

KIC 007199135

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})
007199135-01	OBS	No	2.833769	133.878722	268.7	10.451	35.0	31.9	0.97	6106	1.87	734.66
007199135-02	OBS	No	0.566801	131.688277	2624.4	2.000	55.5	-1.0	0.97	6106	4.96	6280.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007199135-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET—EPHEM_MATCH
007199135-02	OBS	FP	0.00	1	0	0	1	LPP_DV—SAME_NTL_PERIOD—CENT_NOFITS—EPHEM_MATCH

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.

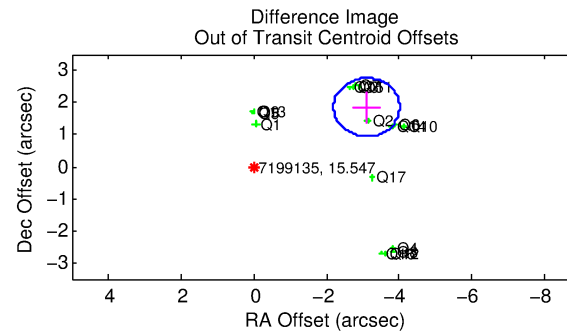
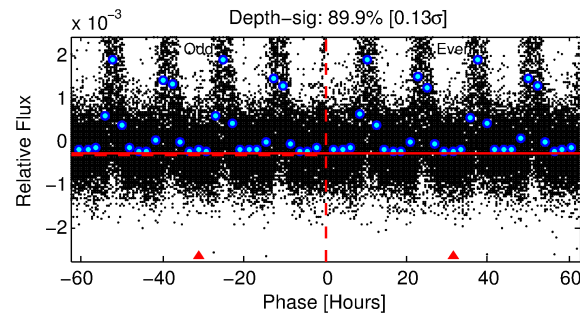
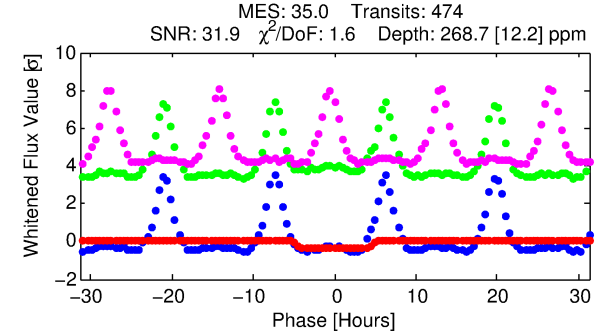
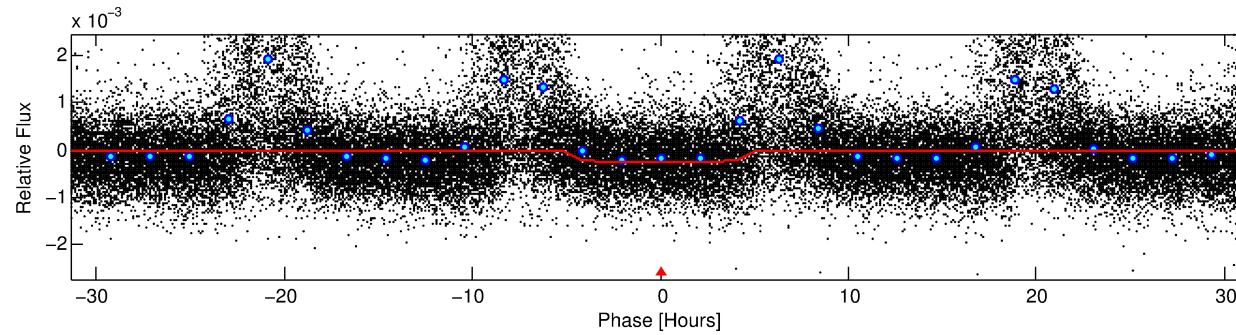
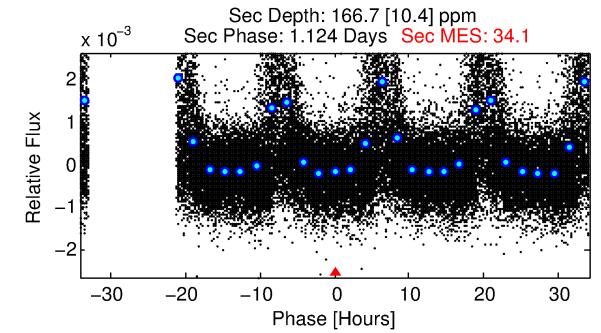
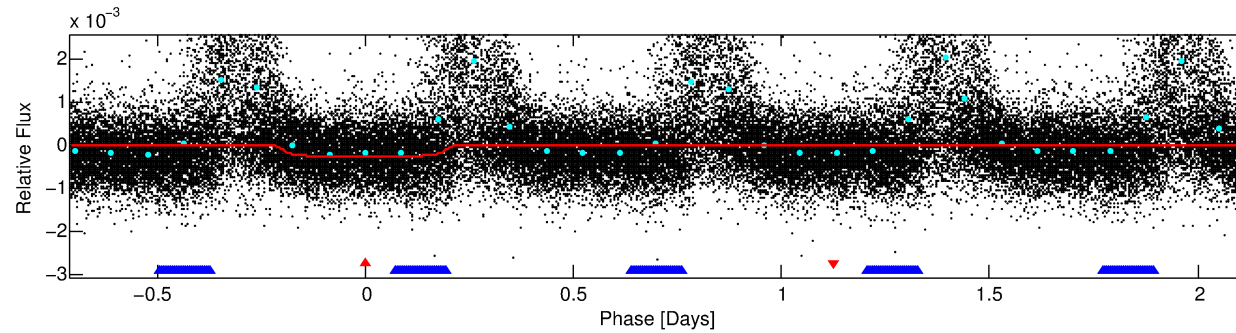
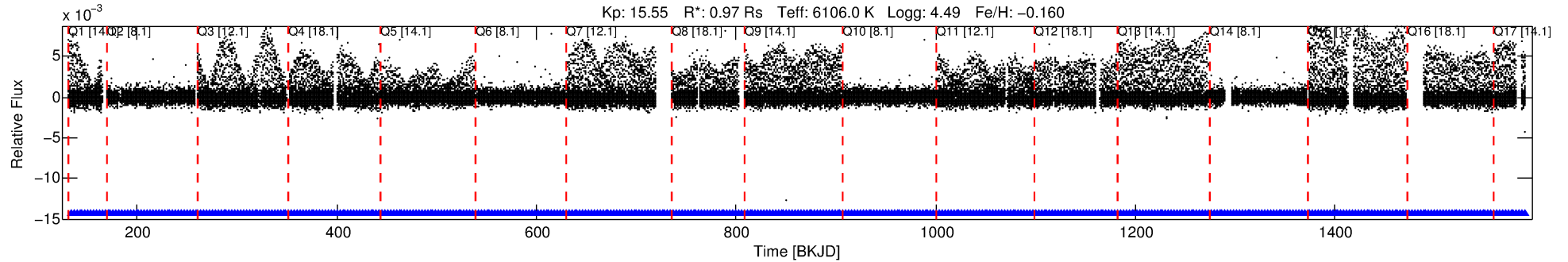
Ephemeris Match Information For 007199135-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007199135-01	7199135	RR-Lyr-pri	7198959	5:1	120.7	22	20	7.86	15.55	2317.10	Direct-PRF	0	4.05	12.88

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7199135 Candidate: 1 of 2 Period: 2.834 d



DV Fit Results:

Period = 2.83377 [0.00002] d
Epoch = 133.8787 [0.0053] BKJD
Rp/R* = 0.0178 [0.0009]
a/R* = 1.35 [0.14]
b = 0.91 [0.05]
Seff = 734.66 [267.32]
Teq = 1328 [121] K
Rp = 1.87 [0.52] Re
a = 0.0398 [0.0092] AU
Ag = 41.33 [14.75] [2.73σ]
Teffp = 5204 [236] K [14.63σ]

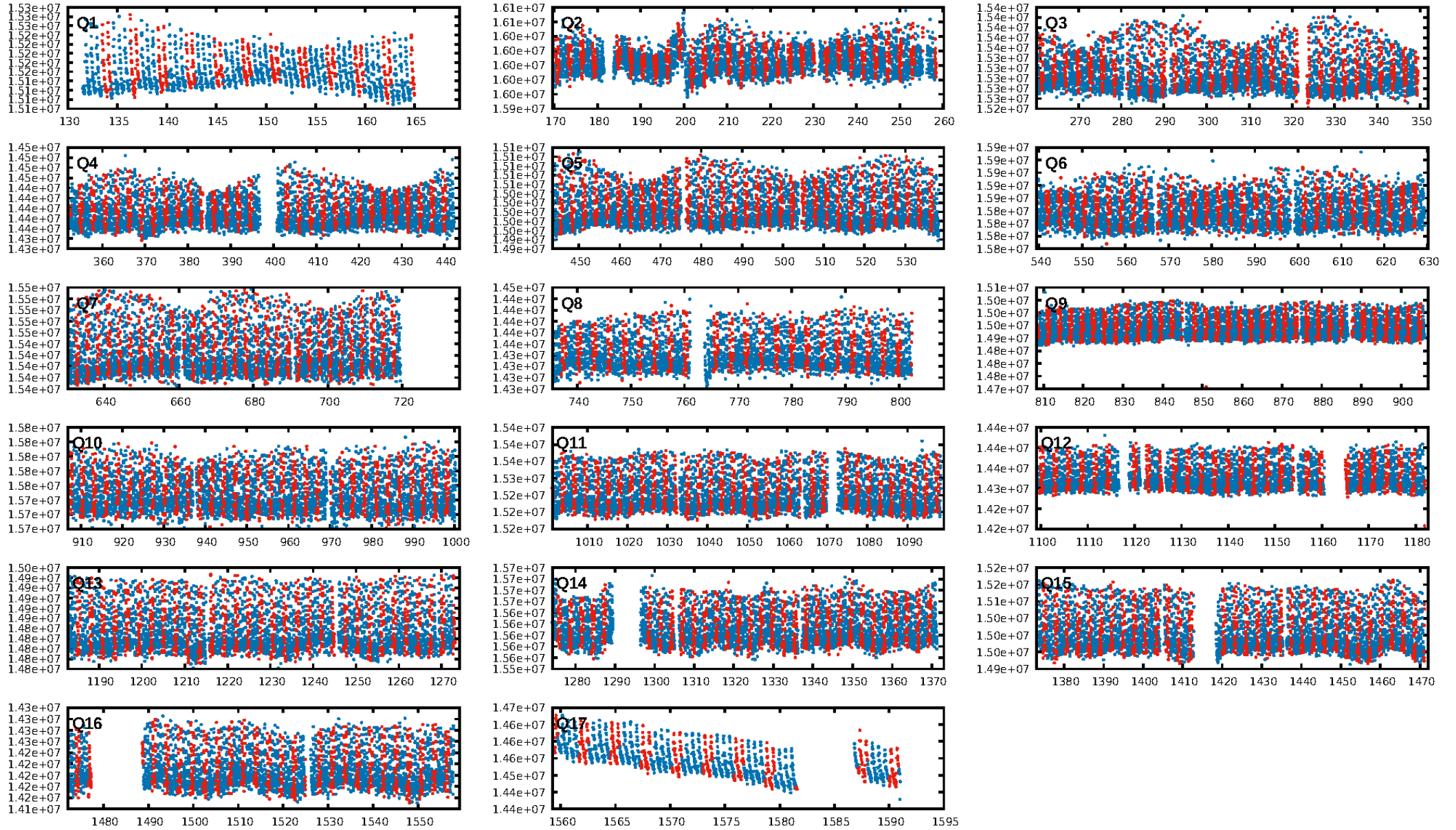
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [5.11σ]
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [452/452]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.450 arcsec [1.12σ]
OotOffset-rm: 3.613 arcsec [11.91σ]
KicOffset-rm: 3.666 arcsec [12.16σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 0.00 [0/17]

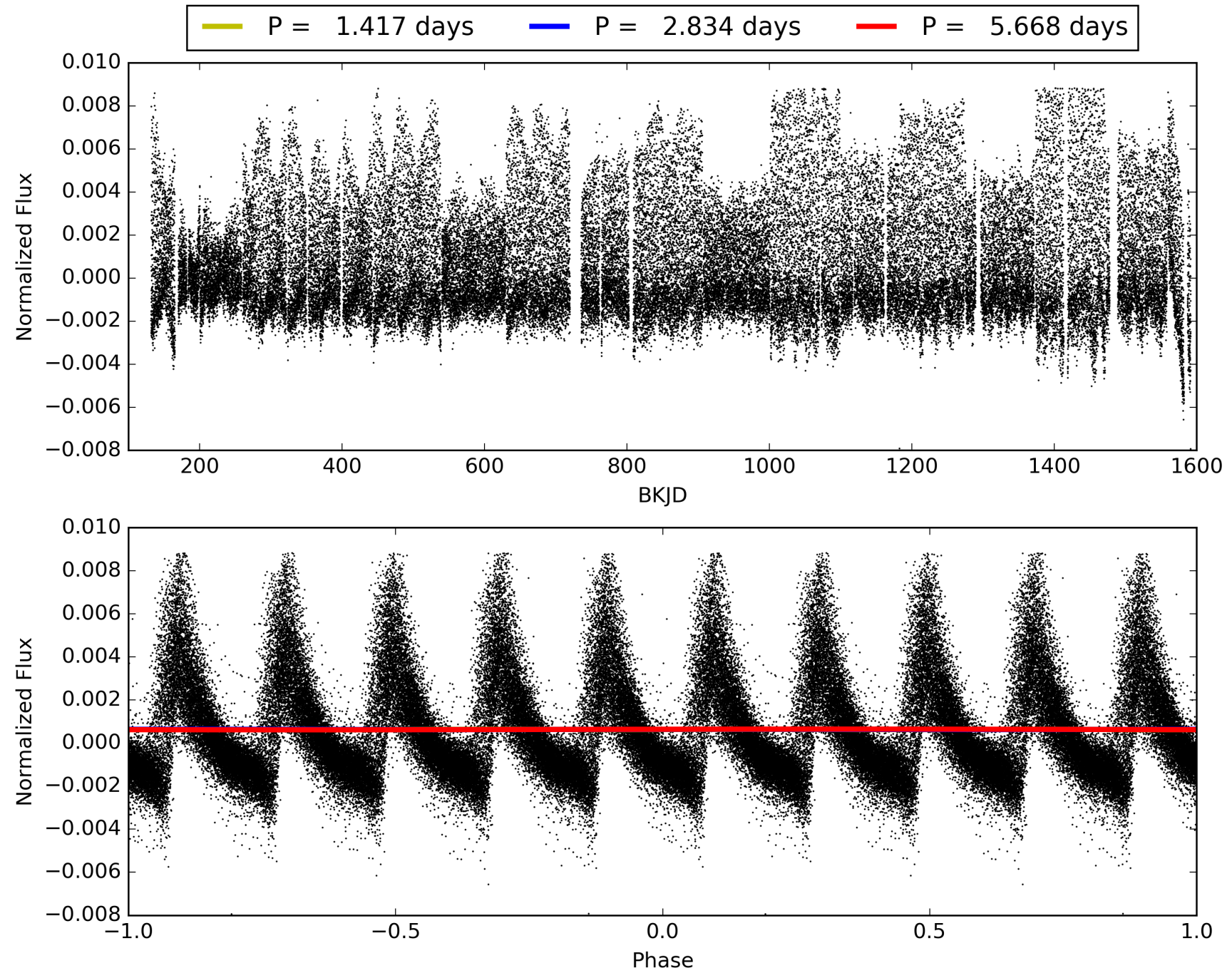
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 007199135-01, PDC Light Curves

