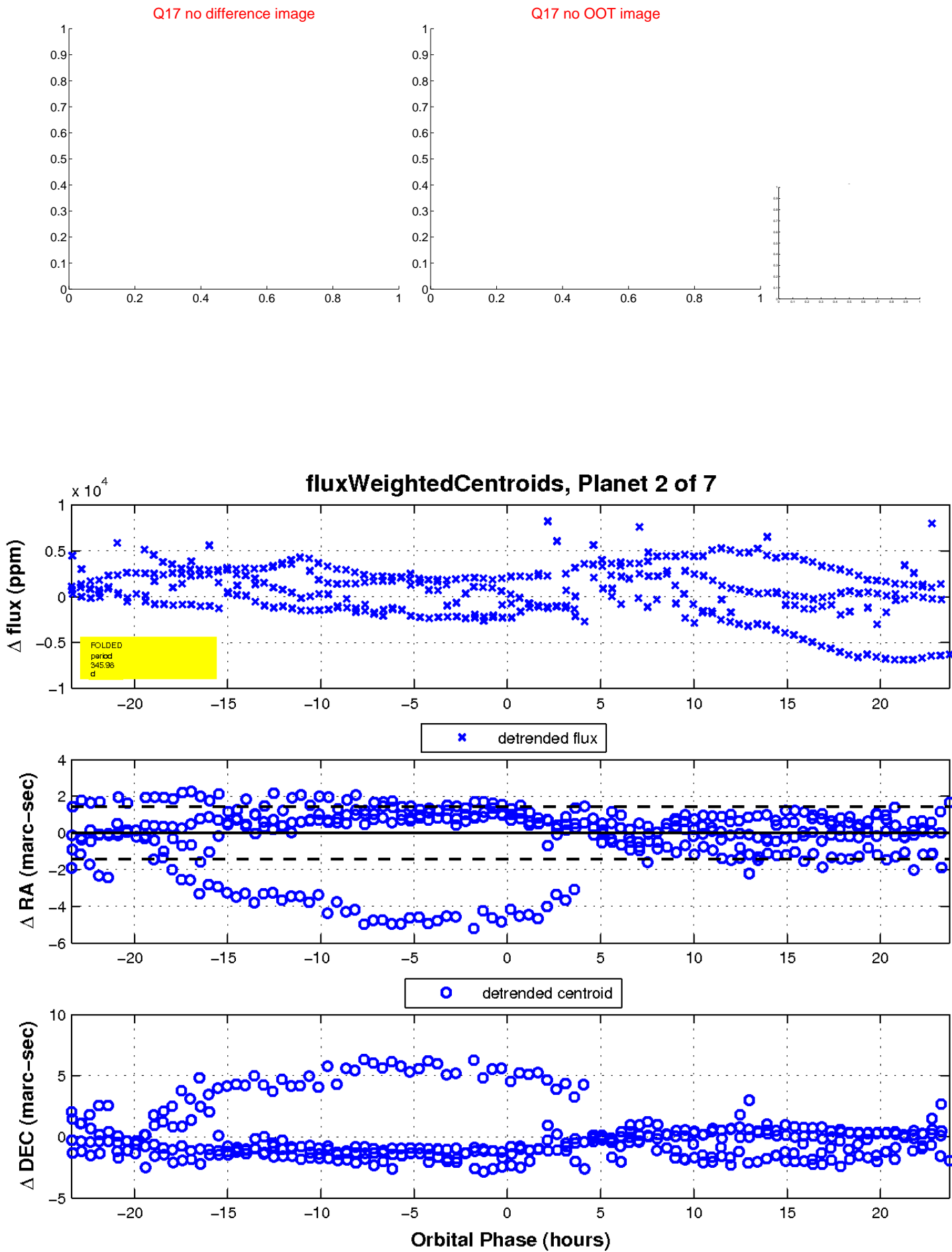
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

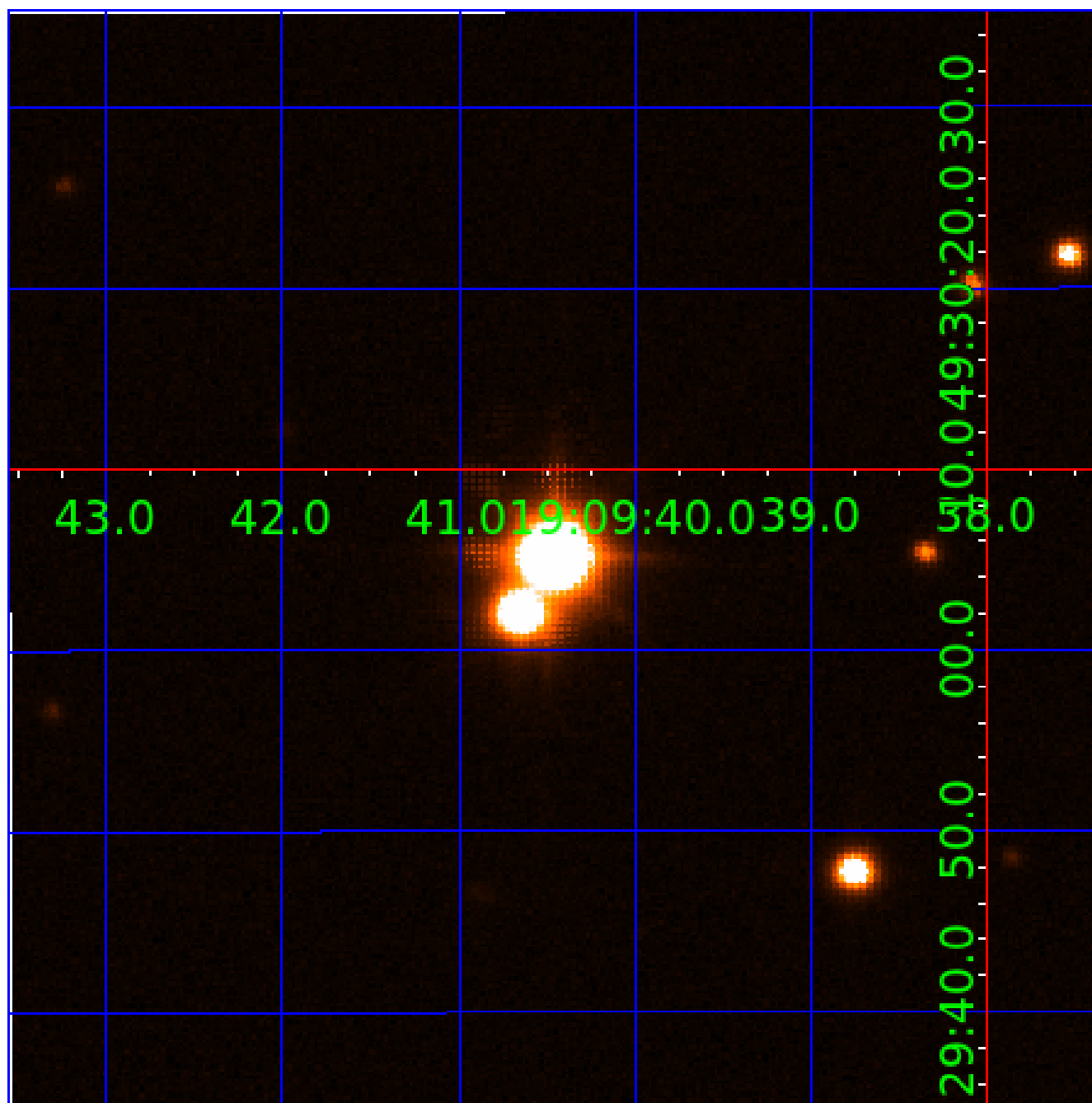


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011551430

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})
011551430-01	OBS	No	329.244684	260.382423	3201.0	13.011	26.0	12.7	1.60	5648	10.39	2.73
011551430-02	OBS	No	345.982227	227.667632	1440.6	7.905	19.3	6.5	1.60	5648	6.07	2.56
011551430-03	OBS	No	422.060038	158.532752	587.4	4.098	18.8	3.8	1.60	5648	7.78	1.96
011551430-04	OBS	No	433.106981	558.832902	2054.7	3.784	19.8	9.0	1.60	5648	7.74	1.89
011551430-05	OBS	No	323.095596	329.665334	672.4	5.841	17.2	4.8	1.60	5648	4.37	2.80
011551430-06	OBS	No	322.047745	158.868707	1693.2	3.849	18.1	9.3	1.60	5648	6.68	2.81
011551430-07	OBS	No	273.011498	299.244567	196.0	3.000	18.4	-1.0	1.60	5648	2.23	3.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011551430-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011551430-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
011551430-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
011551430-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011551430-05	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
011551430-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011551430-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

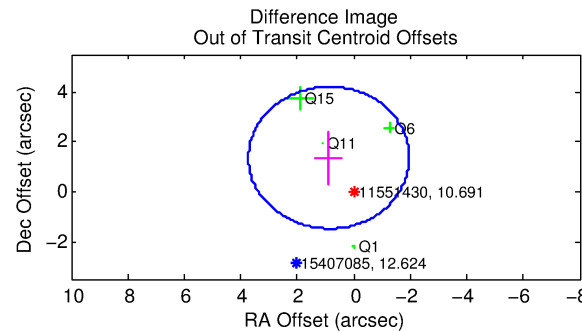
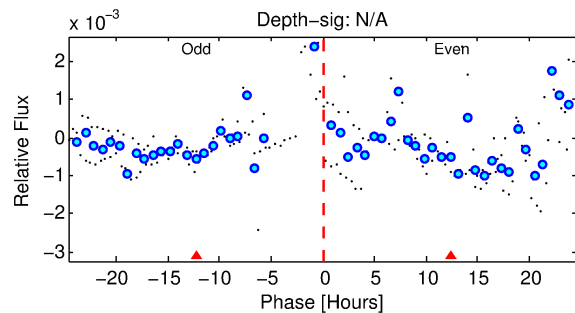
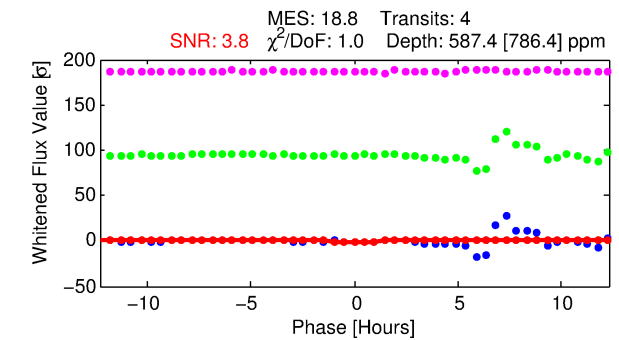
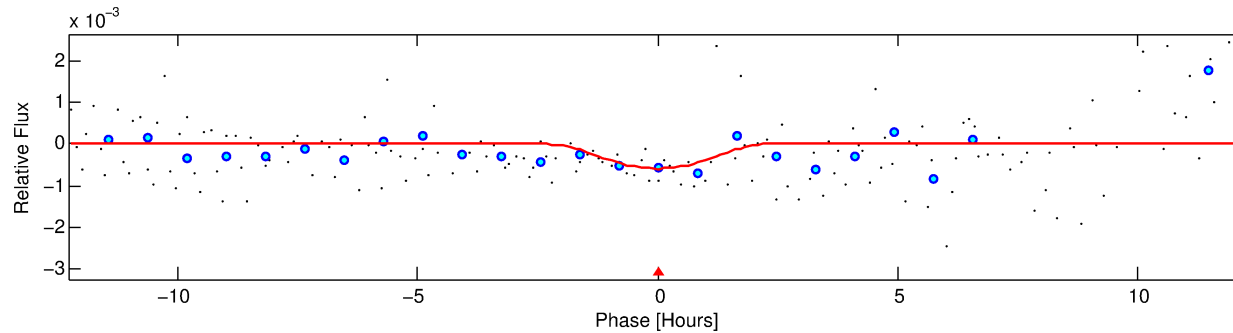
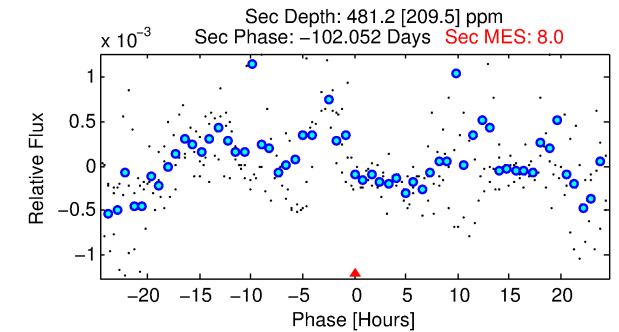
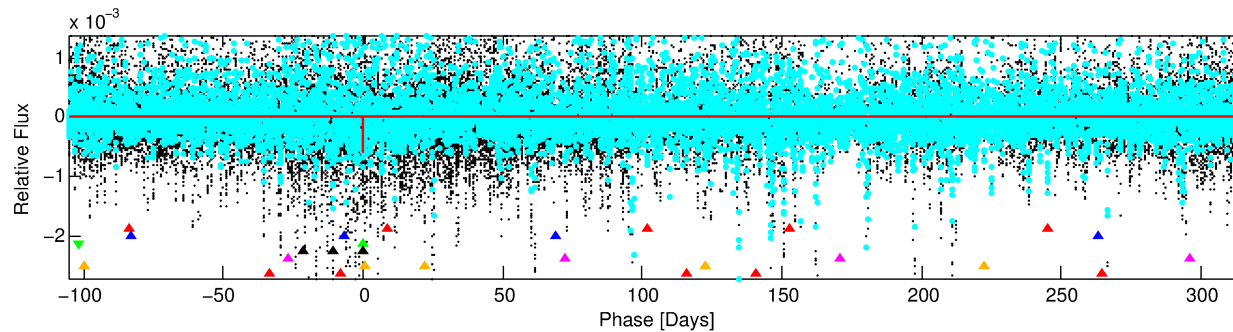
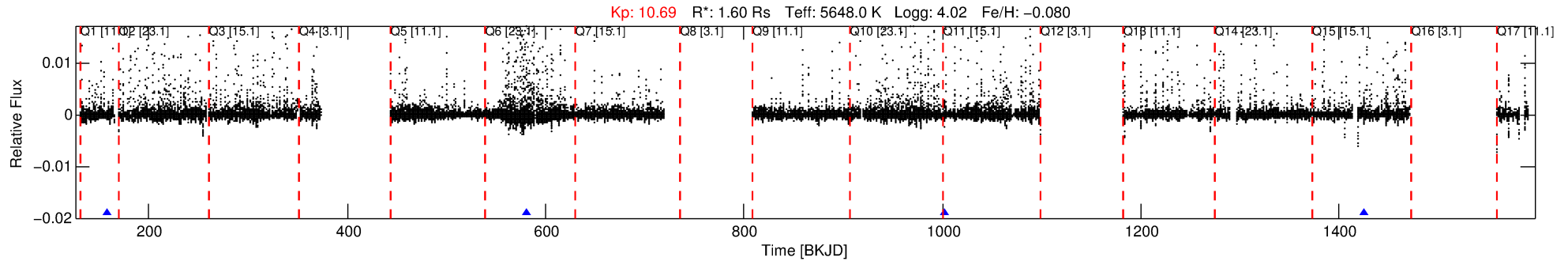
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011551430-03

No Significant Match Found

DV One-Page Summary

KIC: 11551430 Candidate: 3 of 7 Period: 422.060 d



DV Fit Results:

Period = 422.06004 [0.00852] d
Epoch = 158.5328 [0.0136] BKJD
Rp/R* = 0.0444 [0.2218]
a/R* = 237.06 [291.22]
b = 1.00 [0.28]
Seff = 1.96 [0.73]
Teq = 302 [28] K
Rp = 7.78 [38.88] Re
a = 1.0946 [0.2459] AU
Ag = 5246.15 [52498.47] [0.10σ]
Teffp = 3970 [9926] K [0.37σ]

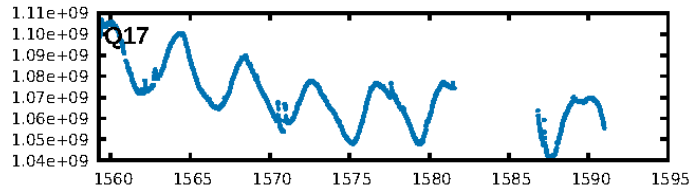
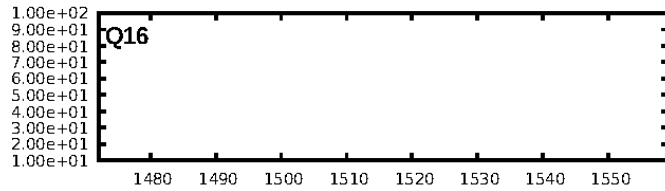
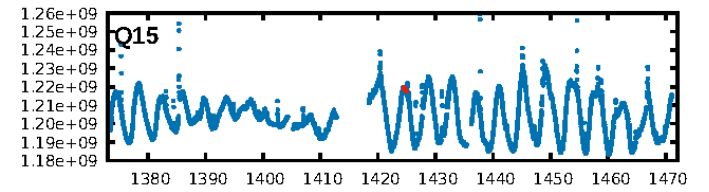
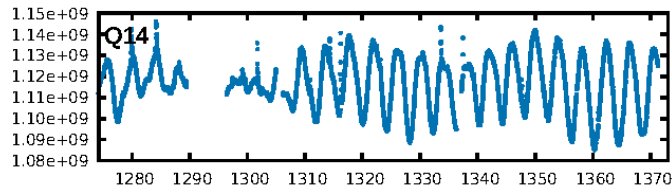
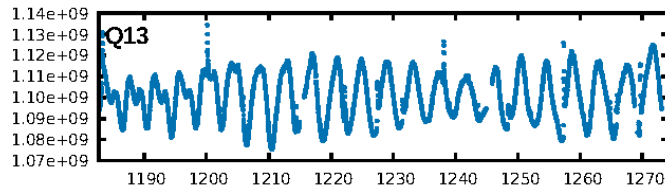
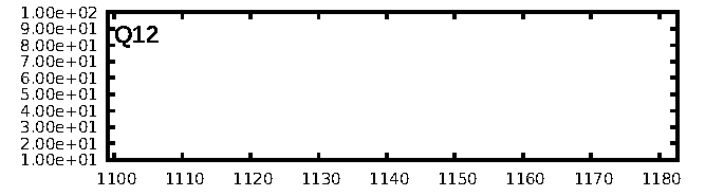
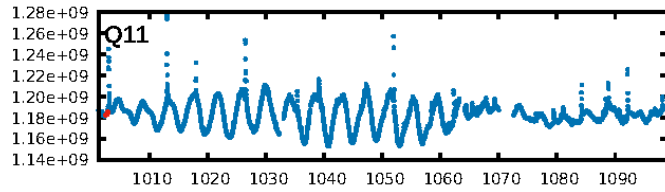
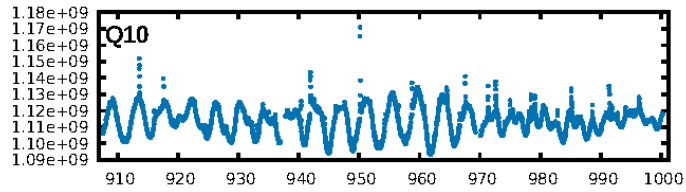
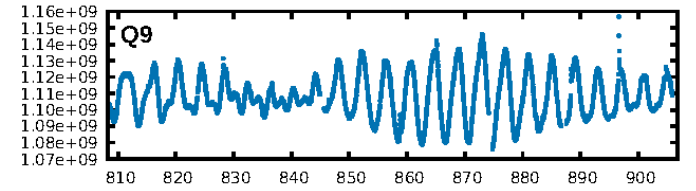
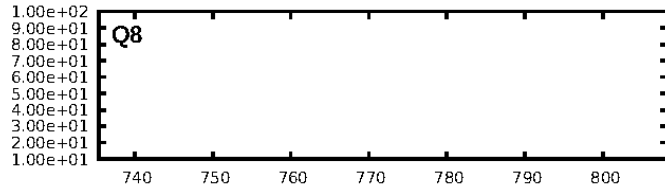
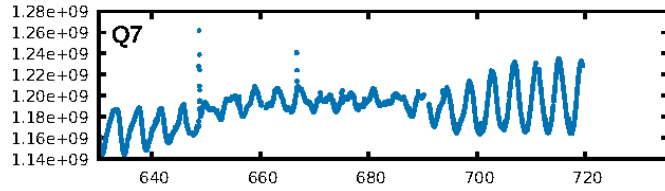
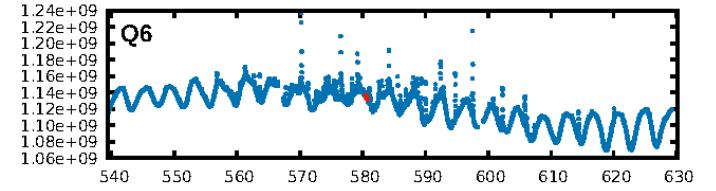
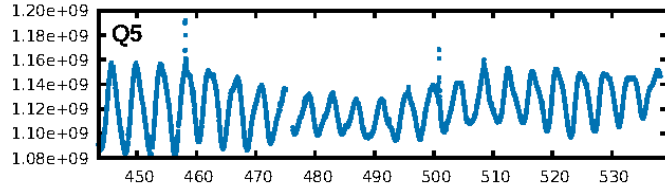
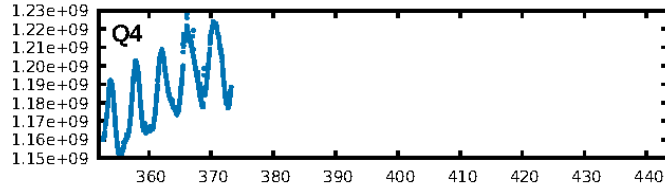
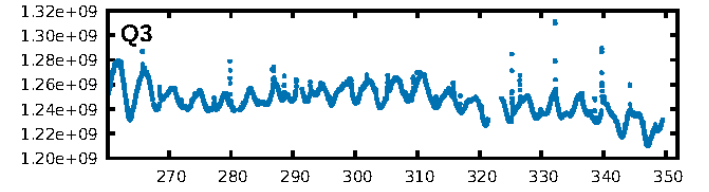
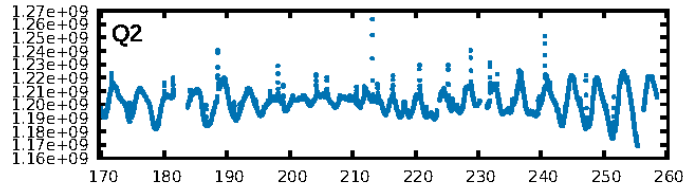
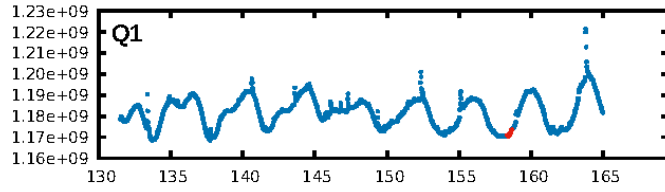
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [205.06σ]
LongPeriod-sig: 100.0% [47.53σ]
ModelChiSquare2-sig: 84.0%
ModelChiSquareGof-sig: 99.0%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: -0.1952
Centroid-sig: N/A
Centroid-so: 0.233 arcsec [0.50σ]
OotOffset-rm: 1.621 arcsec [1.71σ]
KicOffset-rm: 1.742 arcsec [2.37σ]
OotOffset-st: 1/2/0/1 [4]
KicOffset-st: 1/2/0/1 [4]
DiffImageQuality-fgm: 0.25 [1/4]
DiffImageOverlap-fno: 0.50 [2/4]

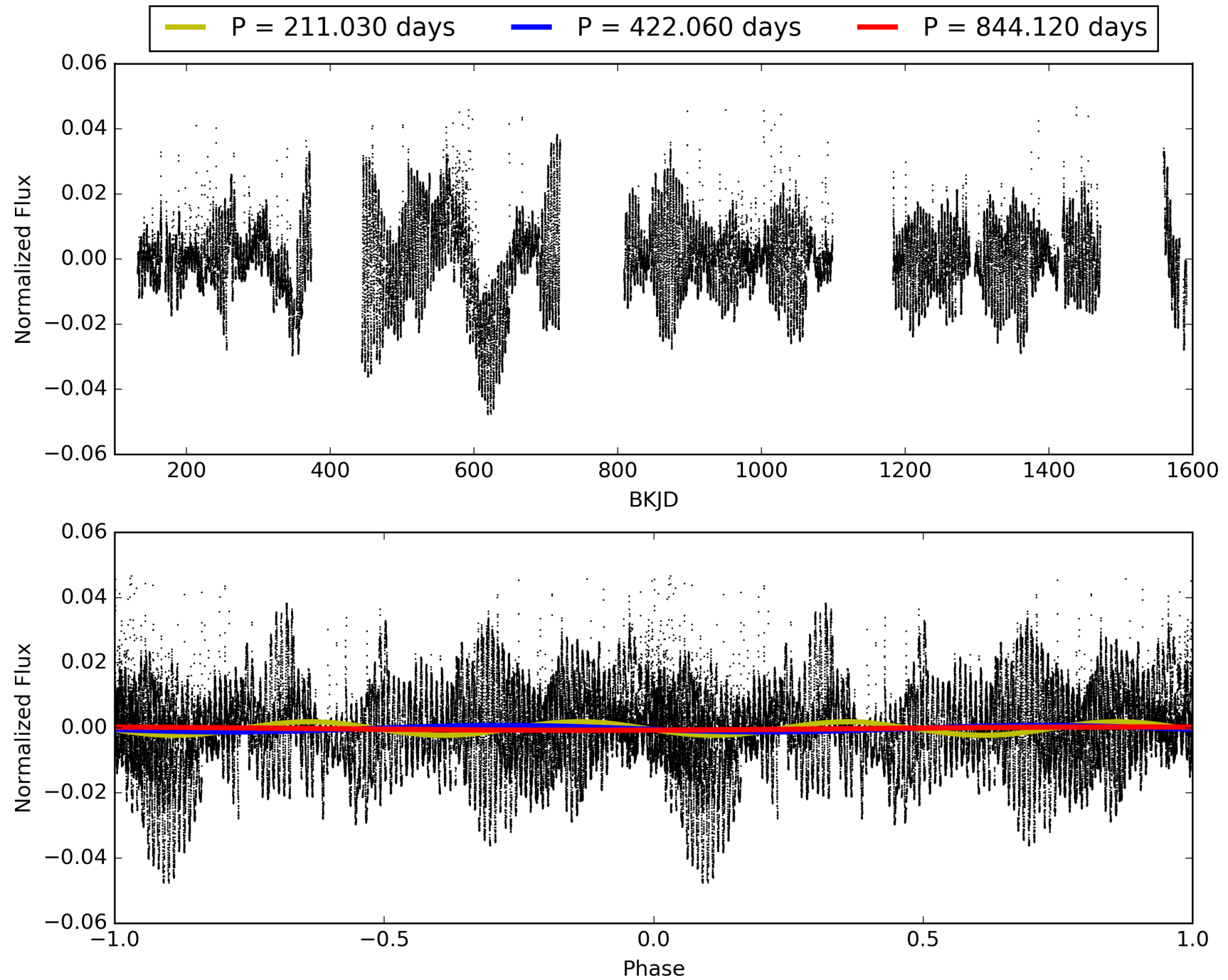
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:11:17 Z

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

TCE 011551430-03, PDC Light Curves

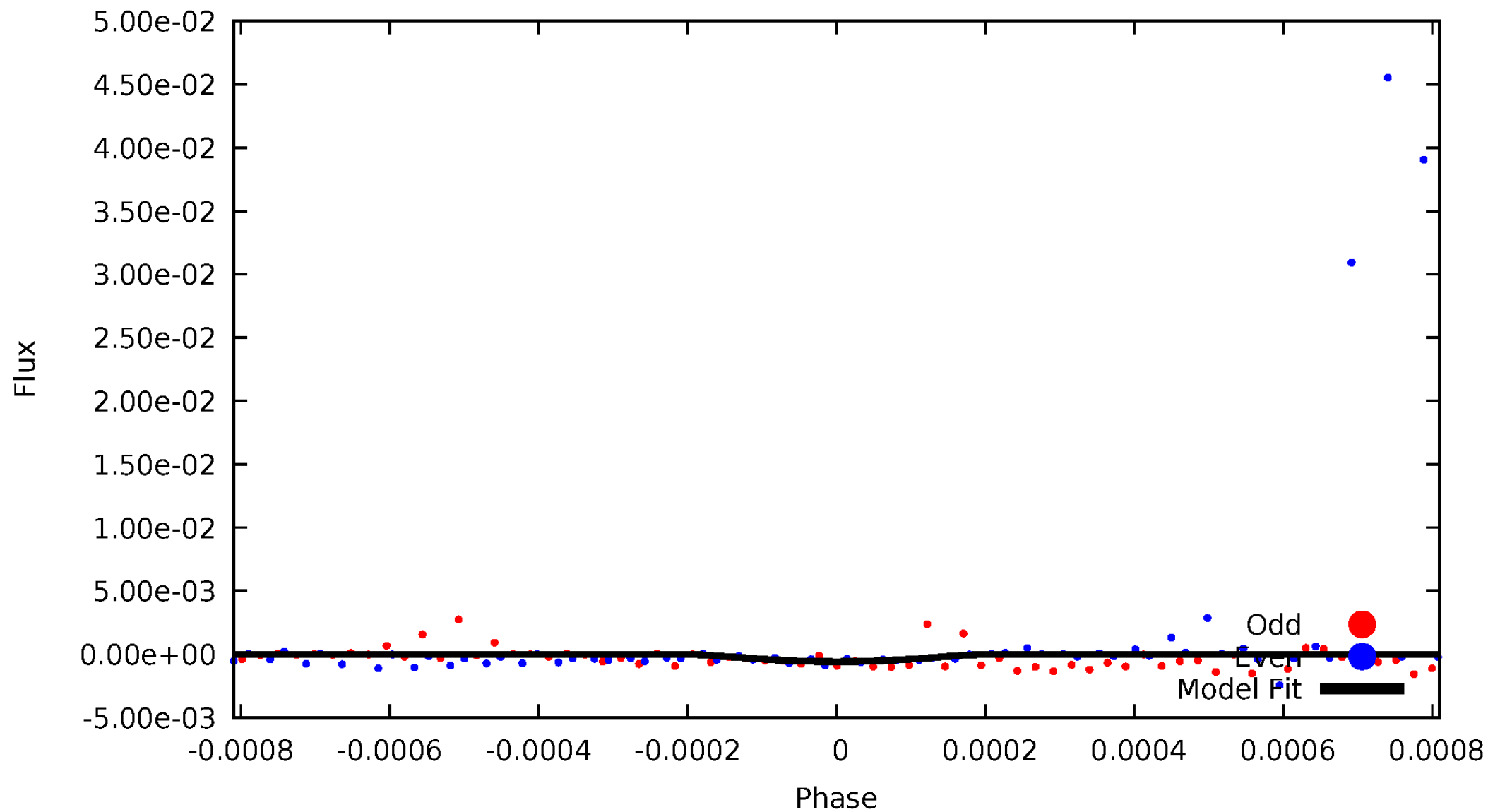


TCE 011551430-03



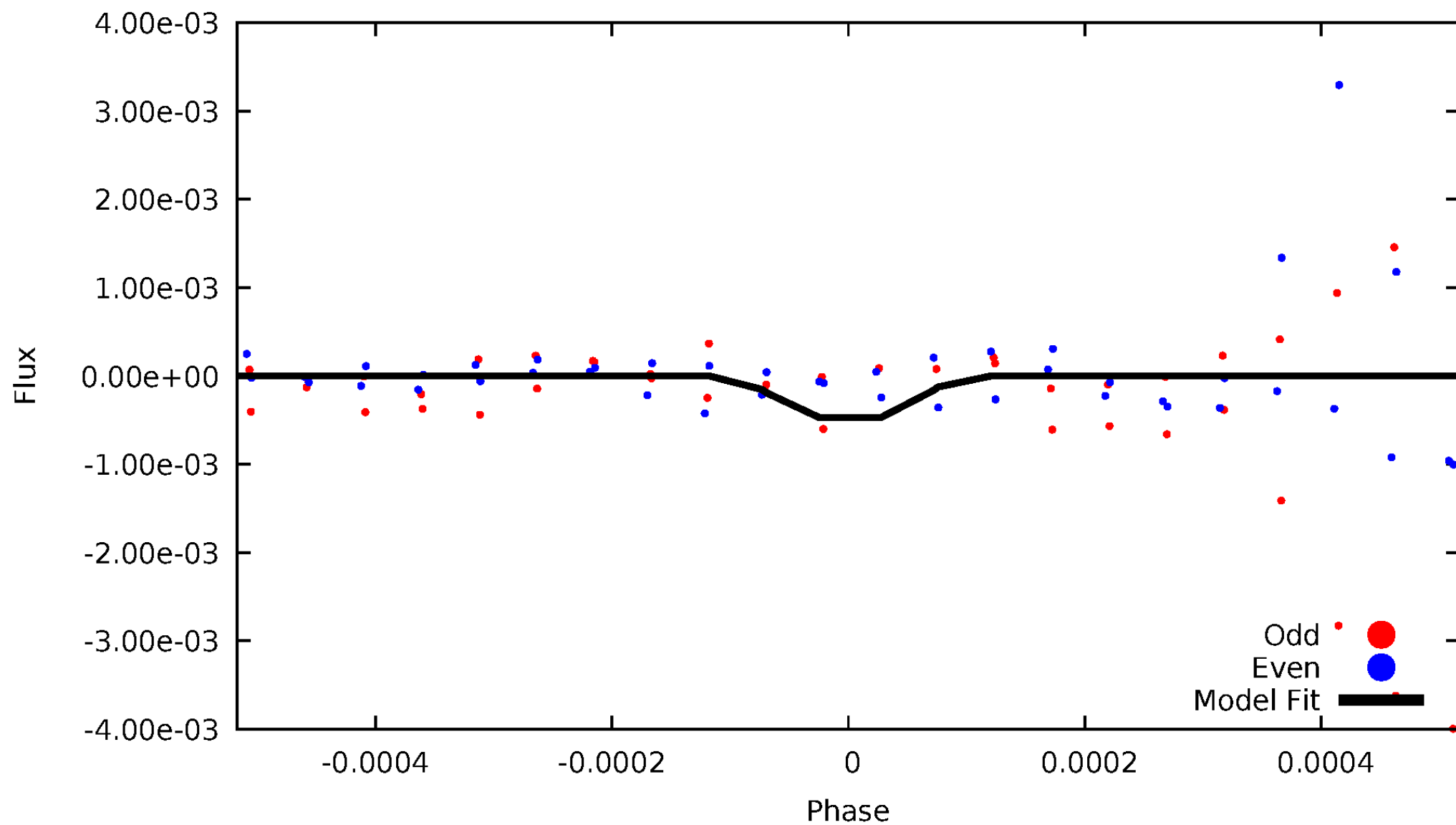
DV Odd/Even

TCE 011551430-03



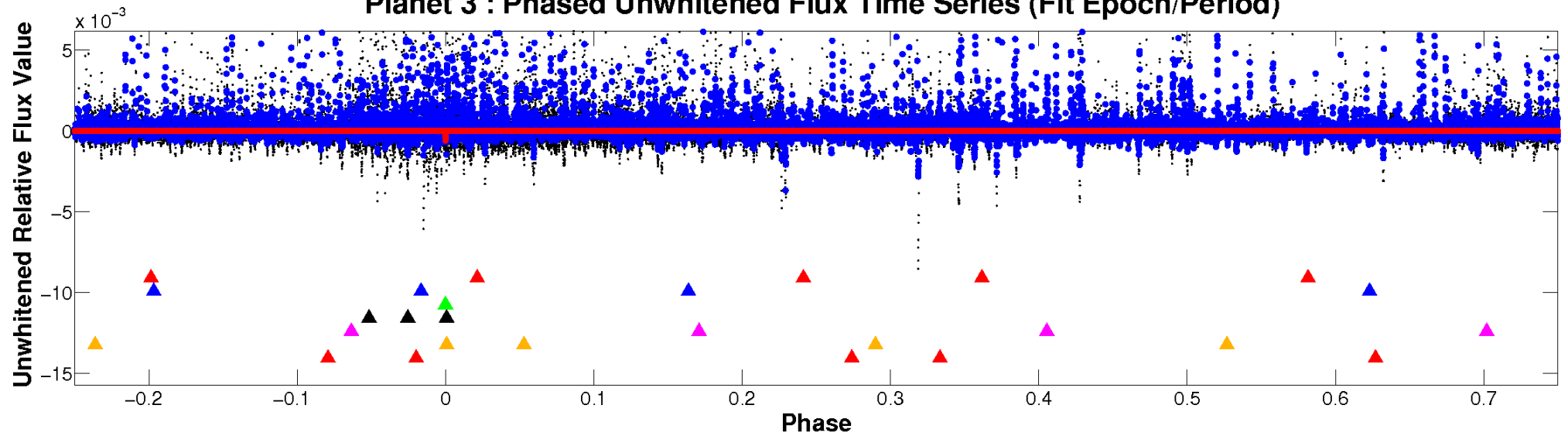
ALT Odd/Even

TCE 011551430-03

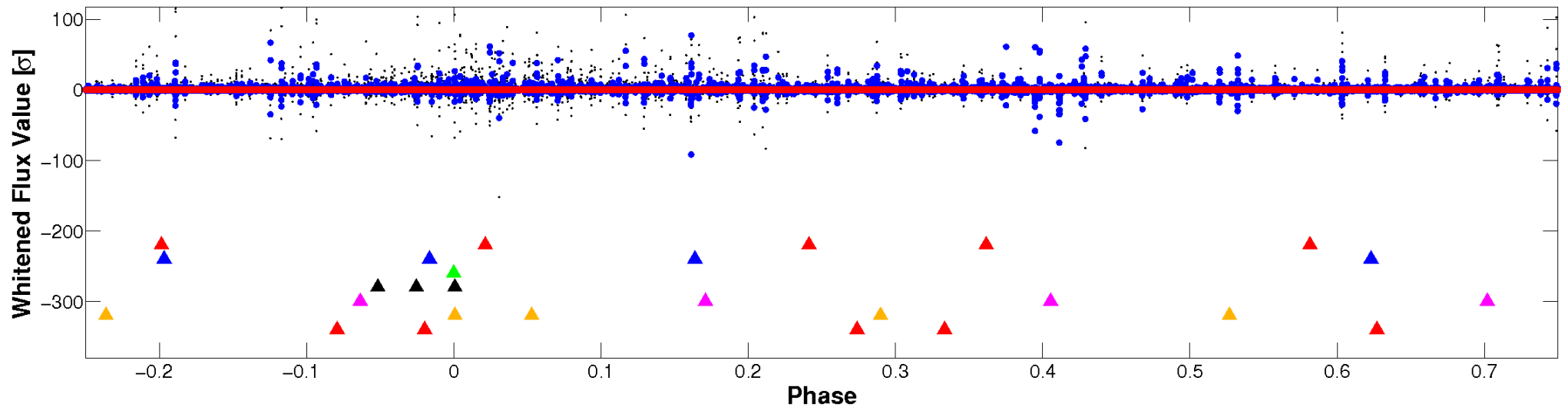


Non-Whitened Vs. Whitened Light Curve

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

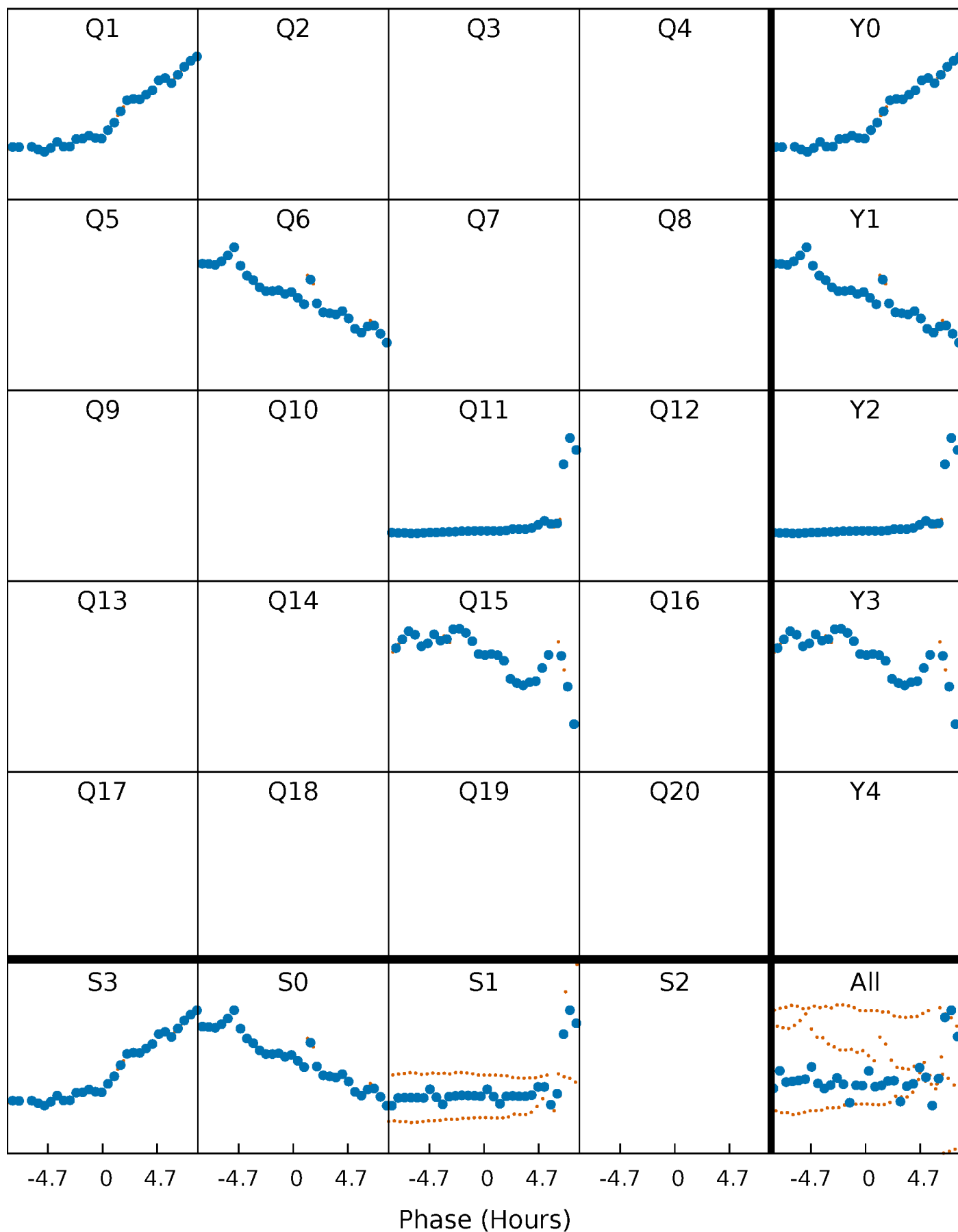


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



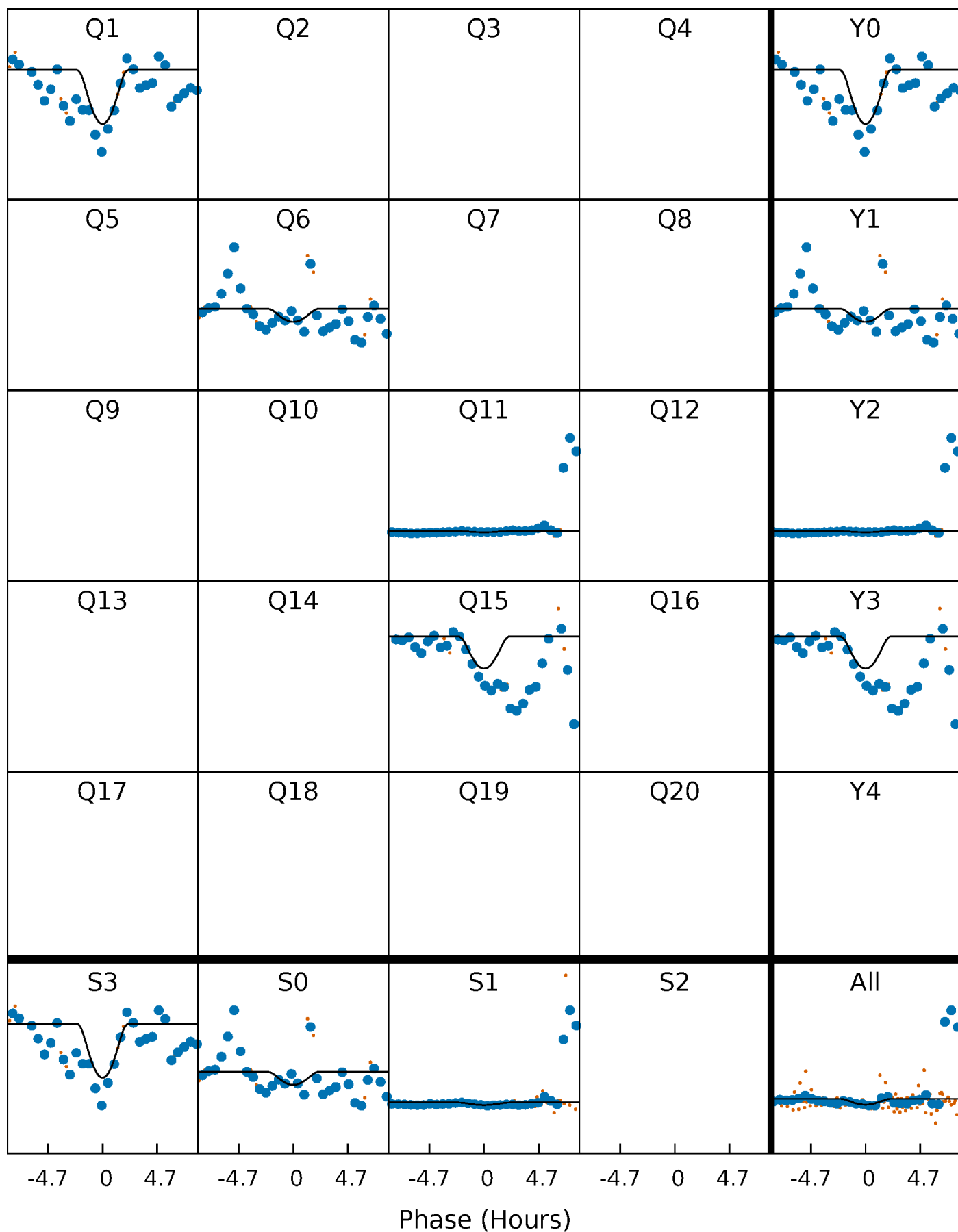
PDC Quarter-Phased Transit Curves

TCE 011551430-03 P=422.060038 Days $T_0=158.532752$ (BKJD)



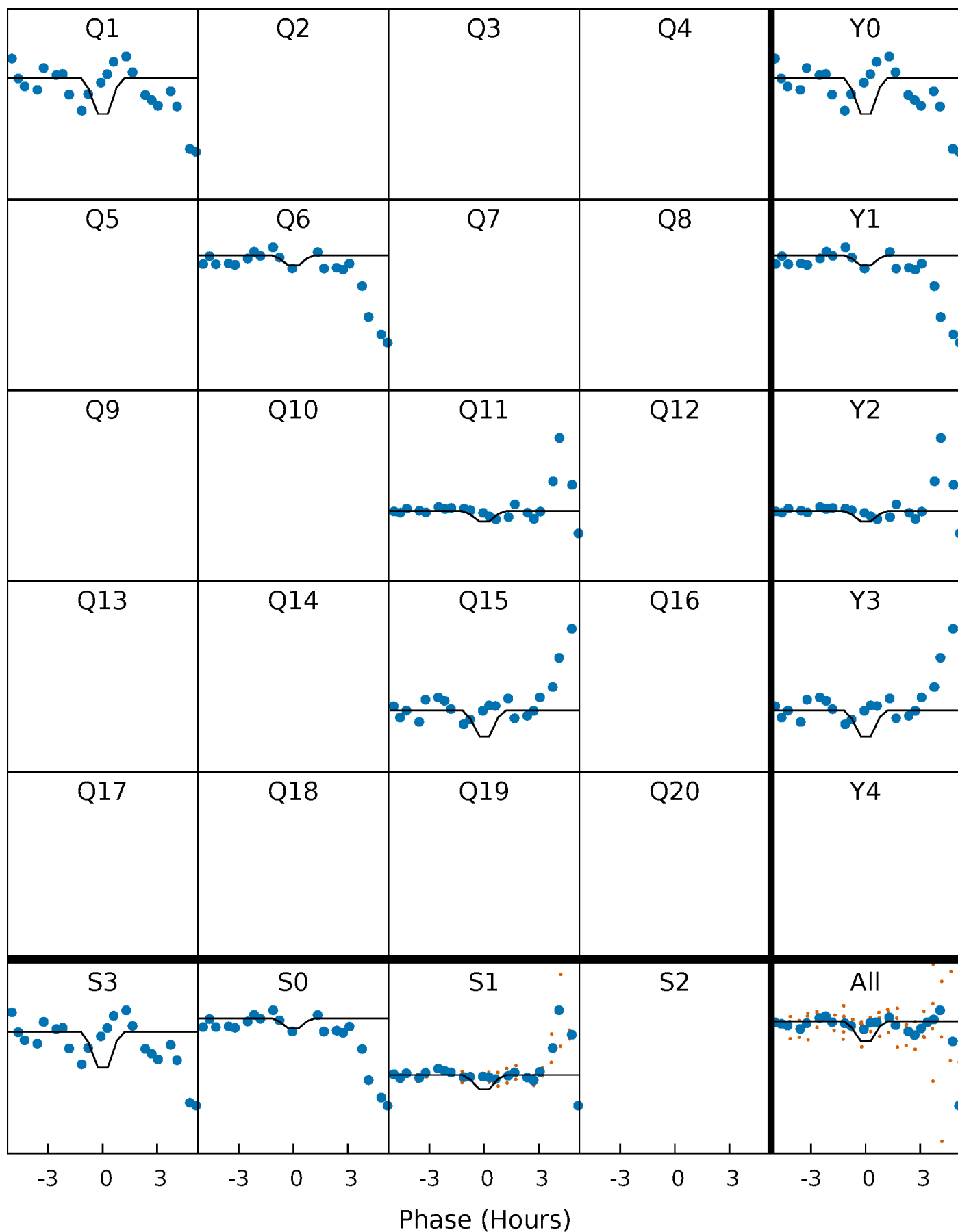
DV Quarter-Phased Transit Curves

TCE 011551430-03 $P=422.060038$ Days $T_0=158.532752$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

