

KIC 005480766

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})
005480766-01	OBS	No	2.162551	131.892351	18.4	8.283	12.0	2.4	1.05	6510	0.47	1558.97
005480766-02	OBS	No	366.598512	149.064621	524.6	5.595	19.4	3.8	1.05	6510	3.15	1.66
005480766-03	OBS	No	4.323525	134.972761	186.9	15.721	12.0	12.2	1.05	6510	1.85	618.98
005480766-04	OBS	No	159.799677	182.306776	946.9	22.686	7.6	7.6	1.05	6510	4.40	5.03
005480766-05	OBS	No	264.221815	183.267372	988.1	19.862	7.4	7.0	1.05	6510	4.17	2.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005480766-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
005480766-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005480766-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

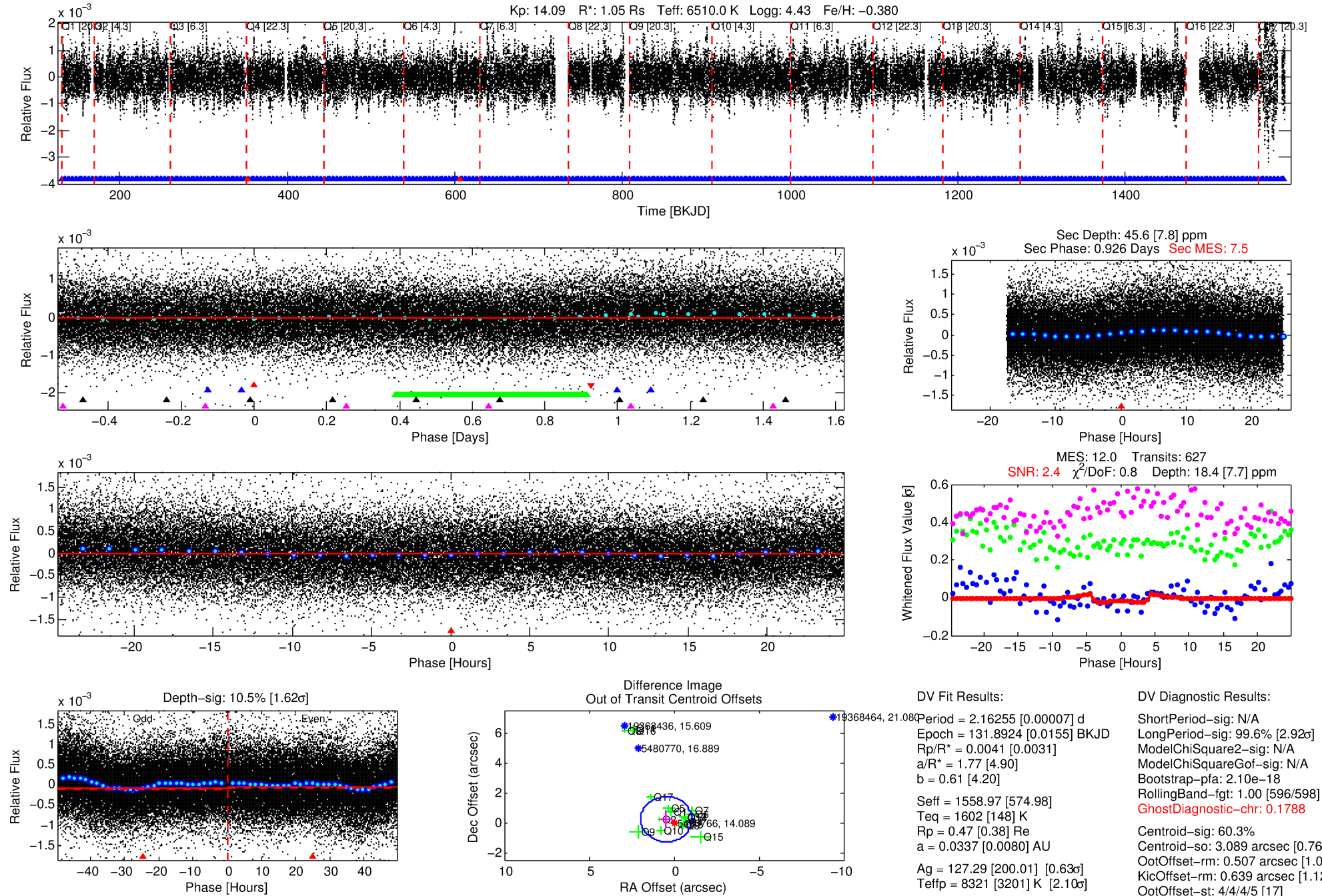
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005480766-01

No Significant Match Found

DV One-Page Summary

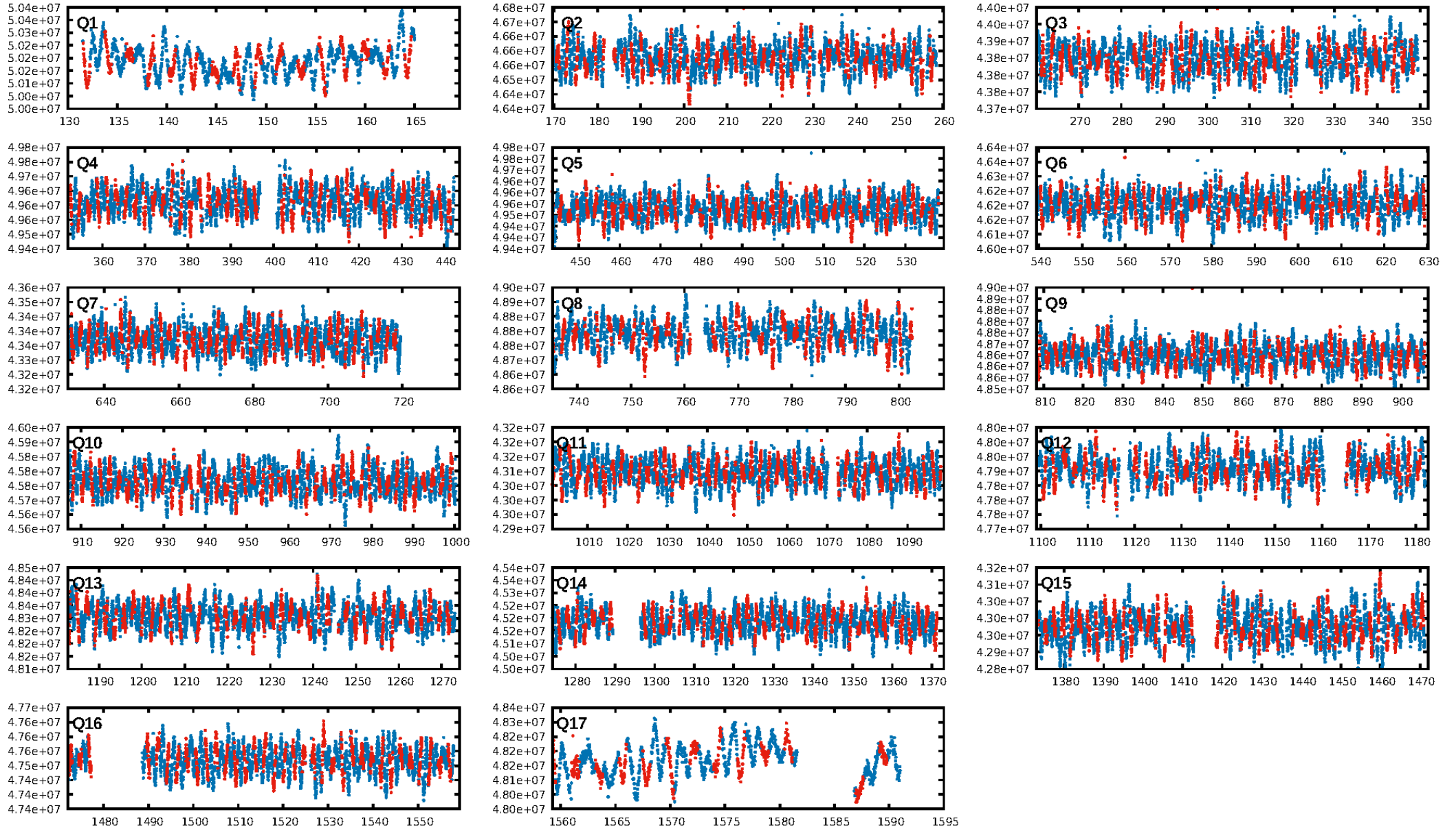
KIC: 5480766 Candidate: 1 of 5 Period: 2.163 d



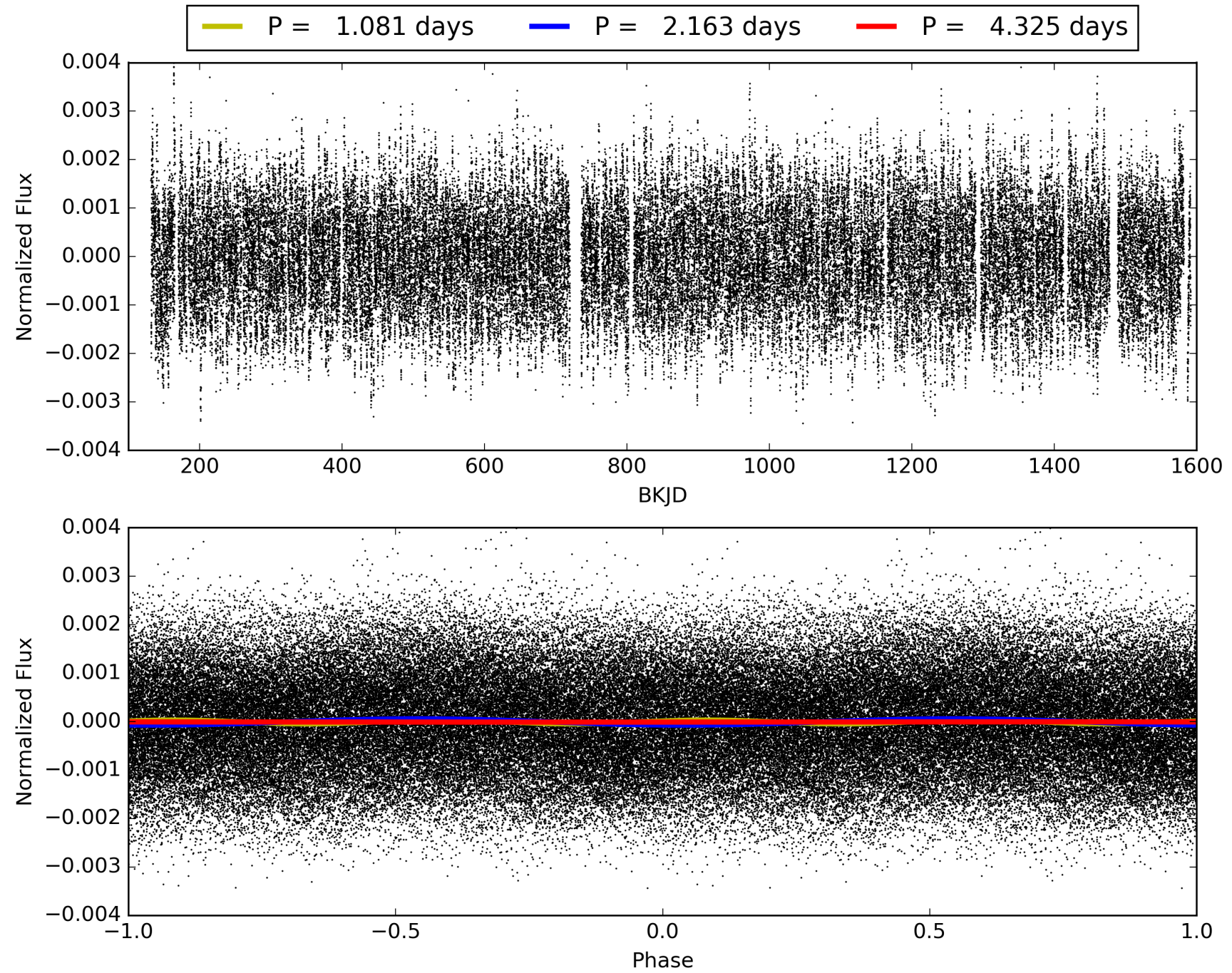
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:04:47 Z

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

TCE 005480766-01, PDC Light Curves

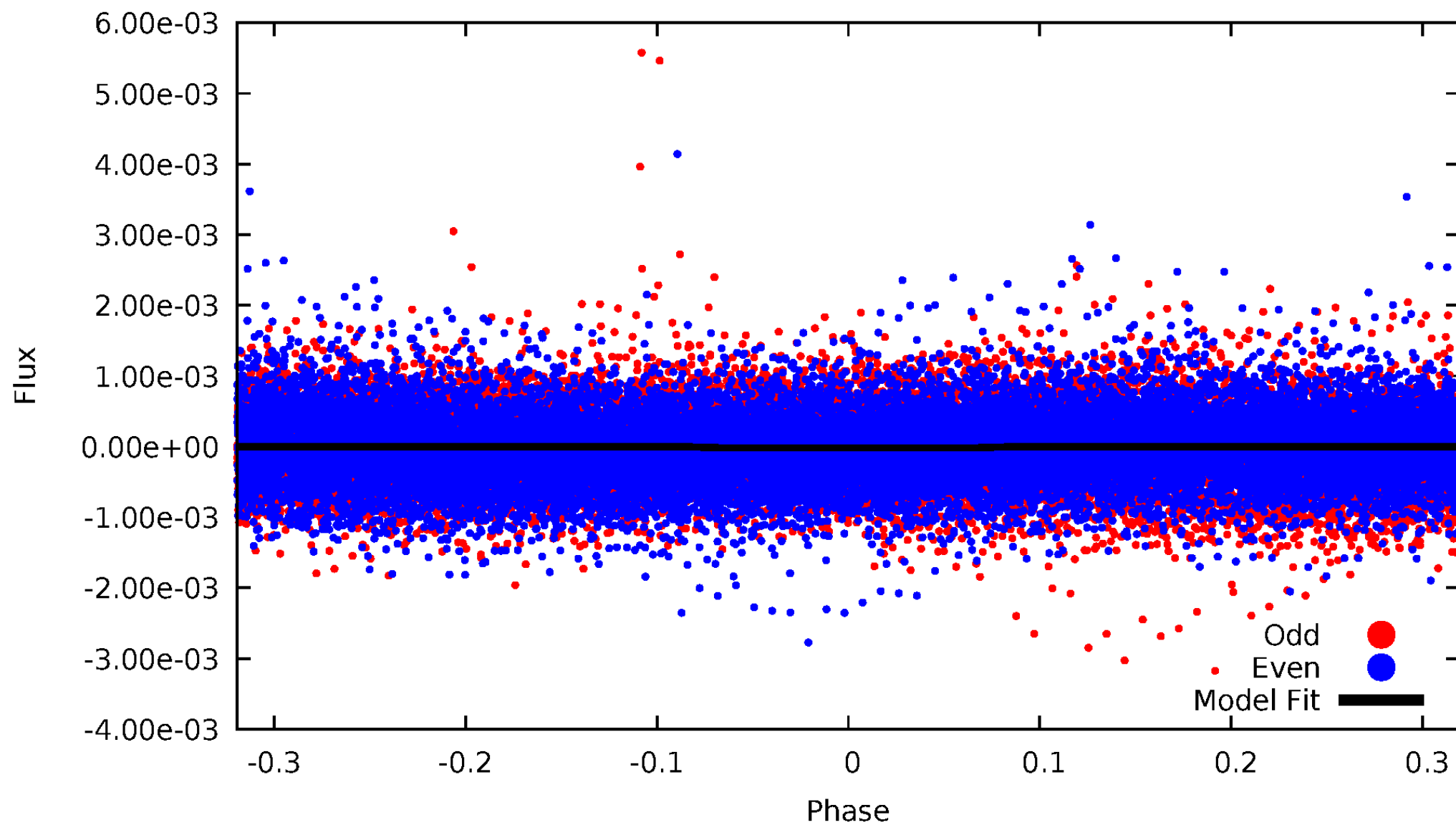


TCE 005480766-01



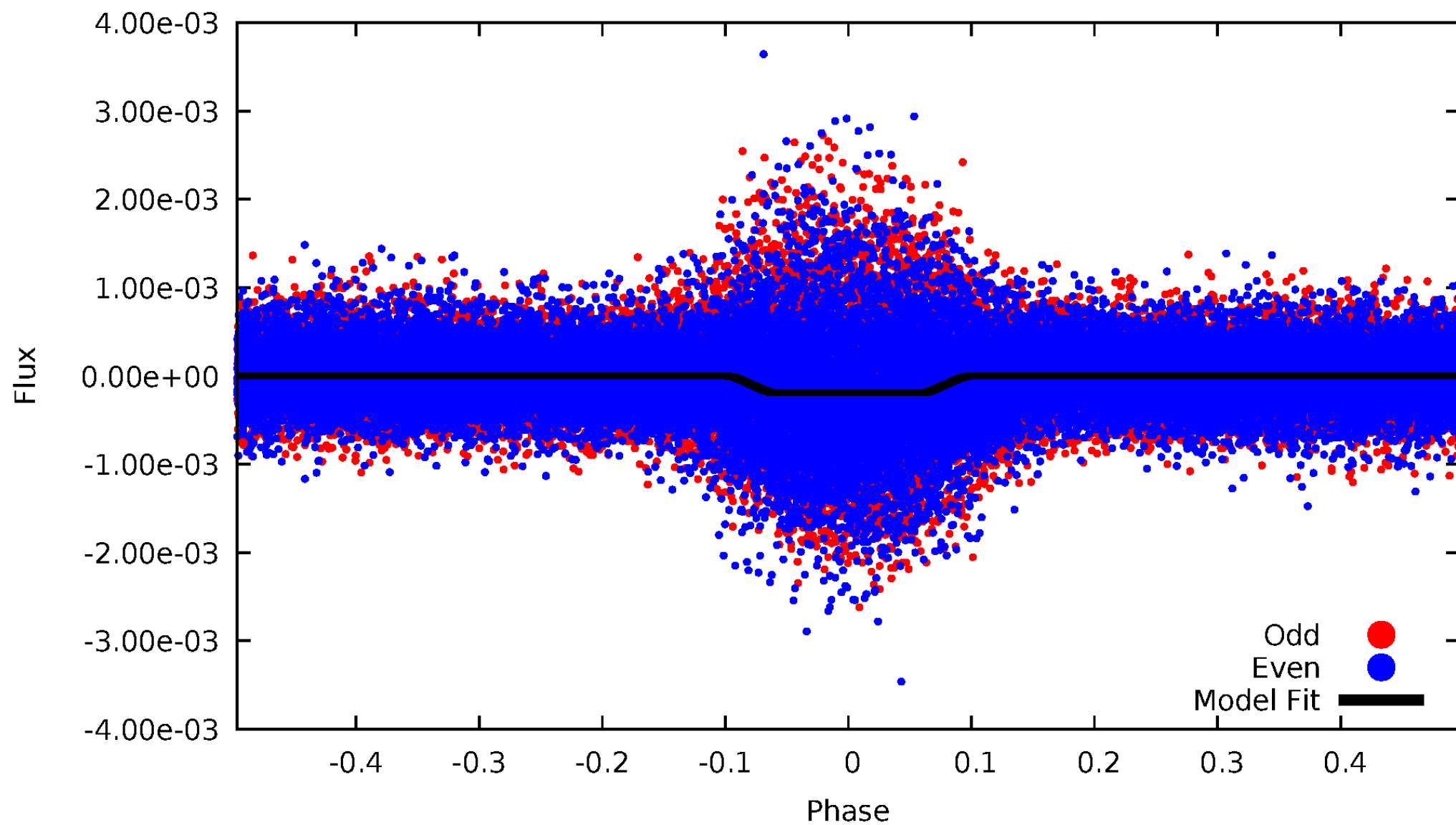
DV Odd/Even

TCE 005480766-01



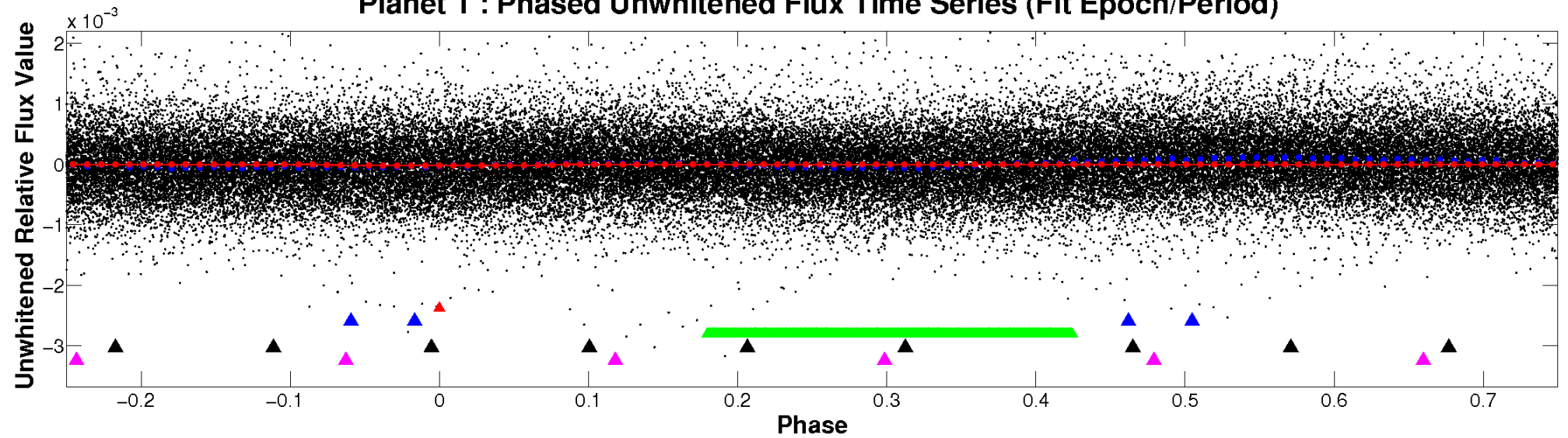
ALT Odd/Even

TCE 005480766-01

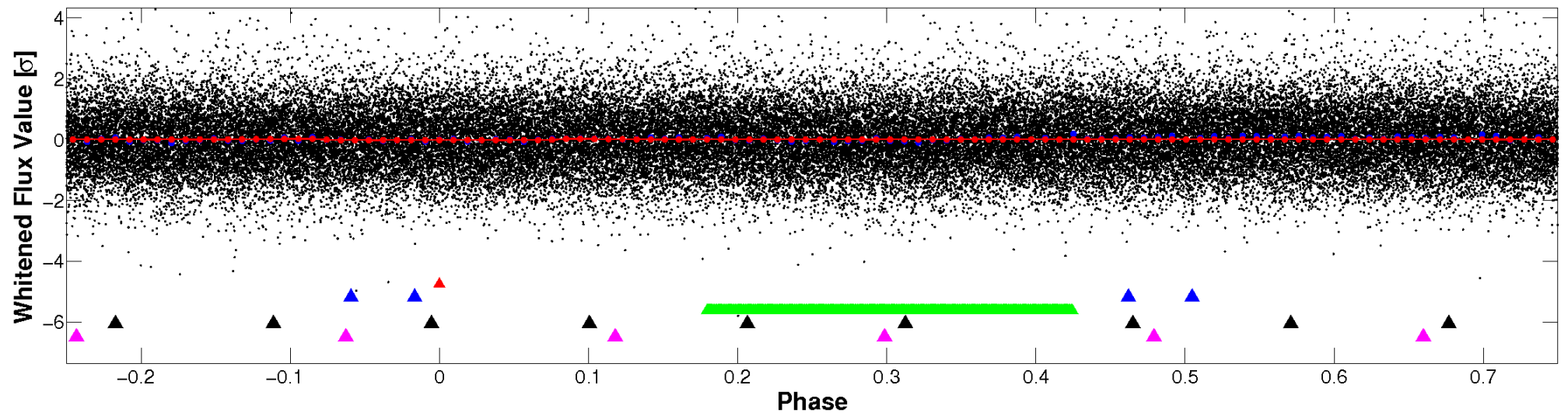


Non-Whitened Vs. Whitened Light Curve

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

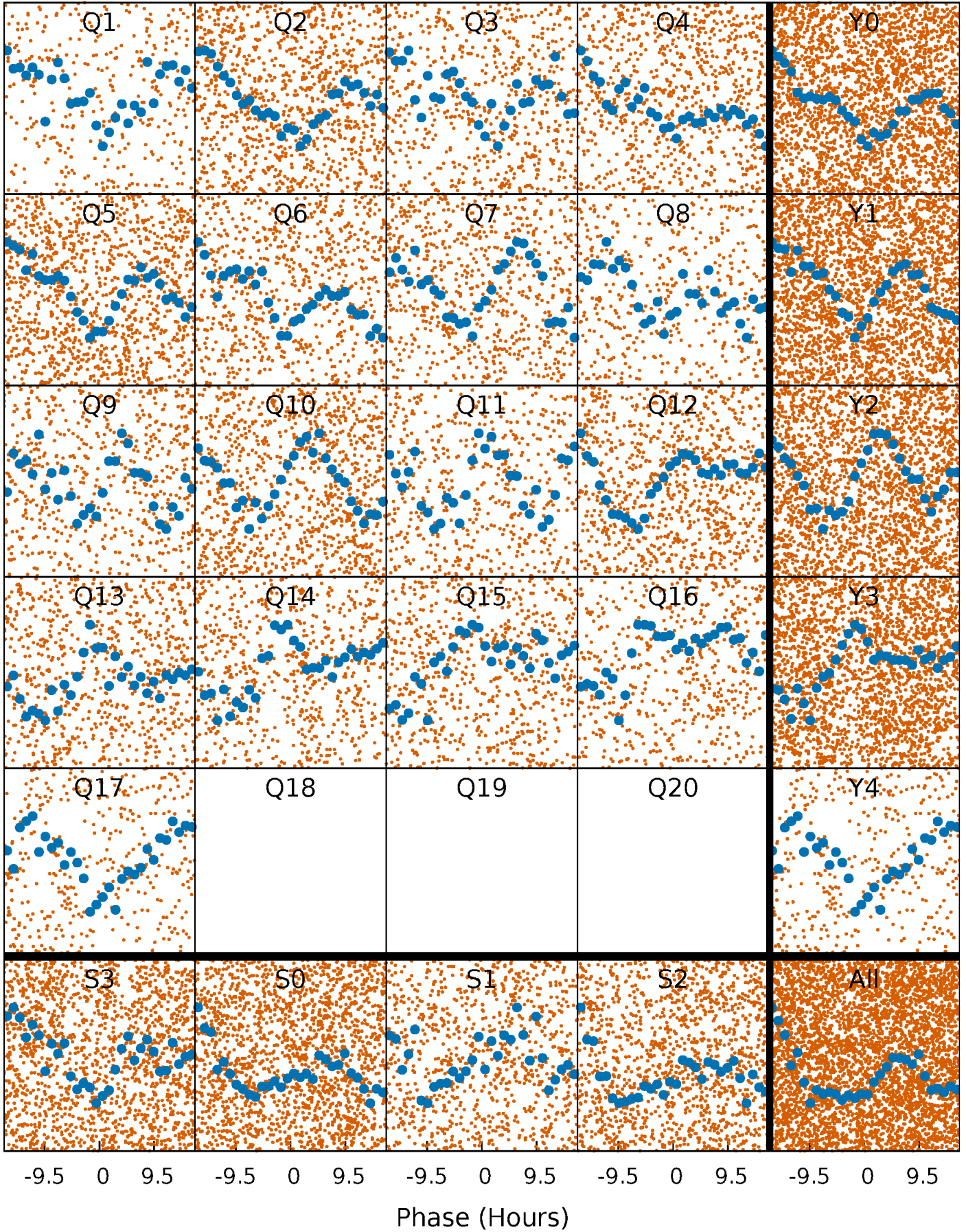


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



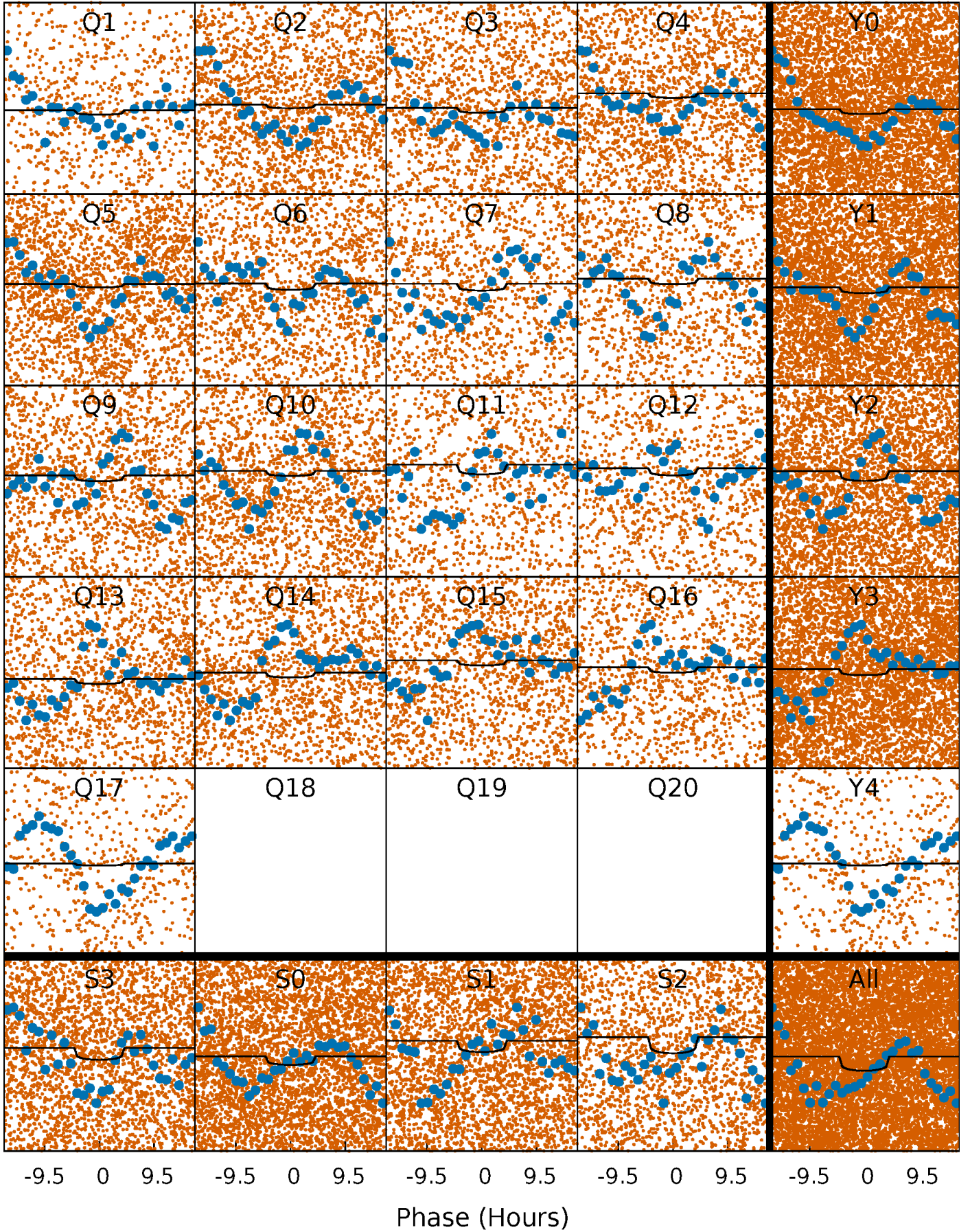
PDC Quarter-Phased Transit Curves

TCE 005480766-01 P= 2.162551 Days $T_0=131.892351$ (BKJD)



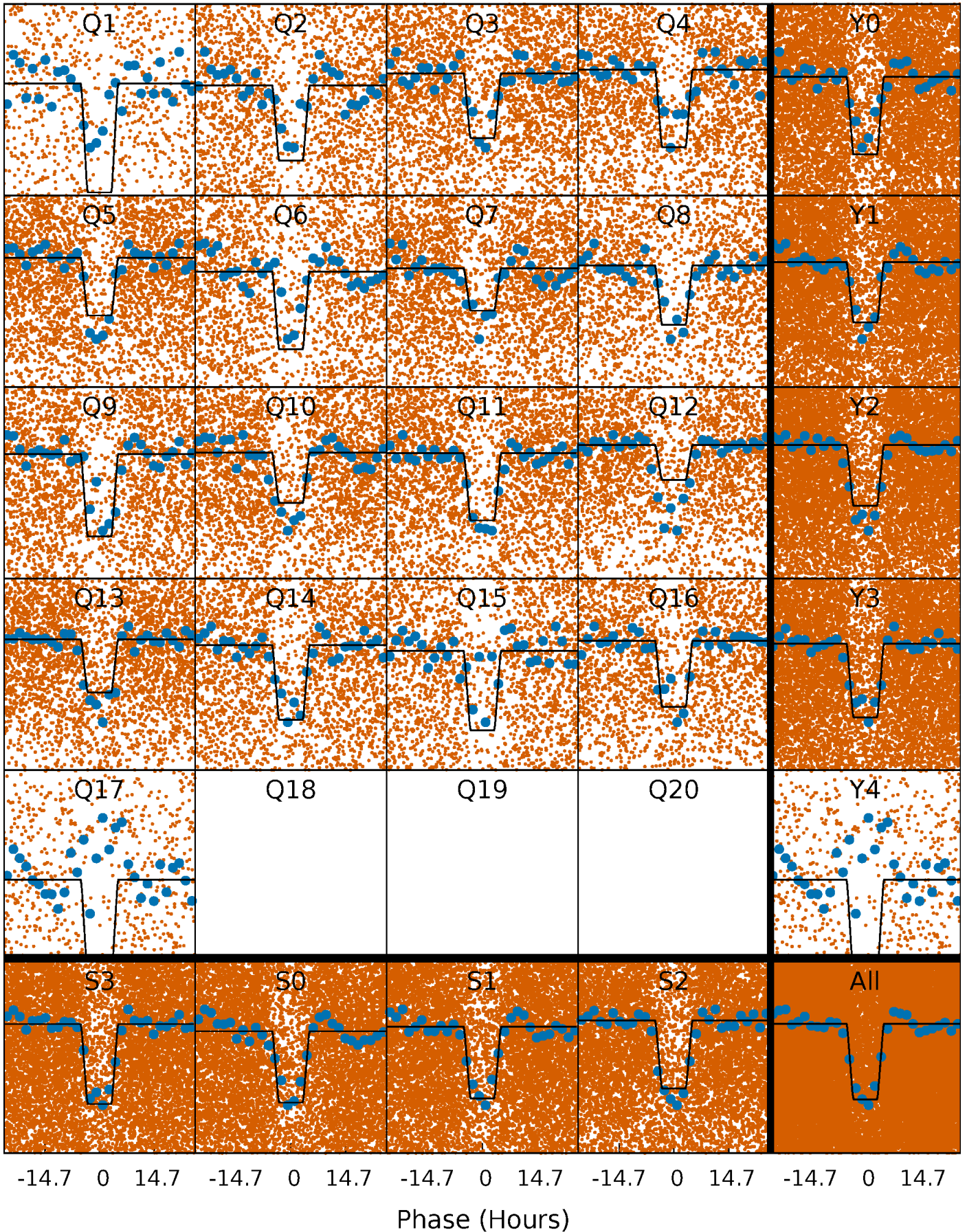
DV Quarter-Phased Transit Curves

TCE 005480766-01 P= 2.162551 Days $T_0=131.892351$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

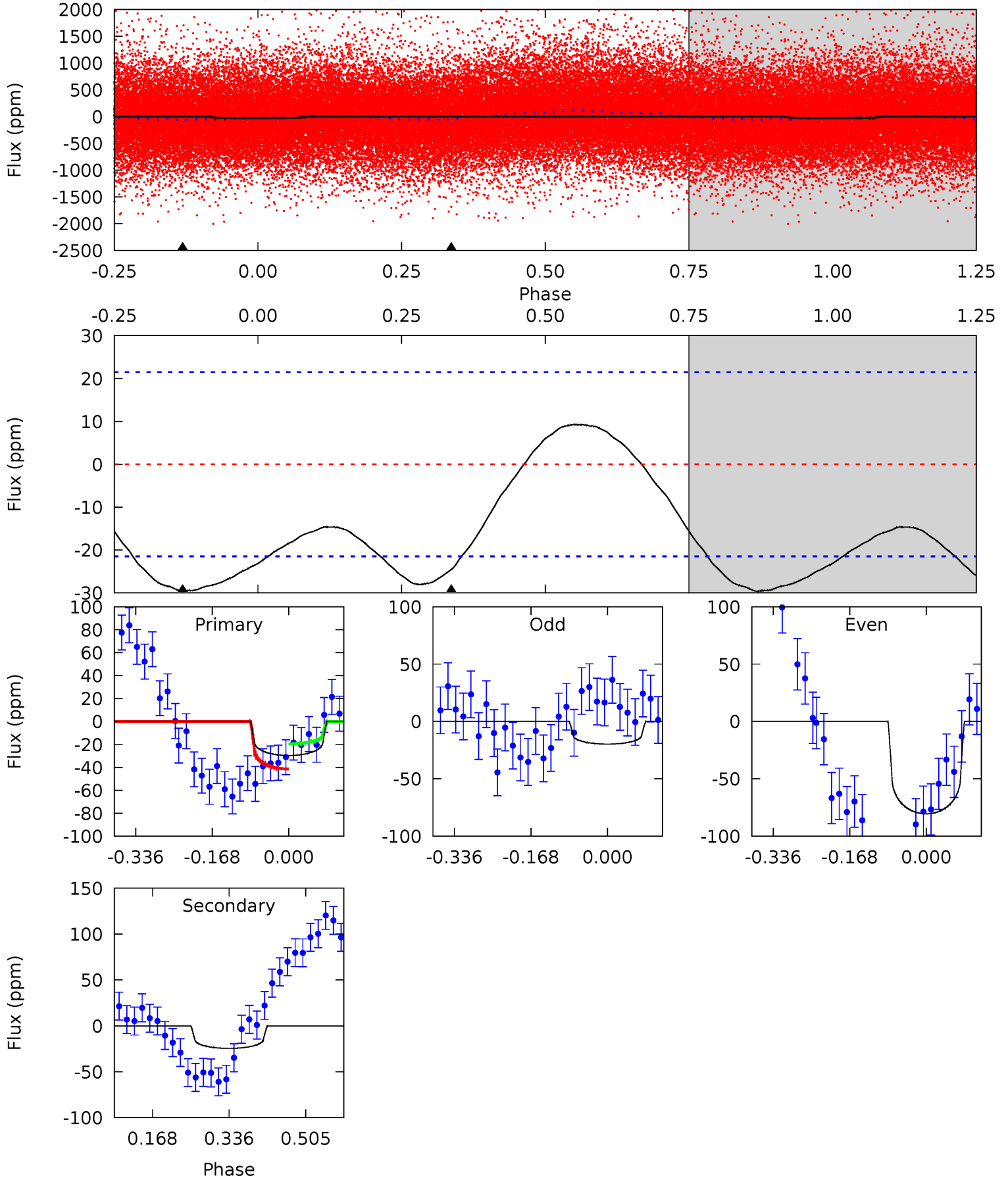
TCE 005480766-01 P= 2.161596 Days $T_0=132.037087$ (BKJD)