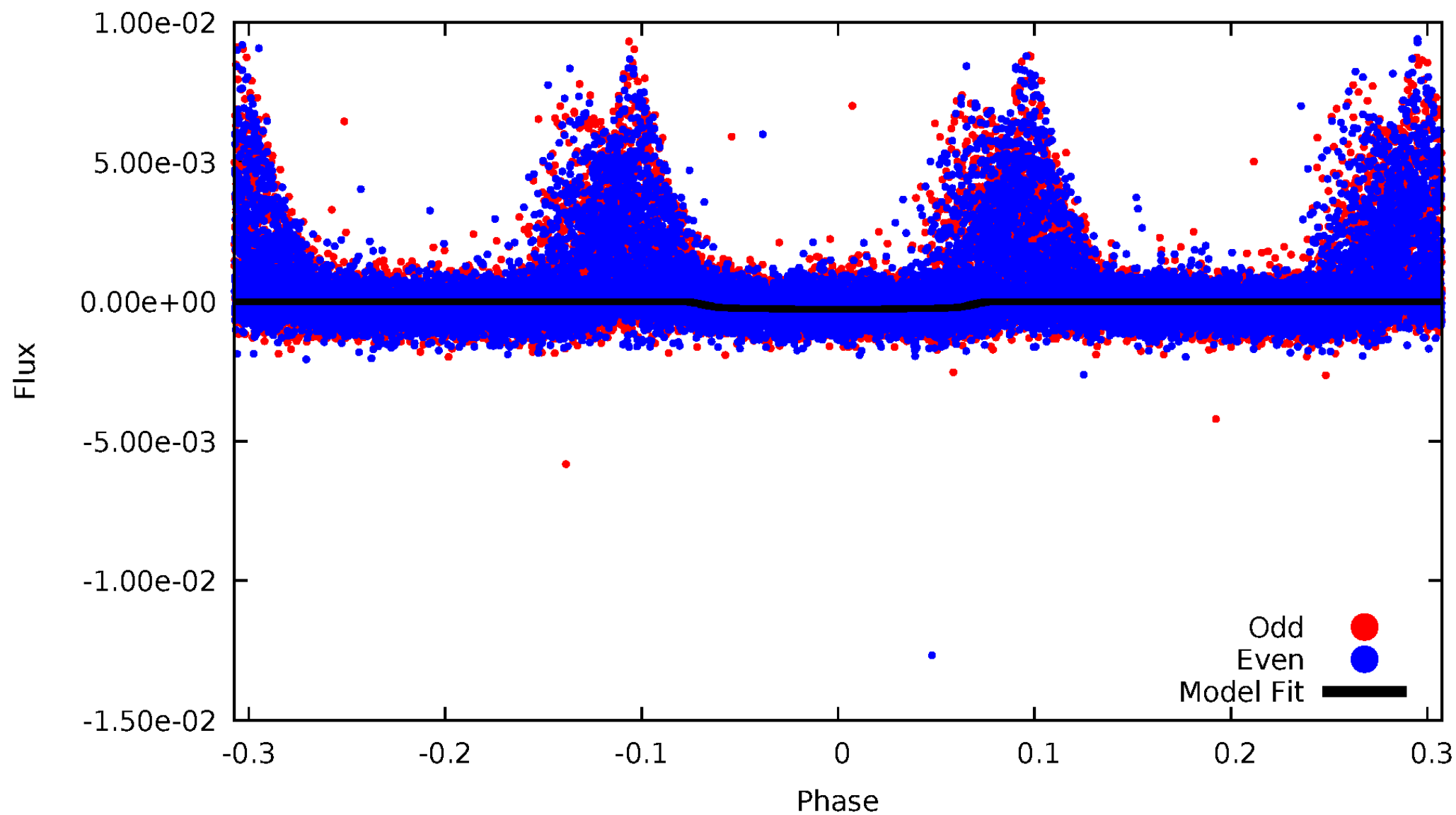


TCE 007199135-01



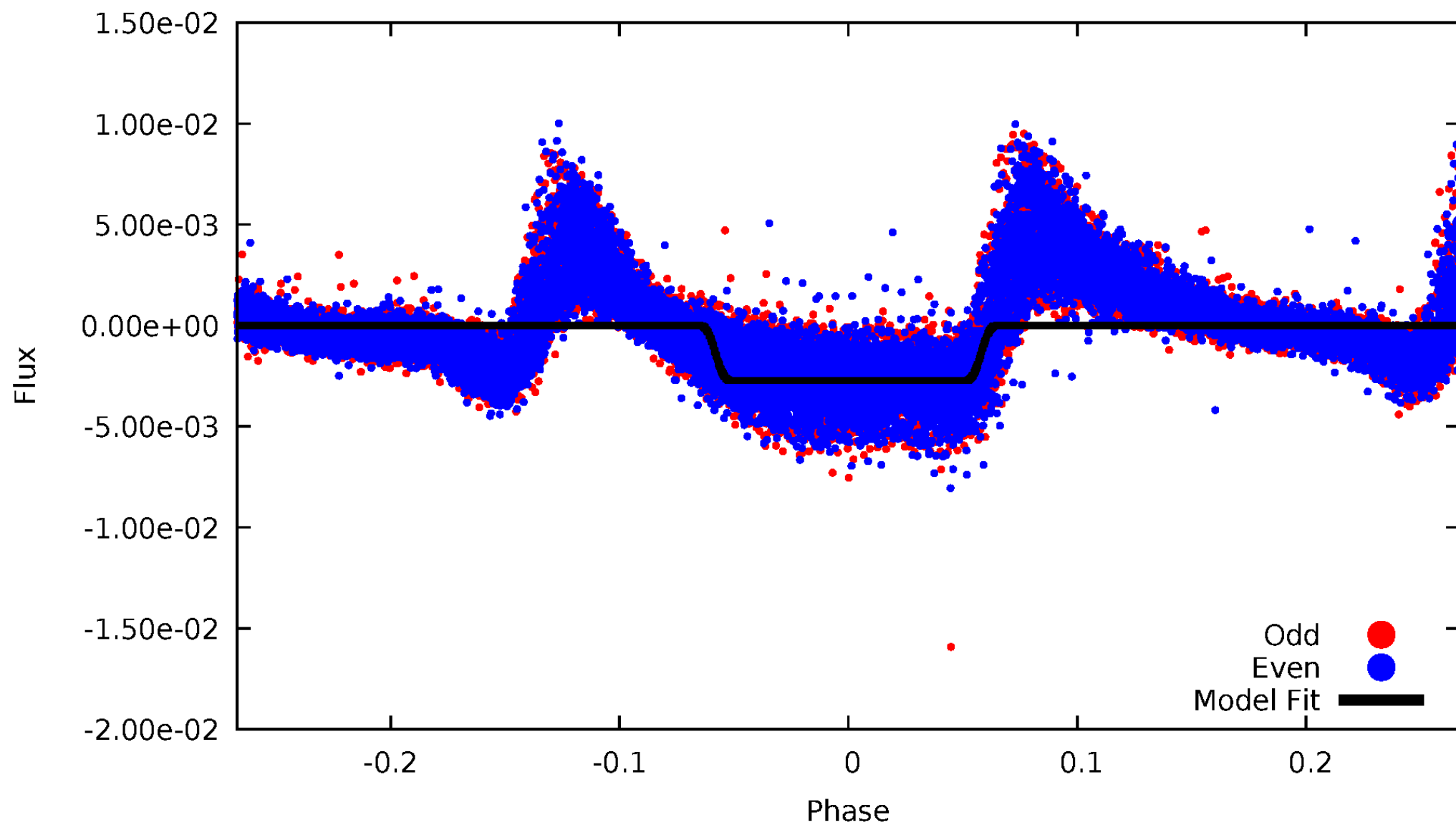
DV Odd/Even

TCE 007199135-01



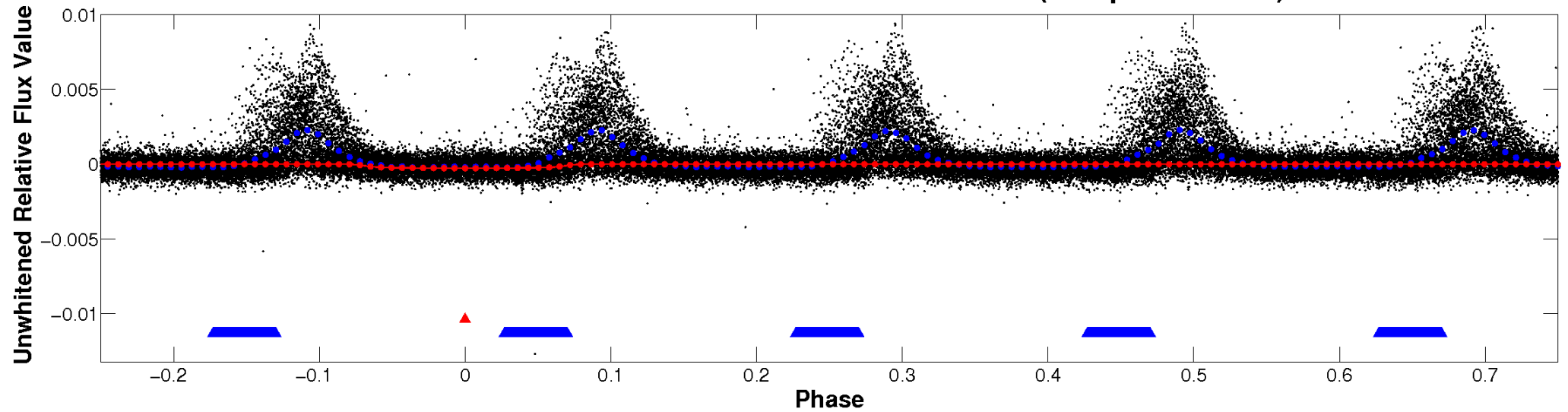
ALT Odd/Even

TCE 007199135-01

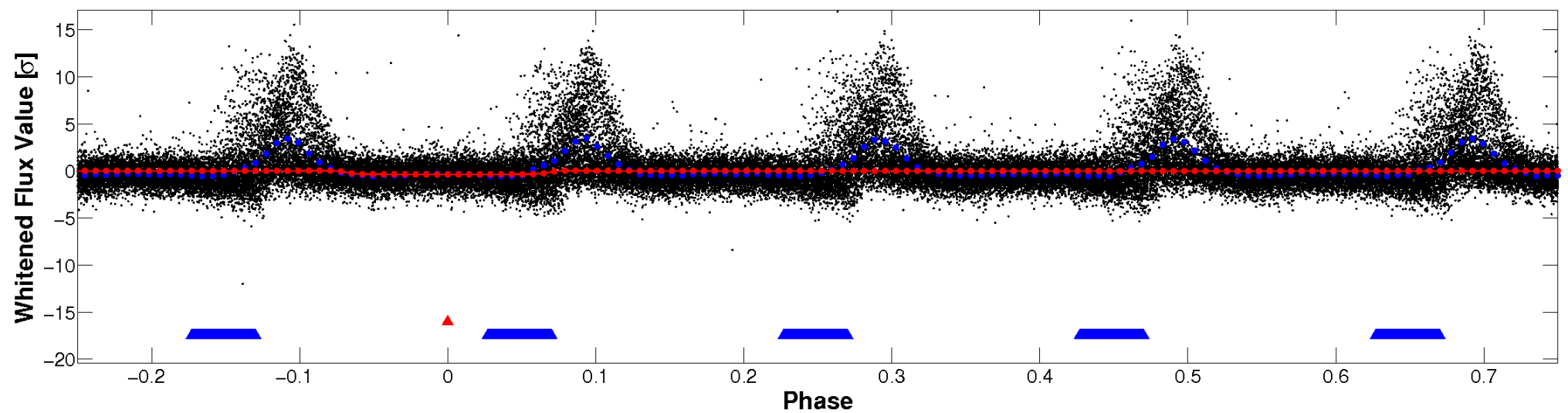


Non-Whitened Vs. Whitened Light Curve

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

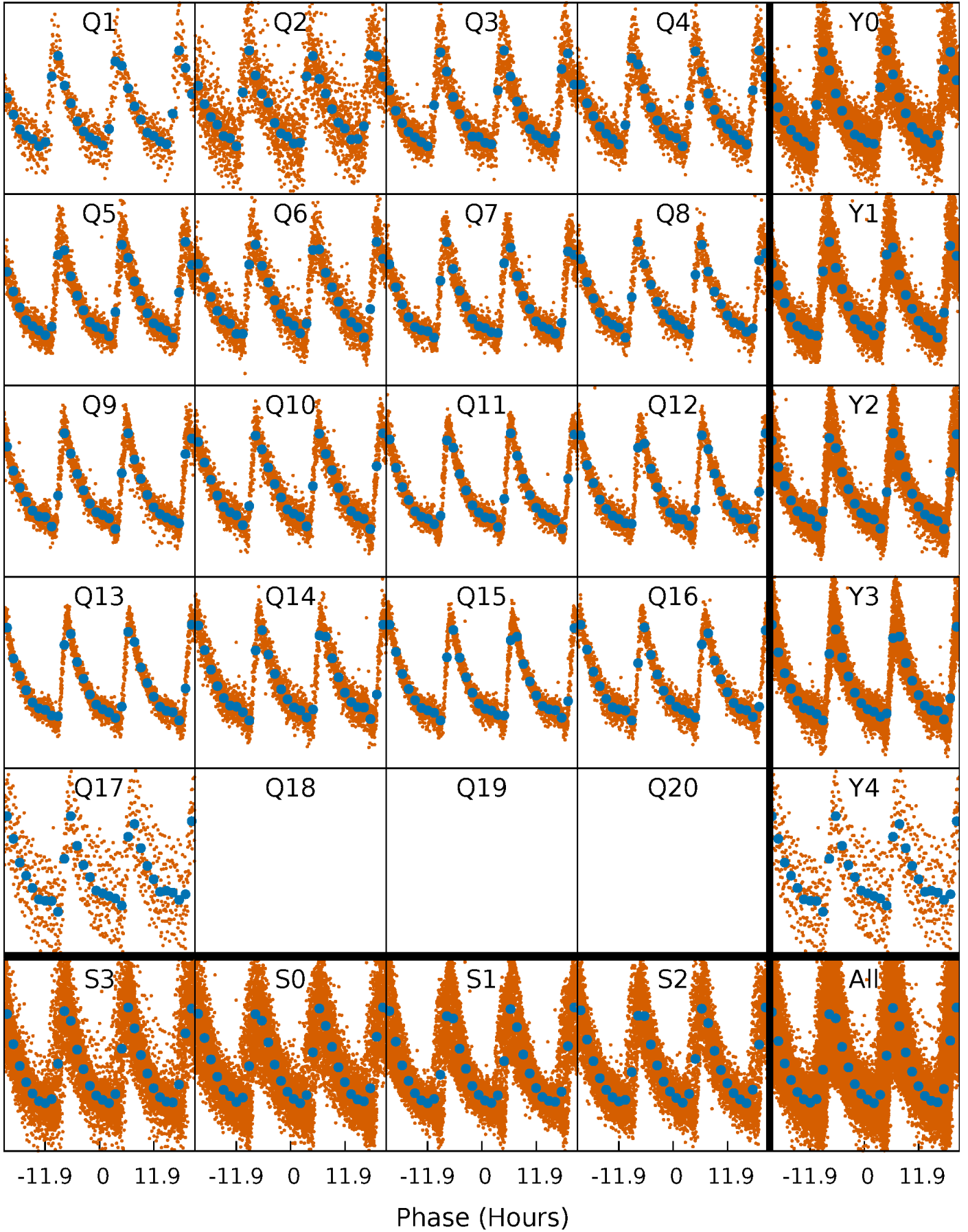


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



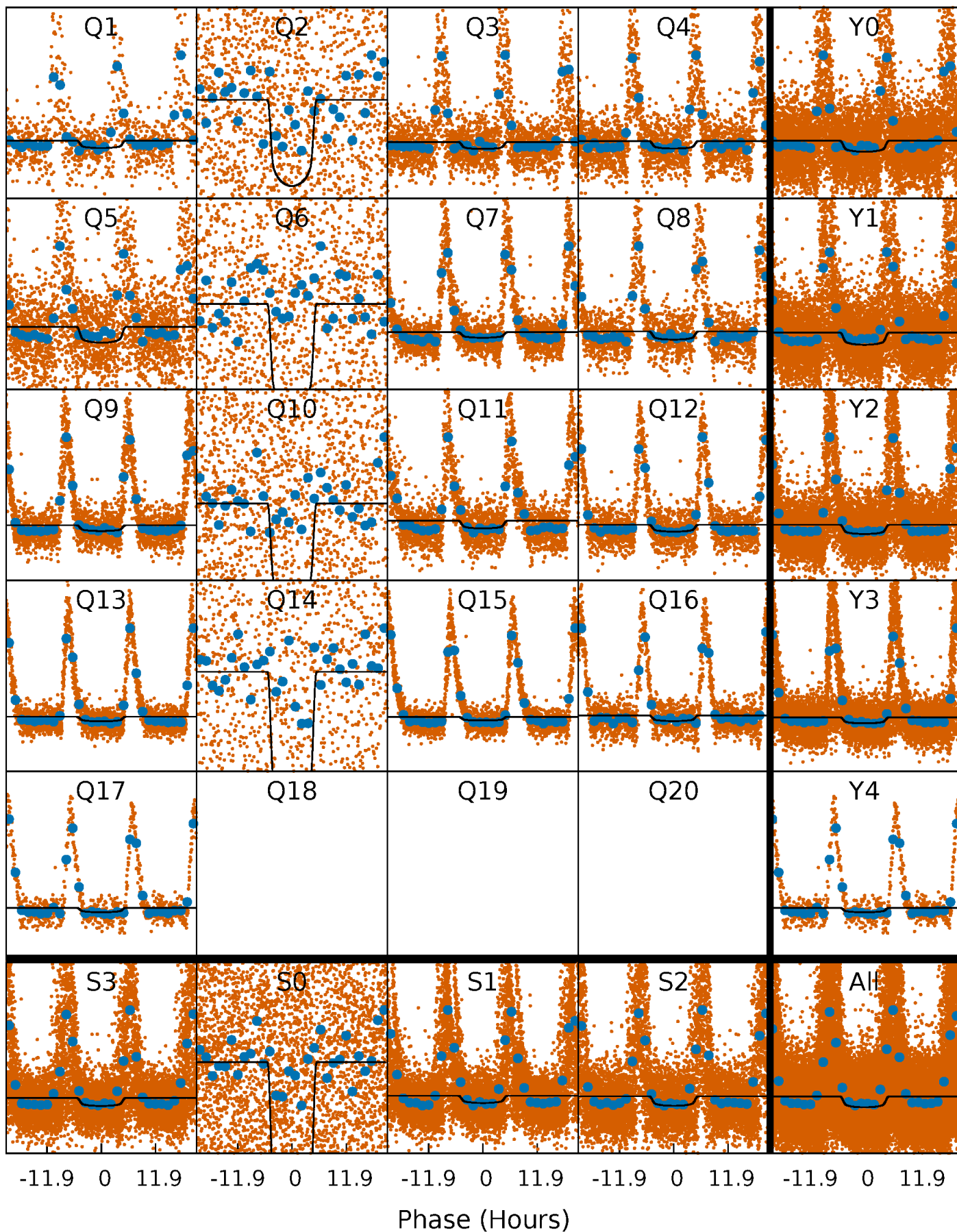
PDC Quarter-Phased Transit Curves

TCE 007199135-01 P= 2.833769 Days $T_0=133.878722$ (BKJD)



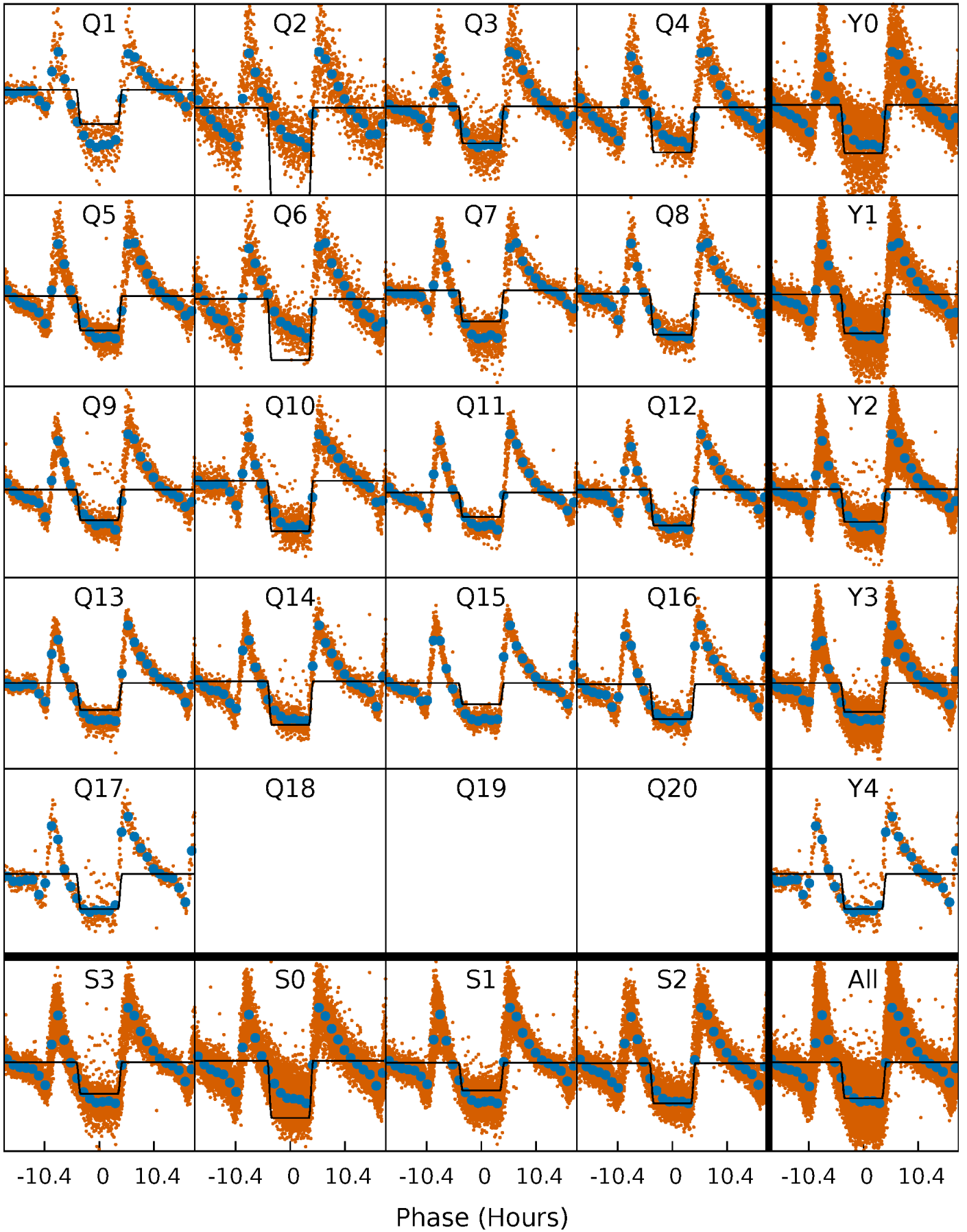
DV Quarter-Phased Transit Curves

TCE 007199135-01 P= 2.833769 Days $T_0=133.878722$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

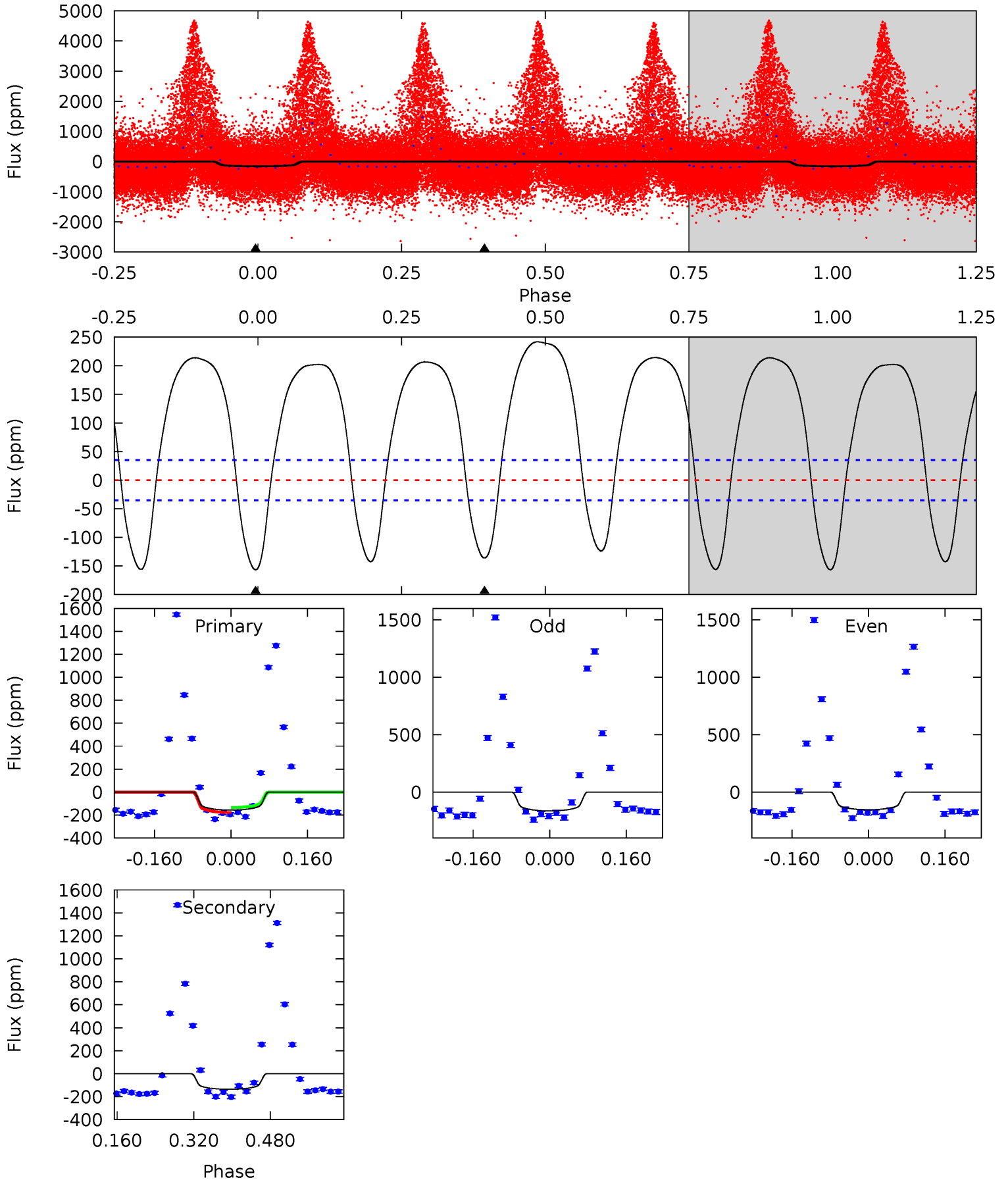
TCE 007199135-01 P= 2.834083 Days $T_0=133.808163$ (BKJD)