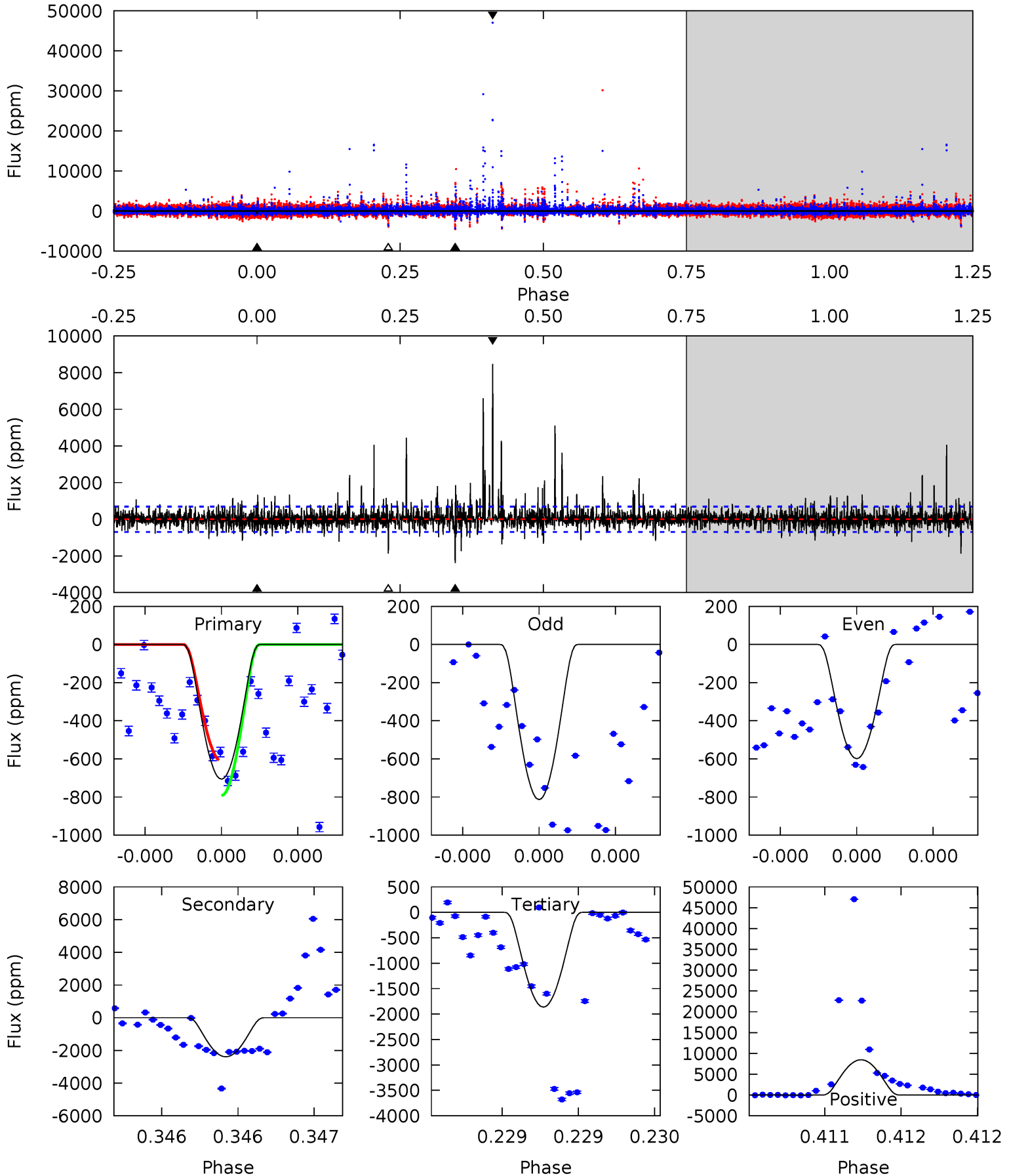
TCE 011551430-03 $P=422.055182$ Days $T_0=158.577533$ (BKJD)



DV Model-Shift Uniqueness Test

011551430-03, P = 422.060038 Days, E = 158.532752 Days

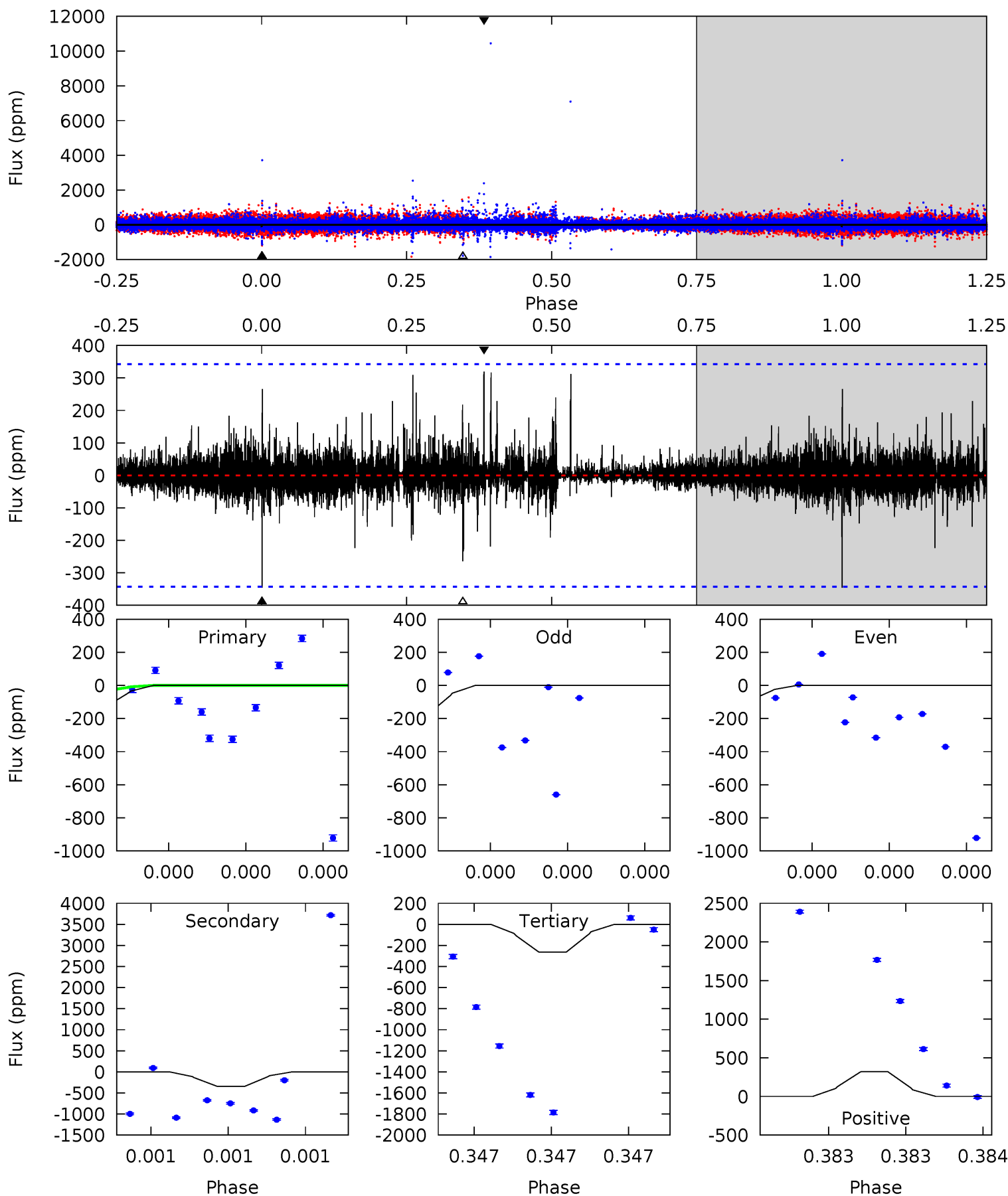
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.72	19.4	15.1	68.6	5.59	3.51	3.38	-9.37	-62.9	4.26	-49.2	0.48	0.99	0.78	0.76



Alt Model-Shift Uniqueness Test

011551430-03, P = 422.055182 Days, E = 158.577533 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.18	5.84	4.45	5.39	5.78	3.79	0.57	-2.27	-3.21	1.39	0.45	0.62	1.95	0.48	0.41



Stellar Parameters For KIC 011551430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5648^{+113}_{-90}	$4.019^{+0.217}_{-0.109}$	$-0.080^{+0.150}_{-0.100}$	$1.605^{+0.297}_{-0.363}$	$0.983^{+0.102}_{-0.084}$	$0.335^{+0.360}_{-0.109}$
	+2%/-2%	+5%/-3%	+188%/-125%	+19%/-23%	+10%/-9%	+108%/-32%
Source	SPE13	SPE13	SPE13	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011551430-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-2390 ± 123	$27.31^{+31.06}_{-18.73}$	419^{+21}_{-28}	3576^{+1957}_{-702}	2129^{+20500}_{-1649}
Alt.	-346 ± 59	$24.69^{+31.35}_{-16.86}$	417^{+22}_{-28}	2747^{+1180}_{-466}	375^{+3293}_{-300}

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 $A_{obs} \gg 1.0$

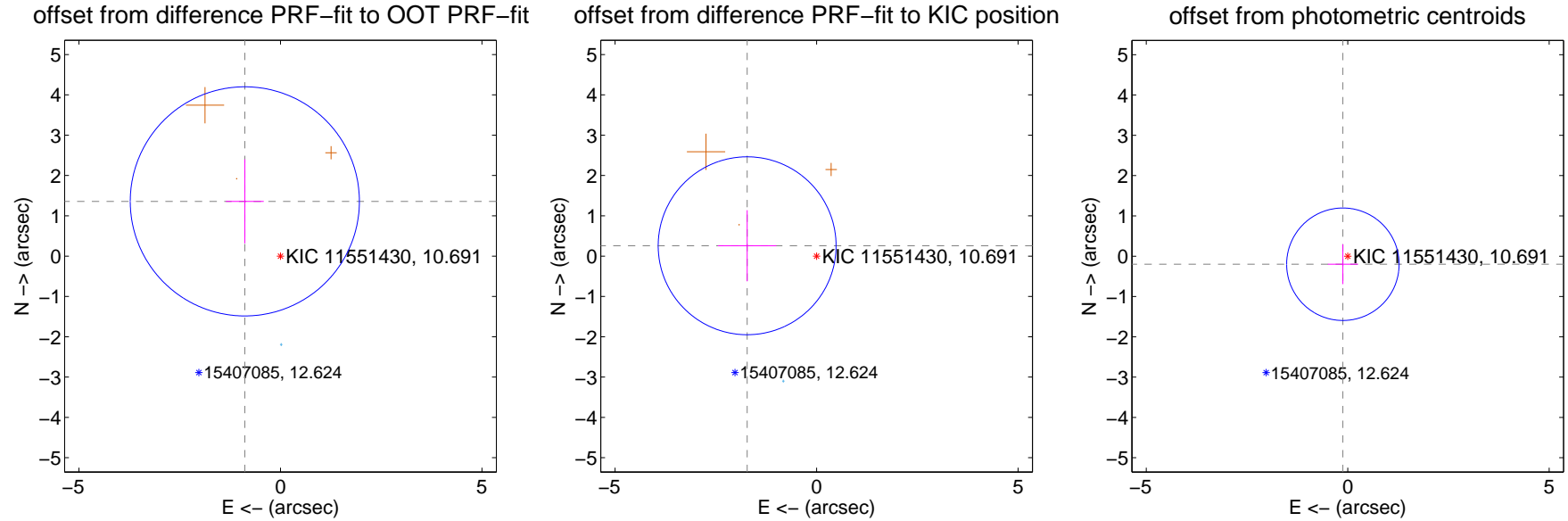
DV Centroid Data

Supplemental centroid analysis for 011551430-03. **Kepler magnitude: 10.69.** Transit SNR 3.78

There are 1 quarters with good PRF difference image offsets

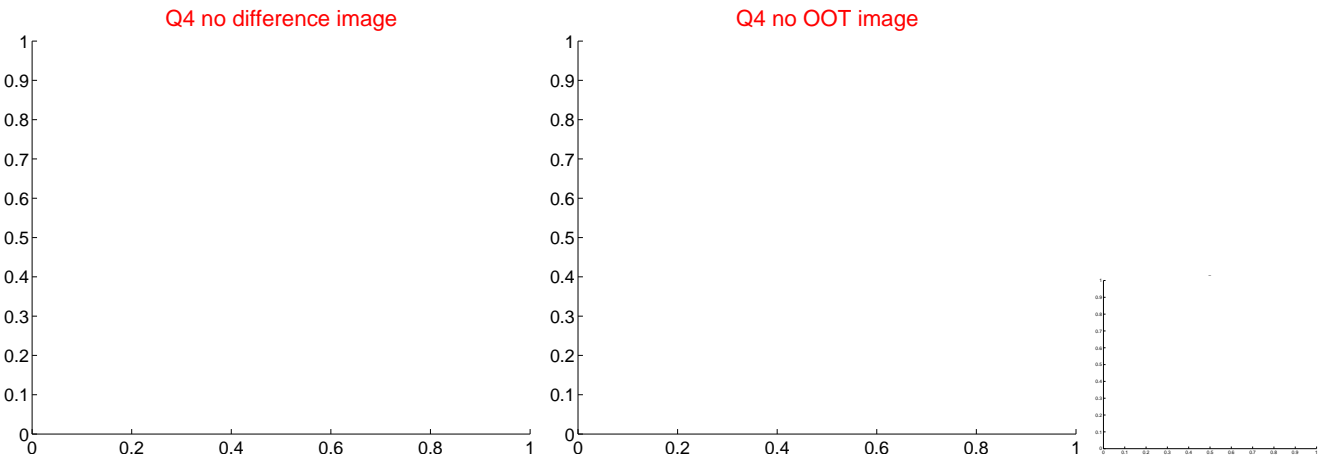
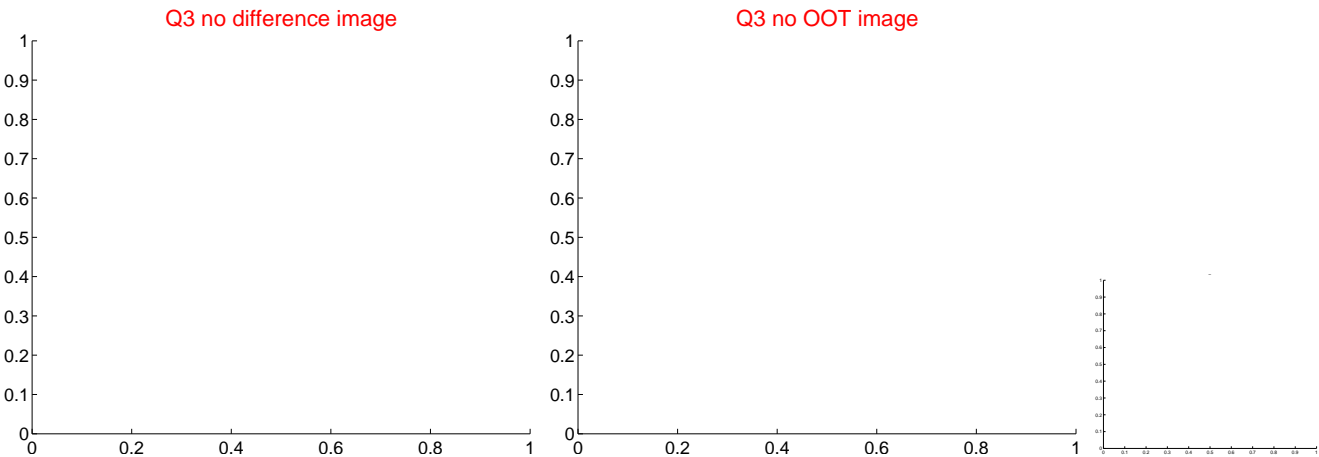
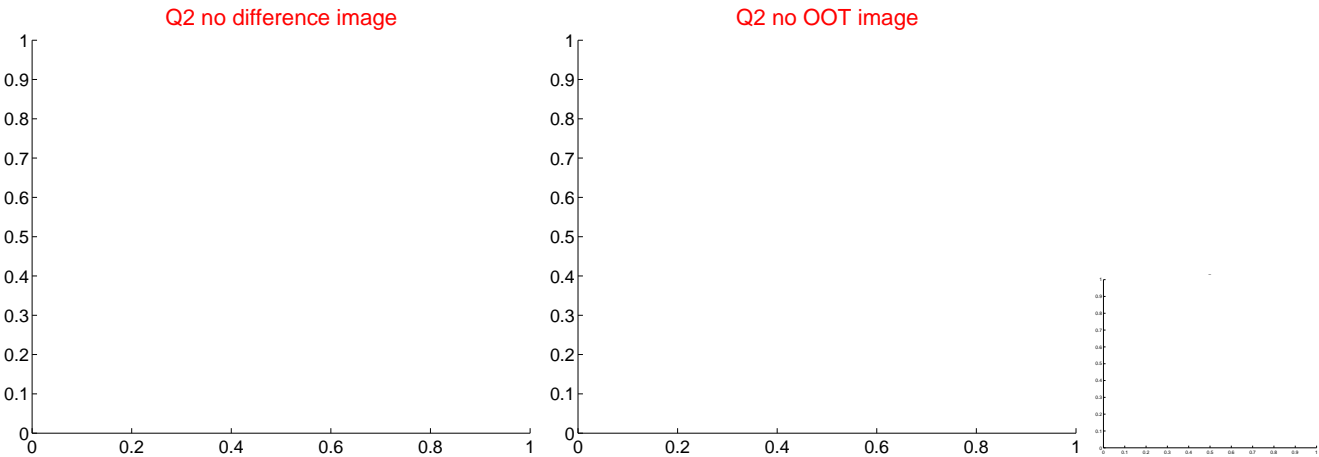
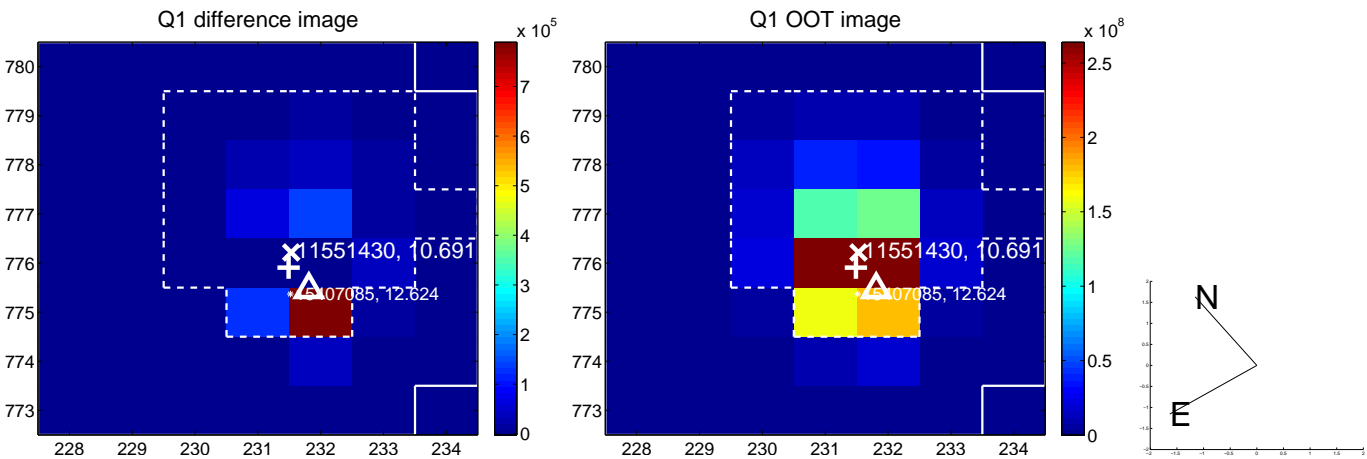
The direct PRF centroid is offset from the target star catalog position by about 1.45 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.621 ± 0.947	1.71	0.884 ± 0.470	1.358 ± 1.043
PRF-fit source offset from KIC position	1.742 ± 0.736	2.37	1.723 ± 0.722	0.257 ± 0.883
photometric centroid source offset	0.23 ± 0.47	0.50	0.12 ± 0.37	-0.20 ± 0.49

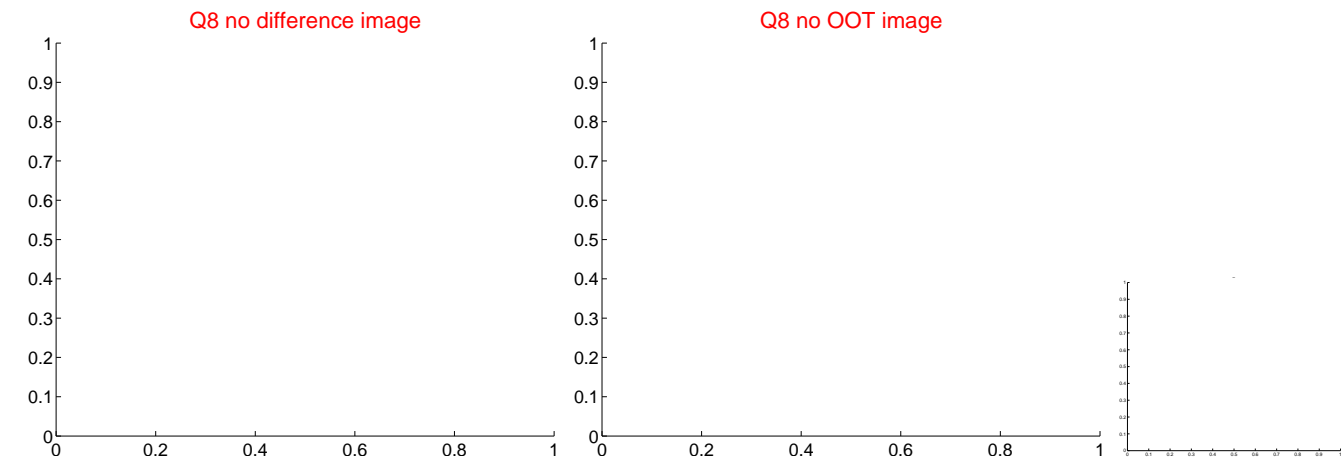
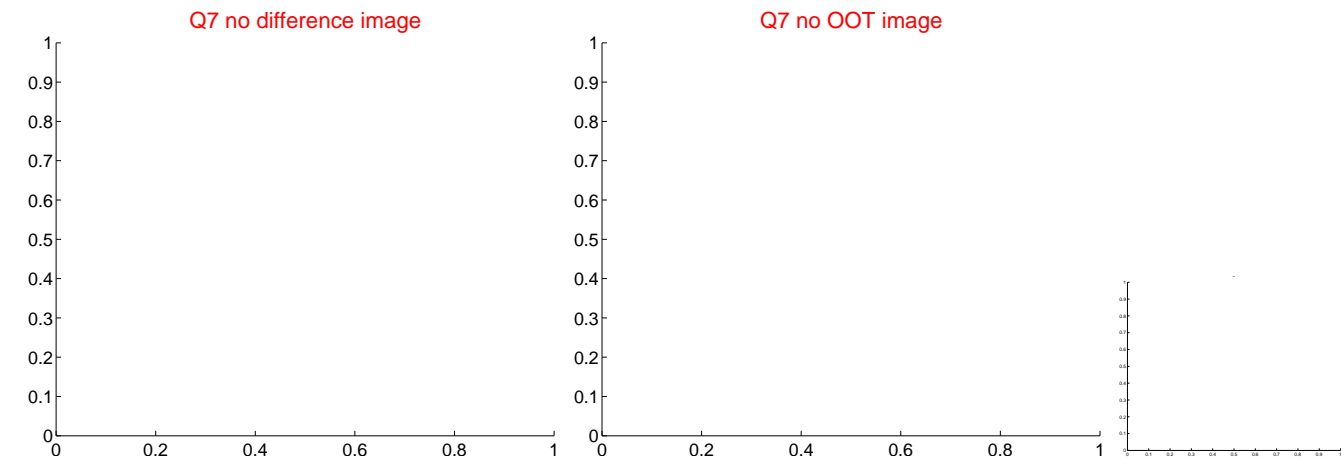
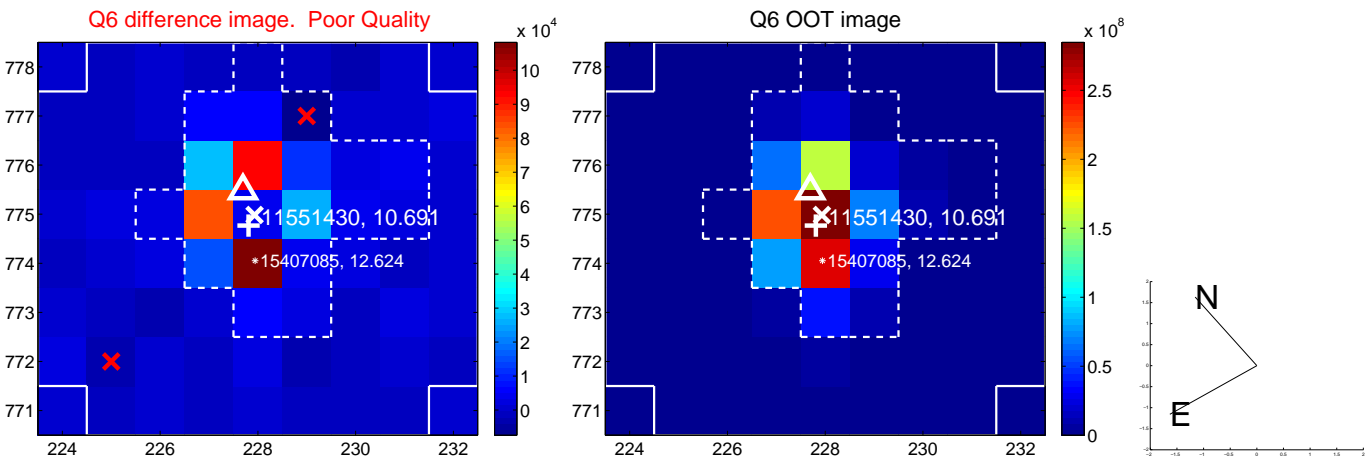


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

Q9 no difference image



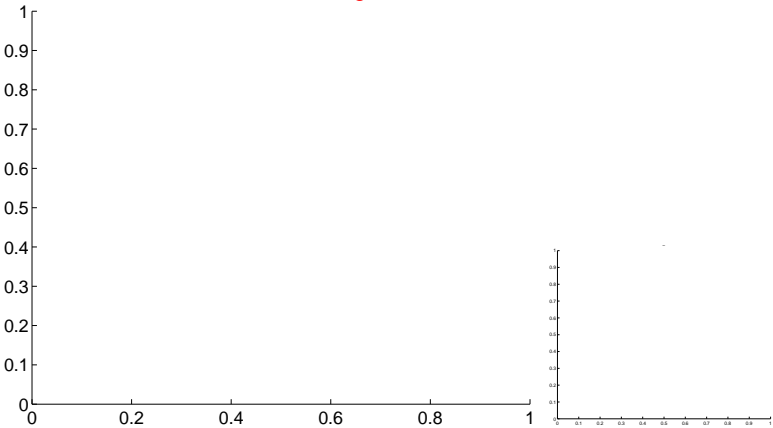
Q9 no OOT image



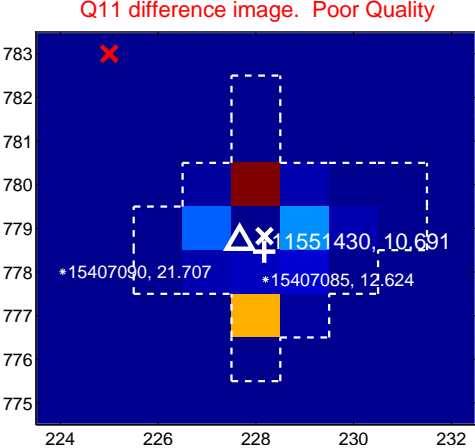
Q10 no difference image



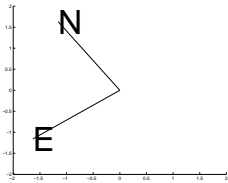
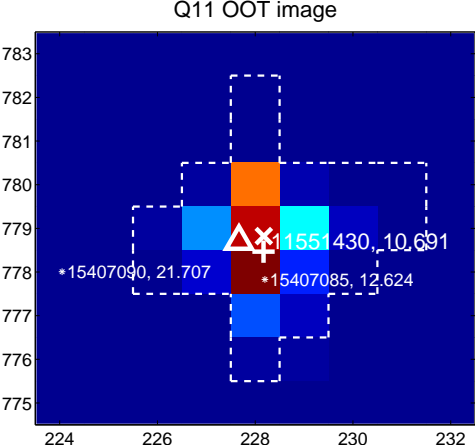
Q10 no OOT image



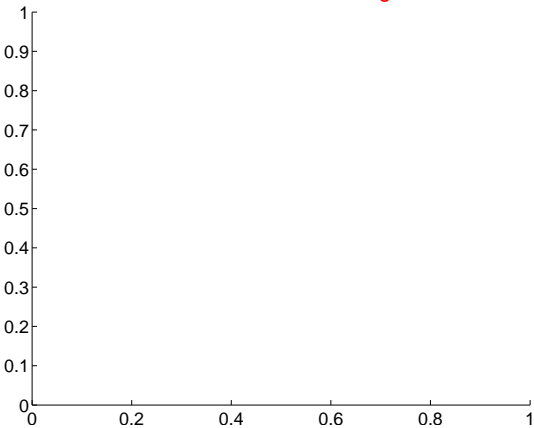
Q11 difference image. Poor Quality



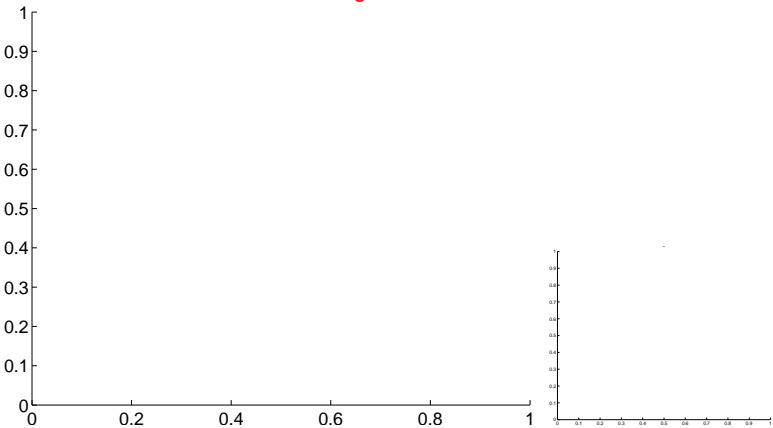
Q11 OOT image



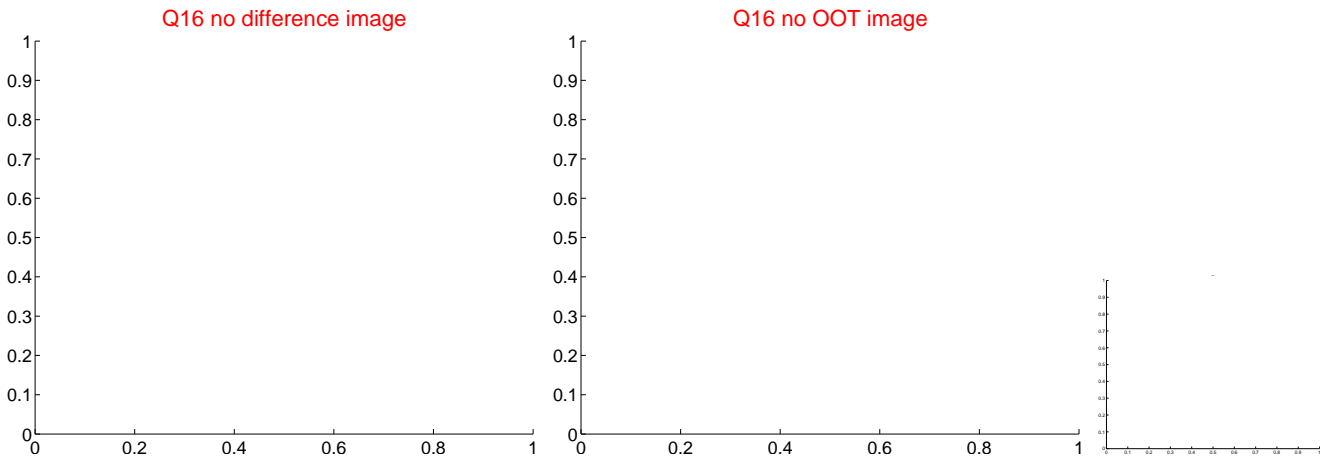
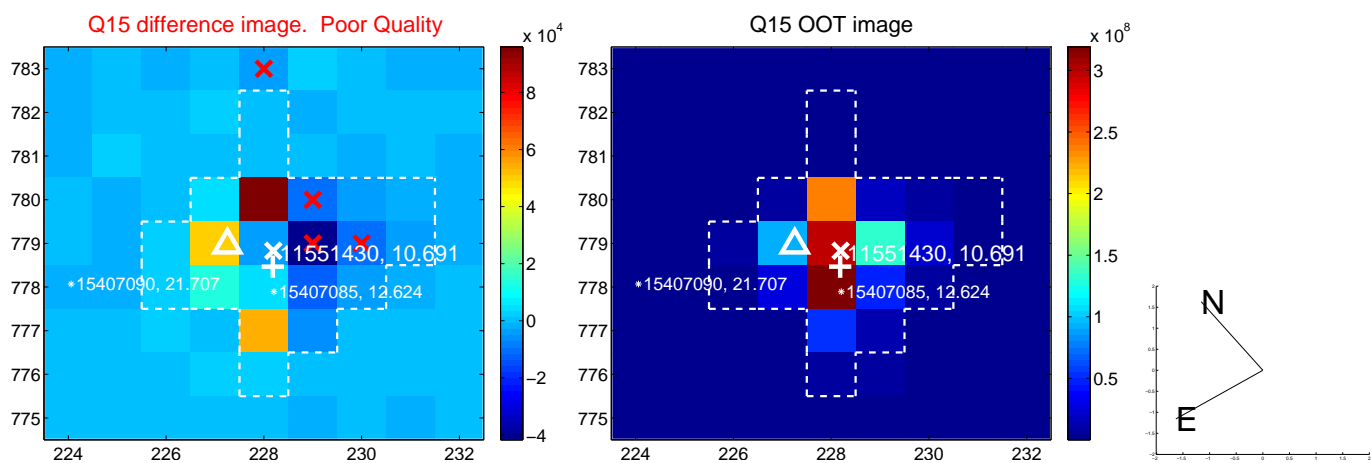
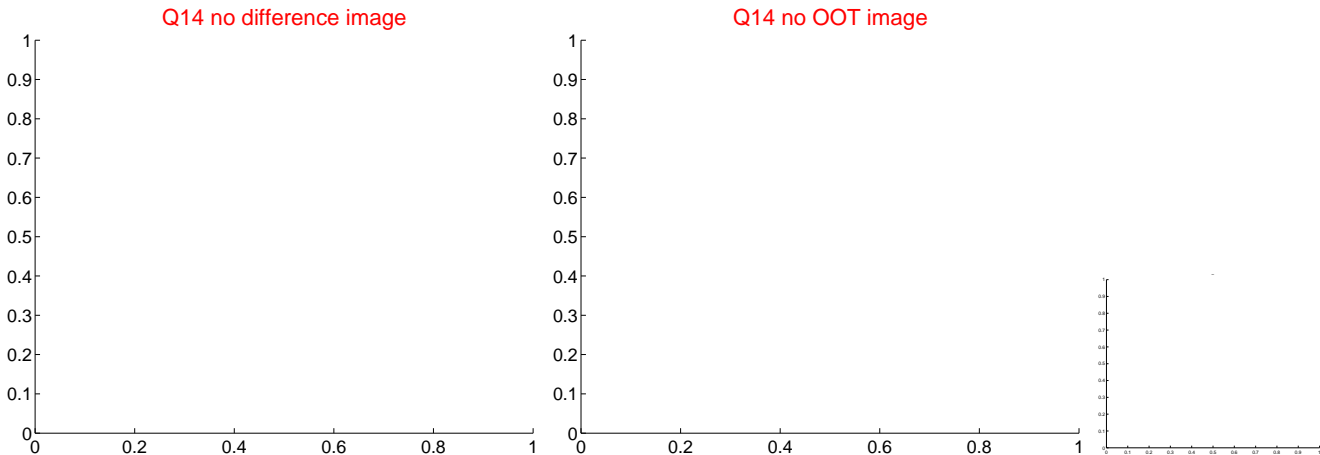
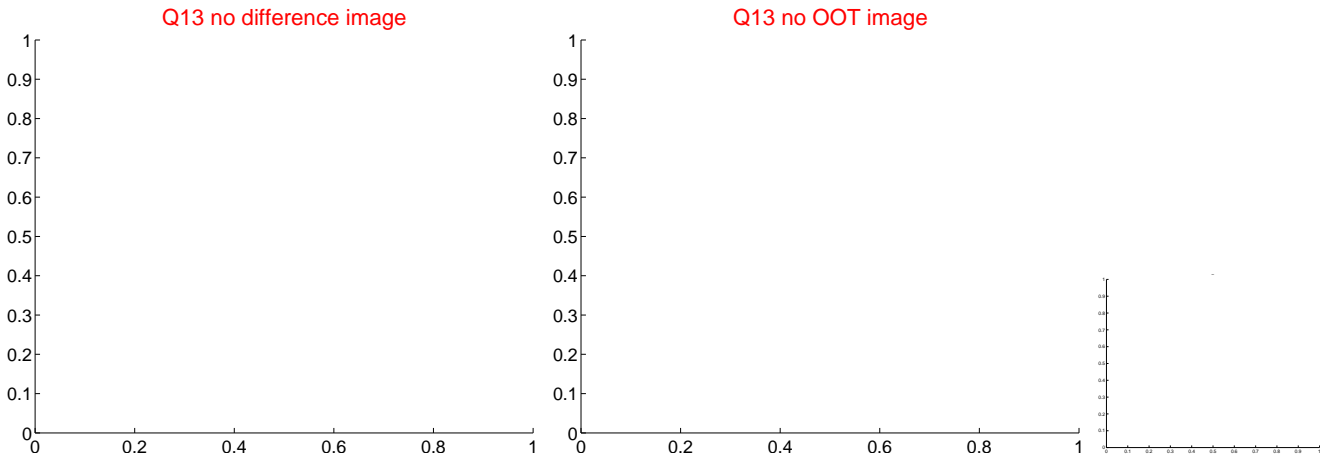
Q12 no difference image



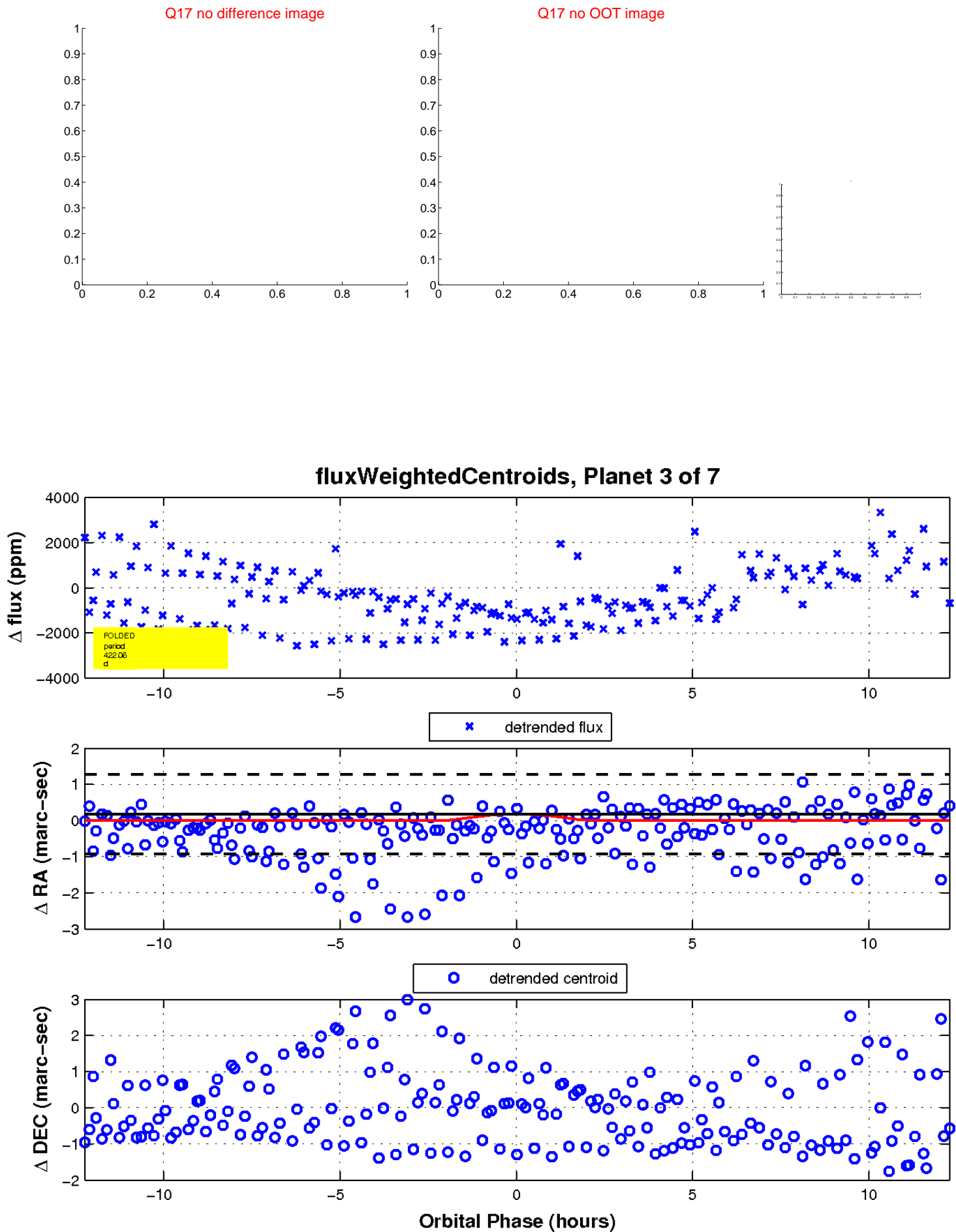
Q12 no OOT image



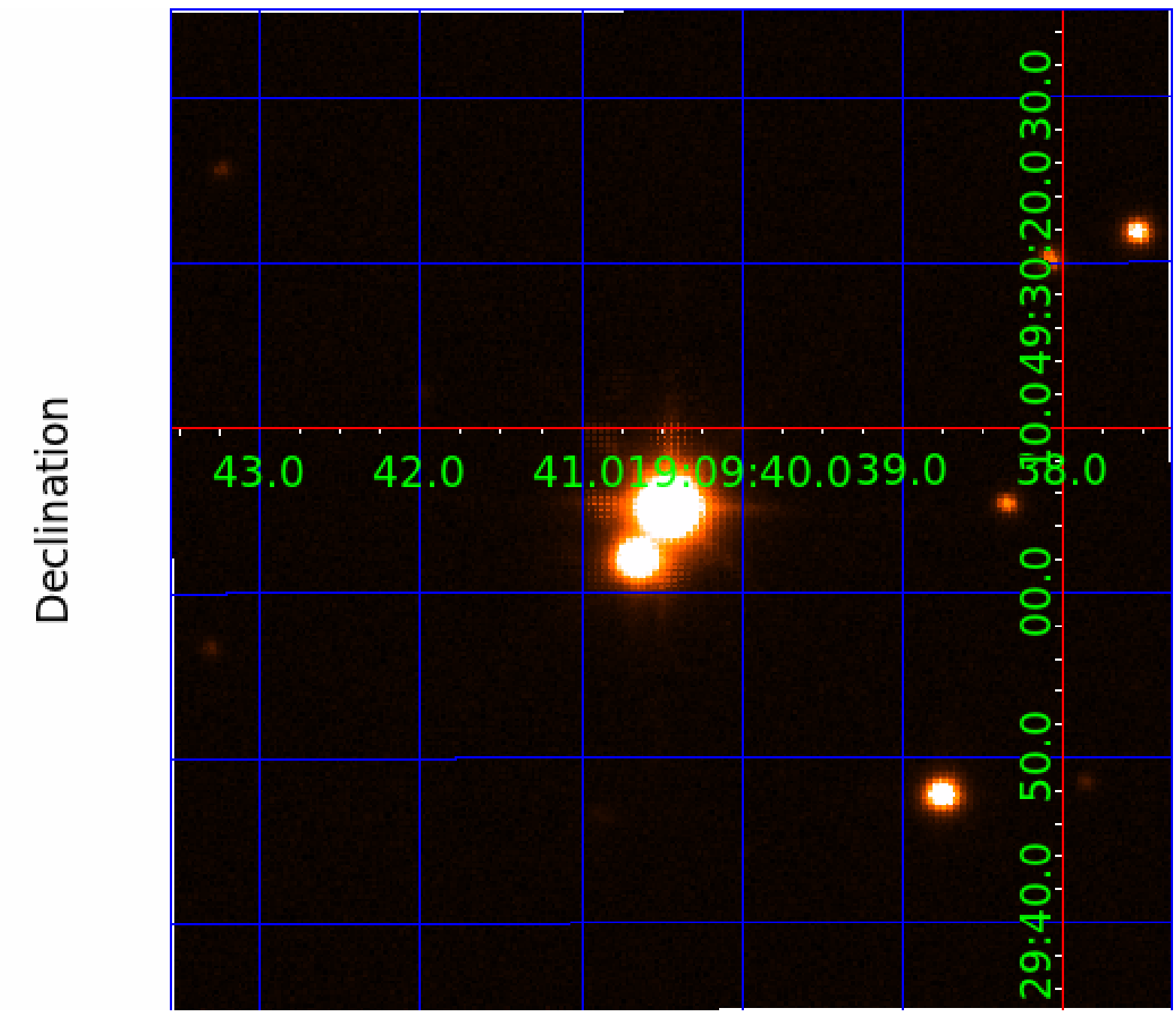
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



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



UKIRT Image



KIC 011551430

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})
011551430-01	OBS	No	329.244684	260.382423	3201.0	13.011	26.0	12.7	1.60	5648	10.39	2.73
011551430-02	OBS	No	345.982227	227.667632	1440.6	7.905	19.3	6.5	1.60	5648	6.07	2.56
011551430-03	OBS	No	422.060038	158.532752	587.4	4.098	18.8	3.8	1.60	5648	7.78	1.96
011551430-04	OBS	No	433.106981	558.832902	2054.7	3.784	19.8	9.0	1.60	5648	7.74	1.89
011551430-05	OBS	No	323.095596	329.665334	672.4	5.841	17.2	4.8	1.60	5648	4.37	2.80
011551430-06	OBS	No	322.047745	158.868707	1693.2	3.849	18.1	9.3	1.60	5648	6.68	2.81
011551430-07	OBS	No	273.011498	299.244567	196.0	3.000	18.4	-1.0	1.60	5648	2.23	3.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011551430-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011551430-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
011551430-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
011551430-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011551430-05	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
011551430-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011551430-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