DV Model-Shift Uniqueness Test

005480766-01, P = 2.162551 Days, E = 129.729800 Days

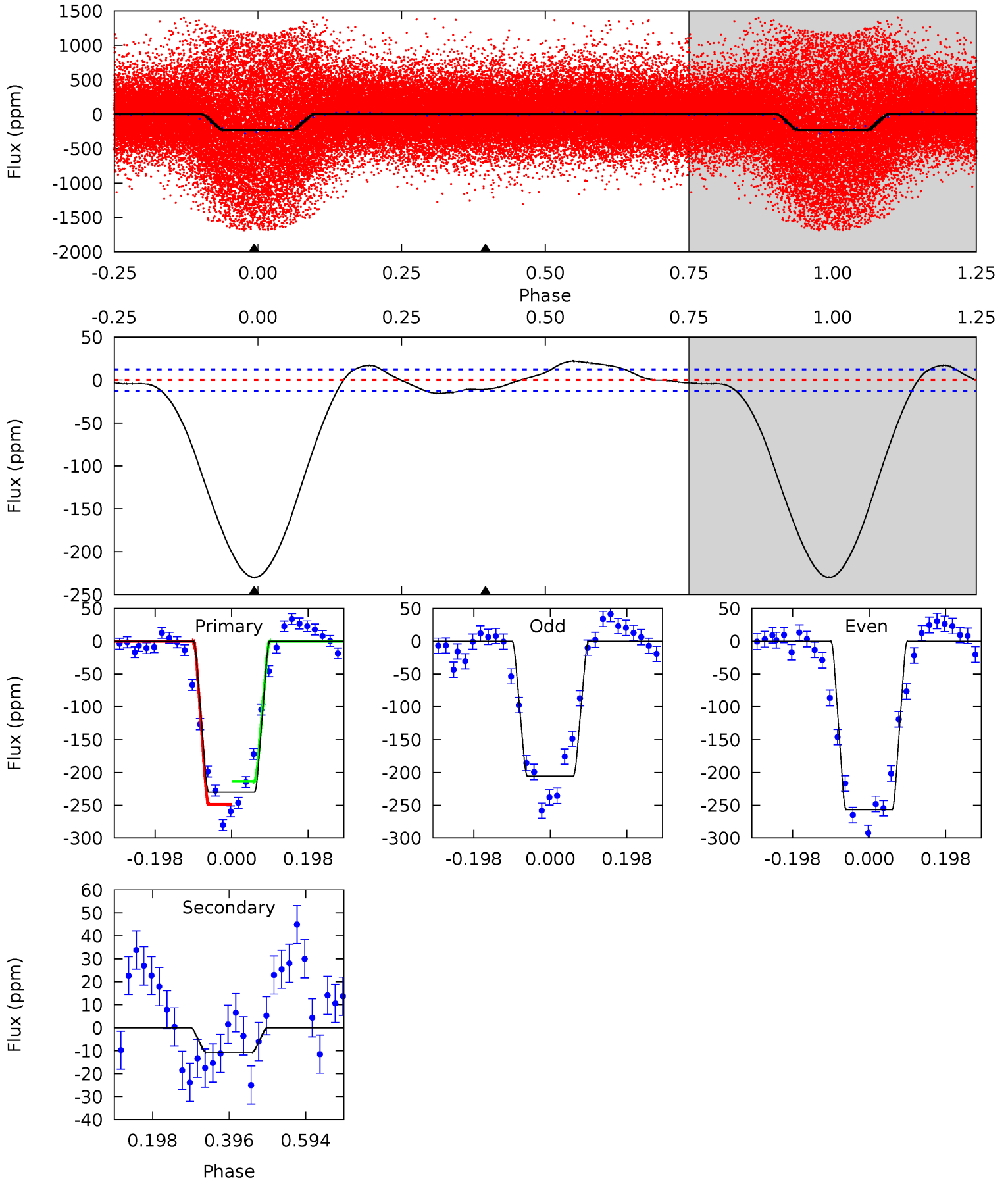
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.15	5.09	0	0	4.45	1.38	2.30	6.15	6.15	5.09	5.09	6.30	0.71	0.24	2.32



Alt Model-Shift Uniqueness Test

005480766-01, P = 2.161596 Days, E = 129.875491 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
82.0	3.81	0	0	4.42	1.29	2.85	82.0	82.0	3.81	3.81	9.12	0.78	0.09	6.33



Stellar Parameters For KIC 005480766

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6510^{+155}_{-214}	$4.434^{+0.062}_{-0.188}$	$-0.380^{+0.250}_{-0.350}$	$1.048^{+0.296}_{-0.127}$	$1.086^{+0.146}_{-0.146}$	$1.329^{+0.433}_{-0.671}$
	+2%/-3%	+1%/-4%	+66%/-92%	+28%/-12%	+13%/-13%	+33%/-50%
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 005480766-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-25 ± 5	$0.53^{+0.35}_{-0.32}$	2272^{+146}_{-112}	6880^{+6286}_{-1608}	52^{+306}_{-33}
Alt.	-11 ± 3	$1.65^{+0.45}_{-0.41}$	2271^{+154}_{-108}	3502^{+396}_{-318}	$2.336^{+2.066}_{-0.982}$

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

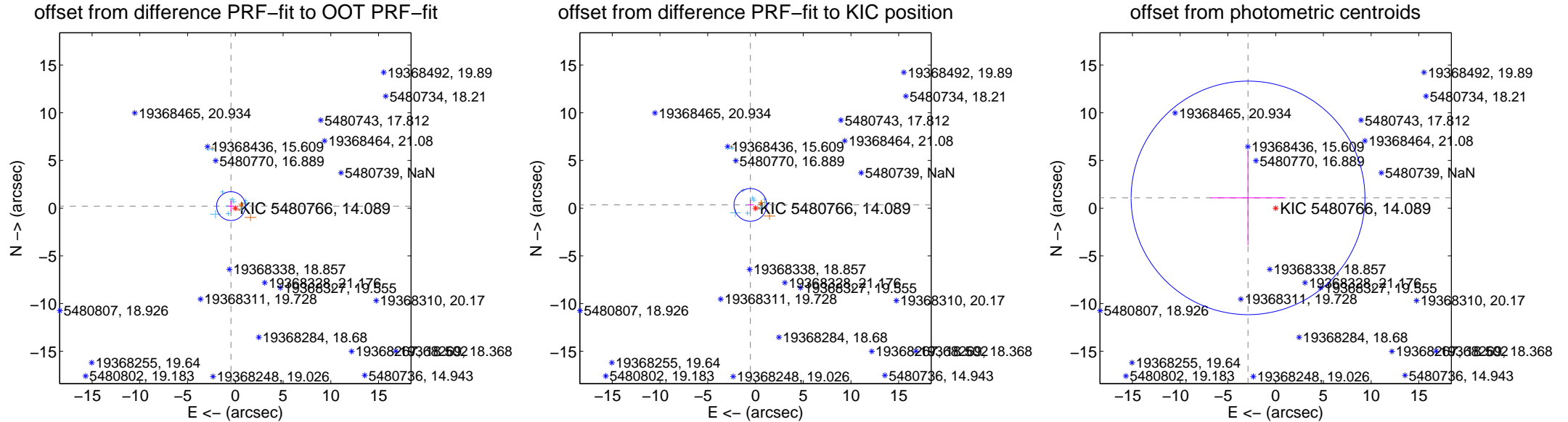
DV Centroid Data

Supplemental centroid analysis for 005480766-01. Kepler magnitude: 14.09. Transit SNR 2.40

There are 12 quarters with good PRF difference image offsets

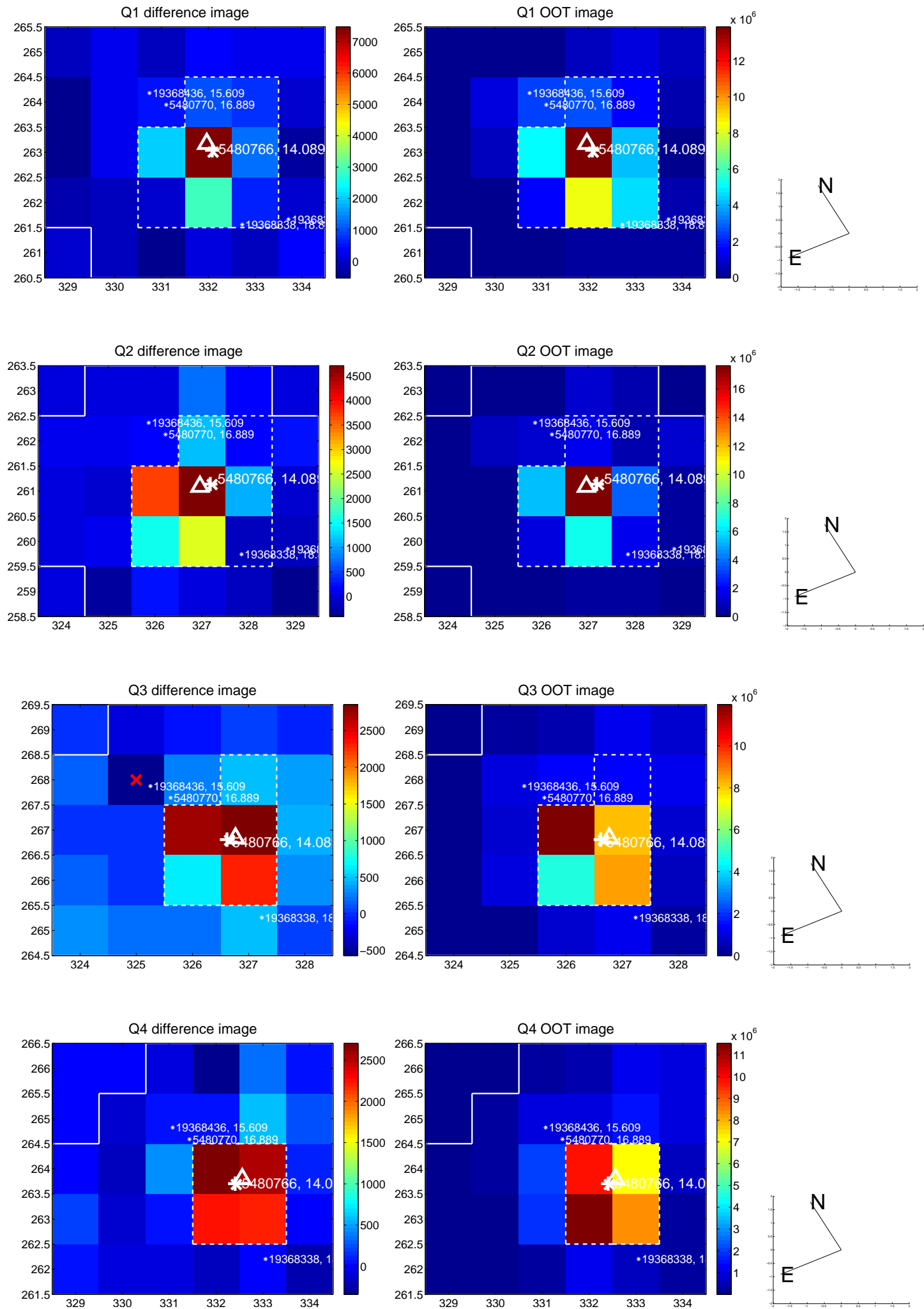
The direct PRF centroid is offset from the target star catalog position by about 0.16 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.507 ± 0.503	1.01	0.458 ± 0.331	0.216 ± 0.567
PRF-fit source offset from KIC position	0.639 ± 0.572	1.12	0.540 ± 0.358	0.342 ± 0.578
photometric centroid source offset	3.09 ± 4.08	0.76	2.89 ± 3.94	1.08 ± 4.97

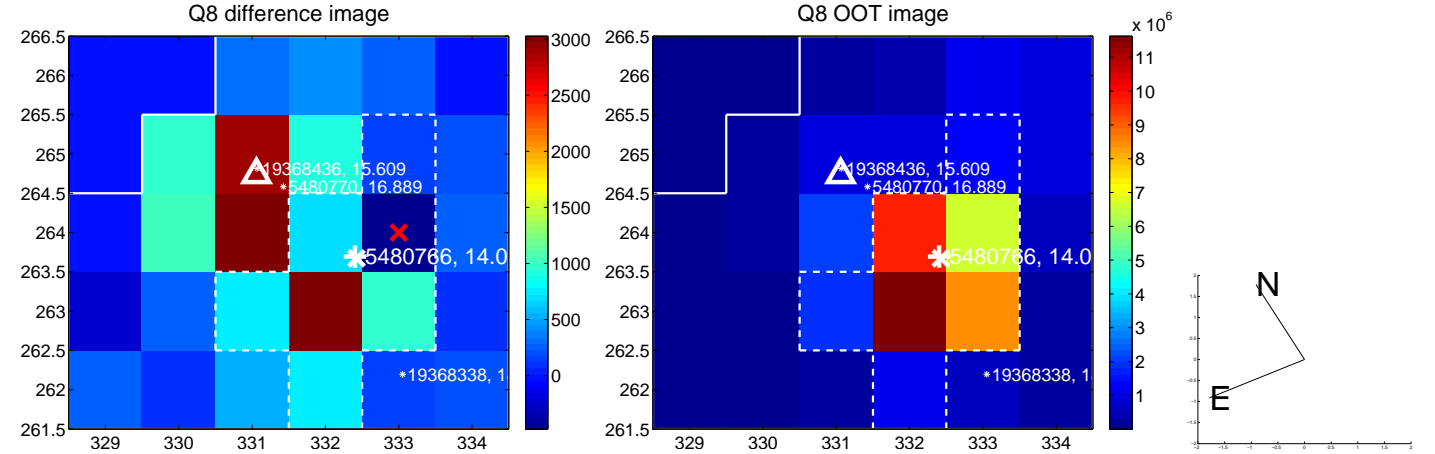
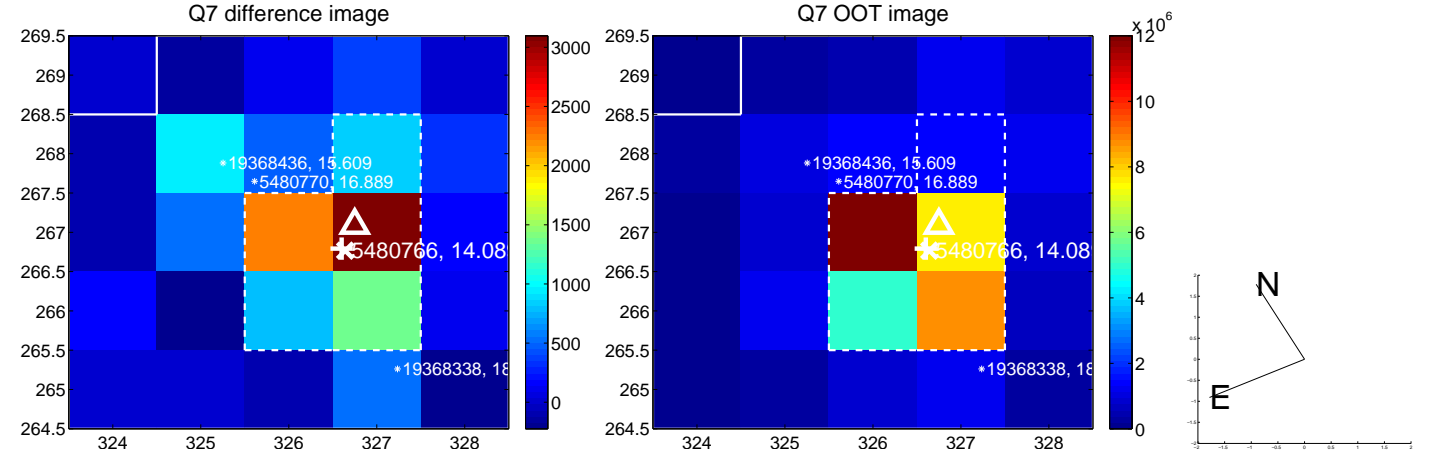
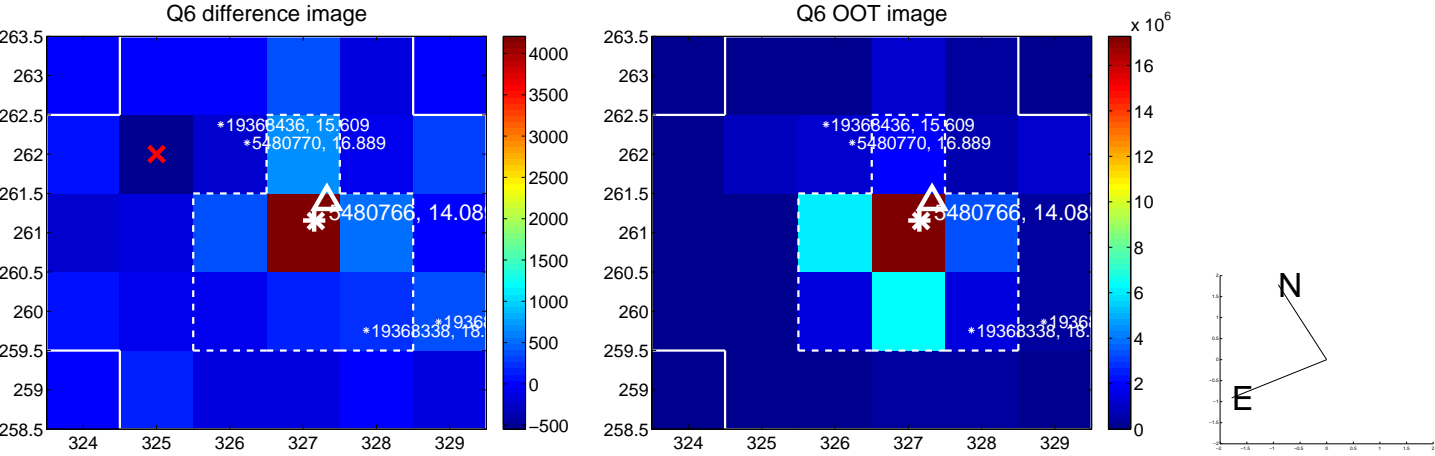
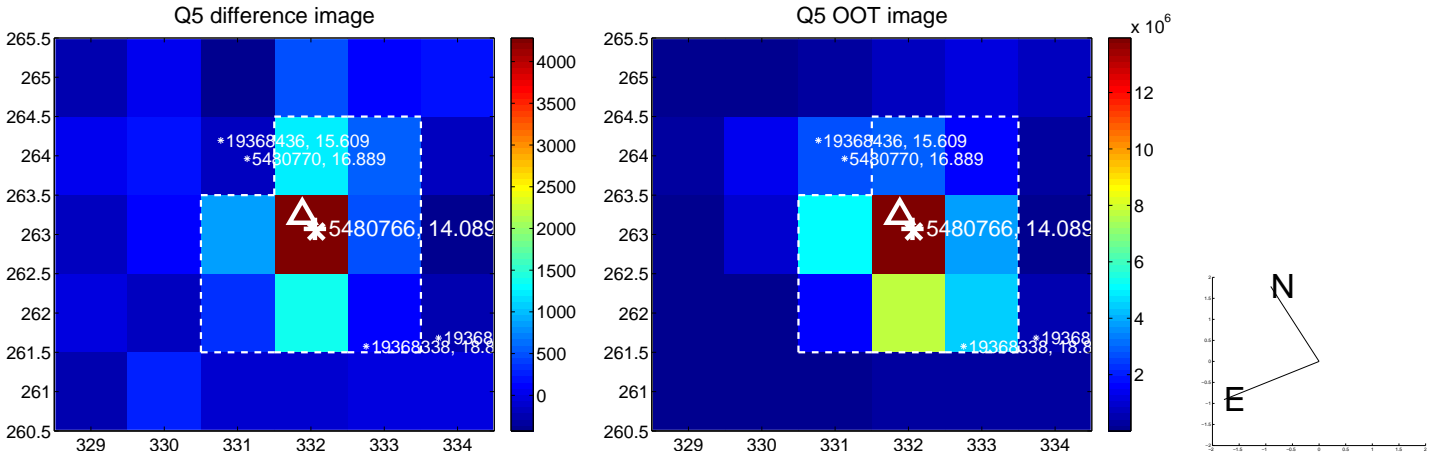


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

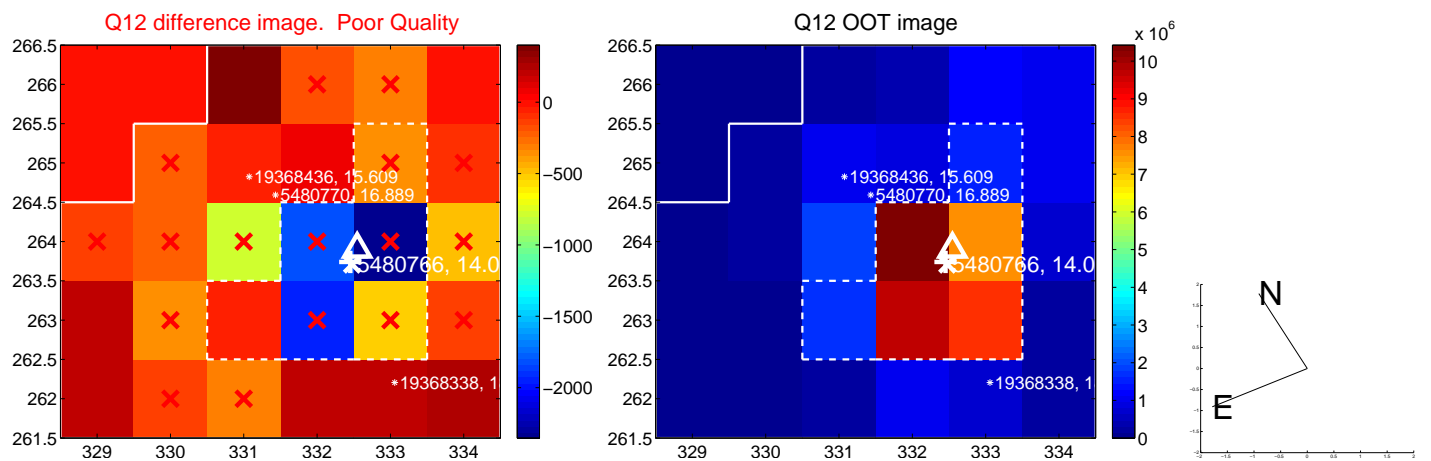
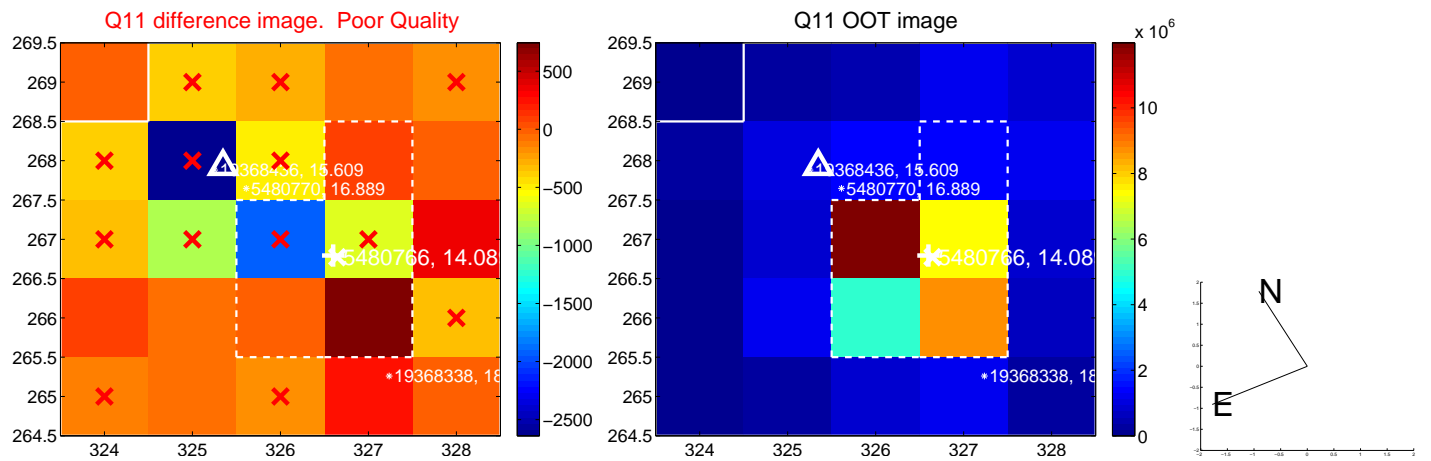
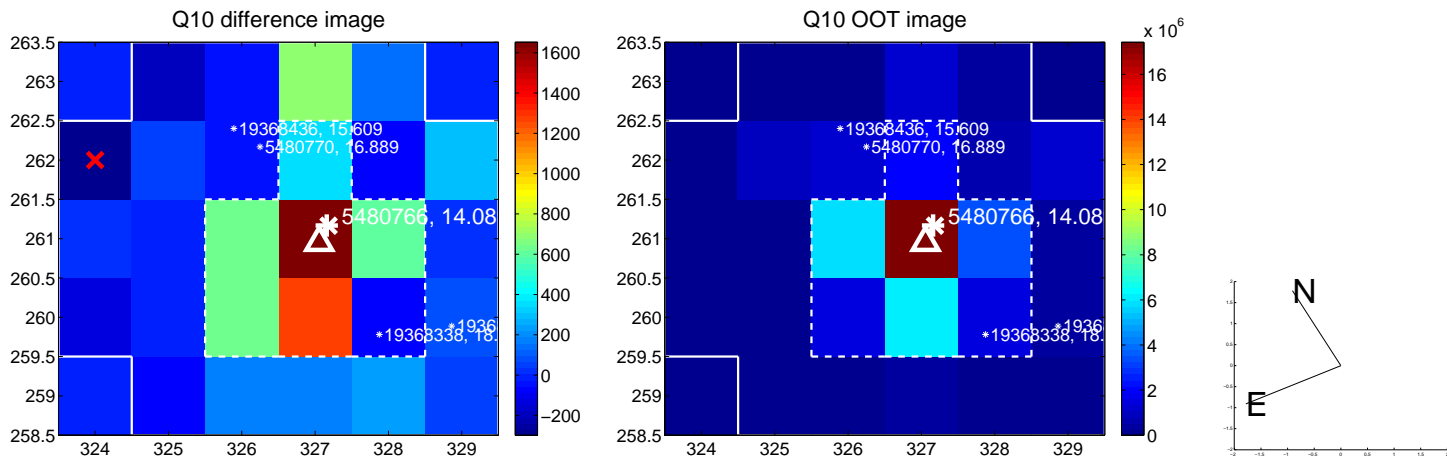
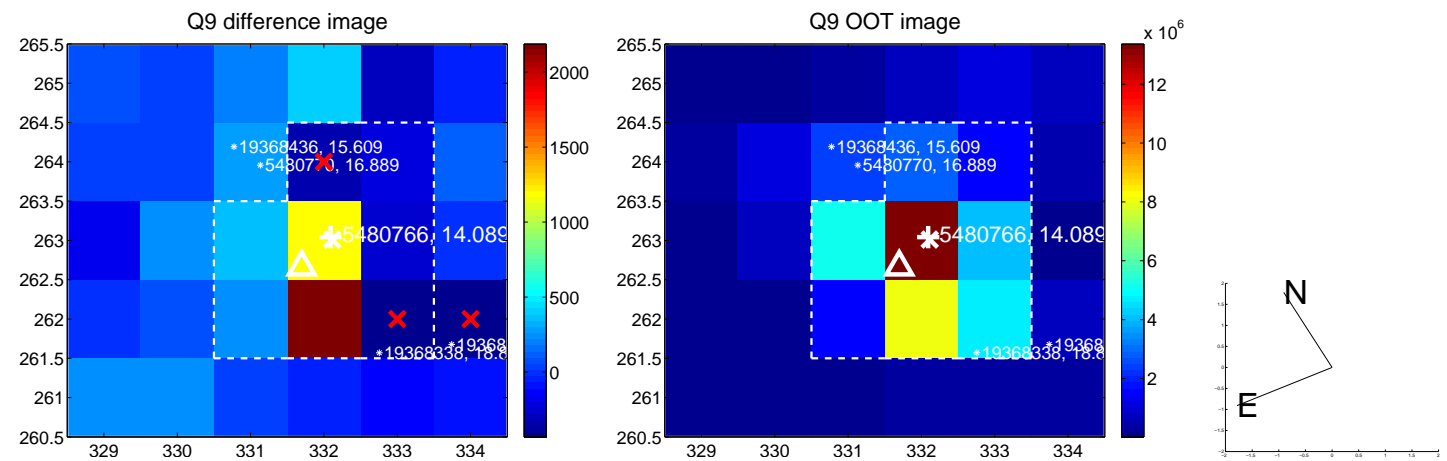
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