DV Model-Shift Uniqueness Test

007199135-01, P = 2.833769 Days, E = 131.044953 Days

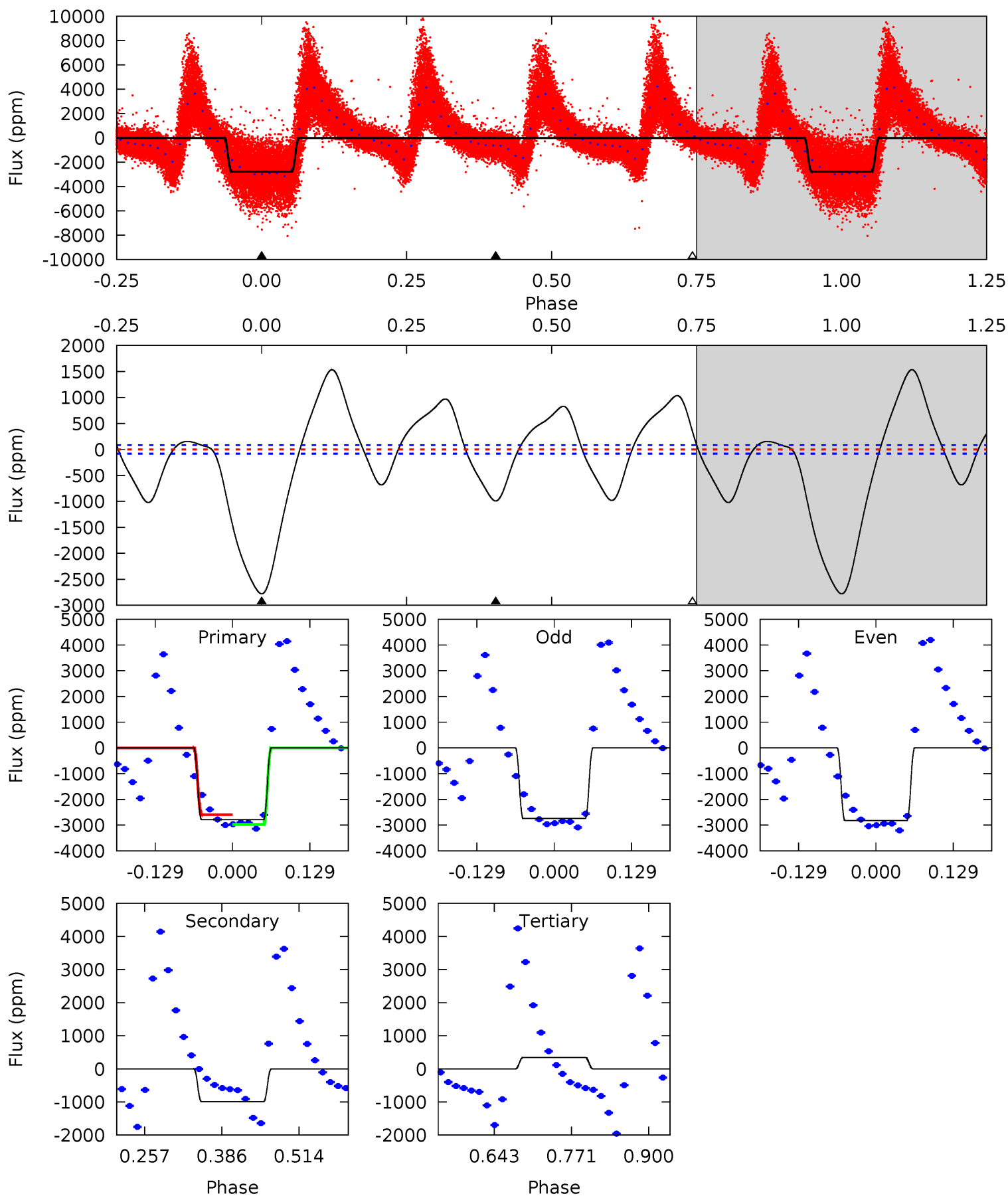
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.9	17.3	0	0	4.46	1.40	16.2	19.9	19.9	17.3	17.3	0.69	0.59	0.61	1.88



Alt Model-Shift Uniqueness Test

007199135-01, P = 2.834083 Days, E = 130.974080 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
150.9	53.9	-18.7	0	4.51	1.52	33.5	169.6	150.9	72.6	53.9	1.96	0.99	0.36	8.95



Stellar Parameters For KIC 007199135

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6106^{+168}_{-210}	$4.487^{+0.046}_{-0.184}$	$-0.160^{+0.300}_{-0.300}$	$0.966^{+0.266}_{-0.095}$	$1.043^{+0.129}_{-0.142}$	$1.631^{+0.403}_{-0.793}$
	+3%/-3%	+1%/-4%	+188%/-188%	+28%/-10%	+12%/-14%	+25%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007199135-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-136 ± 8	$1.92^{+0.29}_{-0.19}$	1884^{+121}_{-86}	5005^{+195}_{-185}	31^{+6}_{-7}
Alt.	-993 ± 18	$5.60^{+0.85}_{-0.42}$	1891^{+120}_{-89}	4846^{+125}_{-138}	27^{+3}_{-6}

T_{max} = Theoretical Maximum Planetary Temperature

T_{obs} = Observed Planetary Temperature (Assuming A=0.3)

A_{obs} = Observed Albedo (Assuming T=0)

If a secondary eclipse is present, the system is likely an EB if $T_{\text{obs}} \gg T_{\text{max}}$ AND $A_{\text{obs}} \gg 1.0$

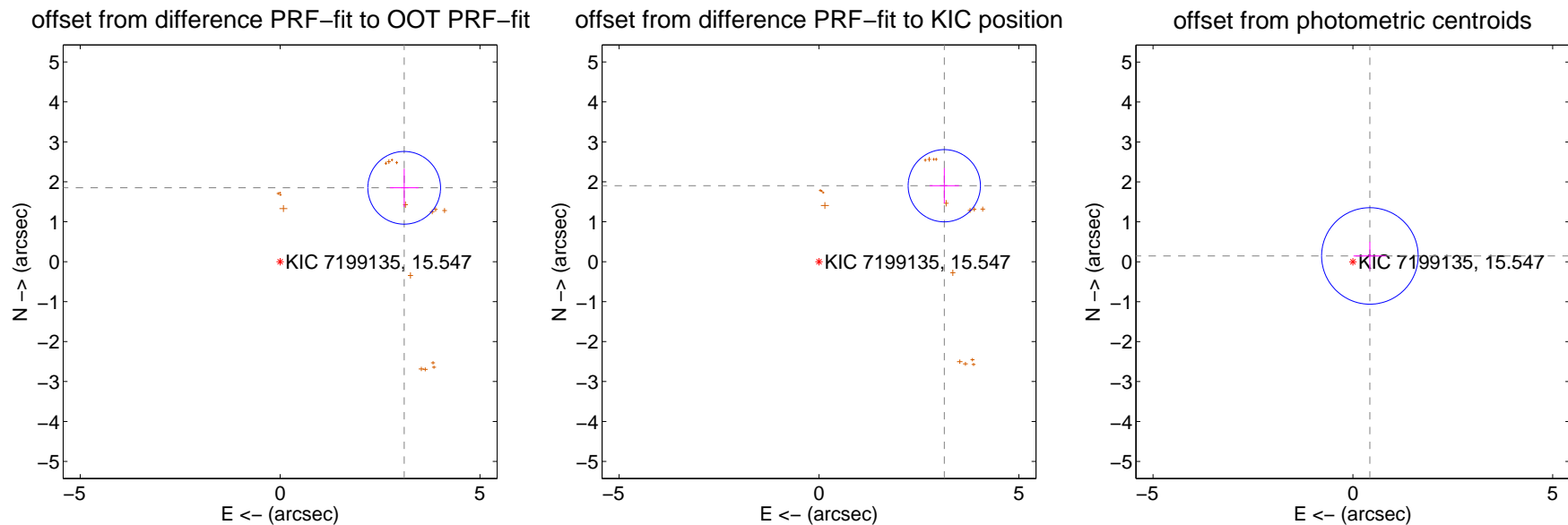
DV Centroid Data

Supplemental centroid analysis for 007199135-01. Kepler magnitude: 15.55. Transit SNR 31.94

There are 0 quarters with good PRF difference image offsets

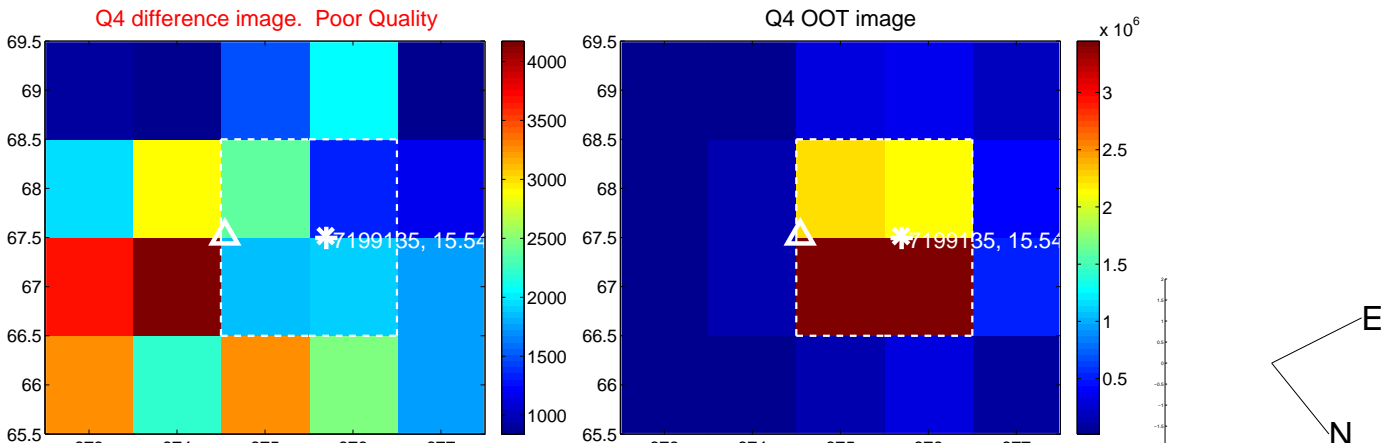
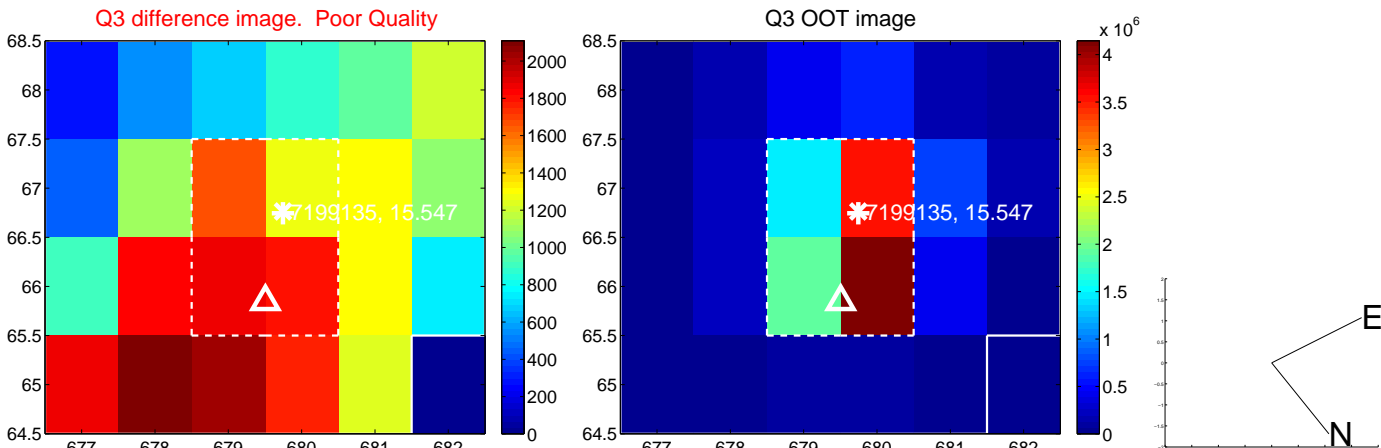
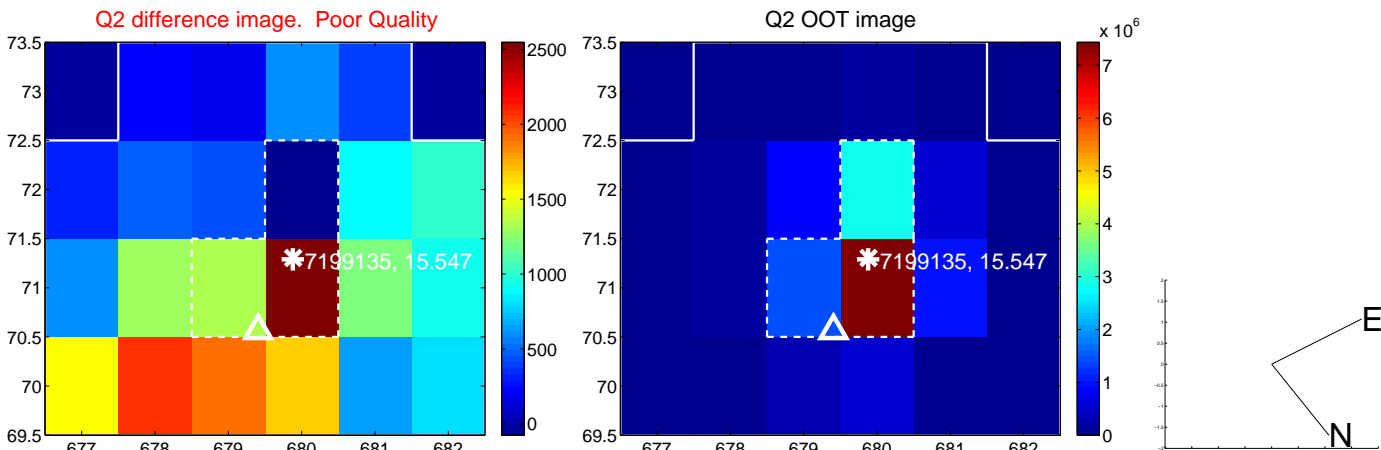
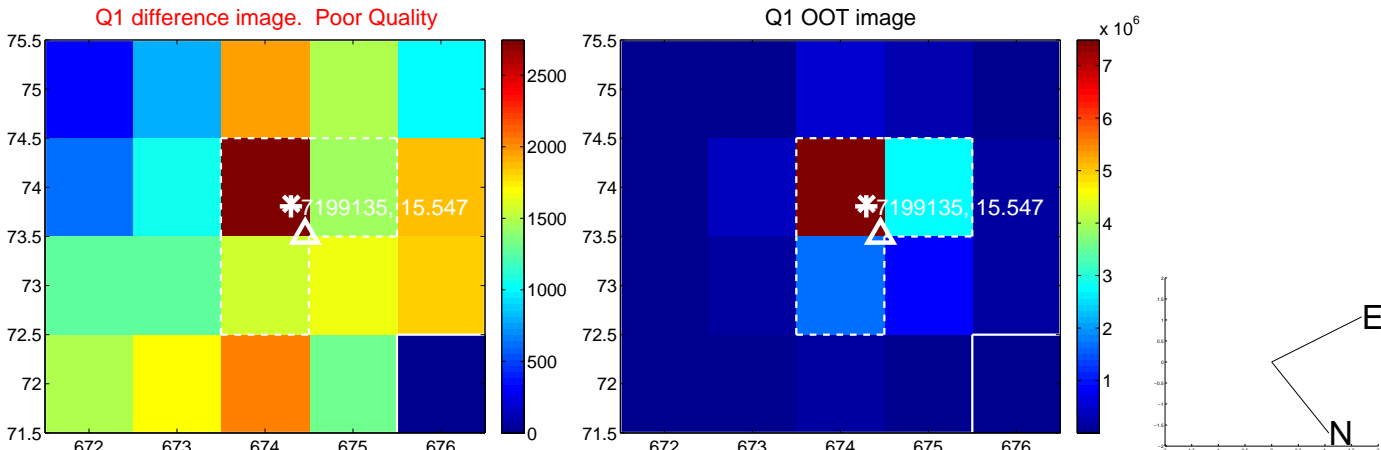
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.613 ± 0.303	11.91	-3.104 ± 0.357	1.849 ± 0.480
PRF-fit source offset from KIC position	3.666 ± 0.301	12.16	-3.135 ± 0.367	1.902 ± 0.443
photometric centroid source offset	0.45 ± 0.40	1.12	-0.43 ± 0.41	0.15 ± 0.35

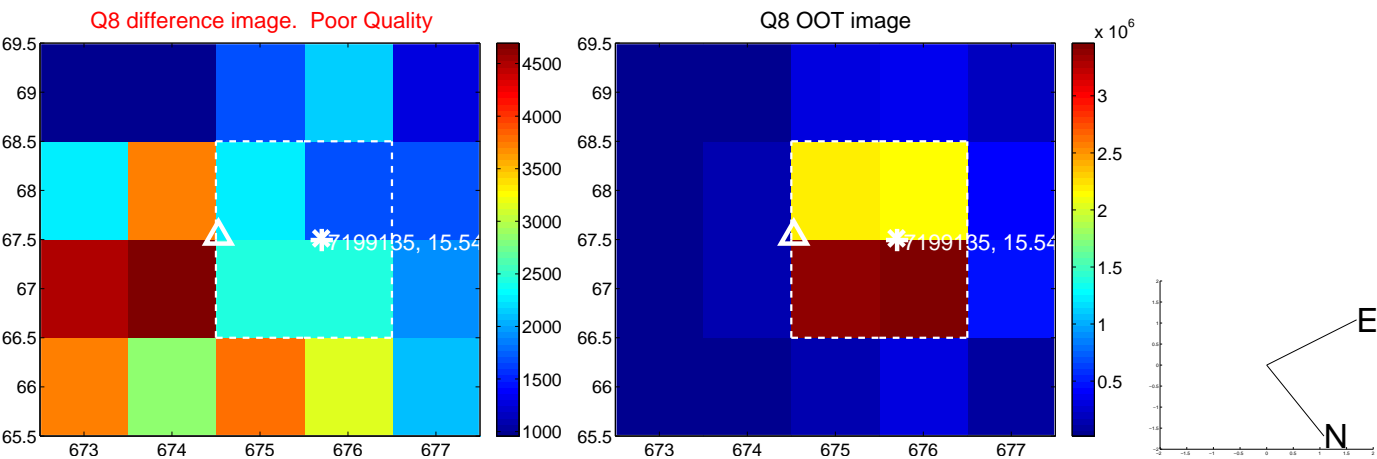
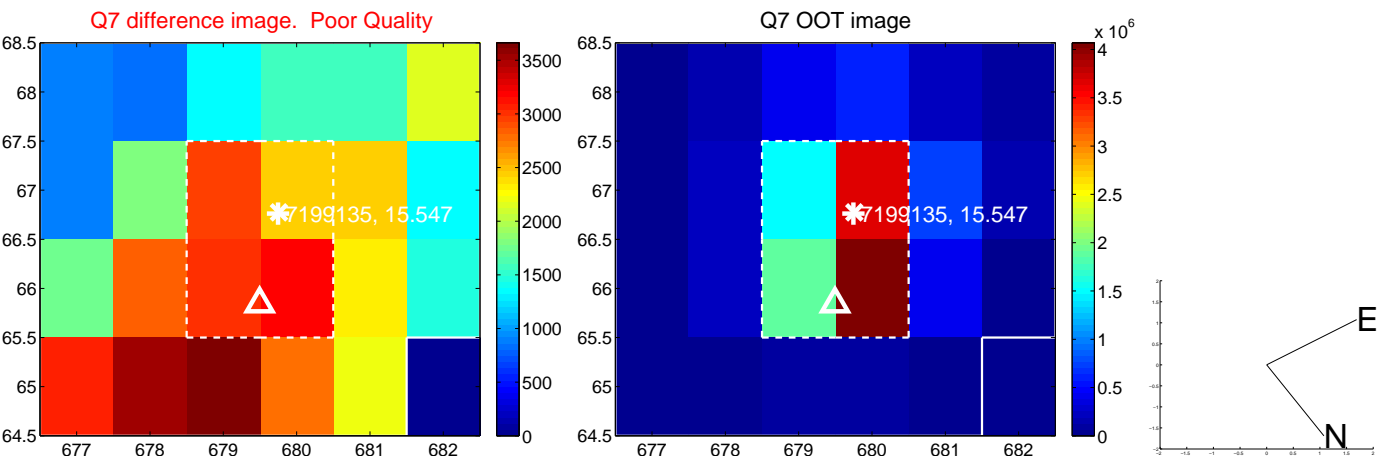
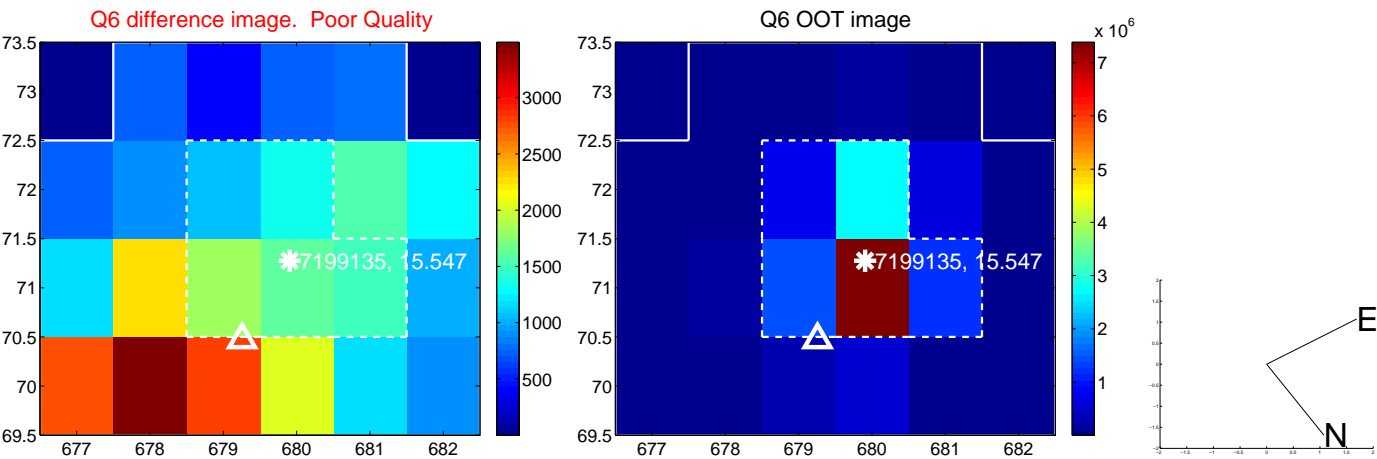
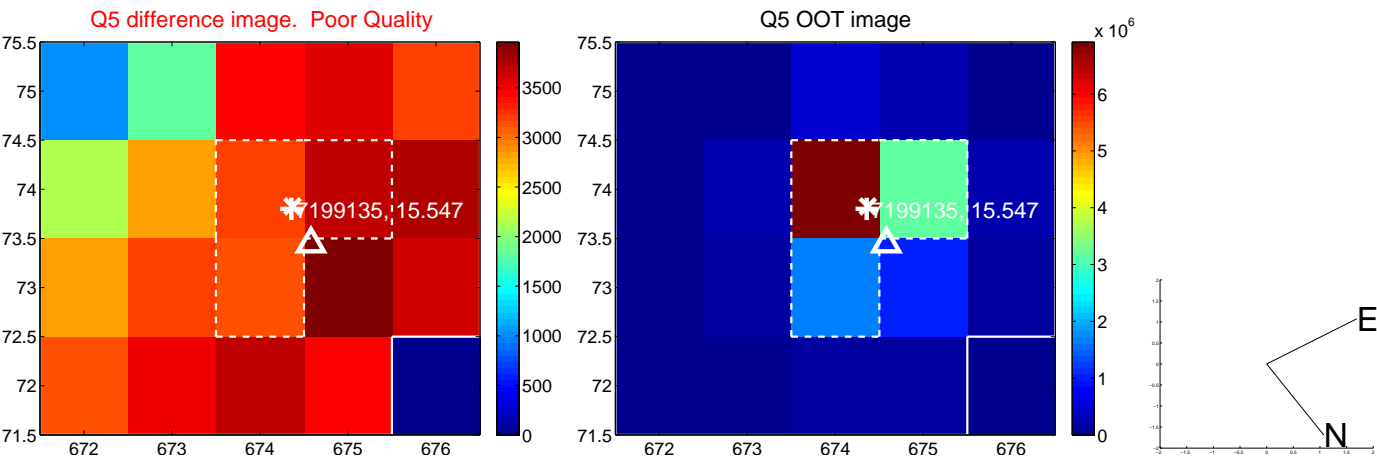