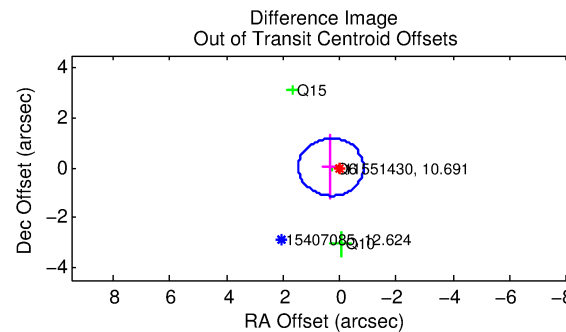
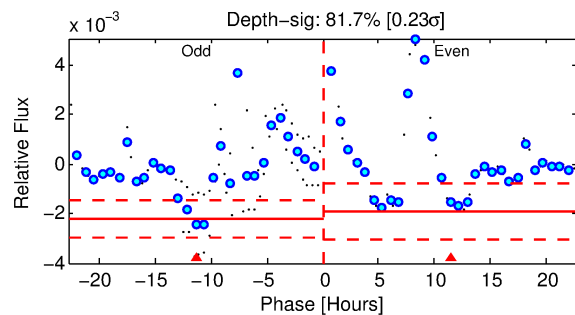
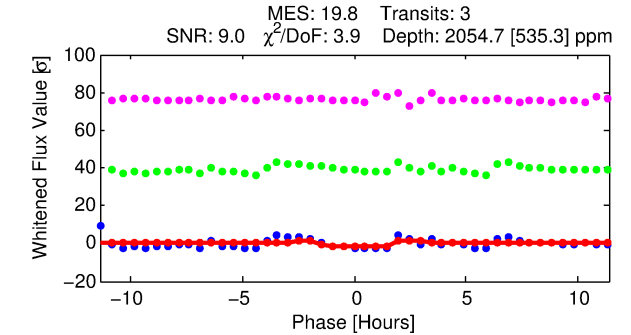
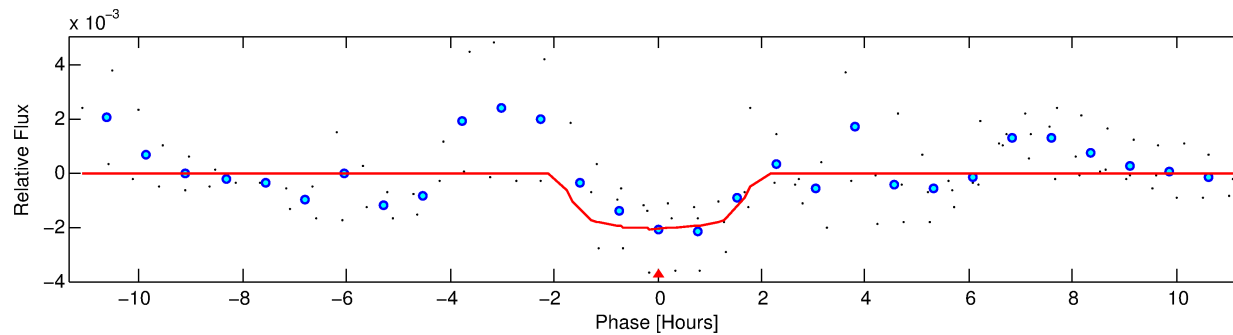
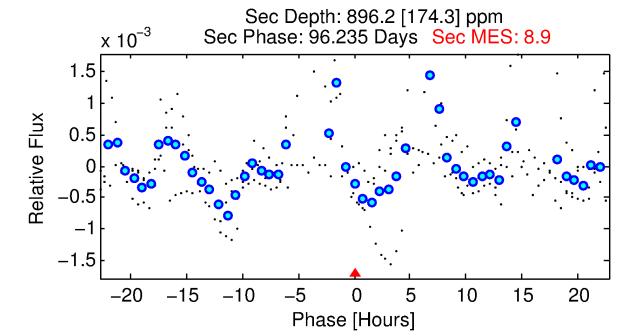
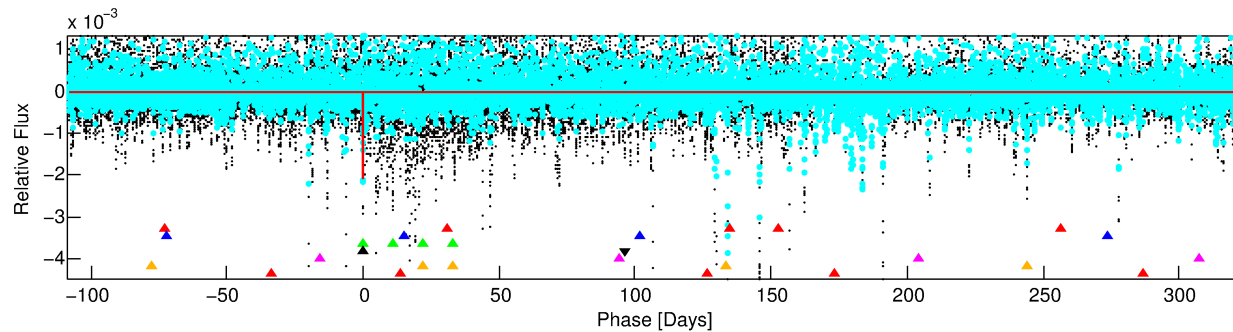
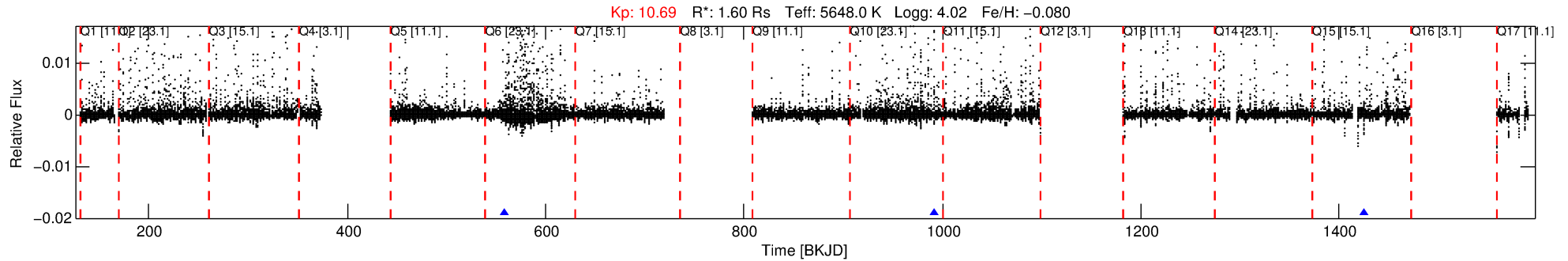
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011551430-04

No Significant Match Found

DV One-Page Summary

KIC: 11551430 Candidate: 4 of 7 Period: 433.107 d



DV Fit Results:

Period = 433.10698 [0.00728] d
Epoch = 558.8329 [0.0076] BKJD
Rp/R* = 0.0442 [0.2361]
a/R* = 691.84 [15872.07]
b = 0.68 [18.33]
Seff = 1.89 [0.71]
Teq = 299 [28] K
Rp = 7.74 [41.38] Re
a = 1.1136 [0.2502] AU
Ag = 10218.40 [109319.09] [0.09σ]
Teffp = 4650 [12430] K [0.35σ]

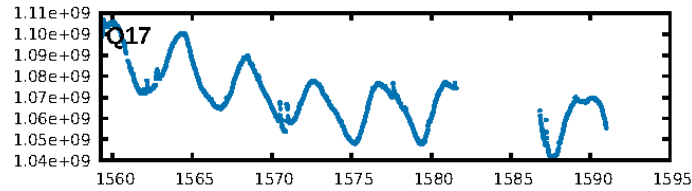
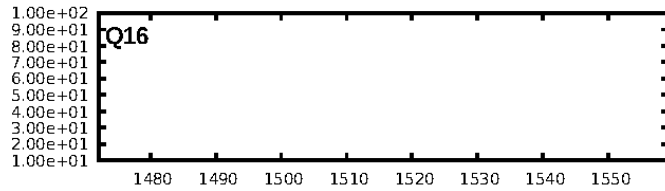
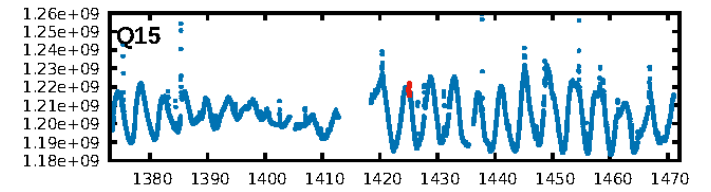
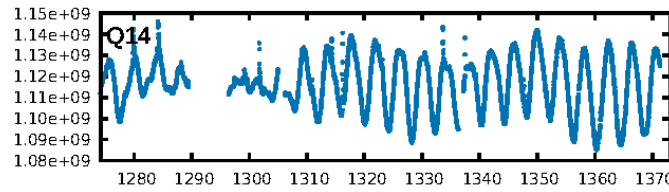
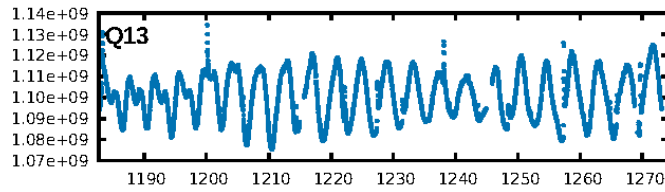
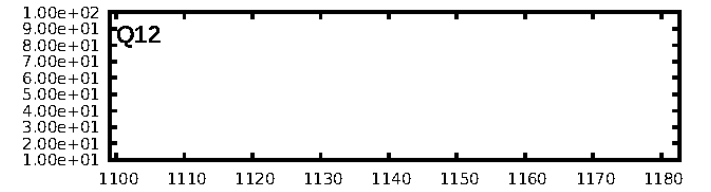
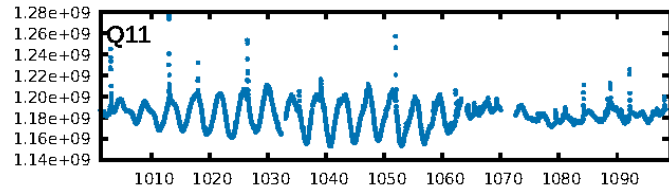
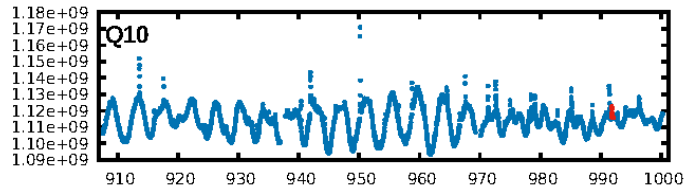
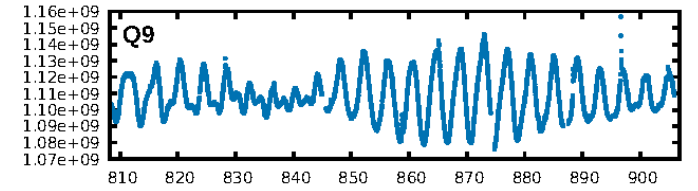
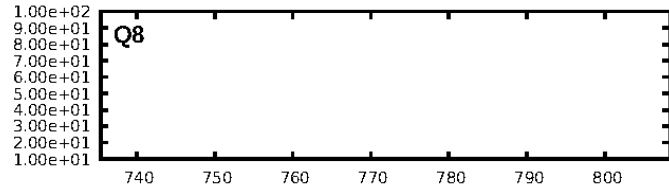
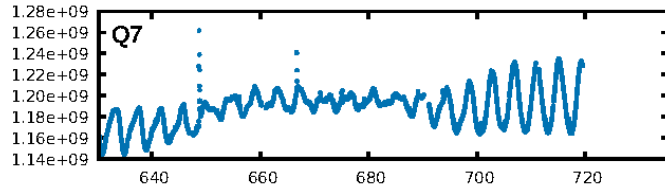
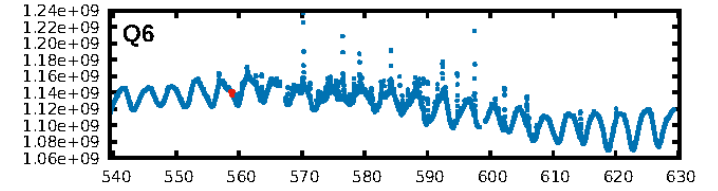
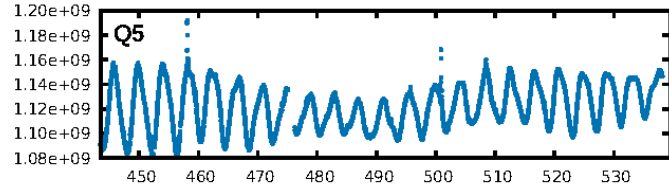
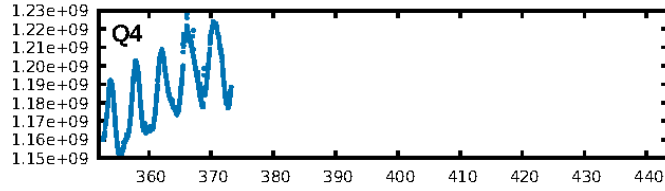
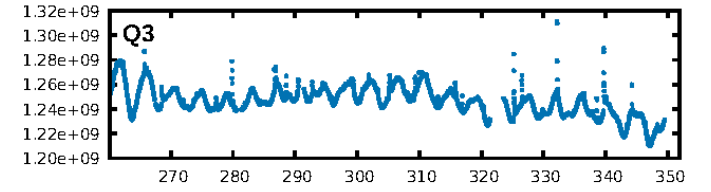
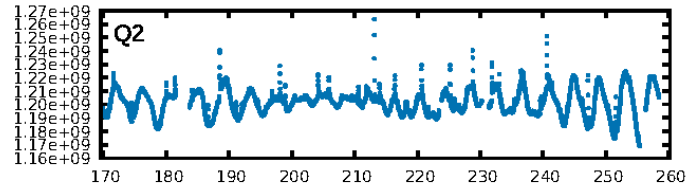
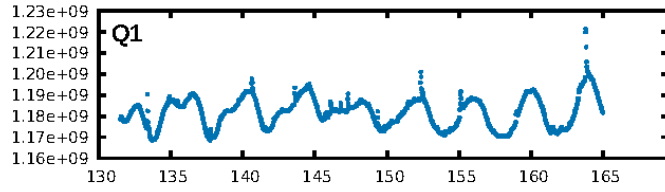
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [47.53σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: 0.0%
ModelChiSquareGof-sig: 10.4%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 3.335
Centroid-sig: N/A
Centroid-so: 0.504 arcsec [5.38σ]
OotOffset-rm: 0.312 arcsec [0.81σ]
OotOffset-st: 2/1/0/0 [3]
KicOffset-rm: 1.187 arcsec [5.95σ]
KicOffset-st: 2/1/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 0.67 [2/3]

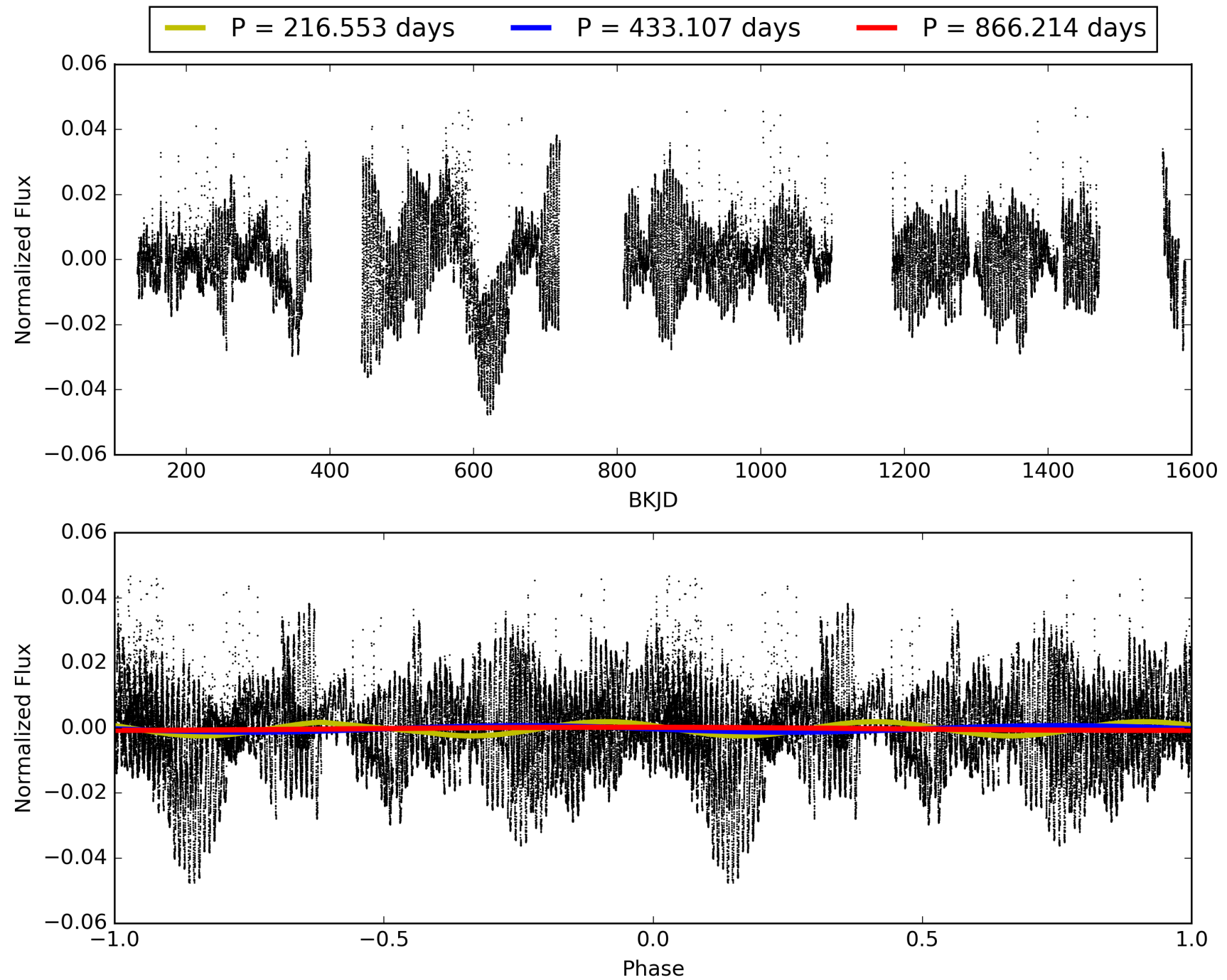
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:11:31 Z

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

TCE 011551430-04, PDC Light Curves

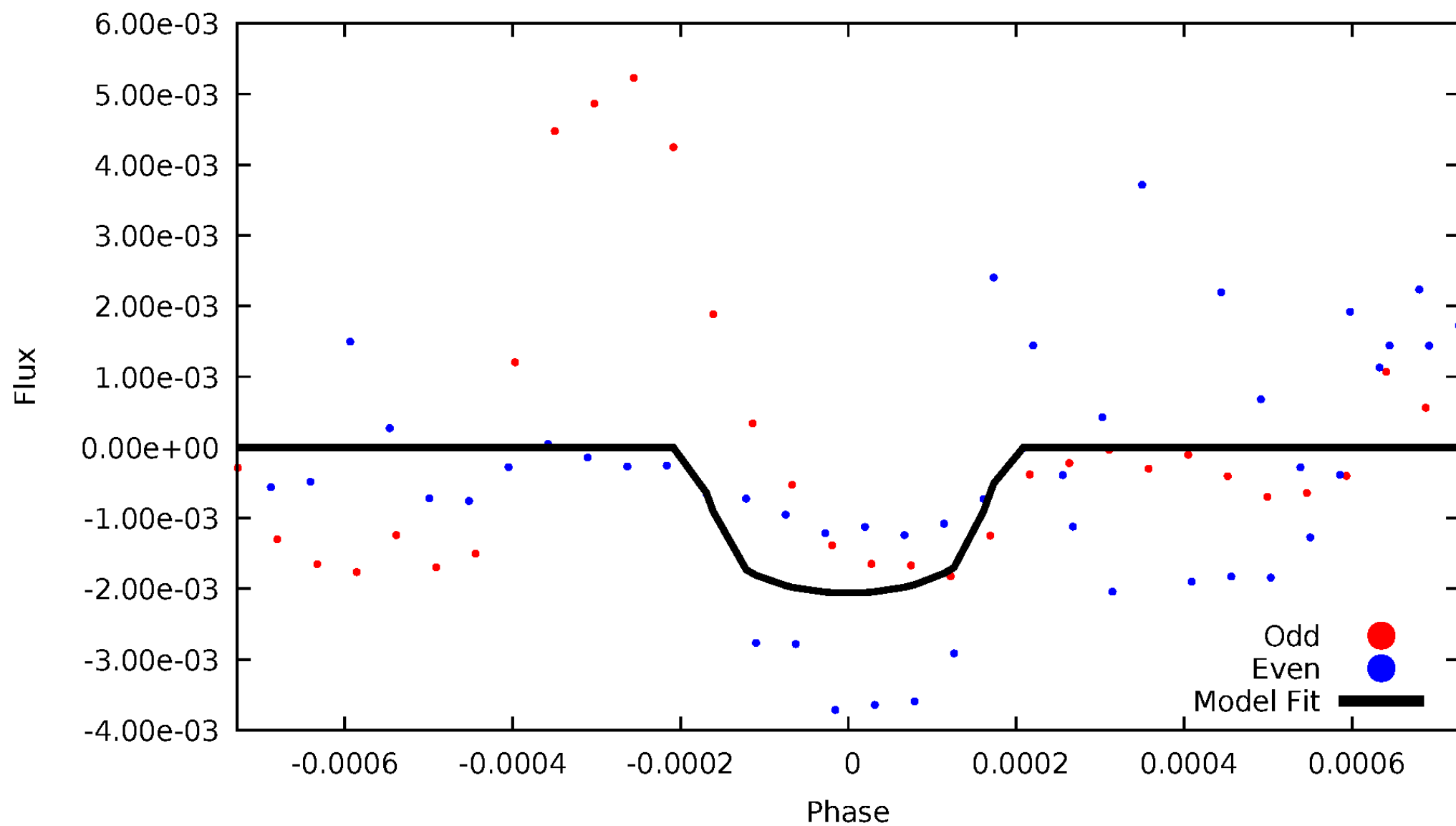


TCE 011551430-04



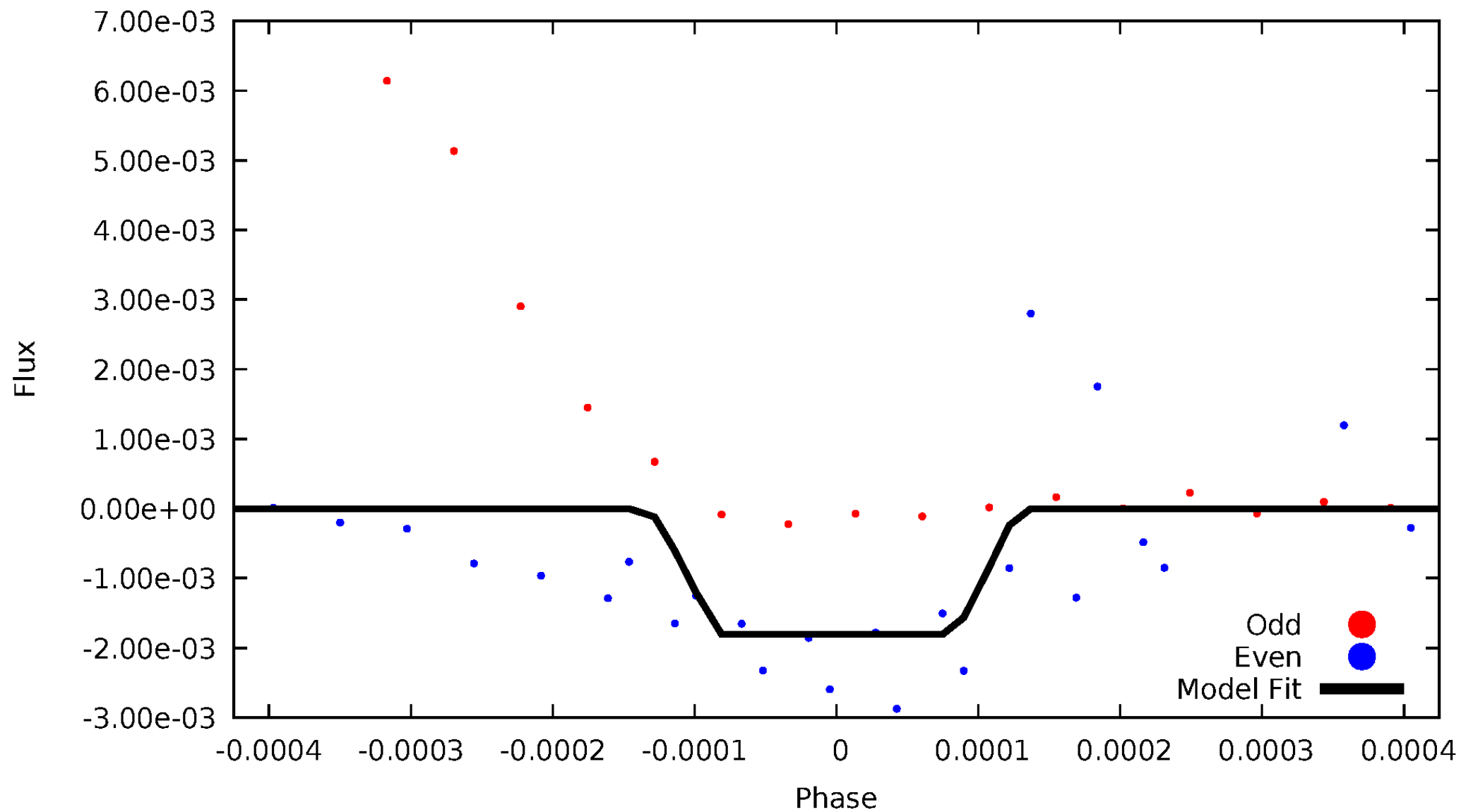
DV Odd/Even

TCE 011551430-04



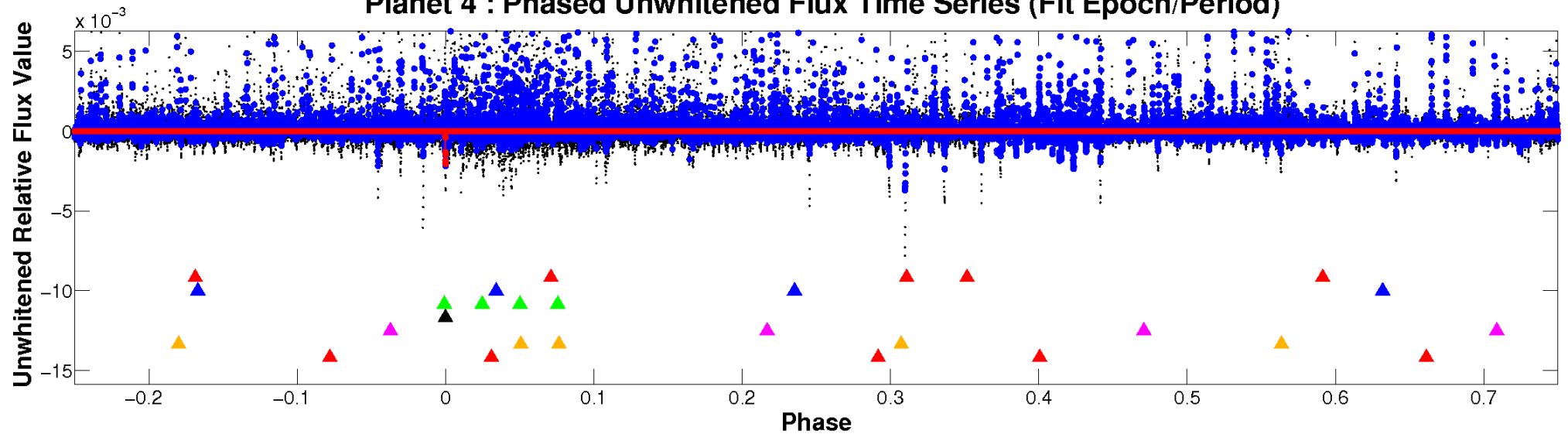
ALT Odd/Even

TCE 011551430-04

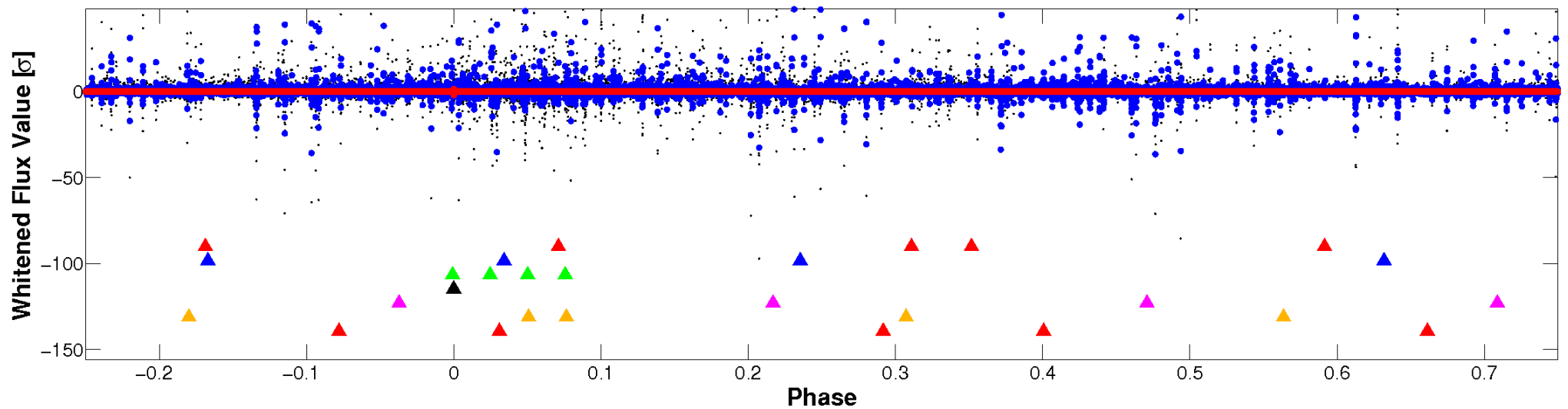


Non-Whitened Vs. Whitened Light Curve

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

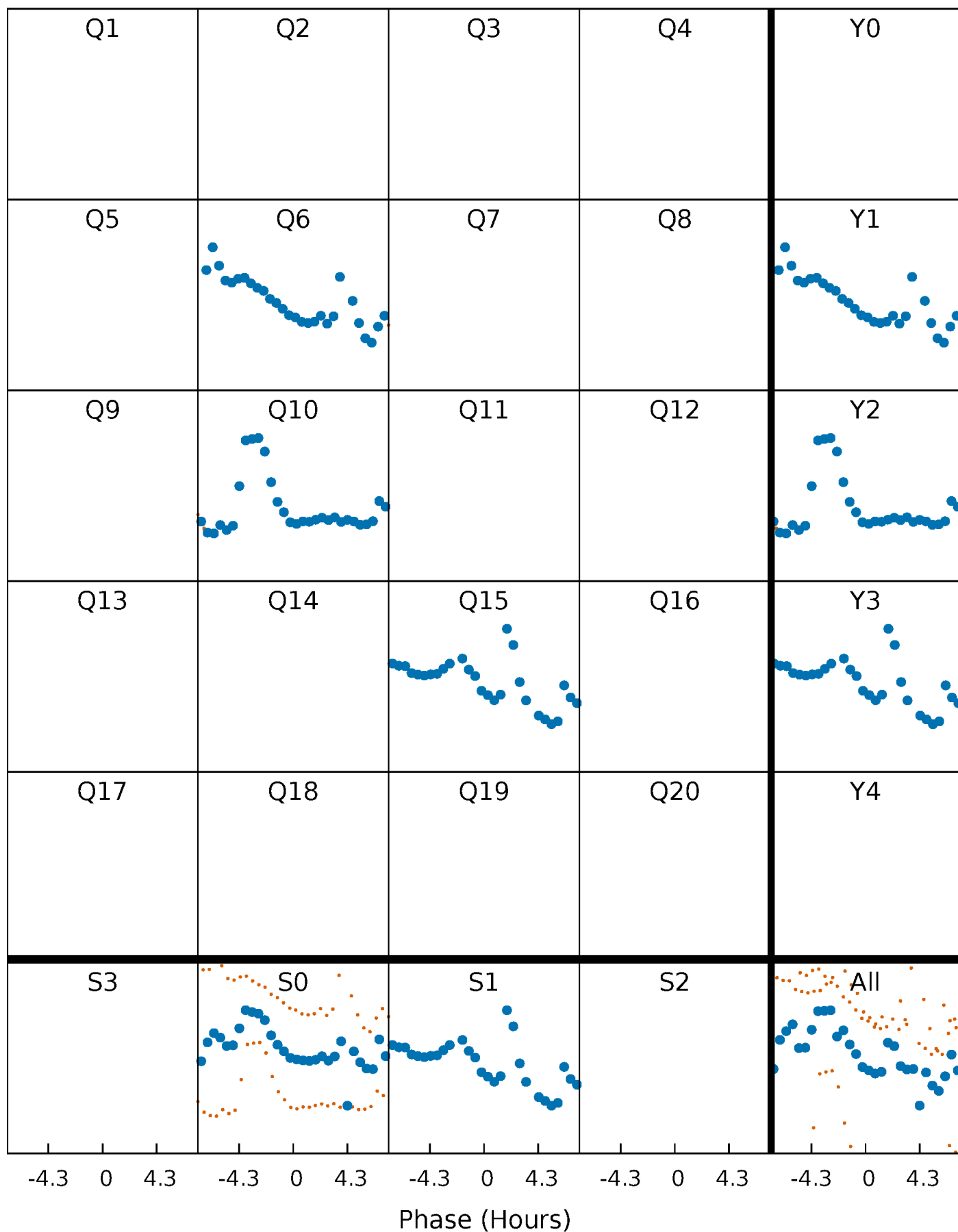


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



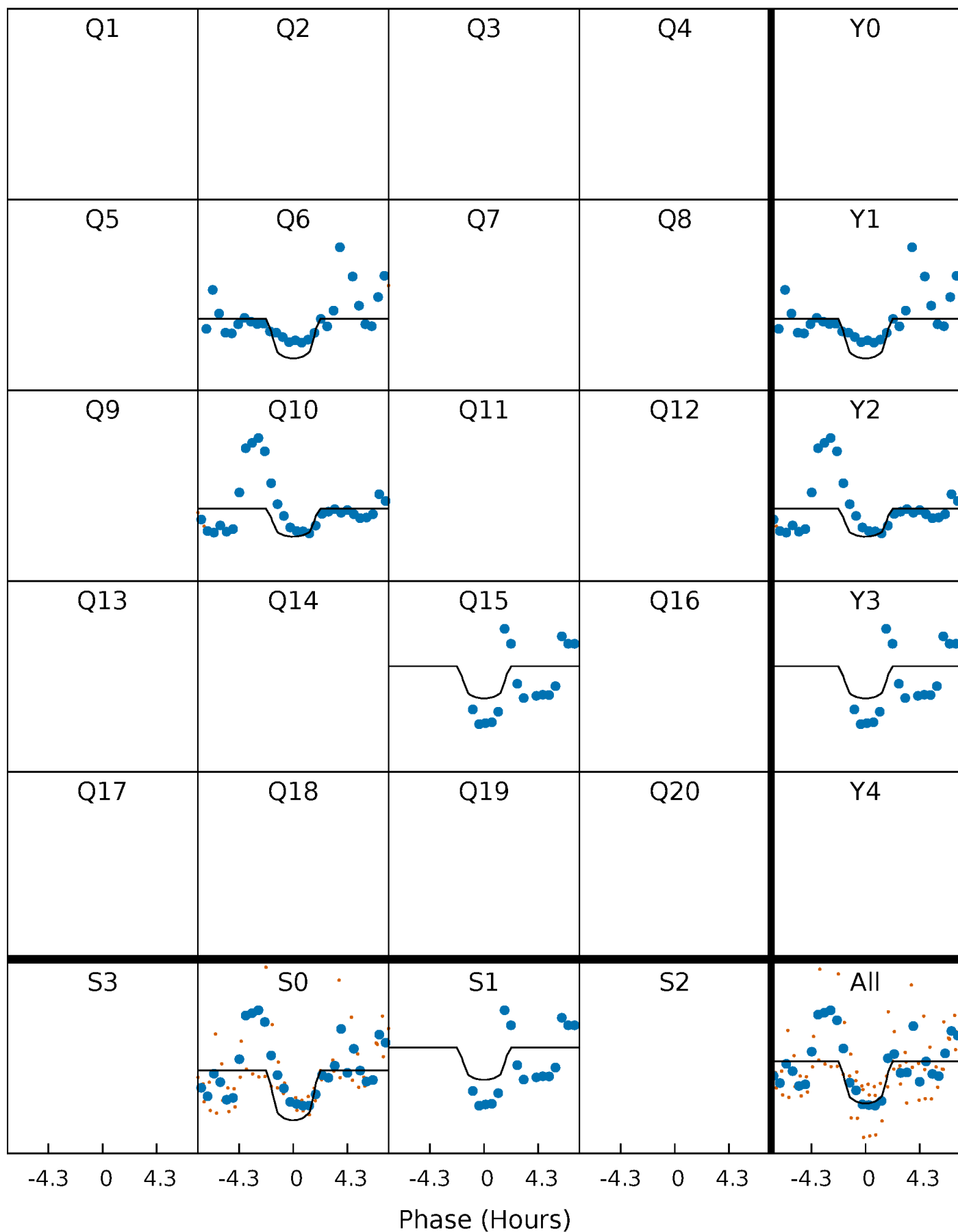
PDC Quarter-Phased Transit Curves

TCE 011551430-04 P=433.106981 Days $T_0=558.832902$ (BKJD)



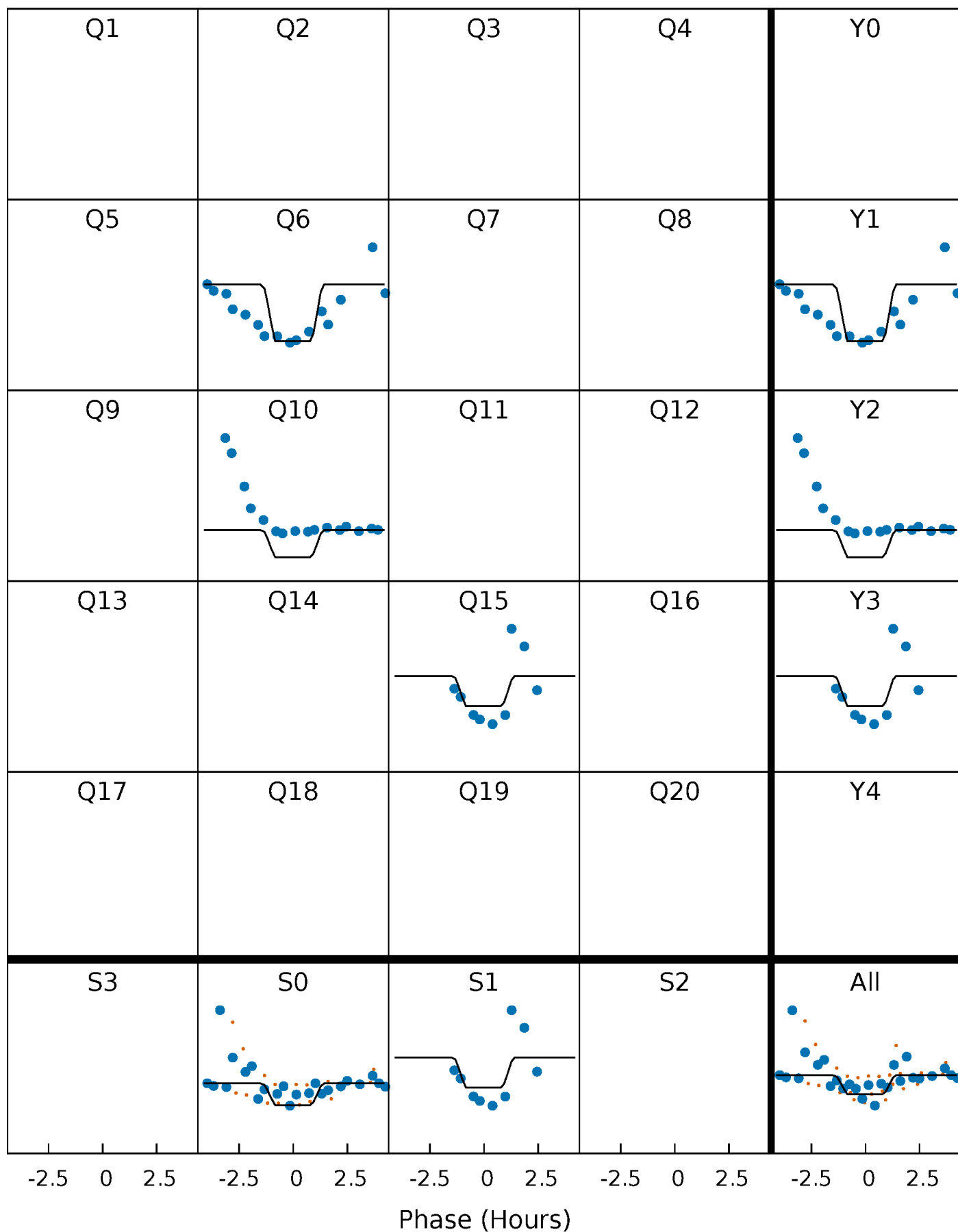
DV Quarter-Phased Transit Curves

TCE 011551430-04 P=433.106981 Days $T_0=558.832902$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

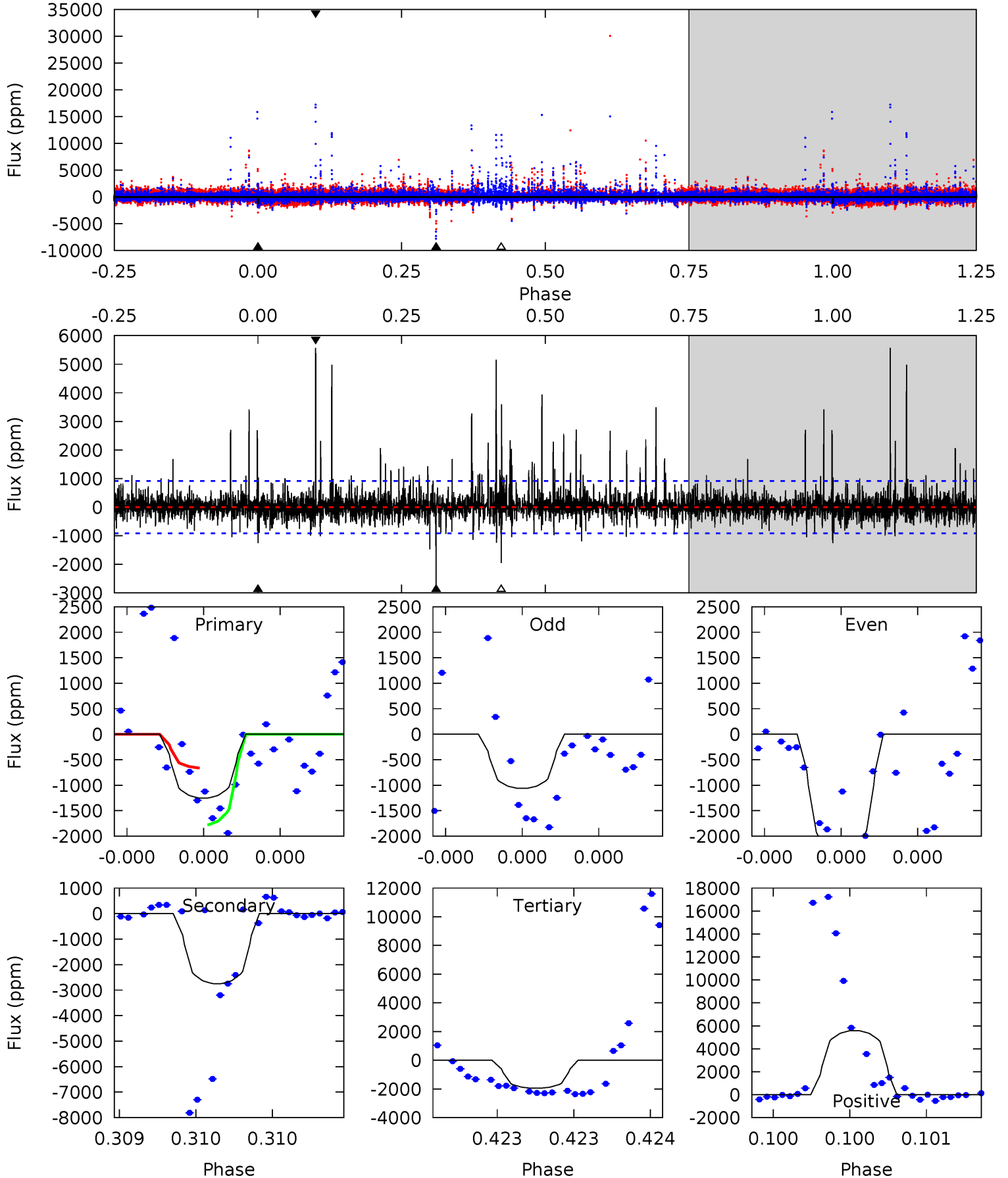
TCE 011551430-04 P=433.096115 Days $T_0=558.870342$ (BKJD)



DV Model-Shift Uniqueness Test

011551430-04, P = 433.106981 Days, E = 125.725921 Days

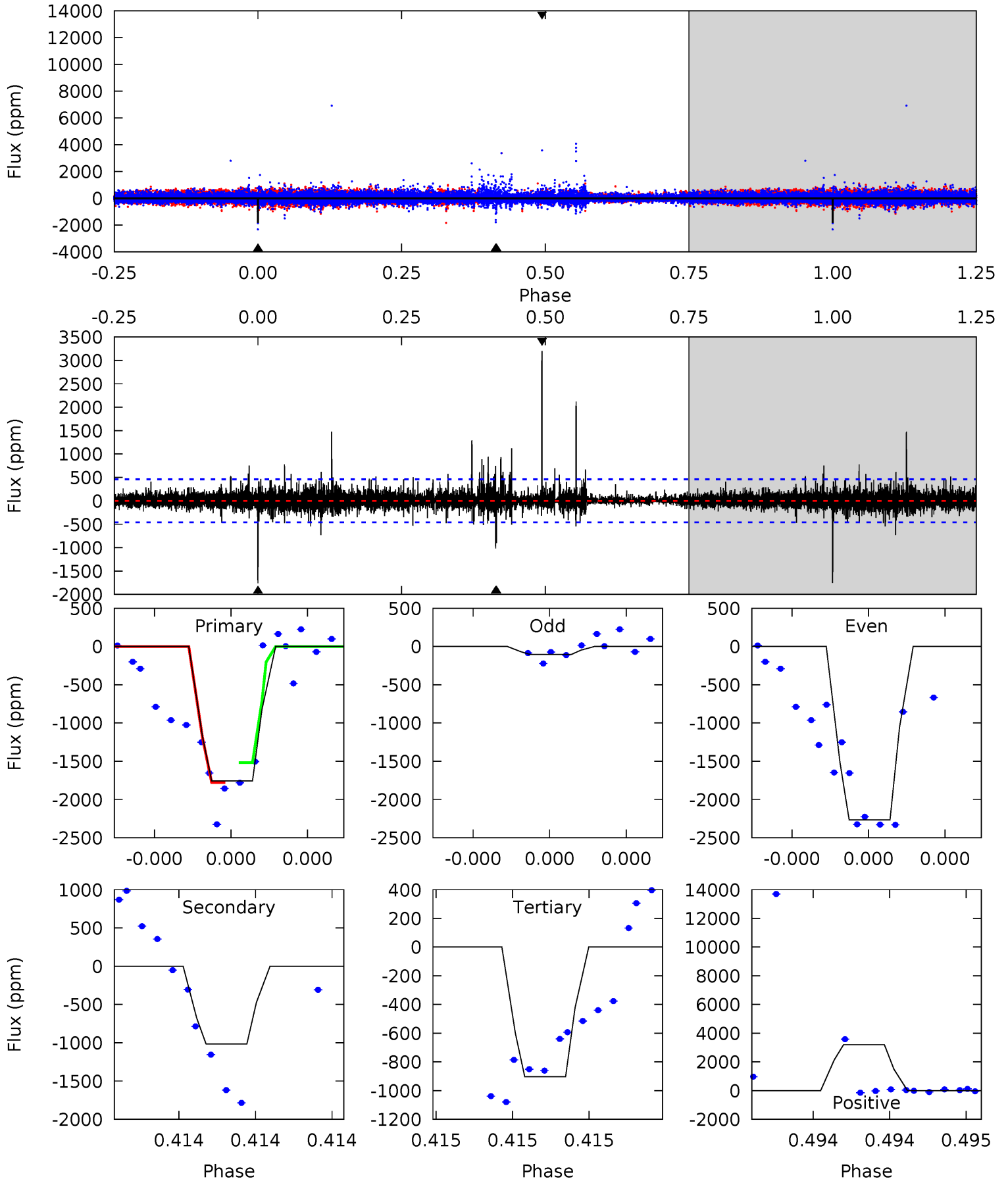
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
7.69	16.9	12.0	34.2	5.62	3.56	2.17	-4.30	-26.6	4.87	-17.4	2.39	1.58	0.67	0



Alt Model-Shift Uniqueness Test

011551430-04, P = 433.096115 Days, E = 125.774227 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
21.8	12.6	11.2	39.7	5.68	3.65	1.37	10.6	-17.9	1.39	-27.1	14.5	0.82	0.65	0



Stellar Parameters For KIC 011551430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	M (M_{\odot})	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5648^{+113}_{-90}	$4.019^{+0.217}_{-0.109}$	$-0.080^{+0.150}_{-0.100}$	$1.605^{+0.297}_{-0.363}$	$0.983^{+0.102}_{-0.084}$	$0.335^{+0.360}_{-0.109}$
	+2%/-2%	+5%/-3%	+188%/-125%	+19%/-23%	+10%/-9%	+108%/-32%
Source	SPE13	SPE13	SPE13	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011551430-04 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-2744 ± 163	$32.32^{+31.61}_{-21.51}$	416^{+22}_{-26}	3478^{+1701}_{-630}	1829^{+14625}_{-1383}
Alt.	-1015 ± 81	$29.97^{+30.17}_{-21.81}$	416^{+20}_{-27}	3048^{+1670}_{-497}	756^{+9720}_{-567}

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 $A_{obs} \gg 1.0$

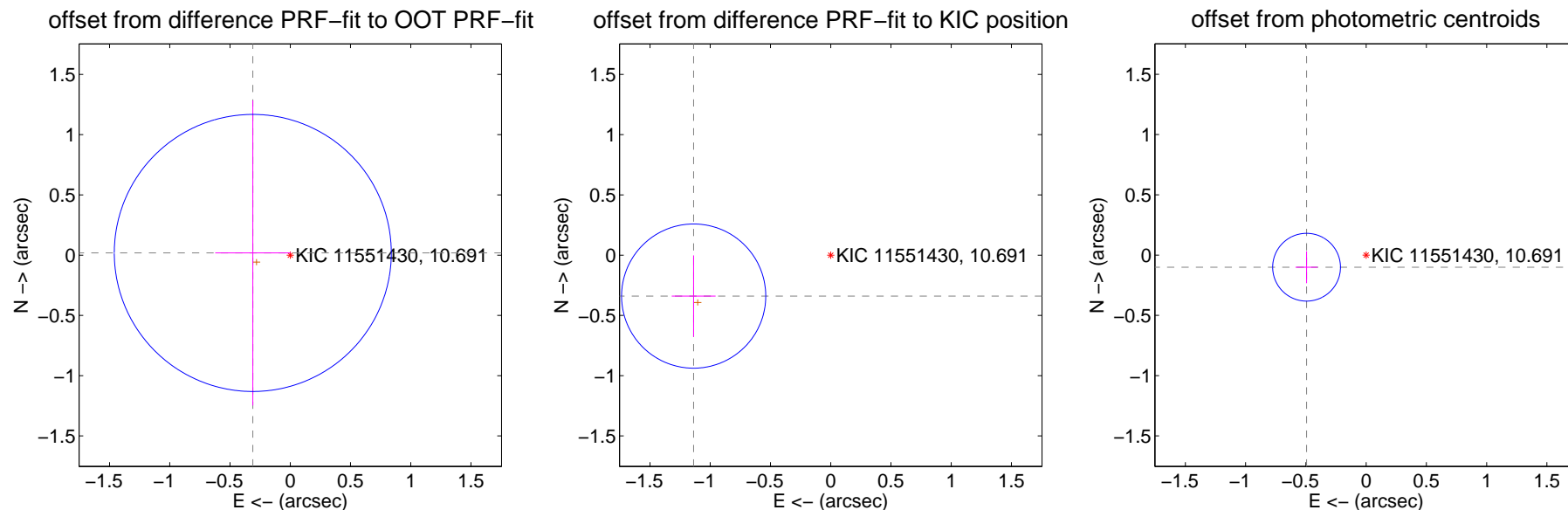
DV Centroid Data

Supplemental centroid analysis for 011551430-04. **Kepler magnitude: 10.69.** Transit SNR 8.97