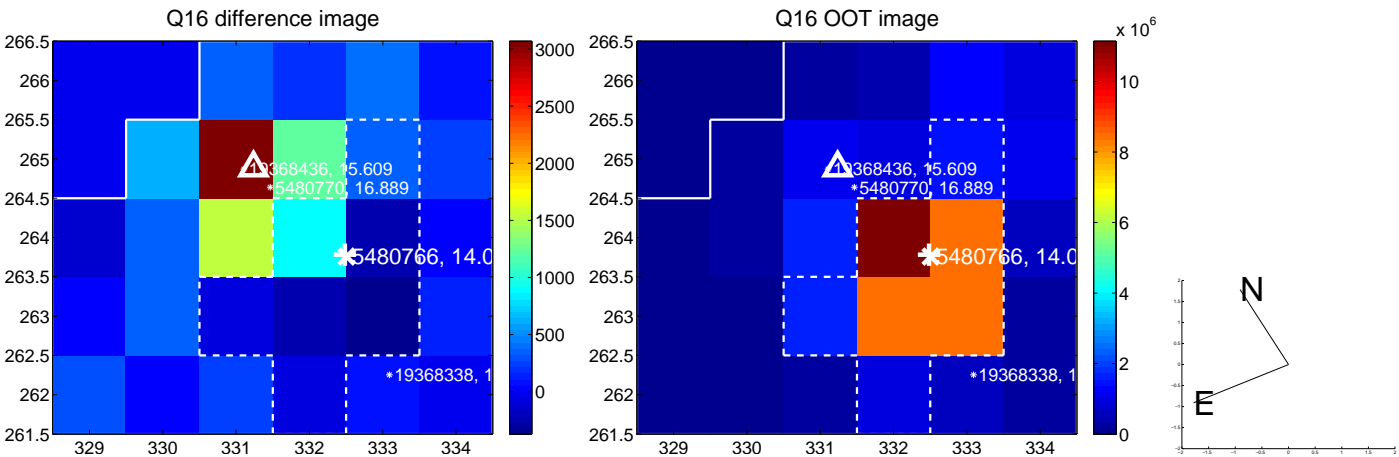
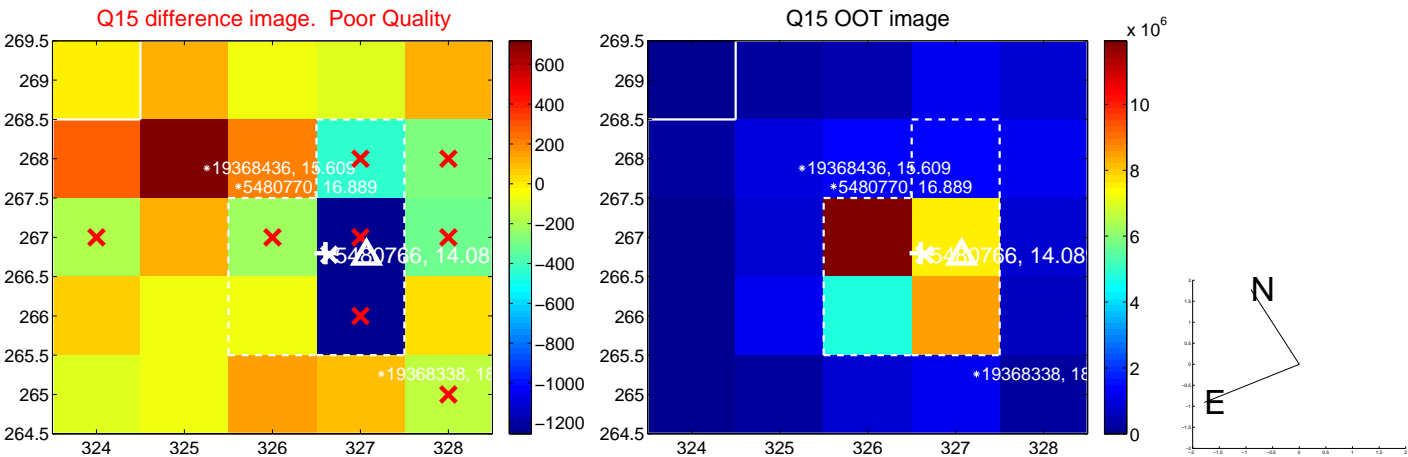
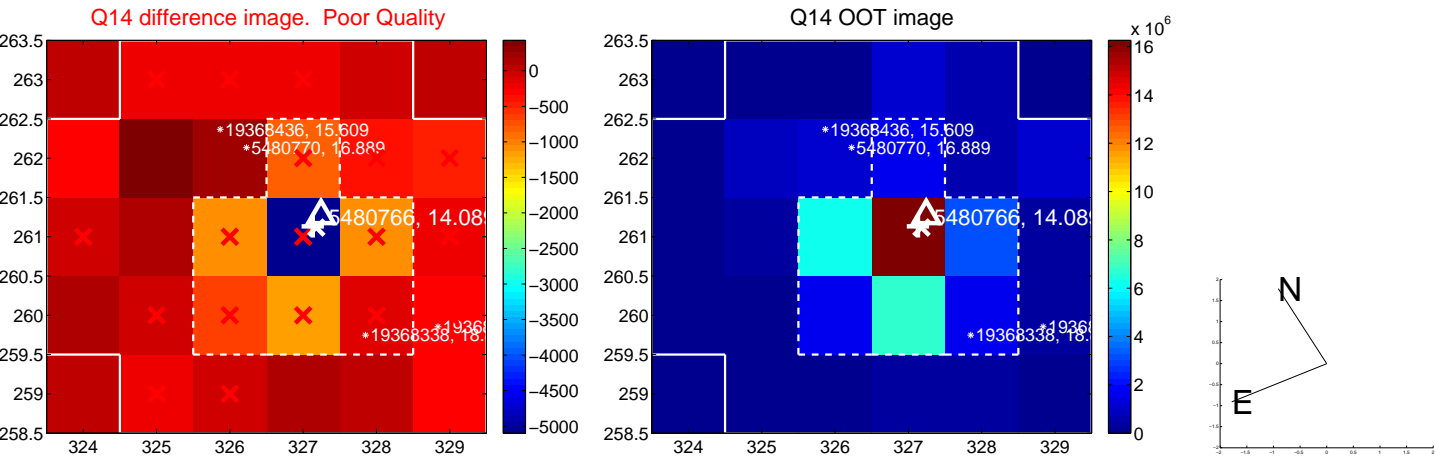
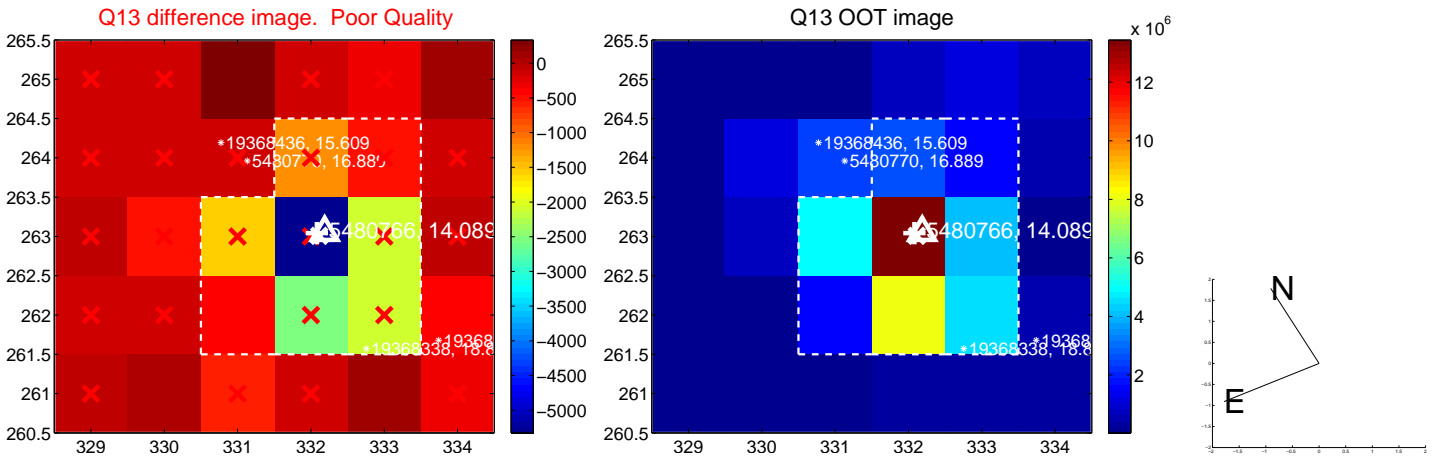
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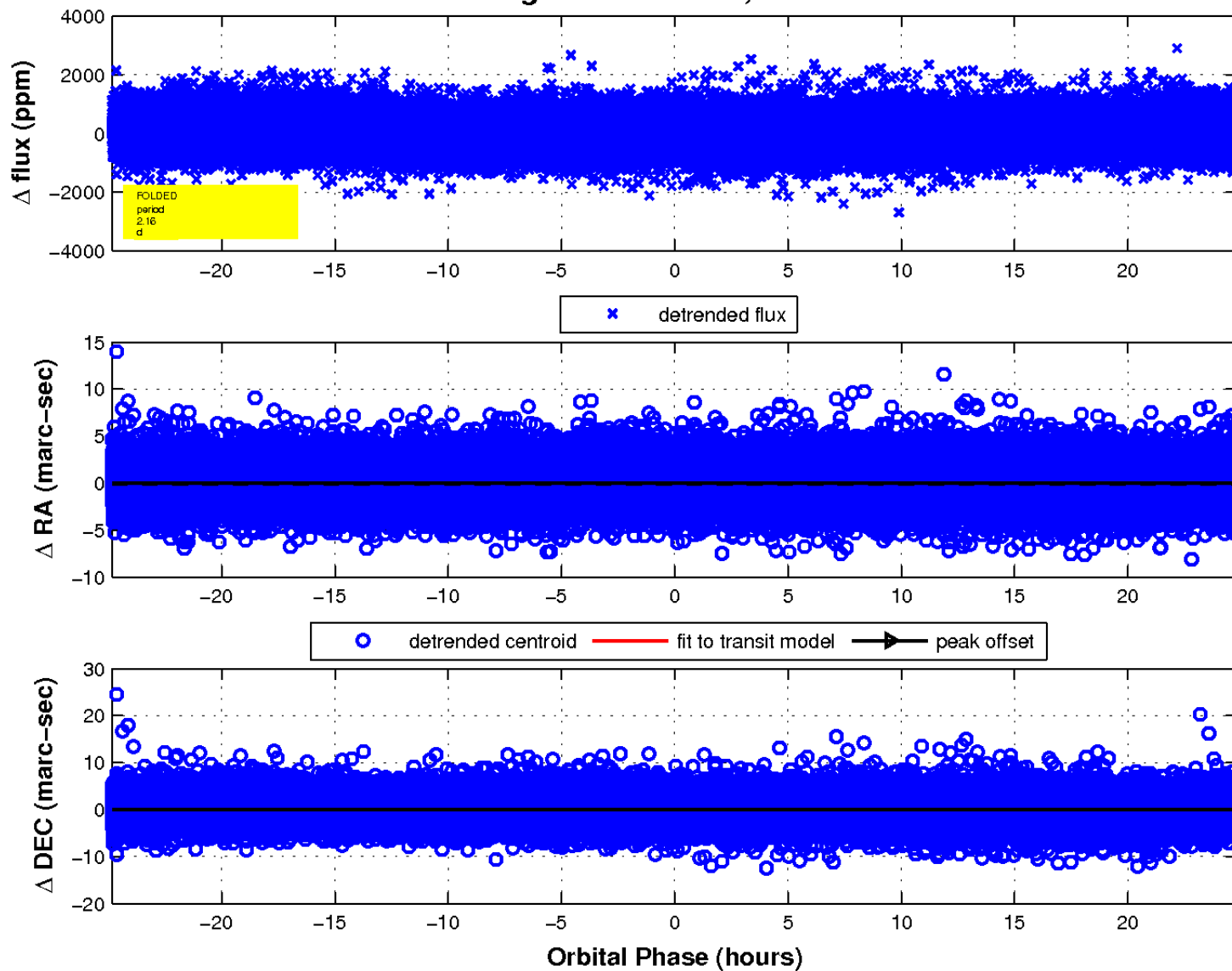
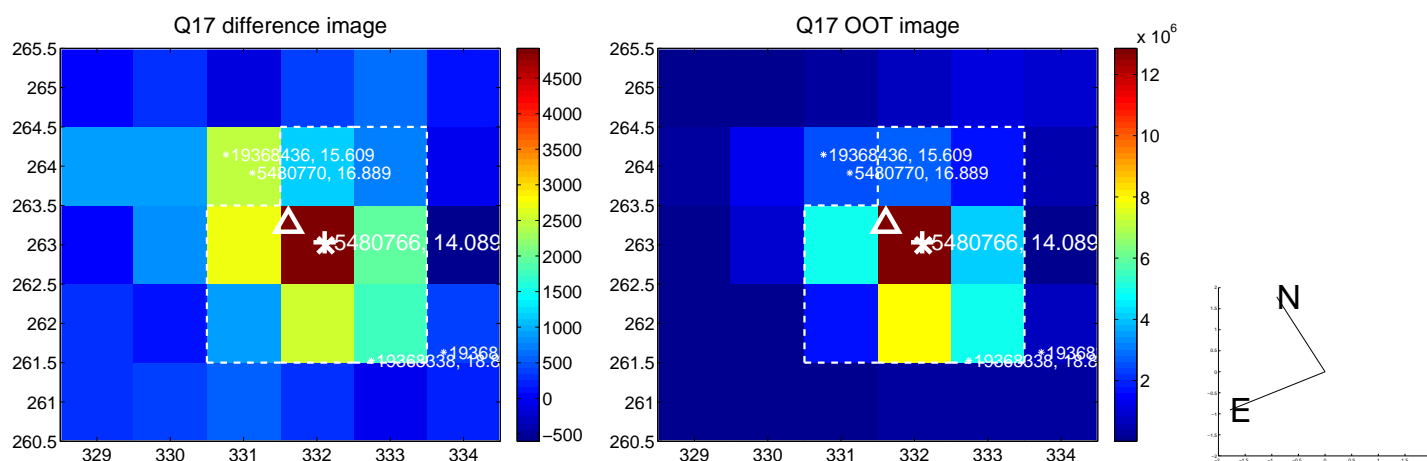
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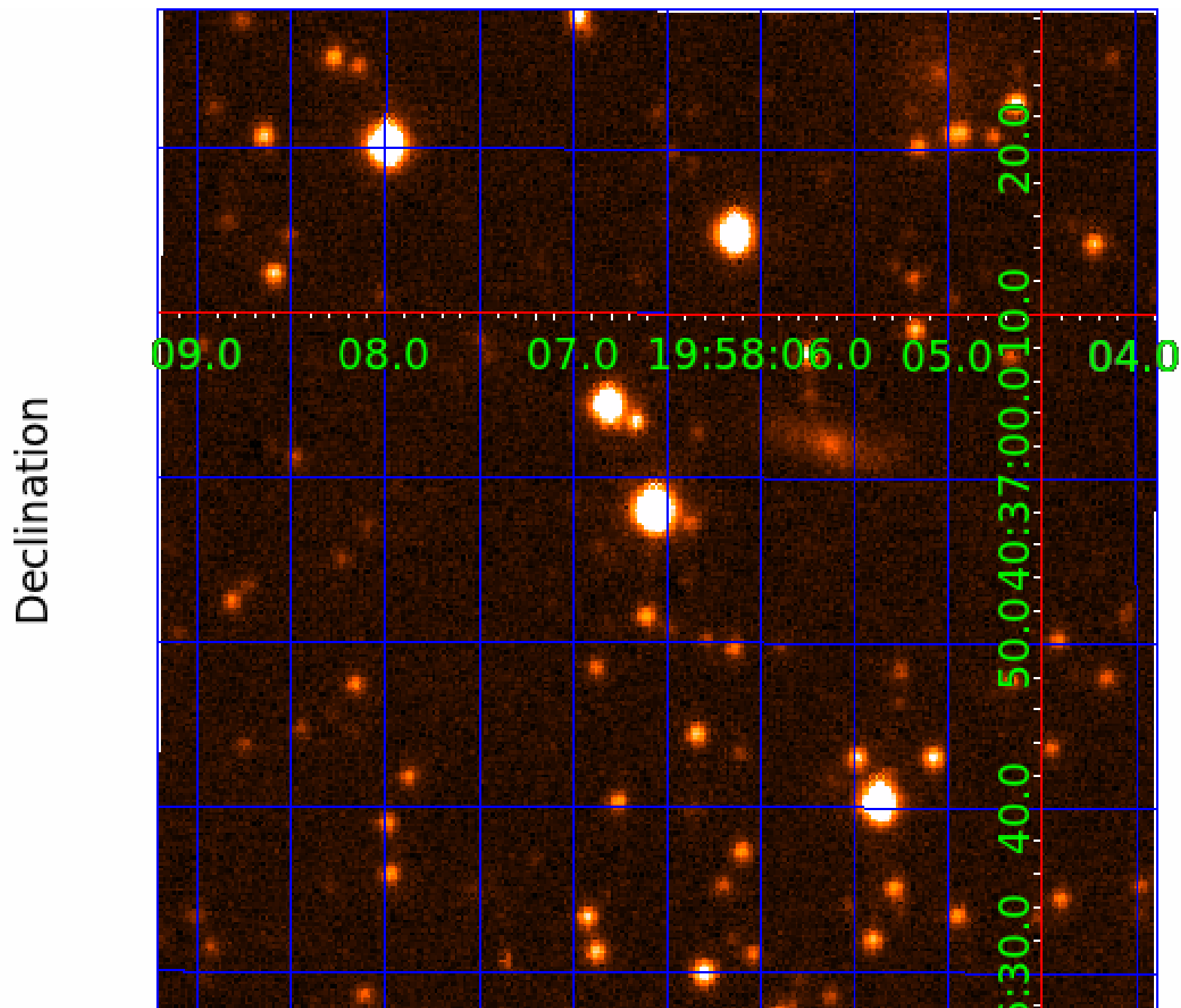
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image



KIC 005480766

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})
005480766-01	OBS	No	2.162551	131.892351	18.4	8.283	12.0	2.4	1.05	6510	0.47	1558.97
005480766-02	OBS	No	366.598512	149.064621	524.6	5.595	19.4	3.8	1.05	6510	3.15	1.66
005480766-03	OBS	No	4.323525	134.972761	186.9	15.721	12.0	12.2	1.05	6510	1.85	618.98
005480766-04	OBS	No	159.799677	182.306776	946.9	22.686	7.6	7.6	1.05	6510	4.40	5.03
005480766-05	OBS	No	264.221815	183.267372	988.1	19.862	7.4	7.0	1.05	6510	4.17	2.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005480766-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
005480766-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005480766-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

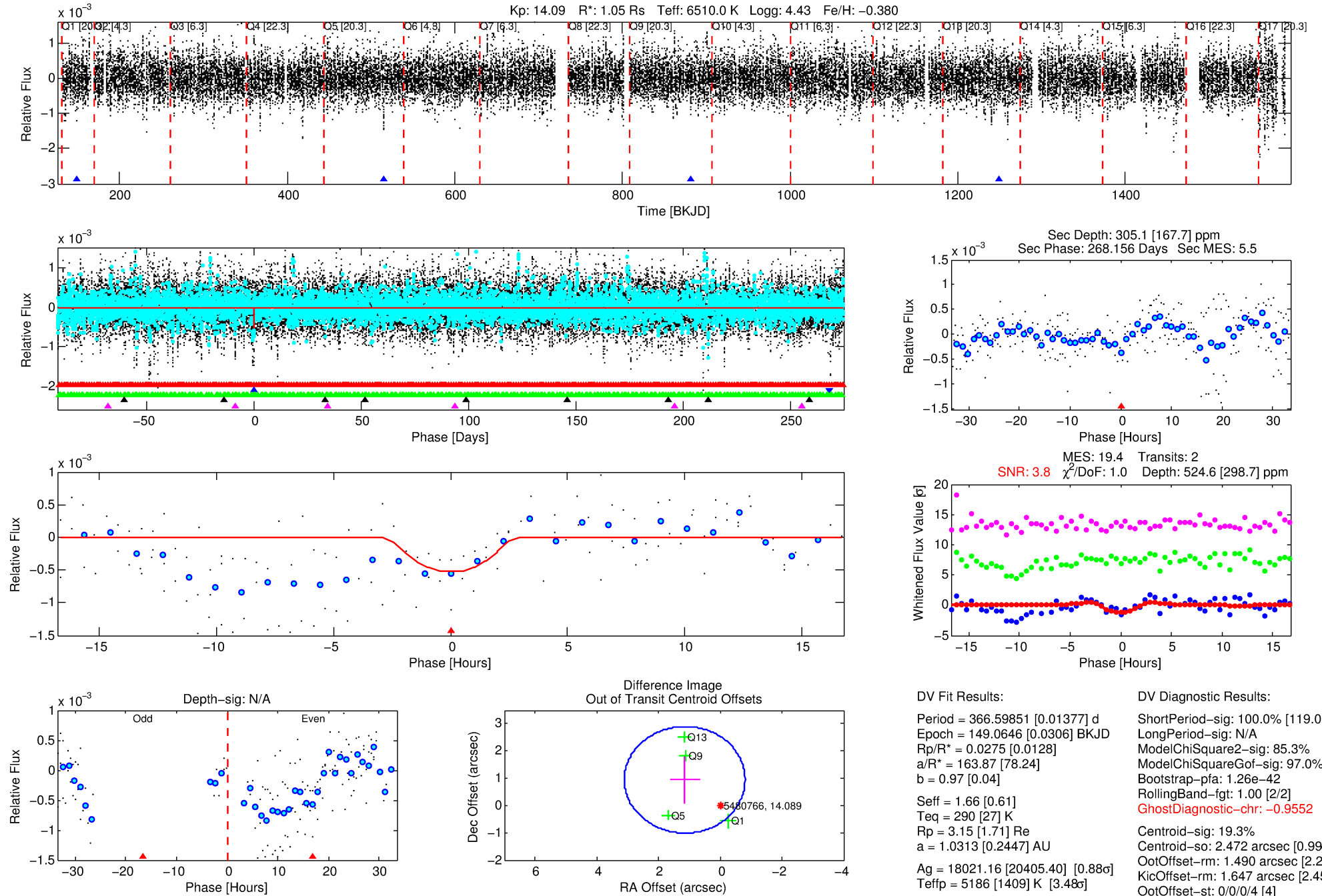
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005480766-02

No Significant Match Found

DV One-Page Summary

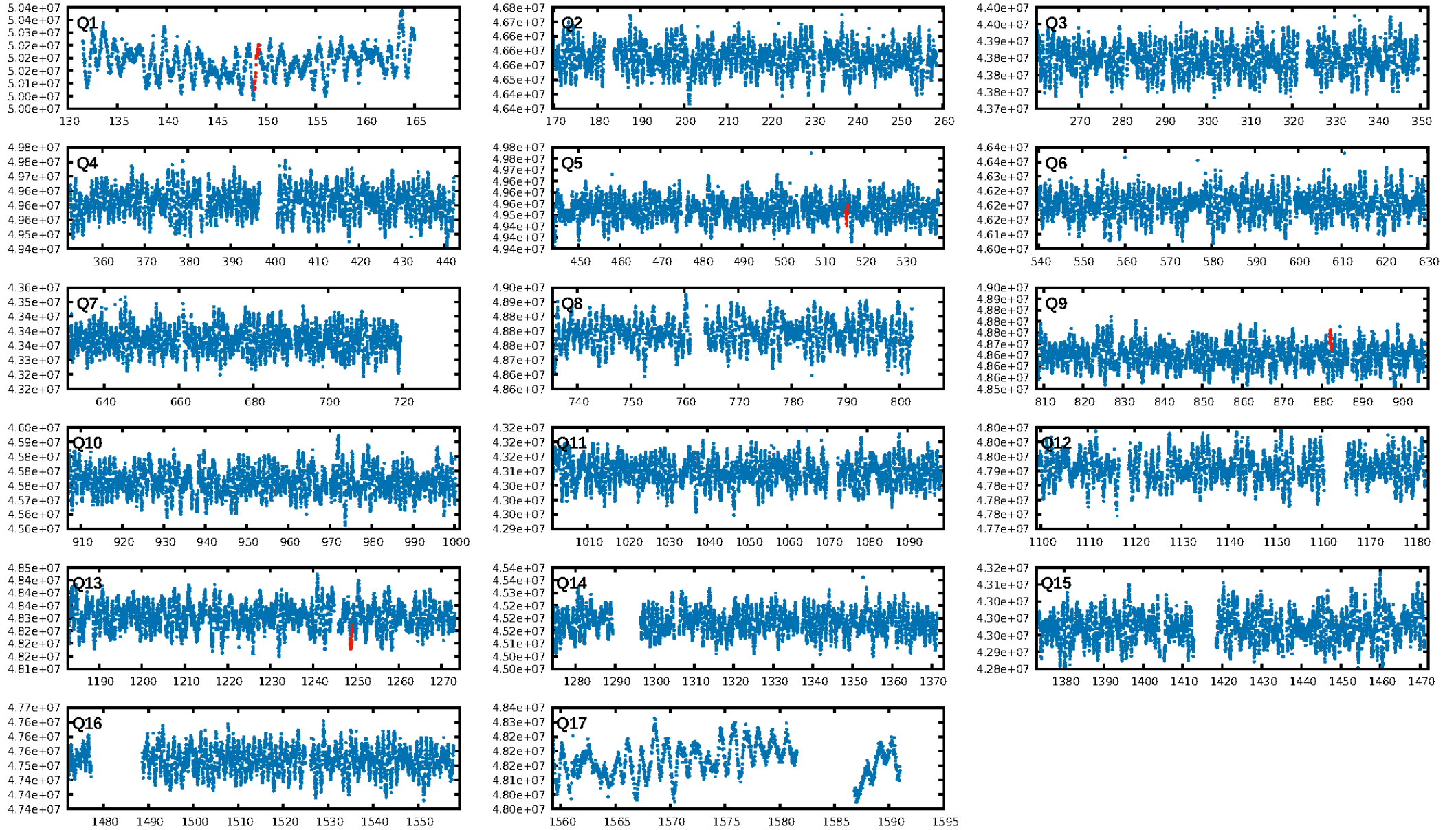
KIC: 5480766 Candidate: 2 of 5 Period: 366.599 d



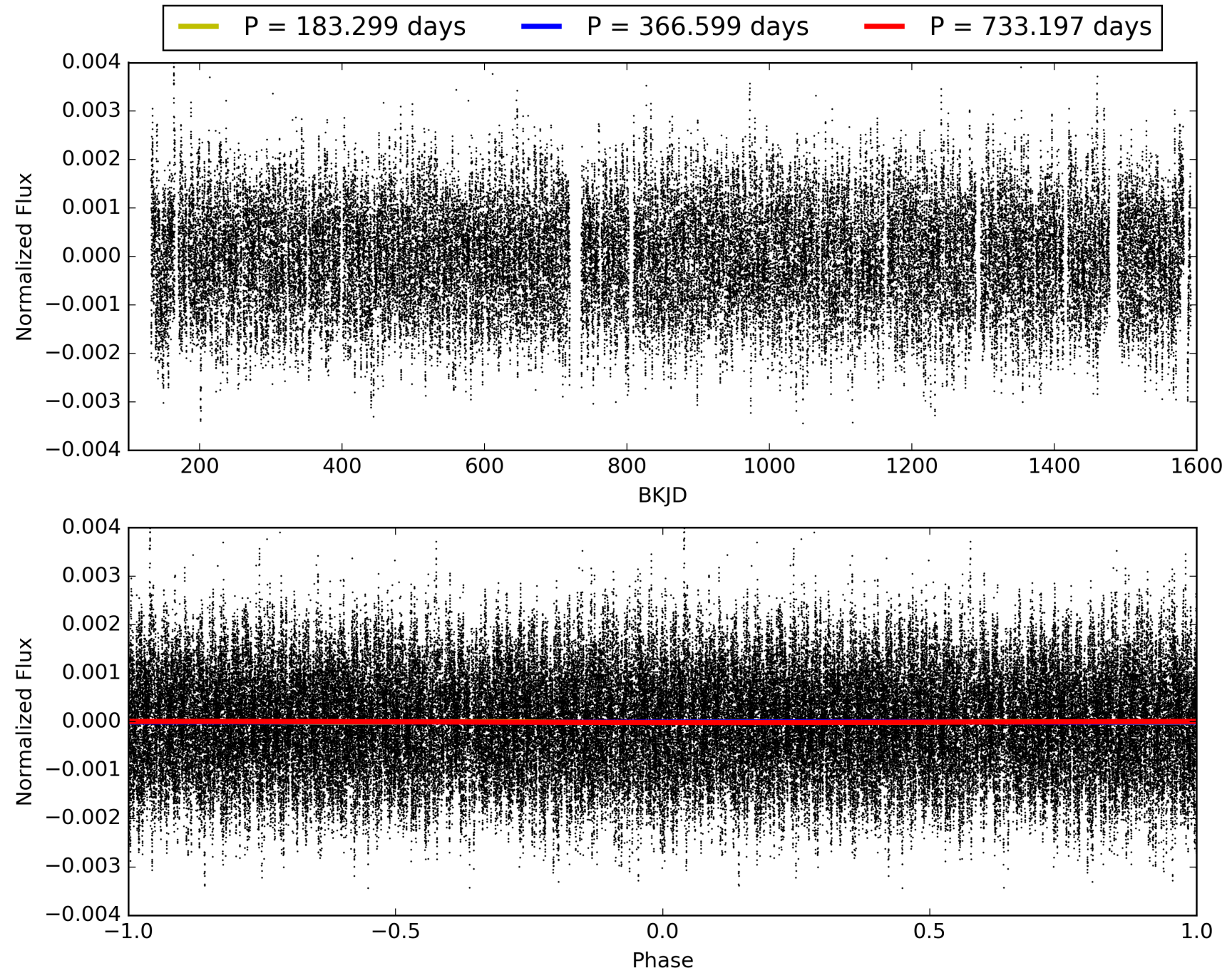
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This Data Validation Report Summary was produced in the Kepler Science Operations Center Pipeline at NASA Ames Research Center

TCE 005480766-02, PDC Light Curves

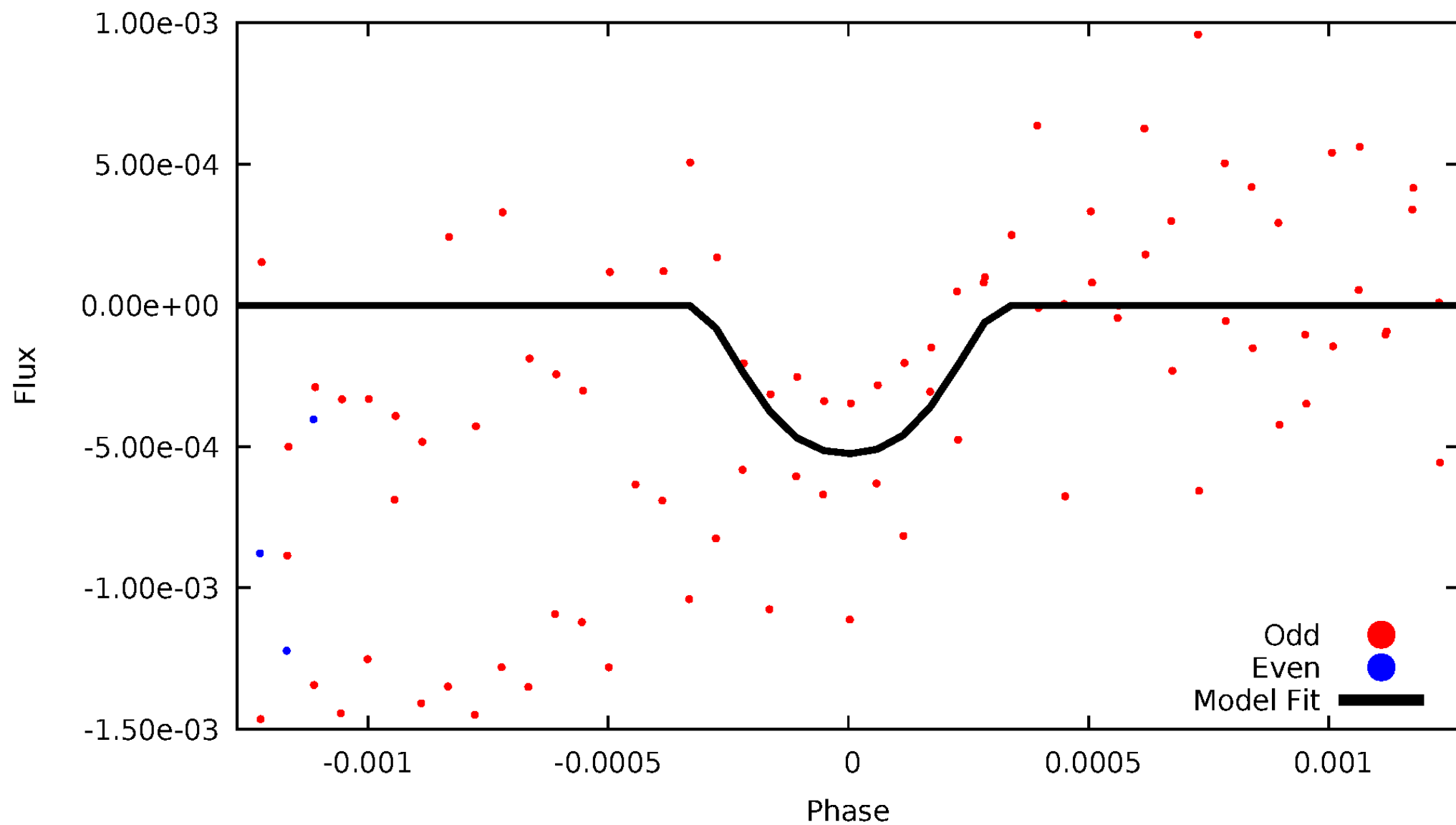


TCE 005480766-02



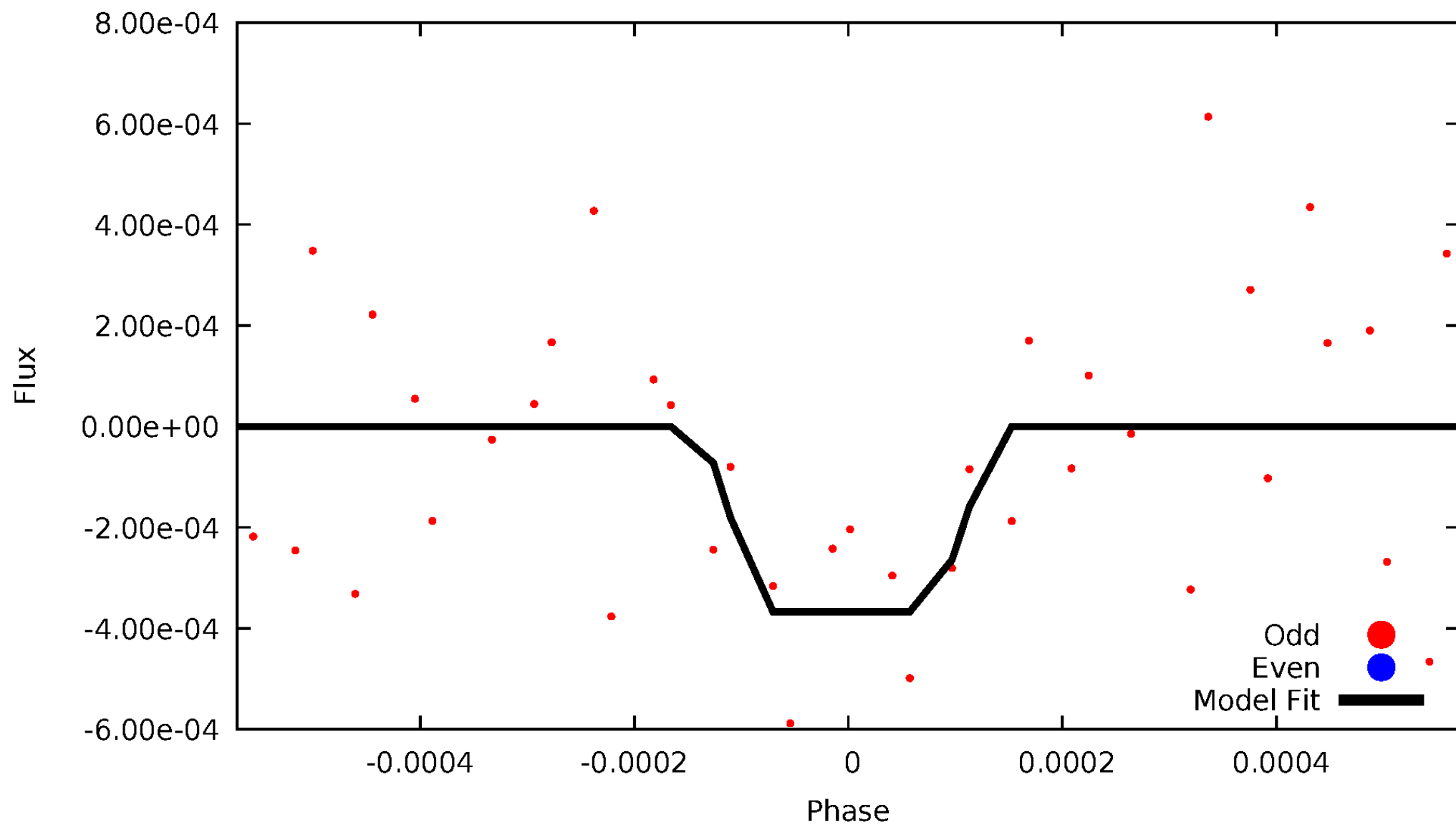
DV Odd/Even

TCE 005480766-02



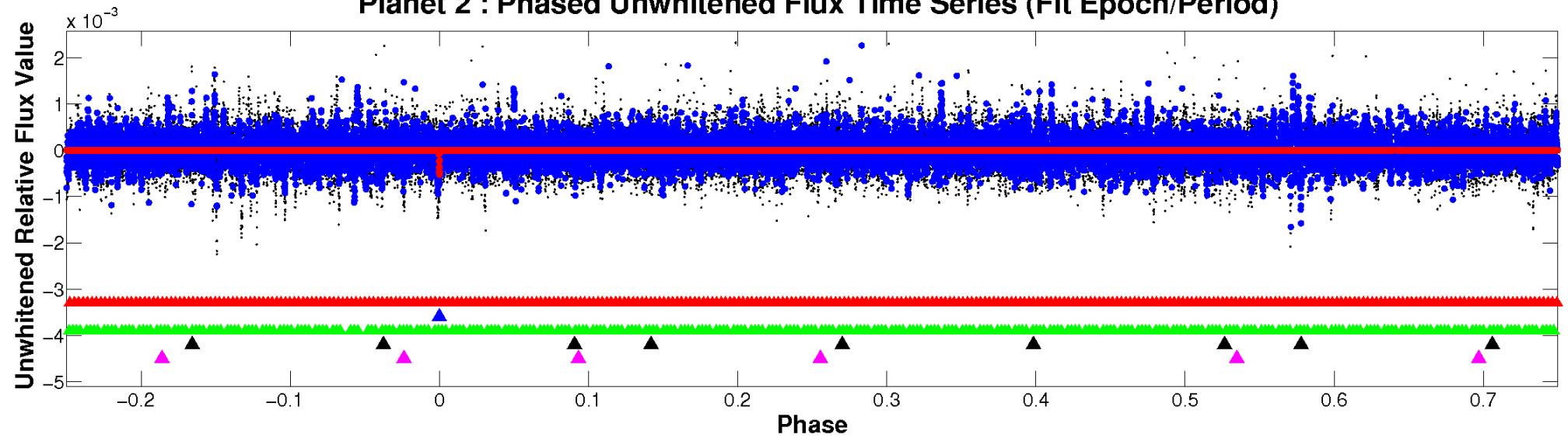
ALT Odd/Even

TCE 005480766-02

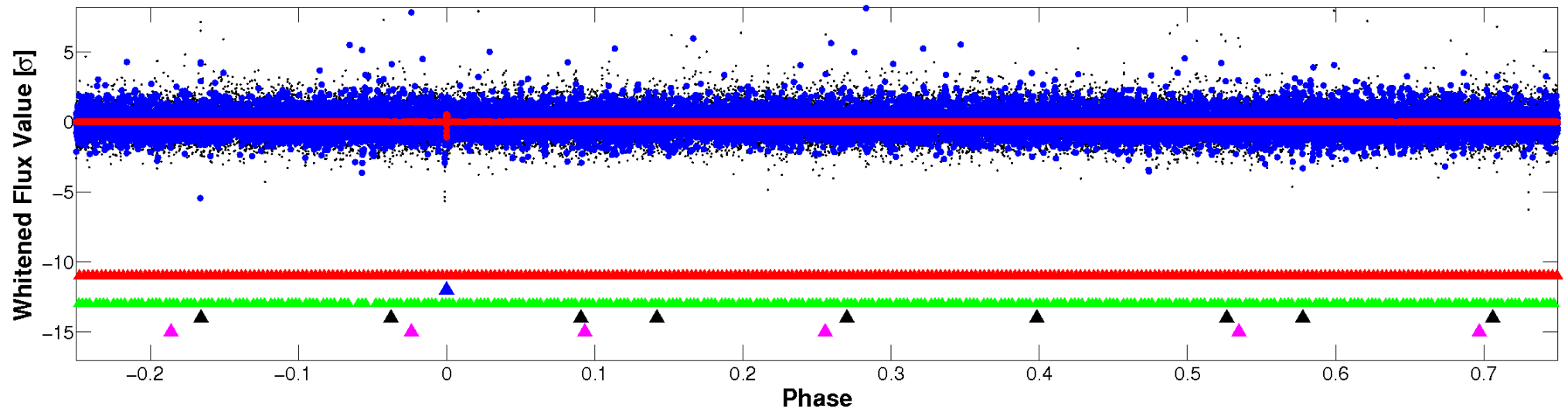


Non-Whitened Vs. Whitened Light Curve

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

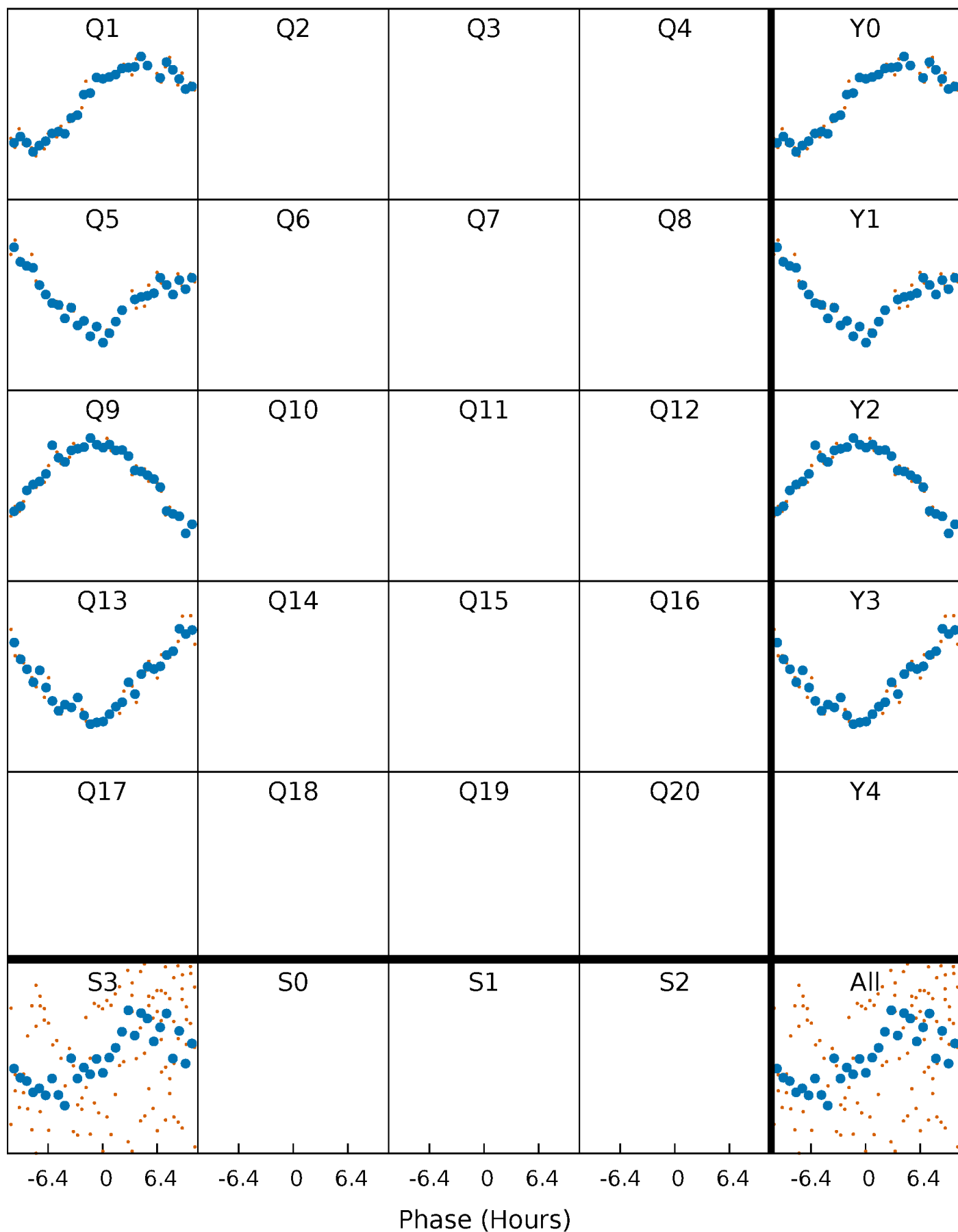


Planet 2 : Phased Whitened Flux Time Series (Fit Epoch/Period)