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

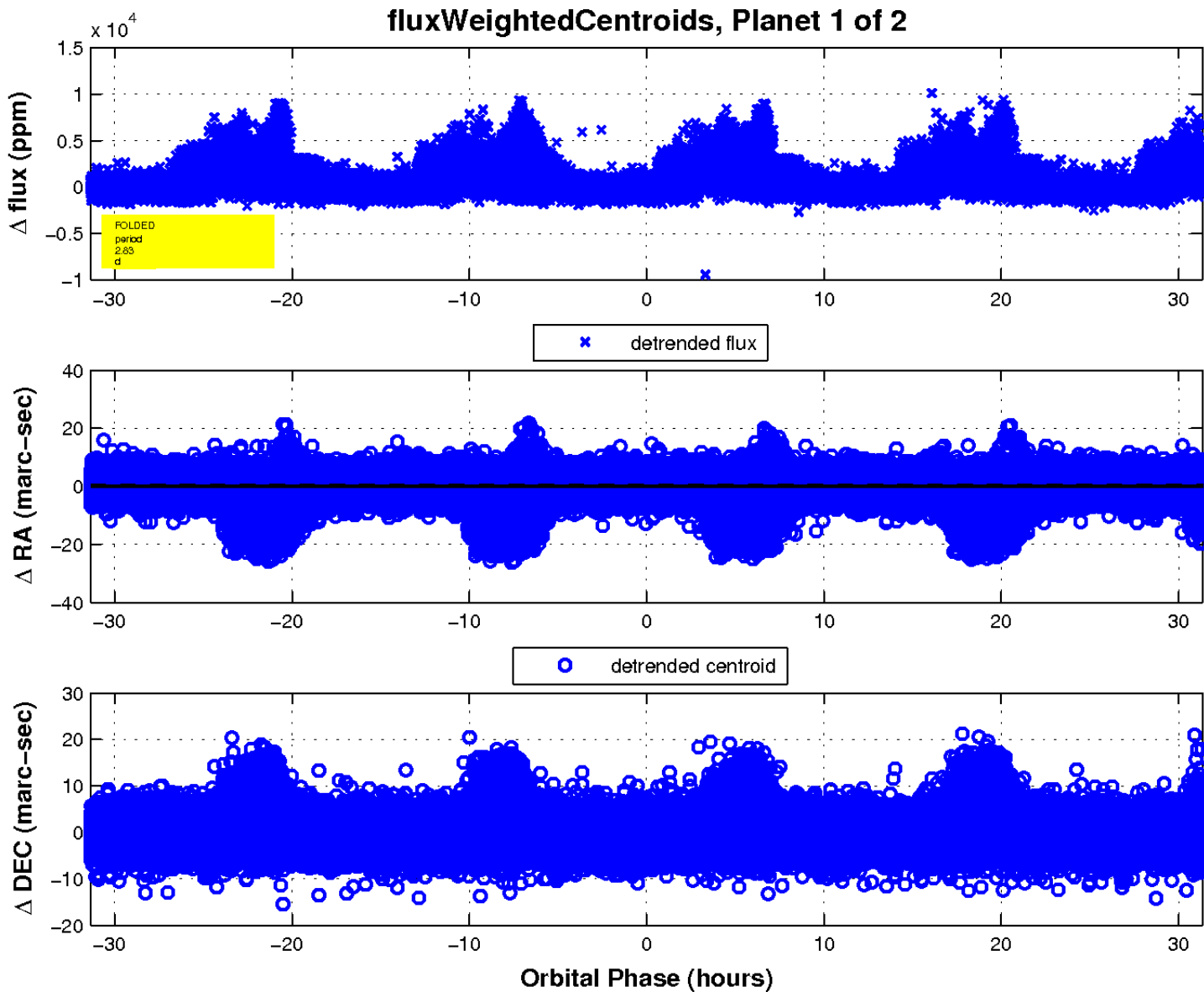
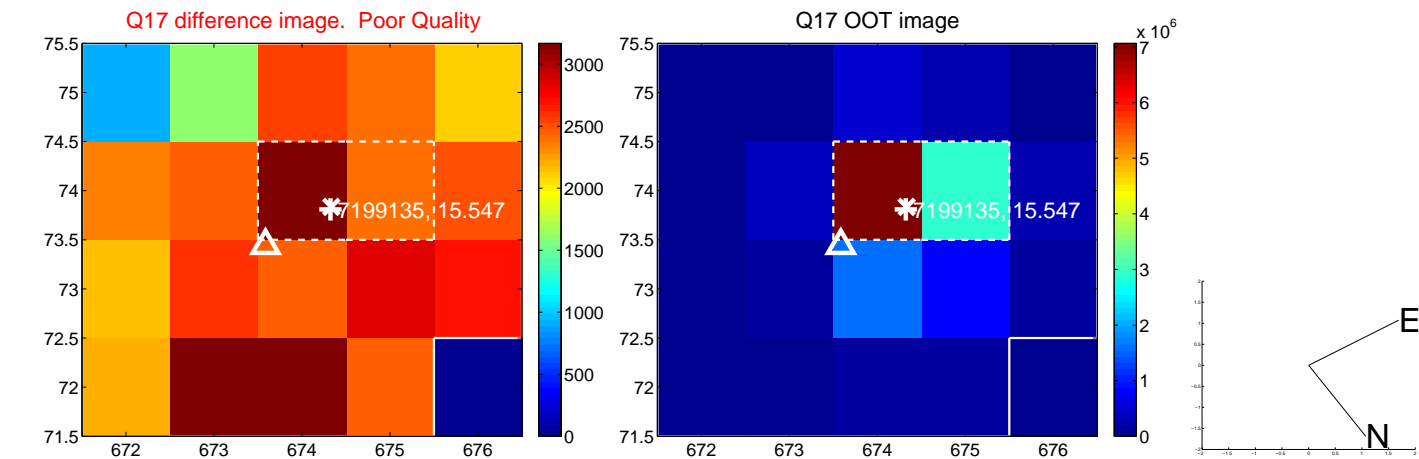
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



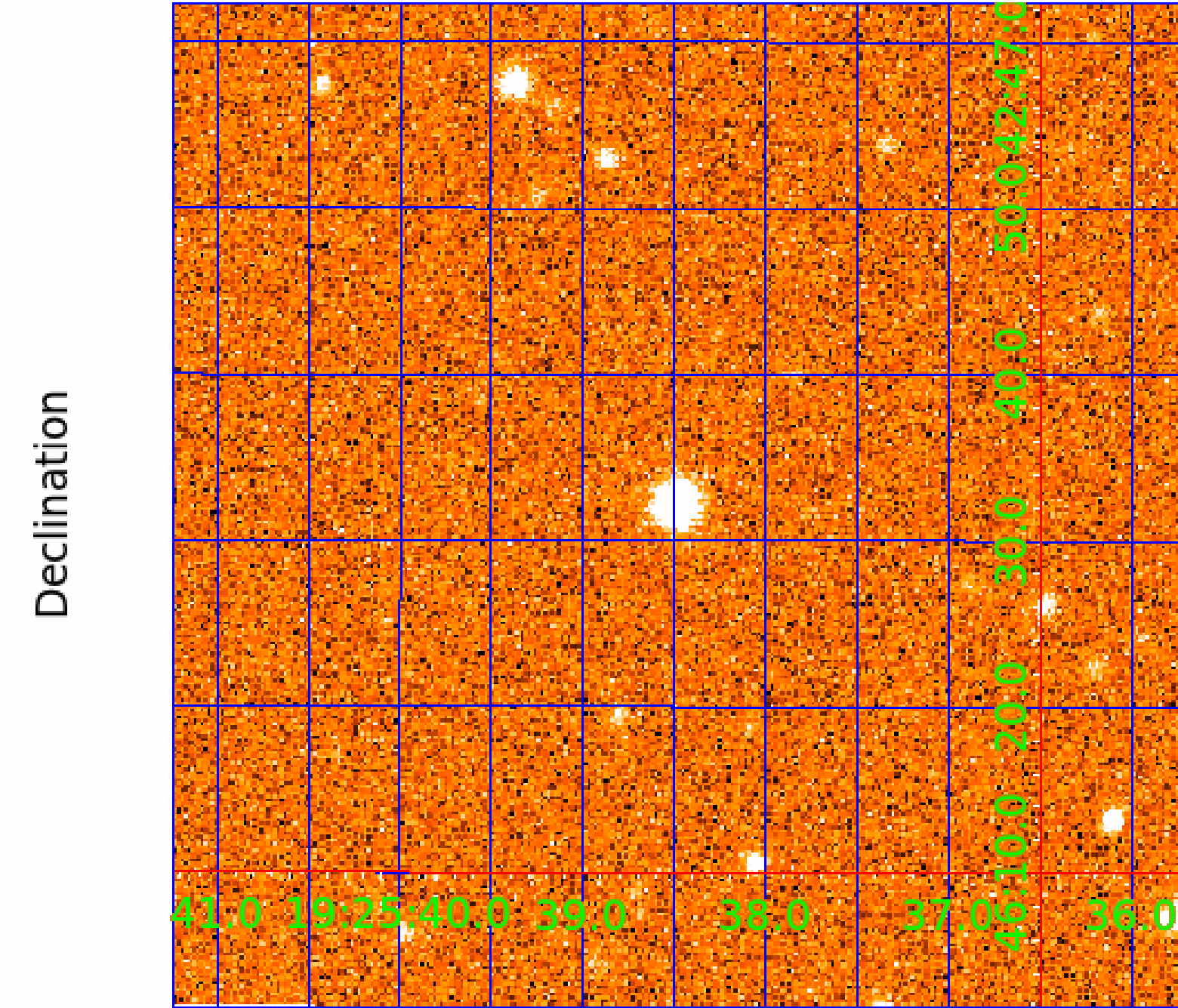
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 007199135

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})
007199135-01	OBS	No	2.833769	133.878722	268.7	10.451	35.0	31.9	0.97	6106	1.87	734.66
007199135-02	OBS	No	0.566801	131.688277	2624.4	2.000	55.5	-1.0	0.97	6106	4.96	6280.56

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
007199135-01	OBS	FP	0.00	1	0	1	1	LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_UNRESOLVED_OFFSET—EPHEM_MATCH
007199135-02	OBS	FP	0.00	1	0	0	1	LPP_DV—SAME_NTL_PERIOD—CENT_NOFITS—EPHEM_MATCH

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.

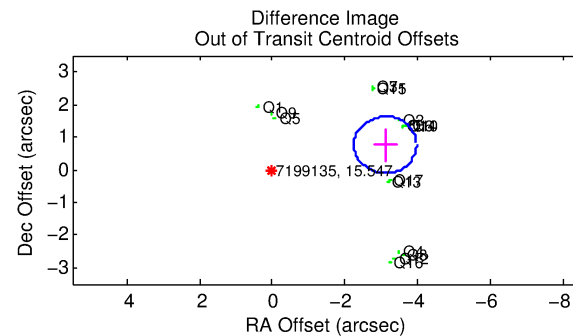
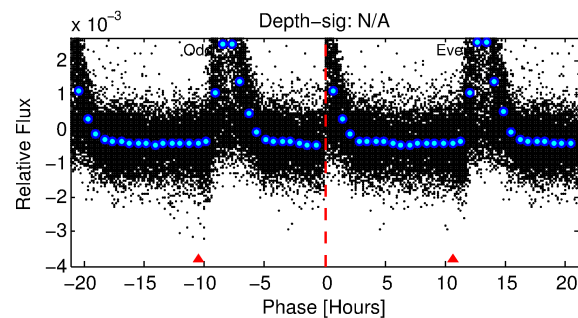
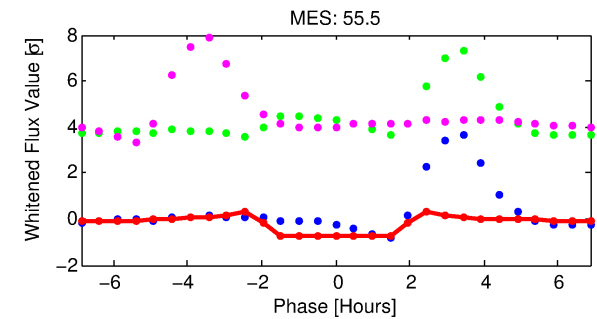
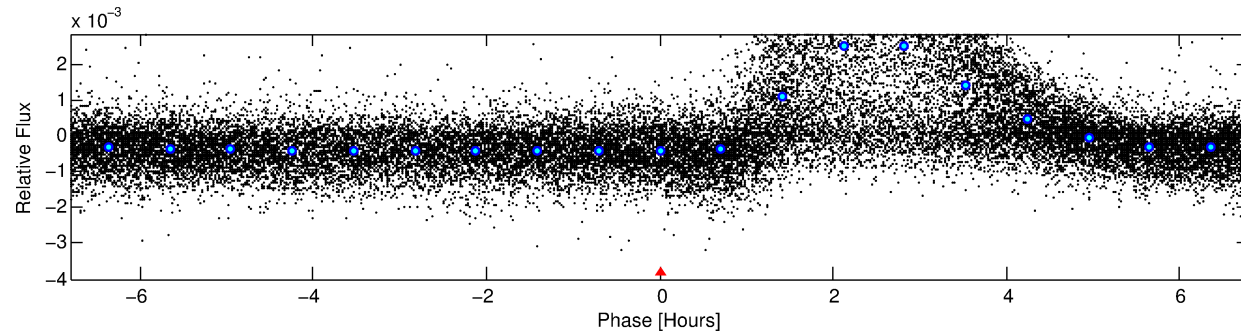
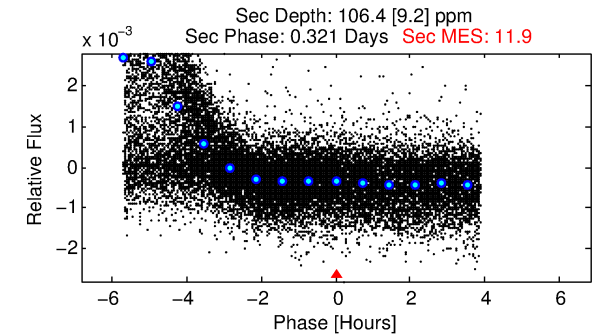
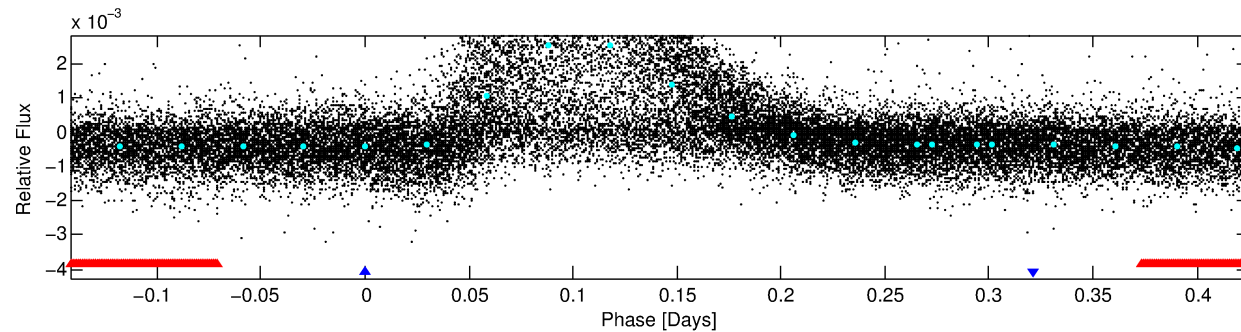
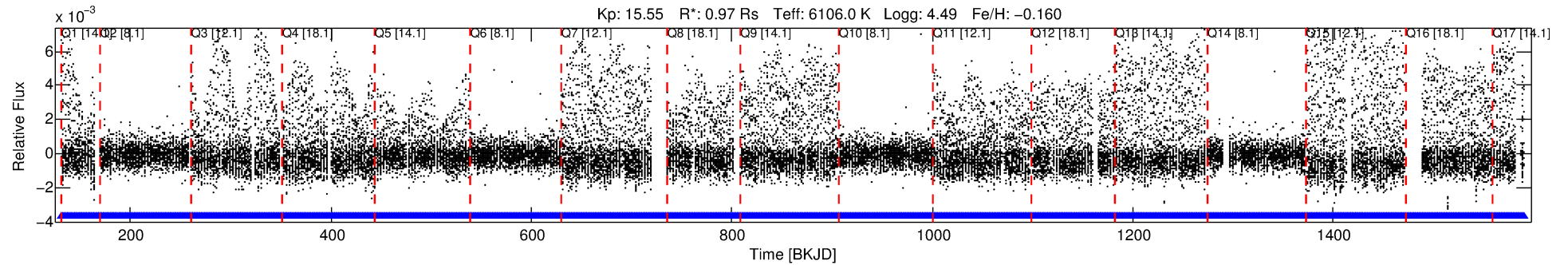
Ephemeris Match Information For 007199135-02

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
007199135-02	7199135	RR-Lyr-pri	7198959	1:1	120.7	22	20	7.86	15.55	237.54	Direct-PRF	0	0.69	19.39

Notes: $P_1:P_2$ is the period ratio. Dist is the distance in arcseconds. Δ Row and Δ Col are the number of pixels apart in row and column. m_2 and m_1 are the magnitudes of the parent and child. D_2/D_1 is the parent's transit depth divided by the child's. σ_P and σ_T are the significance of the match in period and epoch. For a match to be considered significant $\sigma_P < 5.0$ and $\sigma_T < 5.0$. Matches which have σ_P and σ_T very close to this cutoff should receive extra scrutiny, especially if the period ratio is very large.