There are 1 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 1.44 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.312 ± 0.383	0.81	0.311 ± 0.312	0.018 ± 1.266
PRF-fit source offset from KIC position	1.187 ± 0.199	5.95	1.138 ± 0.182	-0.340 ± 0.338
photometric centroid source offset	0.50 ± 0.09	5.38	0.49 ± 0.09	-0.10 ± 0.13

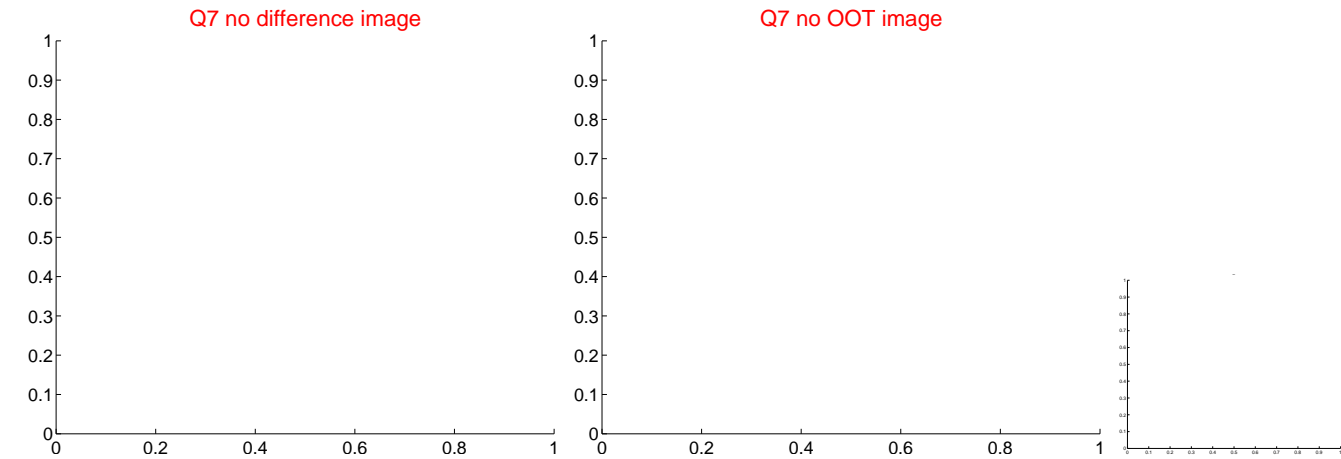
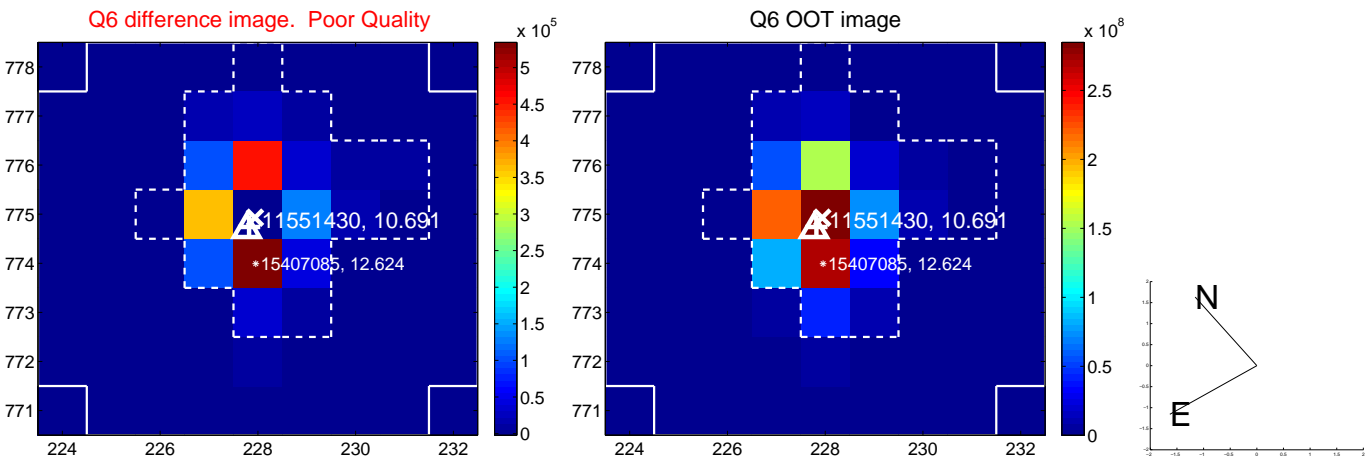


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

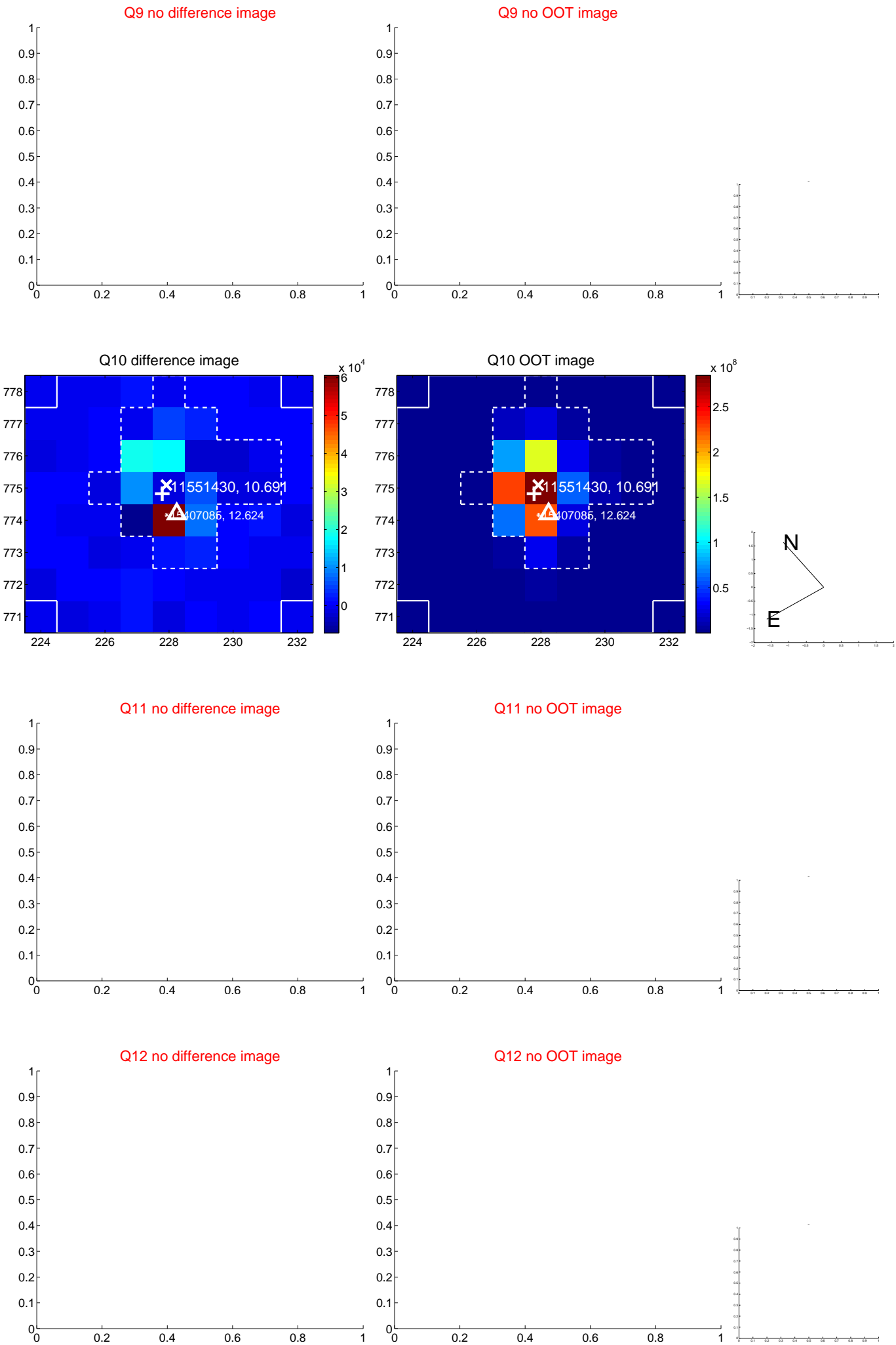
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



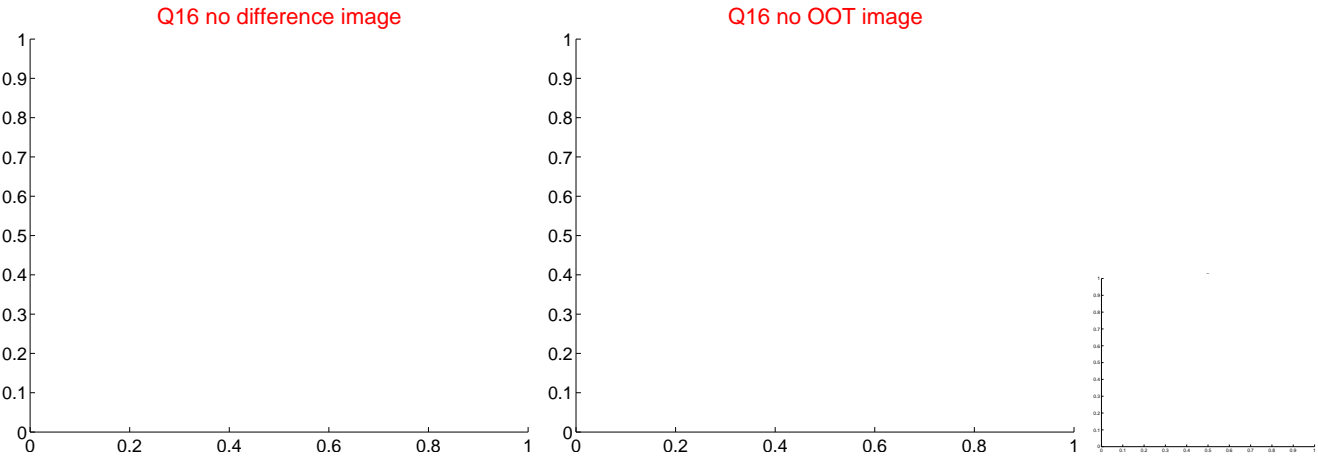
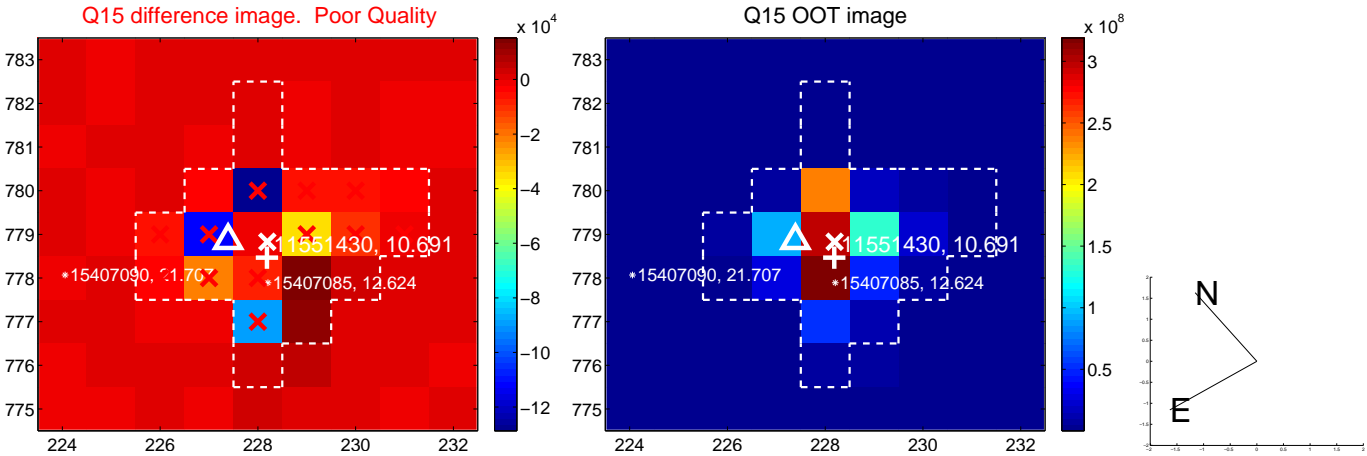
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



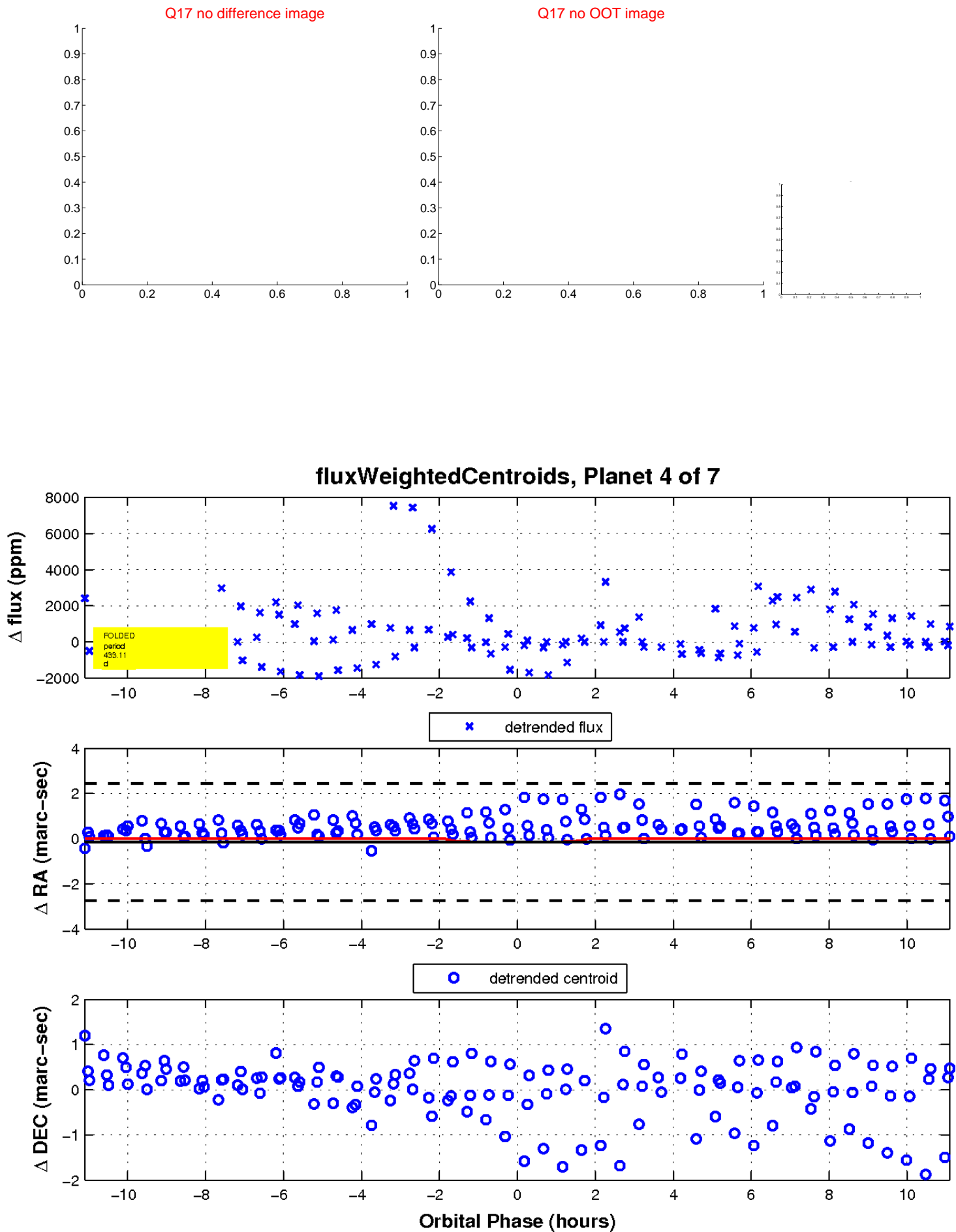
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

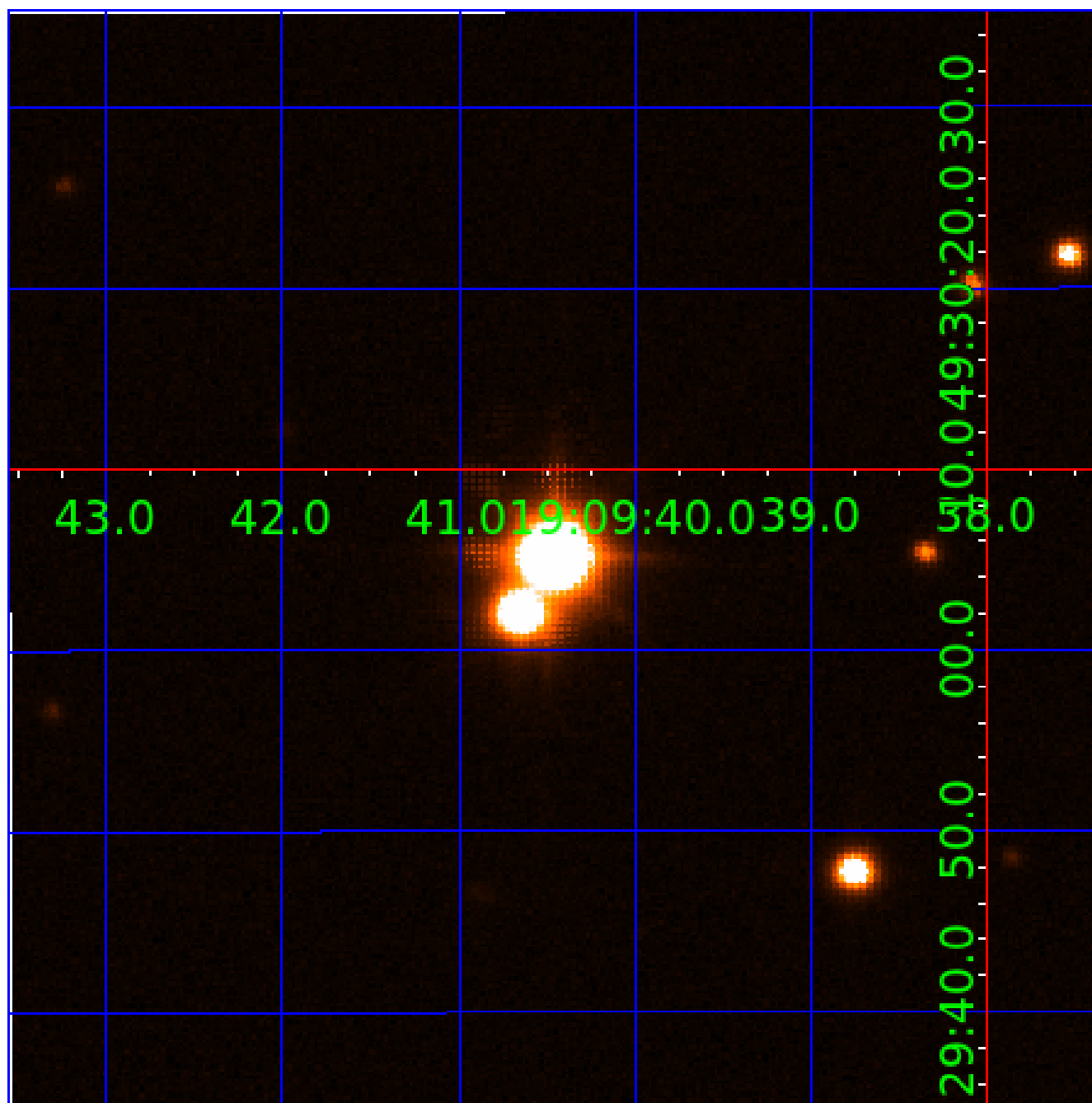


white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



UKIRT Image

Declination



KIC 011551430

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})
011551430-01	OBS	No	329.244684	260.382423	3201.0	13.011	26.0	12.7	1.60	5648	10.39	2.73
011551430-02	OBS	No	345.982227	227.667632	1440.6	7.905	19.3	6.5	1.60	5648	6.07	2.56
011551430-03	OBS	No	422.060038	158.532752	587.4	4.098	18.8	3.8	1.60	5648	7.78	1.96
011551430-04	OBS	No	433.106981	558.832902	2054.7	3.784	19.8	9.0	1.60	5648	7.74	1.89
011551430-05	OBS	No	323.095596	329.665334	672.4	5.841	17.2	4.8	1.60	5648	4.37	2.80
011551430-06	OBS	No	322.047745	158.868707	1693.2	3.849	18.1	9.3	1.60	5648	6.68	2.81
011551430-07	OBS	No	273.011498	299.244567	196.0	3.000	18.4	-1.0	1.60	5648	2.23	3.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011551430-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011551430-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
011551430-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
011551430-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011551430-05	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
011551430-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011551430-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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.

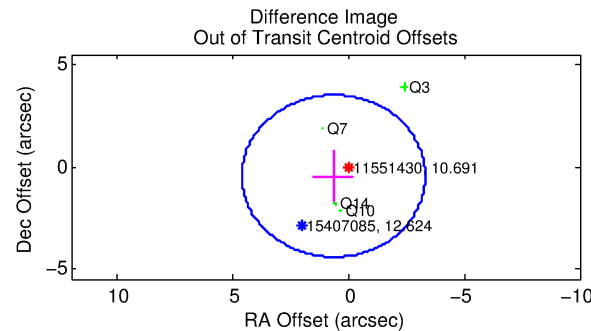
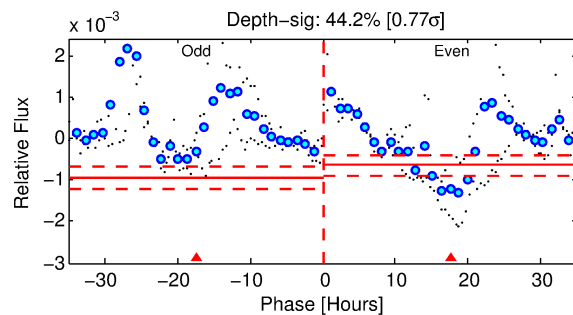
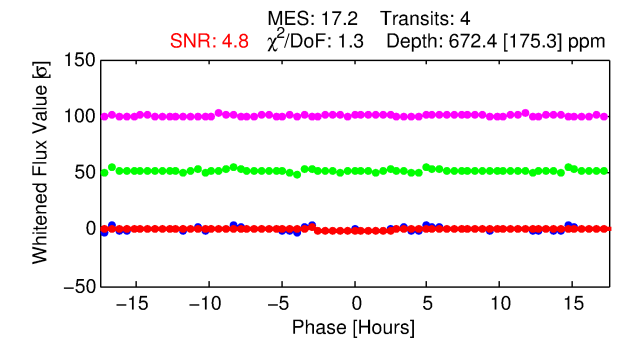
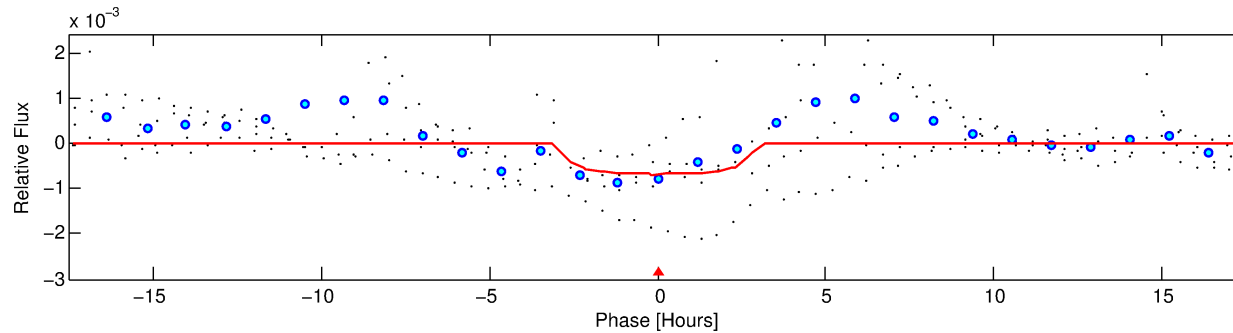
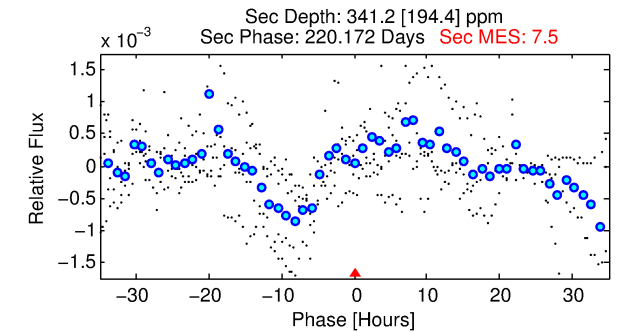
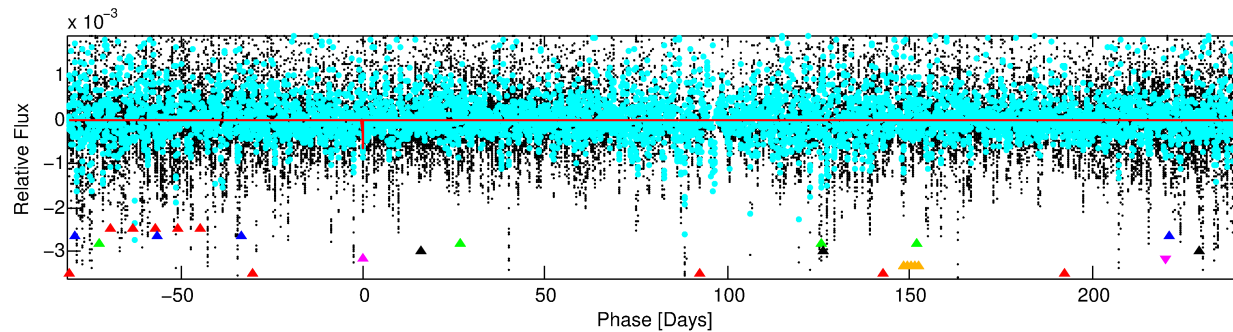
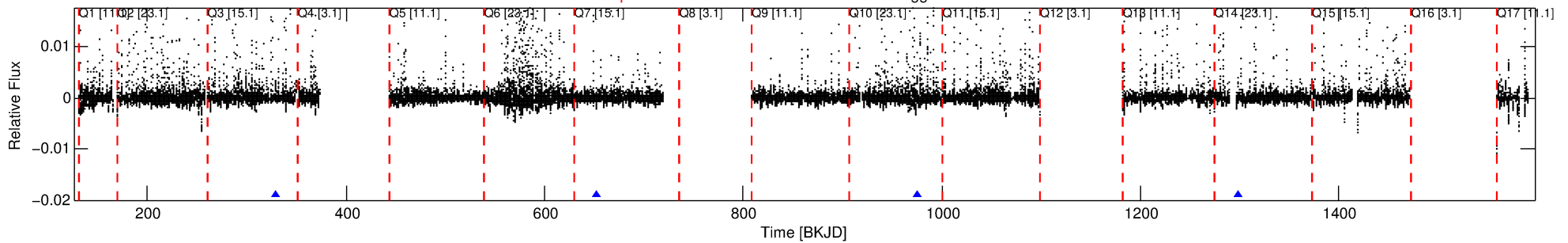
Ephemeris Match Information For 011551430-05

No Significant Match Found

DV One-Page Summary

KIC: 11551430 Candidate: 5 of 7 Period: 323.096 d

Kp: 10.69 R*: 1.60 Rs Teff: 5648.0 K Logg: 4.02 Fe/H: -0.080



DV Fit Results:

Period = 323.09560 [0.00365] d
Epoch = 329.6653 [0.0063] BKJD
Rp/R* = 0.0249 [0.0196]
a/R* = 339.22 [1114.34]
b = 0.64 [3.08]
Seff = 2.80 [1.05]
Teq = 330 [31] K
Rp = 4.37 [3.57] Re
a = 0.9160 [0.2058] AU
Ag = 8261.68 [14126.15] [0.58σ]
Teffp = 4862 [2032] K [2.23σ]

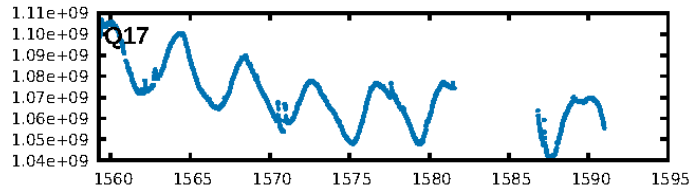
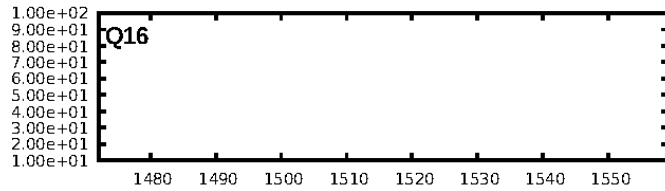
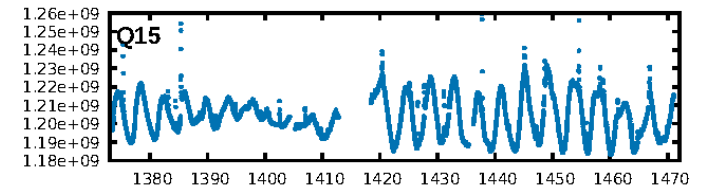
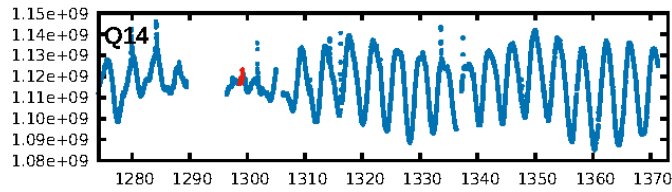
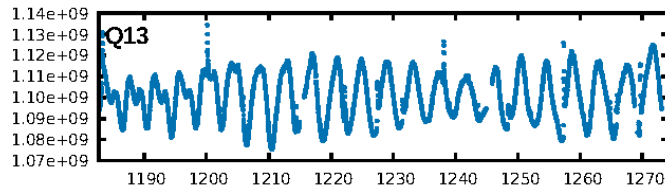
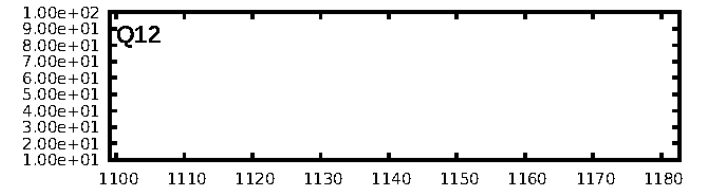
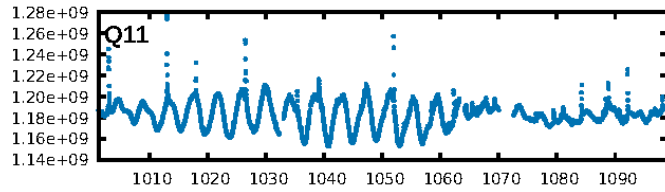
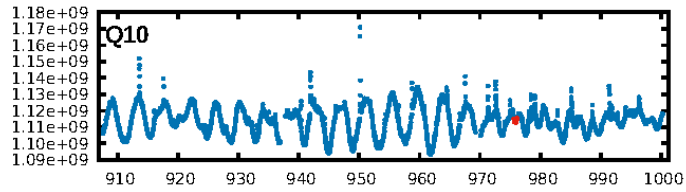
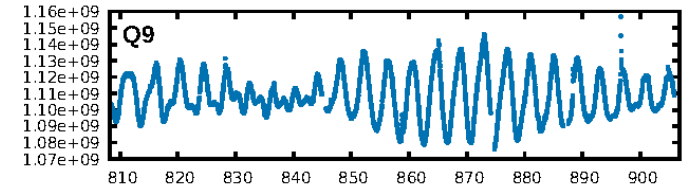
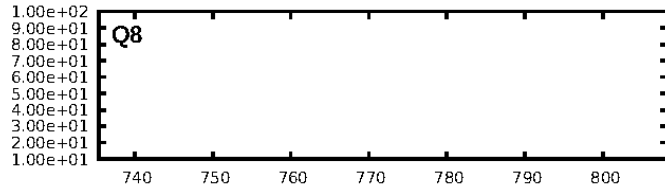
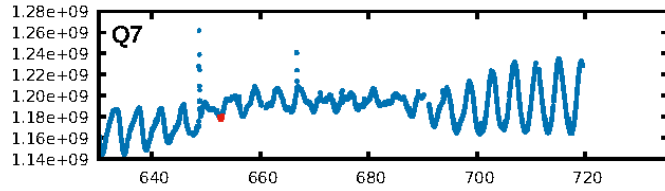
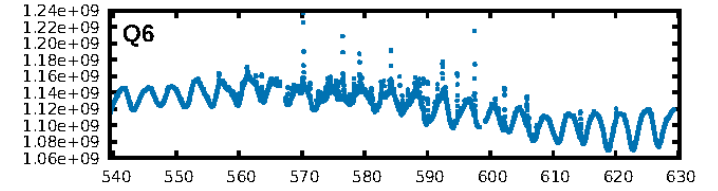
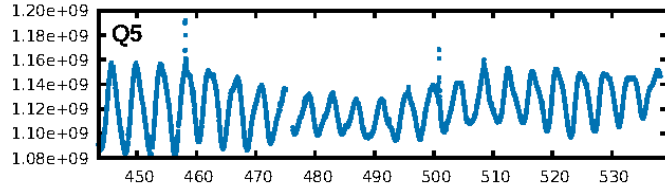
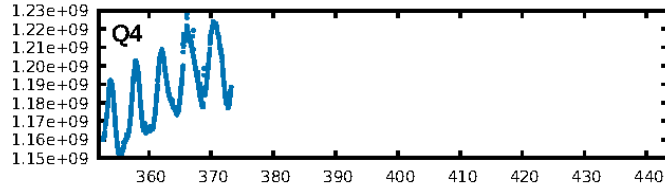
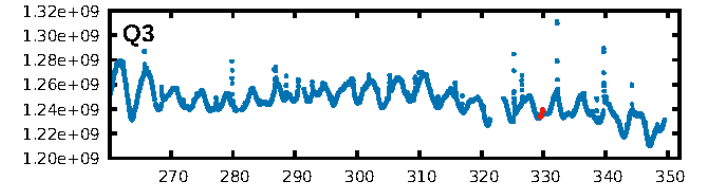
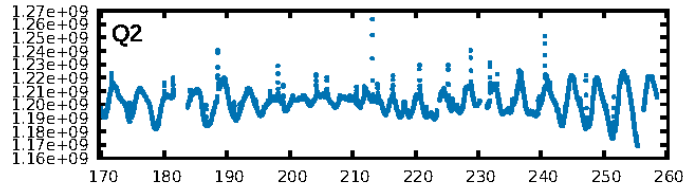
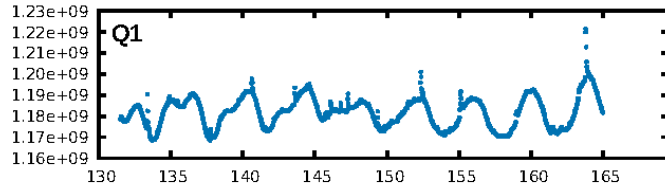
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [3.59σ]
LongPeriod-sig: 100.0% [10.35σ]
ModelChiSquare2-sig: 51.1%
ModelChiSquareGof-sig: 95.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: -0.224
Centroid-sig: N/A
Centroid-so: 0.642 arcsec [2.10σ]
OotOffset-rm: 0.799 arcsec [0.60σ]
KicOffset-rm: 2.002 arcsec [1.79σ]
OotOffset-st: 2/2/0/0 [4]
KicOffset-st: 2/2/0/0 [4]
DiffImageQuality-figm: 0.75 [3/4]
DiffImageOverlap-fno: 1.00 [4/4]

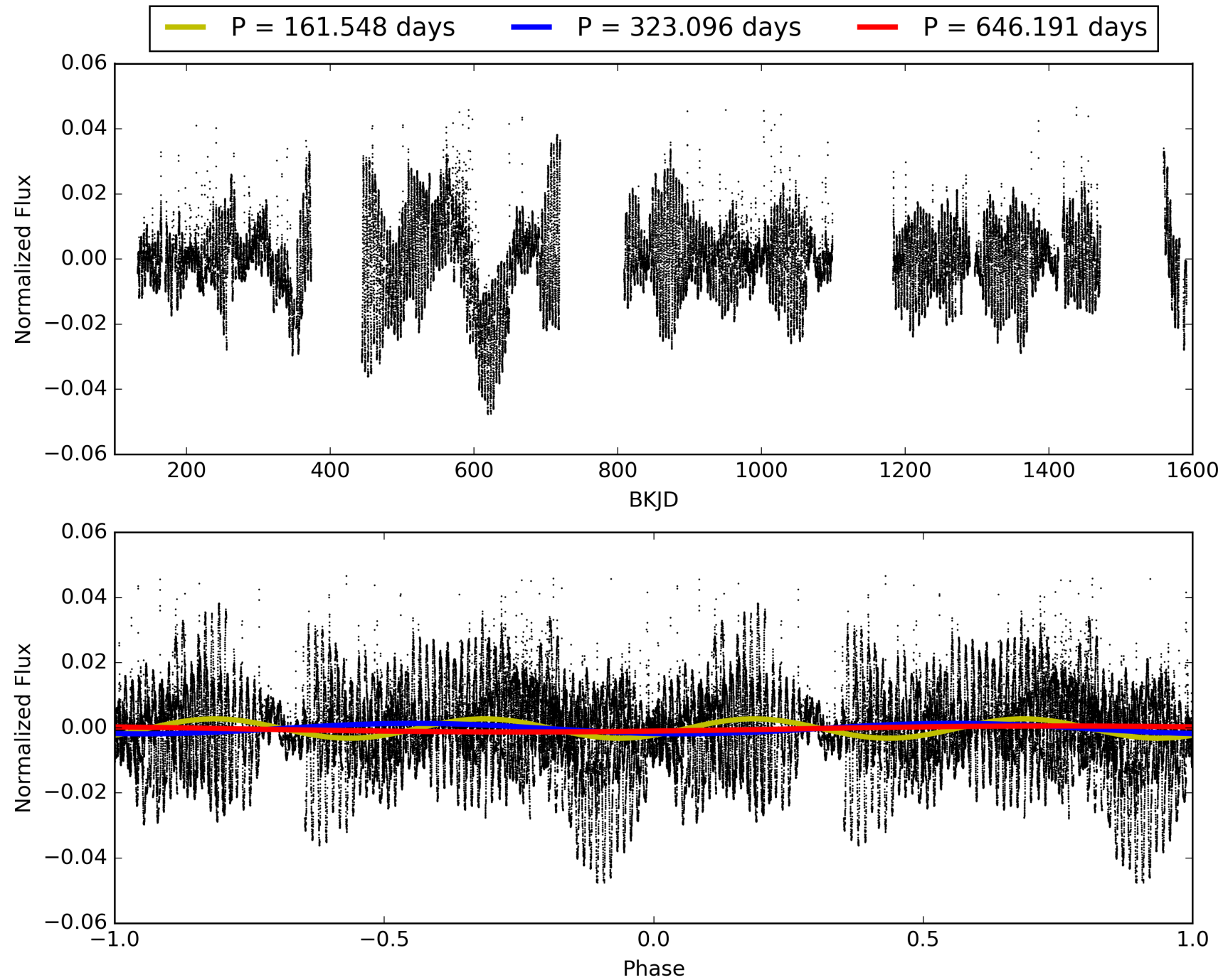
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:11:41 Z