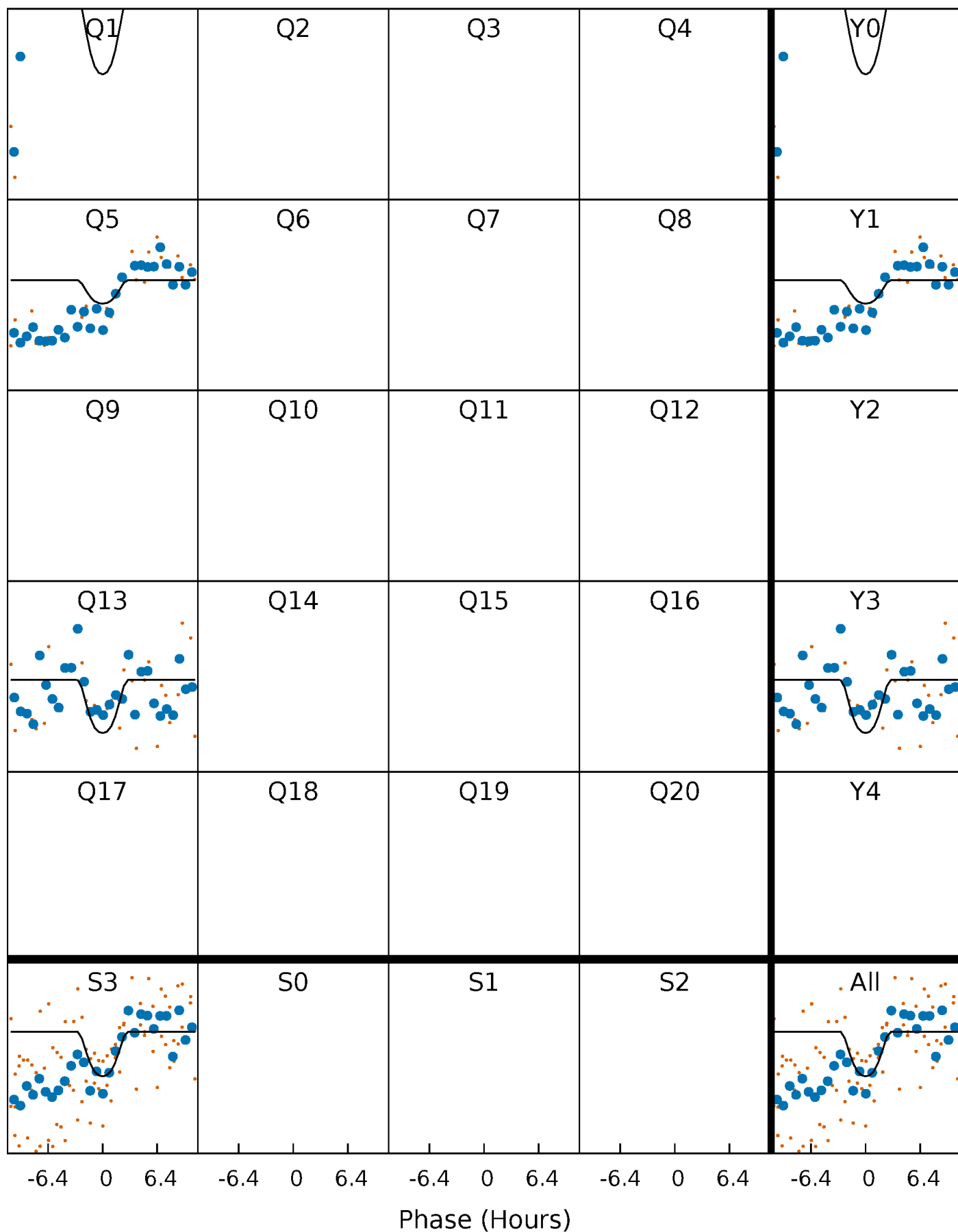
PDC Quarter-Phased Transit Curves

TCE 005480766-02 $P=366.598512$ Days $T_0=149.064620$ (BKJD)



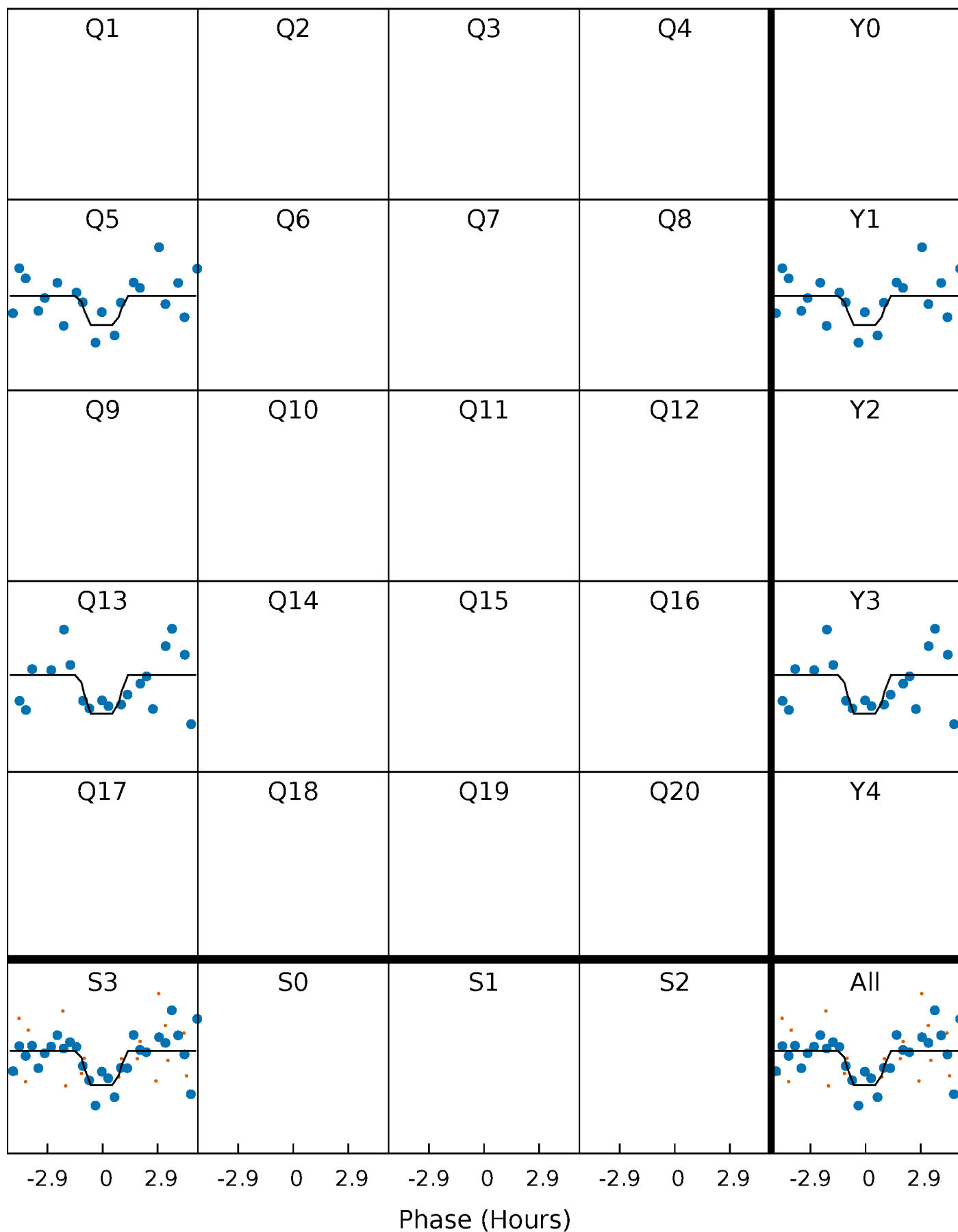
DV Quarter-Phased Transit Curves

TCE 005480766-02 $P=366.598512$ Days $T_0=149.064620$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

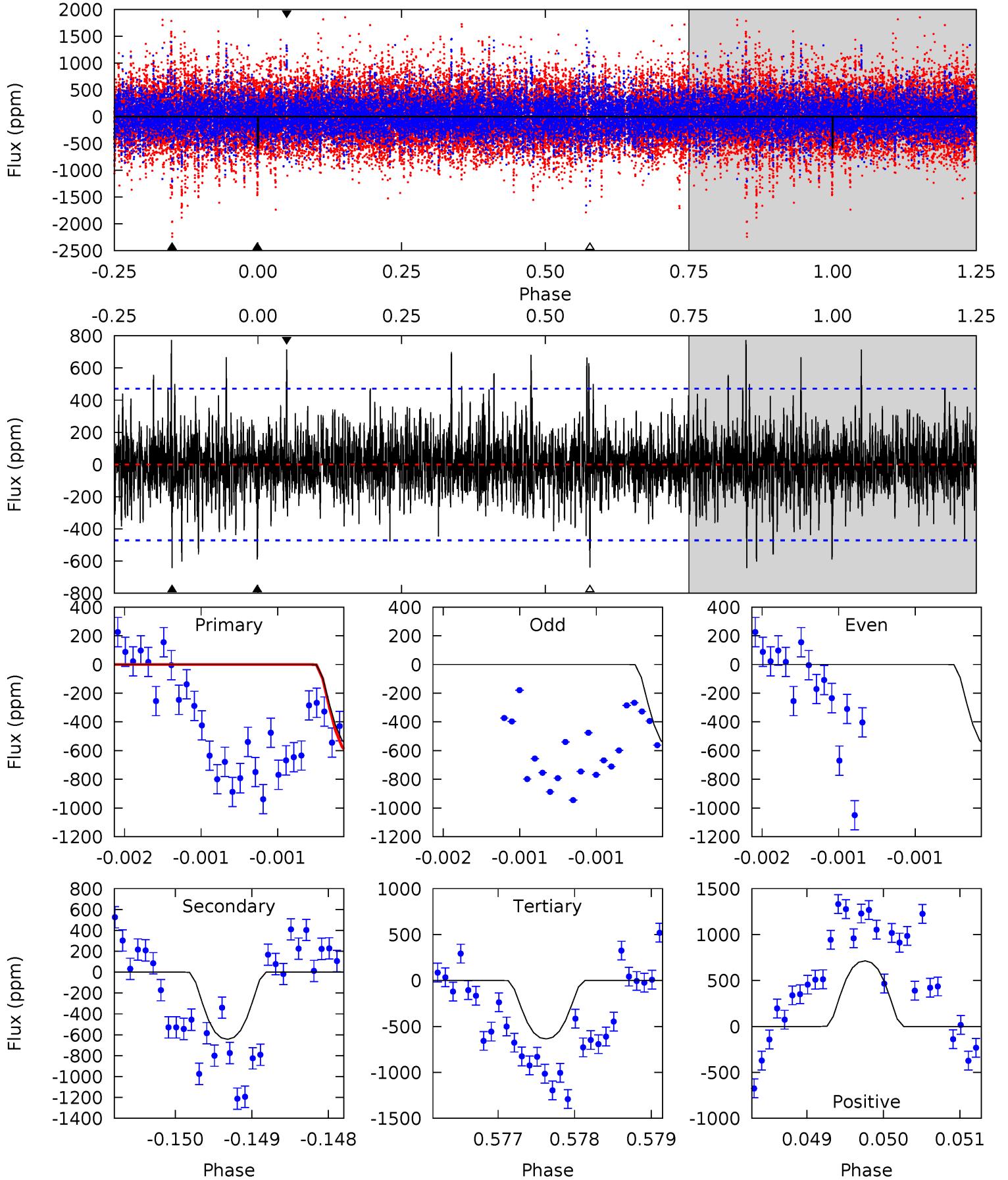
TCE 005480766-02 P=366.571255 Days $T_0=149.112852$ (BKJD)



DV Model-Shift Uniqueness Test

005480766-02, P = 366.598512 Days, E = 149.064620 Days

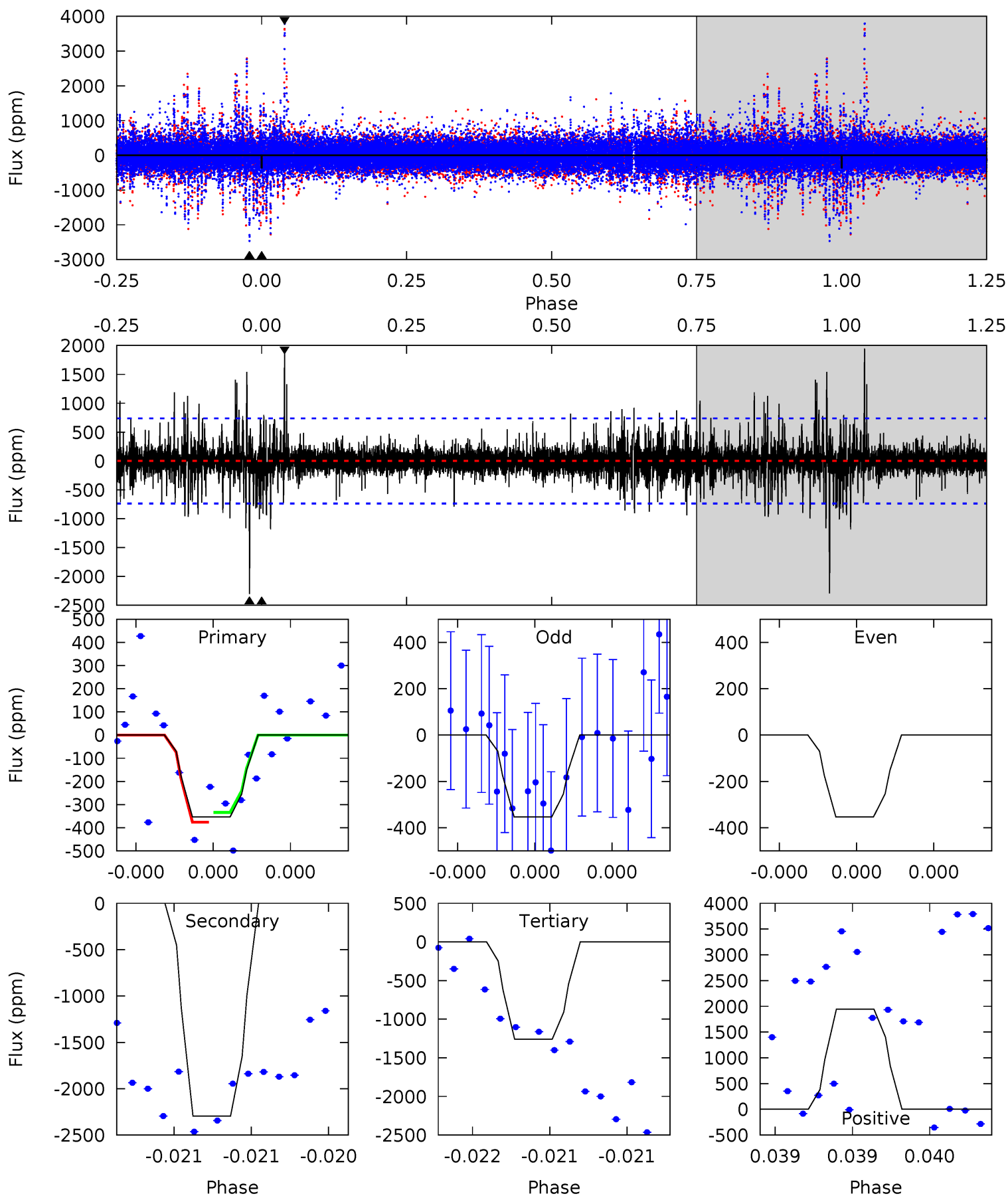
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
6.91	7.53	7.46	8.37	5.52	3.40	1.70	-0.54	-1.45	0.08	-0.83	0	1.00	0.55	0.44



Alt Model-Shift Uniqueness Test

005480766-02, P = 366.571255 Days, E = 149.112852 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
2.72	17.7	9.70	15.0	5.68	3.65	1.73	-6.98	-12.3	7.97	2.70	0	1.00	0.46	0.15



Stellar Parameters For KIC 005480766

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6510^{+155}_{-214}	$4.434^{+0.062}_{-0.188}$	$-0.380^{+0.250}_{-0.350}$	$1.048^{+0.296}_{-0.127}$	$1.086^{+0.146}_{-0.146}$	$1.329^{+0.433}_{-0.671}$
	+2%/-3%	+1%/-4%	+66%/-92%	+28%/-12%	+13%/-13%	+33%/-50%
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 005480766-02 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-643 ± 85	$3.31^{+1.59}_{-1.47}$	411^{+26}_{-20}	6185^{+2317}_{-1027}	34289^{+75789}_{-19390}
Alt.	-2295 ± 130	$2.37^{+1.51}_{-1.32}$	413^{+31}_{-20}	11303^{+15419}_{-3140}	$236589^{+967892}_{-147579}$

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 $A_{obs} \gg 1.0$

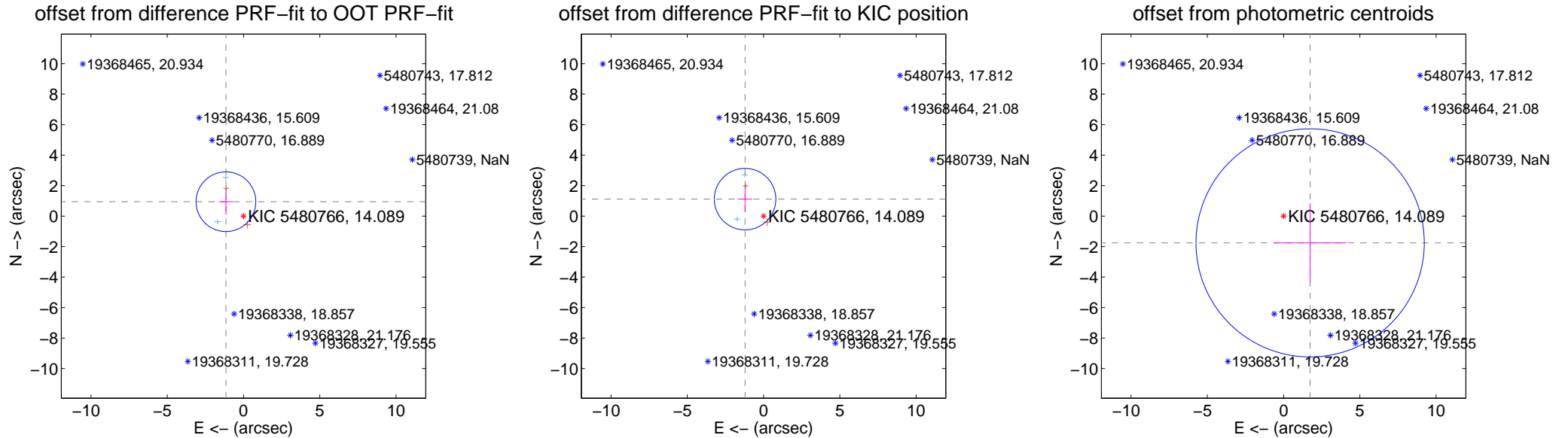
DV Centroid Data

Supplemental centroid analysis for 005480766-02. Kepler magnitude: 14.09. Transit SNR 3.85

There are 2 quarters with good PRF difference image offsets

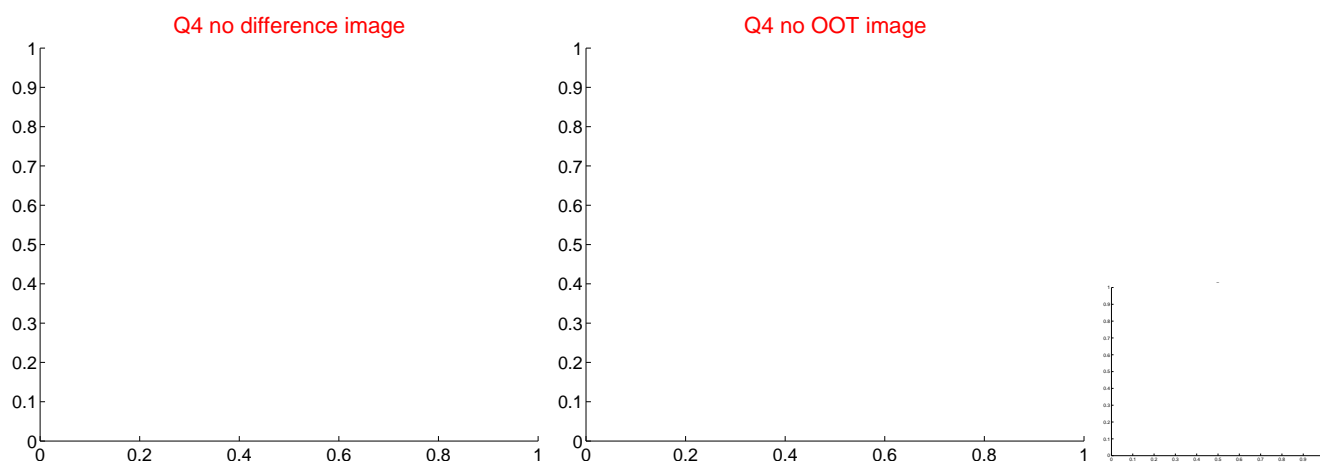
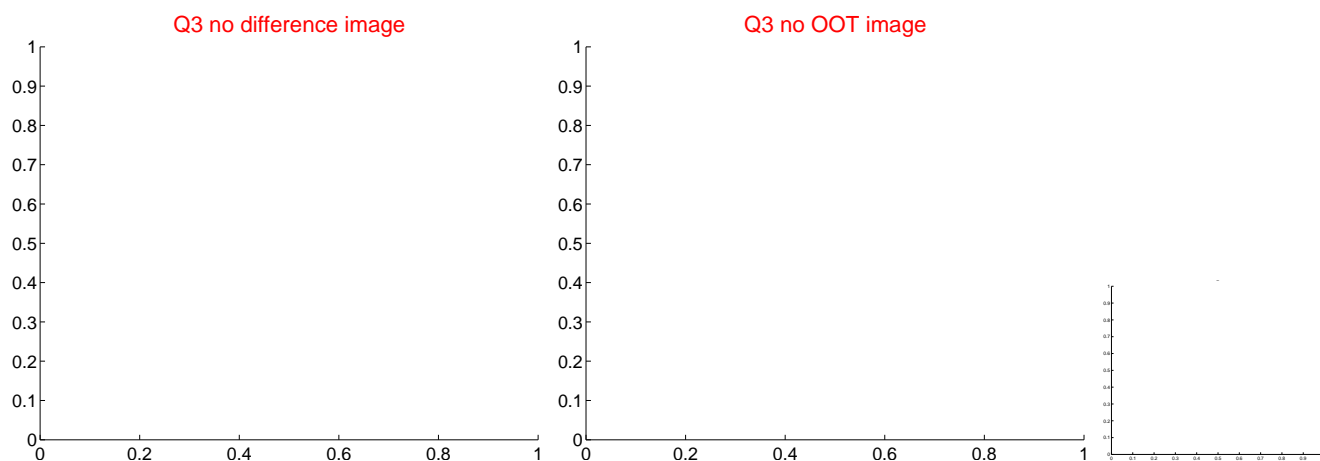
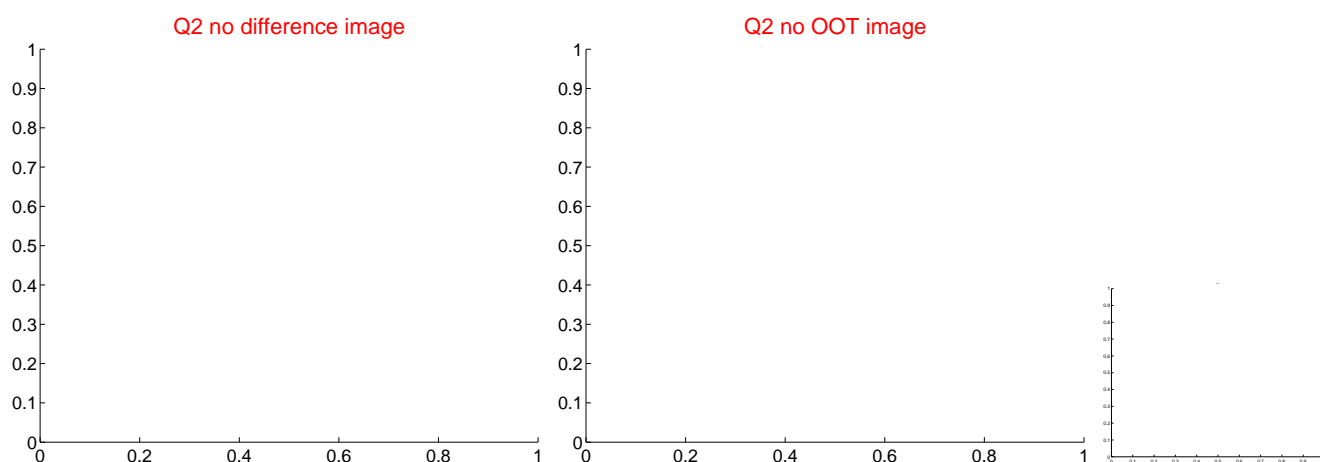
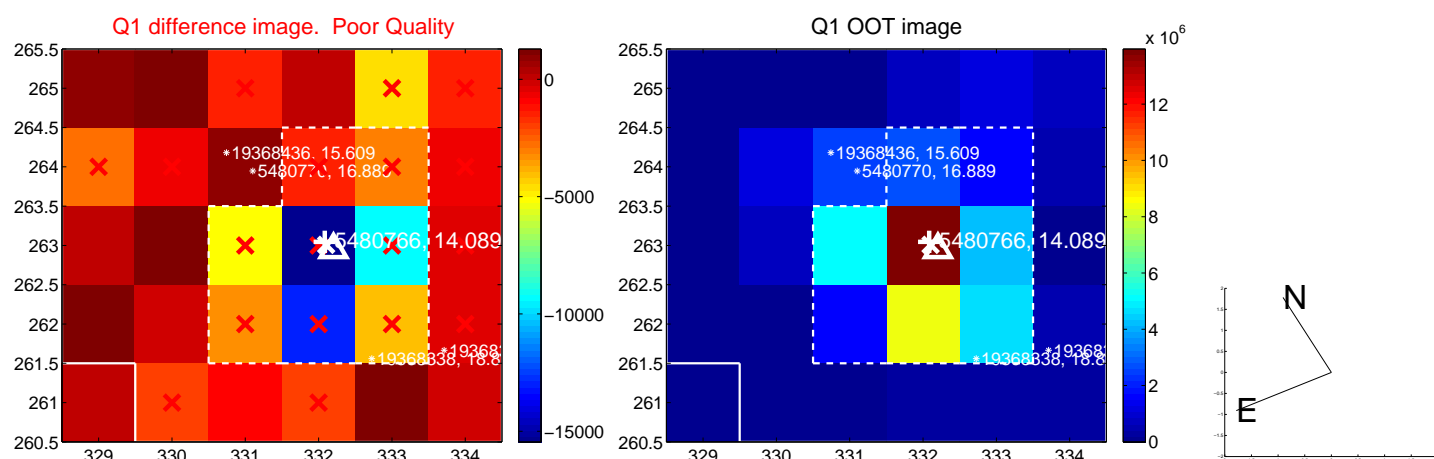
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.490 ± 0.653	2.28	1.152 ± 0.468	0.945 ± 0.856
PRF-fit source offset from KIC position	1.647 ± 0.673	2.45	1.212 ± 0.465	1.114 ± 0.856
photometric centroid source offset	2.47 ± 2.49	0.99	-1.74 ± 2.40	-1.76 ± 2.59

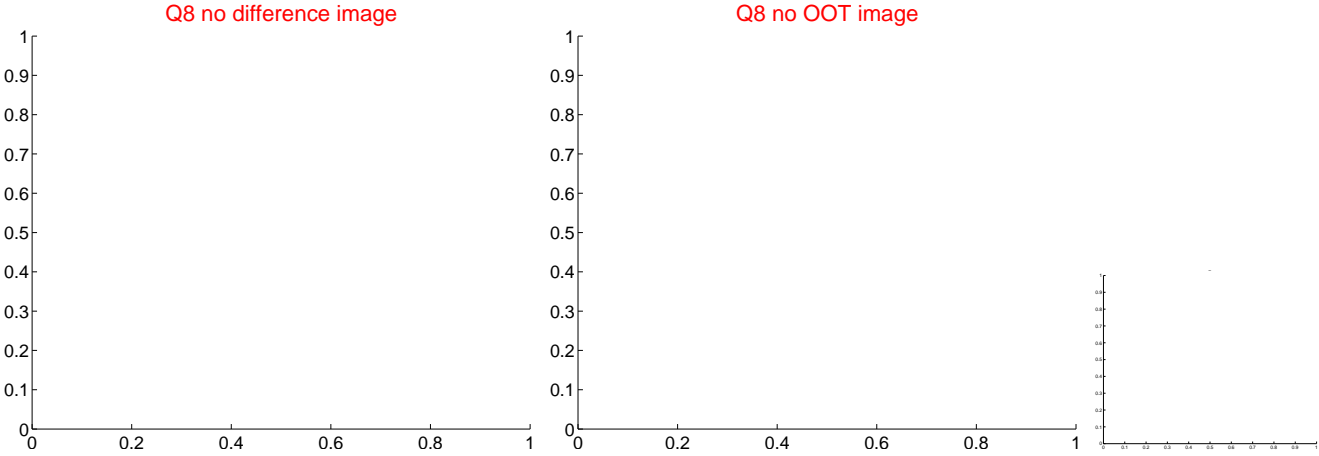
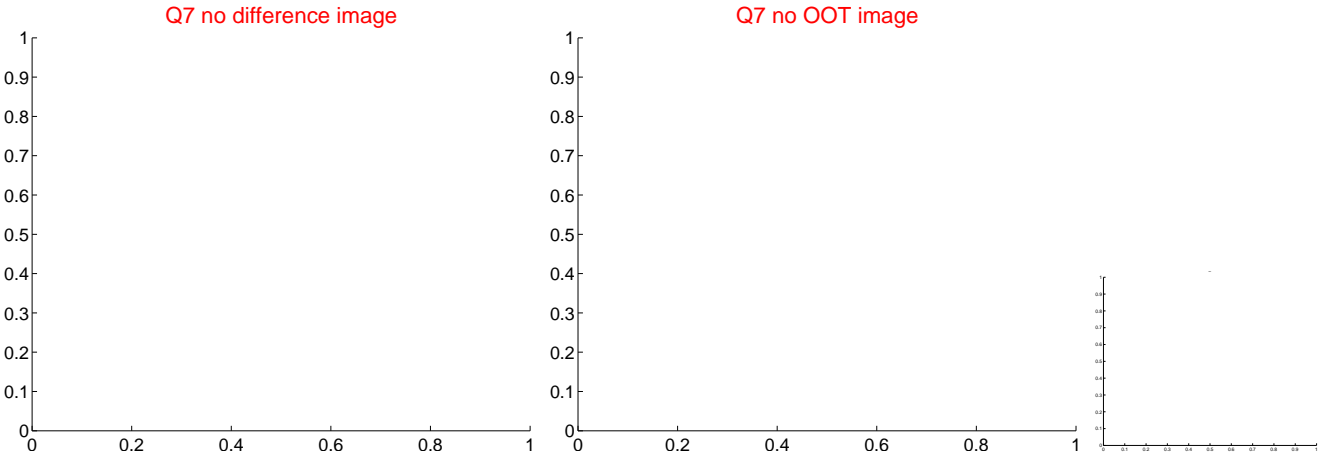
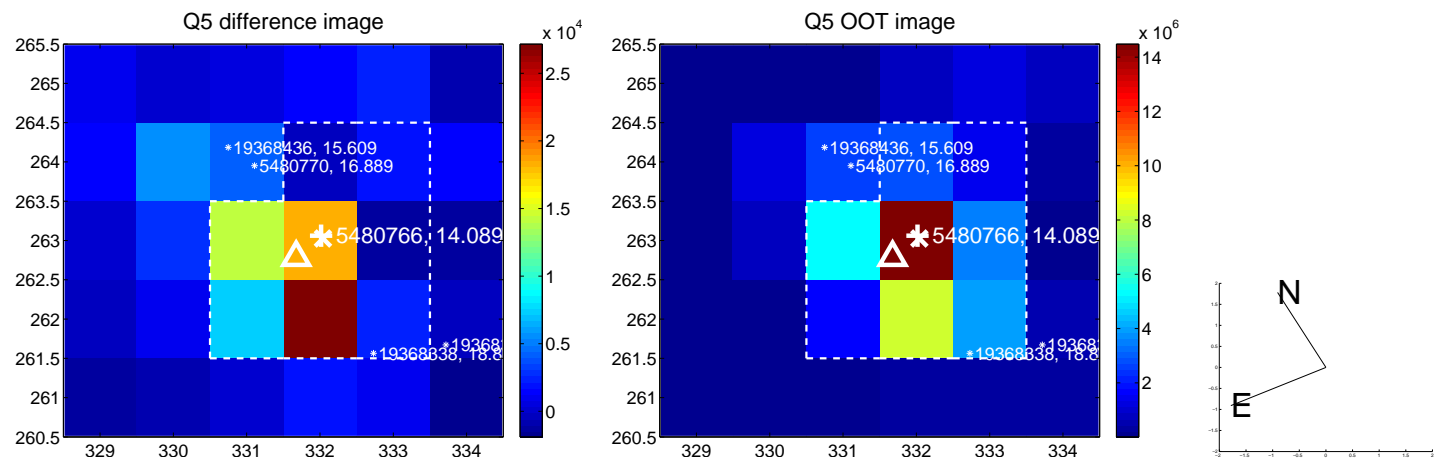


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

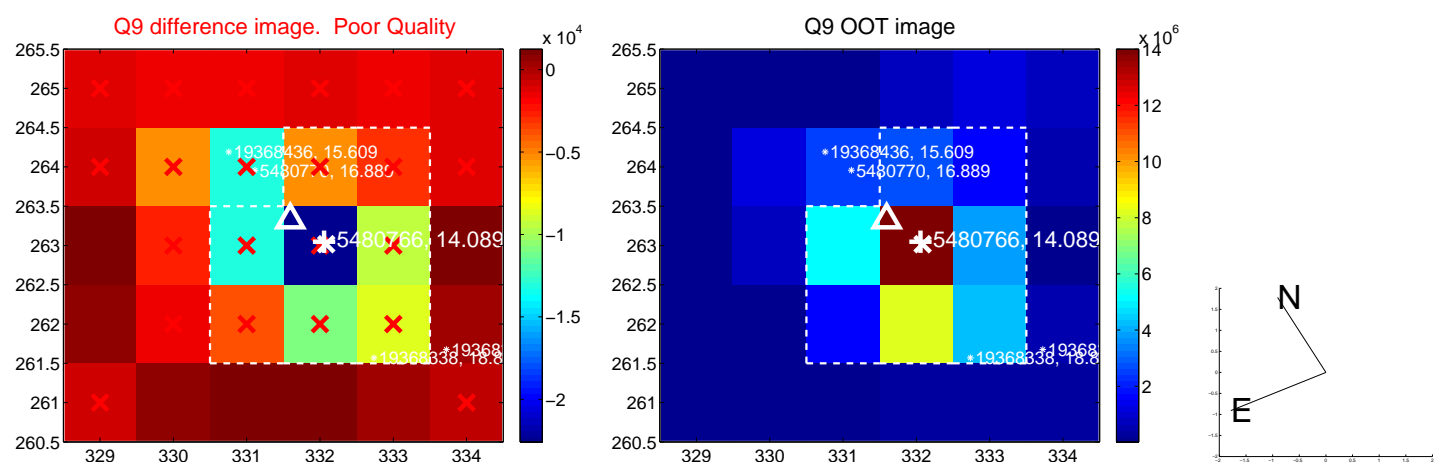
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value