DV One-Page Summary

KIC: 7199135 Candidate: 2 of 2 Period: 0.567 d



TPS TCE Results:

Period = 0.56680 d
Epoch = 131.6883 BKJD

DV fit results are unavailable

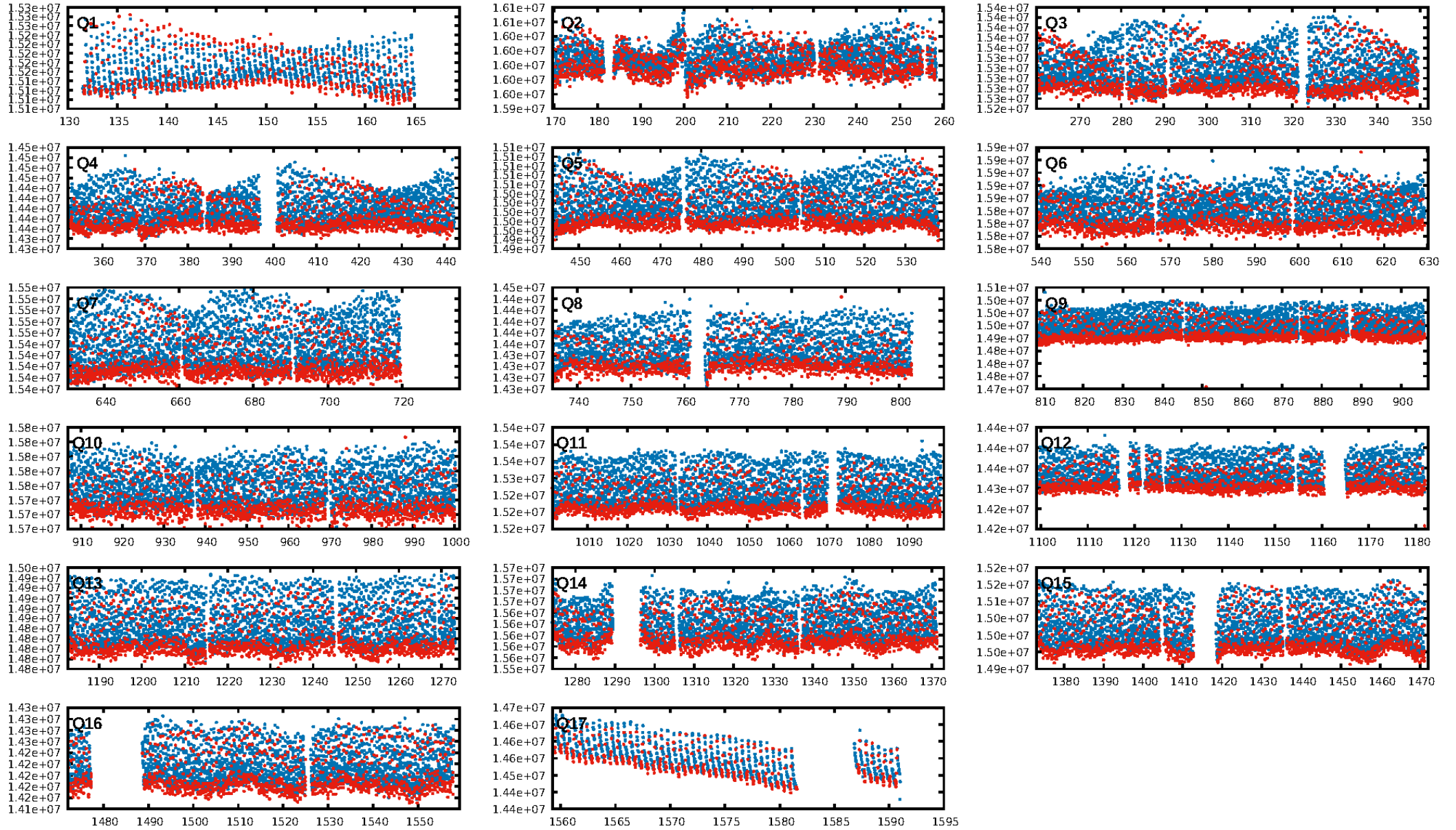
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [5.11σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGoF-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [1363/1363]
GhostDiagnostic-chr: N/A
Centroid-sig: N/A
Centroid-so: 0.320 arcsec [11.71σ]
OotOffset-rm: 3.200 arcsec [11.09σ]
KicOffset-rm: 3.252 arcsec [11.70σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
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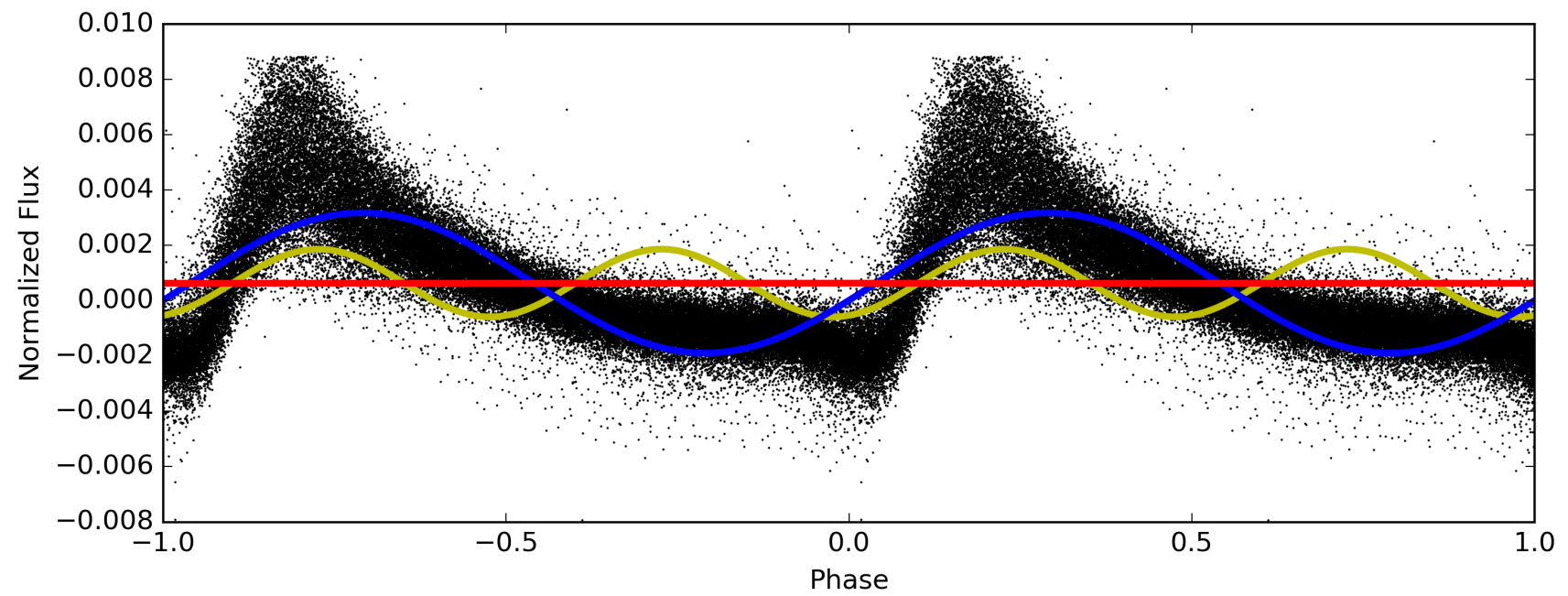
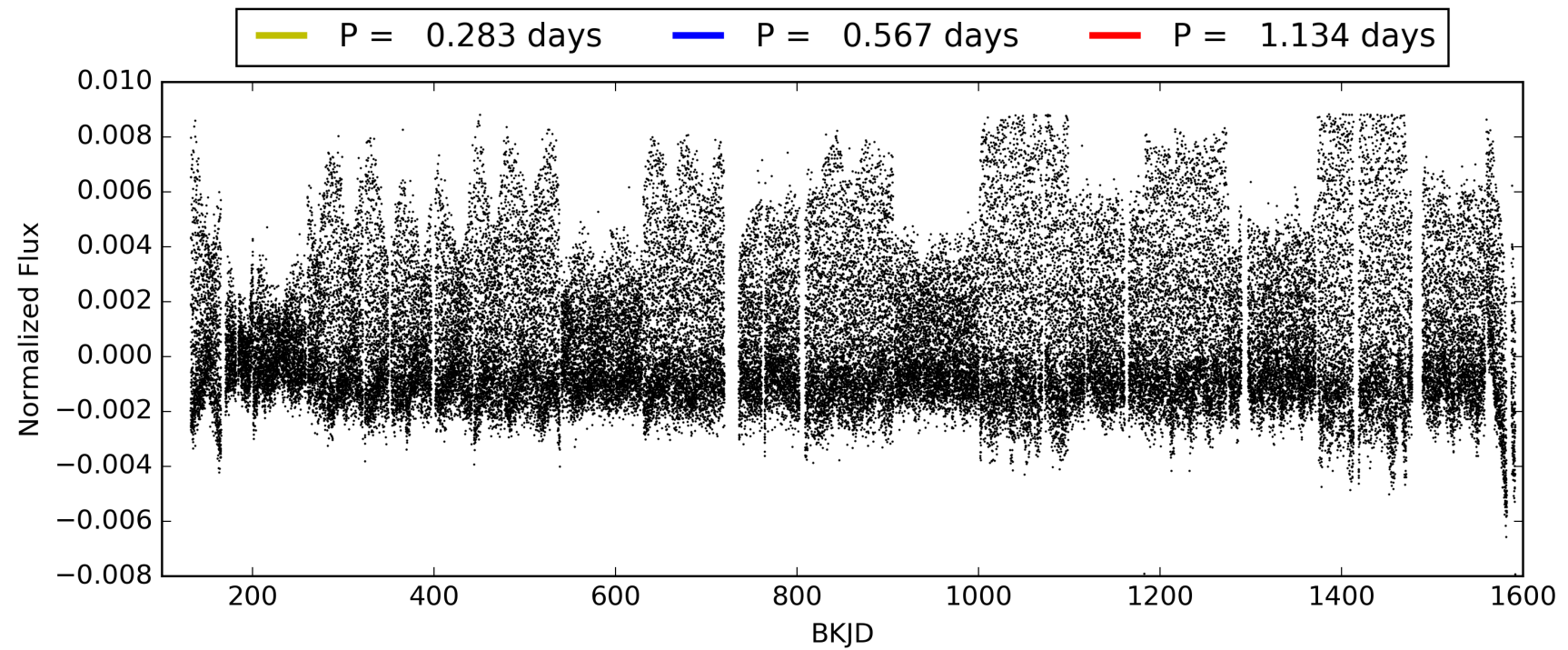
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 16:14:17 Z