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

TCE 011551430-05, PDC Light Curves

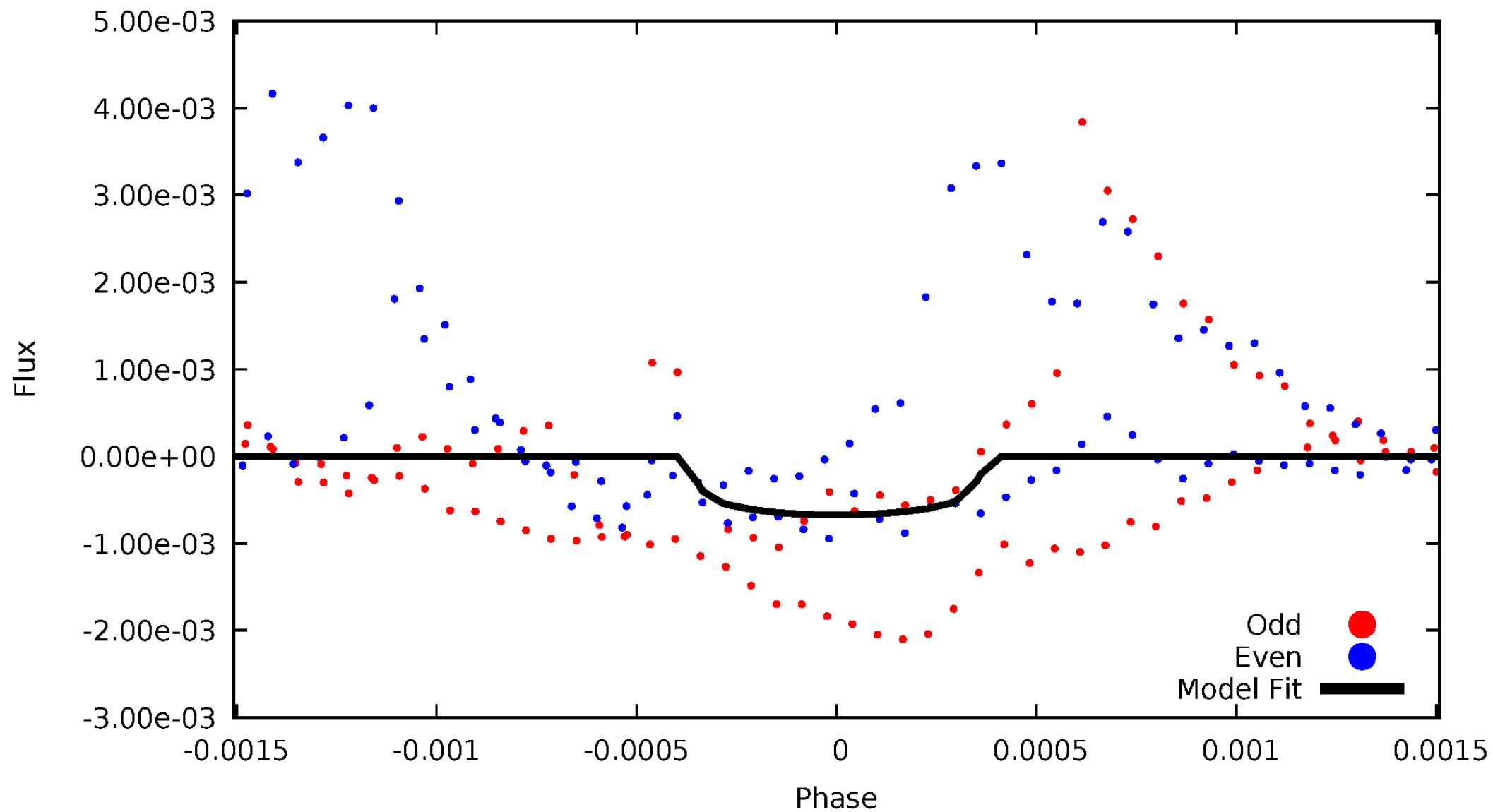


TCE 011551430-05



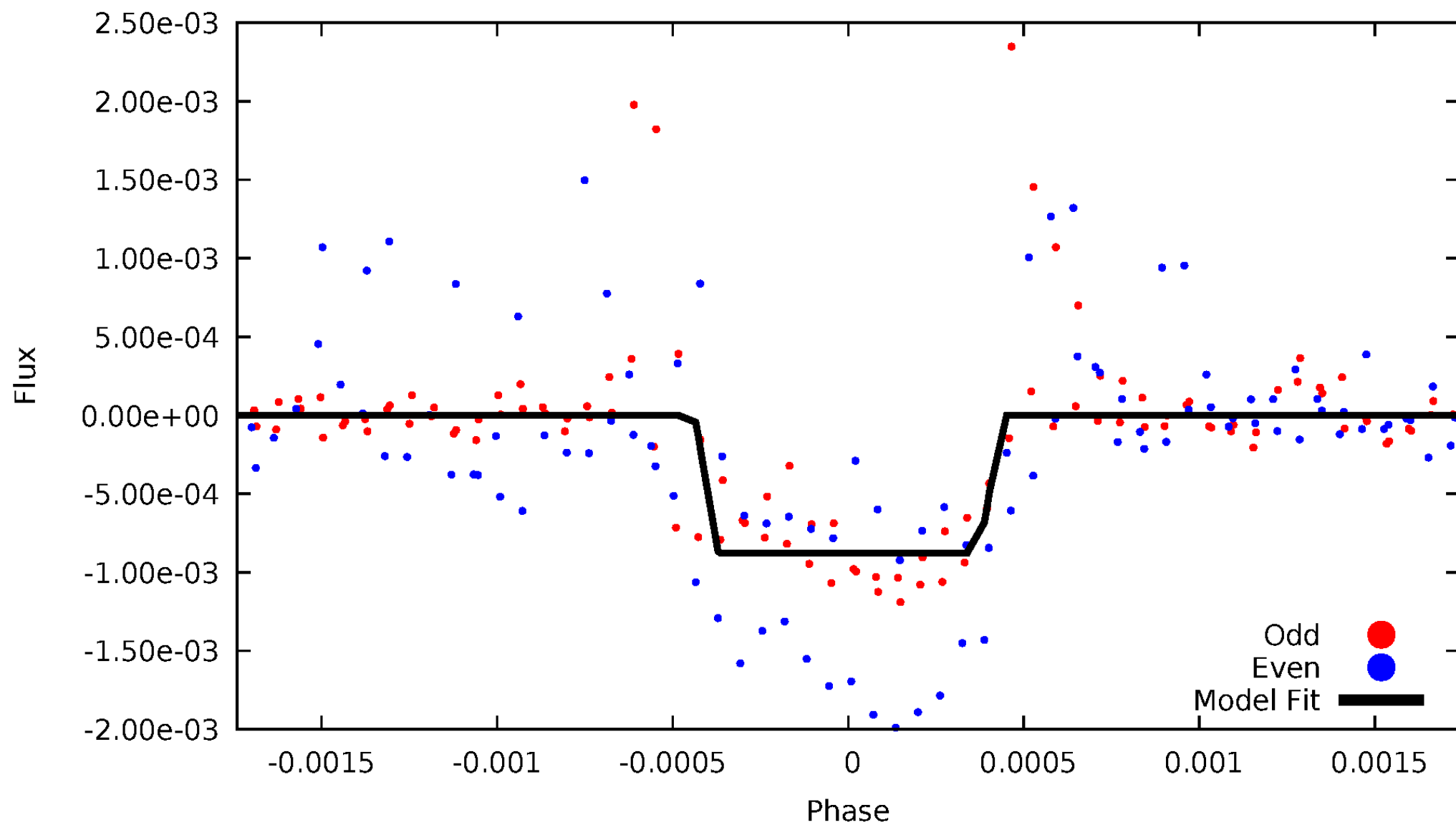
DV Odd/Even

TCE 011551430-05



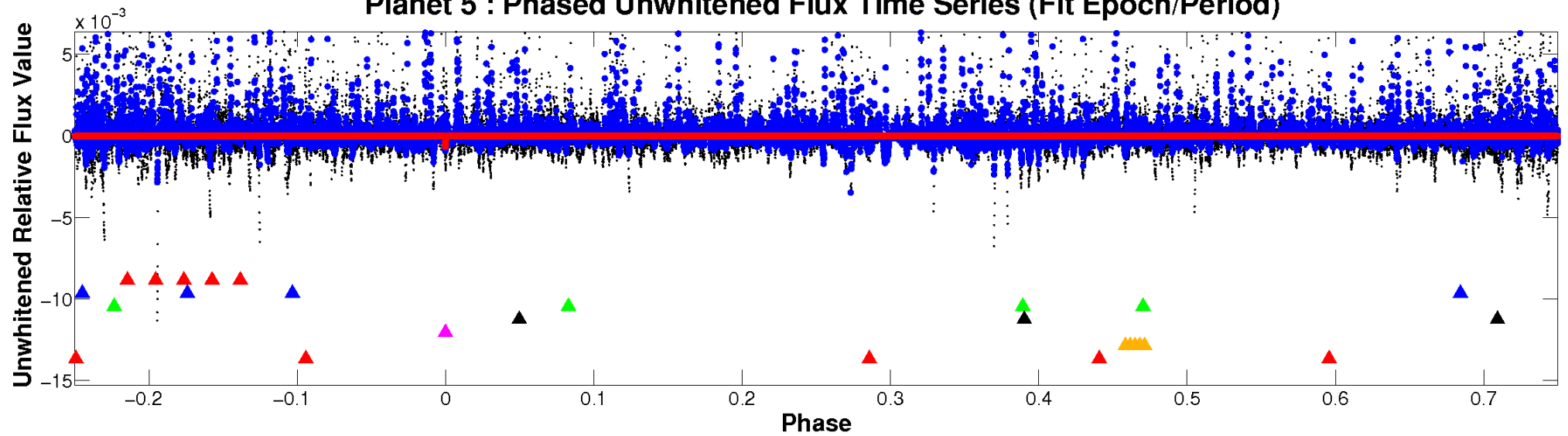
ALT Odd/Even

TCE 011551430-05

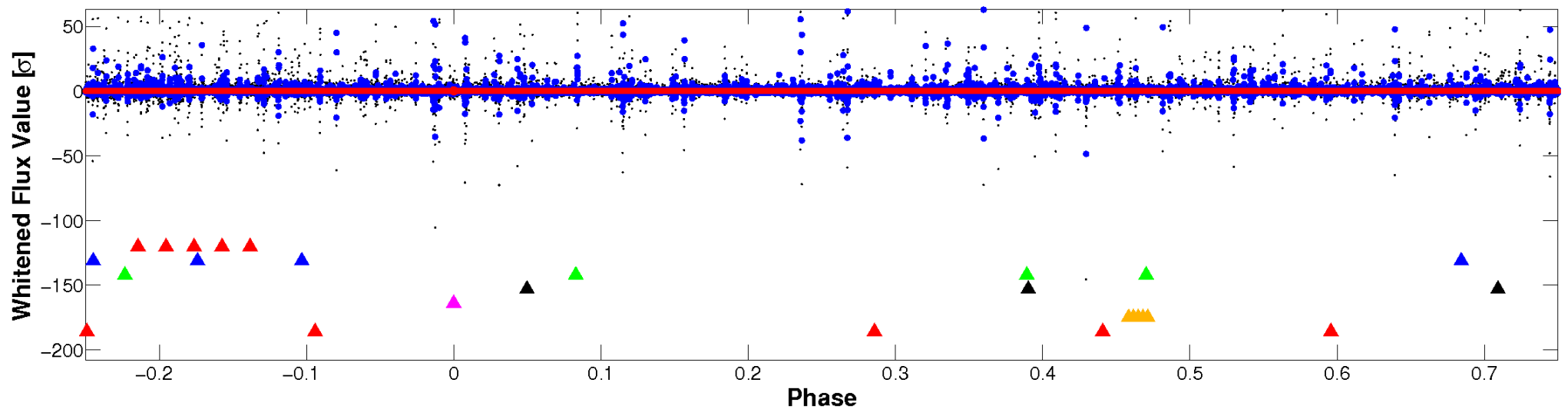


Non-Whitened Vs. Whitened Light Curve

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

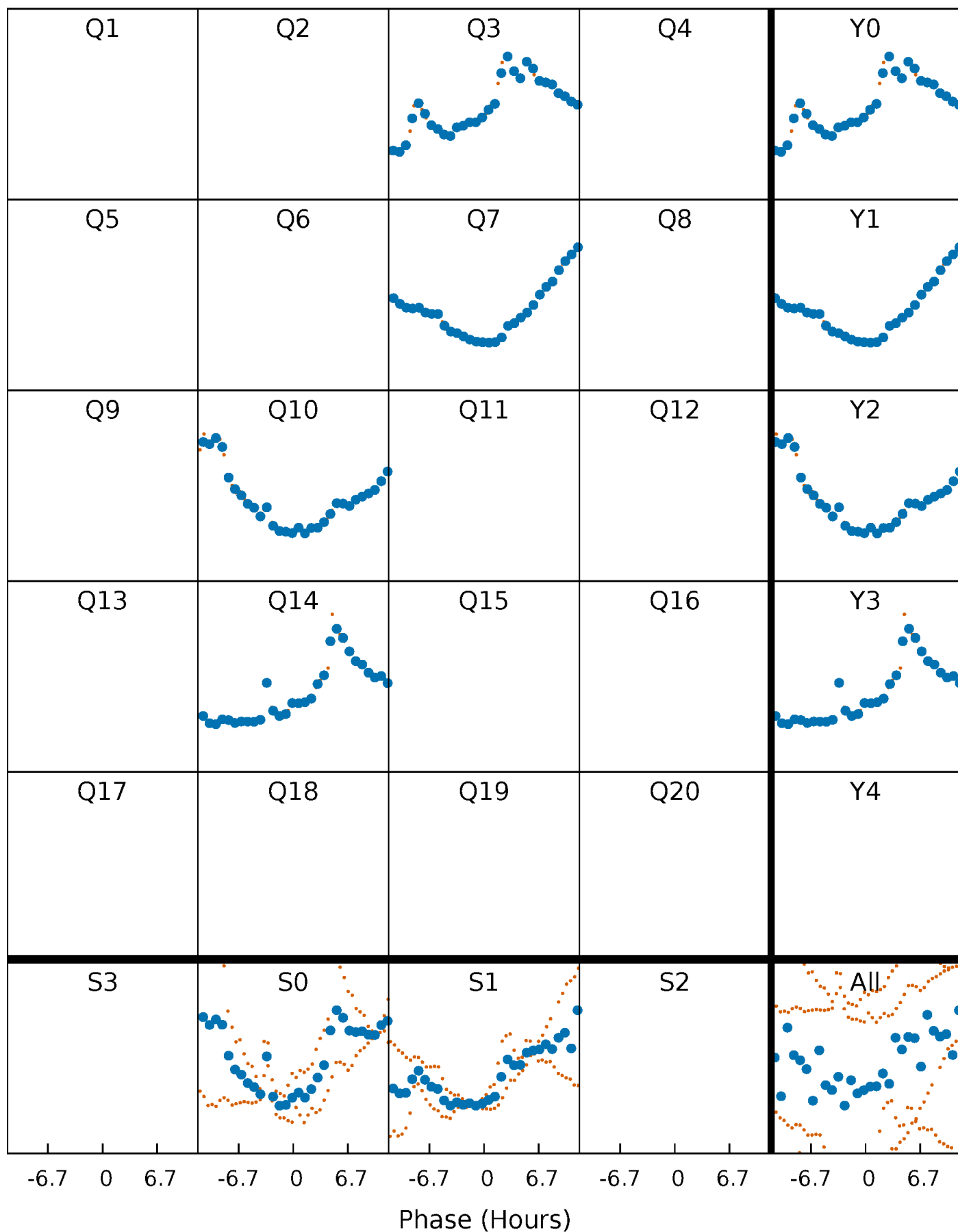


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



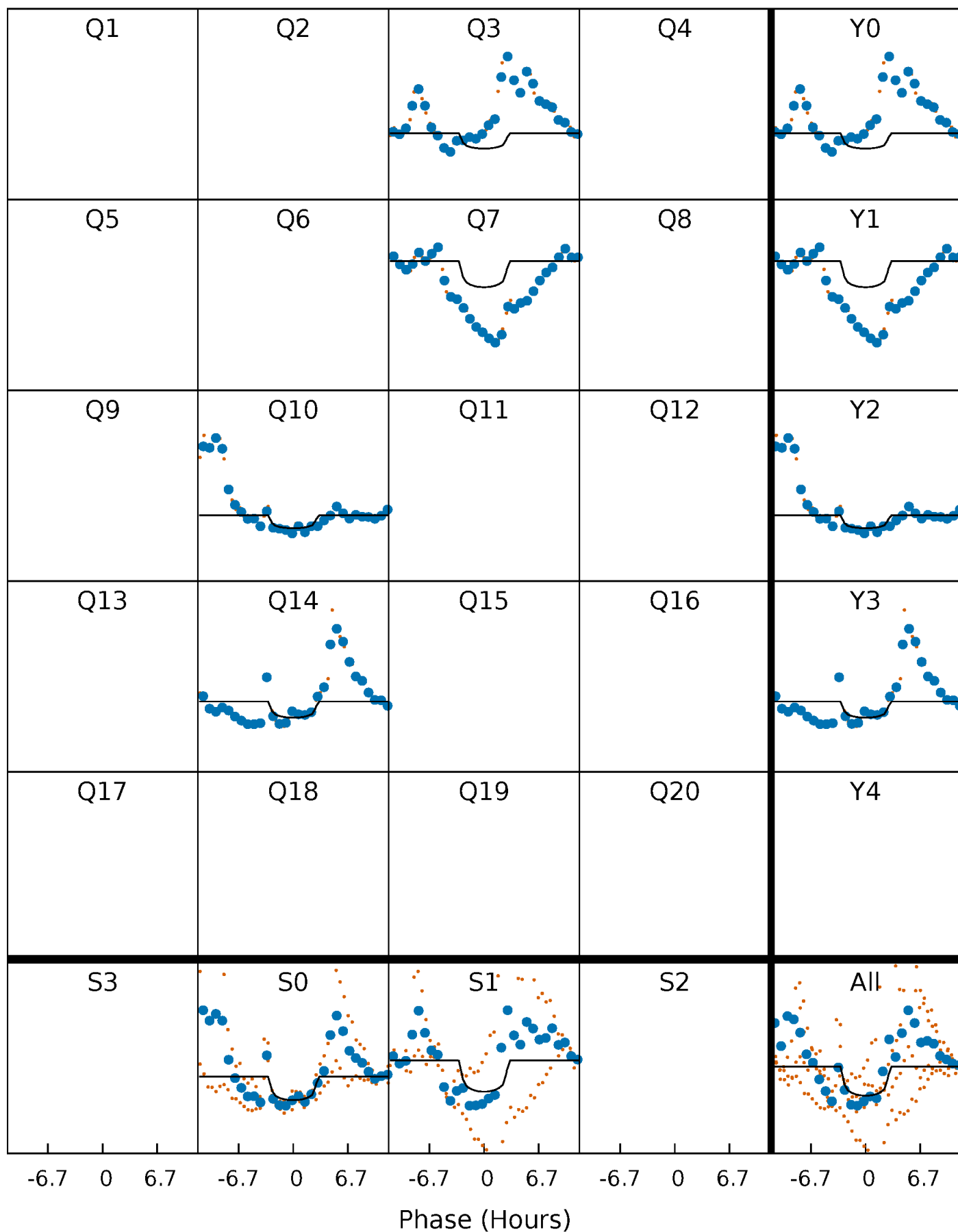
PDC Quarter-Phased Transit Curves

TCE 011551430-05 $P=323.095596$ Days $T_0=329.665334$ (BKJD)



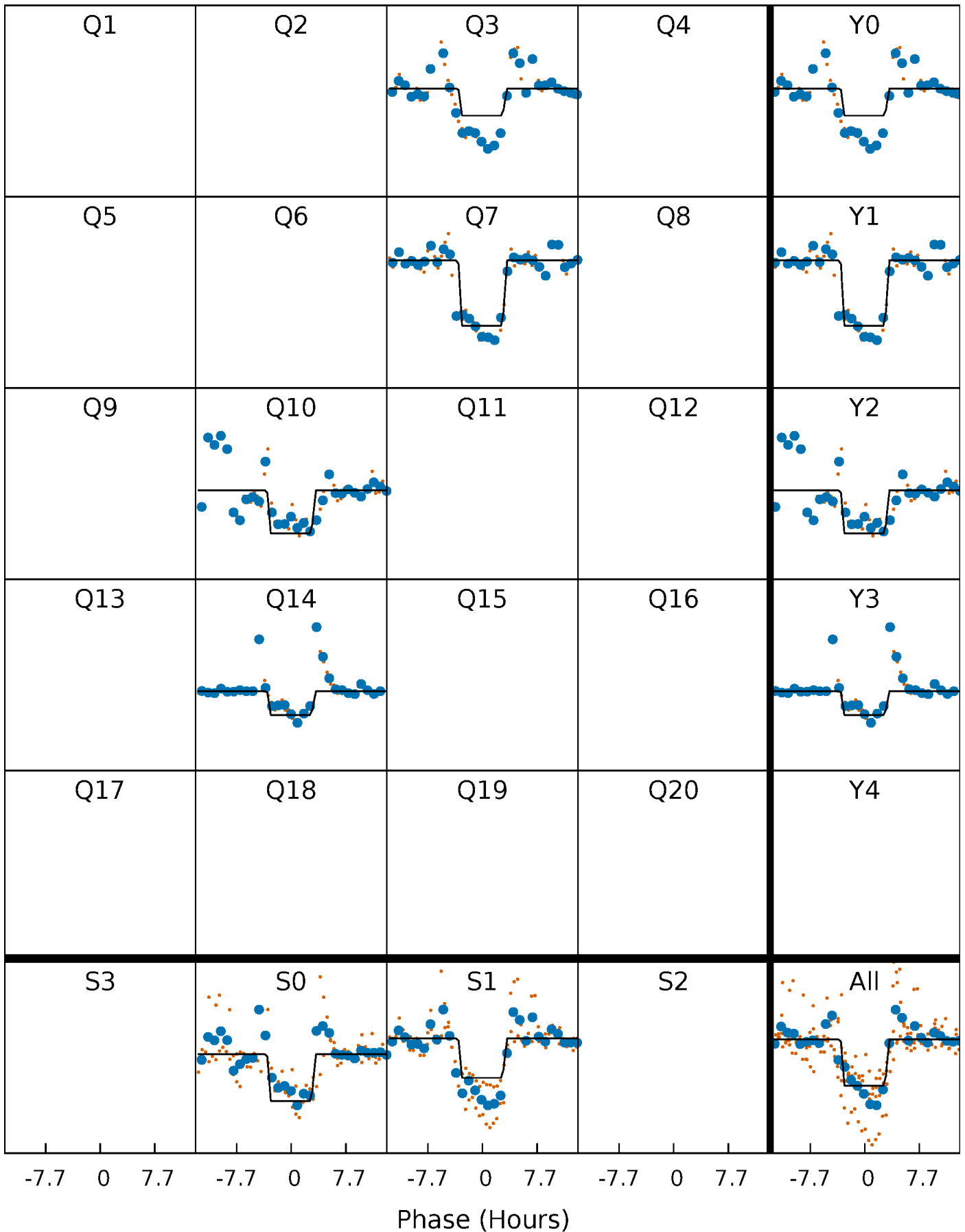
DV Quarter-Phased Transit Curves

TCE 011551430-05 $P=323.095596$ Days $T_0=329.665334$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

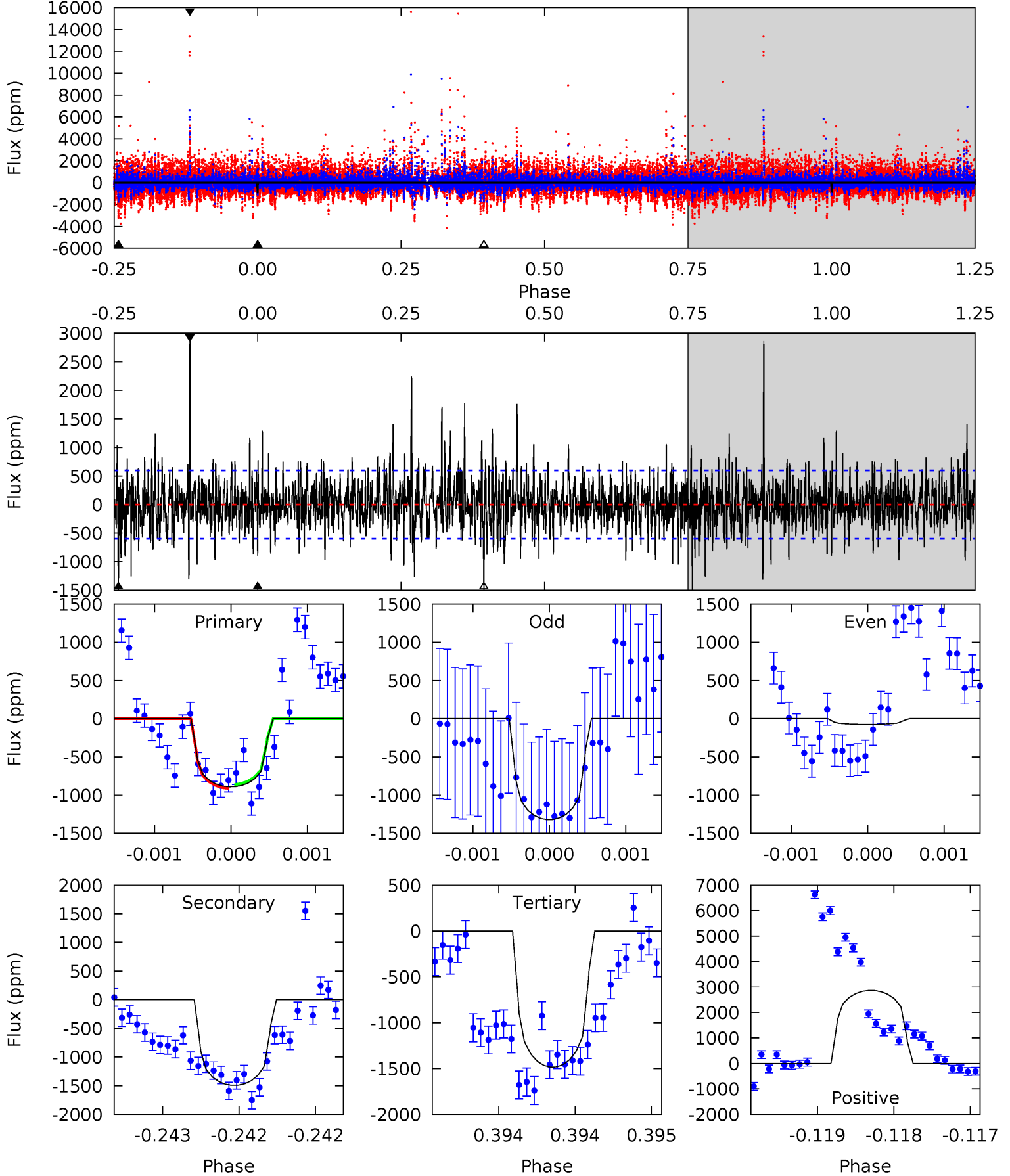
TCE 011551430-05 $P=323.136318$ Days $T_0=329.591604$ (BKJD)



DV Model-Shift Uniqueness Test

011551430-05, P = 323.095596 Days, E = 6.569738 Days

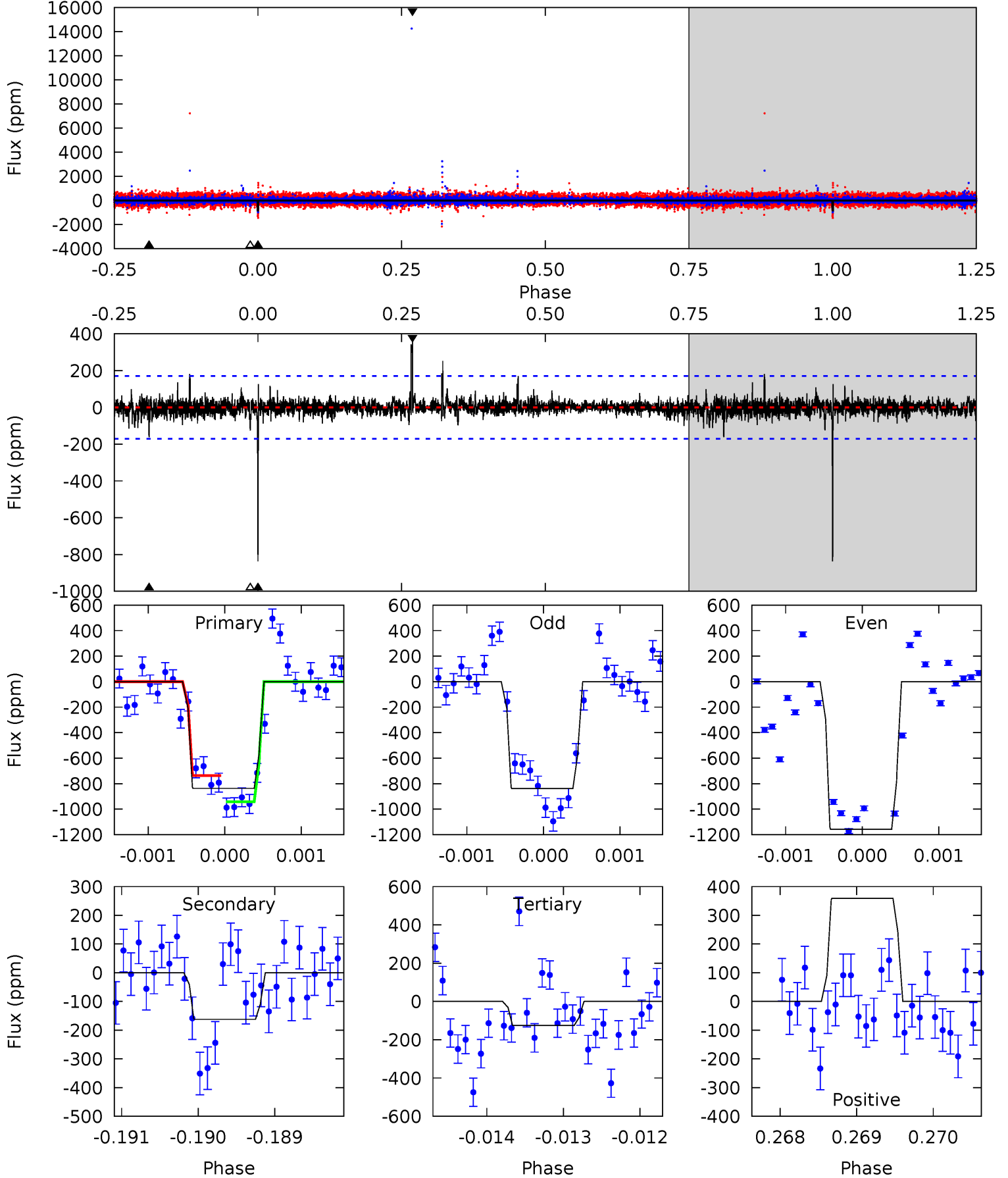
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.20	13.7	13.7	26.4	5.50	3.37	3.24	-5.46	-18.2	0.08	-12.6	3.29	0.95	0.66	0.23



Alt Model-Shift Uniqueness Test

011551430-05, P = 323.136318 Days, E = 6.455286 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.9	5.20	4.02	11.5	5.47	3.33	0.87	22.8	15.3	1.18	-6.33	3.90	1.18	0.30	3.28



Stellar Parameters For KIC 011551430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5648^{+113}_{-90}	$4.019^{+0.217}_{-0.109}$	$-0.080^{+0.150}_{-0.100}$	$1.605^{+0.297}_{-0.363}$	$0.983^{+0.102}_{-0.084}$	$0.335^{+0.360}_{-0.109}$
	+2%/-2%	+5%/-3%	+188%/-125%	+19%/-23%	+10%/-9%	+108%/-32%
Source	SPE13	SPE13	SPE13	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011551430-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-1493 ± 109	$4.51^{+3.23}_{-2.64}$	457^{+25}_{-30}	6873^{+5087}_{-1619}	$34832^{+150547}_{-23543}$
Alt.	-162 ± 31	$5.26^{+3.36}_{-2.98}$	458^{+25}_{-29}	3965^{+1520}_{-612}	2741^{+11408}_{-1764}

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 $A_{obs} \gg 1.0$

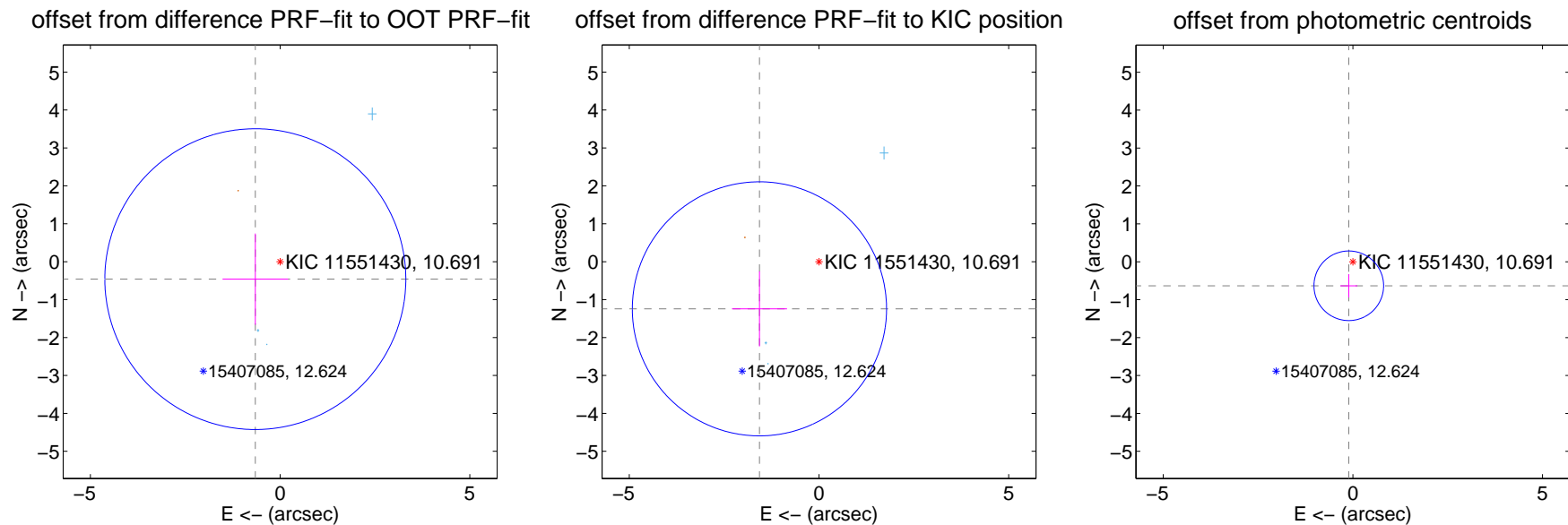
DV Centroid Data

Supplemental centroid analysis for 011551430-05. **Kepler magnitude: 10.69.** Transit SNR 4.84

There are 3 quarters with good PRF difference image offsets

The direct PRF centroid is offset from the target star catalog position by about 0.88 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.799 ± 1.322	0.60	0.653 ± 0.864	-0.460 ± 1.204
PRF-fit source offset from KIC position	2.002 ± 1.117	1.79	1.569 ± 0.725	-1.243 ± 0.992
photometric centroid source offset	0.64 ± 0.31	2.10	0.11 ± 0.23	-0.63 ± 0.31



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.

Q1 no difference image



Q1 no OOT image



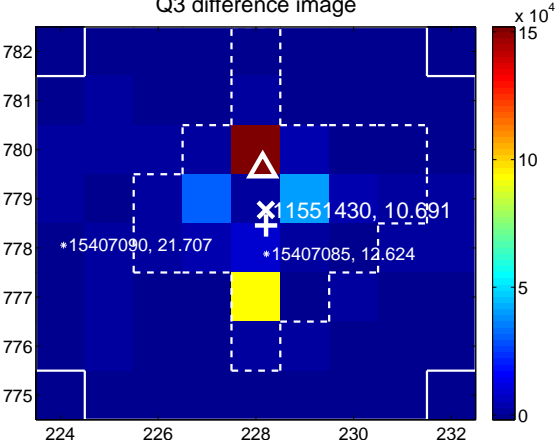
Q2 no difference image



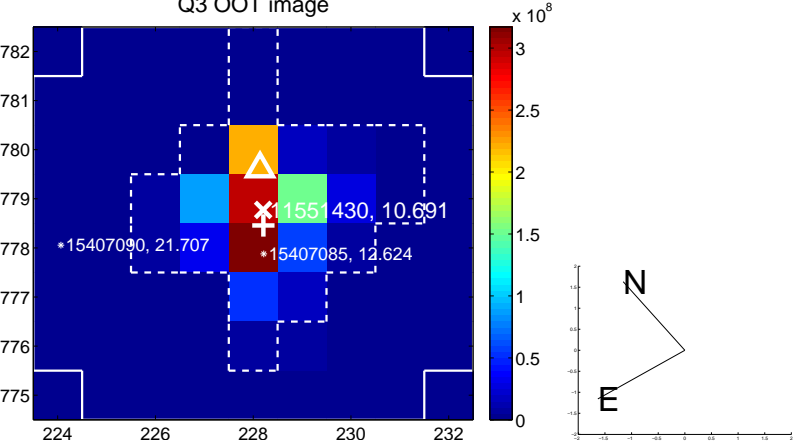
Q2 no OOT image



Q3 difference image



Q3 OOT image



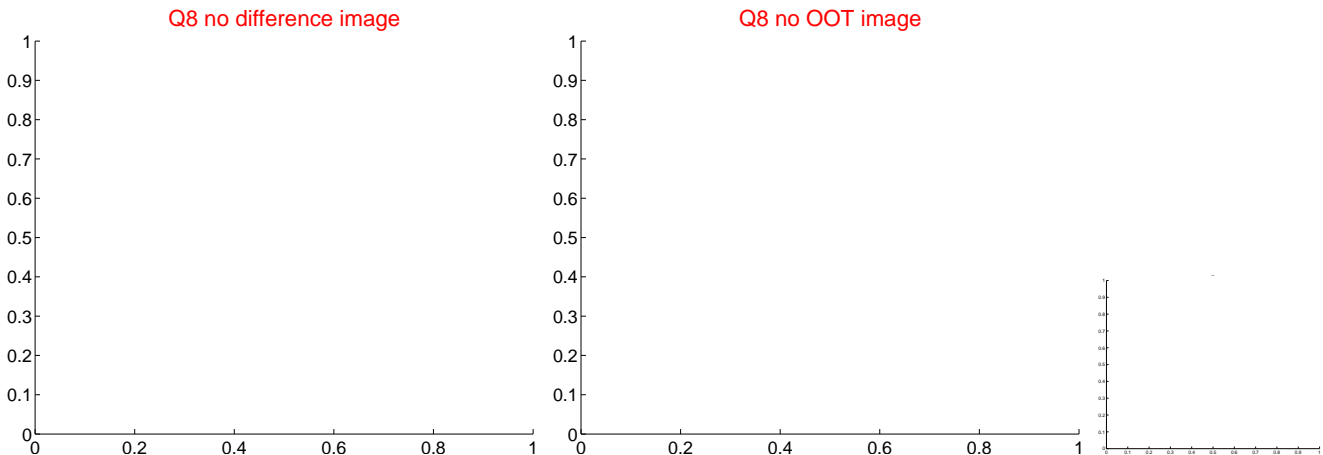
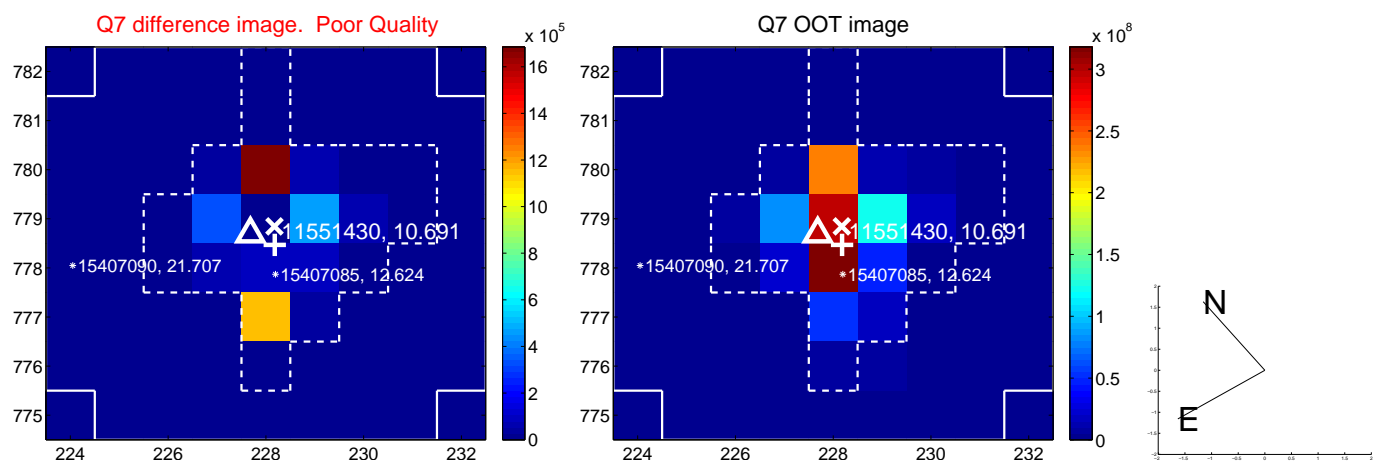
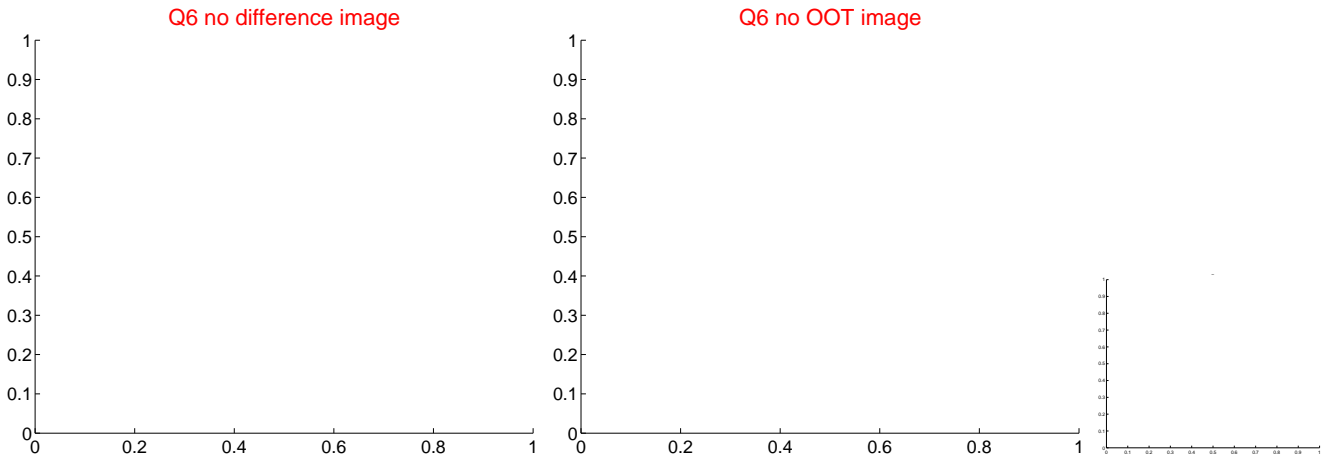
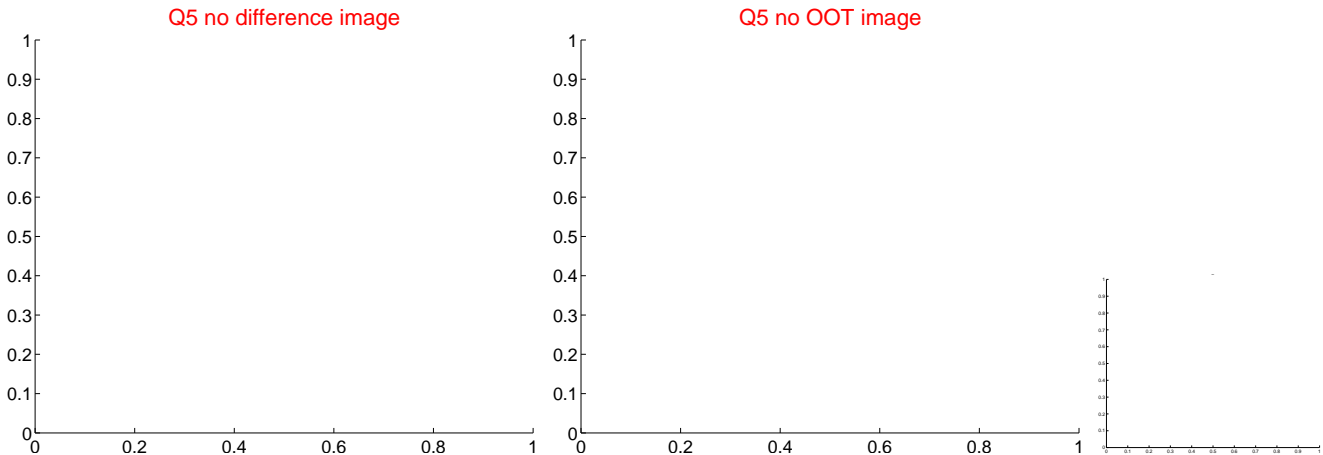
Q4 no difference image



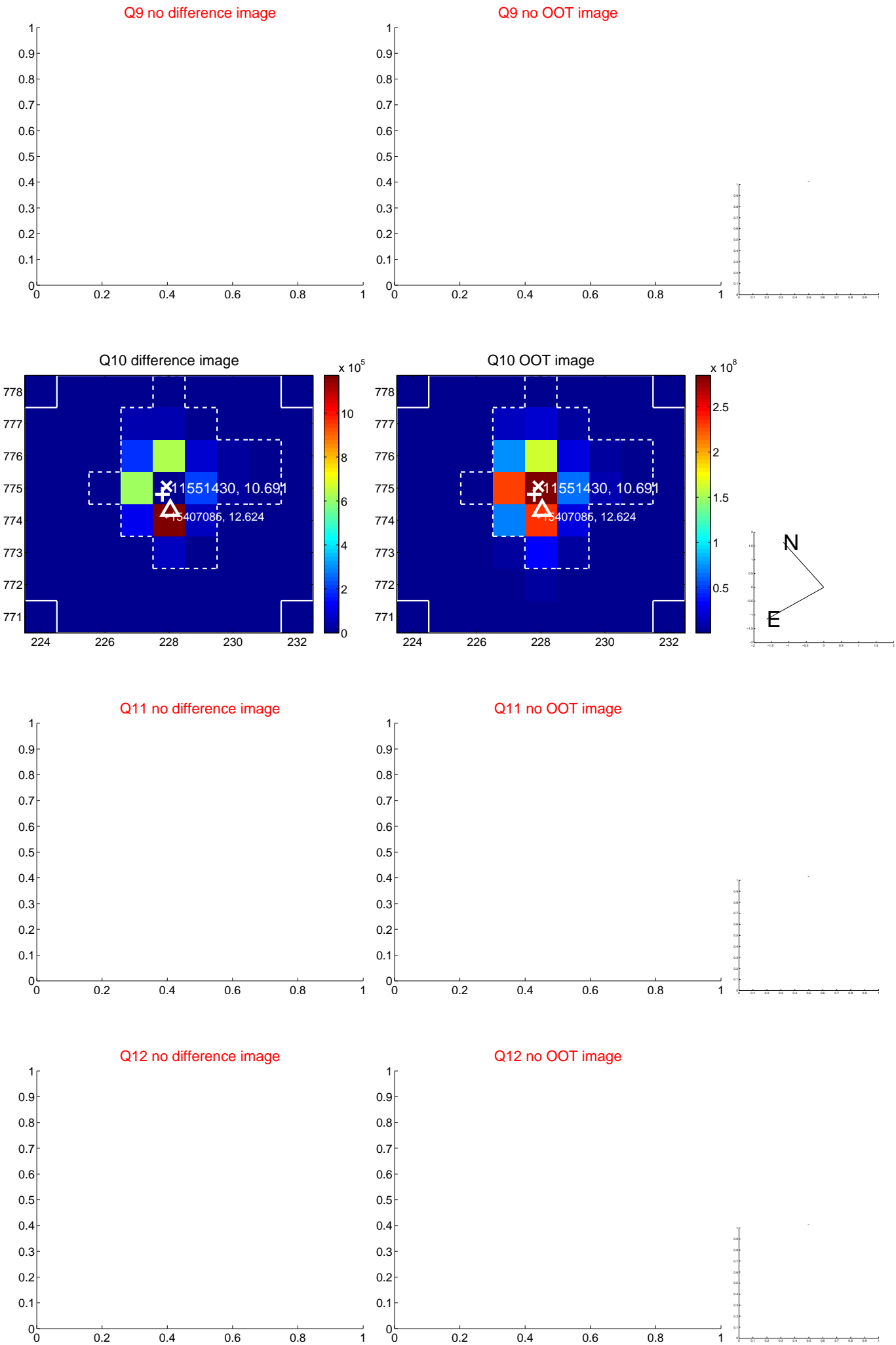
Q4 no OOT image



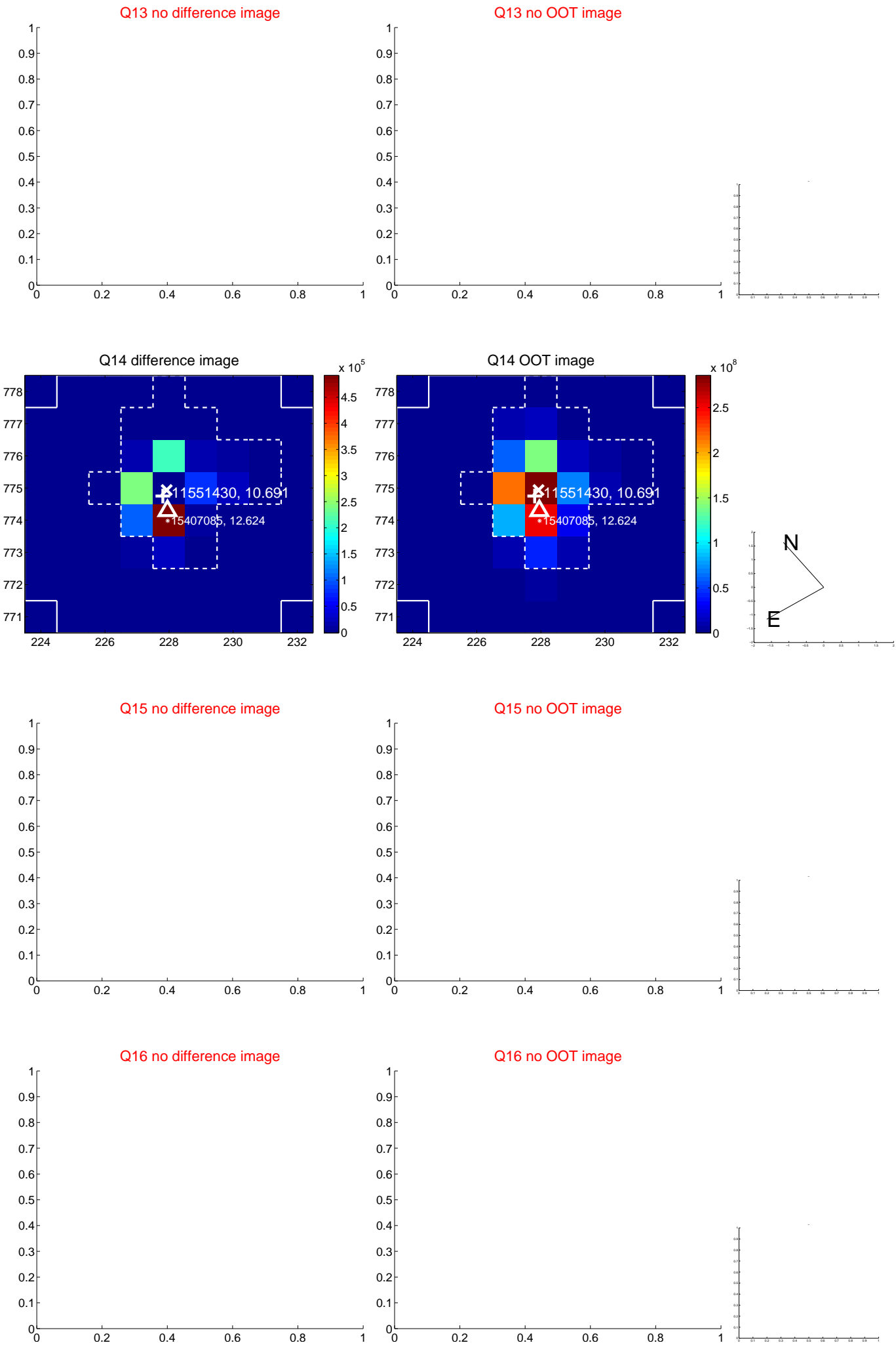
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



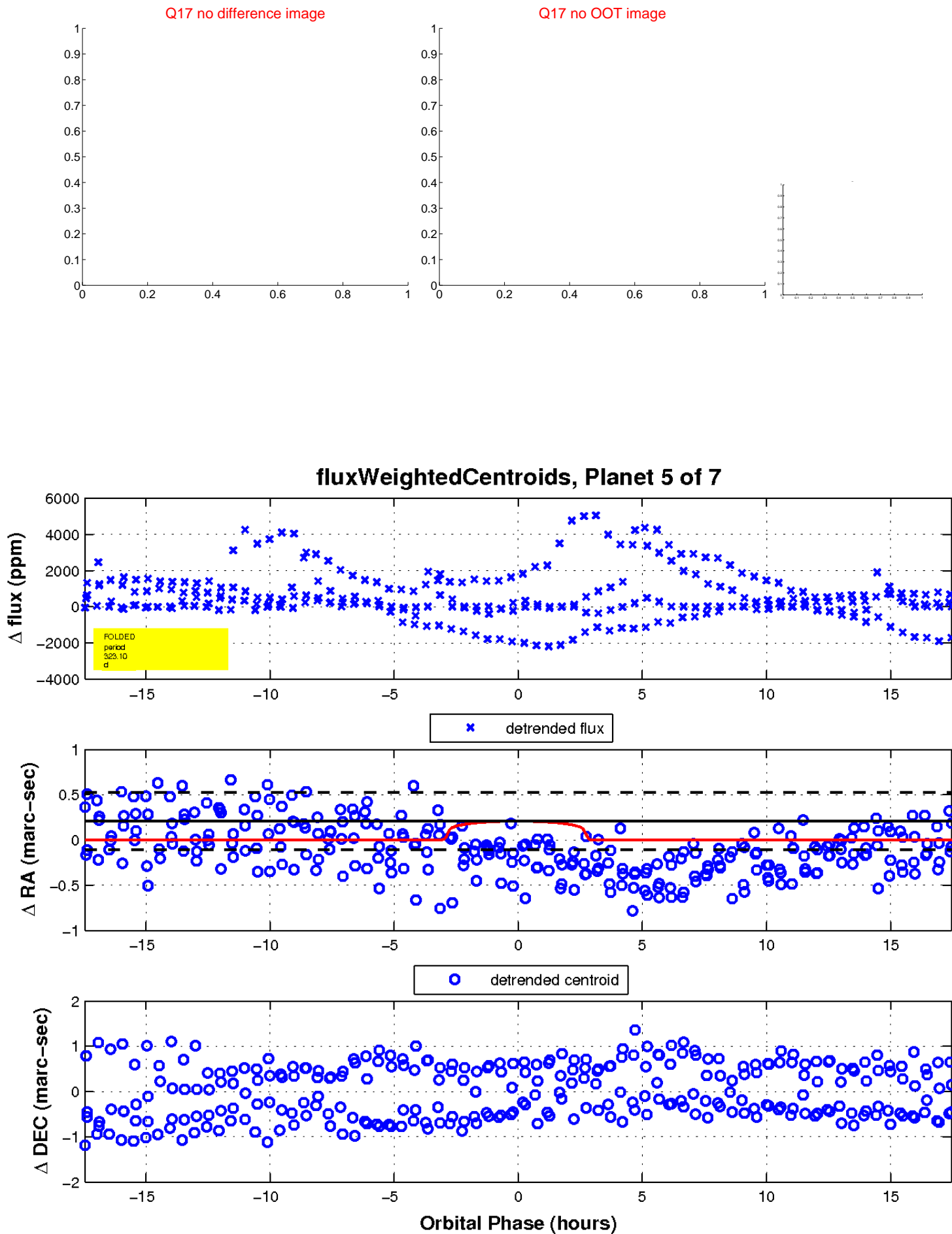
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



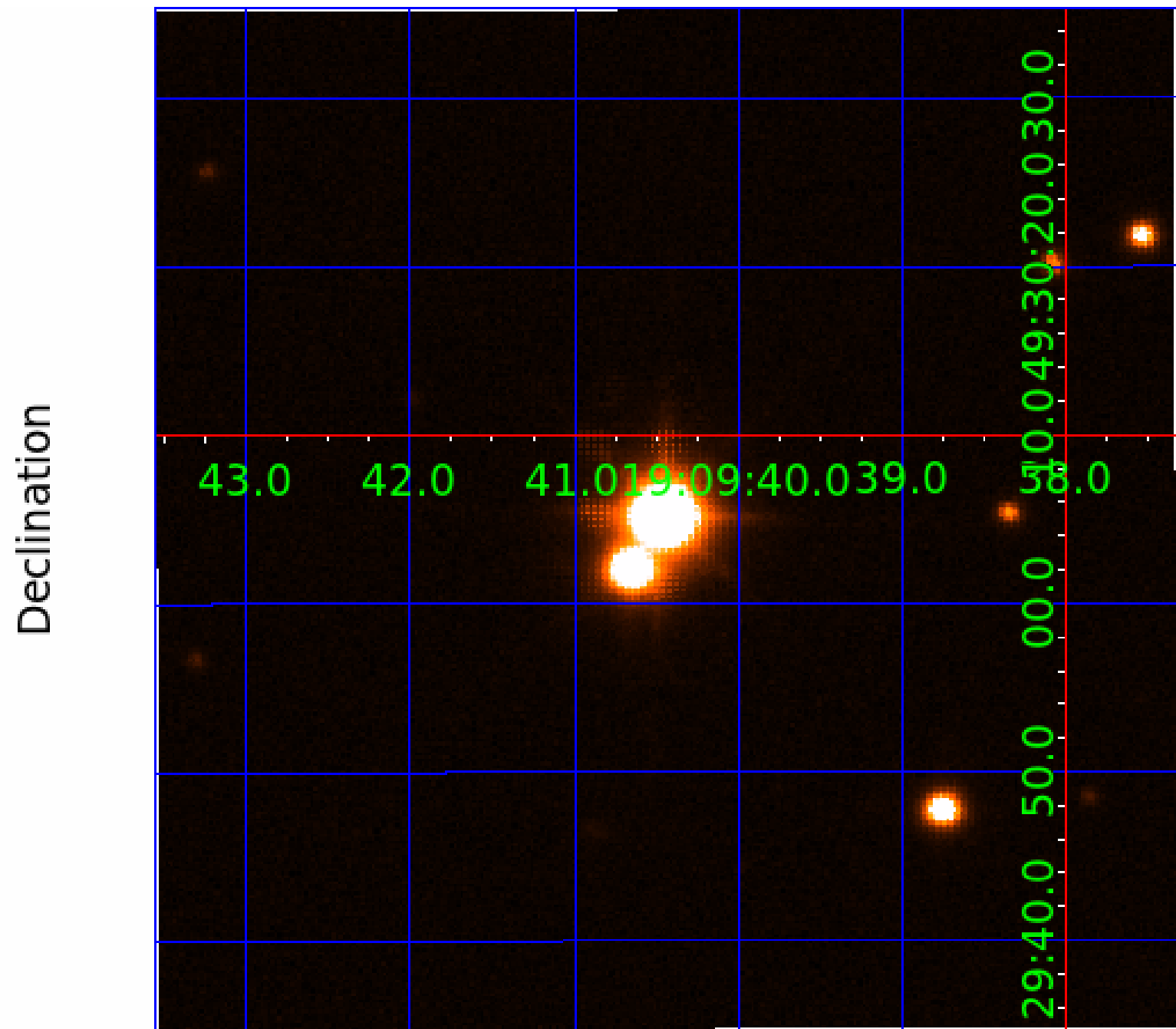
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011551430