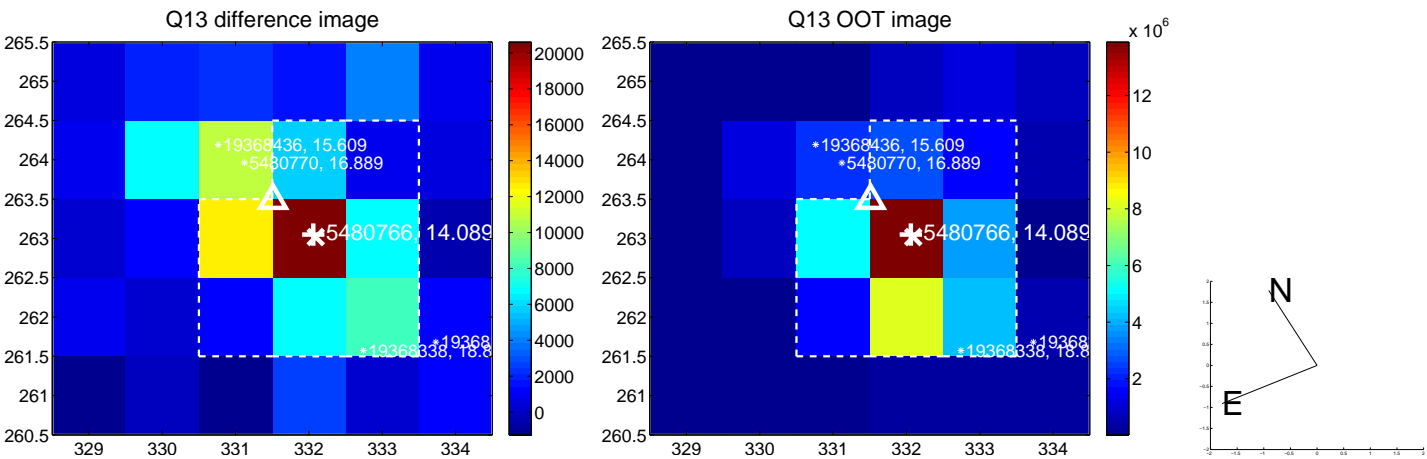
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



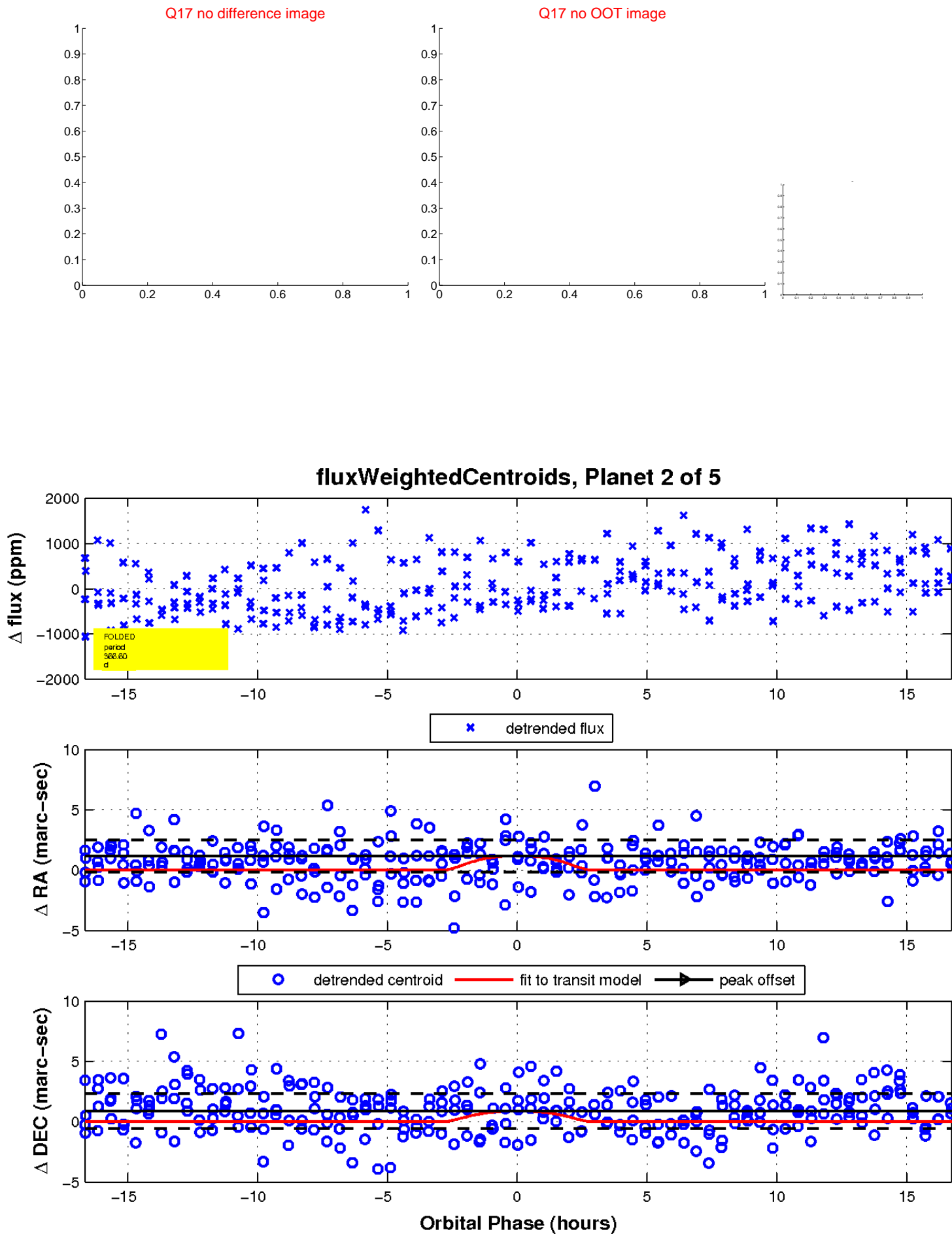
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



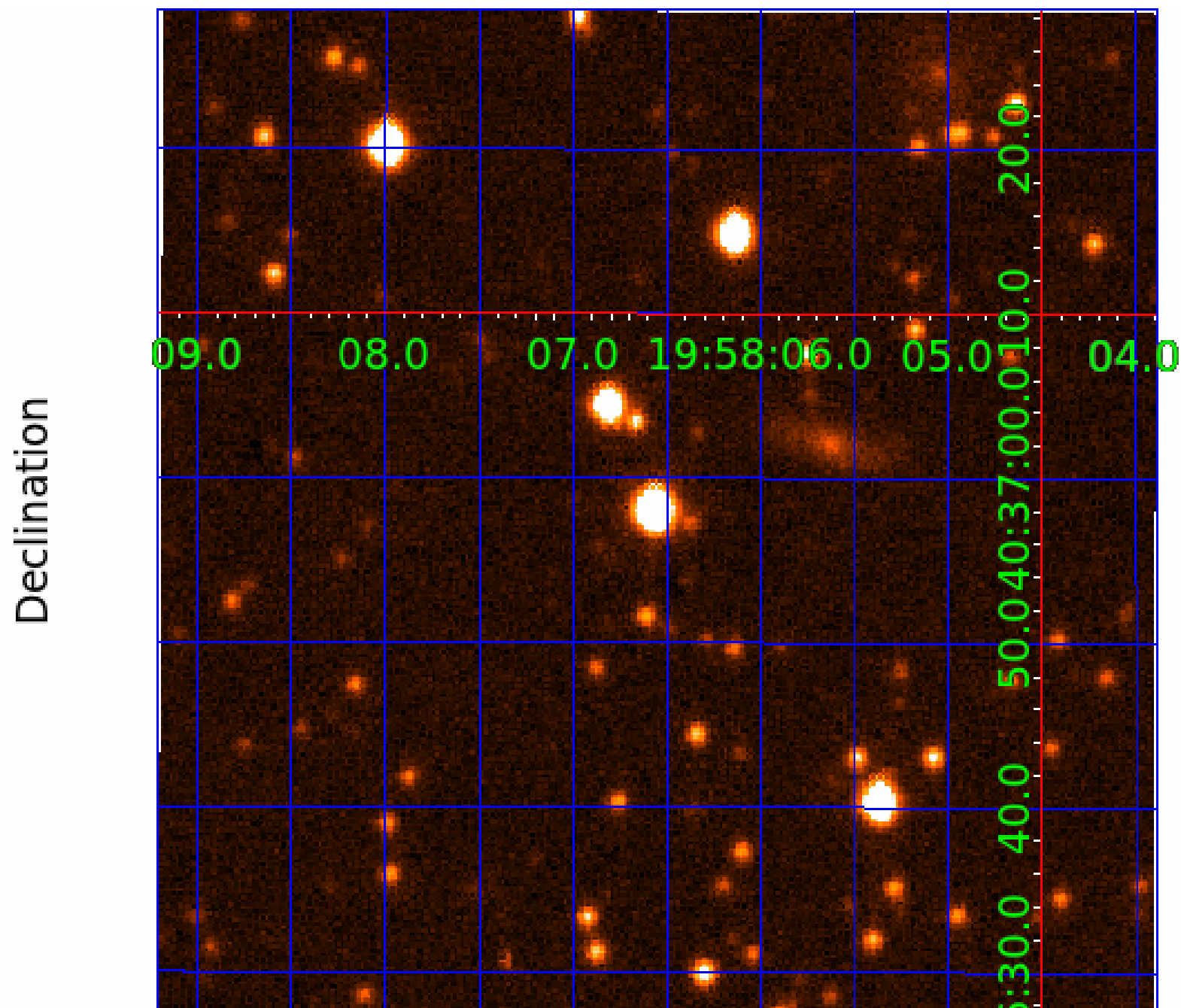
white ×: KIC target position; +: OOT centroid; △: difference centroid. red ✕: large negative pixel value.



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



UKIRT Image



KIC 005480766

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})
005480766-01	OBS	No	2.162551	131.892351	18.4	8.283	12.0	2.4	1.05	6510	0.47	1558.97
005480766-02	OBS	No	366.598512	149.064621	524.6	5.595	19.4	3.8	1.05	6510	3.15	1.66
005480766-03	OBS	No	4.323525	134.972761	186.9	15.721	12.0	12.2	1.05	6510	1.85	618.98
005480766-04	OBS	No	159.799677	182.306776	946.9	22.686	7.6	7.6	1.05	6510	4.40	5.03
005480766-05	OBS	No	264.221815	183.267372	988.1	19.862	7.4	7.0	1.05	6510	4.17	2.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005480766-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
005480766-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005480766-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

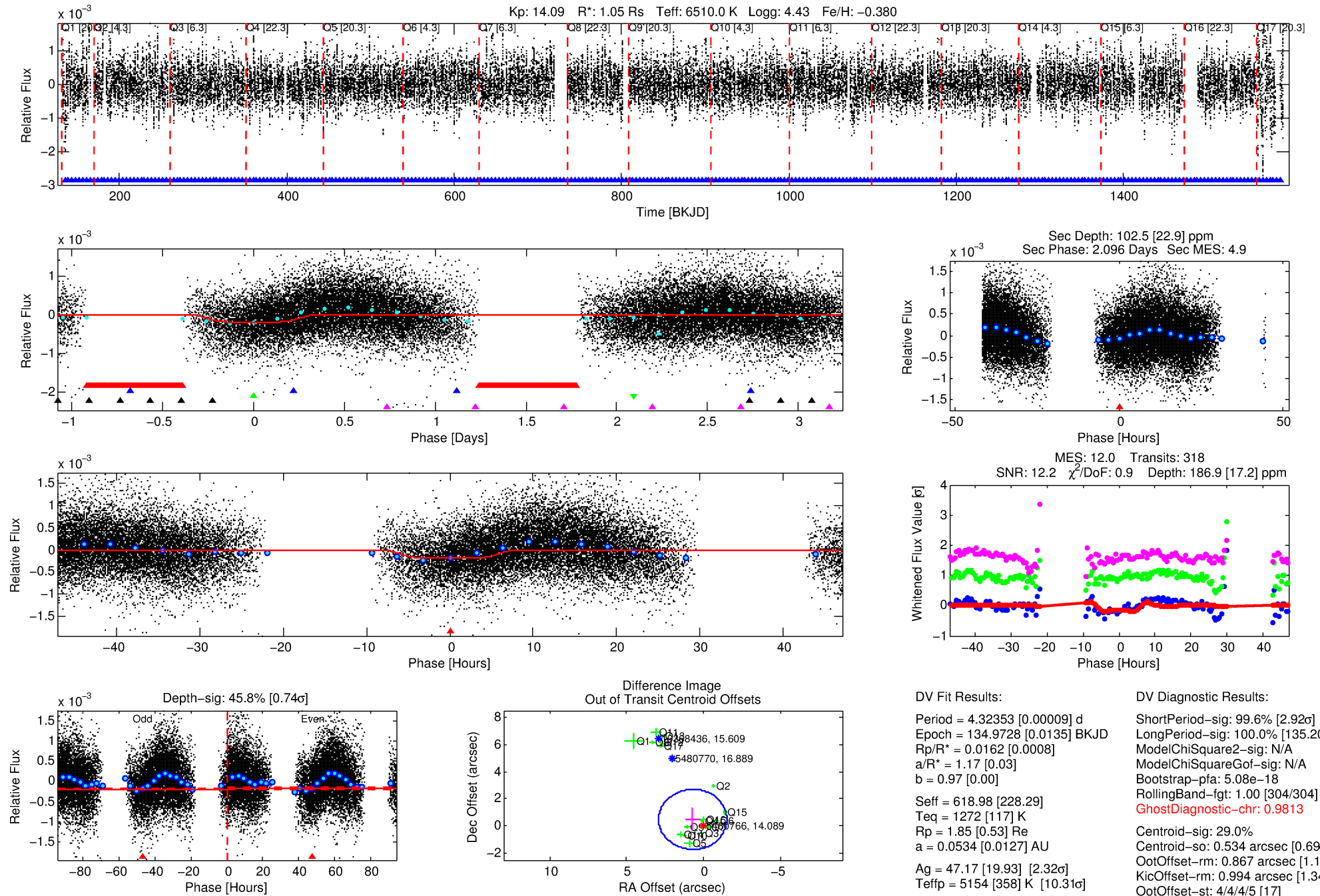
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005480766-03

No Significant Match Found

DV One-Page Summary

KIC: 5480766 Candidate: 3 of 5 Period: 4.324 d



DV Fit Results:

Period = 4.32353 [0.00009] d
Epoch = 134.9728 [0.0135] BKJD
Rp/R* = 0.0162 [0.0008]
a/R* = 1.17 [0.03]
b = 0.97 [0.00]
Seff = 618.98 [228.29]
Teff = 1272 [117] K
Rp = 1.85 [0.53] Re
a = 0.0534 [0.0127] AU
Ag = 47.17 [19.93] [2.32σ]
Teffp = 5154 [358] K [10.31σ]

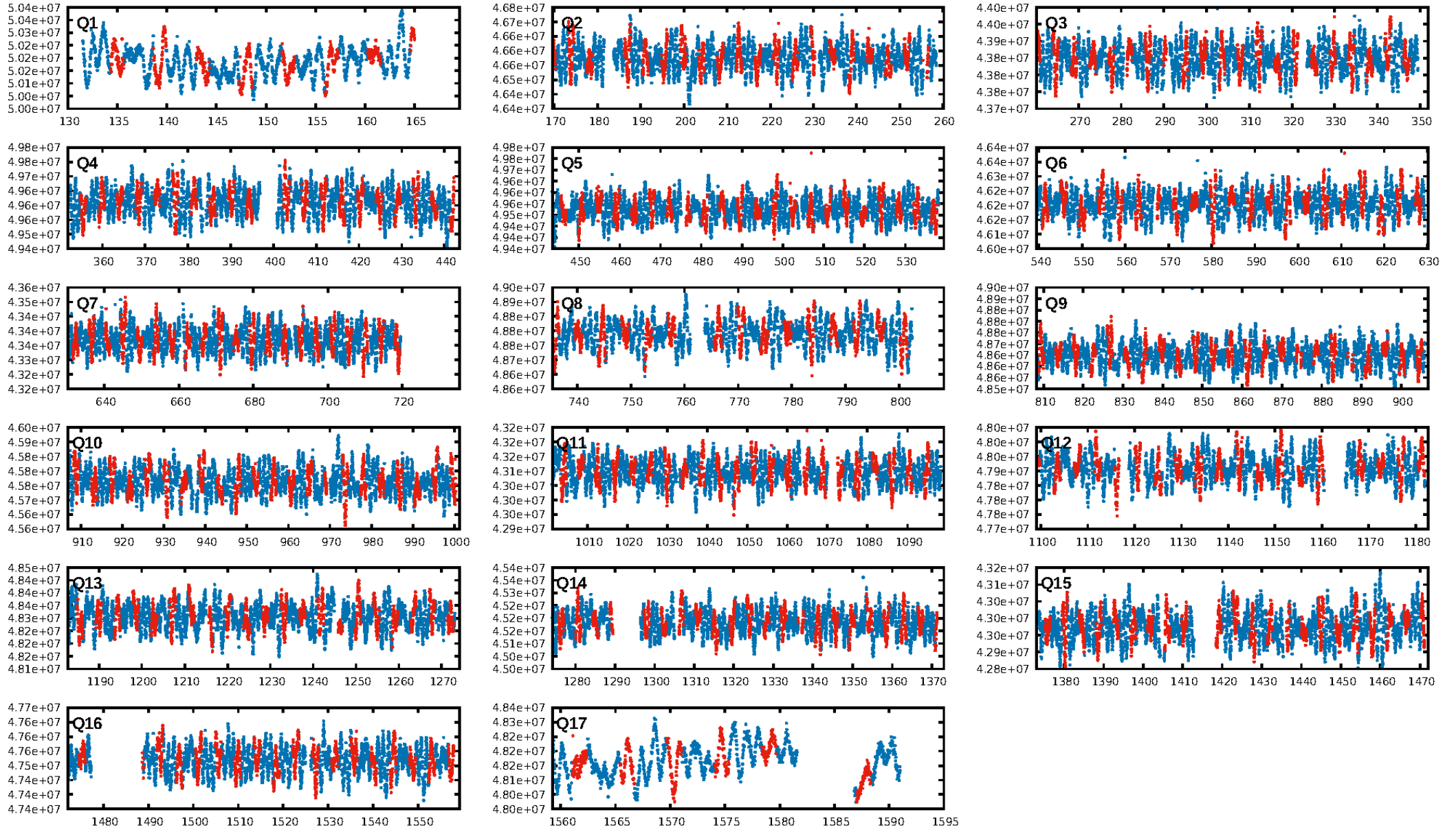
DV Diagnostic Results:

ShortPeriod-sig: 99.6% [2.92σ]
LongPeriod-sig: 100.0% [135.20σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 5.08e-18
RollingBand-fgt: 1.00 [304/304]
GhostDiagnostic-chr: 0.9813
Centroid-sig: 29.0%
Centroid-so: 0.534 arcsec [0.69σ]
OotOffset-rm: 0.867 arcsec [1.18σ]
KicOffset-rm: 0.994 arcsec [1.34σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.53 [9/17]
DiffImageOverlap-fno: 0.00 [0/17]

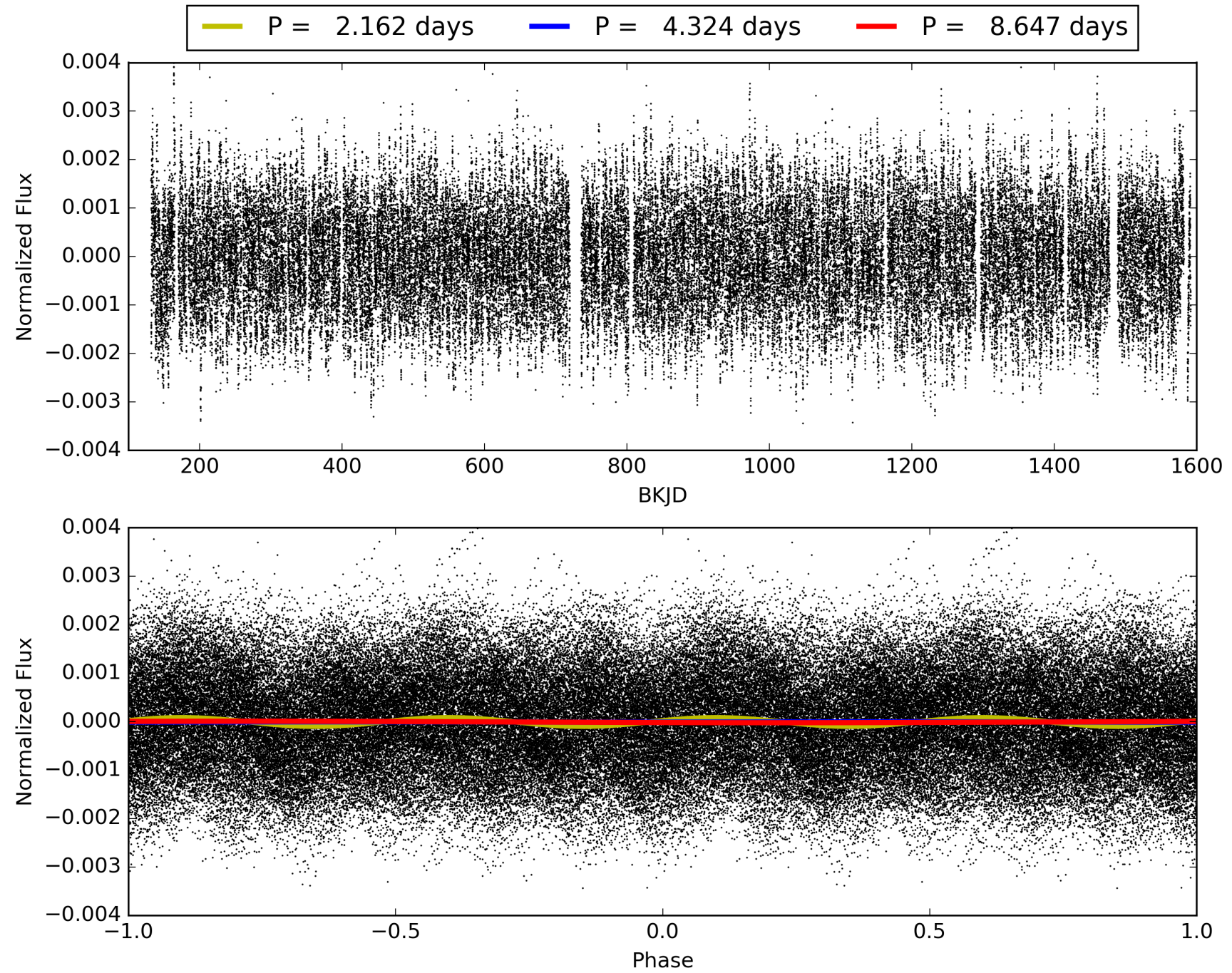
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:05:08 Z

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

TCE 005480766-03, PDC Light Curves

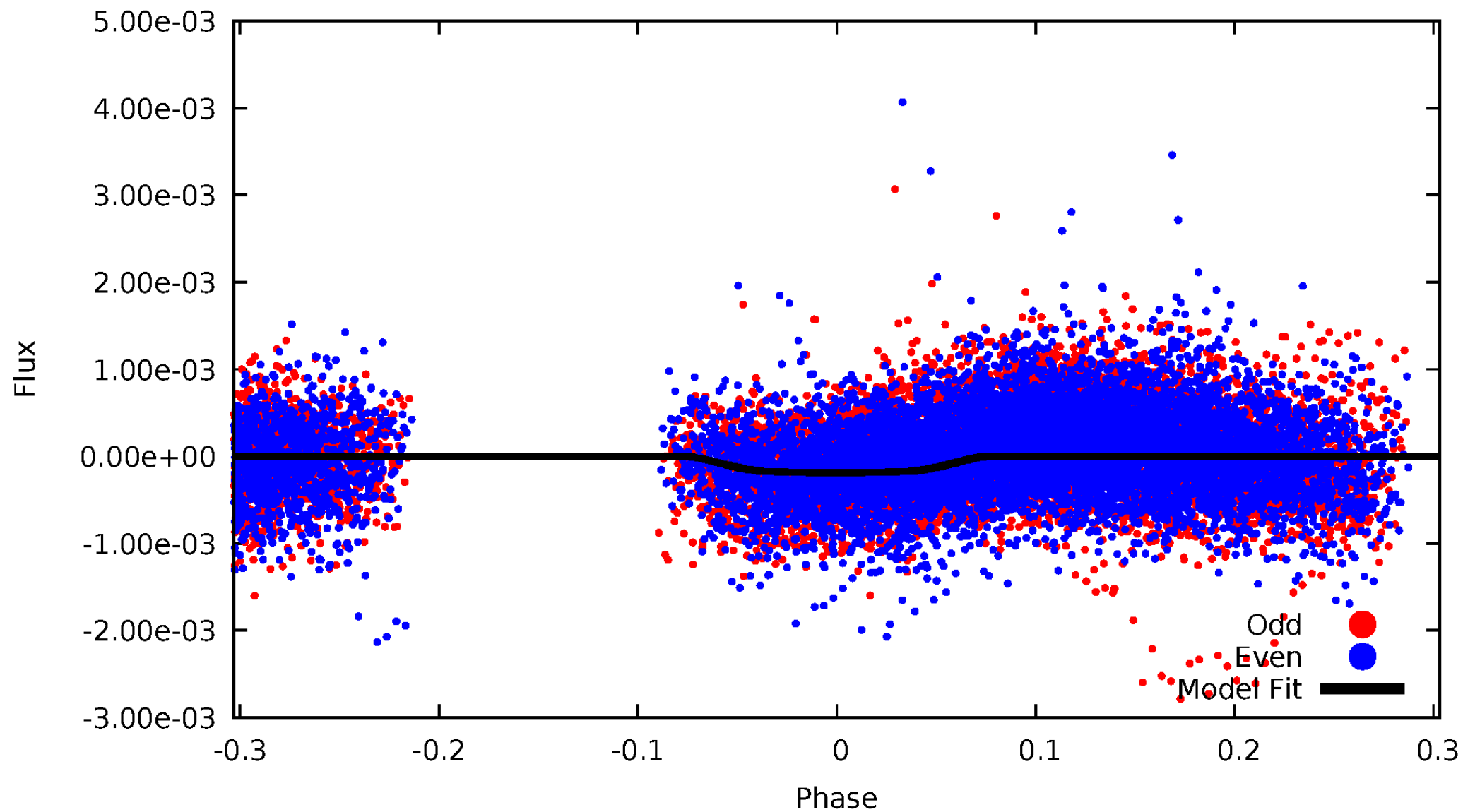


TCE 005480766-03



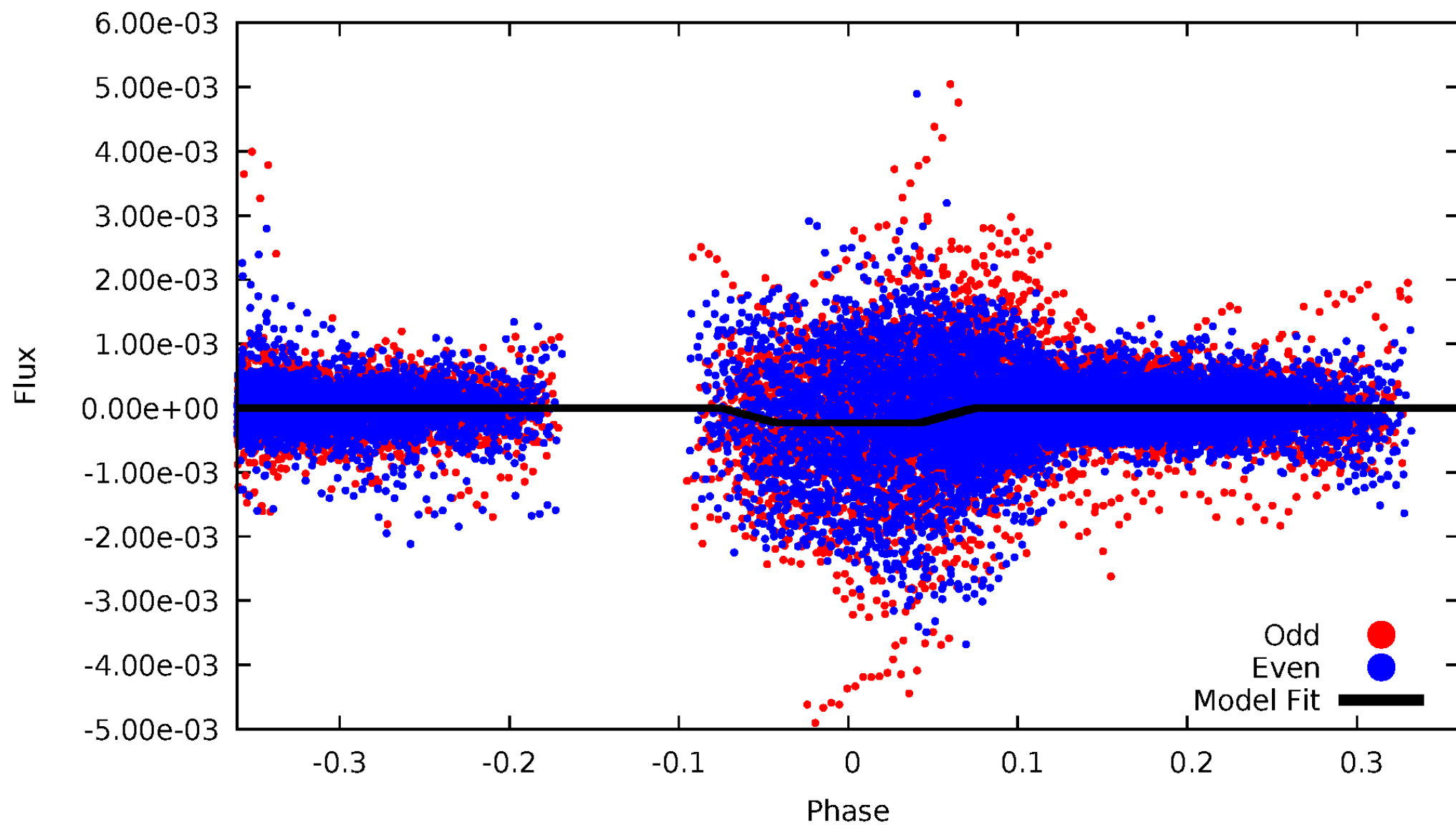
DV Odd/Even

TCE 005480766-03



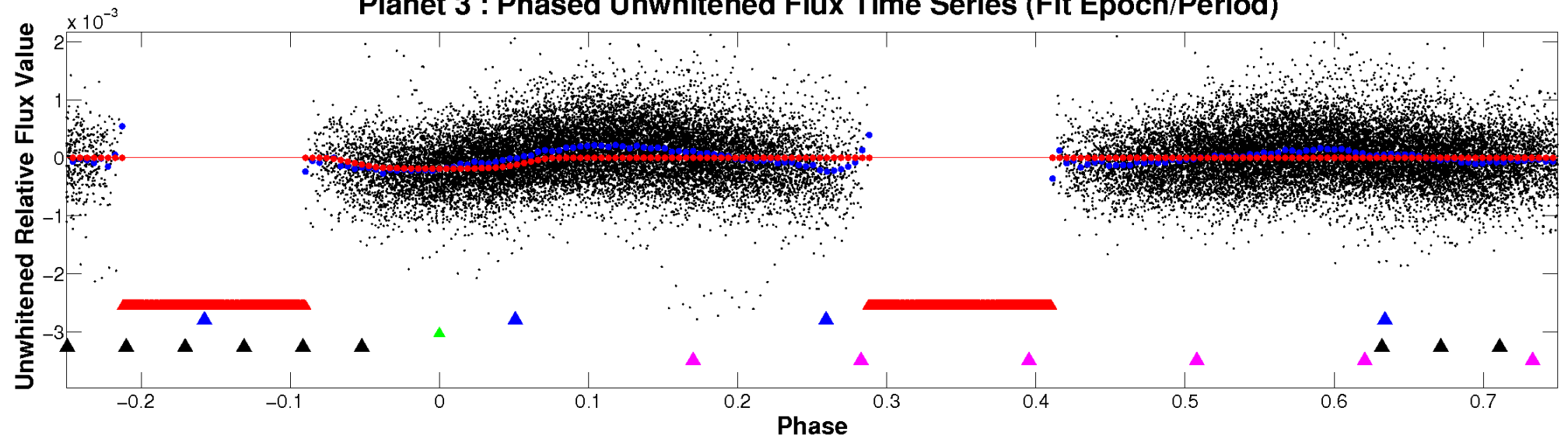
ALT Odd/Even

TCE 005480766-03

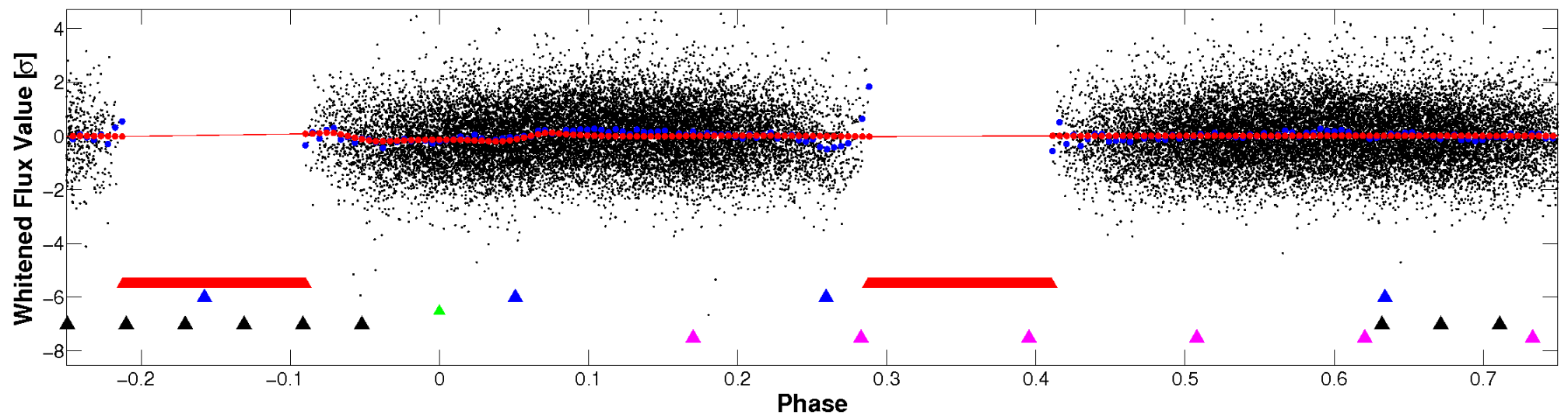


Non-Whitened Vs. Whitened Light Curve

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

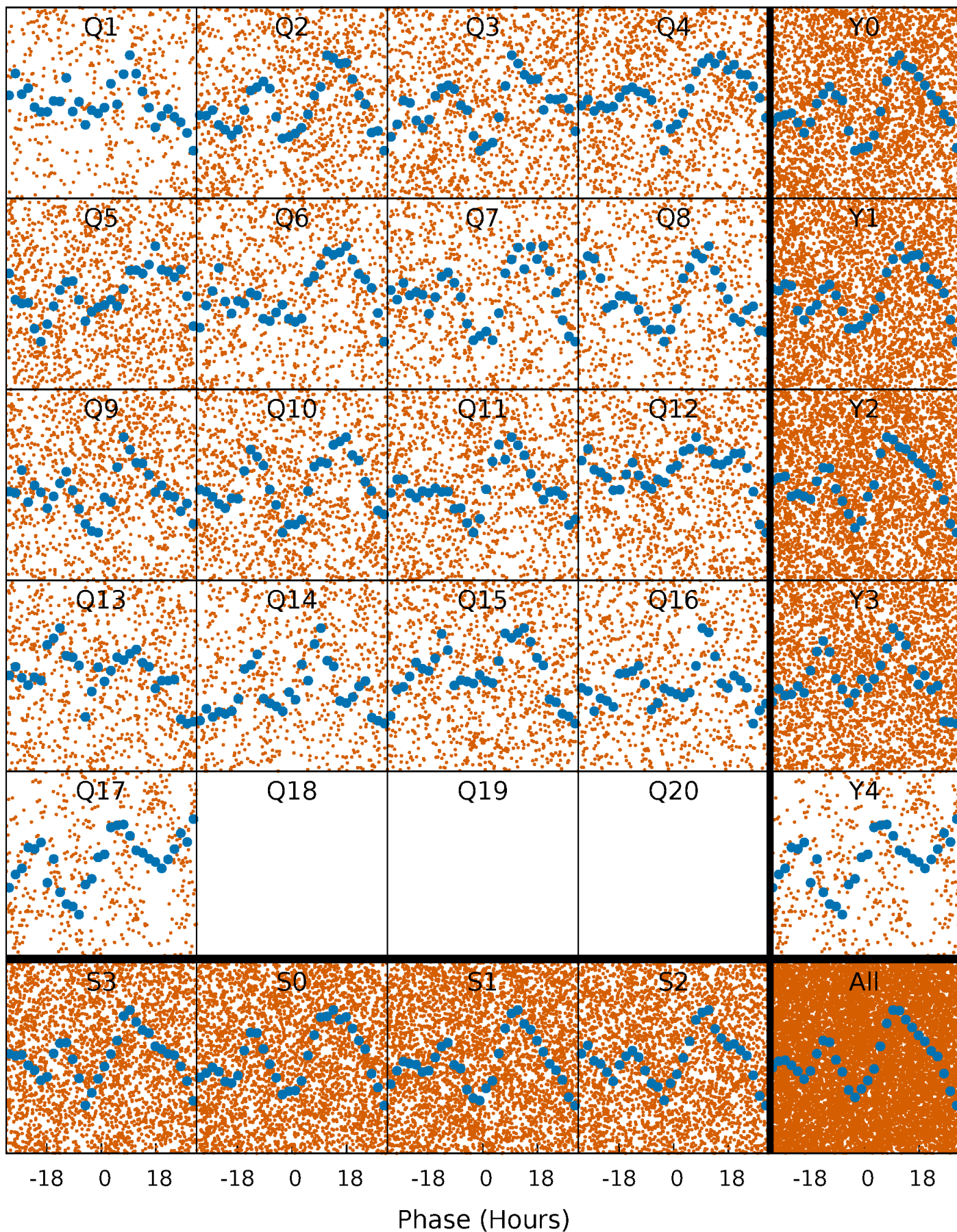


Planet 3 : Phased Whitened Flux Time Series (Fit Epoch/Period)