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

TCE 007199135-02, PDC Light Curves

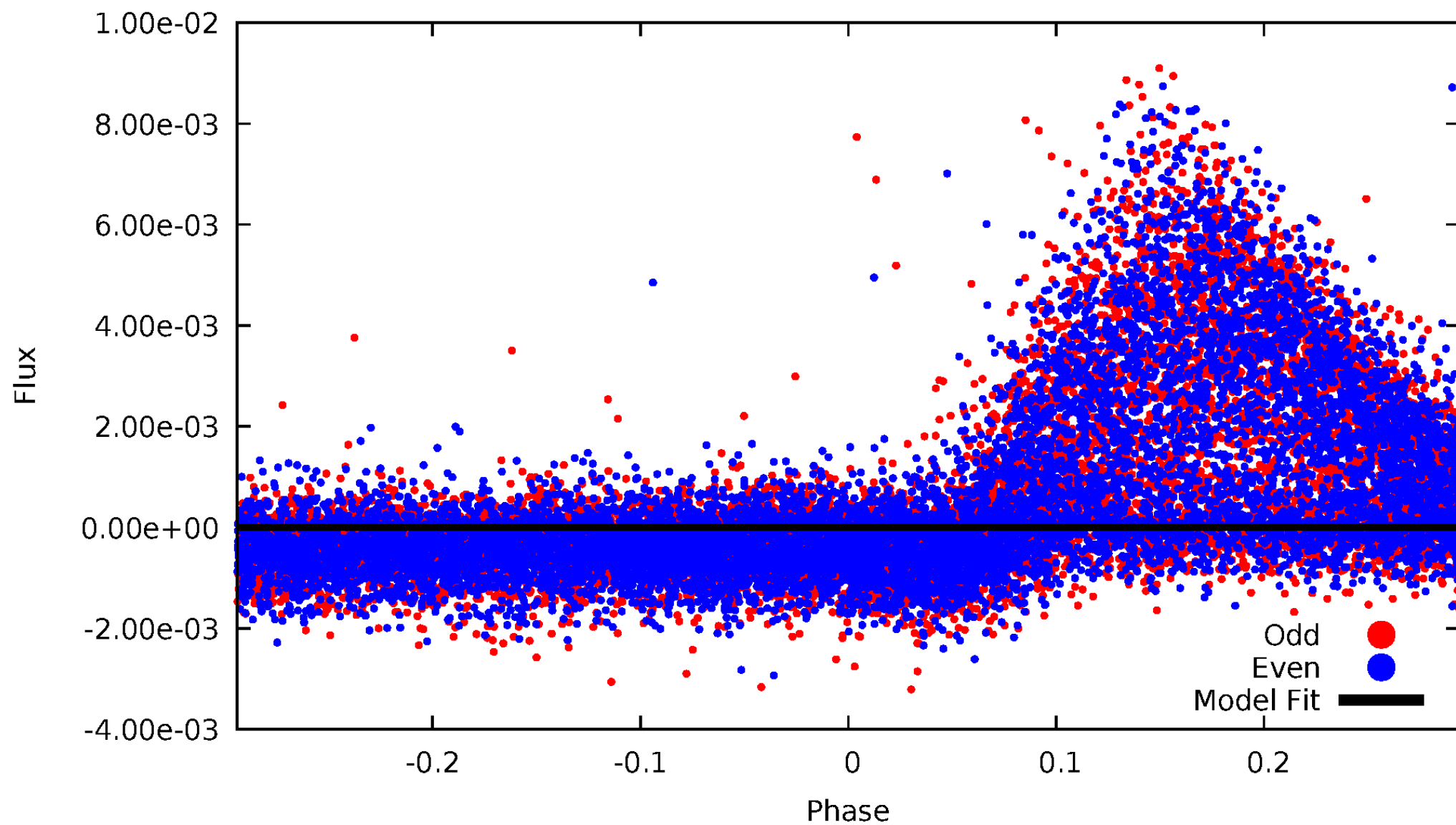


TCE 007199135-02



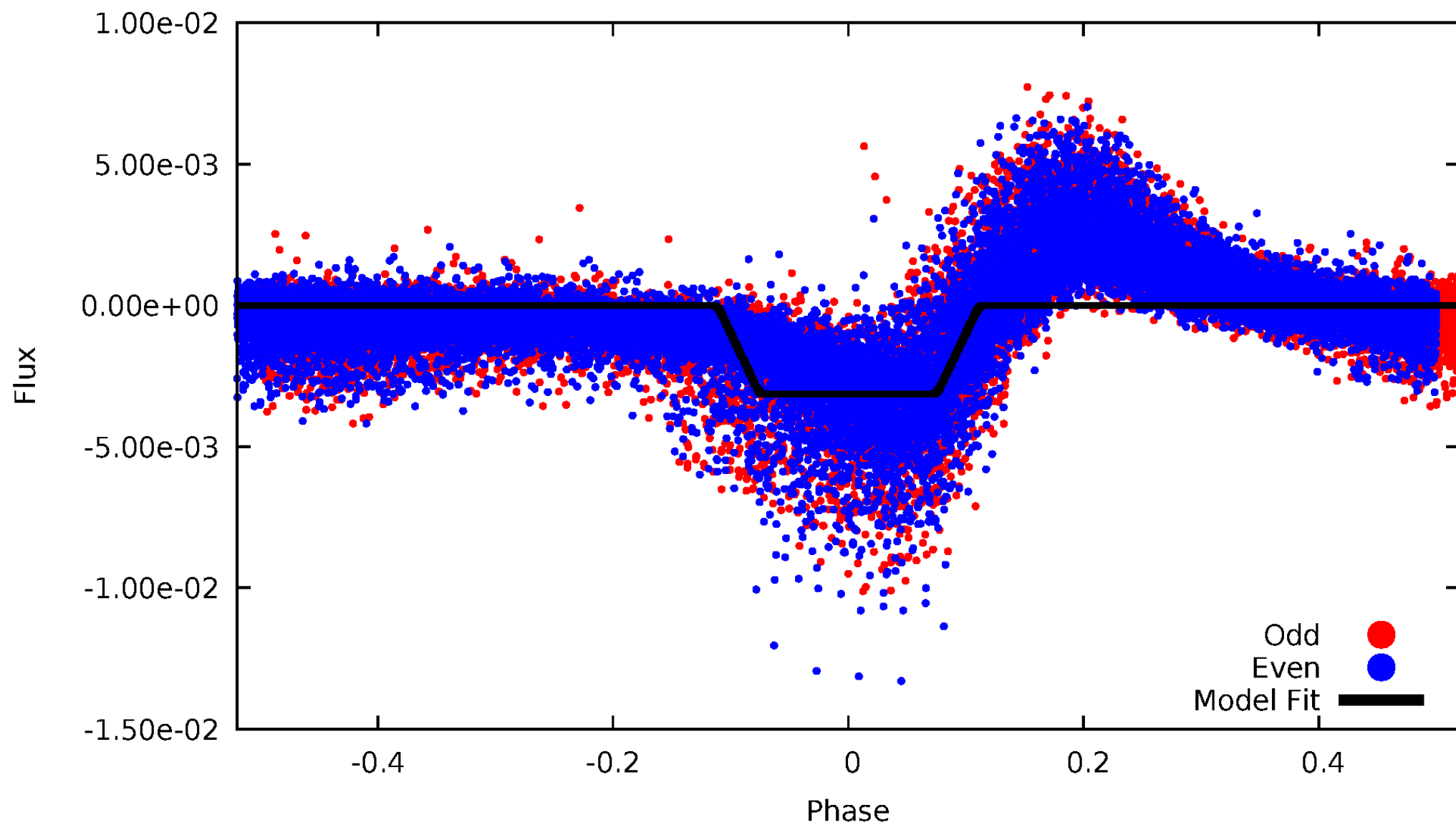
DV Odd/Even

TCE 007199135-02



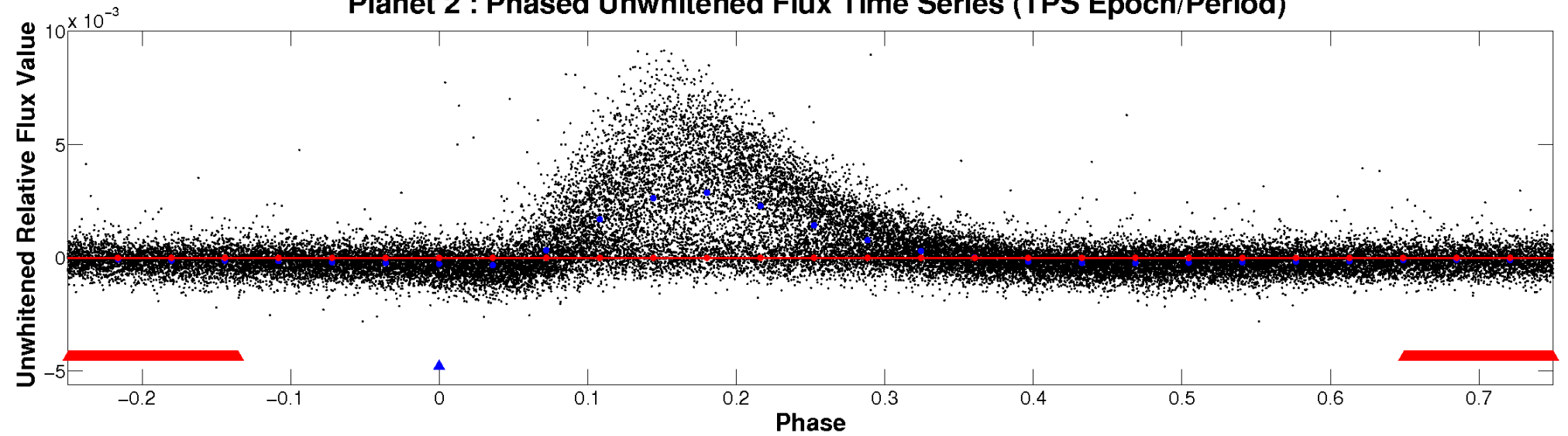
ALT Odd/Even

TCE 007199135-02

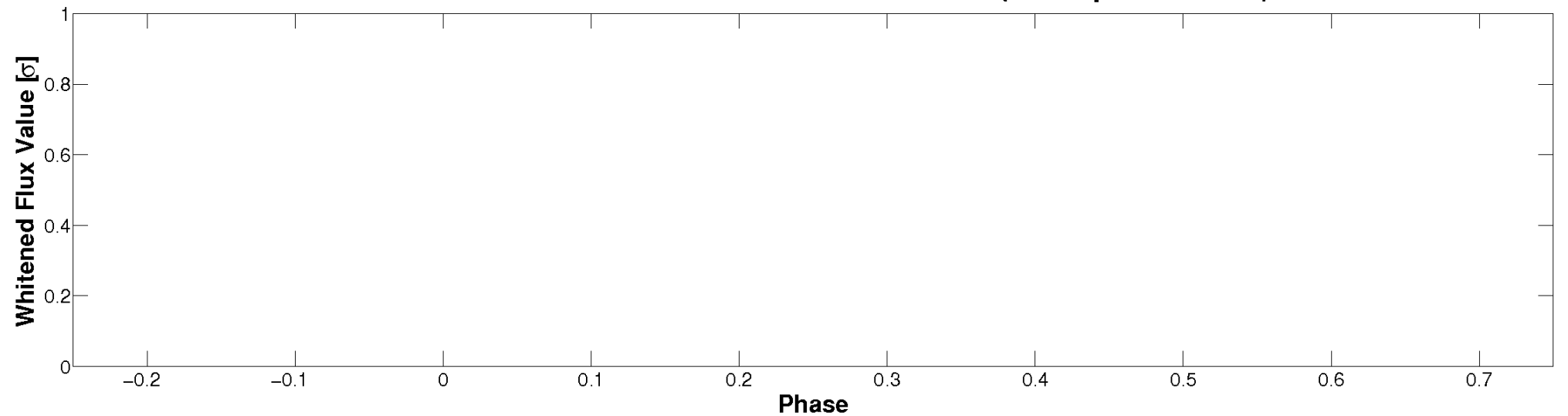


Non-Whitened Vs. Whitened Light Curve

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

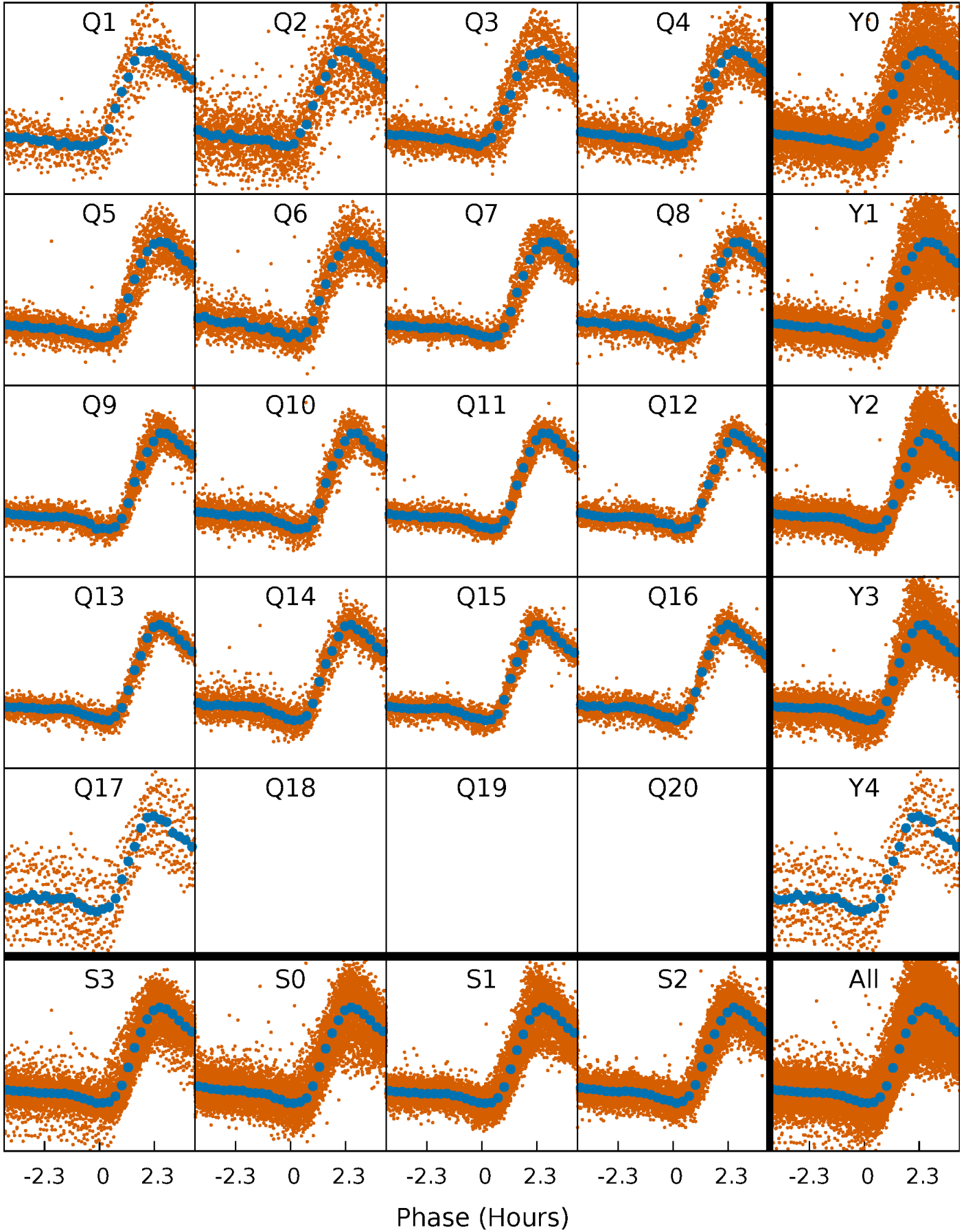


Planet 2 : Phased Whitened Flux Time Series (TPS Epoch/Period)



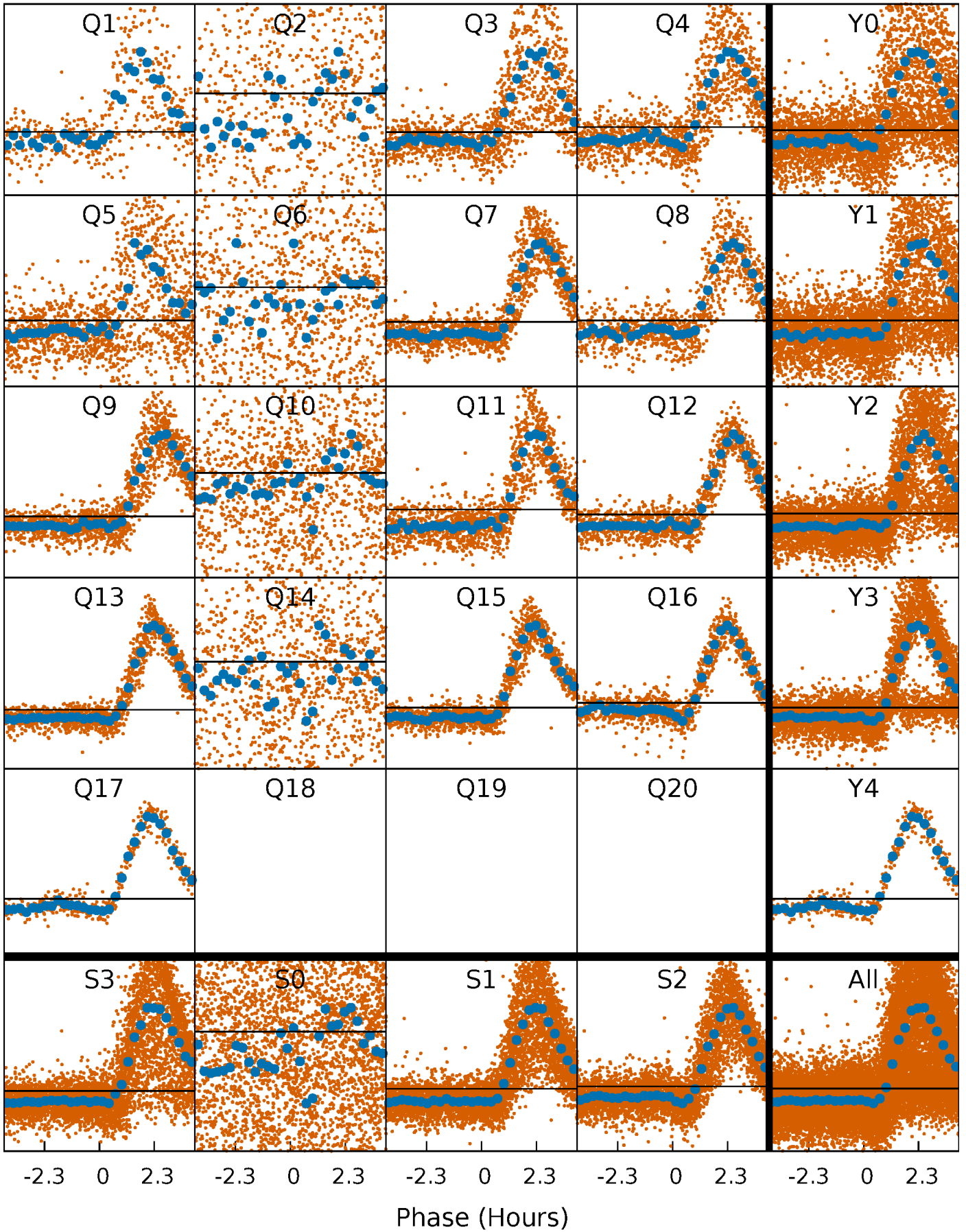
PDC Quarter-Phased Transit Curves

TCE 007199135-02 P= 0.566801 Days $T_0=131.688277$ (BKJD)



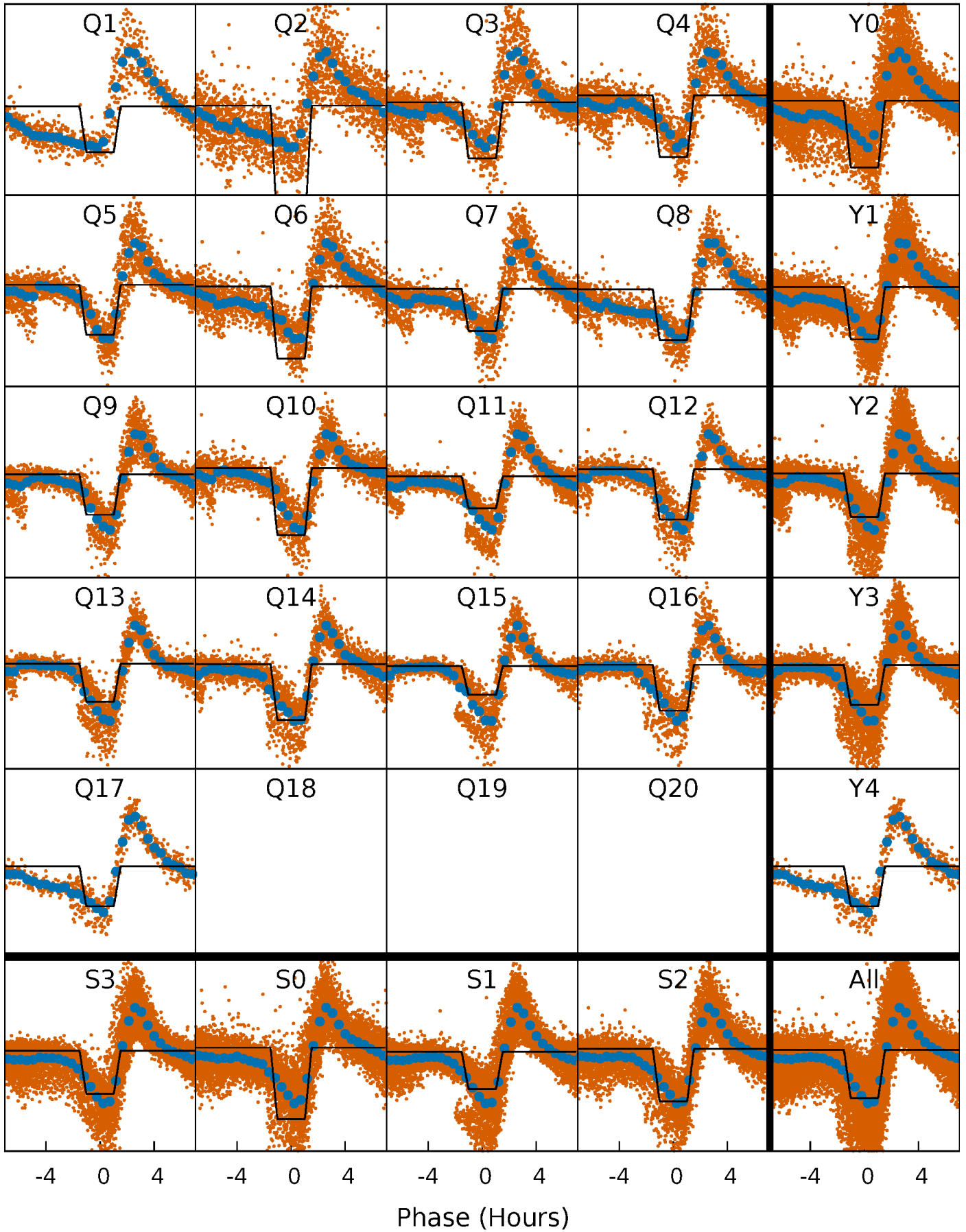
DV Quarter-Phased Transit Curves

TCE 007199135-02 P= 0.566801 Days $T_0=131.688277$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

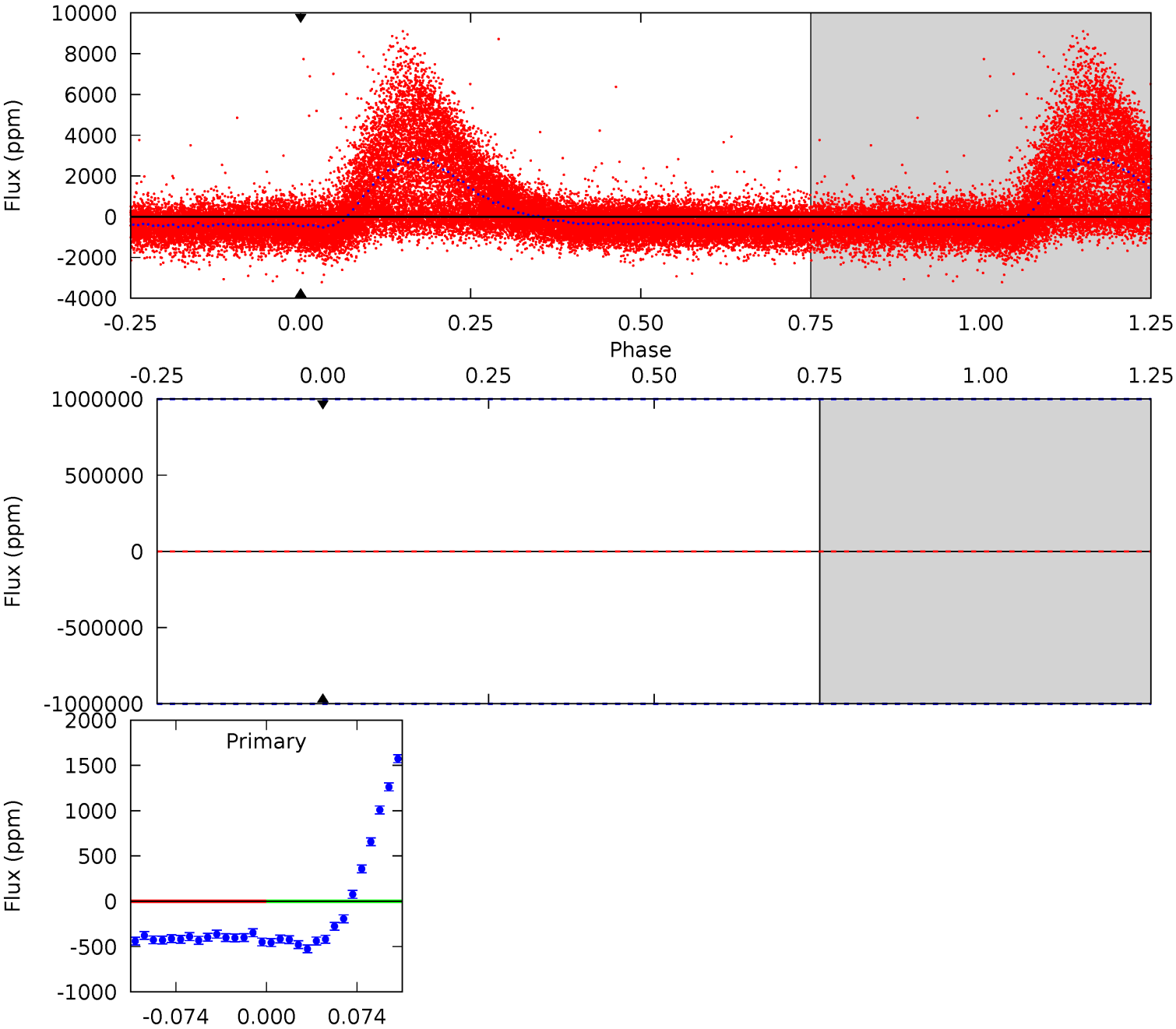
TCE 007199135-02 P= 0.566801 Days $T_0=131.683006$ (BKJD)



DV Model-Shift Uniqueness Test

007199135-02, P = 0.566801 Days, E = 131.688277 Days

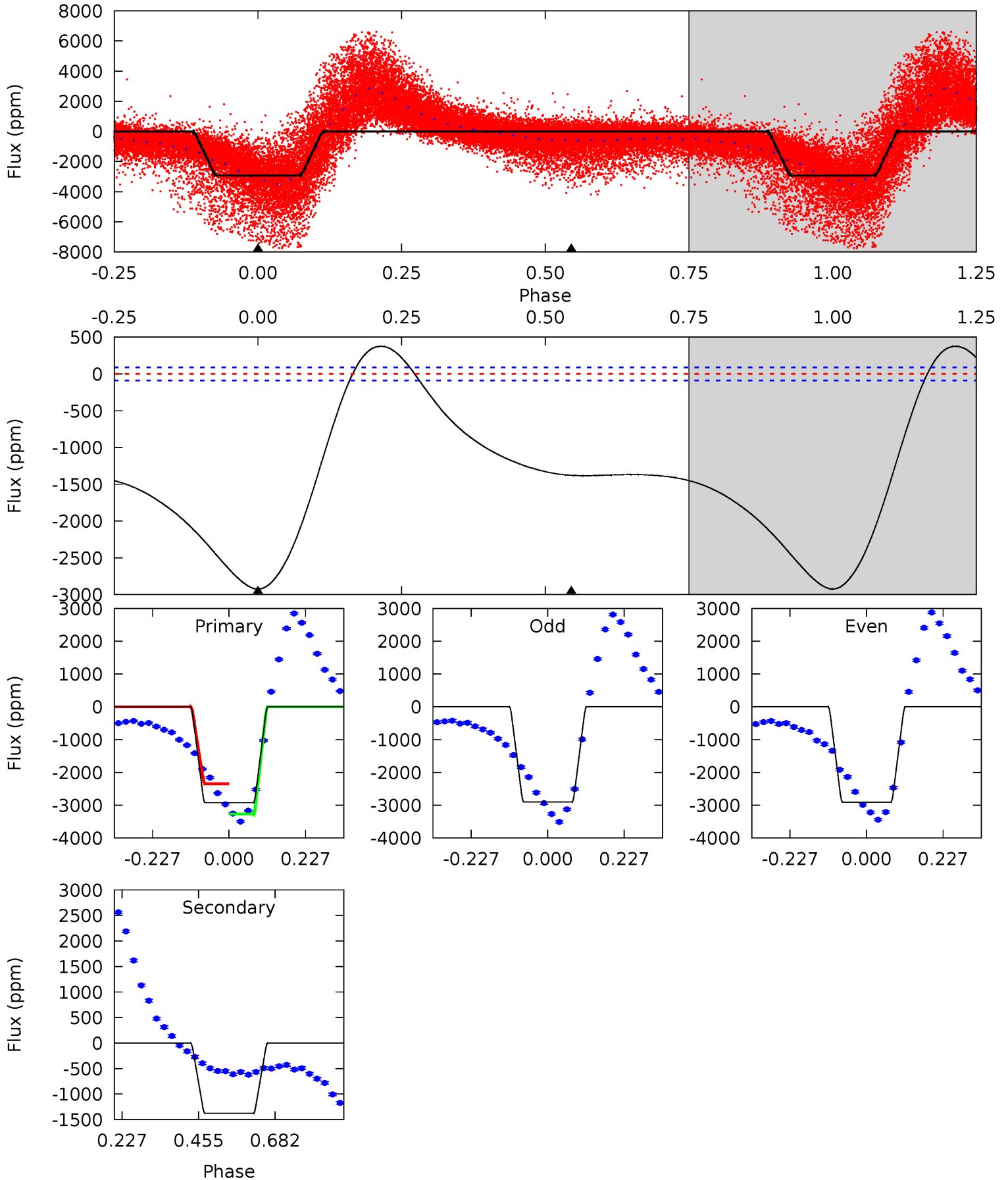
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
0	0	0	0	1.00	1.00	1.00	0	0	0	0	0	0	0	0



Alt Model-Shift Uniqueness Test

007199135-02, P = 0.566801 Days, E = 131.683006 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
144.3	68.0	0	0	4.39	1.21	12.5	144.3	144.3	68.0	68.0	0.16	1.13	0.11	25.3