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})
011551430-01	OBS	No	329.244684	260.382423	3201.0	13.011	26.0	12.7	1.60	5648	10.39	2.73
011551430-02	OBS	No	345.982227	227.667632	1440.6	7.905	19.3	6.5	1.60	5648	6.07	2.56
011551430-03	OBS	No	422.060038	158.532752	587.4	4.098	18.8	3.8	1.60	5648	7.78	1.96
011551430-04	OBS	No	433.106981	558.832902	2054.7	3.784	19.8	9.0	1.60	5648	7.74	1.89
011551430-05	OBS	No	323.095596	329.665334	672.4	5.841	17.2	4.8	1.60	5648	4.37	2.80
011551430-06	OBS	No	322.047745	158.868707	1693.2	3.849	18.1	9.3	1.60	5648	6.68	2.81
011551430-07	OBS	No	273.011498	299.244567	196.0	3.000	18.4	-1.0	1.60	5648	2.23	3.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011551430-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011551430-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
011551430-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
011551430-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011551430-05	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
011551430-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011551430-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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

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

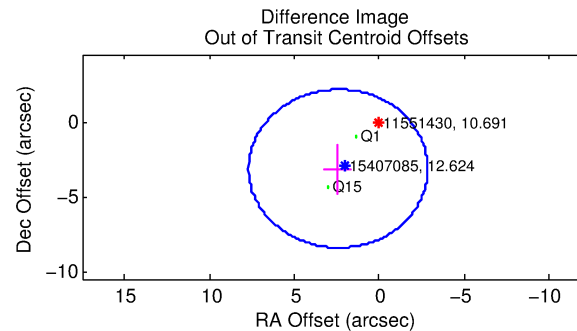
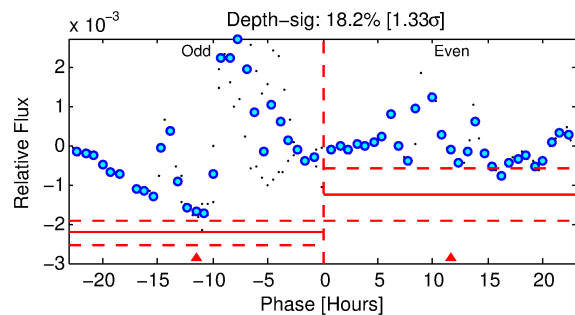
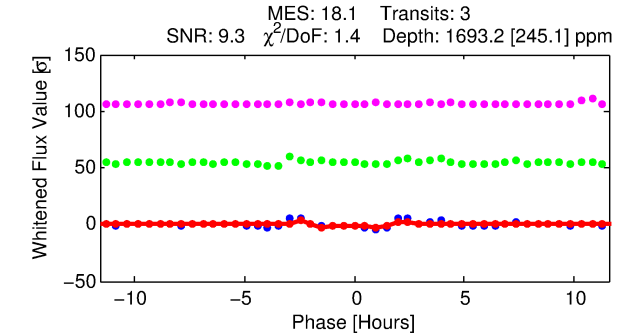
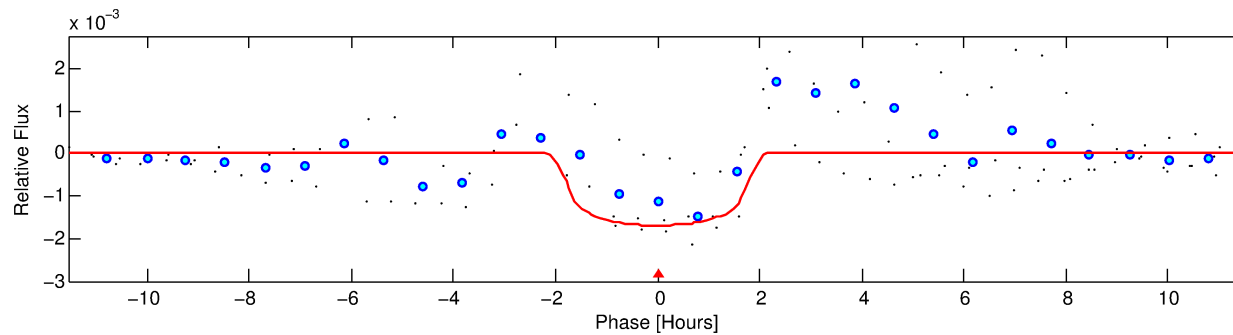
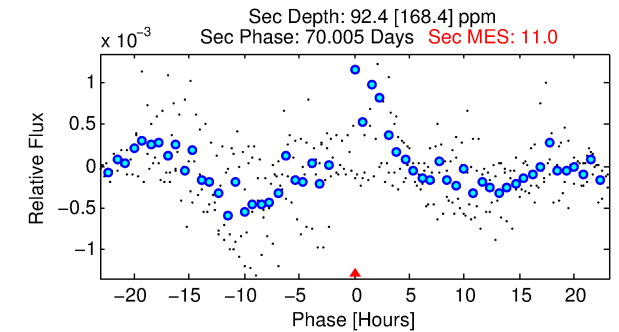
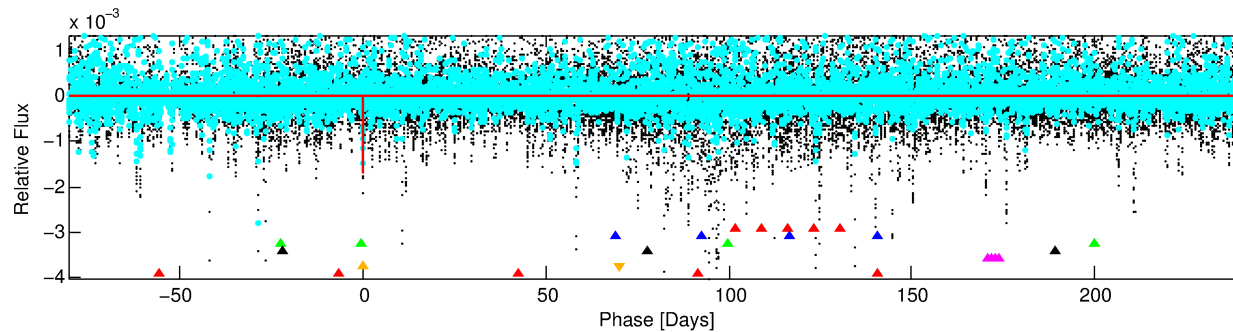
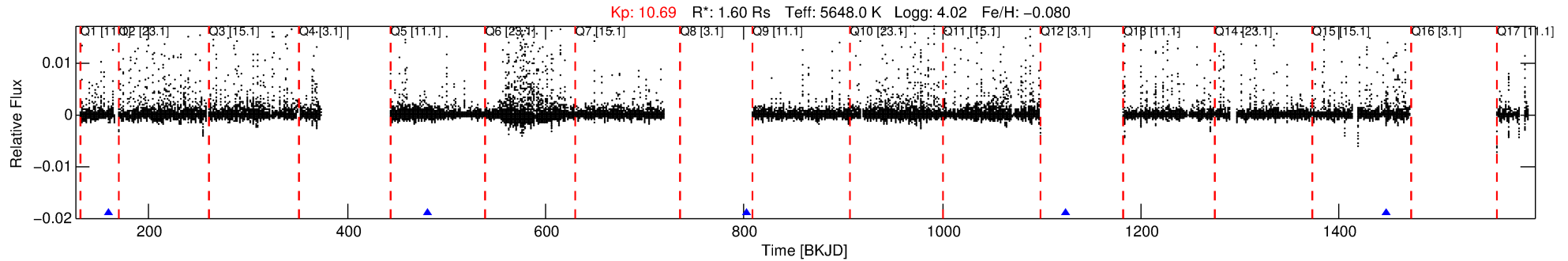
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 011551430-06

No Significant Match Found

DV One-Page Summary

KIC: 11551430 Candidate: 6 of 7 Period: 322.048 d



DV Fit Results:

Period = 322.04775 [0.00147] d
Epoch = 158.8687 [0.0045] BKJD
Rp/R* = 0.0381 [0.0204]
a/R* = 603.94 [1307.21]
b = 0.43 [4.14]
Seff = 2.81 [1.05]
Teq = 330 [31] K
Rp = 6.68 [3.88] Re
a = 0.9140 [0.2054] AU
Ag = 951.57 [2040.85] [0.47σ]
Teffp = 2835 [1499] K [1.67σ]

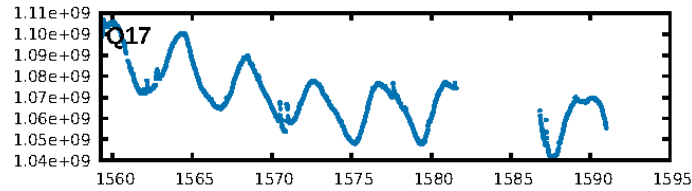
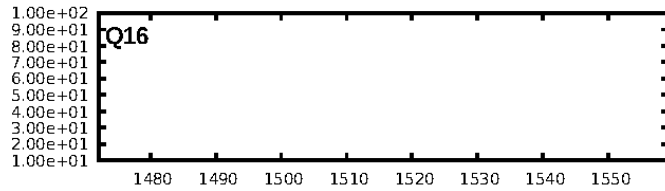
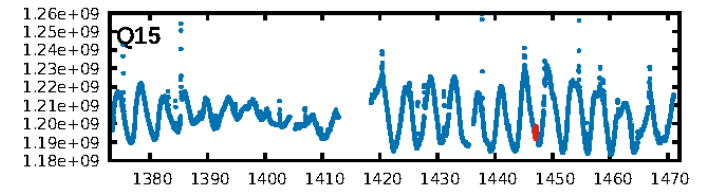
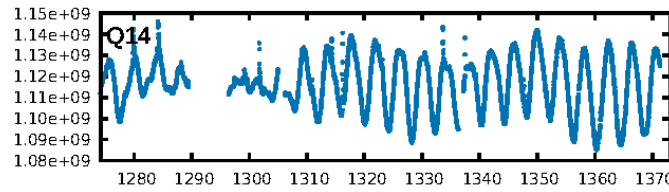
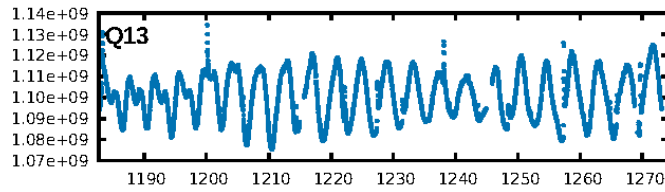
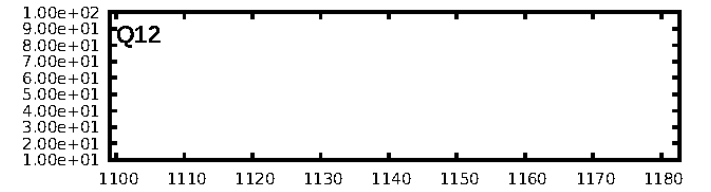
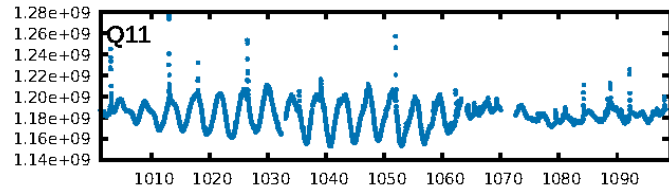
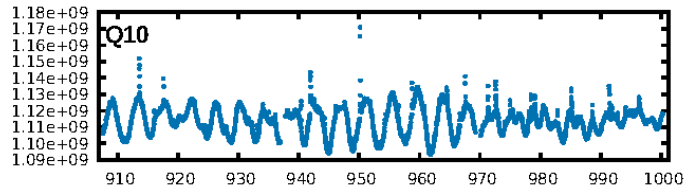
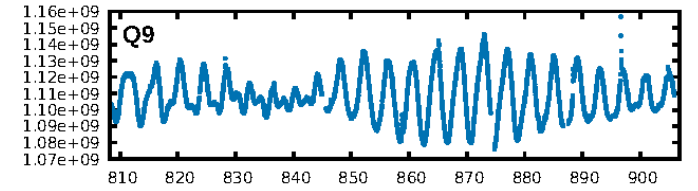
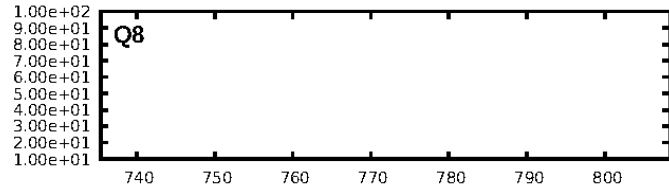
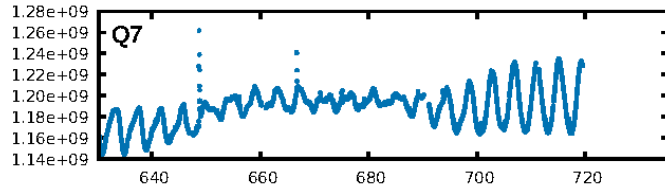
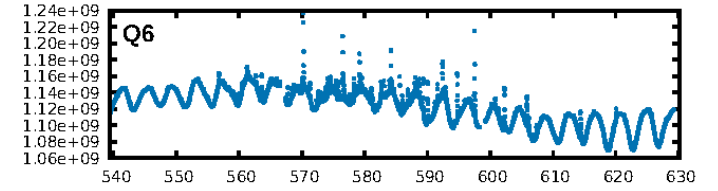
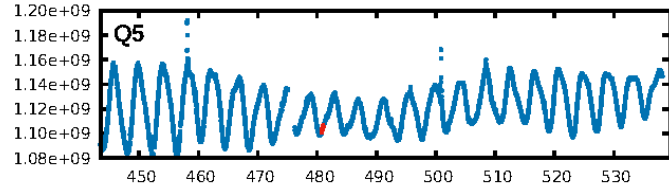
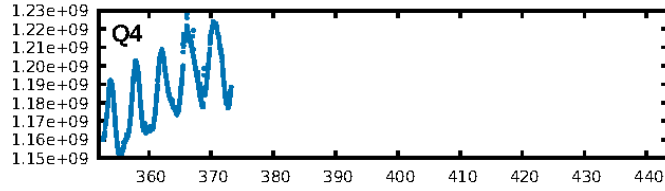
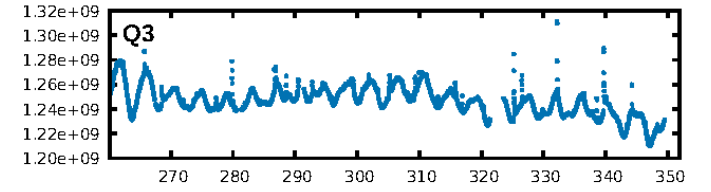
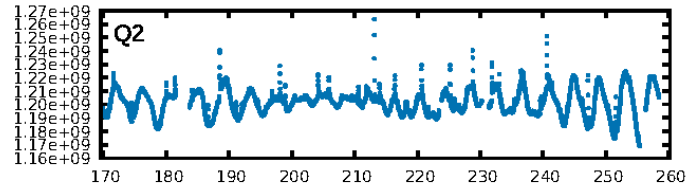
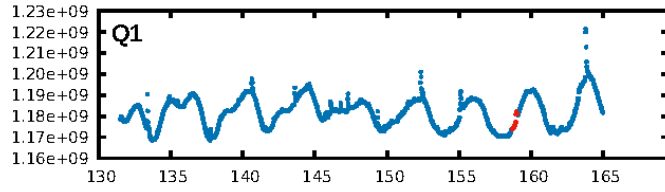
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [241.15σ]
LongPeriod-sig: 100.0% [3.59σ]
ModelChiSquare2-sig: 0.1%
ModelChiSquareGof-sig: 85.9%
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2/2]
GhostDiagnostic-chr: 0.3451
Centroid-sig: N/A
Centroid-so: 0.351 arcsec [2.32σ]
OotOffset-rm: 3.952 arcsec [2.24σ]
OotOffset-st: 0/1/0/1 [2]
KicOffset-rm: 5.256 arcsec [3.17σ]
KicOffset-st: 0/1/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.67 [2/3]

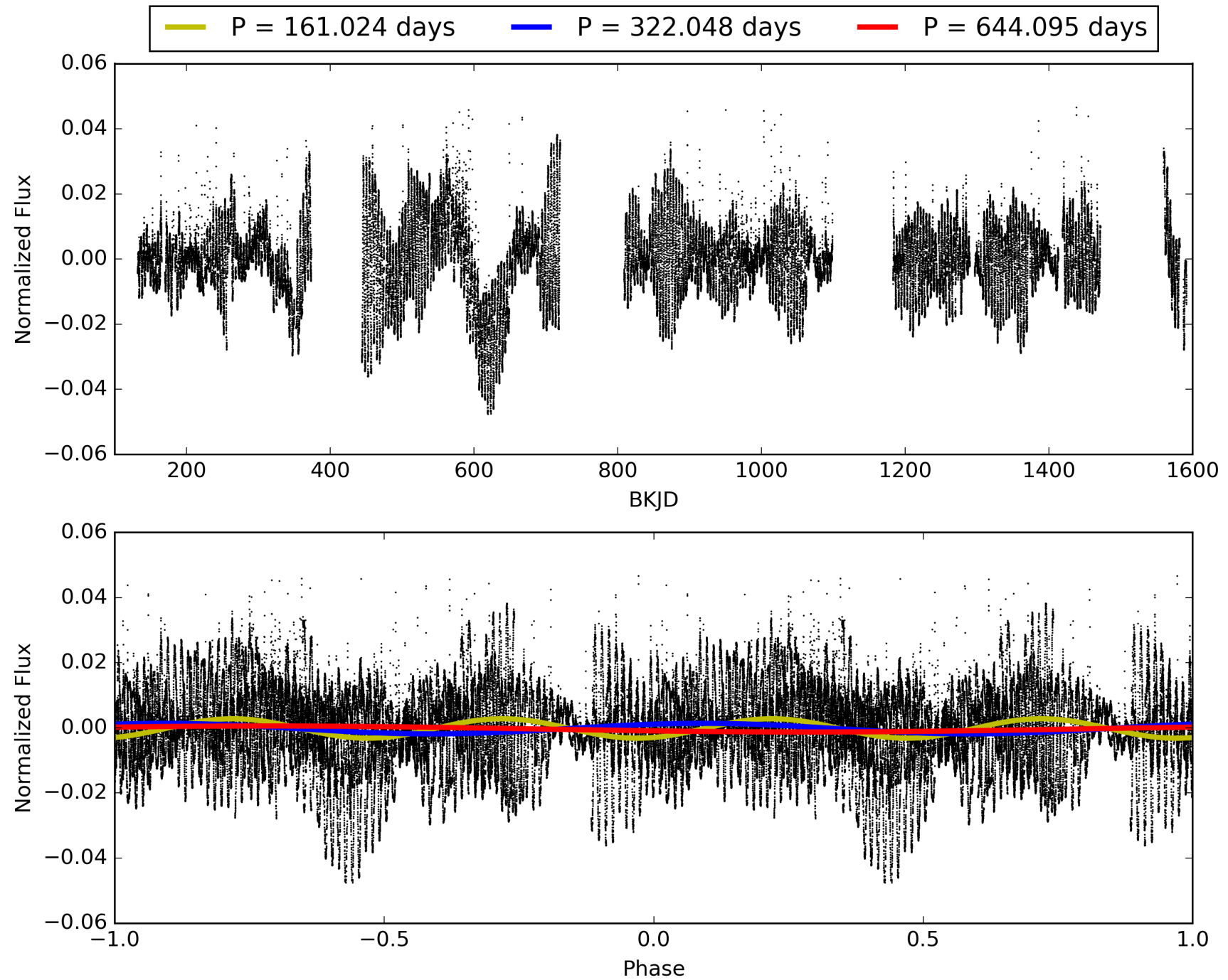
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:11:52 Z

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

TCE 011551430-06, PDC Light Curves

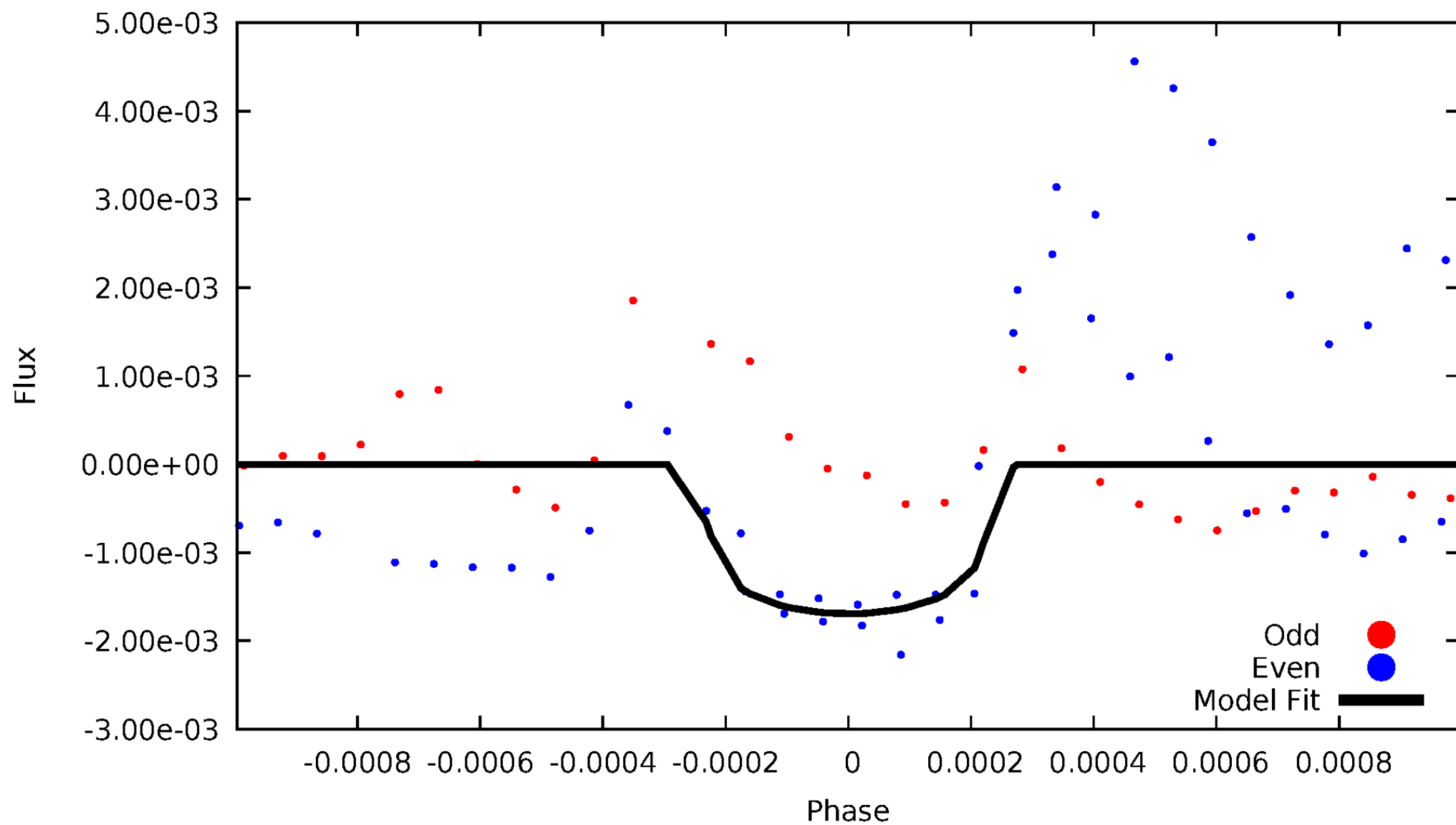


TCE 011551430-06



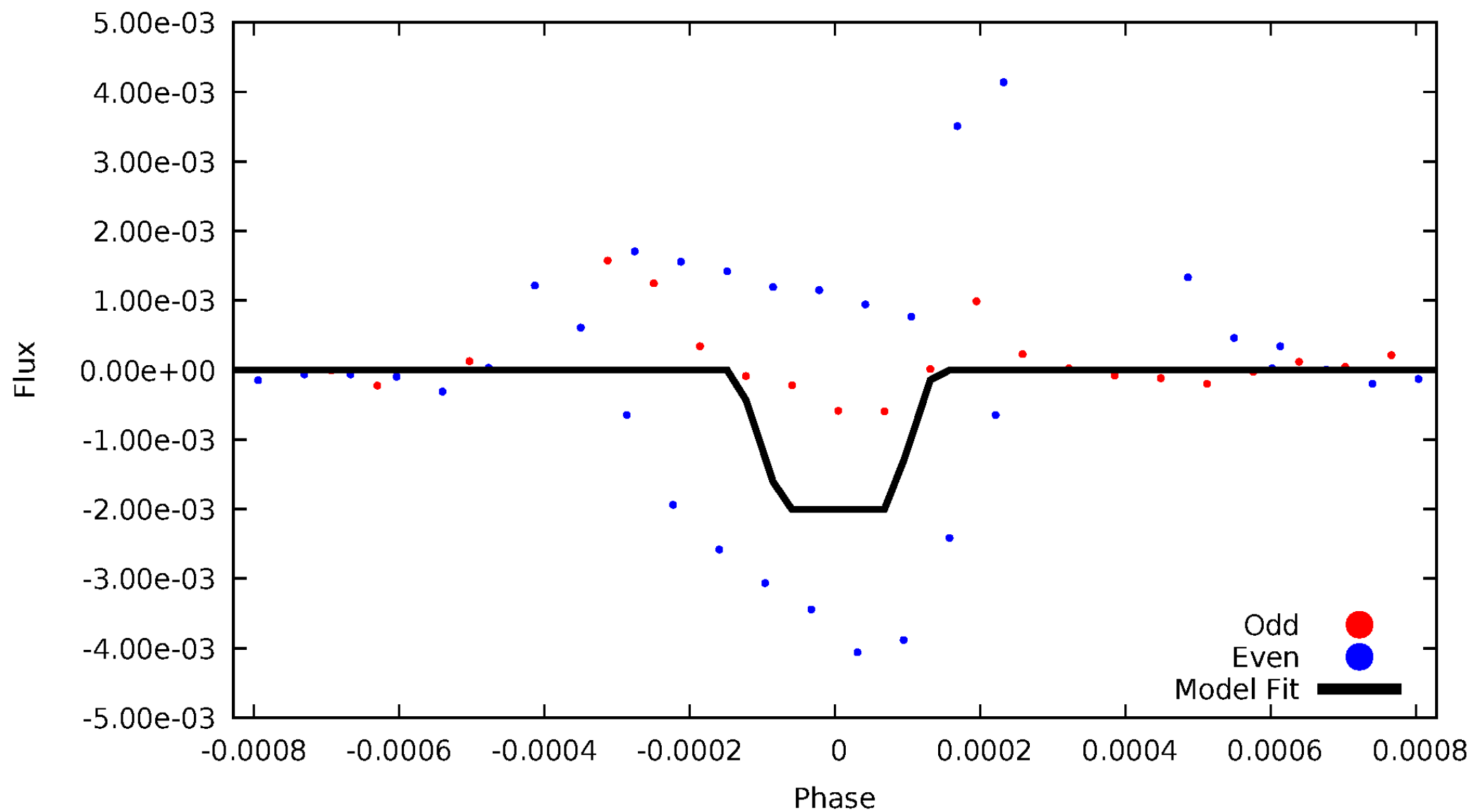
DV Odd/Even

TCE 011551430-06



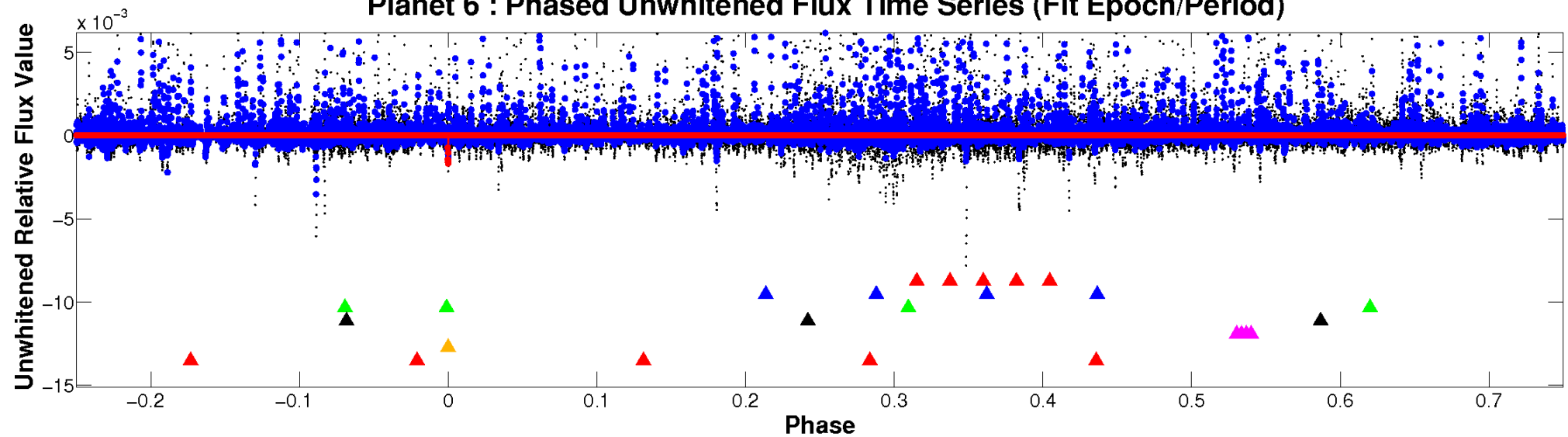
ALT Odd/Even

TCE 011551430-06

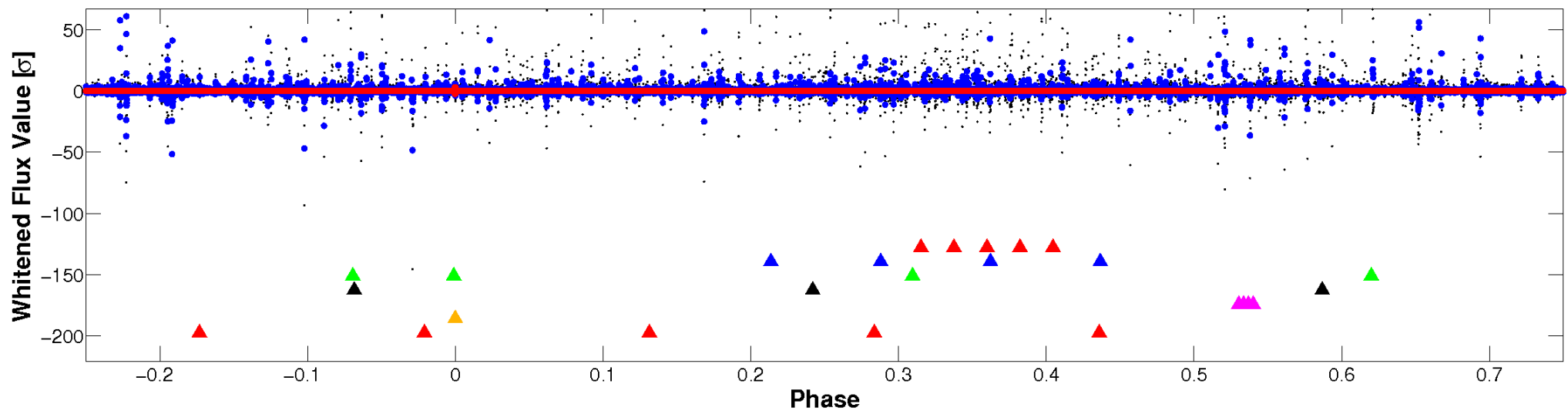


Non-Whitened Vs. Whitened Light Curve

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

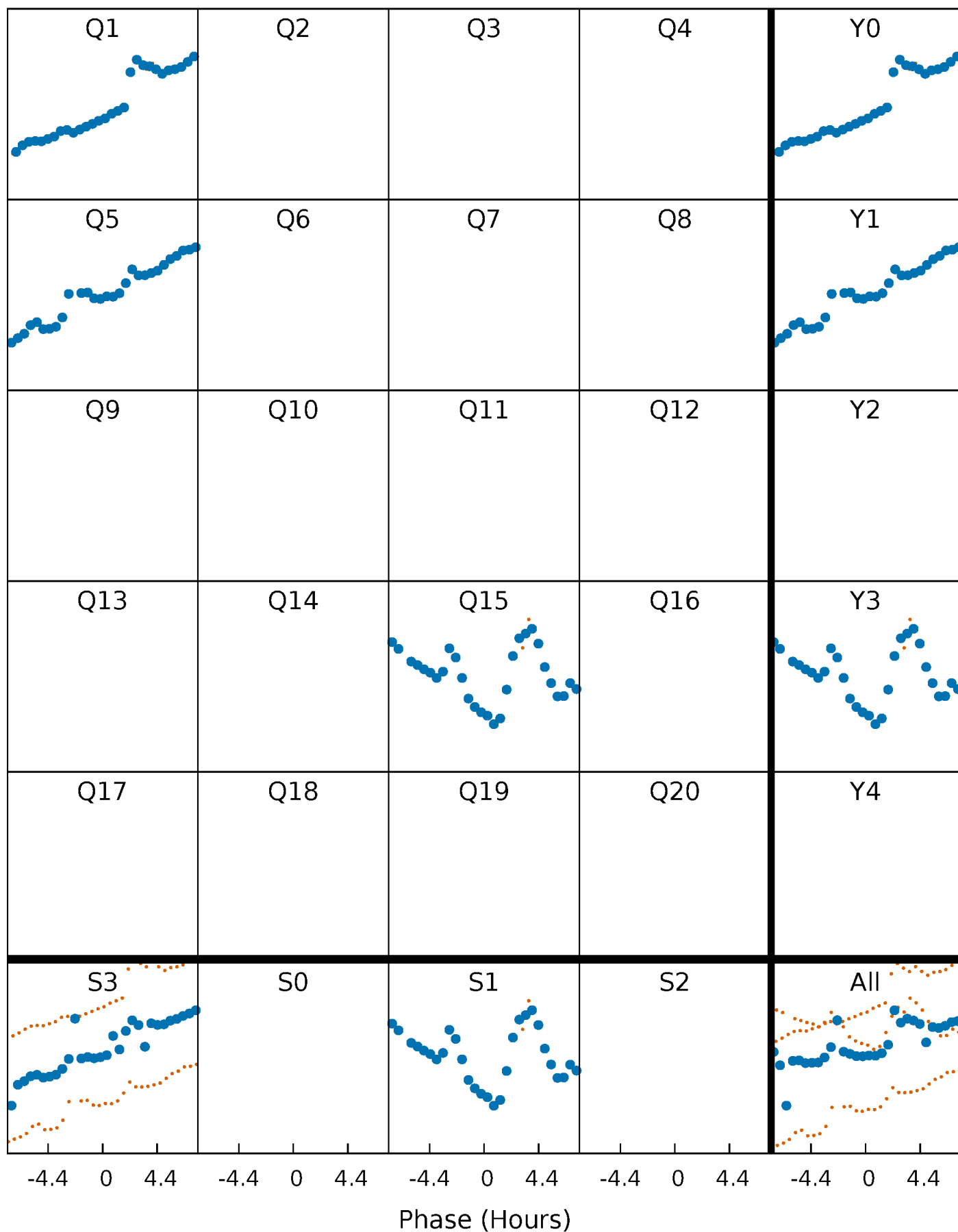


Planet 6 : Phased Whitened Flux Time Series (Fit Epoch/Period)



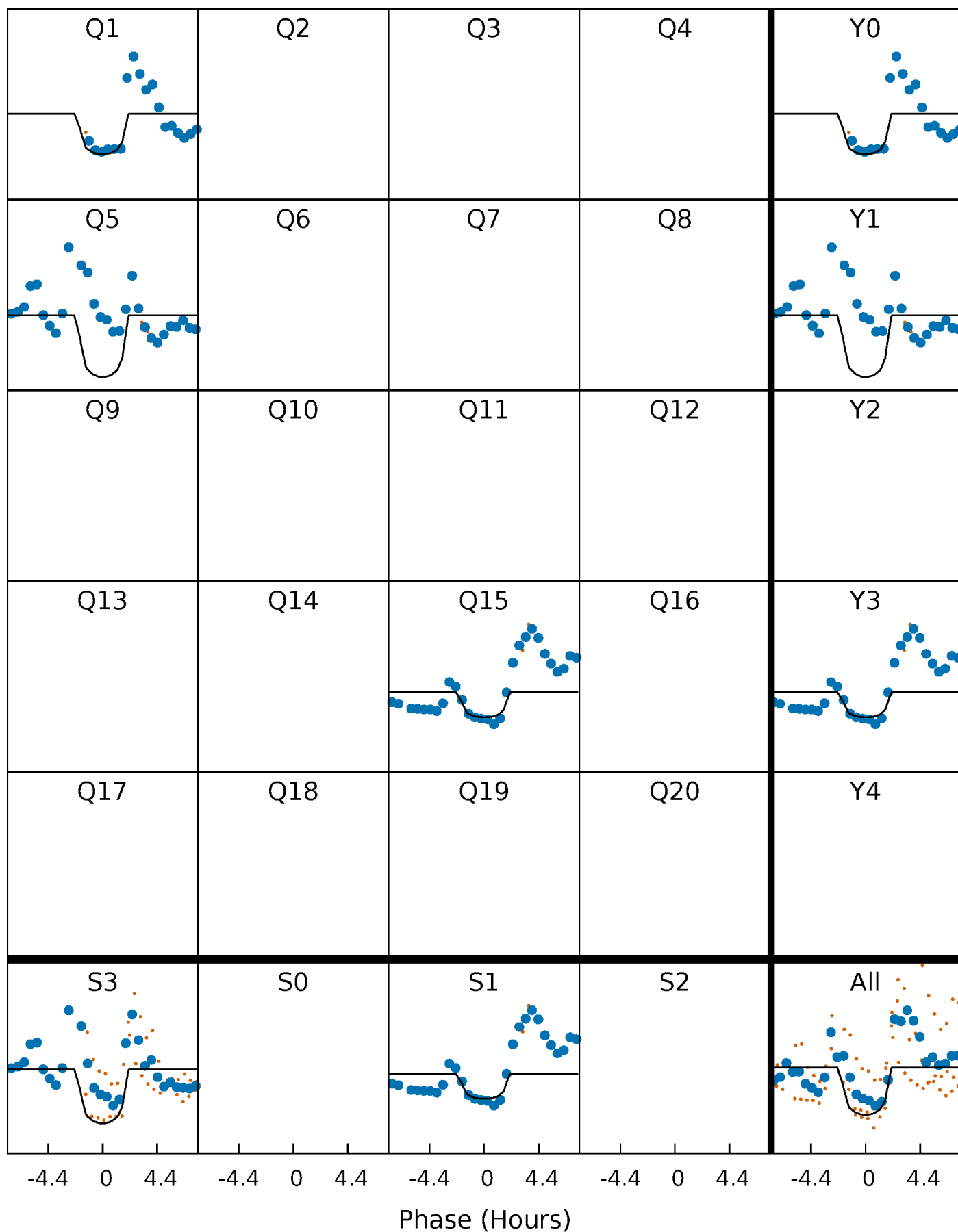
PDC Quarter-Phased Transit Curves

TCE 011551430-06 P=322.047745 Days $T_0=158.868707$ (BKJD)



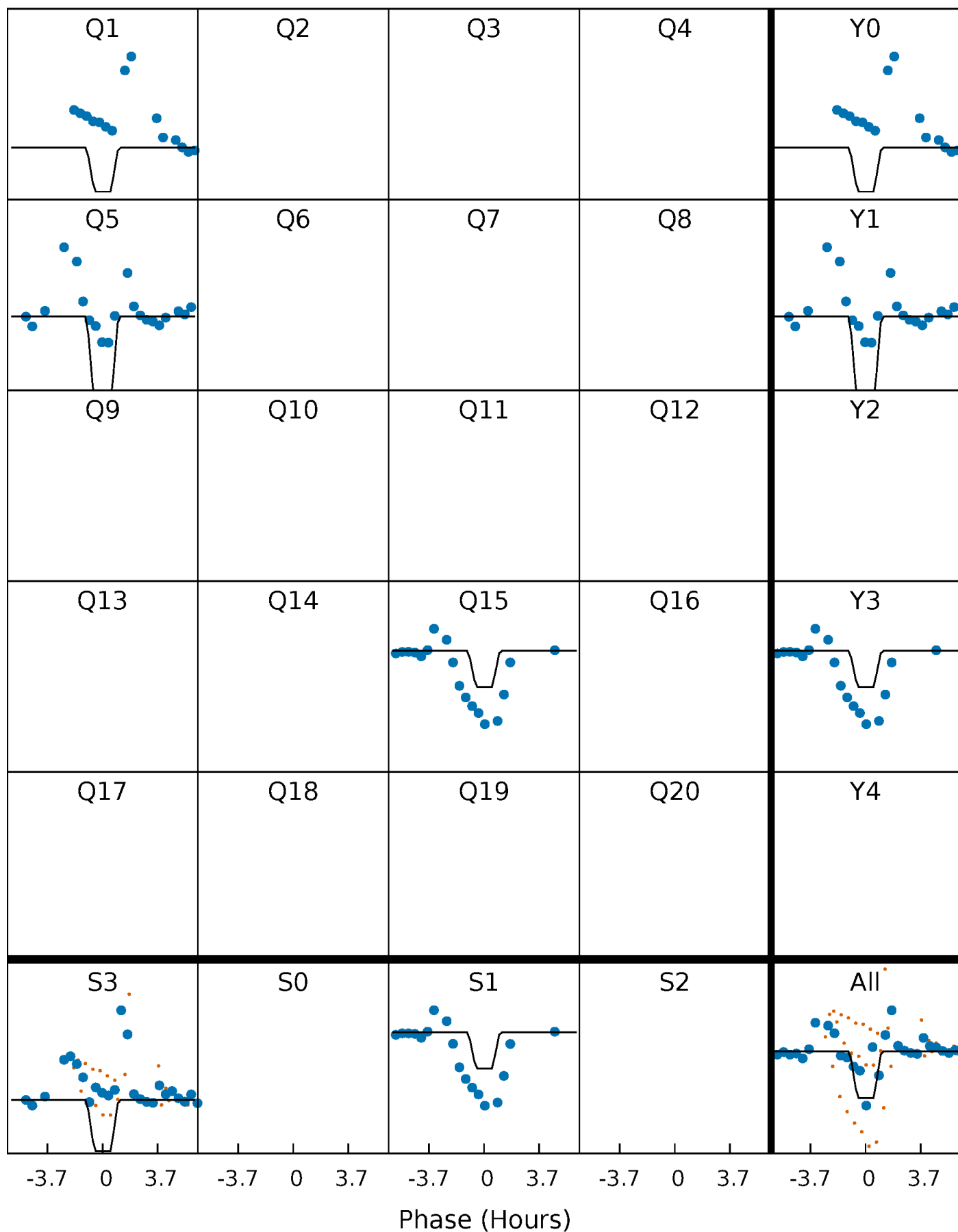
DV Quarter-Phased Transit Curves

TCE 011551430-06 $P=322.047745$ Days $T_0=158.868707$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

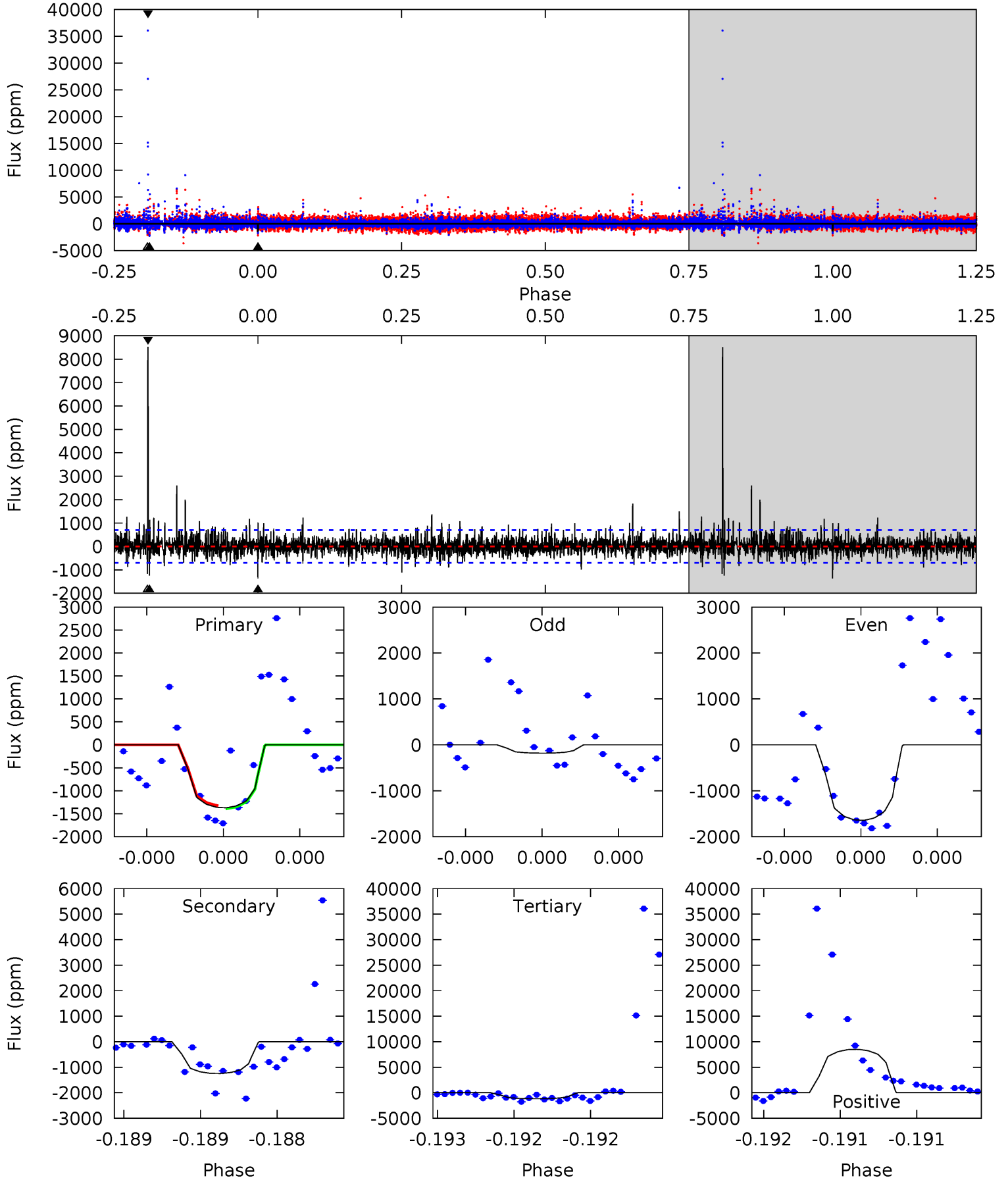
TCE 011551430-06 P=322.044070 Days $T_0=158.901014$ (BKJD)



DV Model-Shift Uniqueness Test

011551430-06, P = 322.047745 Days, E = 158.868707 Days

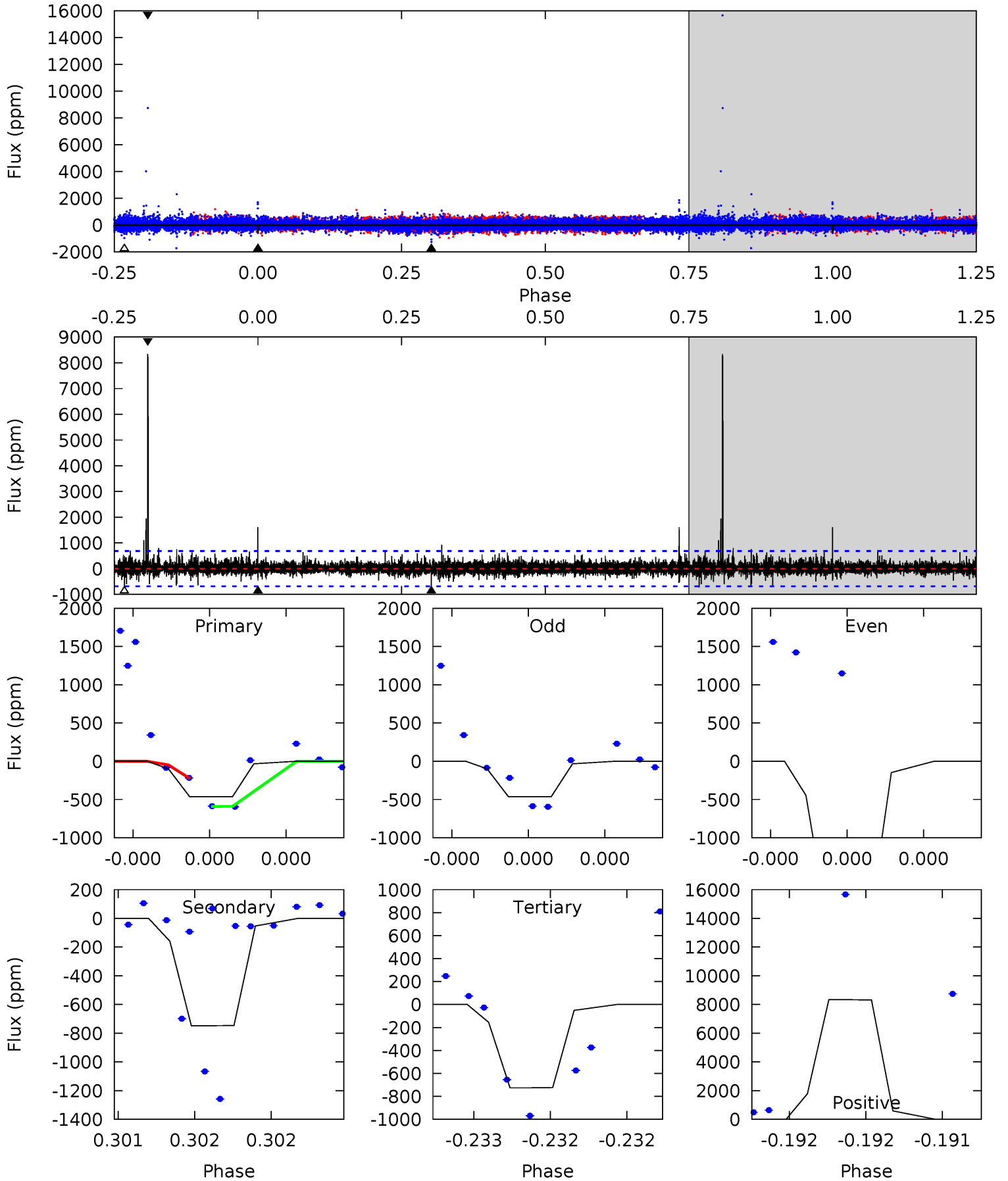
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
10.9	9.93	9.28	67.9	5.57	3.48	2.30	1.64	-57.0	0.65	-58.0	2.72	0.68	0.86	0.24