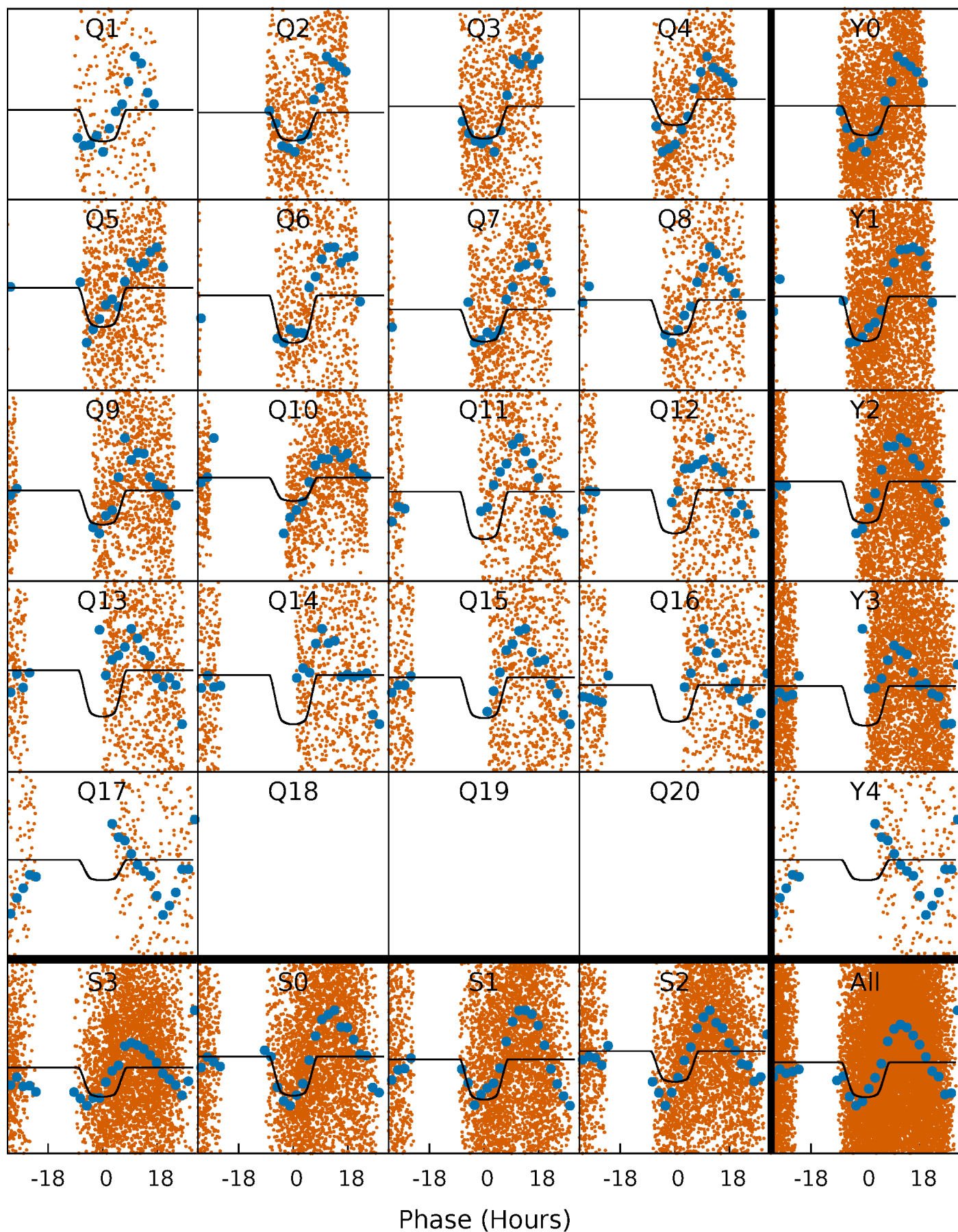
PDC Quarter-Phased Transit Curves

TCE 005480766-03 P= 4.323525 Days $T_0=134.972761$ (BKJD)



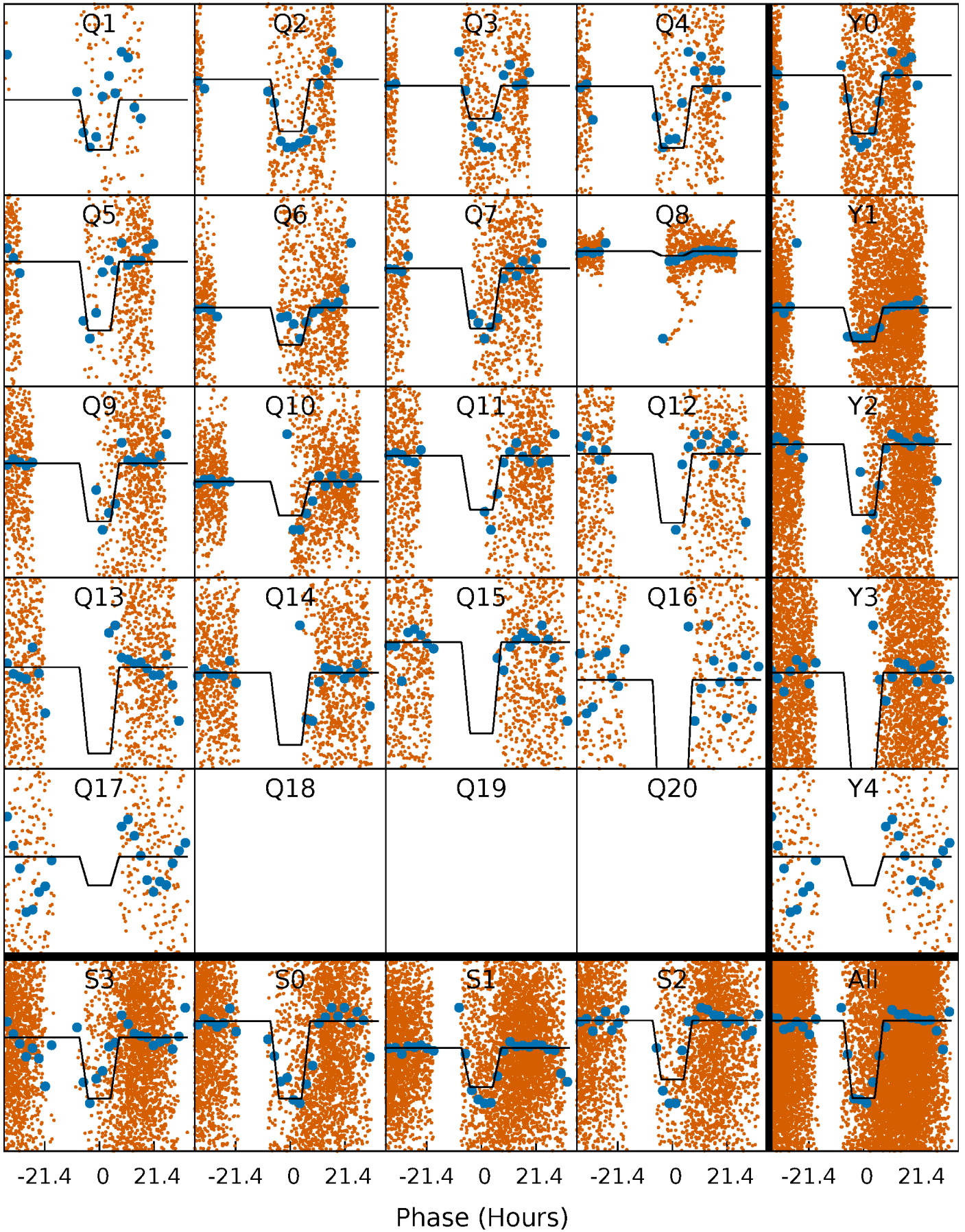
DV Quarter-Phased Transit Curves

TCE 005480766-03 P= 4.323525 Days $T_0=134.972761$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

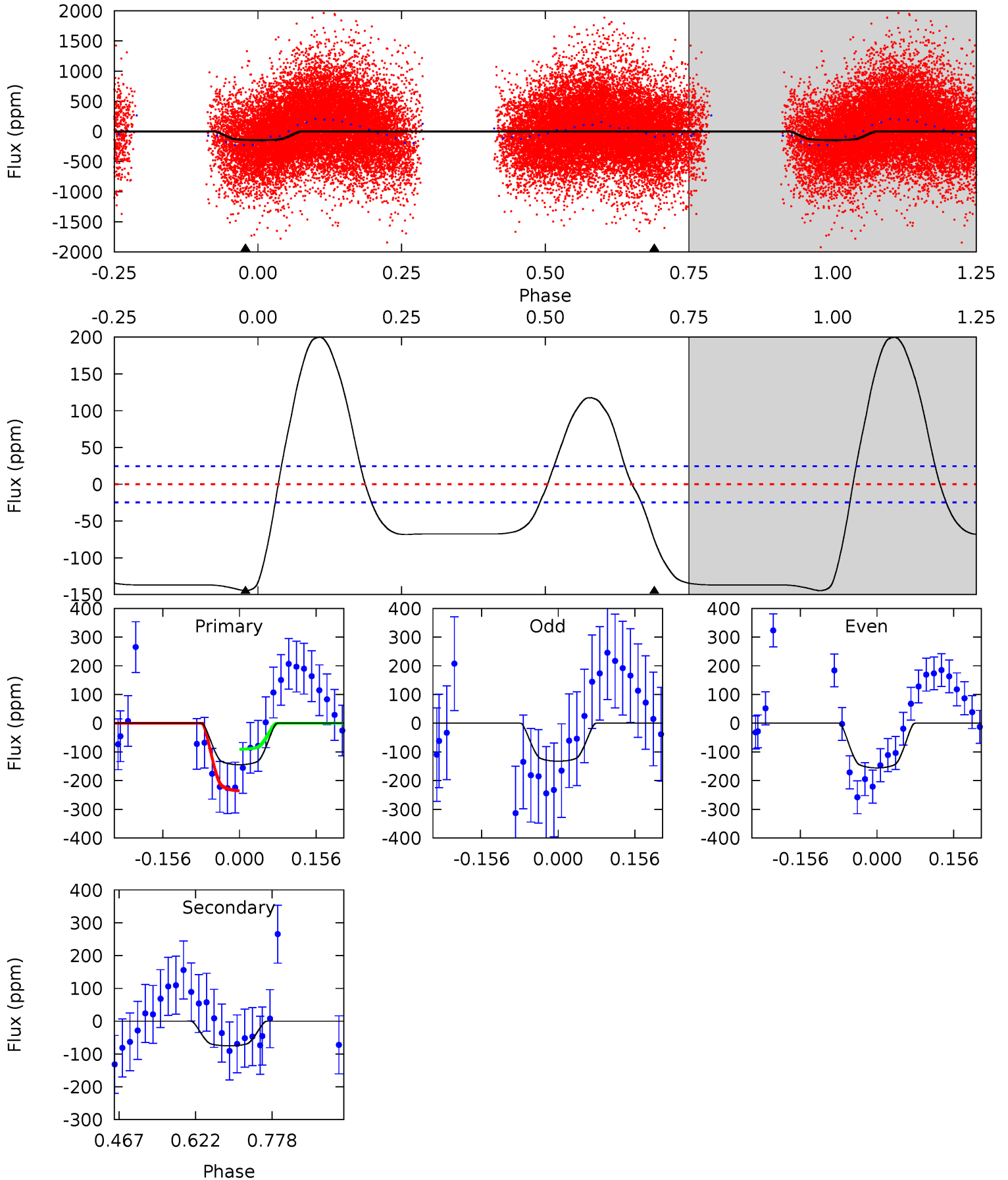
TCE 005480766-03 $P = 4.322872$ Days $T_0 = 134.997549$ (BKJD)



DV Model-Shift Uniqueness Test

005480766-03, P = 4.323525 Days, E = 130.649236 Days

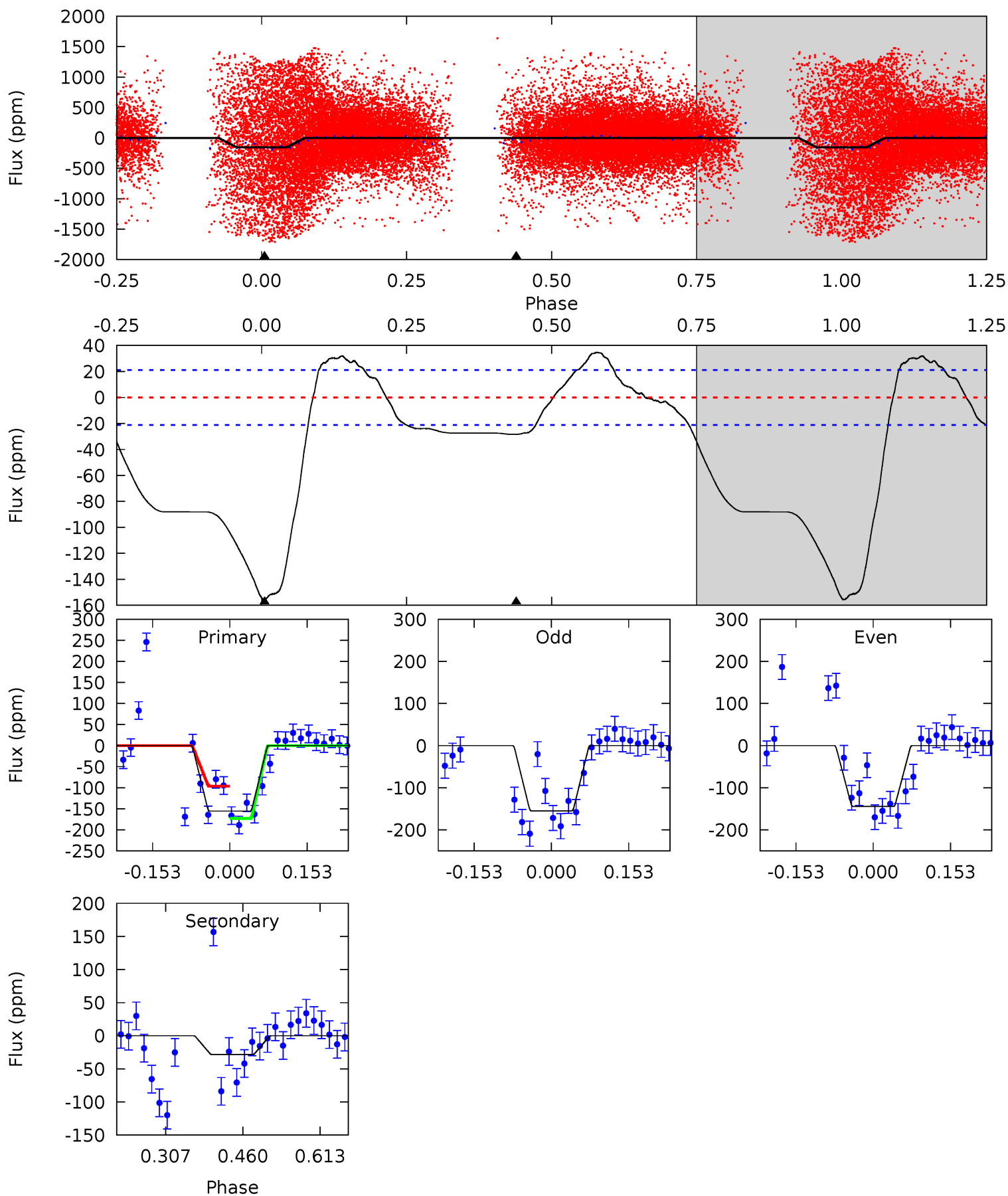
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
26.4	13.7	0	0	4.47	1.42	12.5	26.4	26.4	13.7	13.7	2.14	0.81	0.58	12.7



Alt Model-Shift Uniqueness Test

005480766-03, P = 4.322872 Days, E = 130.674677 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
32.9	6.02	0	0	4.47	1.43	4.85	32.9	32.9	6.02	6.02	1.11	0.66	0.18	7.41



Stellar Parameters For KIC 005480766

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6510^{+155}_{-214}	$4.434^{+0.062}_{-0.188}$	$-0.380^{+0.250}_{-0.350}$	$1.048^{+0.296}_{-0.127}$	$1.086^{+0.146}_{-0.146}$	$1.329^{+0.433}_{-0.671}$
	+2%/-3%	+1%/-4%	+66%/-92%	+28%/-12%	+13%/-13%	+33%/-50%
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 005480766-03 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-75 ± 5	$1.91^{+0.31}_{-0.20}$	1808^{+124}_{-95}	4845^{+164}_{-175}	32^{+7}_{-7}
Alt.	-28 ± 5	$1.79^{+0.27}_{-0.19}$	1807^{+121}_{-88}	4104^{+182}_{-174}	13^{+4}_{-4}

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

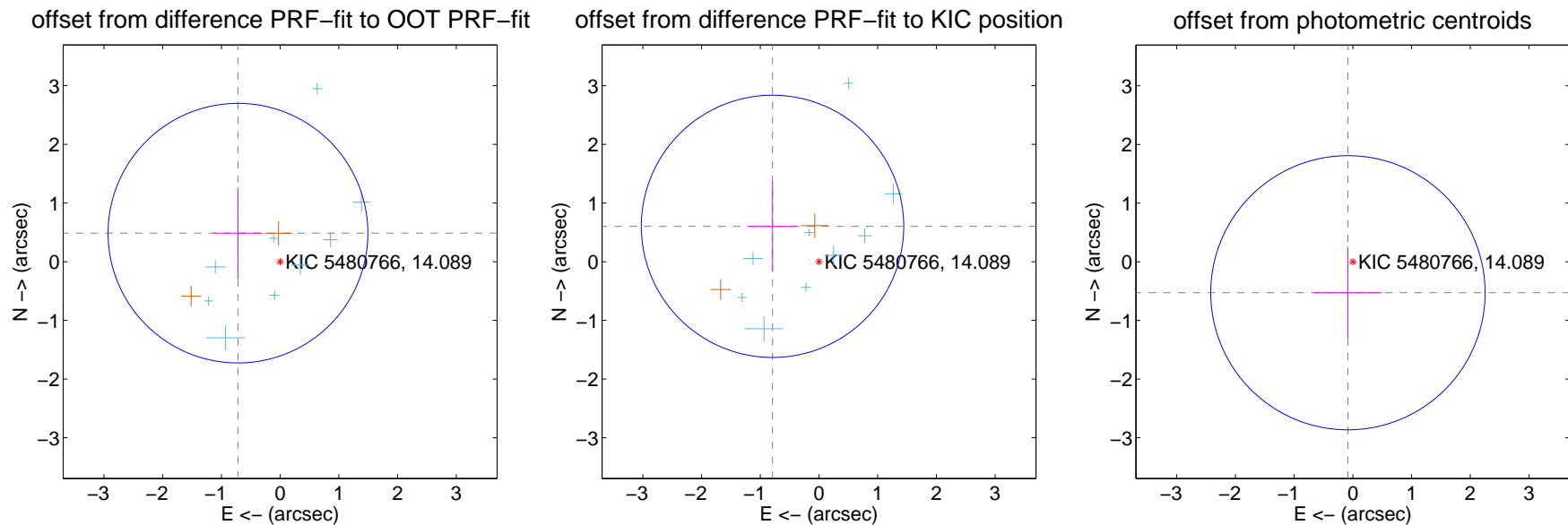
DV Centroid Data

Supplemental centroid analysis for 005480766-03. Kepler magnitude: 14.09. Transit SNR 12.24

There are 9 quarters with good PRF difference image offsets

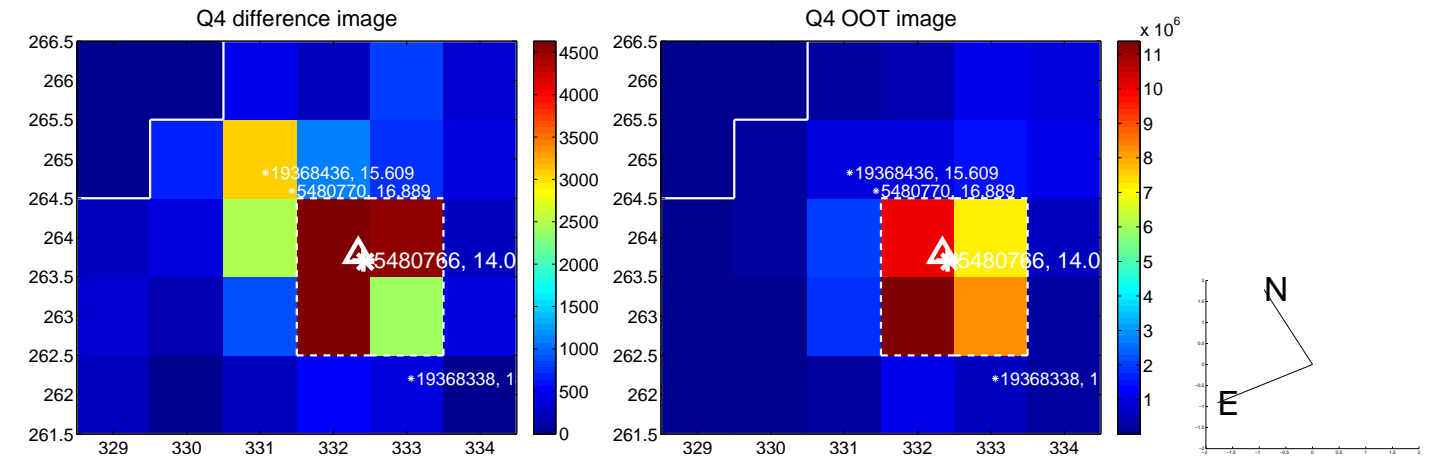
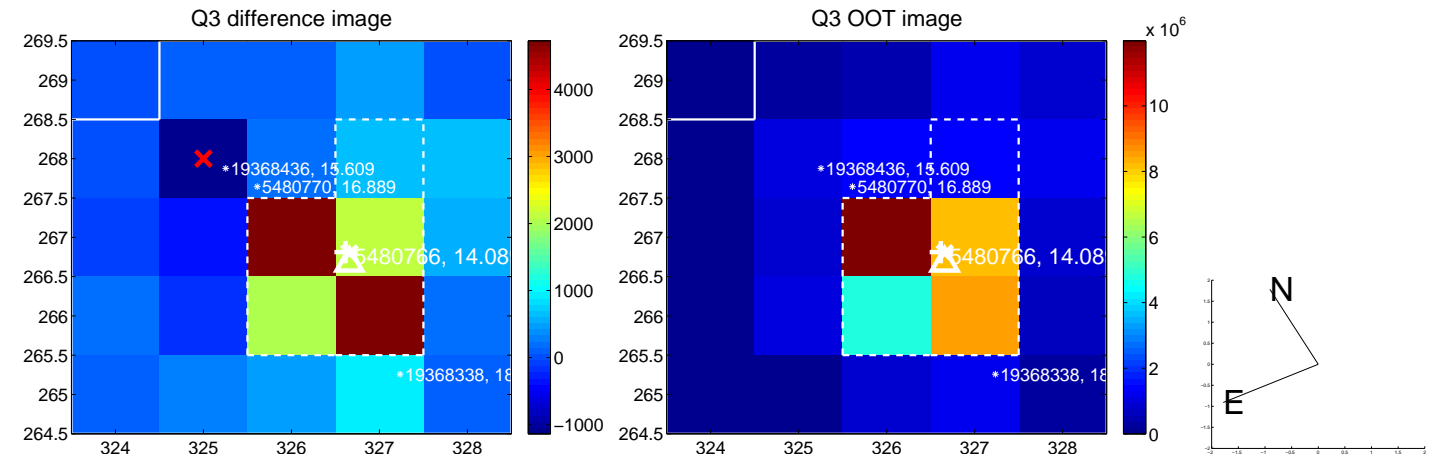
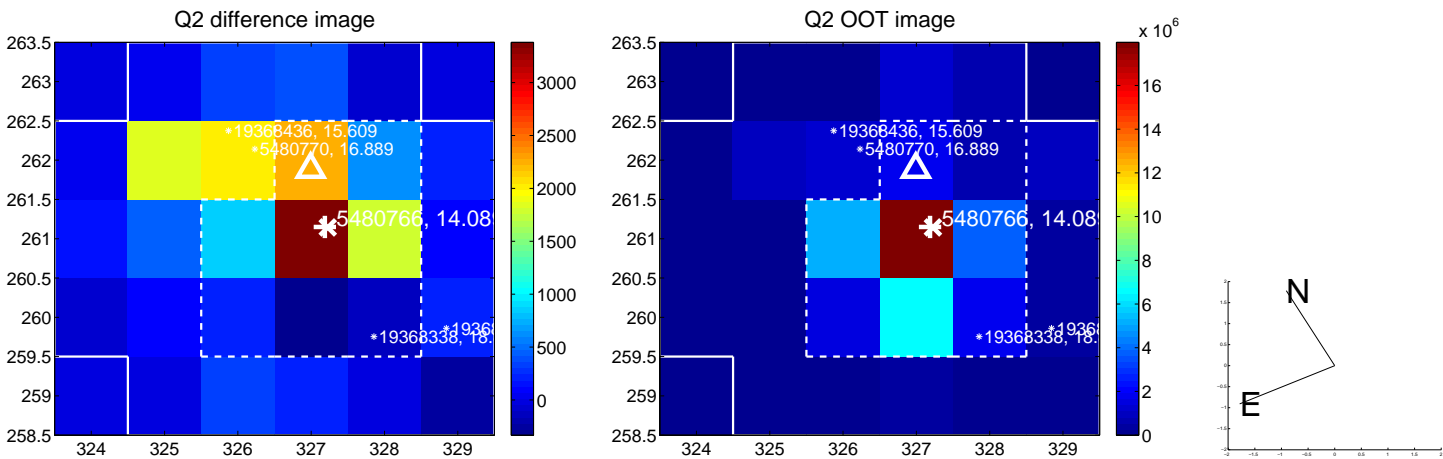
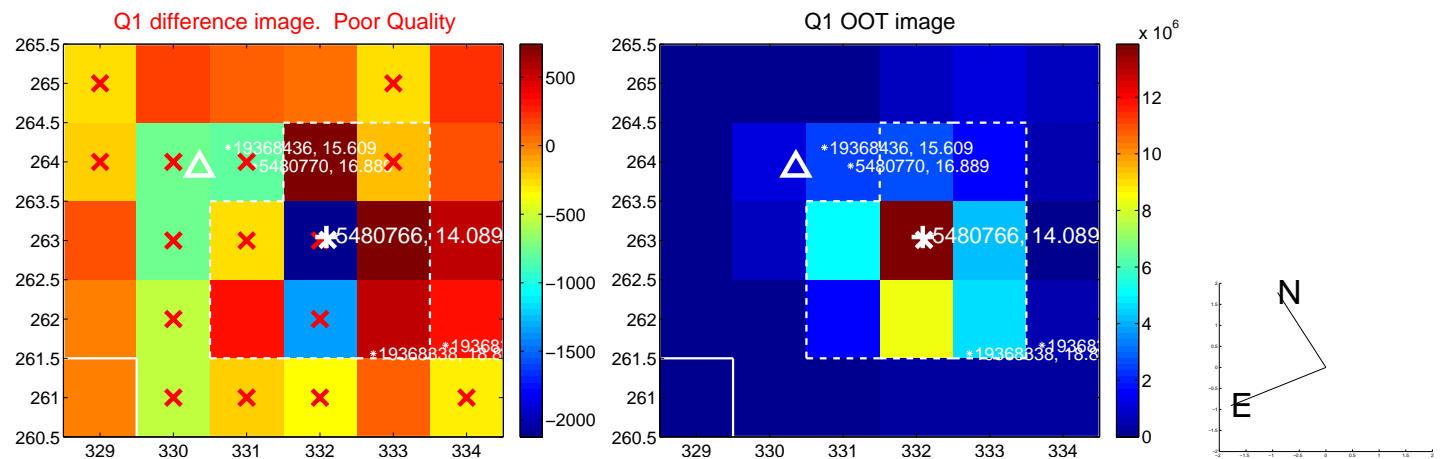
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.867 ± 0.737	1.18	0.718 ± 0.417	0.486 ± 0.775
PRF-fit source offset from KIC position	0.994 ± 0.745	1.34	0.791 ± 0.414	0.603 ± 0.766
photometric centroid source offset	0.53 ± 0.78	0.69	0.08 ± 0.57	-0.53 ± 0.78

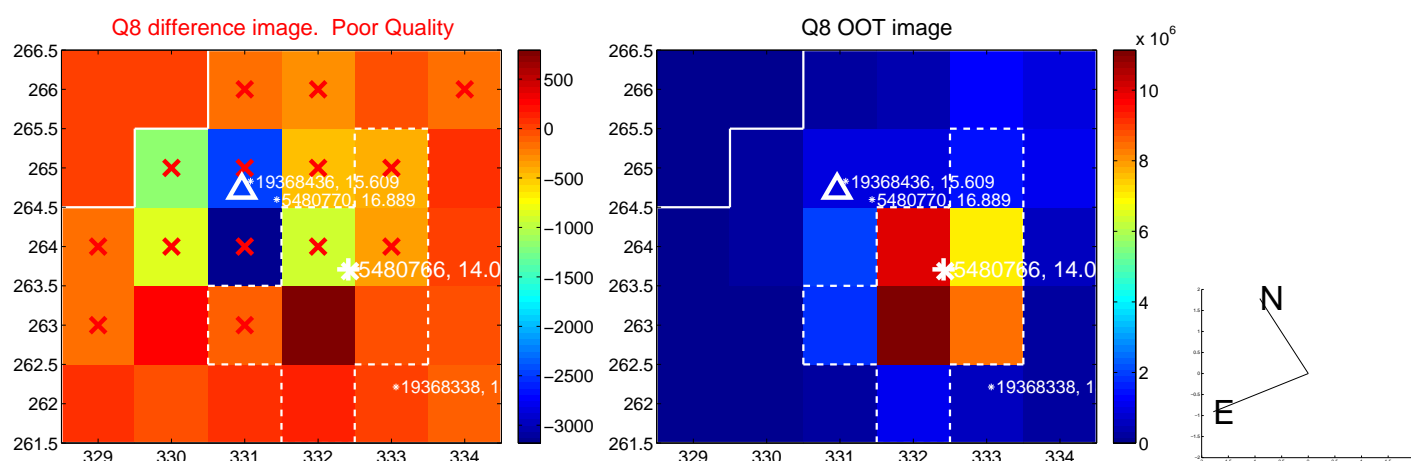
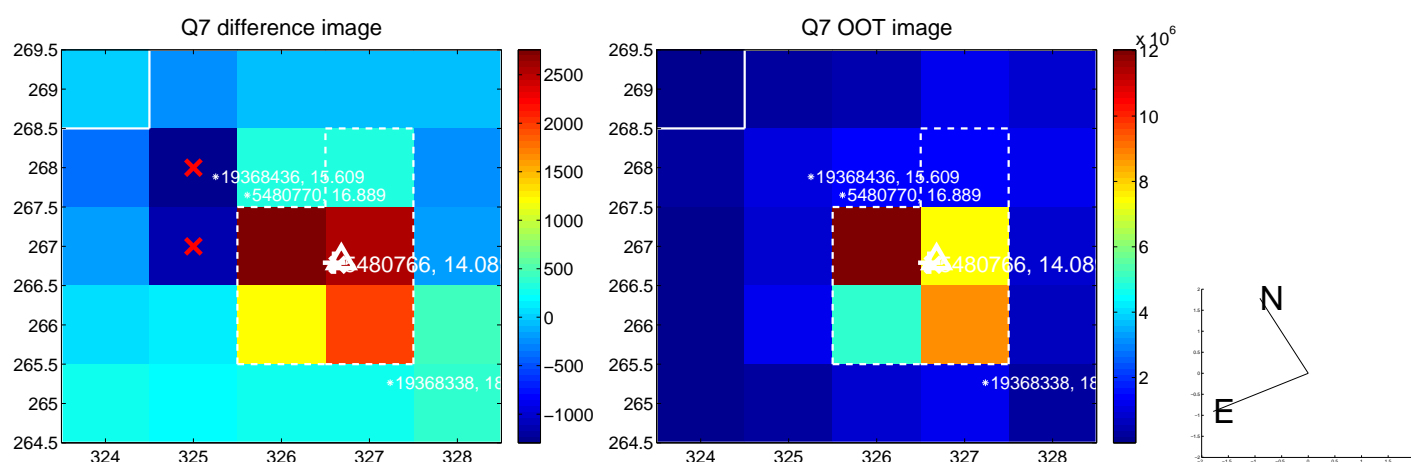
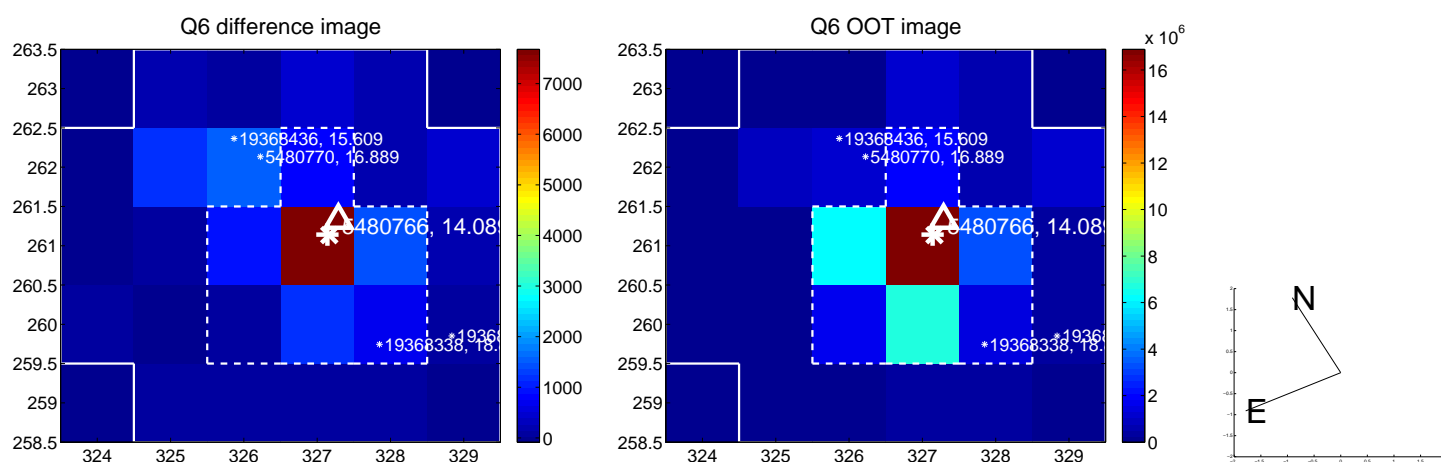
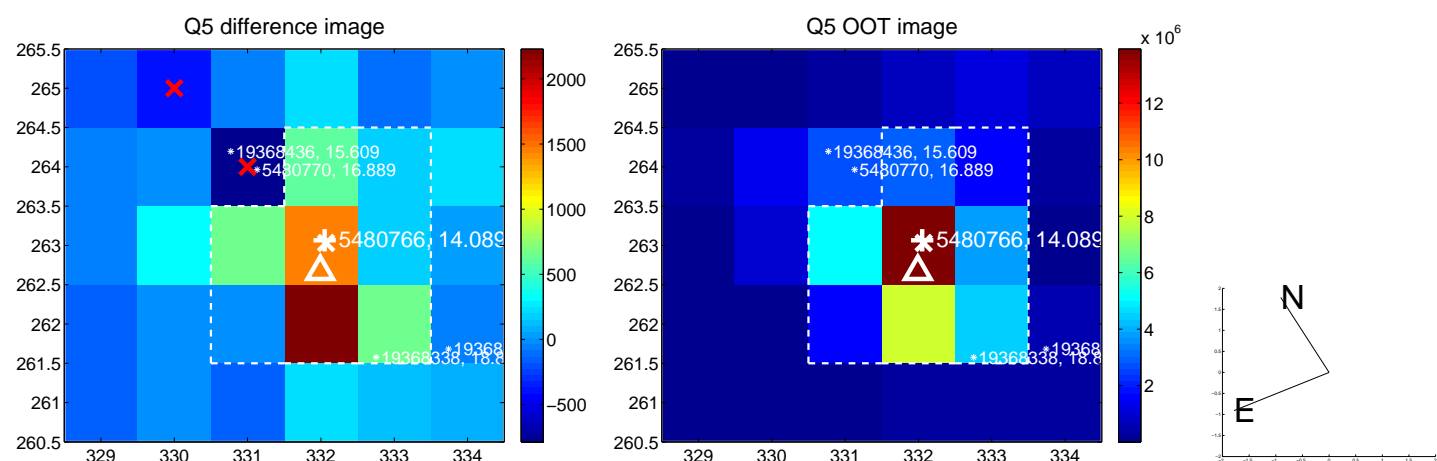