Stellar Parameters For KIC 007199135

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6106^{+168}_{-210}	$4.487^{+0.046}_{-0.184}$	$-0.160^{+0.300}_{-0.300}$	$0.966^{+0.266}_{-0.095}$	$1.043^{+0.129}_{-0.142}$	$1.631^{+0.403}_{-0.793}$
	+3%/-3%	+1%/-4%	+188%/-188%	+28%/-10%	+12%/-14%	+25%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 007199135-02 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	0 ± 1000000	$9.55^{+9.14}_{-6.59}$	3235^{+203}_{-167}	-4124^{+23672}_{-12984}	$-0.825^{+198.013}_{-147.511}$
Alt.	-1378 ± 20	$10.51^{+9.97}_{-7.05}$	3225^{+228}_{-144}	3880^{+2634}_{-1468}	$1.238^{+10.035}_{-0.901}$

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 $A_{obs} \gg 1.0$

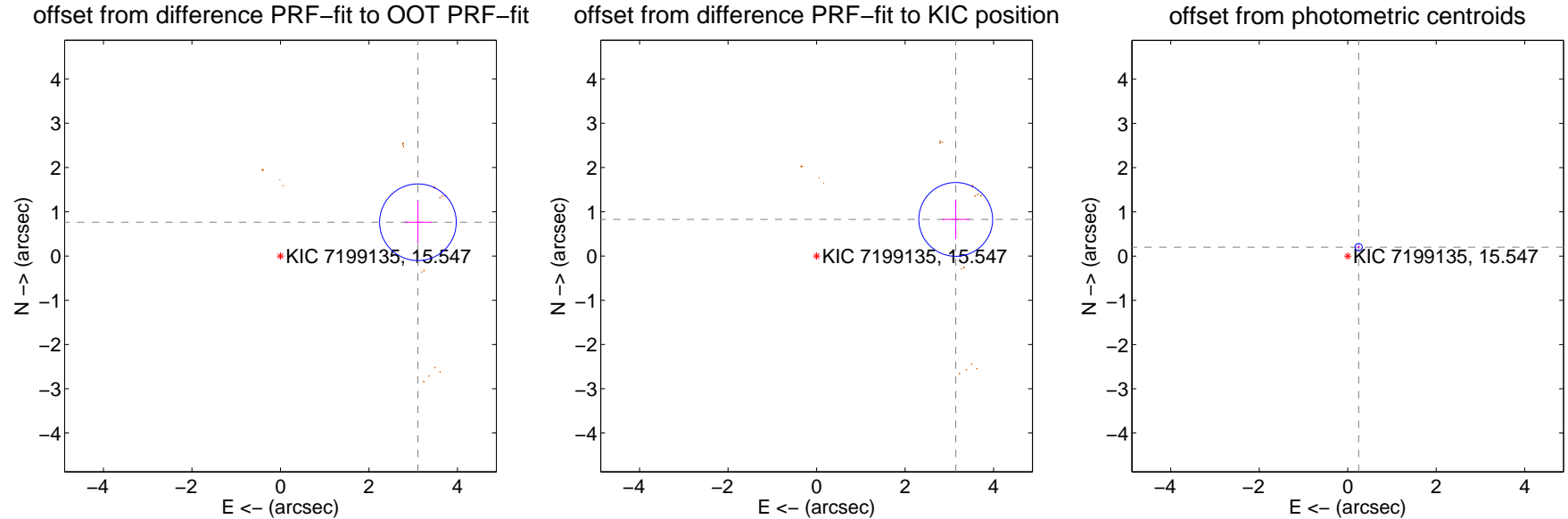
DV Centroid Data

Supplemental centroid analysis for 007199135-02. Kepler magnitude: 15.55. Transit SNR -1.00

There are 0 quarters with good PRF difference image offsets

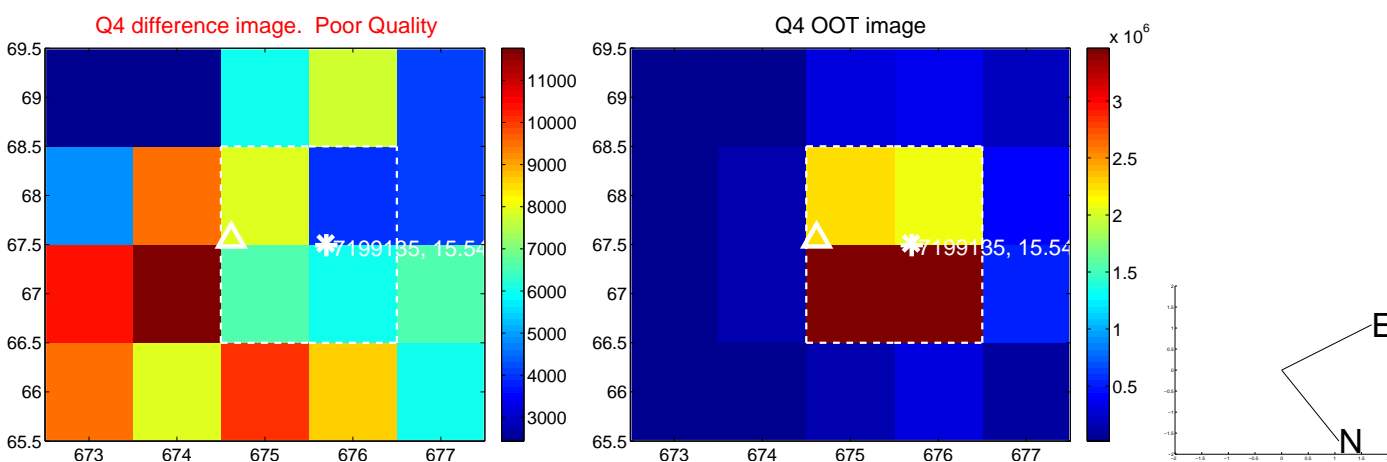
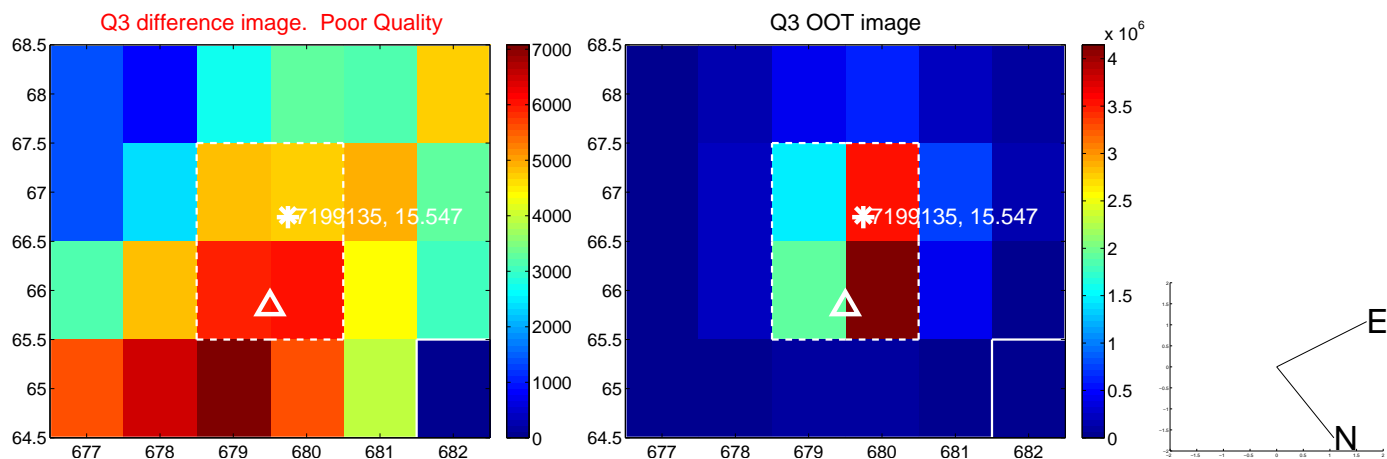
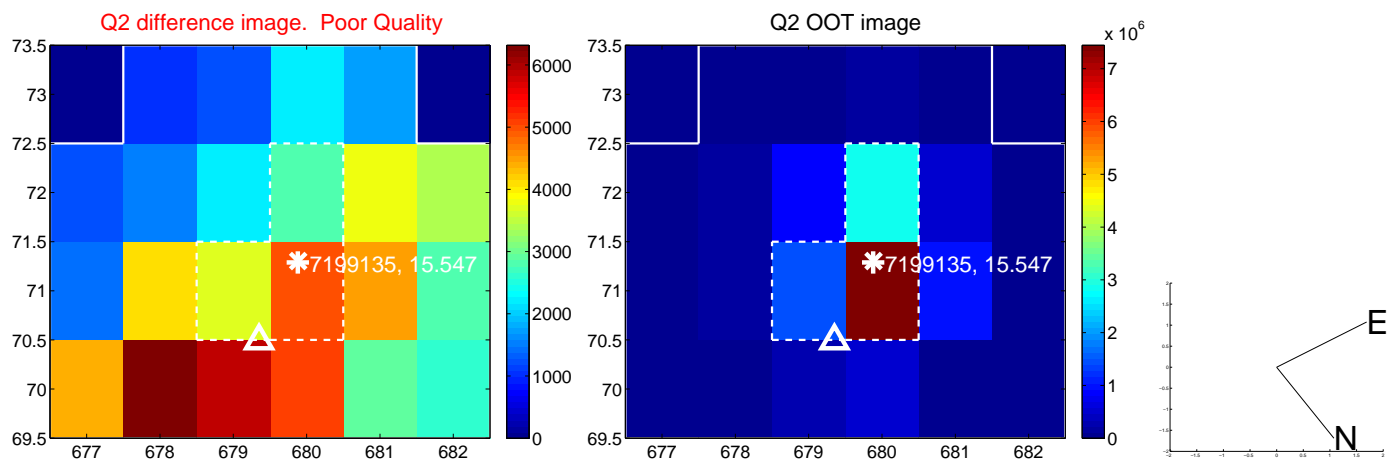
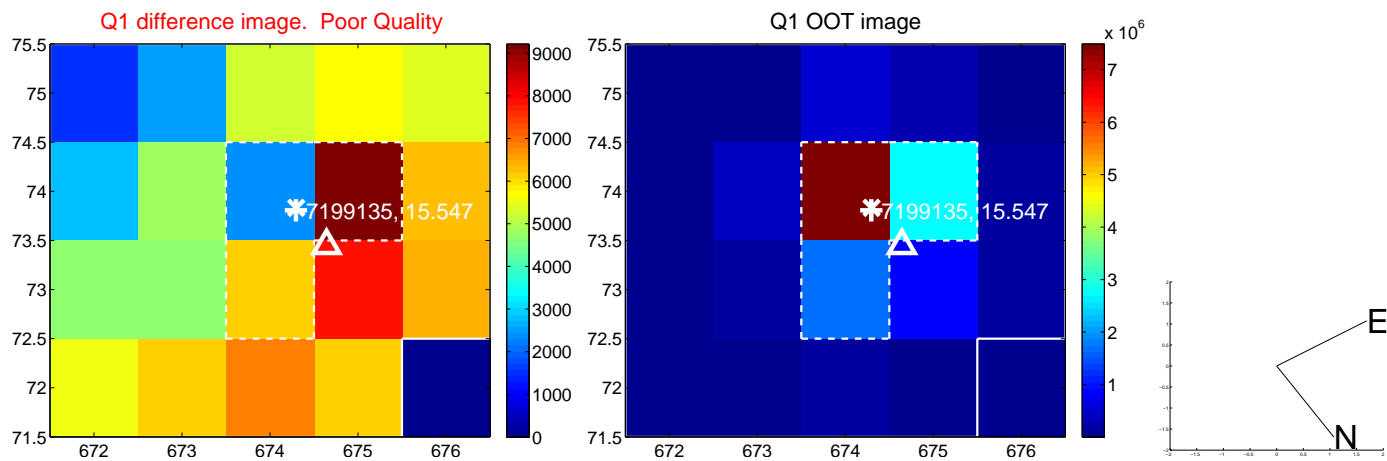
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.200 ± 0.289	11.09	-3.107 ± 0.306	0.764 ± 0.479
PRF-fit source offset from KIC position	3.252 ± 0.278	11.70	-3.145 ± 0.312	0.828 ± 0.451
photometric centroid source offset	0.32 ± 0.03	11.71	-0.25 ± 0.03	0.20 ± 0.02

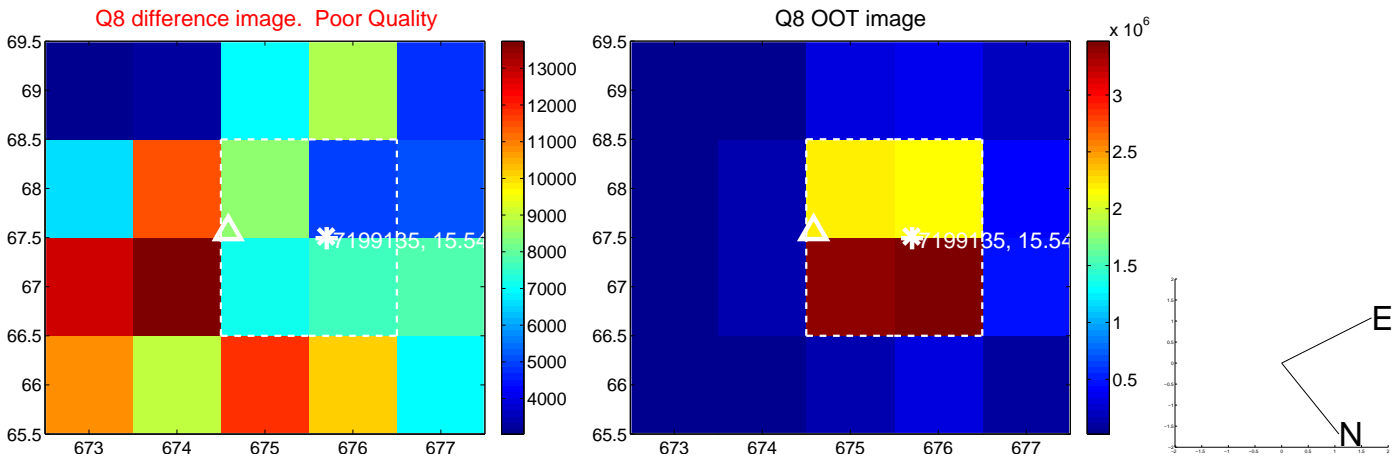
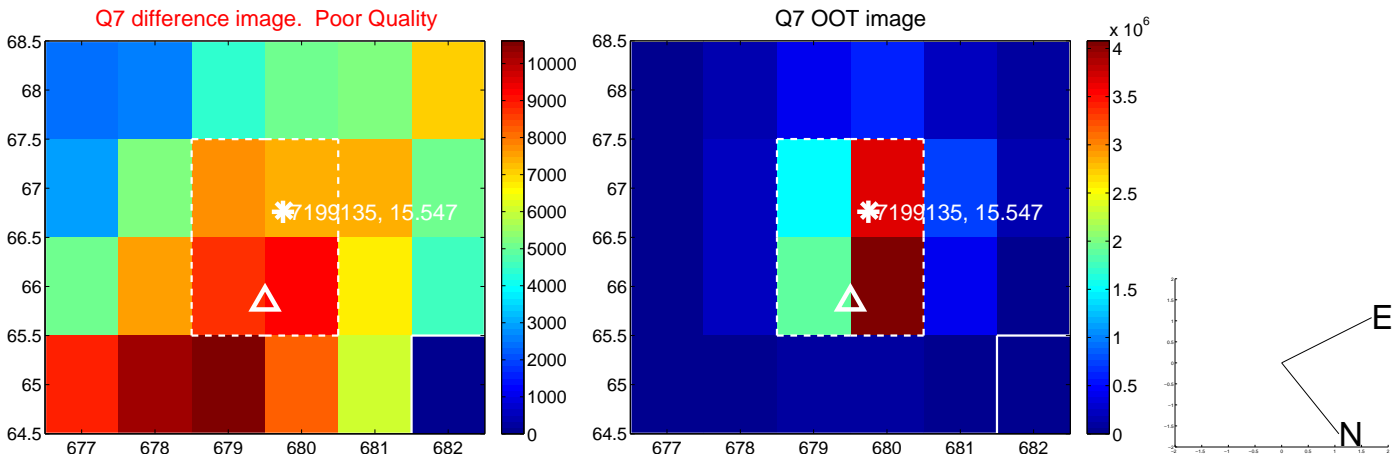
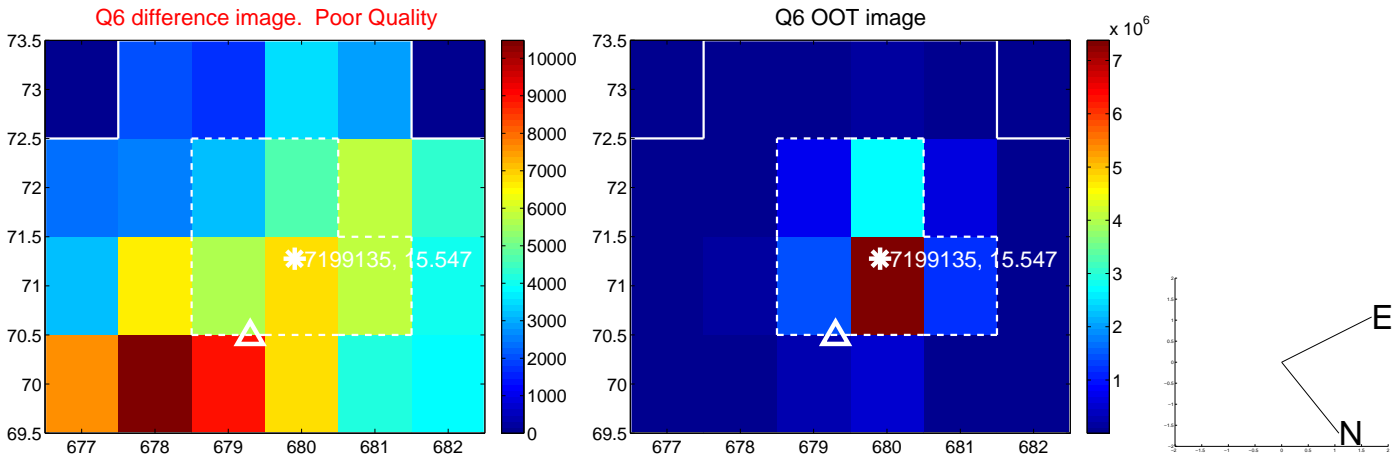
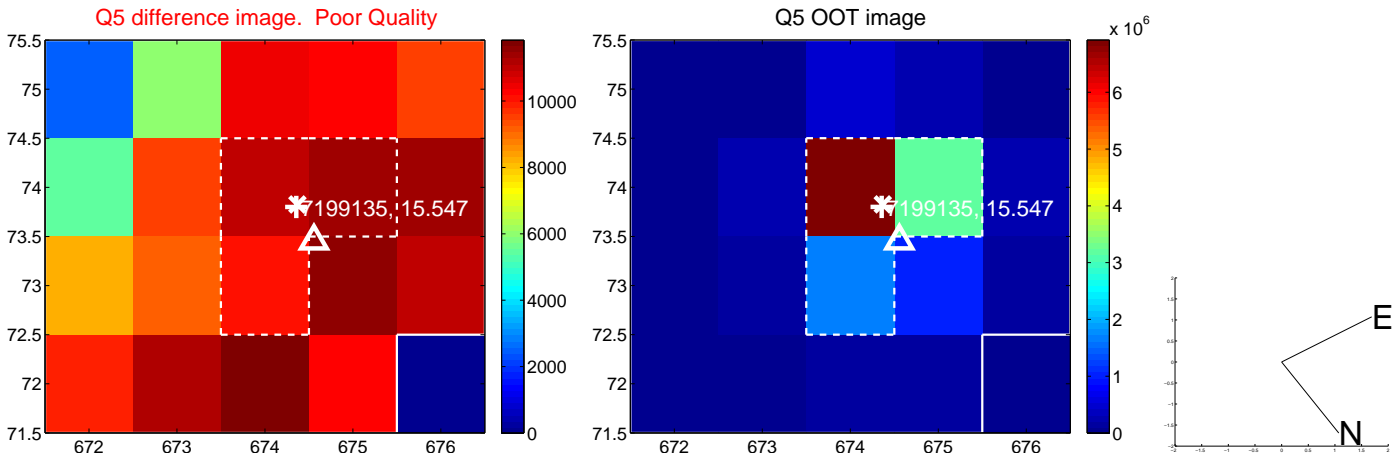