Alt Model-Shift Uniqueness Test

011551430-06, P = 322.044070 Days, E = 158.901014 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
3.88	6.25	6.06	69.6	5.71	3.69	1.12	-2.18	-65.7	0.19	-63.3	8.11	2.52	0.92	0



Stellar Parameters For KIC 011551430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5648^{+113}_{-90}	$4.019^{+0.217}_{-0.109}$	$-0.080^{+0.150}_{-0.100}$	$1.605^{+0.297}_{-0.363}$	$0.983^{+0.102}_{-0.084}$	$0.335^{+0.360}_{-0.109}$
	+2%/-2%	+5%/-3%	+188%/-125%	+19%/-23%	+10%/-9%	+108%/-32%
Source	SPE13	SPE13	SPE13	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011551430-06 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-1245 ± 125	$6.63^{+3.54}_{-3.15}$	459^{+23}_{-30}	5370^{+2064}_{-820}	13274^{+35791}_{-7601}
Alt.	-748 ± 120	$7.82^{+3.54}_{-3.66}$	457^{+24}_{-31}	4484^{+1450}_{-531}	5679^{+14202}_{-3054}

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

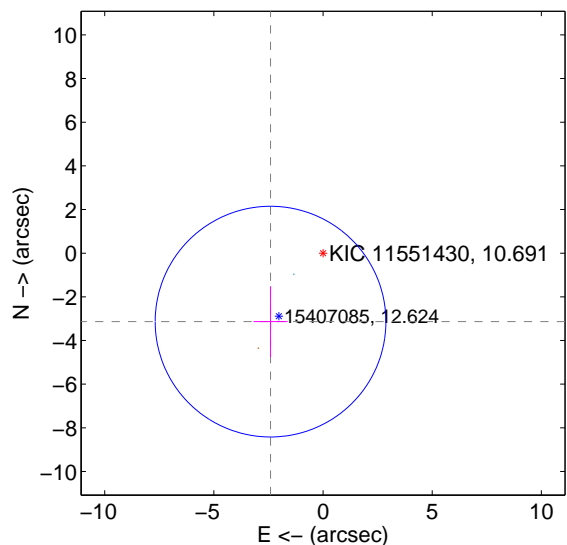
Supplemental centroid analysis for 011551430-06. **Kepler magnitude: 10.69.** Transit SNR 9.30

There are 1 quarters with good PRF difference image offsets

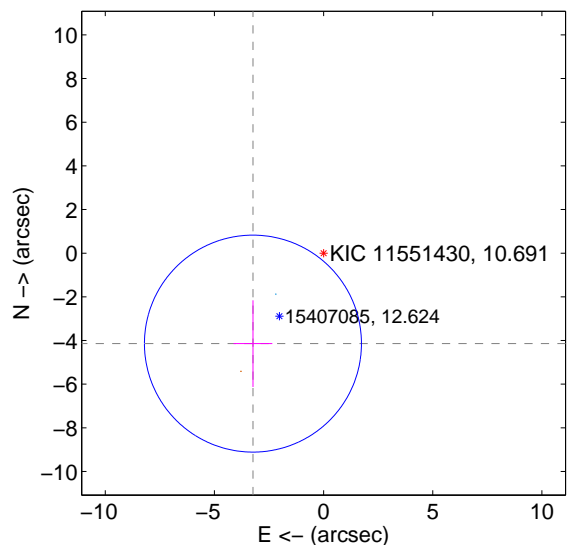
The direct PRF centroid is offset from the target star catalog position by about 1.34 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.952 ± 1.761	2.24	2.405 ± 0.781	-3.136 ± 1.622
PRF-fit source offset from KIC position	5.256 ± 1.656	3.17	3.236 ± 0.889	-4.143 ± 1.984
photometric centroid source offset	0.35 ± 0.15	2.32	0.32 ± 0.13	-0.14 ± 0.23

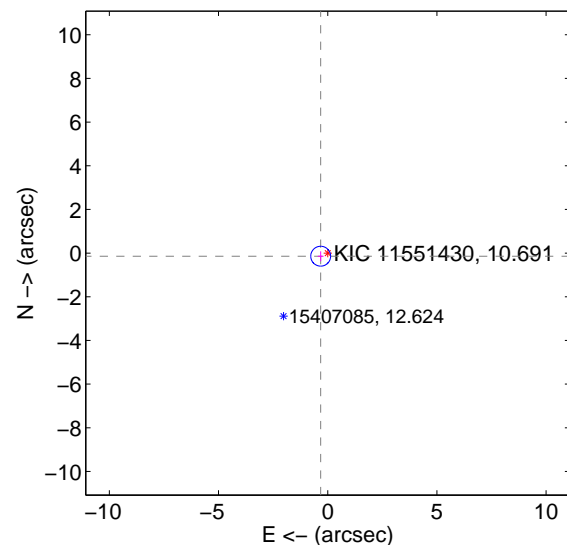
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

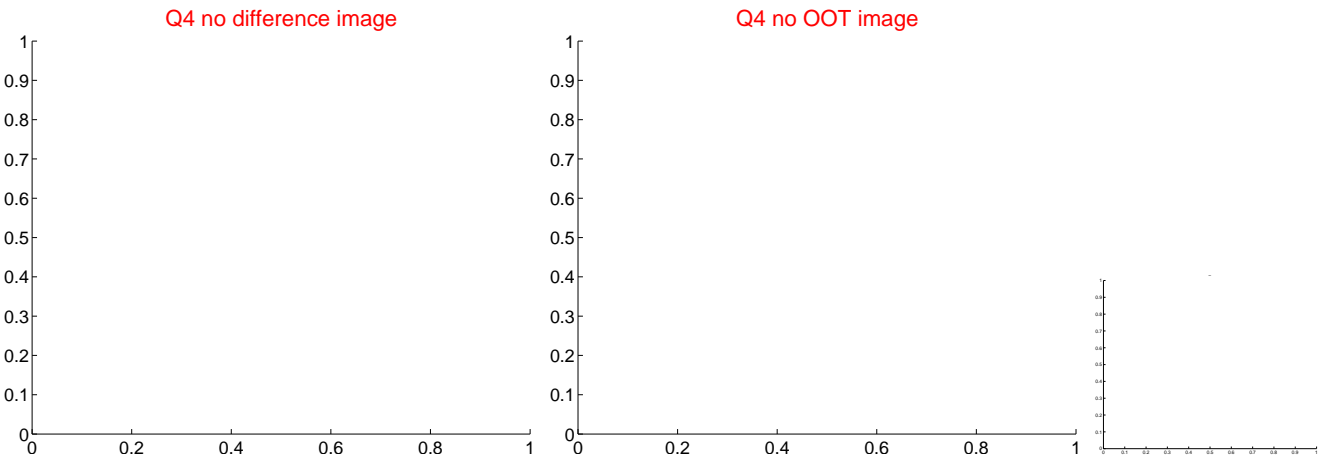
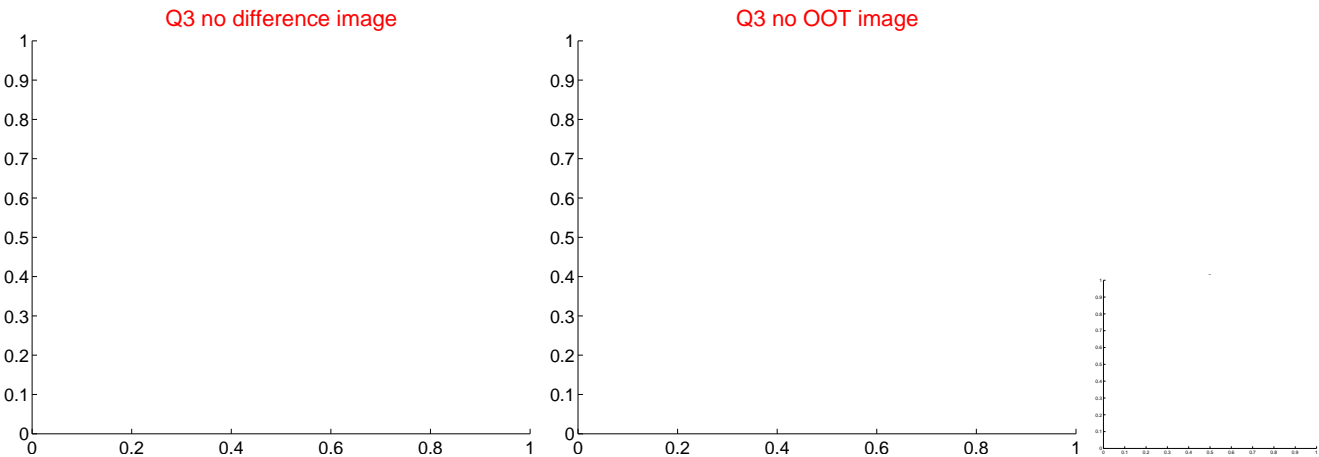
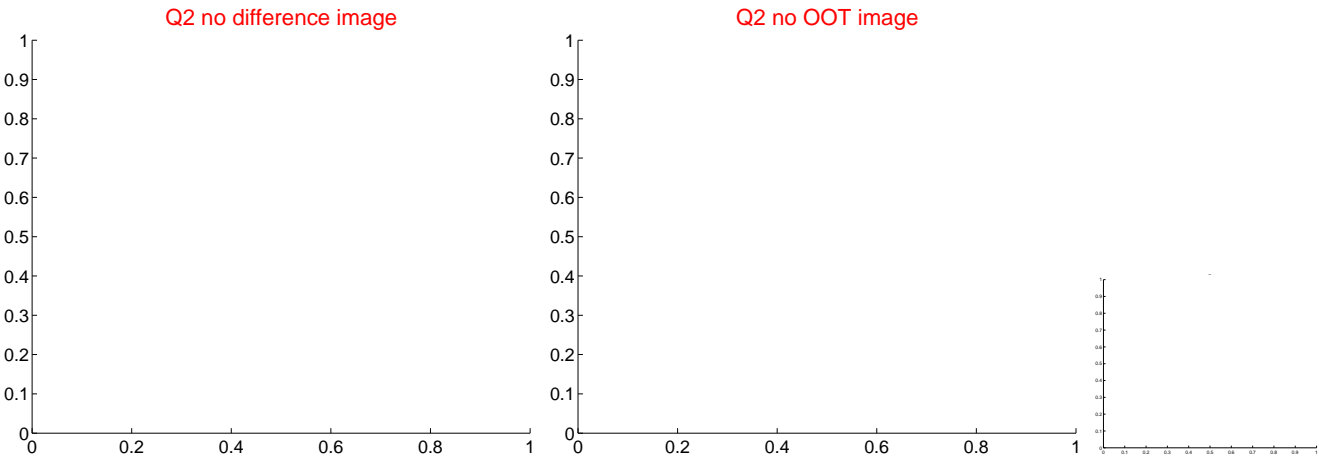
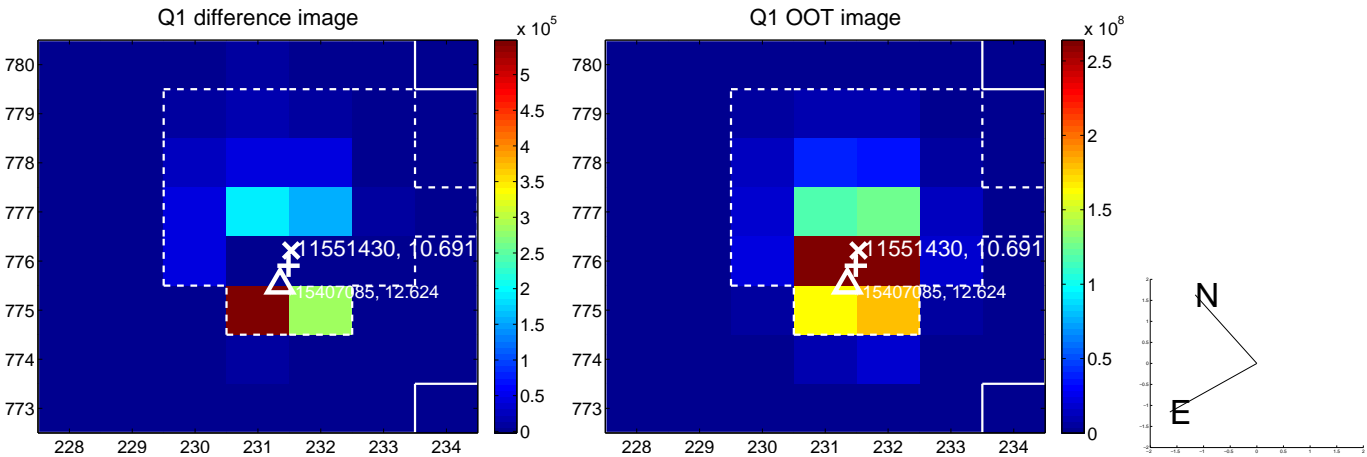


offset from photometric centroids

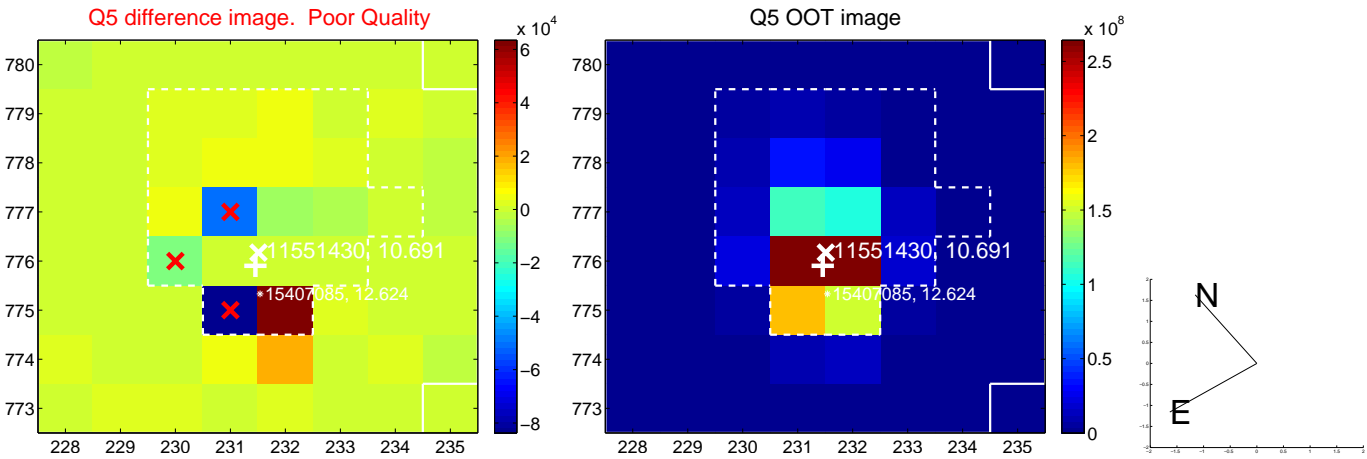


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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



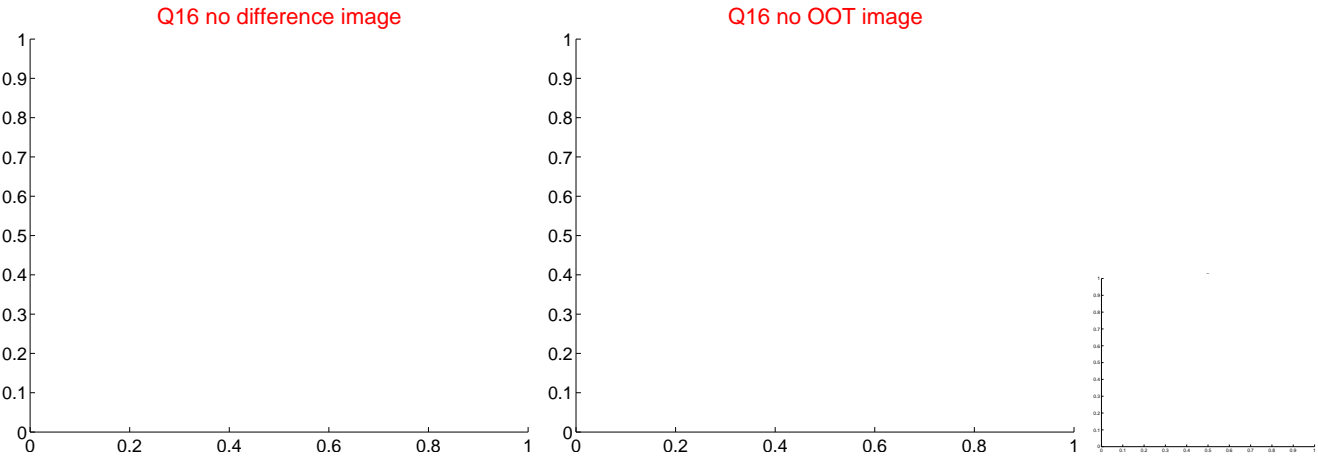
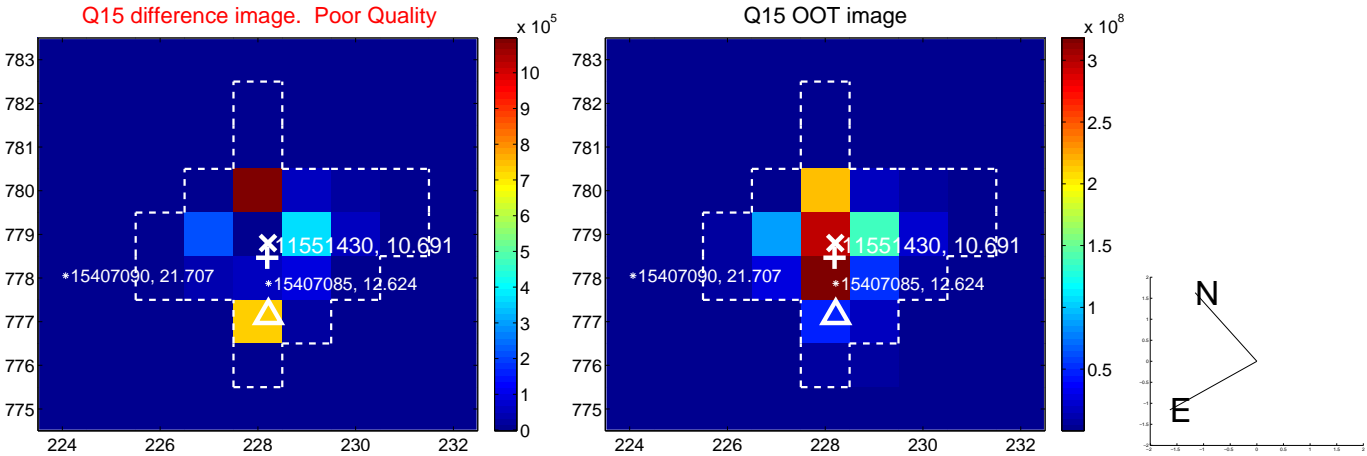
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



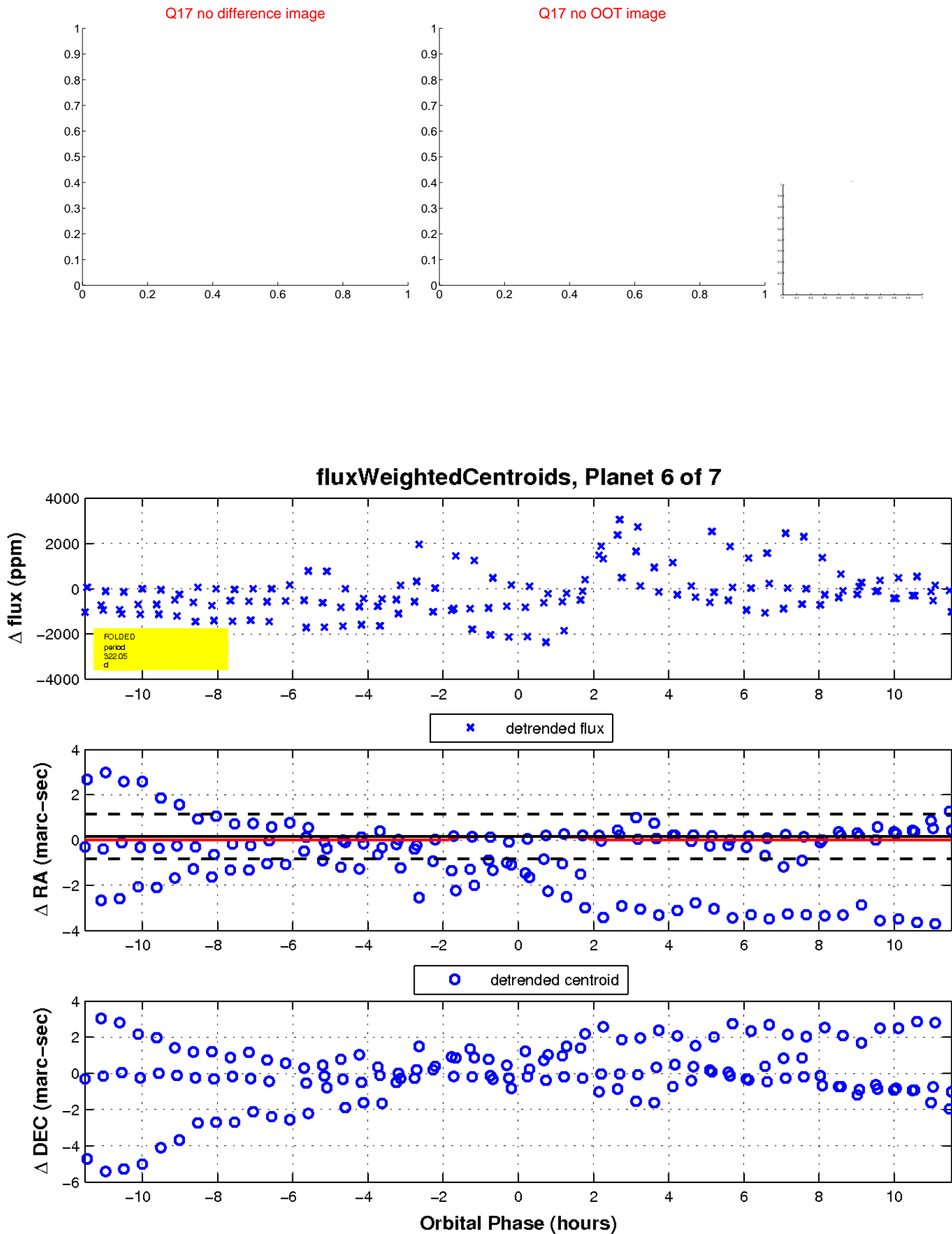
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



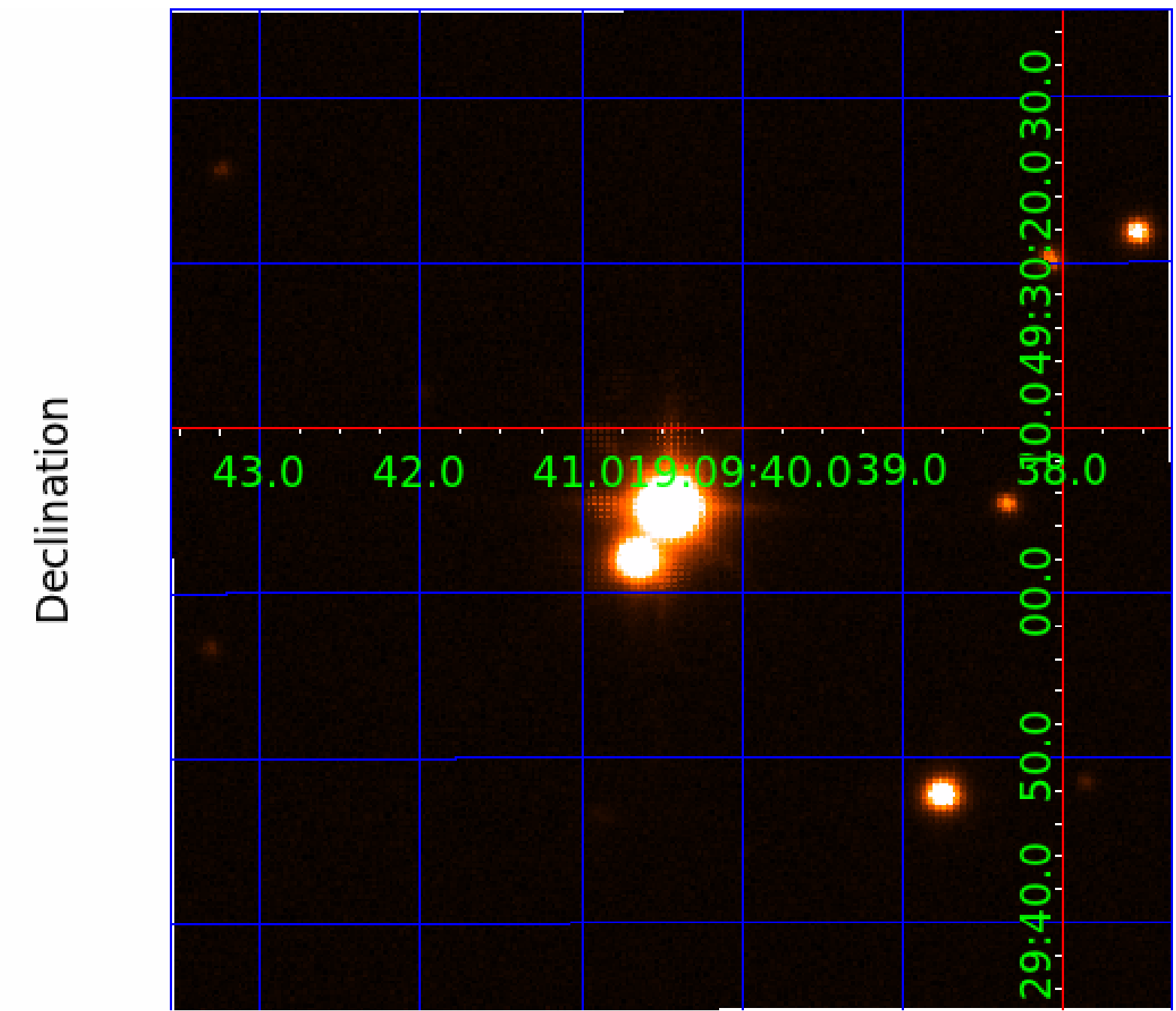
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 011551430

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})
011551430-01	OBS	No	329.244684	260.382423	3201.0	13.011	26.0	12.7	1.60	5648	10.39	2.73
011551430-02	OBS	No	345.982227	227.667632	1440.6	7.905	19.3	6.5	1.60	5648	6.07	2.56
011551430-03	OBS	No	422.060038	158.532752	587.4	4.098	18.8	3.8	1.60	5648	7.78	1.96
011551430-04	OBS	No	433.106981	558.832902	2054.7	3.784	19.8	9.0	1.60	5648	7.74	1.89
011551430-05	OBS	No	323.095596	329.665334	672.4	5.841	17.2	4.8	1.60	5648	4.37	2.80
011551430-06	OBS	No	322.047745	158.868707	1693.2	3.849	18.1	9.3	1.60	5648	6.68	2.81
011551430-07	OBS	No	273.011498	299.244567	196.0	3.000	18.4	-1.0	1.60	5648	2.23	3.50

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011551430-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—CENT_SATURATED
011551430-02	OBS	FP	0.00	1	0	0	0	LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED
011551430-03	OBS	FP	0.00	1	0	1	0	INDIV_TRANS_CHASES_SKYE_ZUMA_TRACKER—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED—HALO_GHOST
011551430-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—MOD_POS_ALT—INCONSISTENT_TRANS—CENT_SATURATED
011551430-05	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—MOD_TER_DV—MOD_POS_DV—INCONSISTENT_TRANS—CENT_SATURATED—HALO_GHOST
011551430-06	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_SKYE—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_POS_DV—MOD_NONUNIQ_ALT—MOD_TER_ALT—MOD_POS_ALT—CENT_SATURATED
011551430-07	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_CHASES_MARSHALL—LPP_DV—LPP_ALT—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—CENT_SATURATED

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.

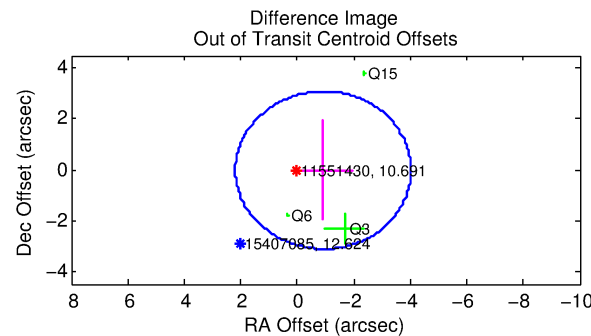
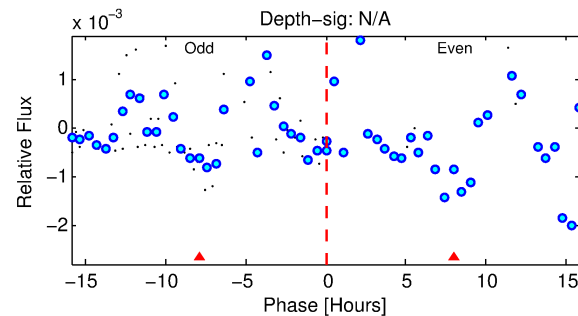
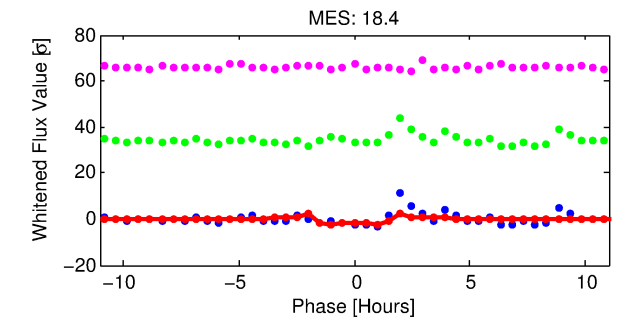
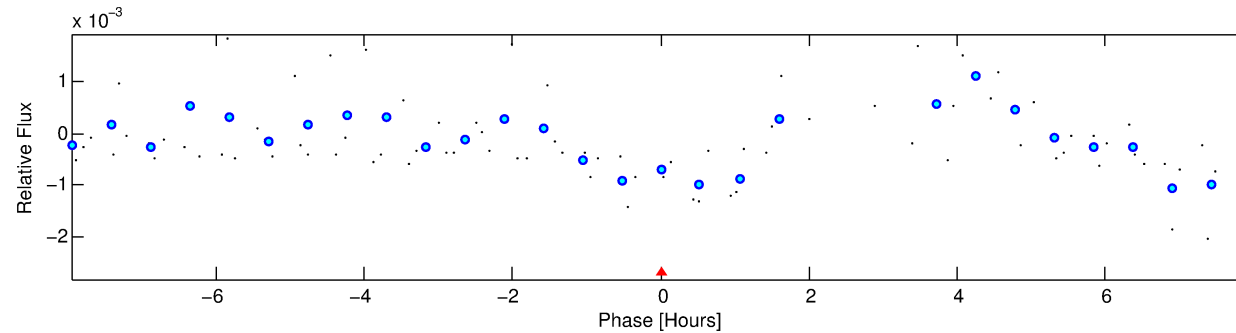
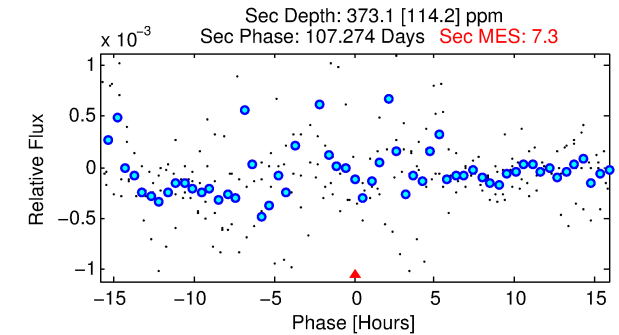
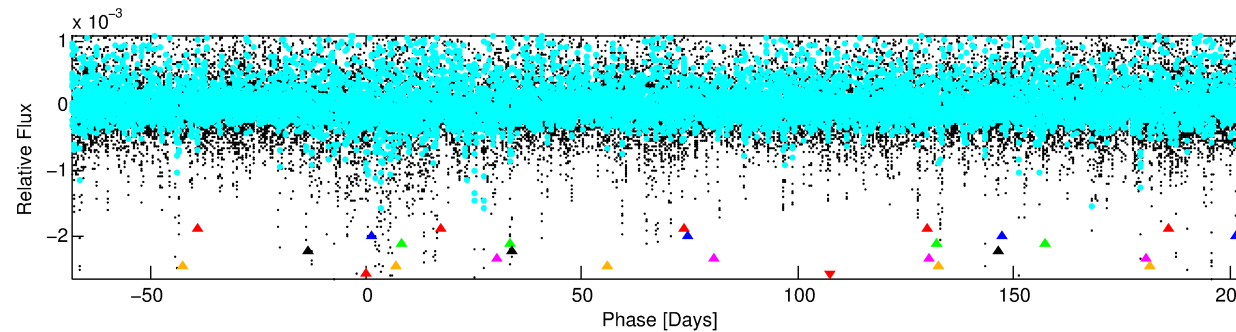
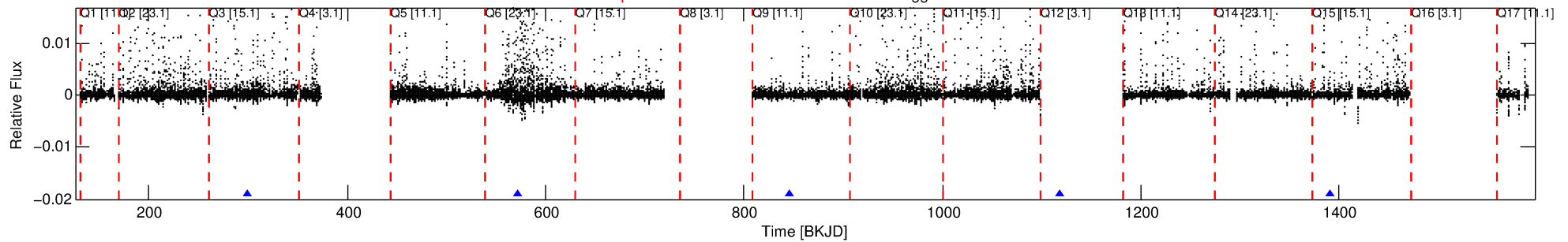
Ephemeris Match Information For 011551430-07

No Significant Match Found

DV One-Page Summary

KIC: 11551430 Candidate: 7 of 7 Period: 273.011 d

Kp: 10.69 R*: 1.60 Rs Teff: 5648.0 K Logg: 4.02 Fe/H: -0.080



TPS TCE Results:

Period = 273.01150 d
Epoch = 299.2446 BKJD

DV fit results are unavailable

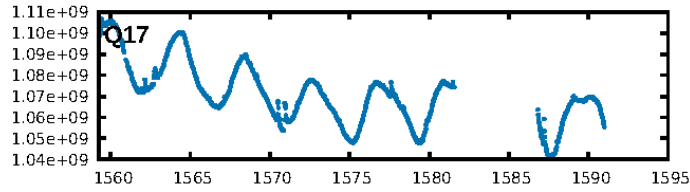
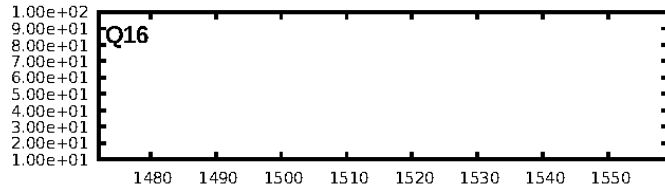
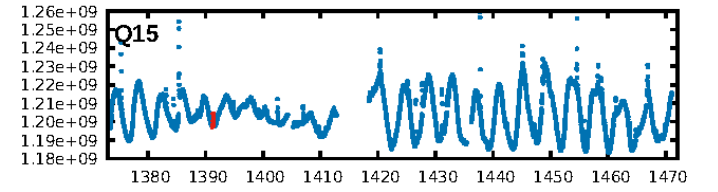
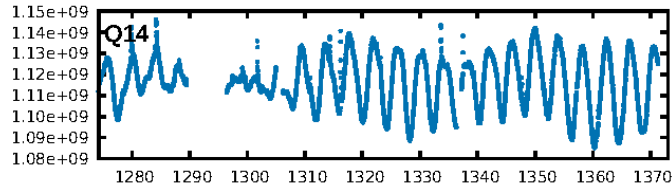
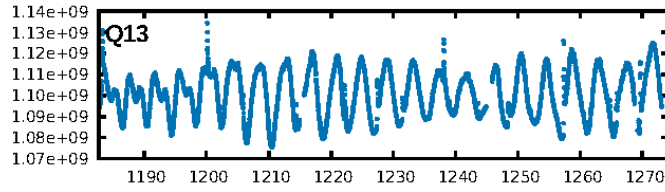
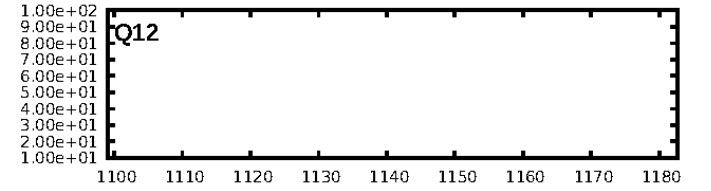
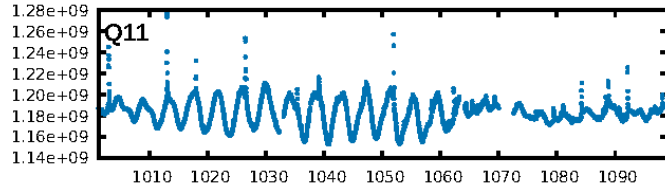
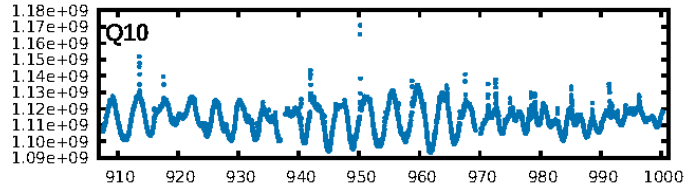
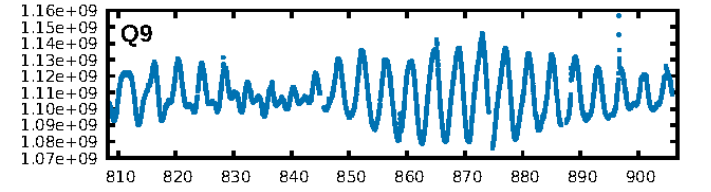
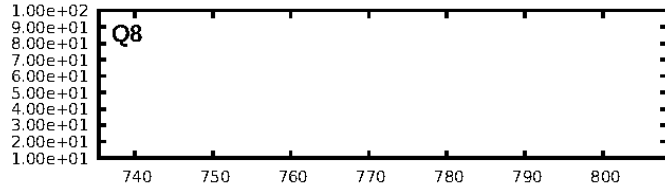
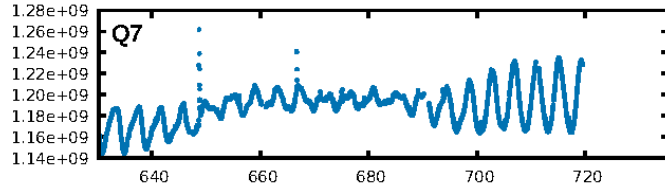
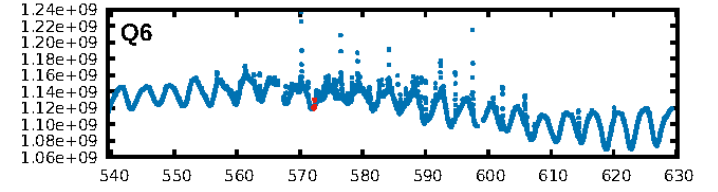
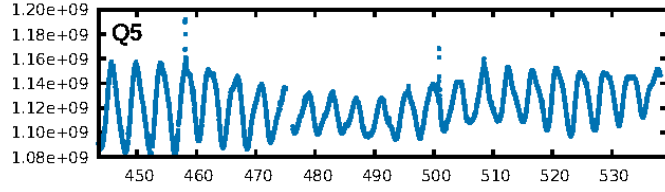
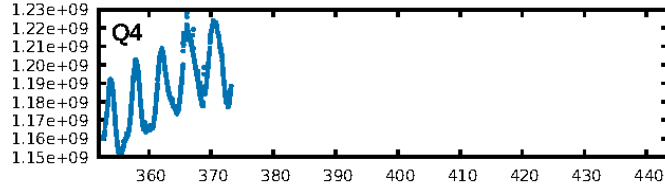
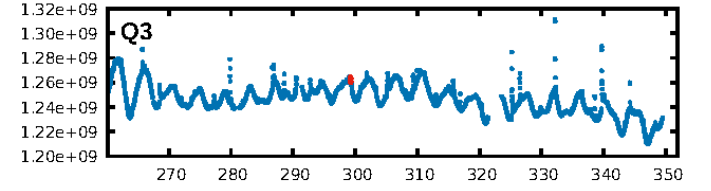
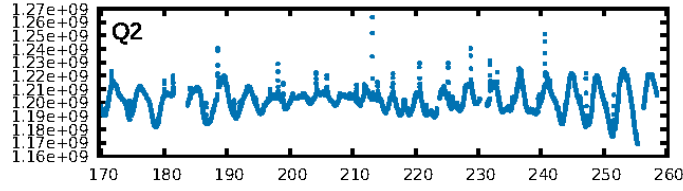
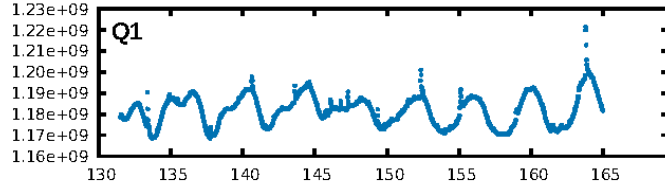
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [241.15σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [3/3]
GhostDiagnostic-chr: 1.279
Centroid-sig: N/A
Centroid-so: 0.503 arcsec [2.63σ]
OotOffset-rm: 0.917 arcsec [0.89σ]
KicOffset-rm: 0.666 arcsec [0.40σ]
OotOffset-st: 1/2/0/0 [3]
KicOffset-st: 1/2/0/0 [3]
DiffImageQuality-fgm: 0.33 [1/3]
DiffImageOverlap-fno: 1.00 [3/3]

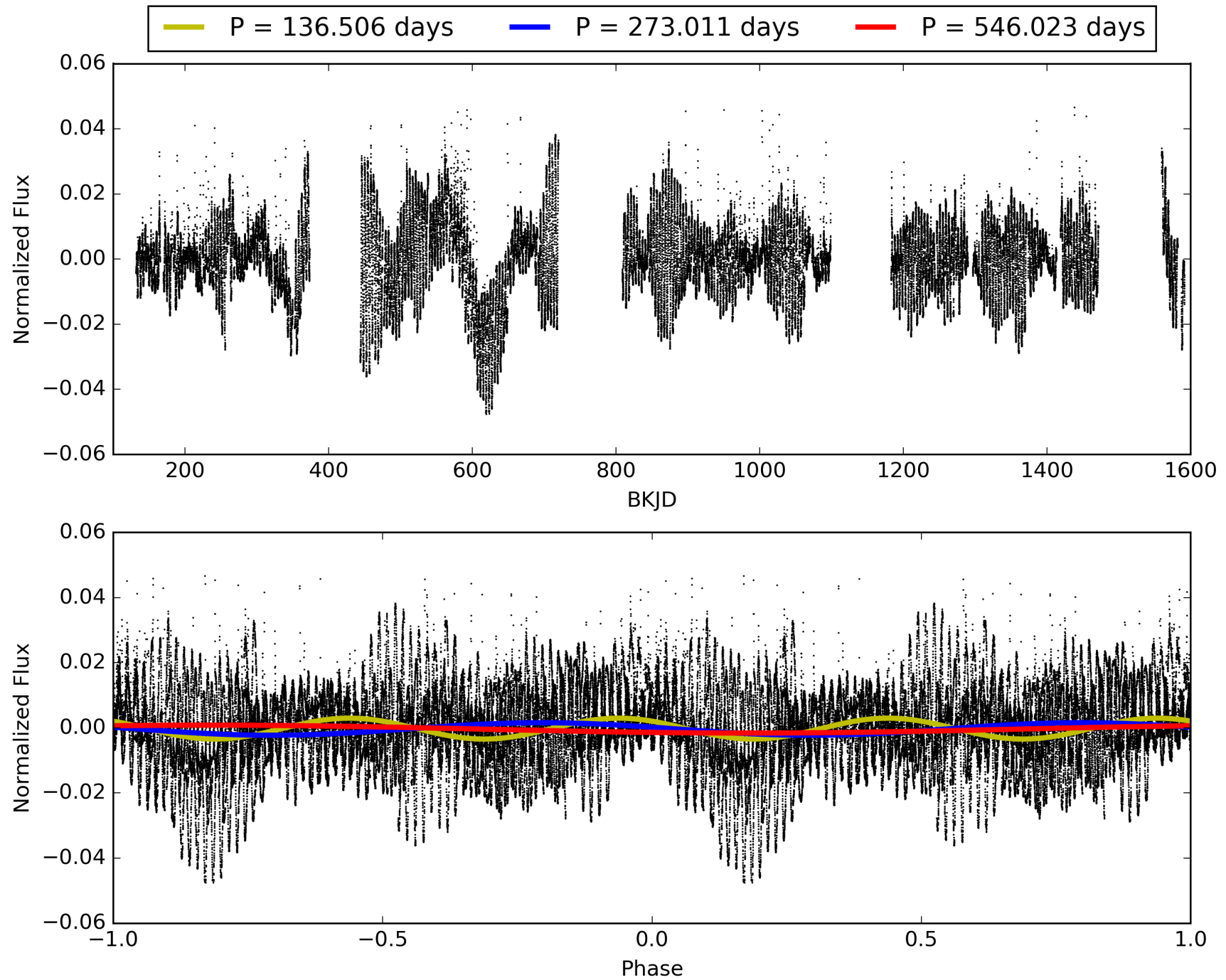
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 06:12:05 Z