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

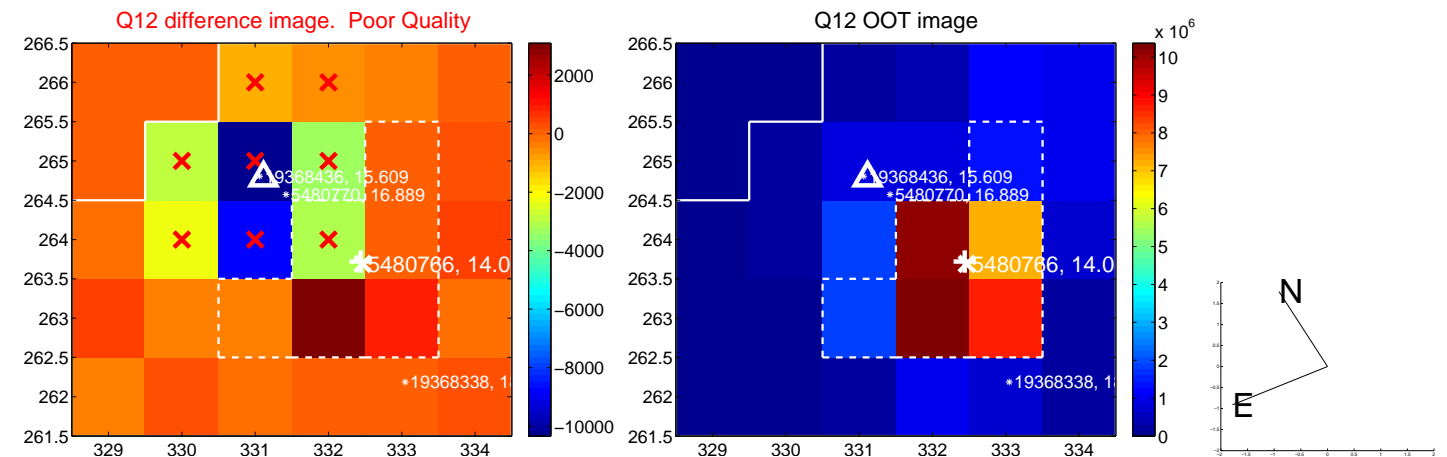
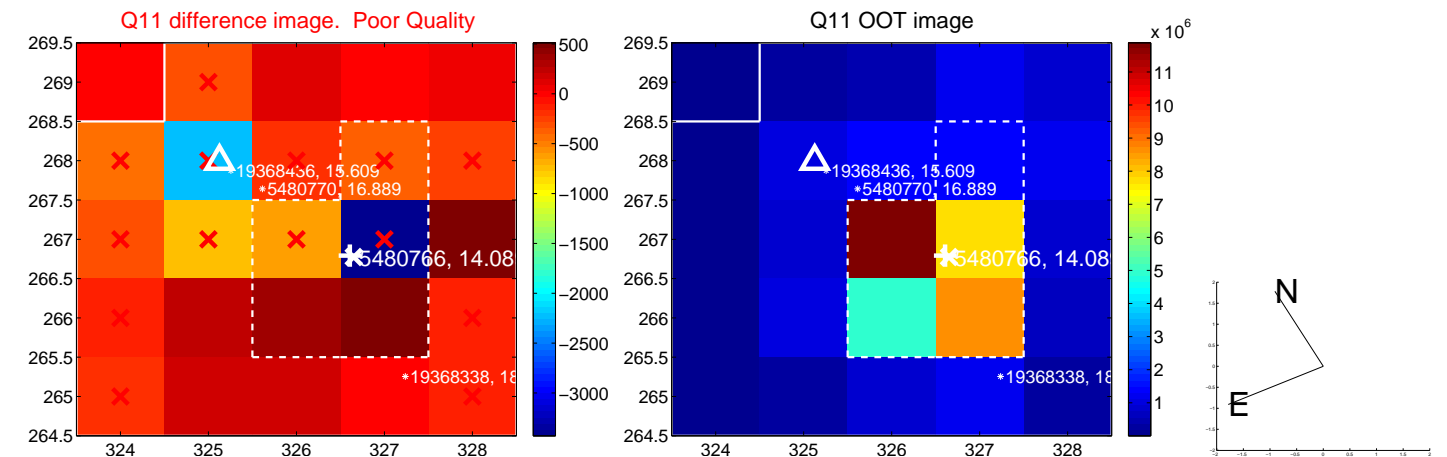
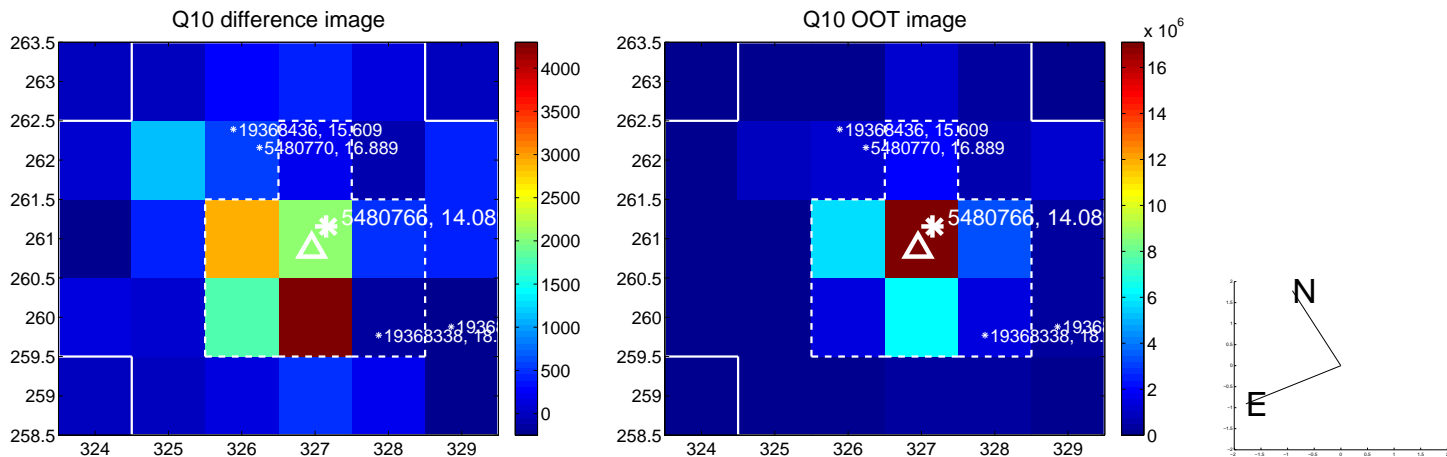
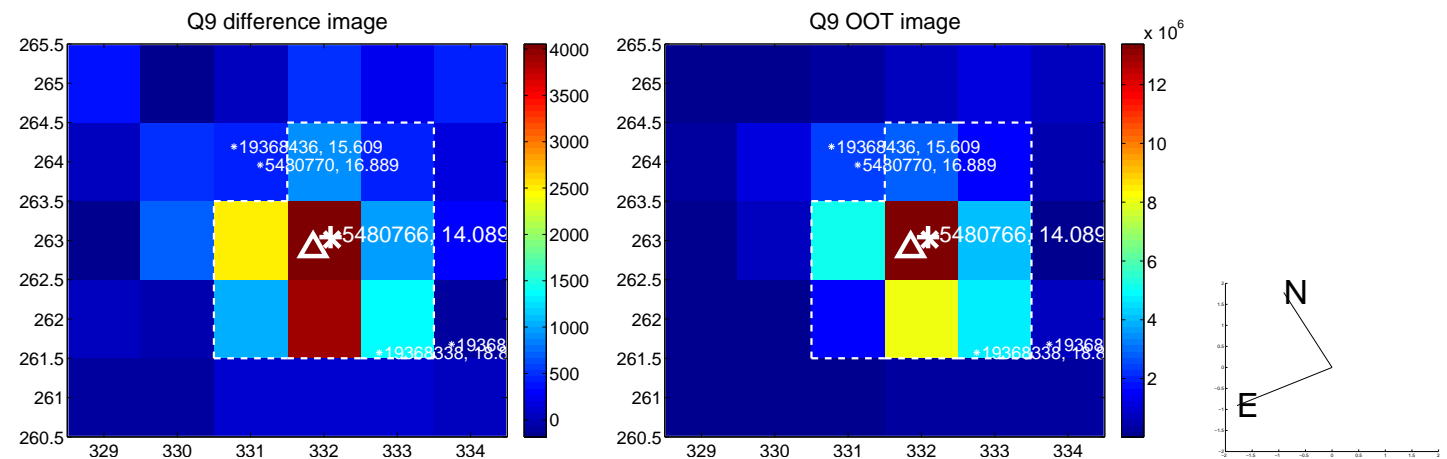
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



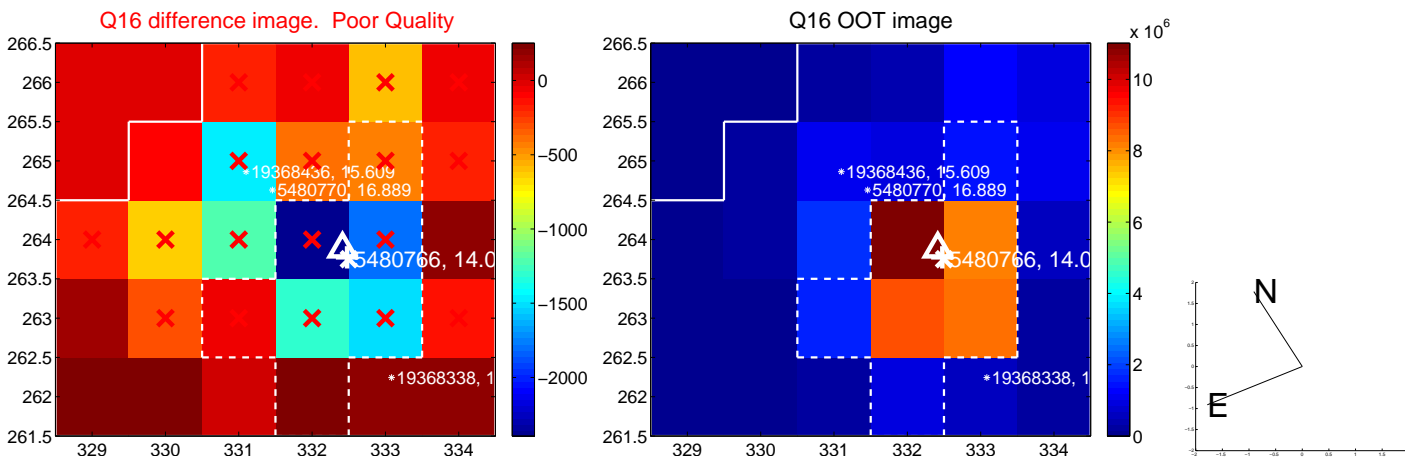
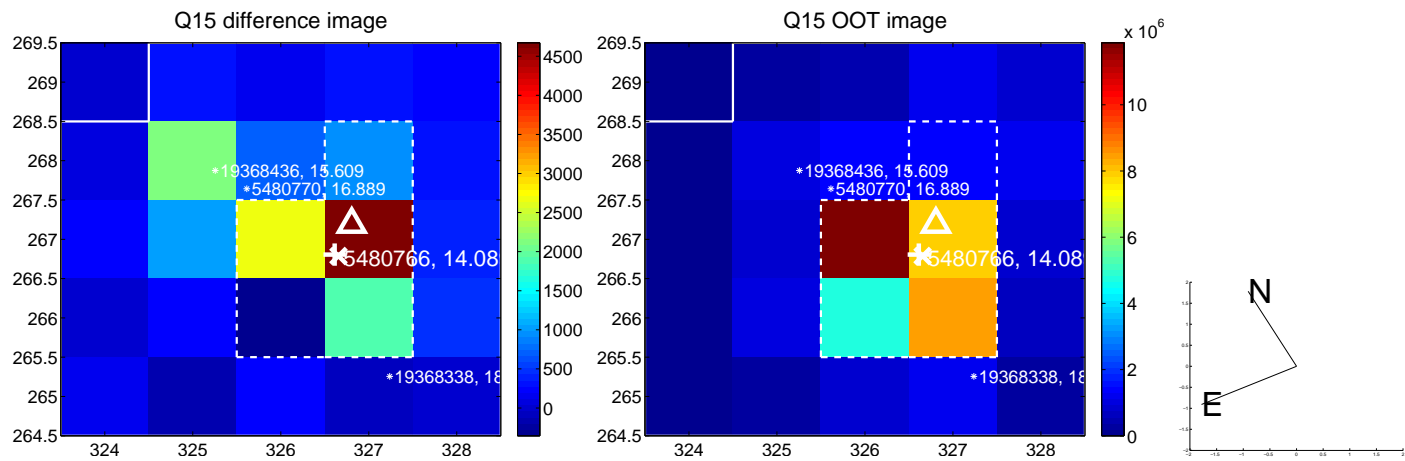
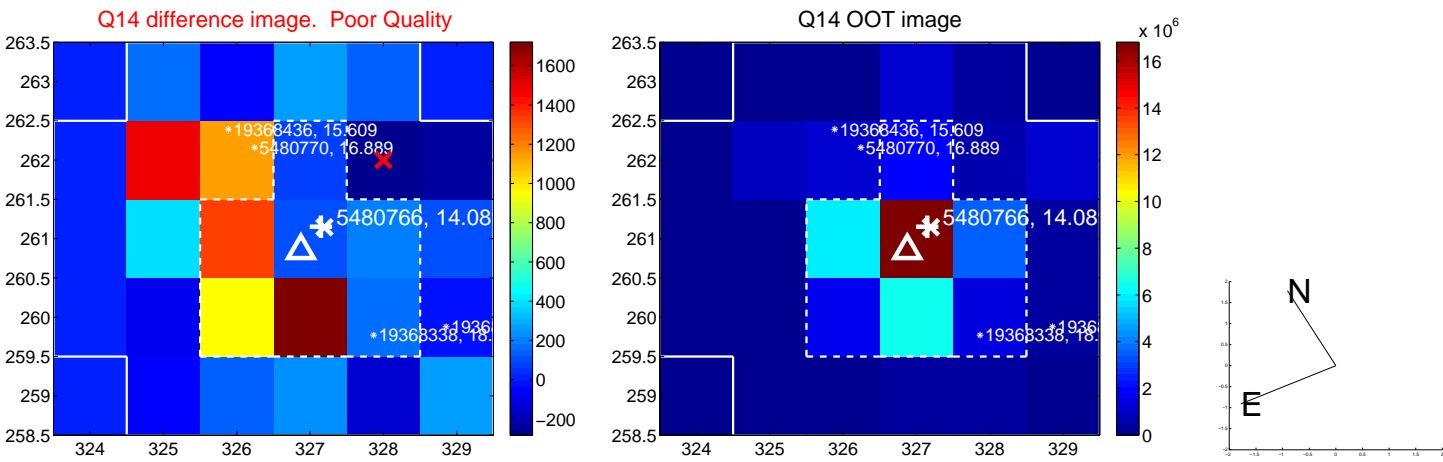
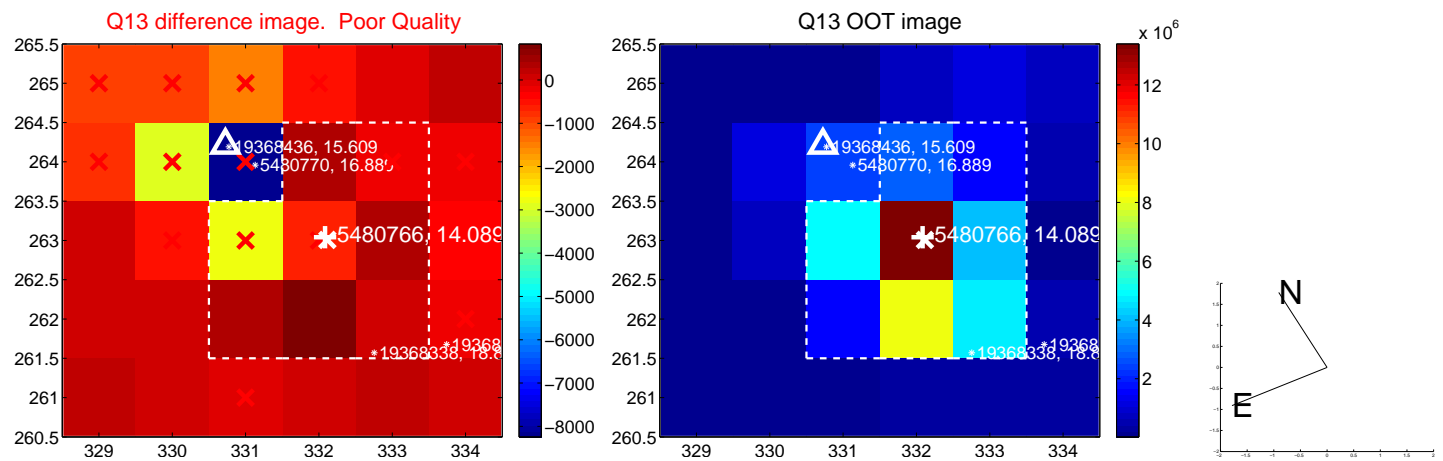
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



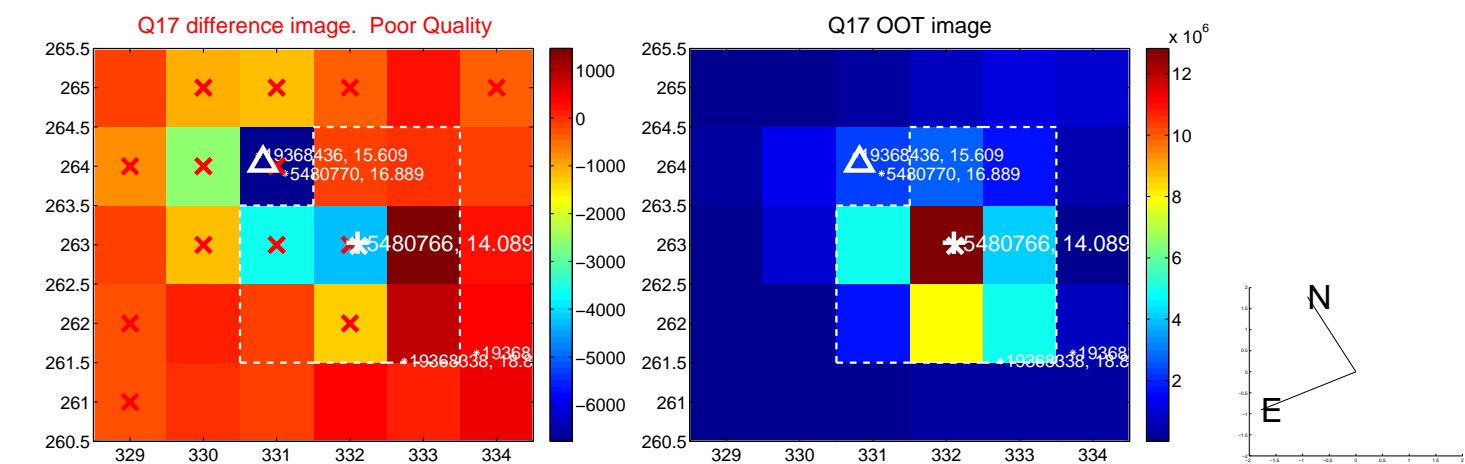
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



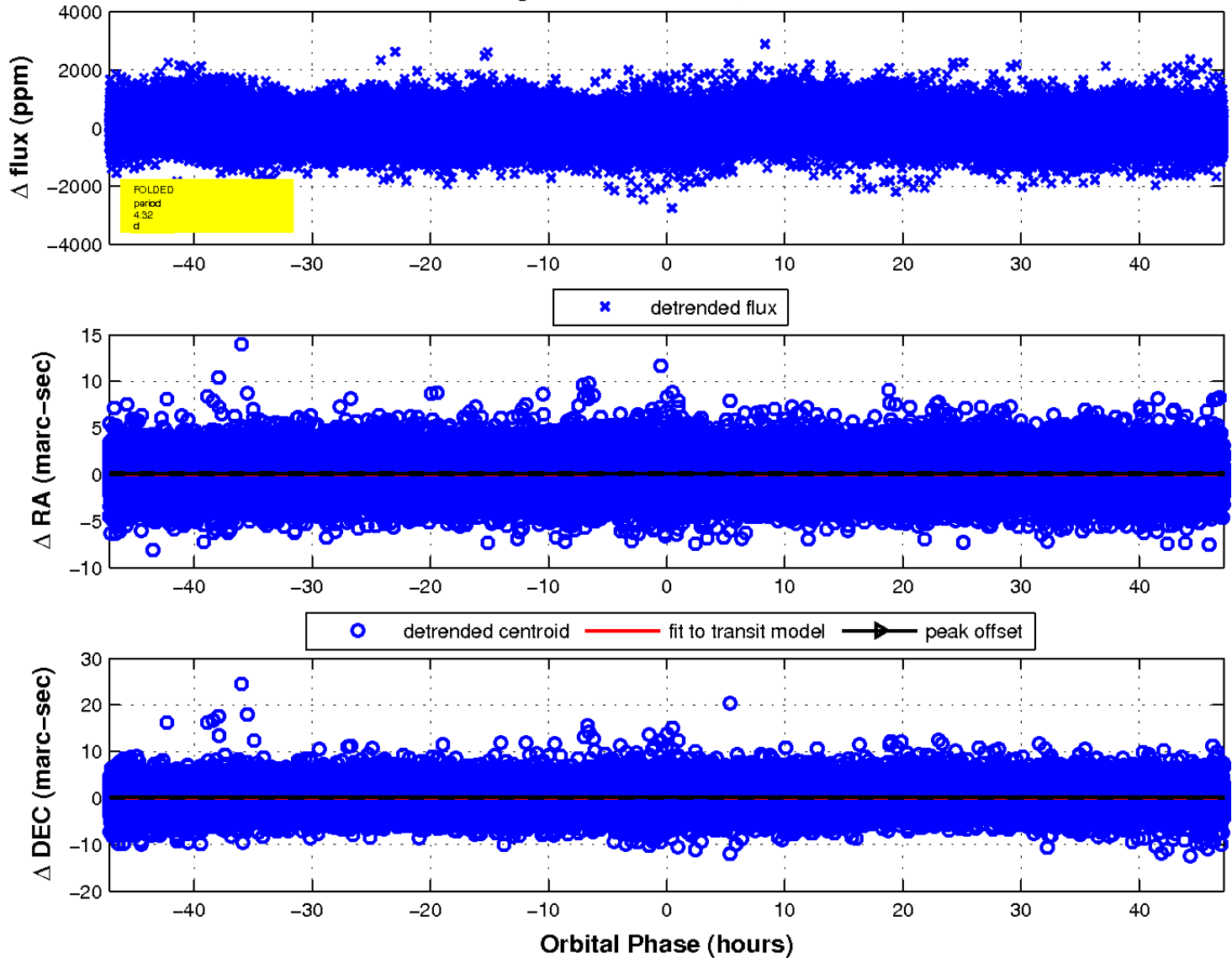
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



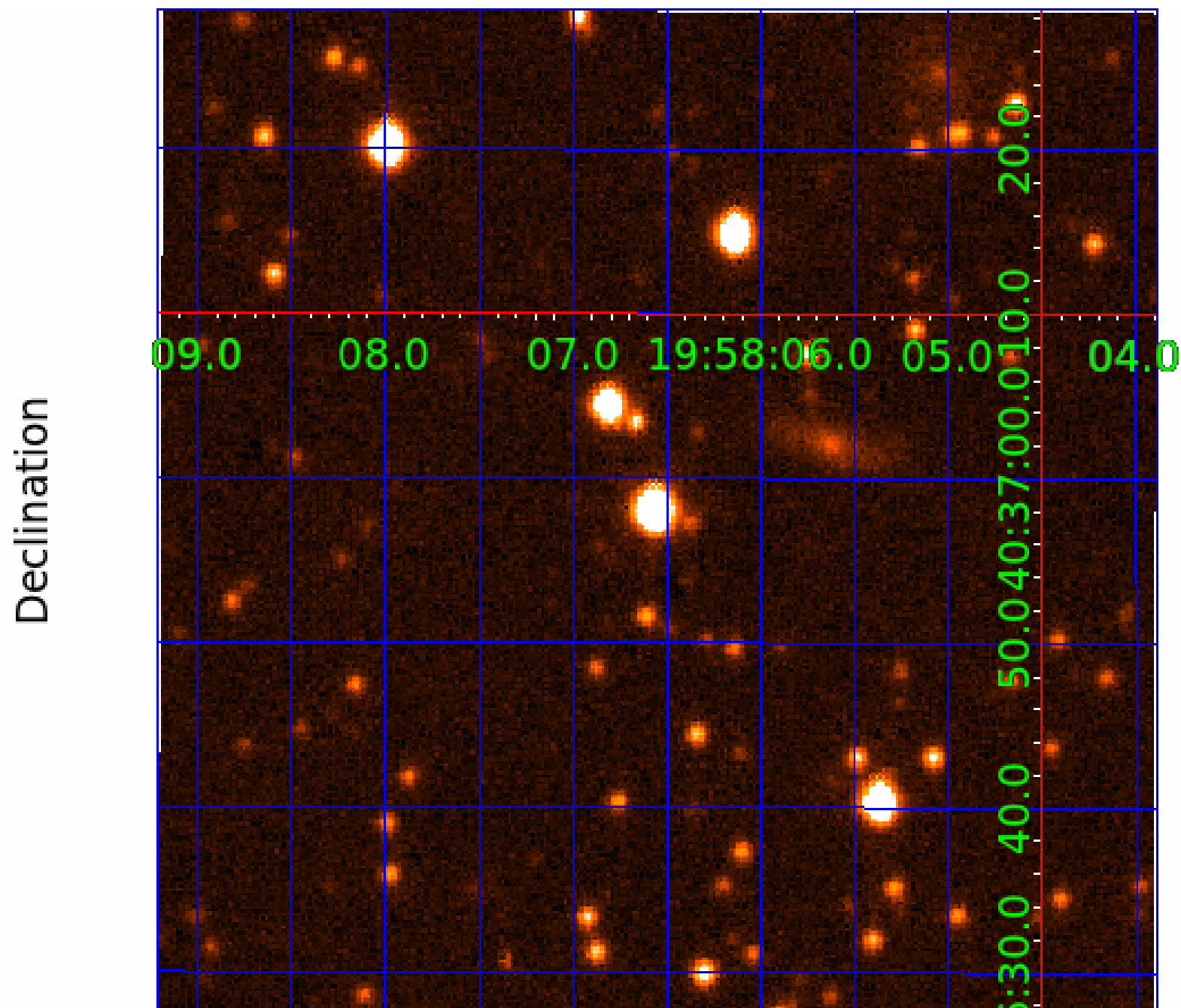
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



fluxWeightedCentroids, Planet 3 of 5



UKIRT Image



KIC 005480766

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})
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005480766-02	OBS	No	366.598512	149.064621	524.6	5.595	19.4	3.8	1.05	6510	3.15	1.66
005480766-03	OBS	No	4.323525	134.972761	186.9	15.721	12.0	12.2	1.05	6510	1.85	618.98
005480766-04	OBS	No	159.799677	182.306776	946.9	22.686	7.6	7.6	1.05	6510	4.40	5.03
005480766-05	OBS	No	264.221815	183.267372	988.1	19.862	7.4	7.0	1.05	6510	4.17	2.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005480766-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
005480766-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005480766-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

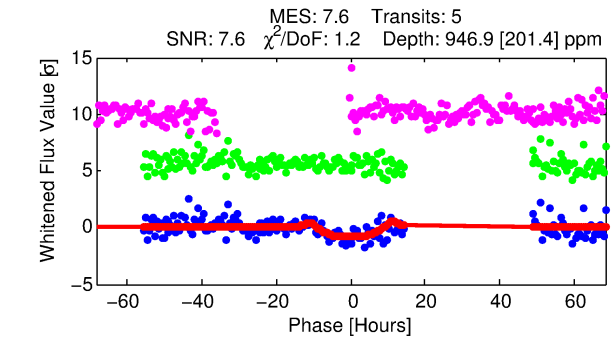
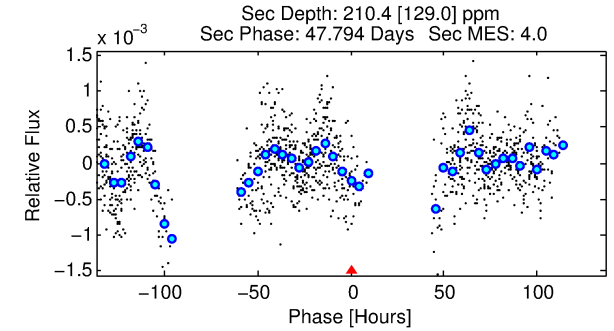
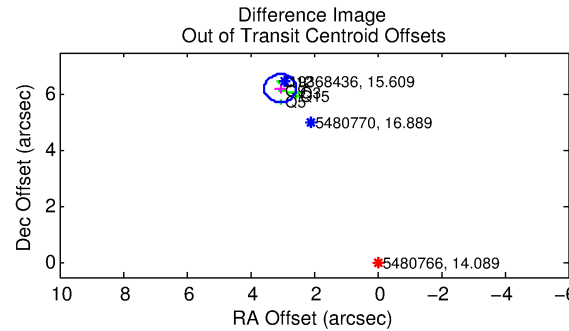
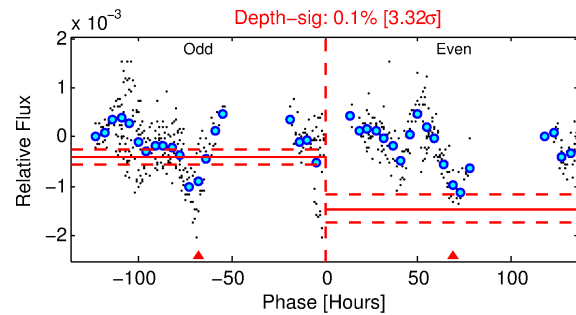
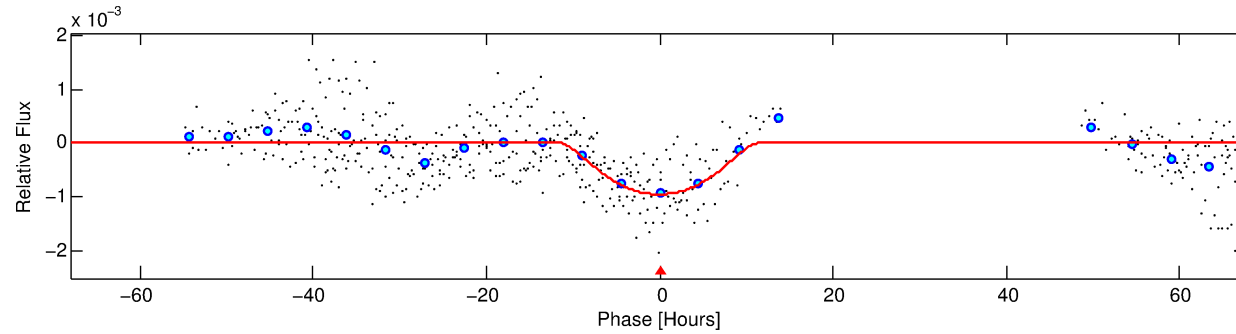
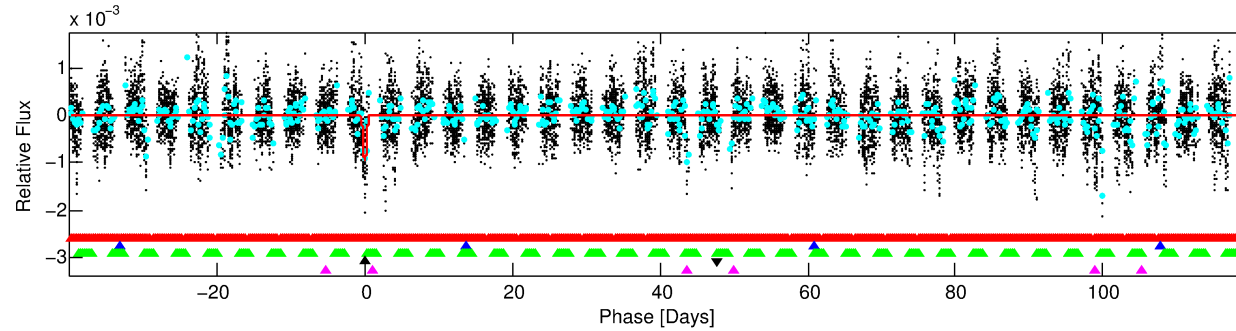
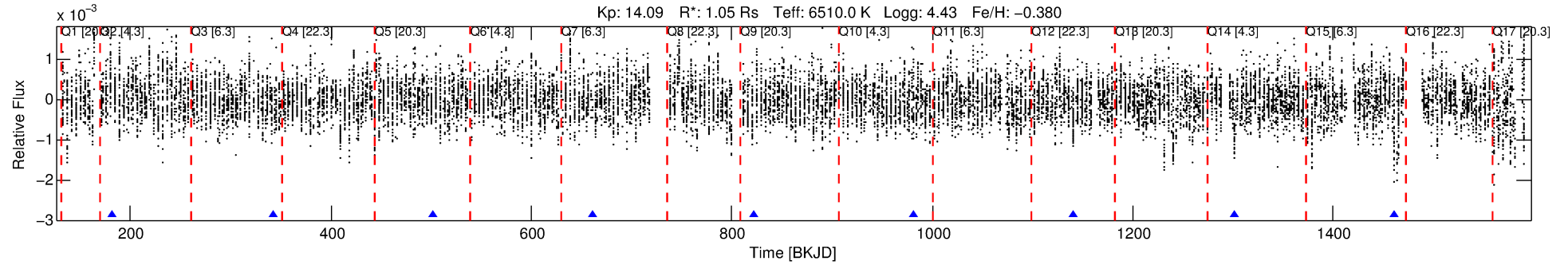
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005480766-04

No Significant Match Found

DV One-Page Summary

KIC: 5480766 Candidate: 4 of 5 Period: 159.800 d



DV Fit Results:

Period = 159.79968 [0.02119] d
Epoch = 182.3068 [0.1478] BKJD
Rp/R* = 0.0385 [0.0140]
a/R* = 19.51 [3.82]
b = 0.97 [0.03]
Seff = 5.03 [1.85]
Teq = 382 [35] K
Rp = 4.40 [2.02] Re
a = 0.5929 [0.1407] AU
Ag = 2100.95 [2123.89] [0.99σ]
Teff = 3997 [959] K [3.77σ]

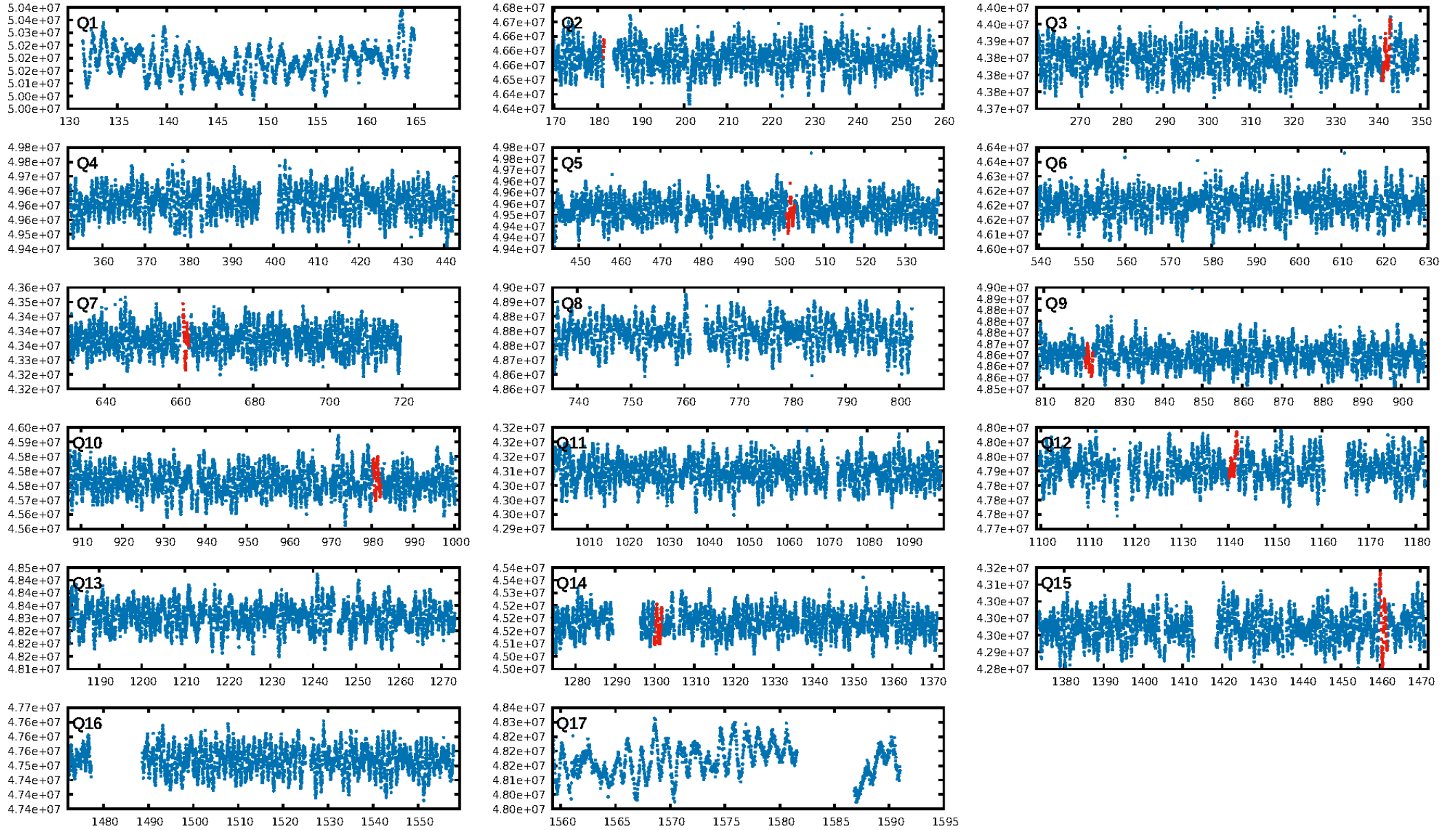
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [135.20σ]
LongPeriod-sig: 100.0% [83.12σ]
ModelChiSquare2-sig: 11.4%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.03e-07
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 6.865
Centroid-sig: 0.6%
Centroid-so: 1.490 arcsec [1.49σ]
OotOffset-rm: 6.926 arcsec [41.52σ]
KicOffset-rm: 7.056 arcsec [43.76σ]
OotOffset-st: 0/2/1/2 [5]
KicOffset-st: 0/2/1/2 [5]
DiffImageQuality-fgm: 0.40 [2/5]
DiffImageOverlap-fno: 0.00 [0/7]