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

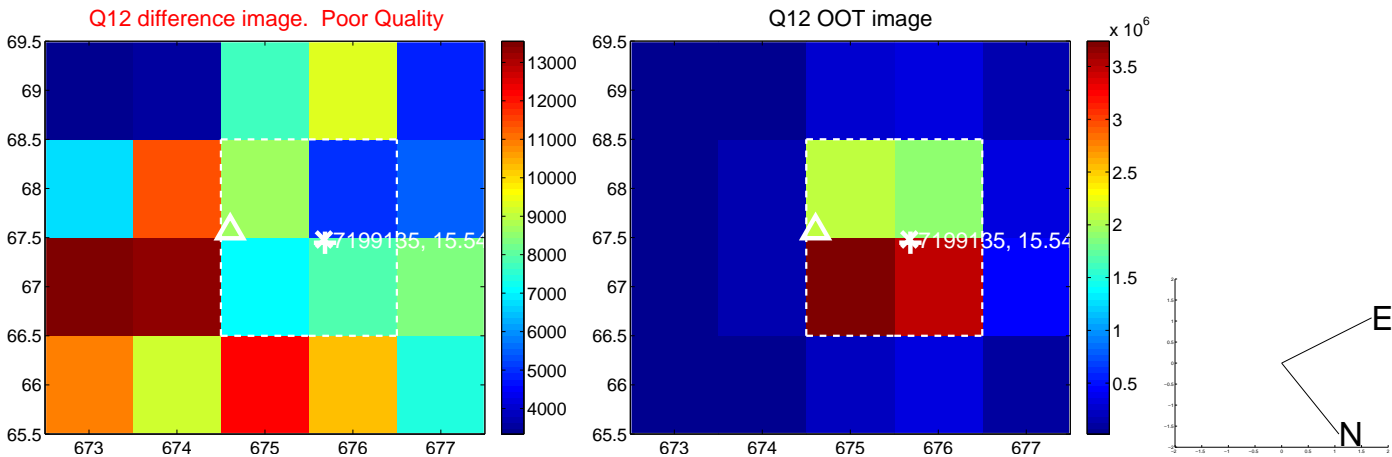
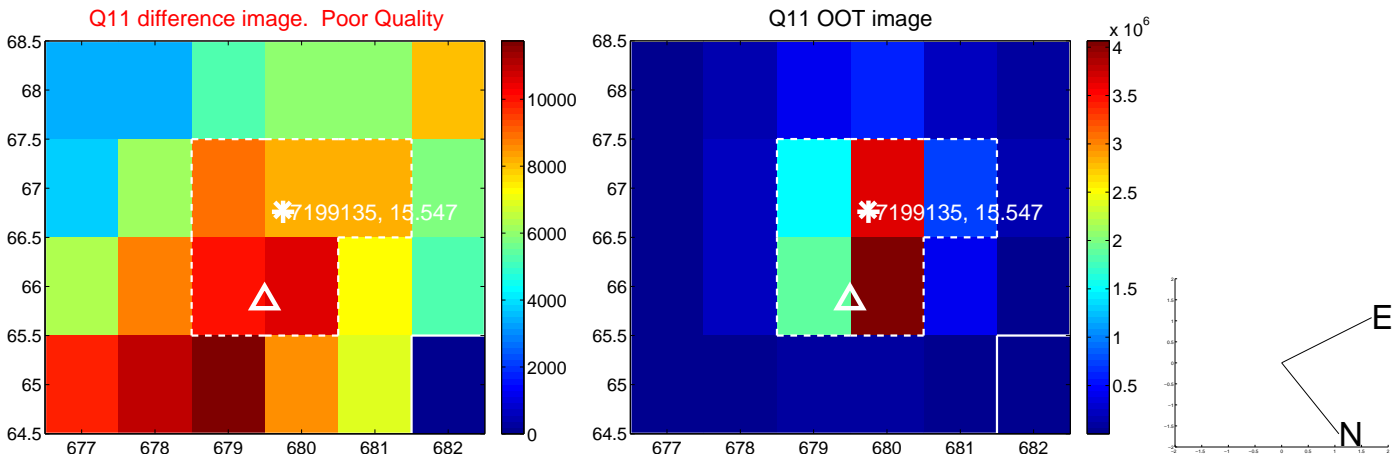
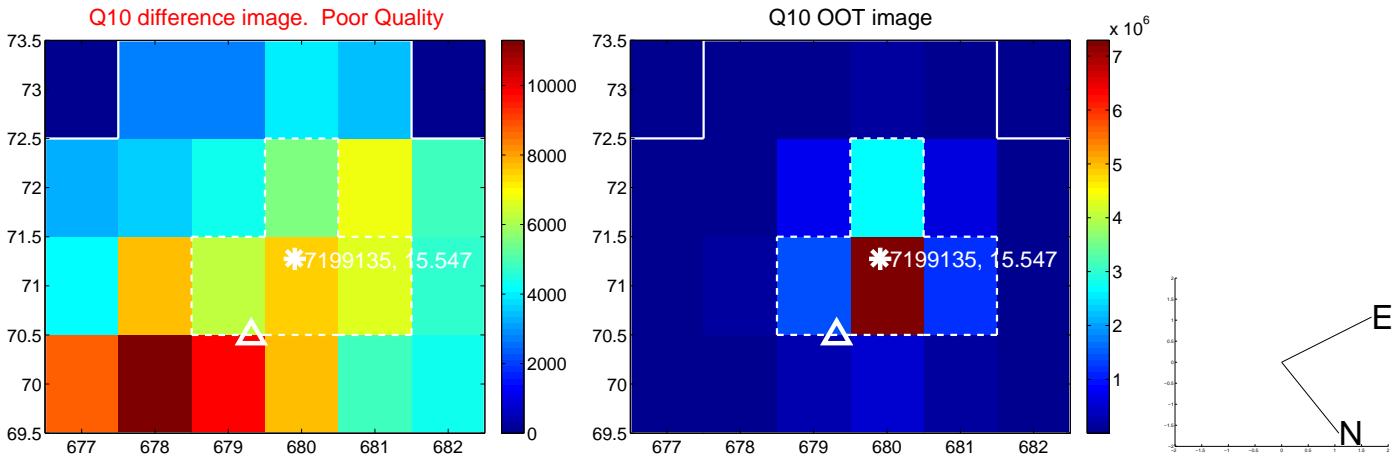
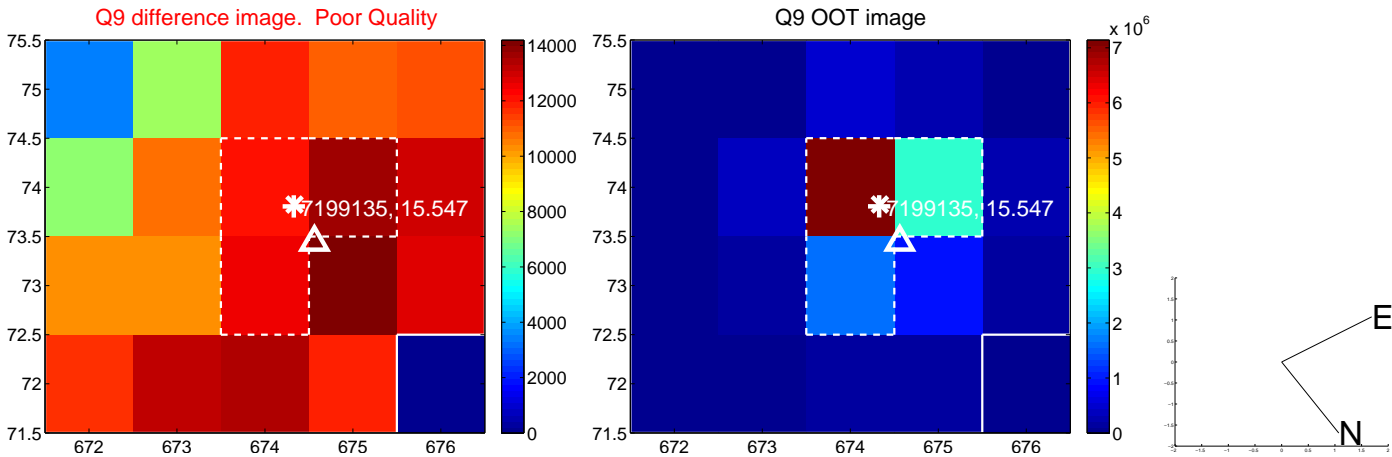
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



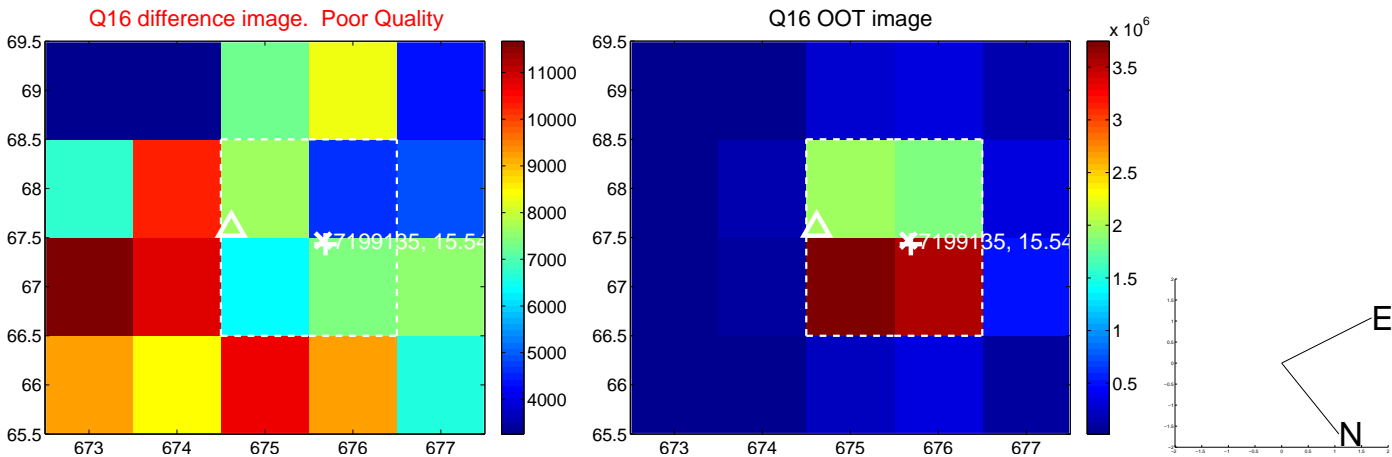
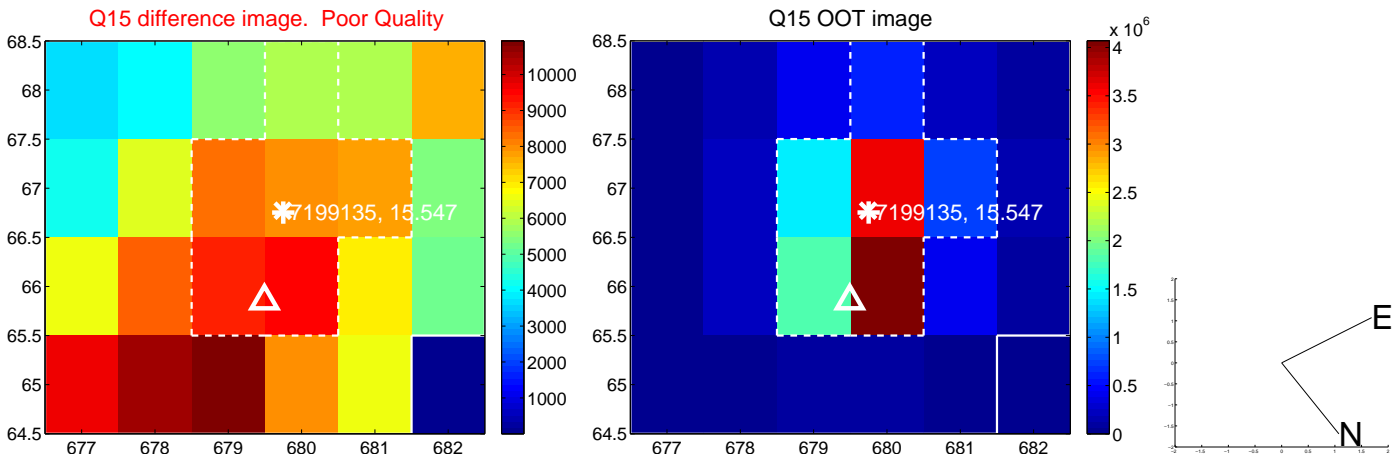
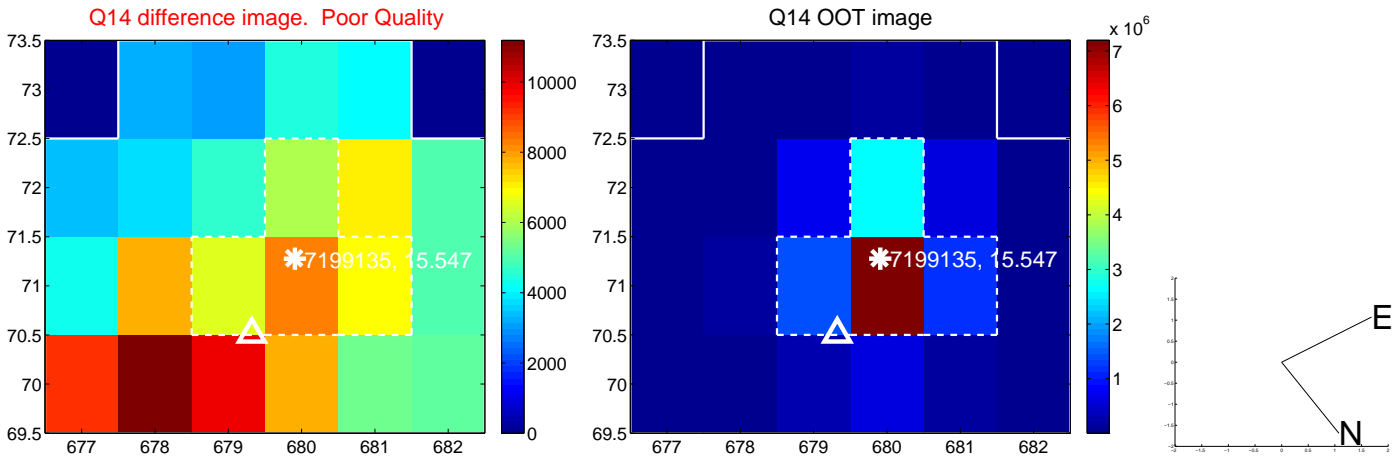
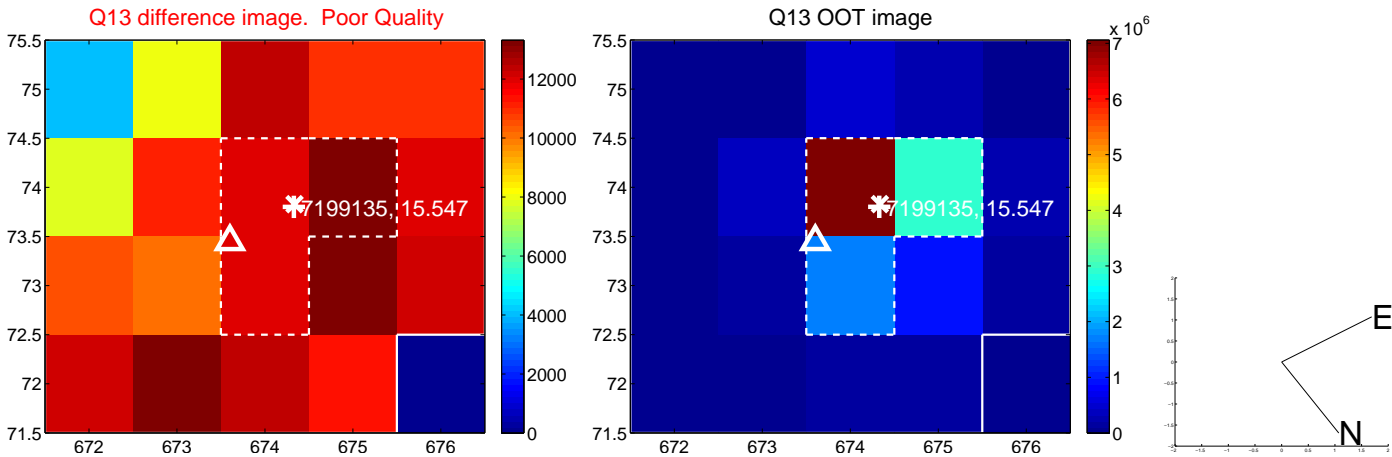
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



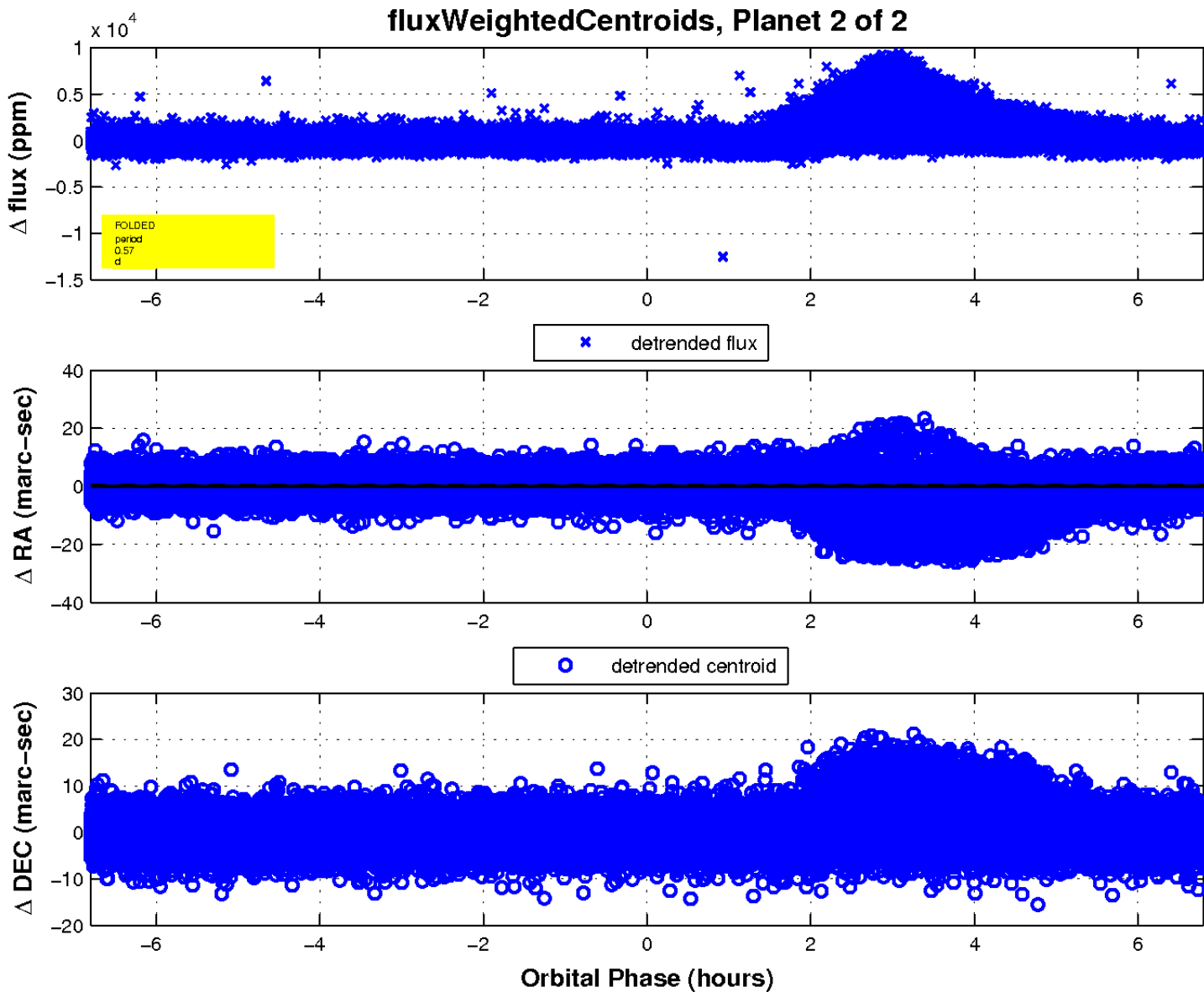
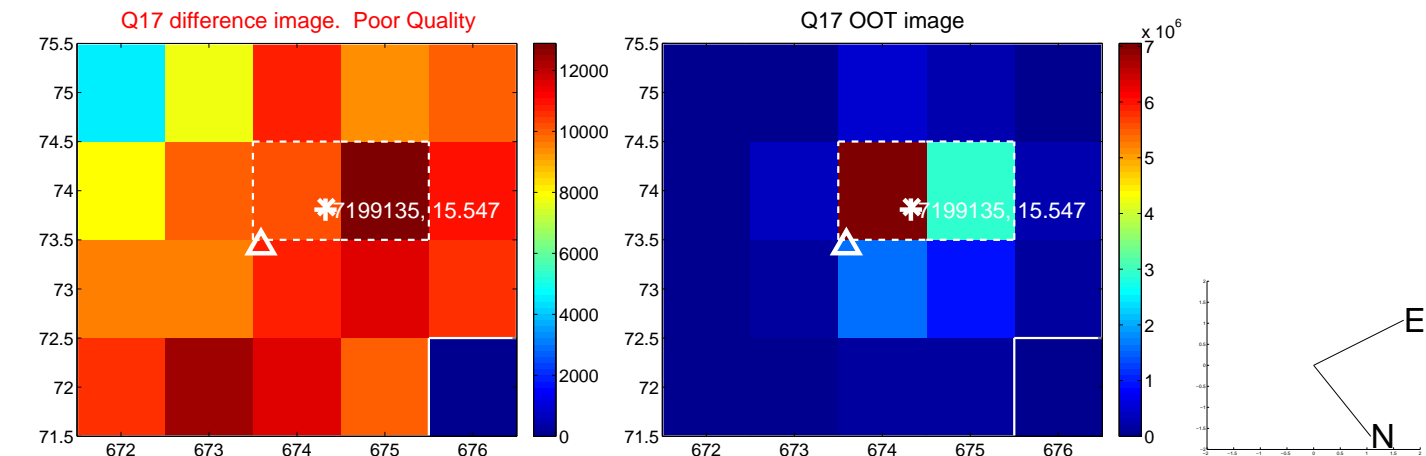
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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