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

TCE 011551430-07, PDC Light Curves

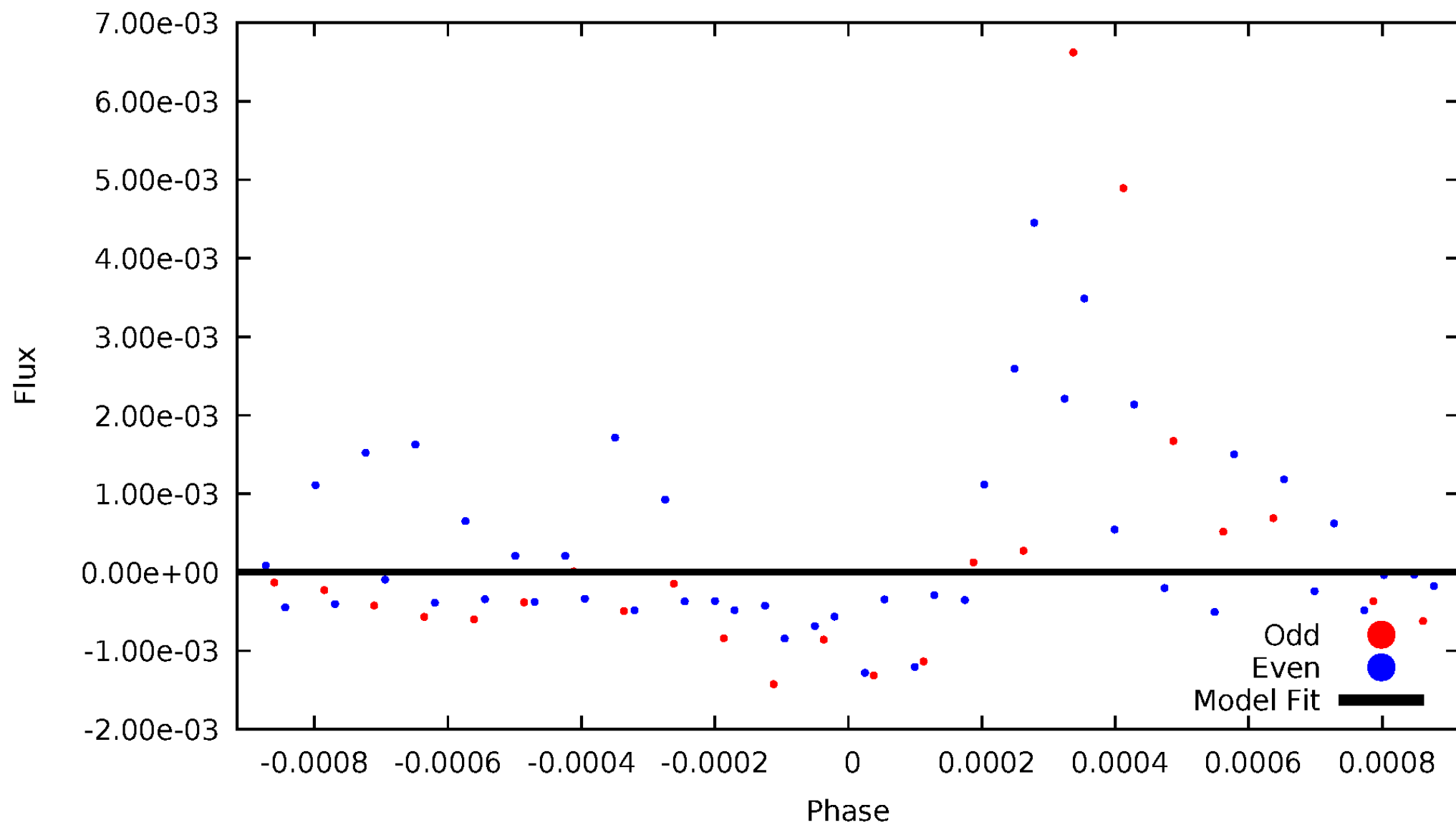


TCE 011551430-07



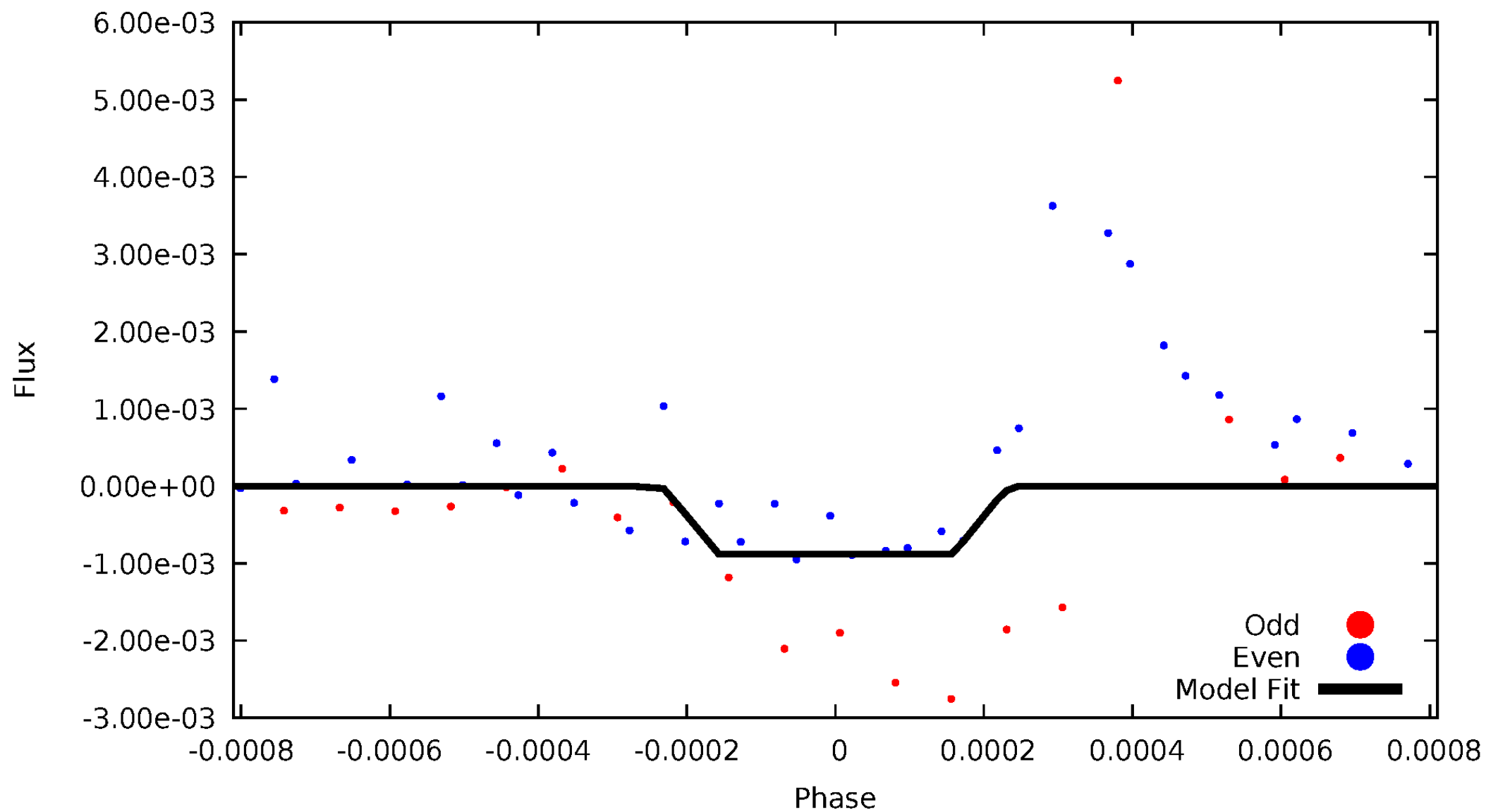
DV Odd/Even

TCE 011551430-07



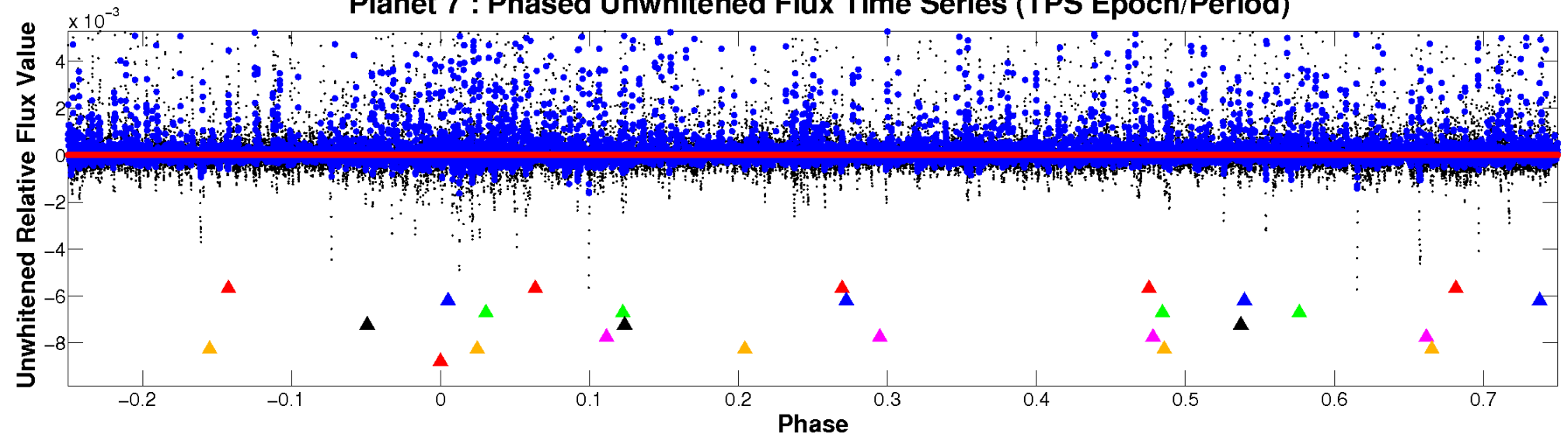
ALT Odd/Even

TCE 011551430-07

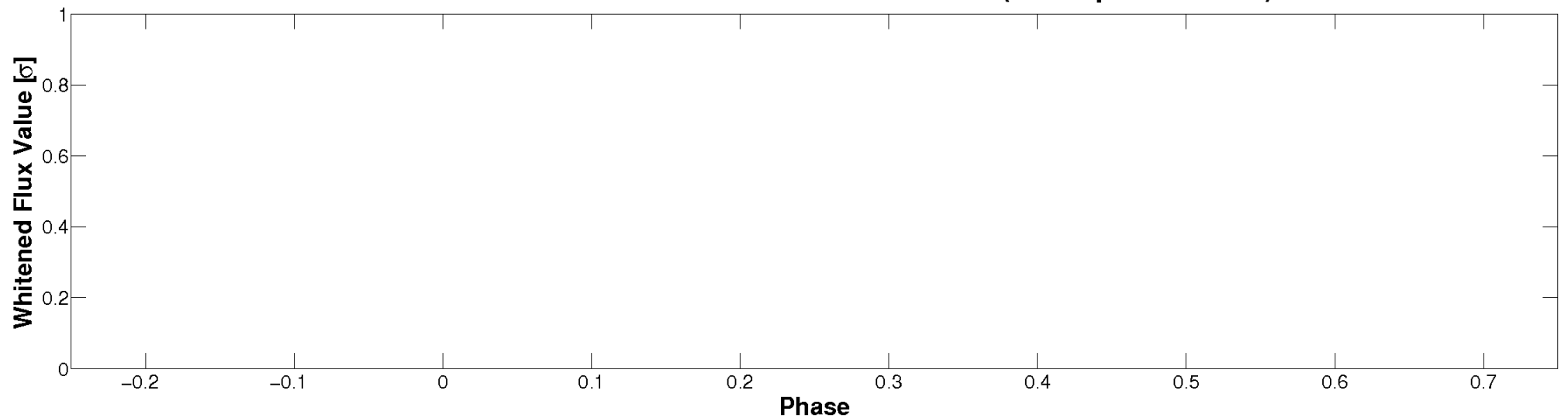


Non-Whitened Vs. Whitened Light Curve

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

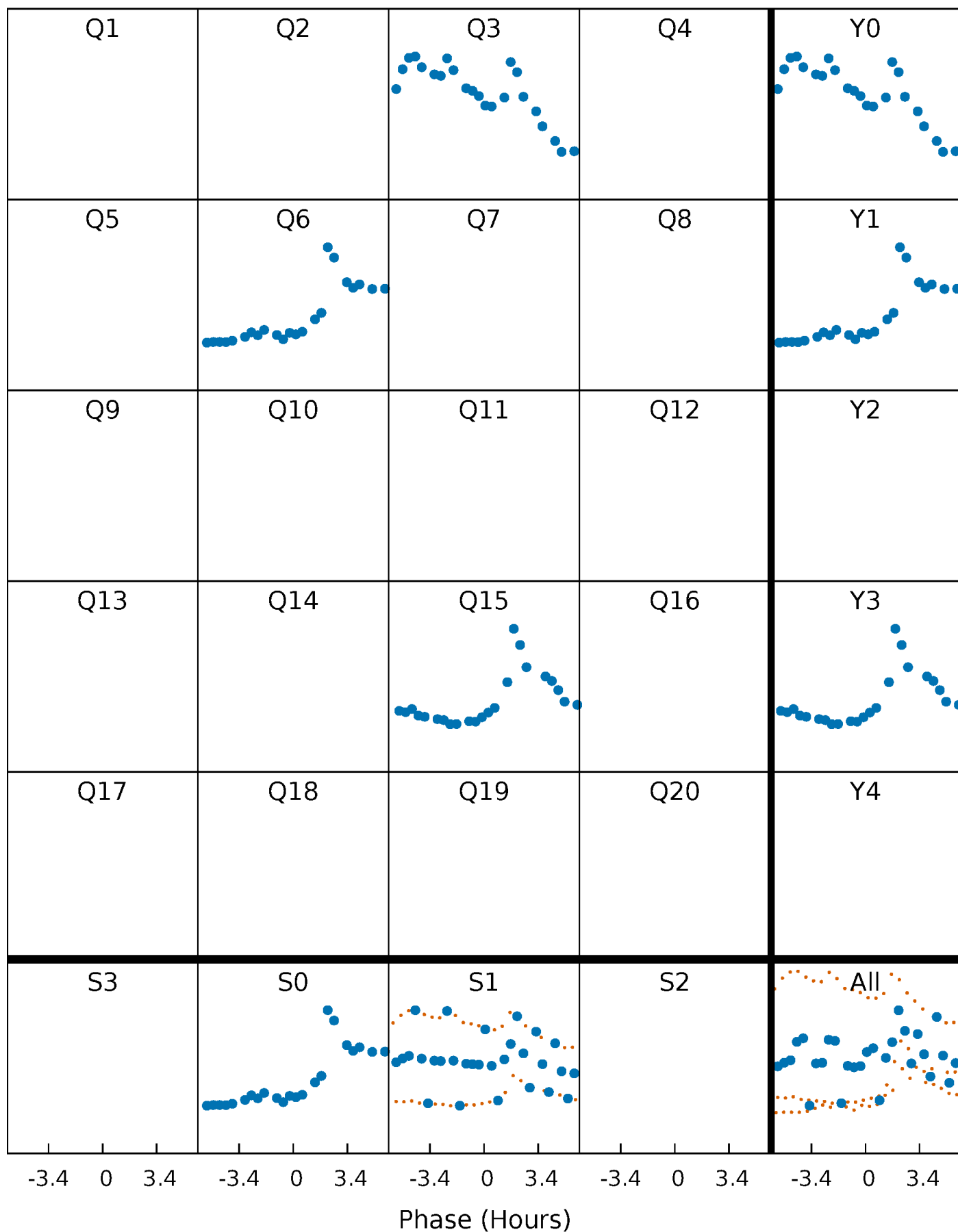


Planet 7 : Phased Whitened Flux Time Series (TPS Epoch/Period)



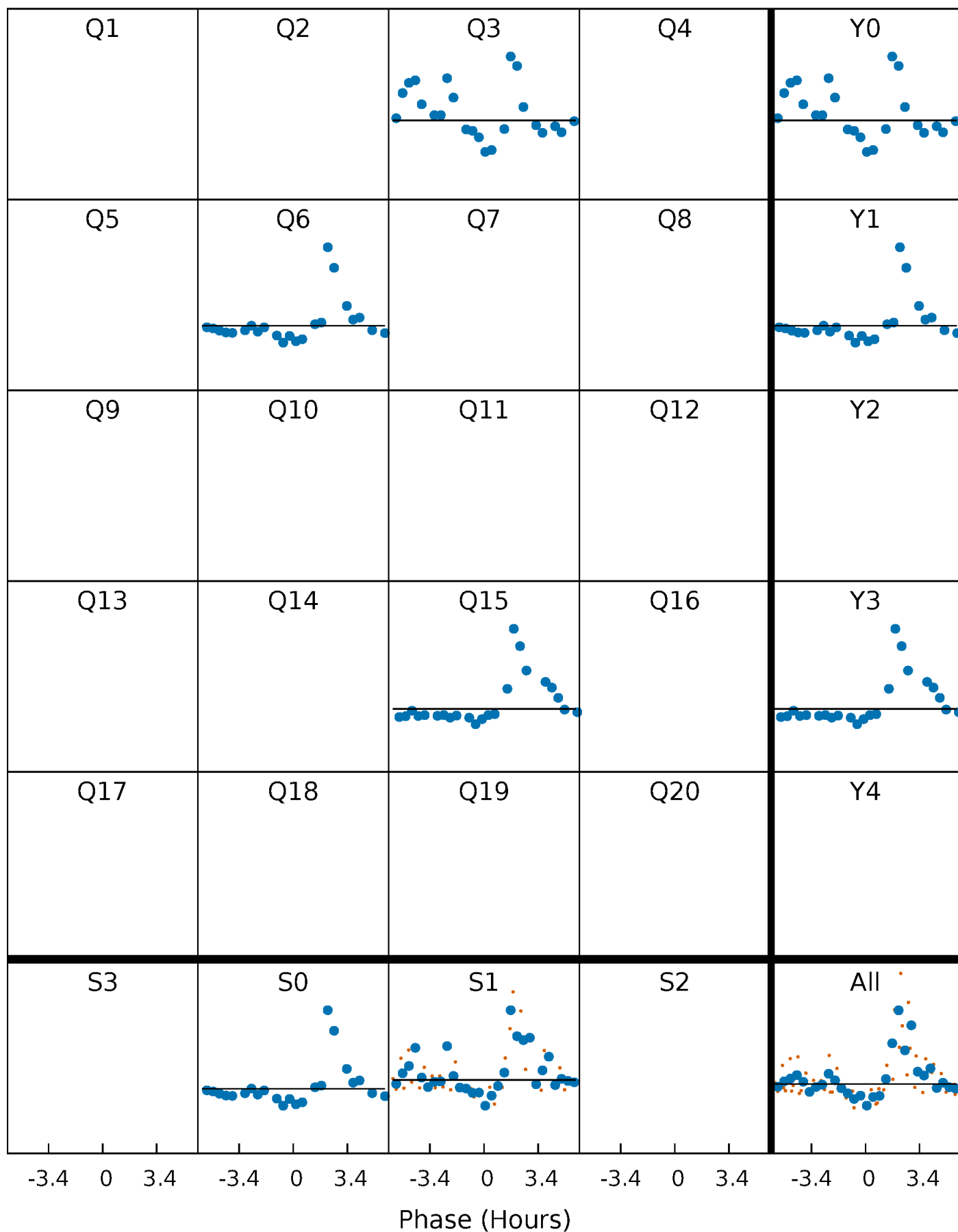
PDC Quarter-Phased Transit Curves

TCE 011551430-07 P=273.011498 Days $T_0=299.244567$ (BKJD)



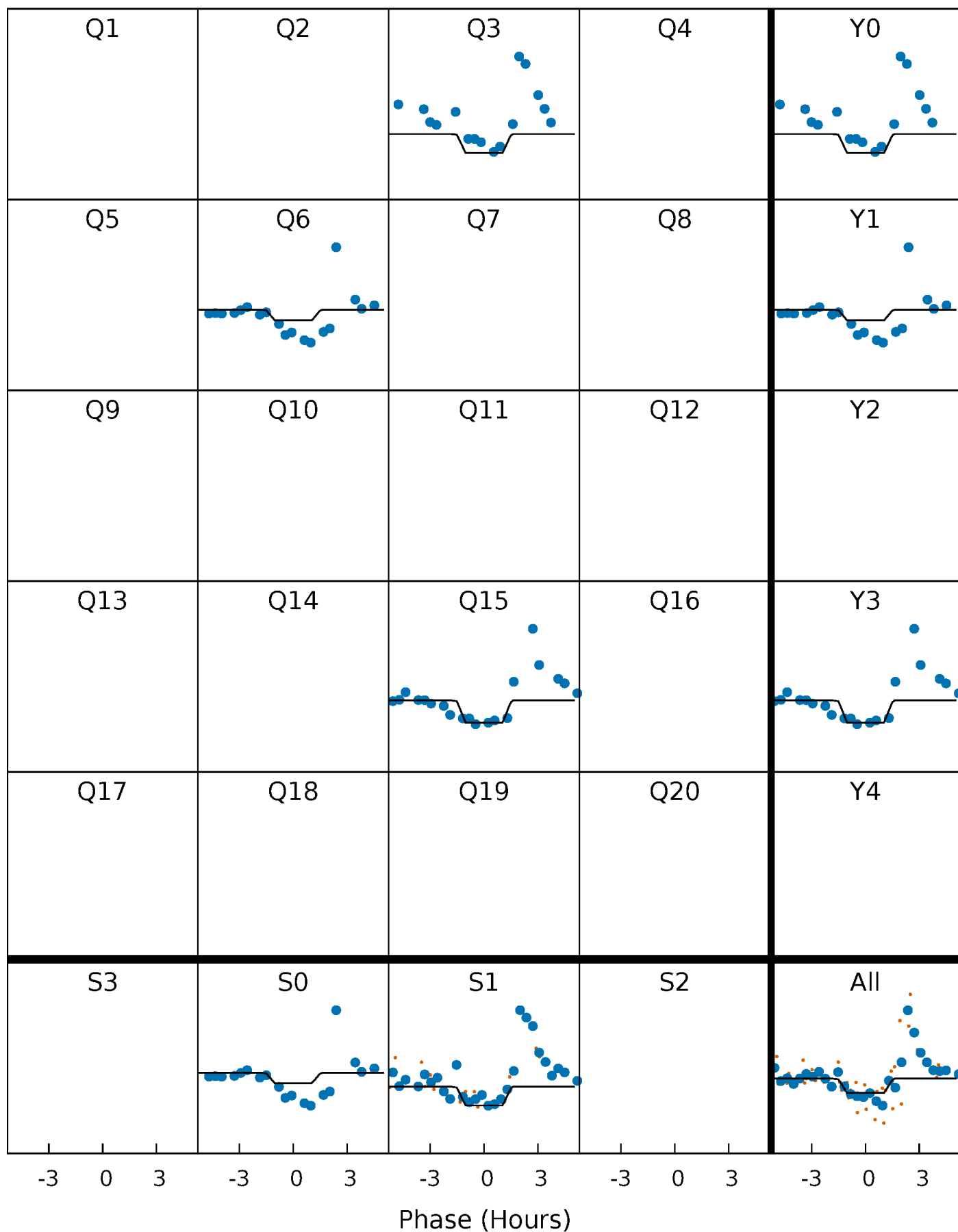
DV Quarter-Phased Transit Curves

TCE 011551430-07 P=273.011498 Days $T_0=299.244567$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

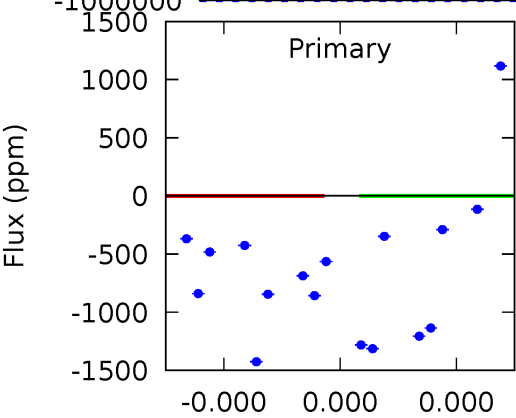
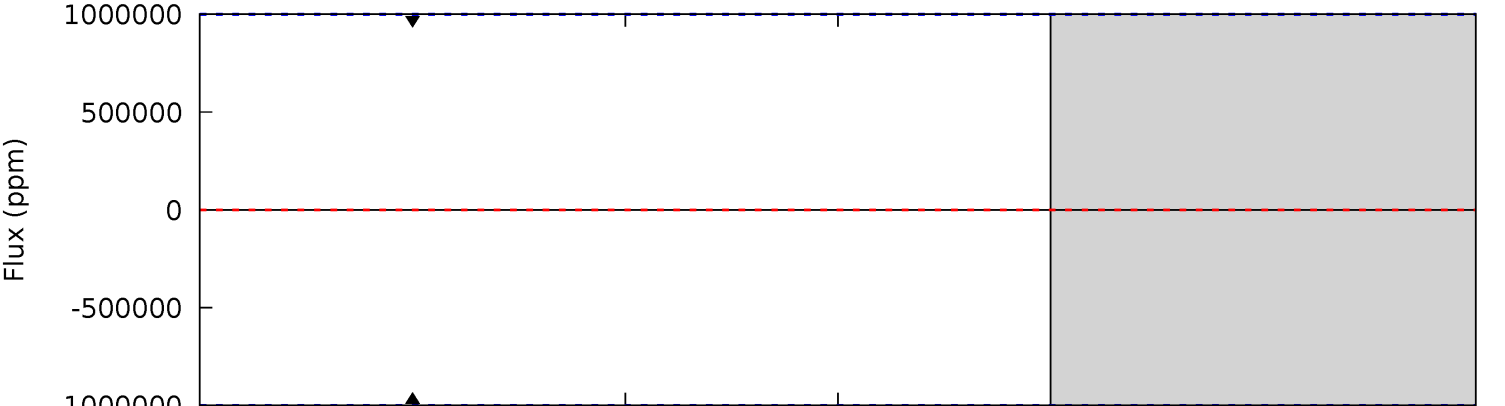
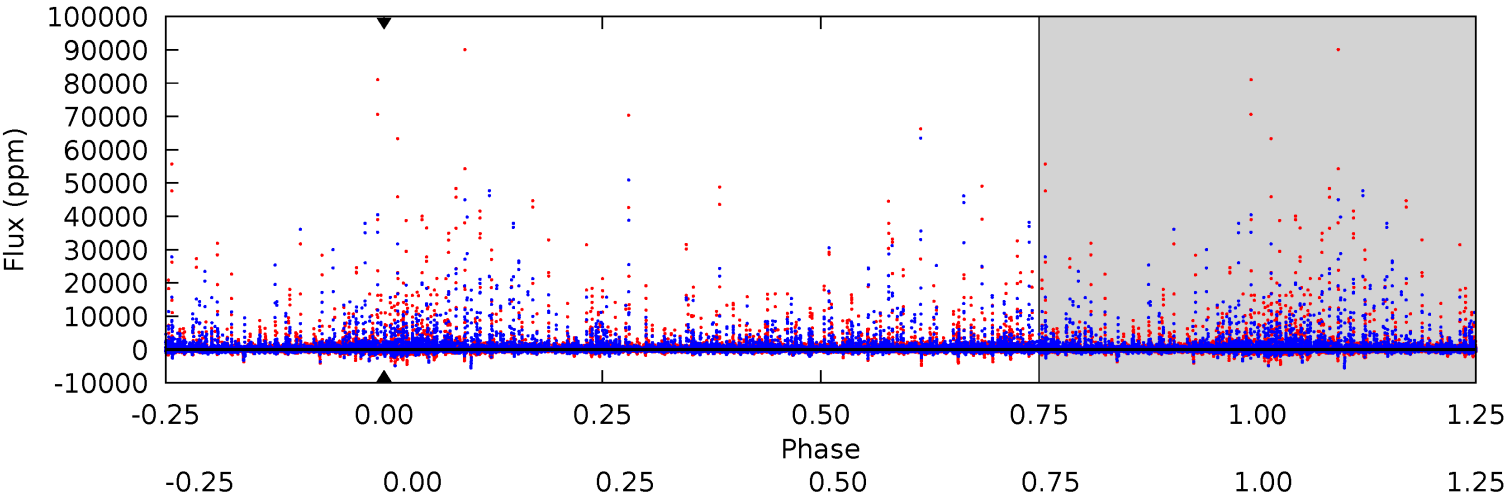
TCE 011551430-07 P=273.011498 Days $T_0=299.232818$ (BKJD)



DV Model-Shift Uniqueness Test

011551430-07, P = 273.011498 Days, E = 26.233069 Days

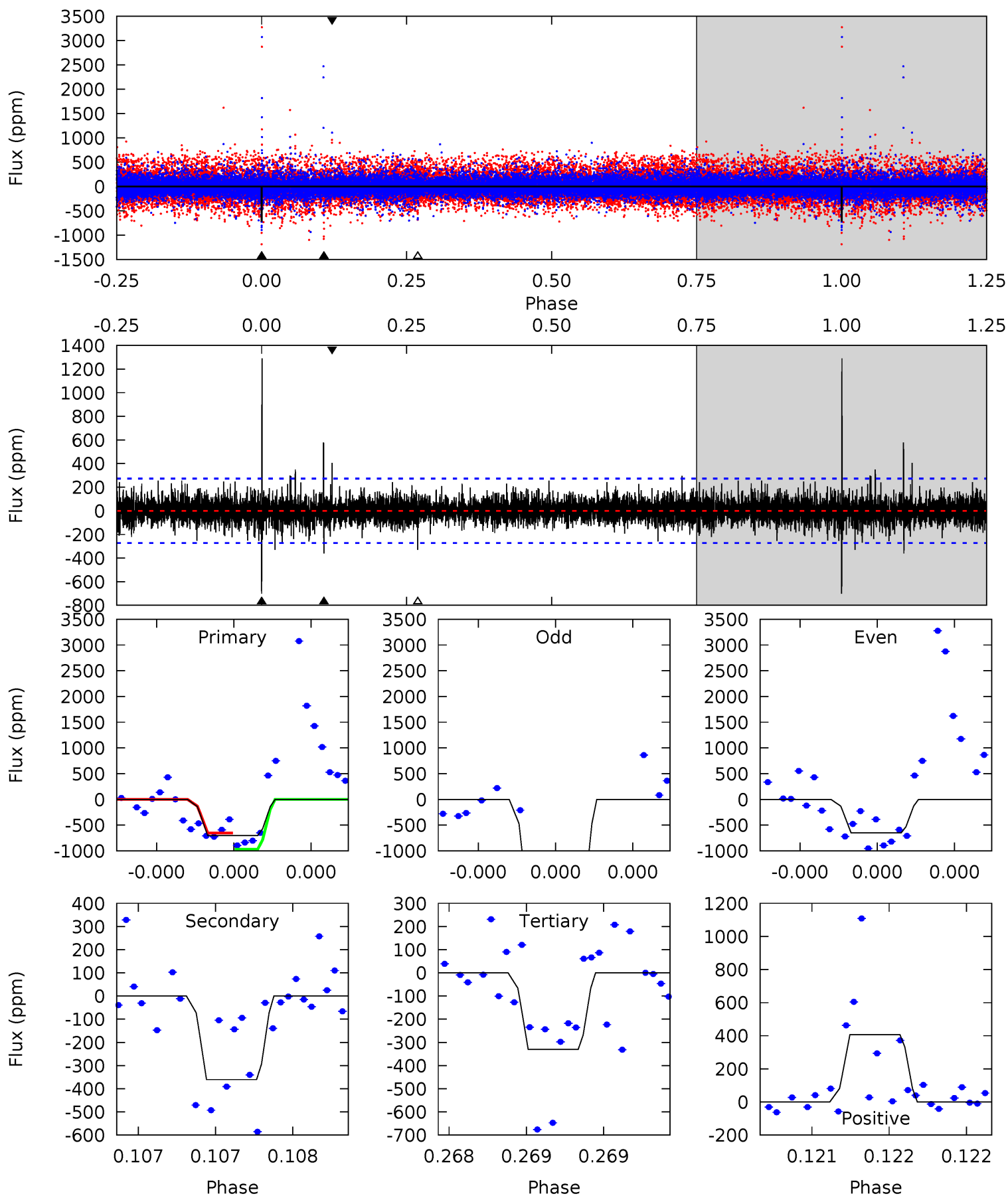
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

011551430-07, P = 273.011498 Days, E = 26.221320 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.4	7.39	6.76	8.33	5.59	3.50	1.37	7.61	6.04	0.63	-0.94	9.86	1.30	0.65	3.37



Stellar Parameters For KIC 011551430

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5648^{+113}_{-90}	$4.019^{+0.217}_{-0.109}$	$-0.080^{+0.150}_{-0.100}$	$1.605^{+0.297}_{-0.363}$	$0.983^{+0.102}_{-0.084}$	$0.335^{+0.360}_{-0.109}$
	+2%/-2%	+5%/-3%	+188%/-125%	+19%/-23%	+10%/-9%	+108%/-32%
Source	SPE13	SPE13	SPE13	DSEP		

KIC = Kepler Input Catalog; PHO = Photometry; SPE = Spectroscopy; AST = Asteroseismology
 TRA = Transits; DESP = Dartmouth Models; MULT = Multiple Models

Secondary Eclipse Parameters for KIC 011551430-07 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$12.07^{+13.44}_{-8.57}$	484^{+25}_{-33}	-4074^{+28325}_{-16304}	$-2049.741^{+616670.716}_{-422603.178}$
Alt.	-361 ± 49	$12.90^{+14.12}_{-8.34}$	483^{+26}_{-31}	3315^{+1527}_{-593}	773^{+5576}_{-592}

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 $A_{obs} \gg 1.0$

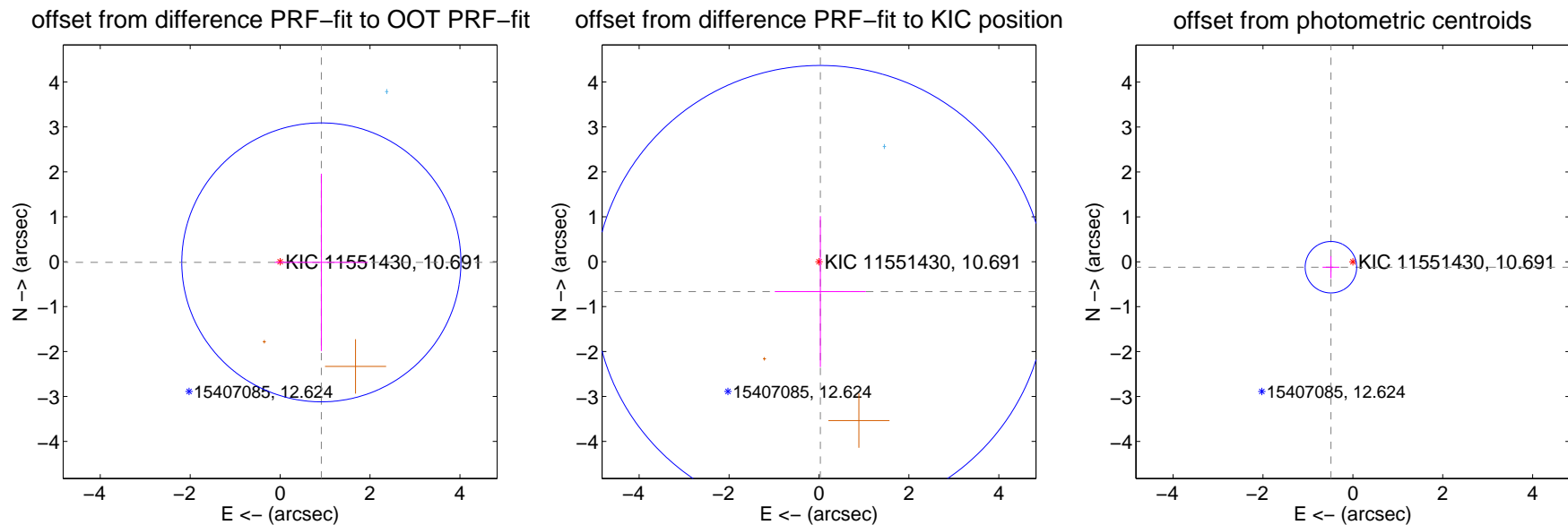
DV Centroid Data

Supplemental centroid analysis for 011551430-07. **Kepler magnitude: 10.69.** Transit SNR -1.00

There are 1 quarters with good PRF difference image offsets

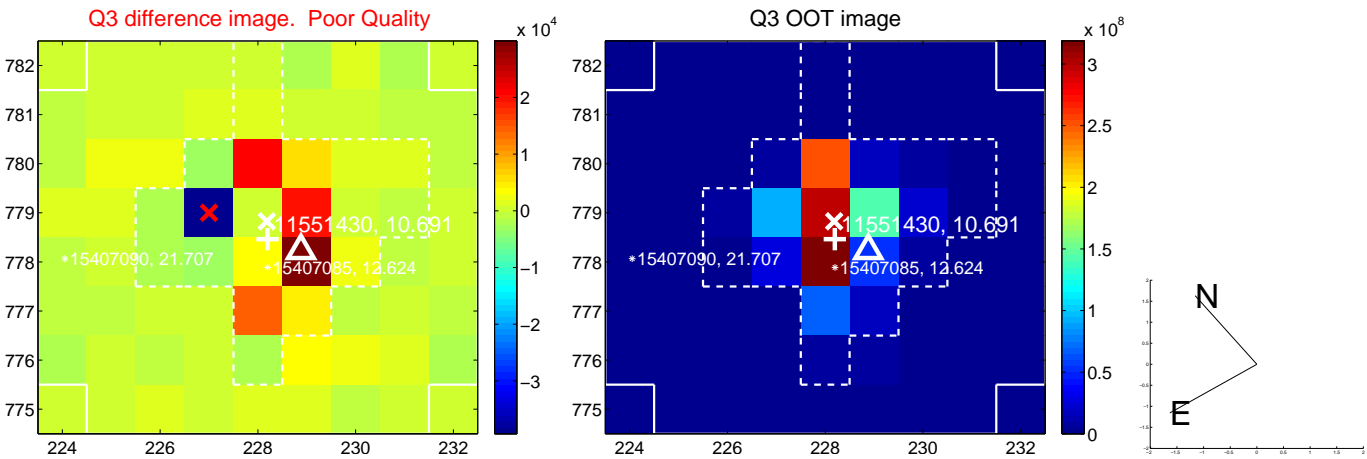
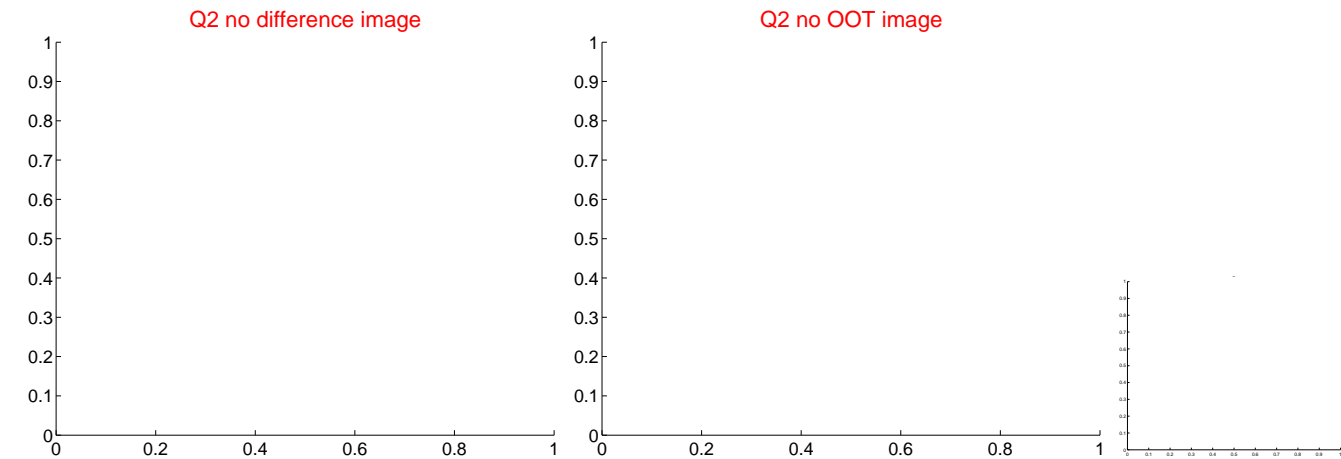
The direct PRF centroid is offset from the target star catalog position by about 1.53 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.917 ± 1.035	0.89	-0.917 ± 1.034	-0.015 ± 1.974
PRF-fit source offset from KIC position	0.666 ± 1.677	0.40	-0.030 ± 1.013	-0.665 ± 1.678
photometric centroid source offset	0.50 ± 0.19	2.63	0.49 ± 0.19	-0.12 ± 0.25

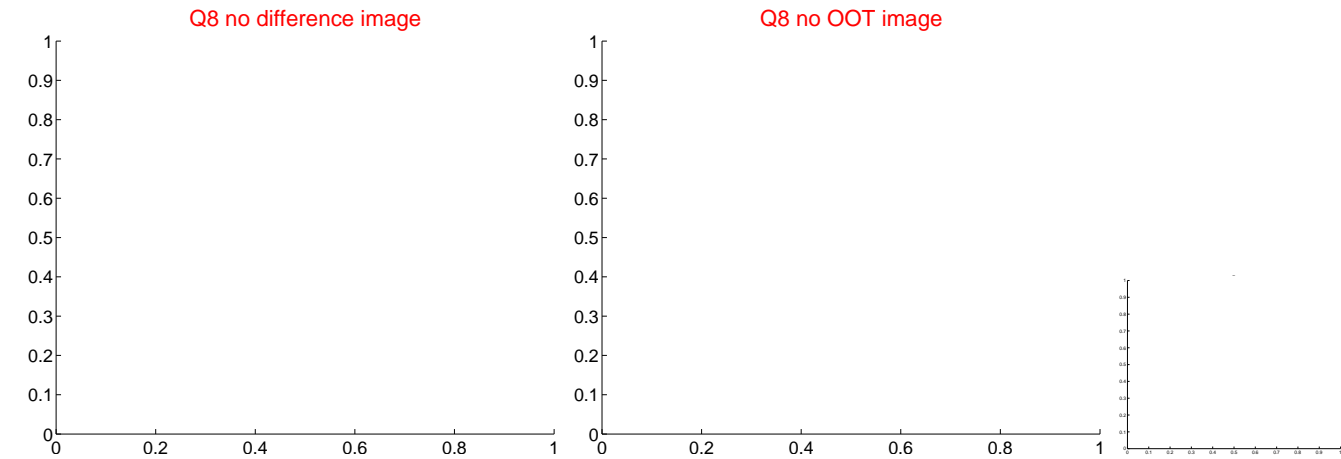
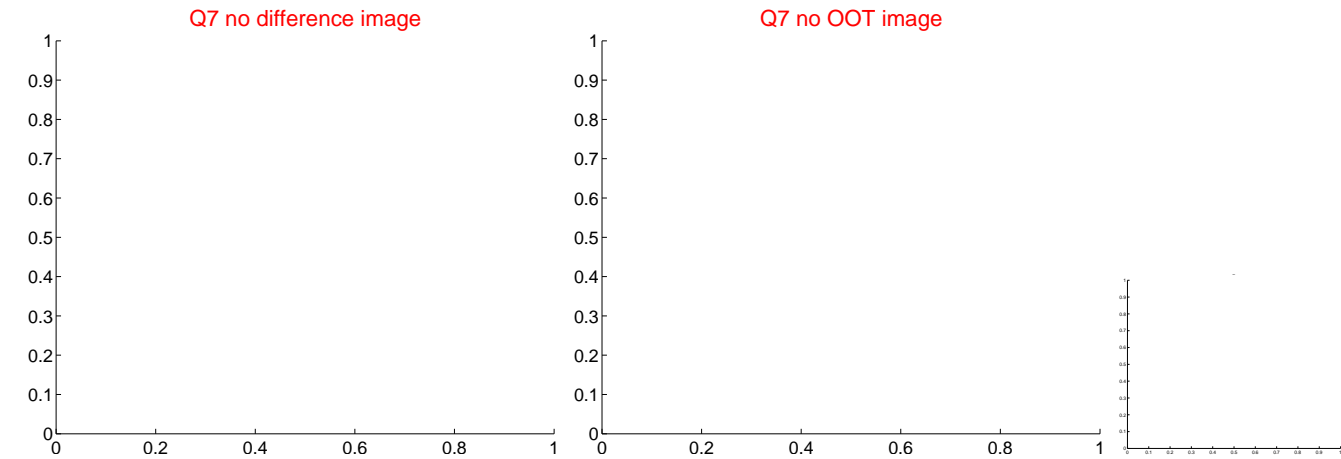
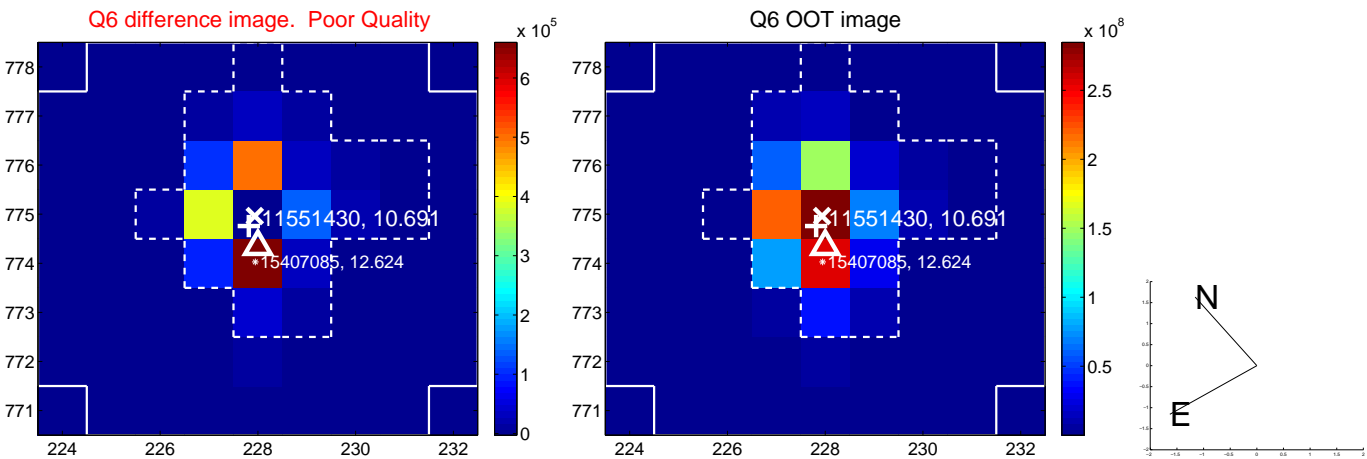


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

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



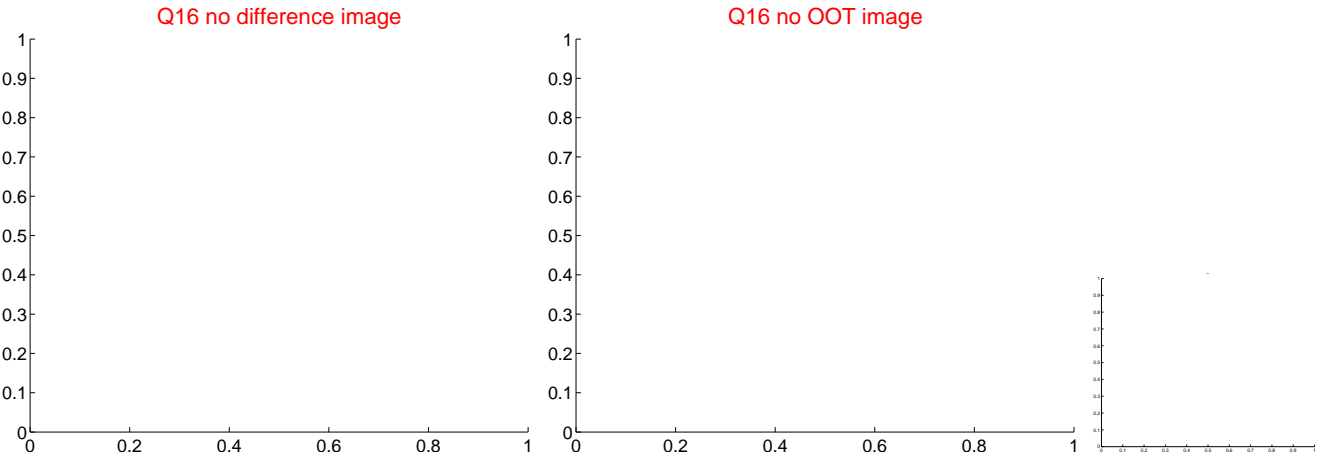
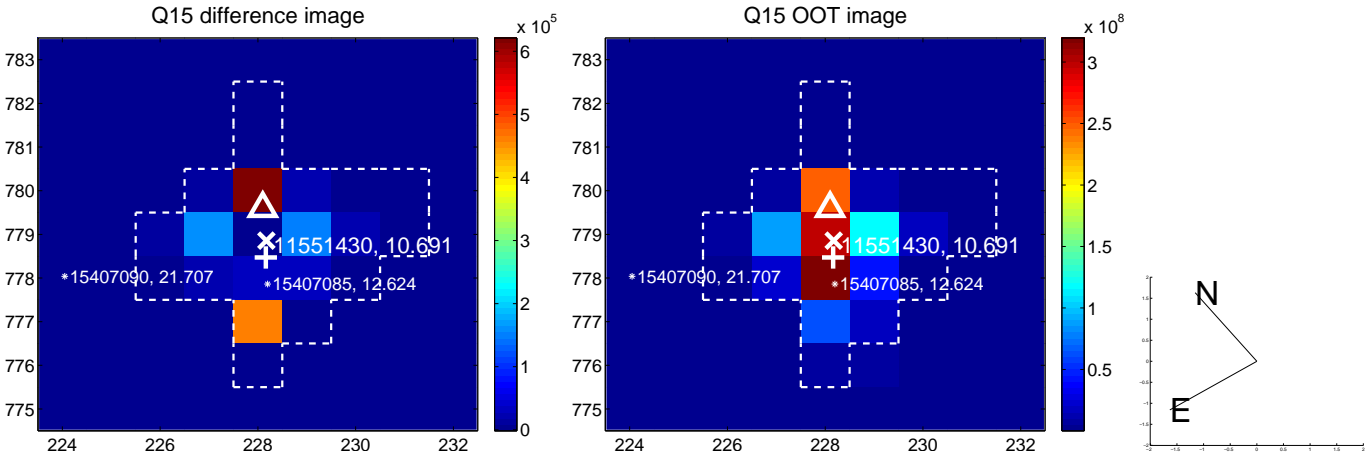
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



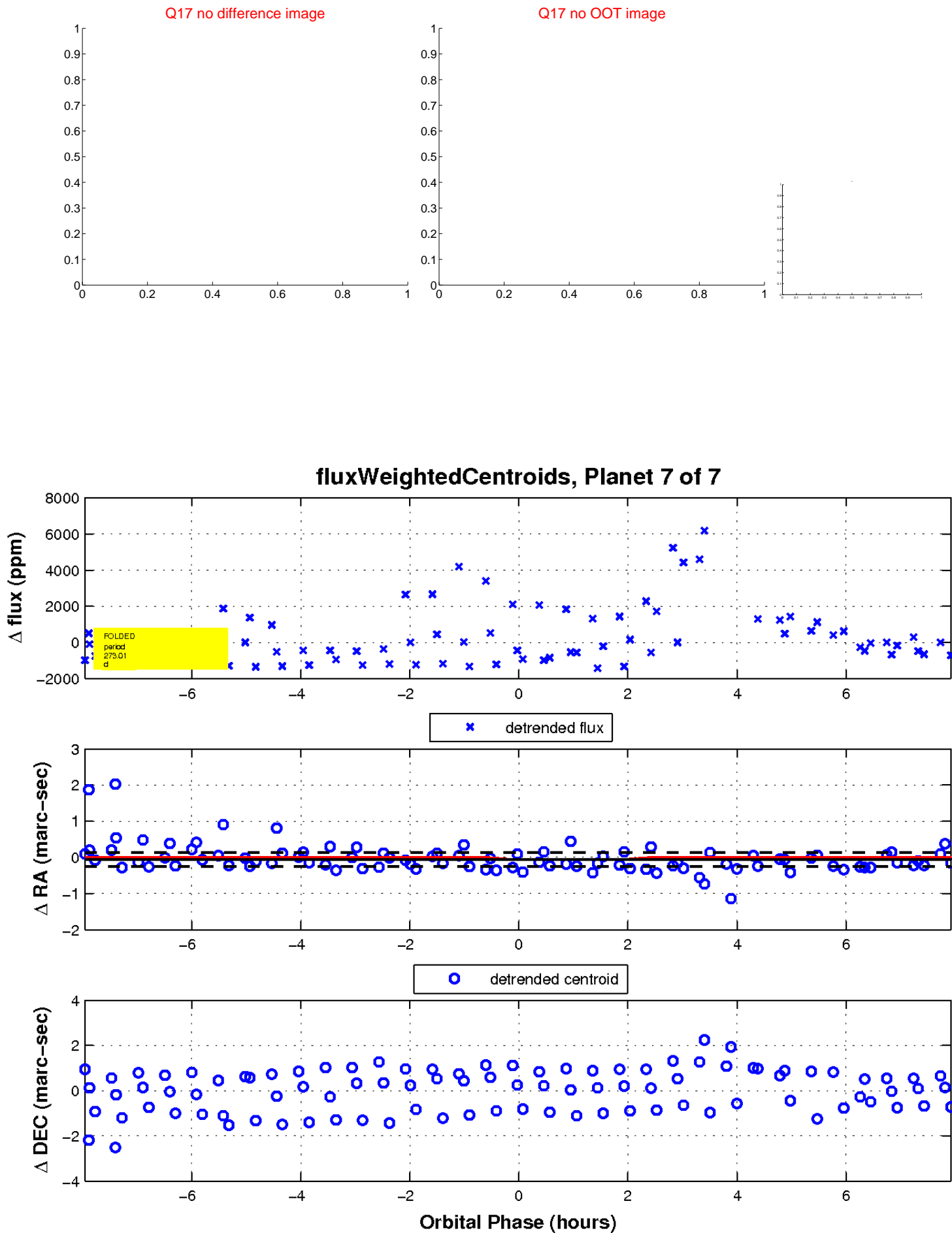
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



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



UKIRT Image

Declination