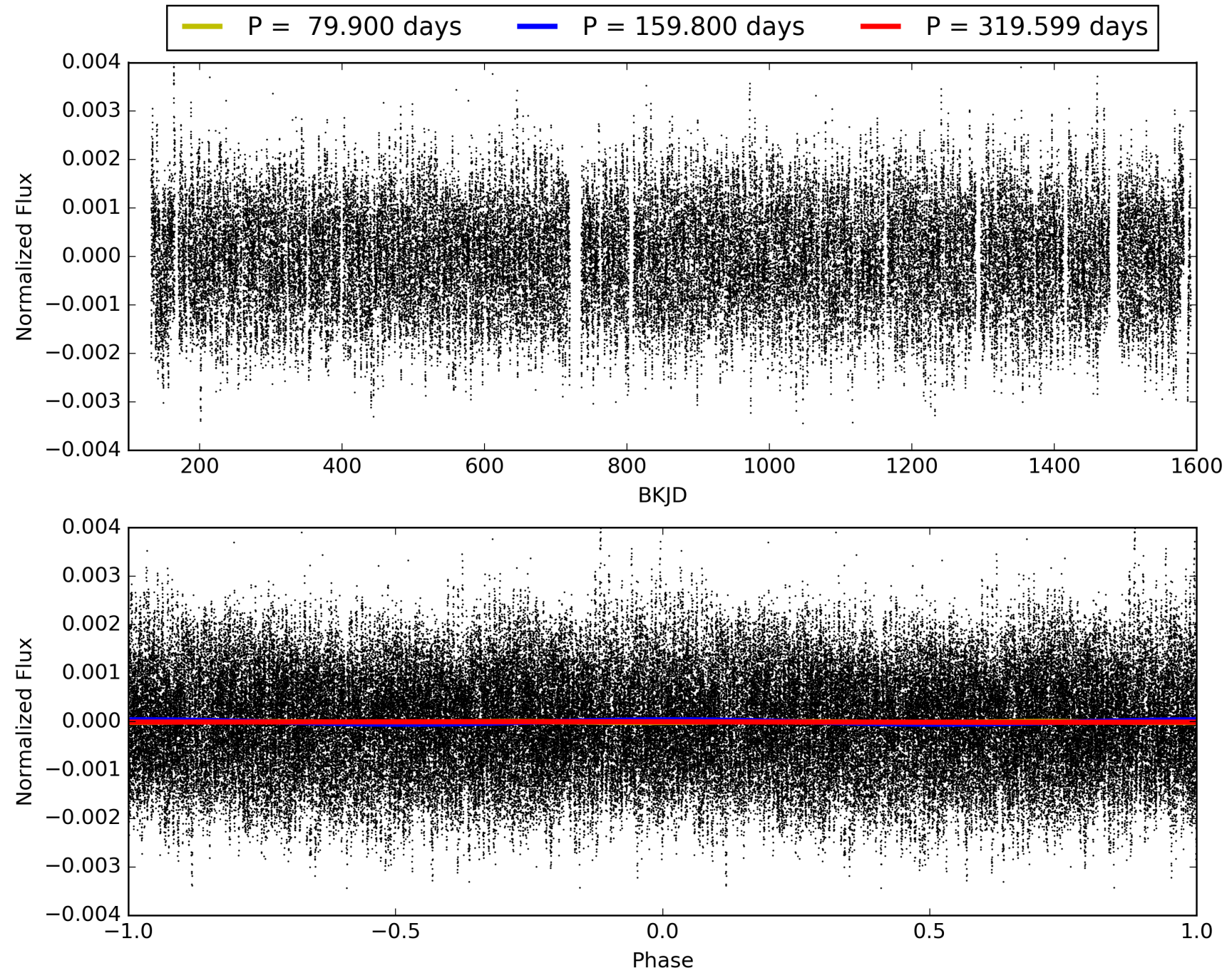
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:05:15 Z

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

TCE 005480766-04, PDC Light Curves

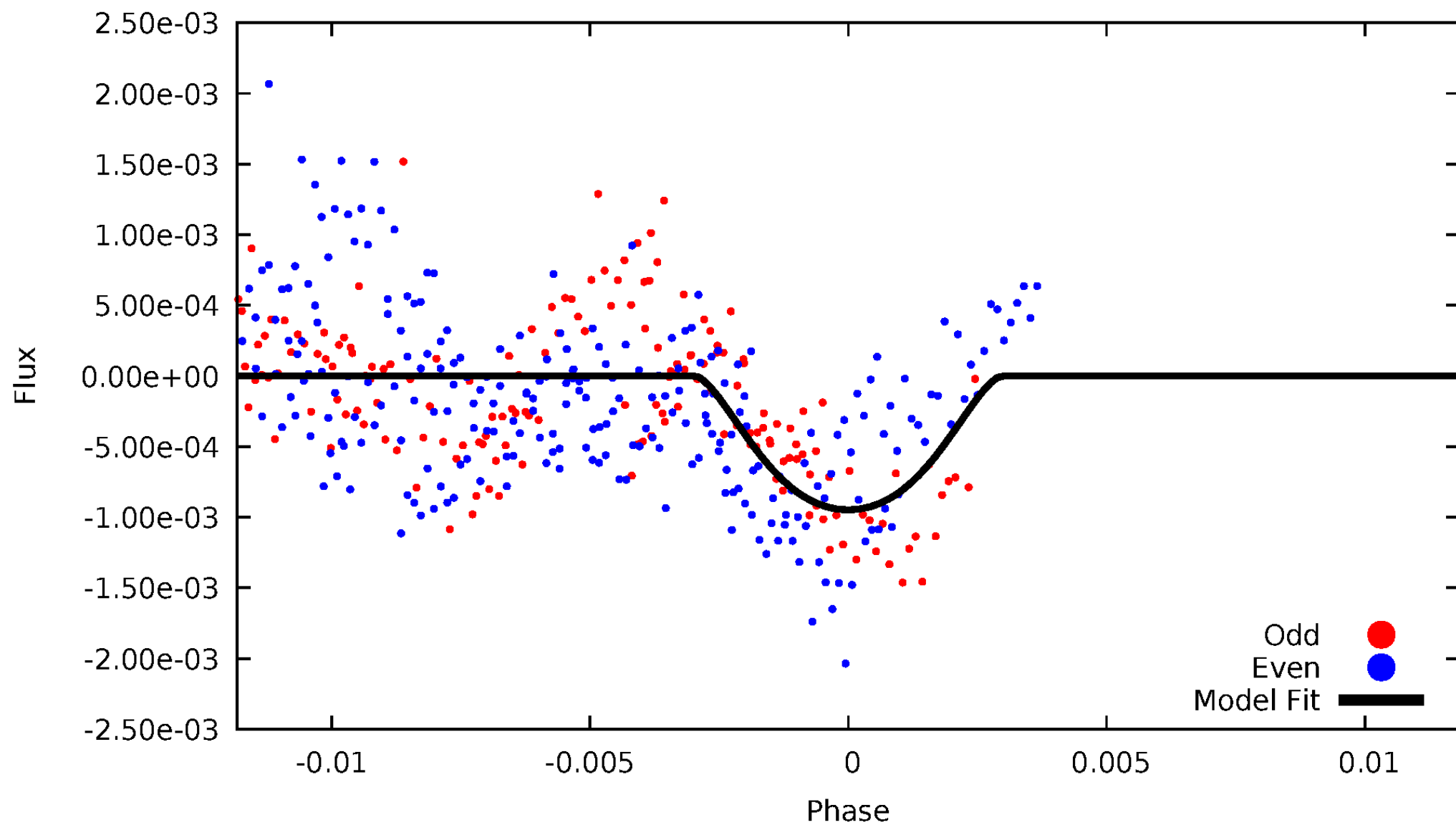


TCE 005480766-04



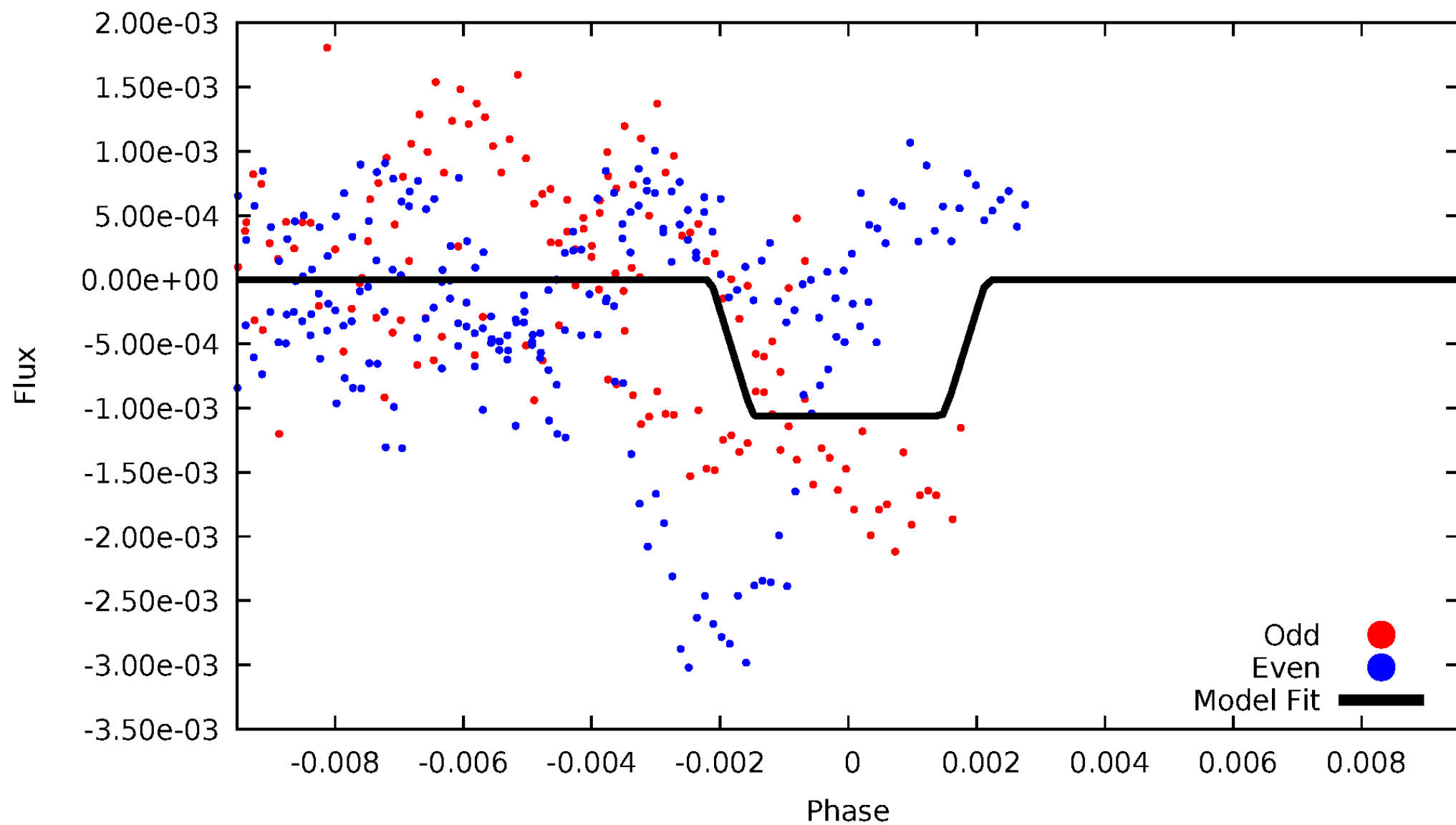
DV Odd/Even

TCE 005480766-04



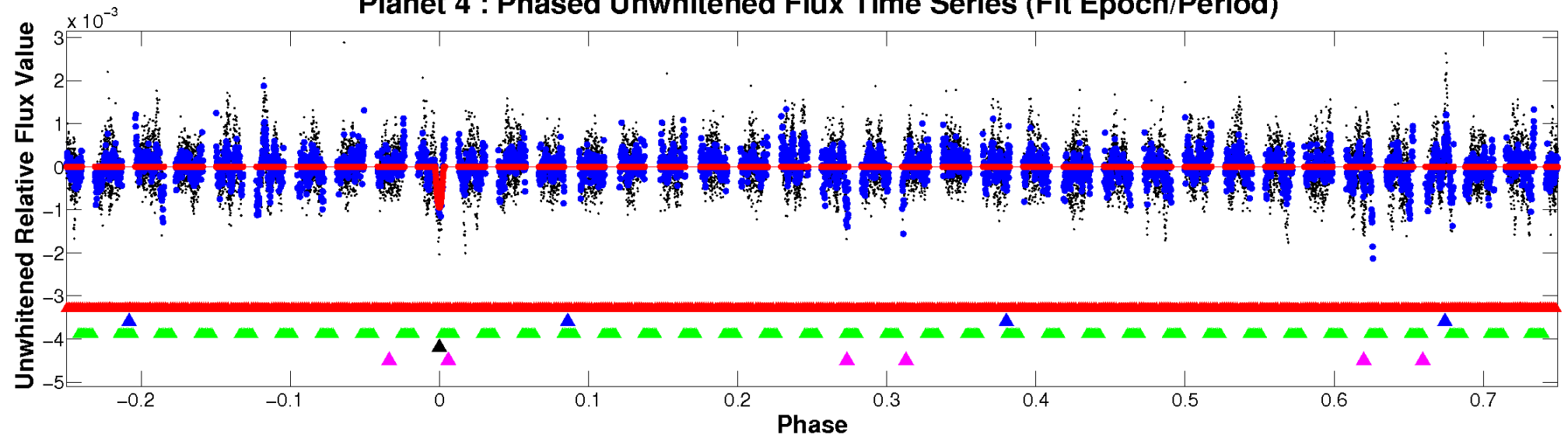
ALT Odd/Even

TCE 005480766-04

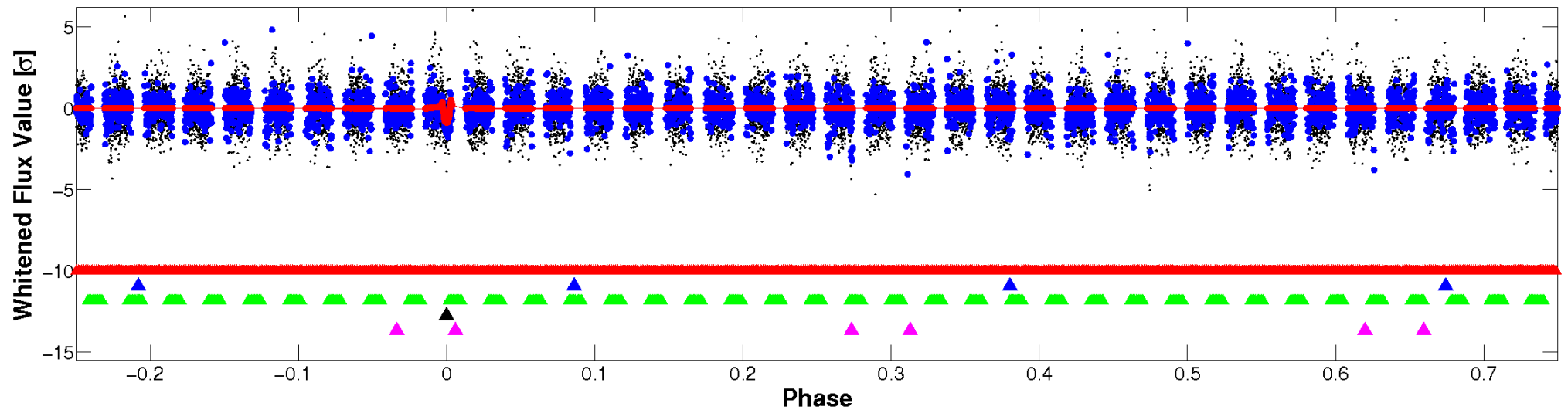


Non-Whitened Vs. Whitened Light Curve

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

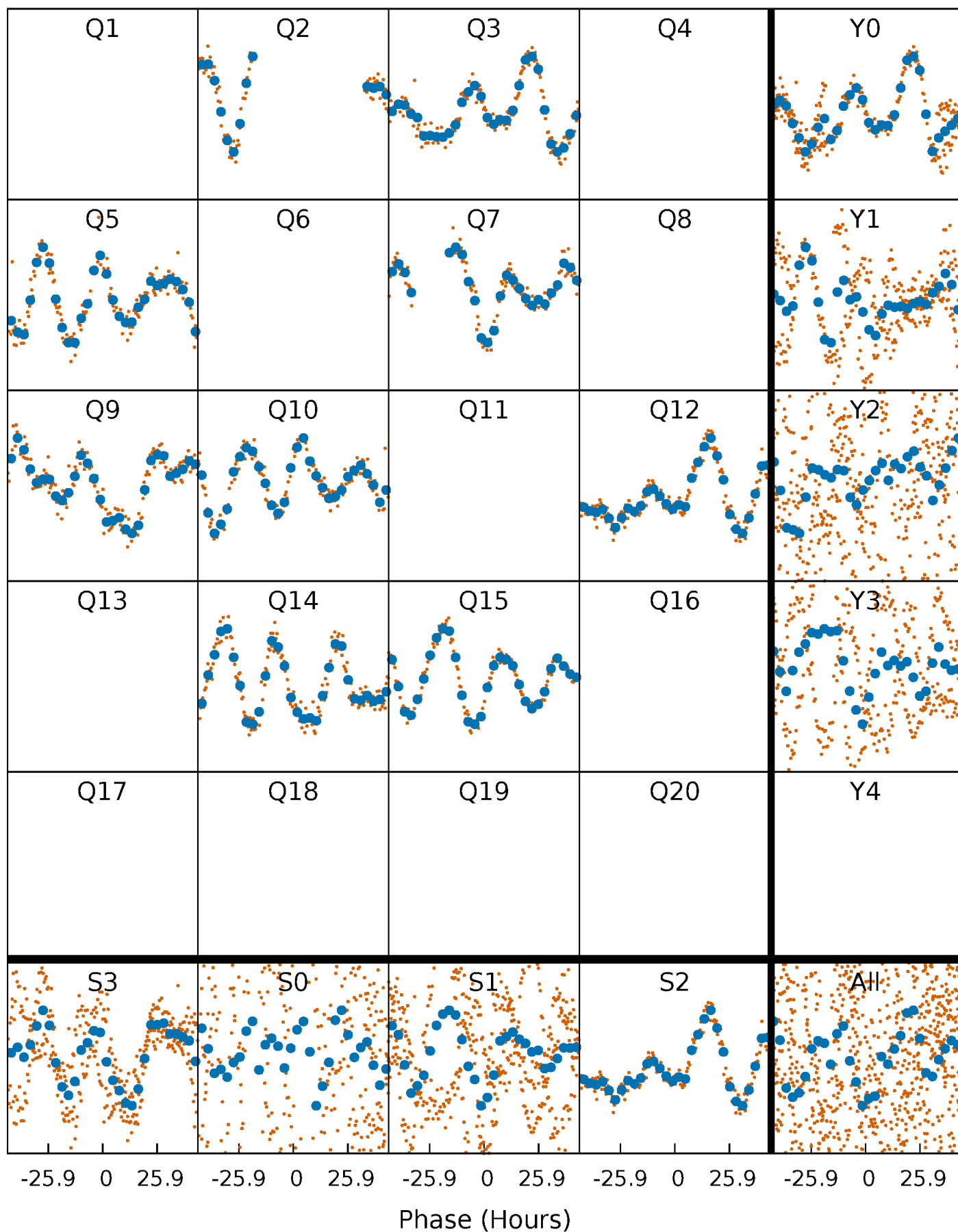


Planet 4 : Phased Whitened Flux Time Series (Fit Epoch/Period)



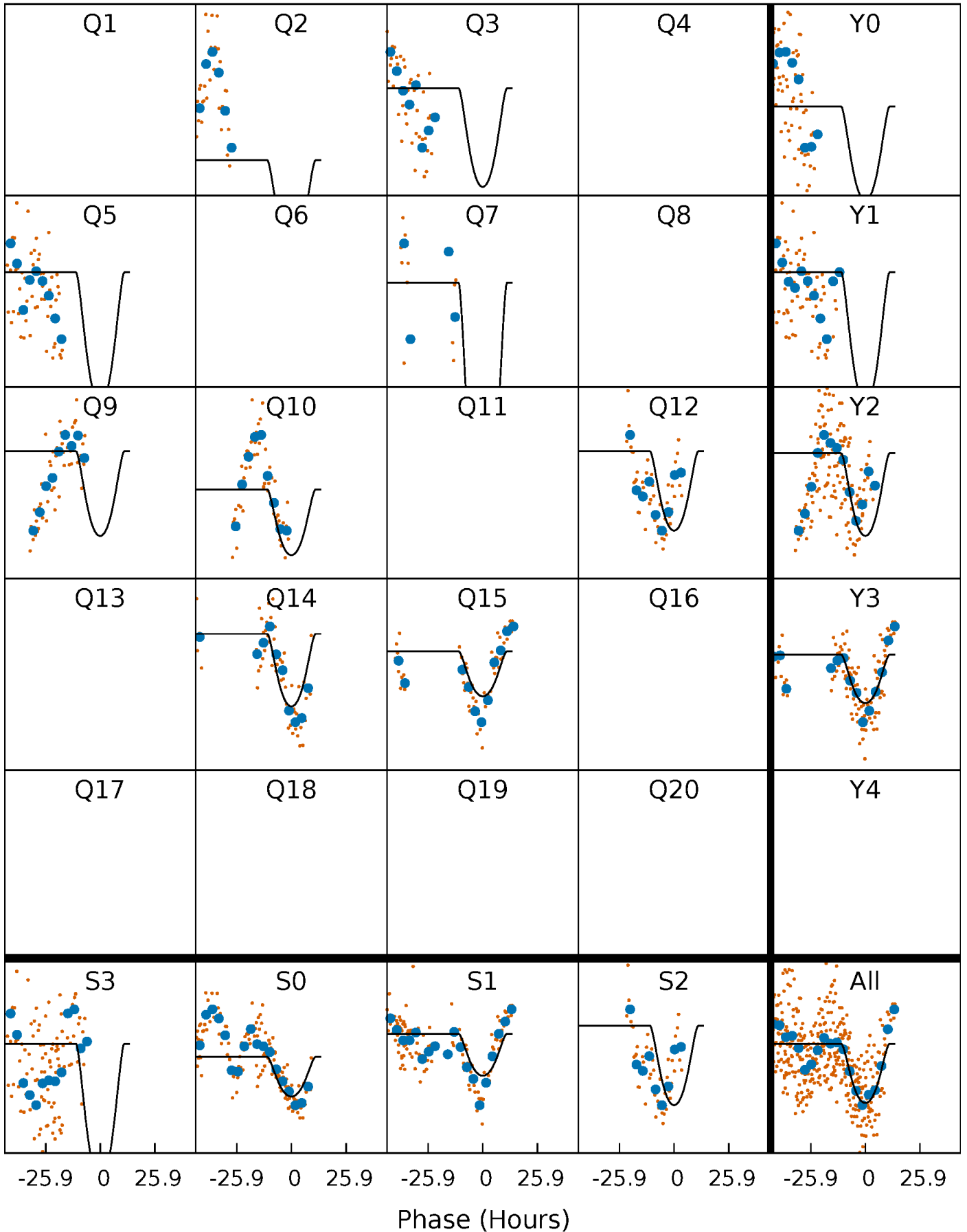
PDC Quarter-Phased Transit Curves

TCE 005480766-04 P=159.799677 Days $T_0=182.306777$ (BKJD)



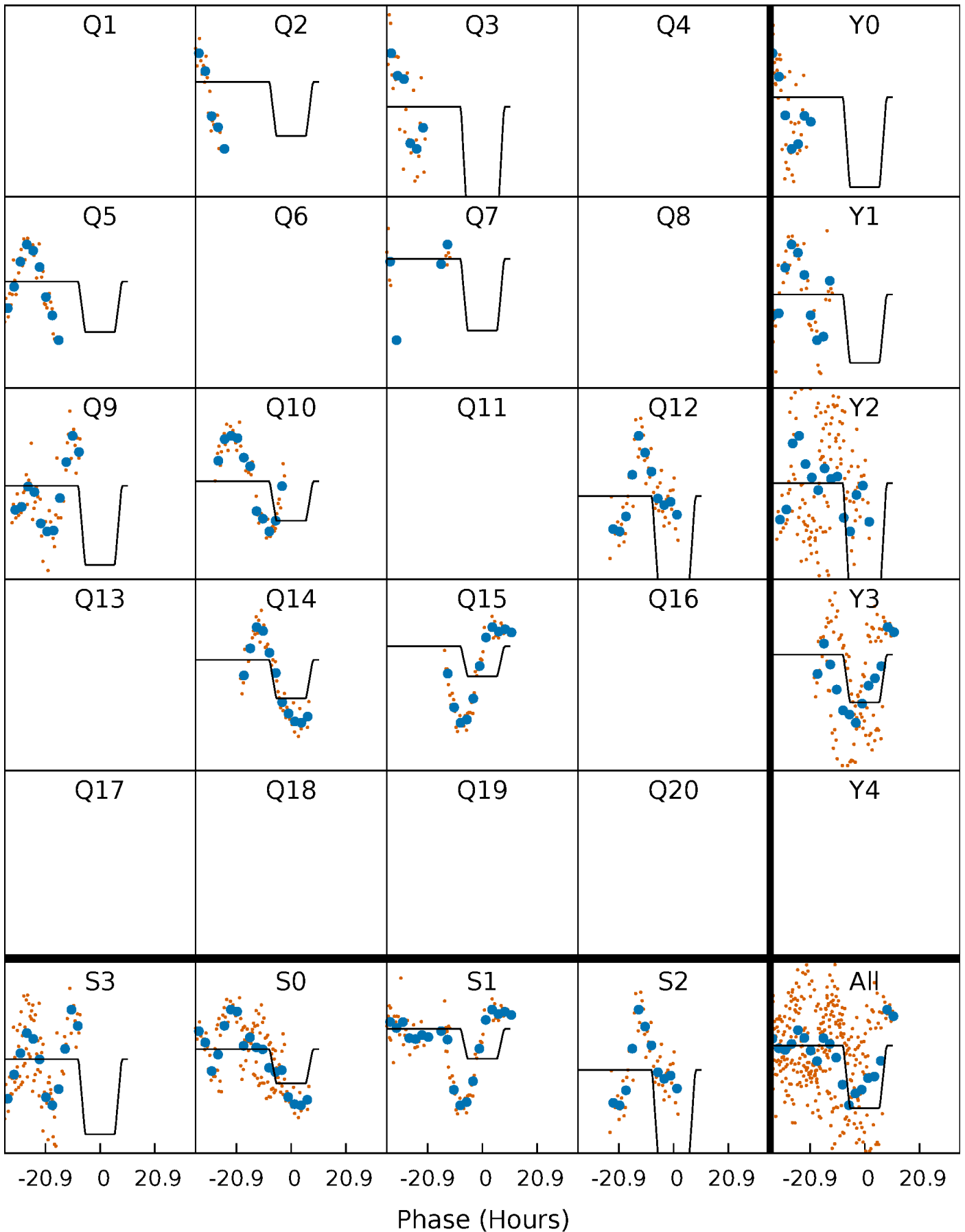
DV Quarter-Phased Transit Curves

TCE 005480766-04 P=159.799677 Days $T_0=182.306777$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

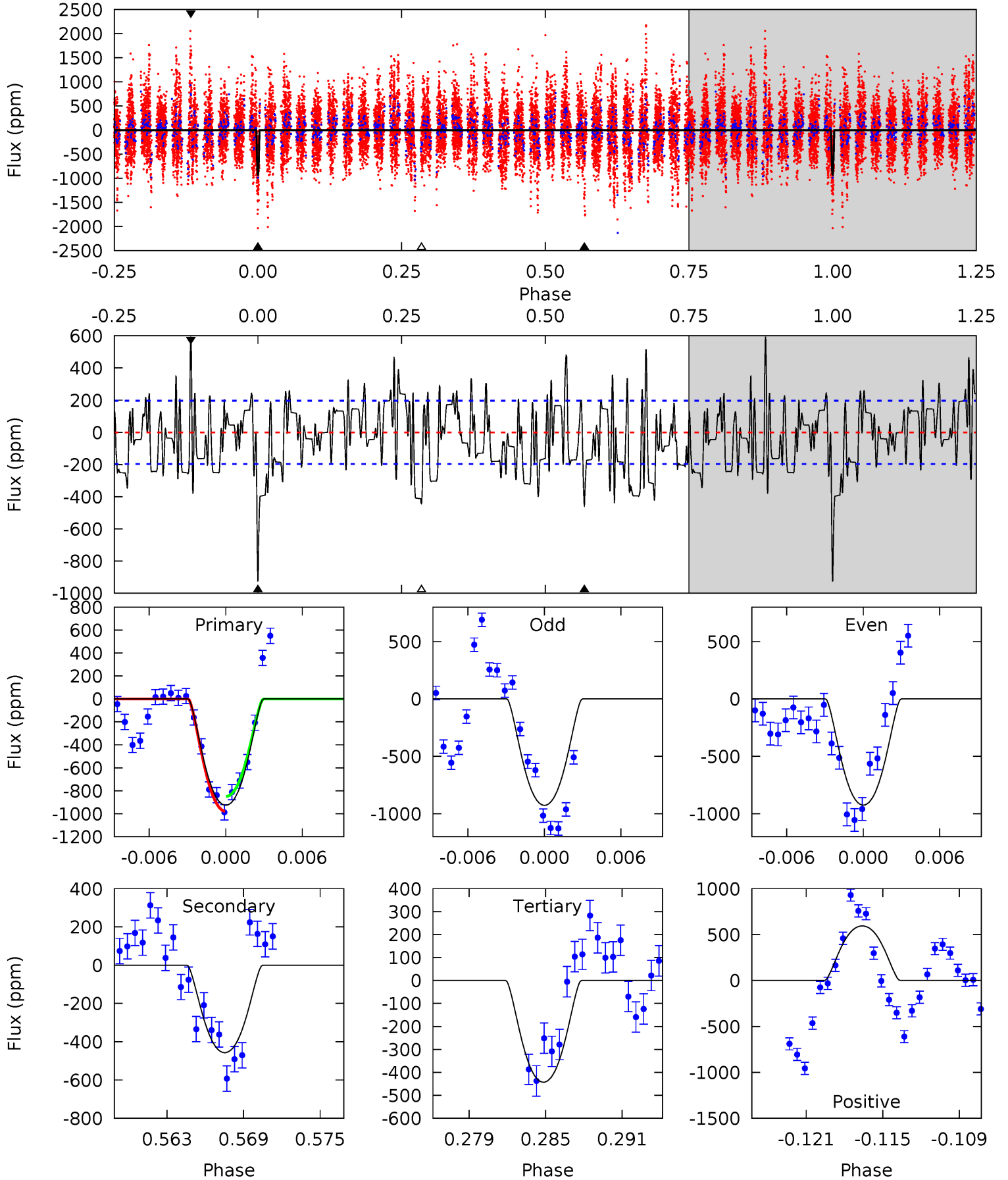
TCE 005480766-04 P=159.831306 Days $T_0=182.197347$ (BKJD)



DV Model-Shift Uniqueness Test

005480766-04, P = 159.799677 Days, E = 22.507100 Days

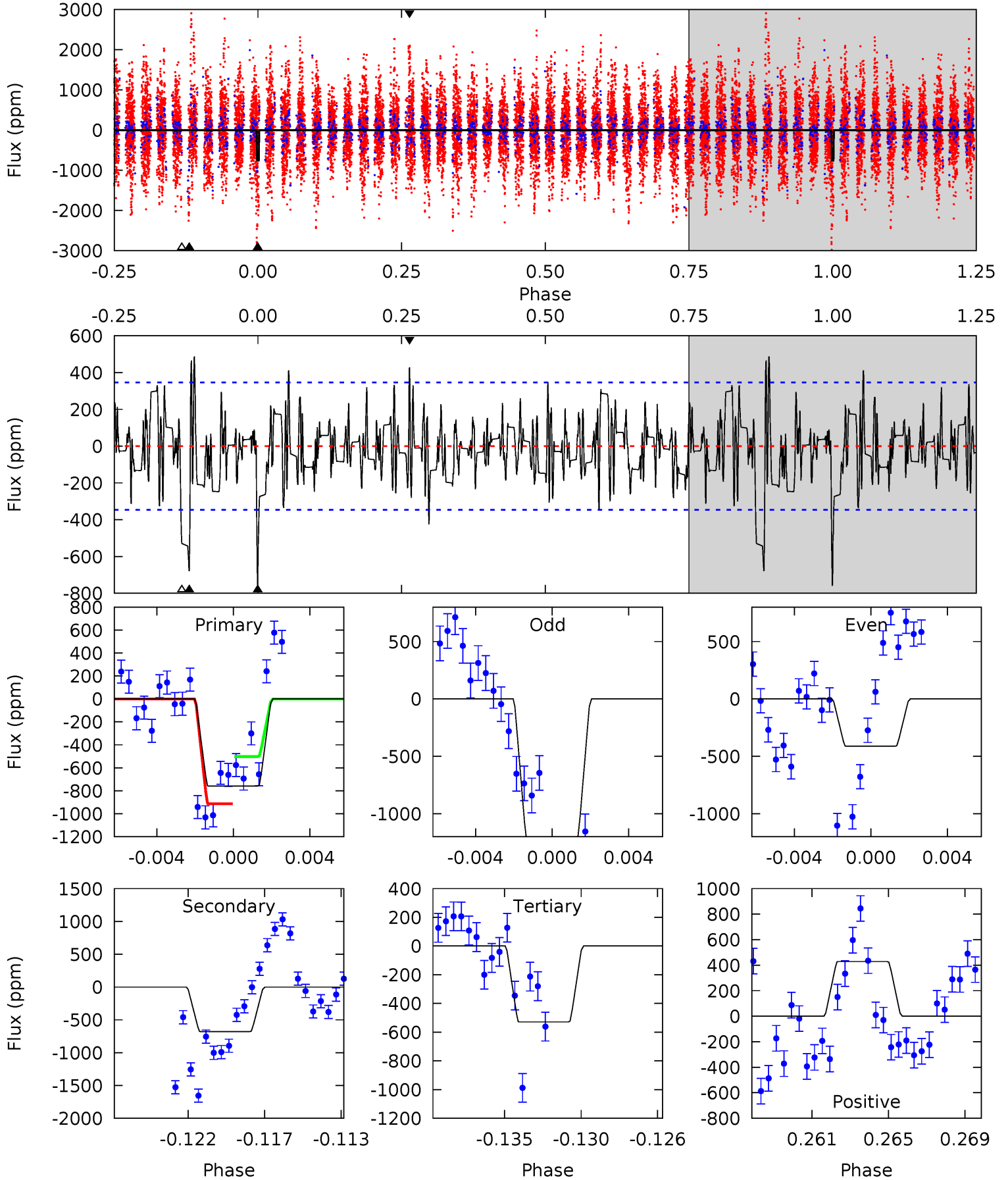
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.1	11.9	11.5	15.5	5.12	2.74	4.59	12.6	8.65	0.37	-3.56	0.03	1.07	0.39	1.64



Alt Model-Shift Uniqueness Test

005480766-04, P = 159.831306 Days, E = 22.366041 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.4	10.2	7.92	6.41	5.18	2.85	2.06	3.45	4.95	2.24	3.75	5.88	-0.02	0.39	2.97



Stellar Parameters For KIC 005480766

	$T_{\text{eff}} (K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6510^{+155}_{-214}	$4.434^{+0.062}_{-0.188}$	$-0.380^{+0.250}_{-0.350}$	$1.048^{+0.296}_{-0.127}$	$1.086^{+0.146}_{-0.146}$	$1.329^{+0.433}_{-0.671}$
	+2%/-3%	+1%/-4%	+66%/-92%	+28%/-12%	+13%/-13%	+33%/-50%
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 005480766-04 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-457 ± 38	$4.61^{+1.61}_{-1.59}$	542^{+34}_{-26}	4936^{+999}_{-580}	4054^{+5297}_{-1828}
Alt.	-679 ± 67	$3.90^{+1.75}_{-1.65}$	543^{+36}_{-26}	5780^{+1917}_{-856}	8536^{+16835}_{-4555}

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

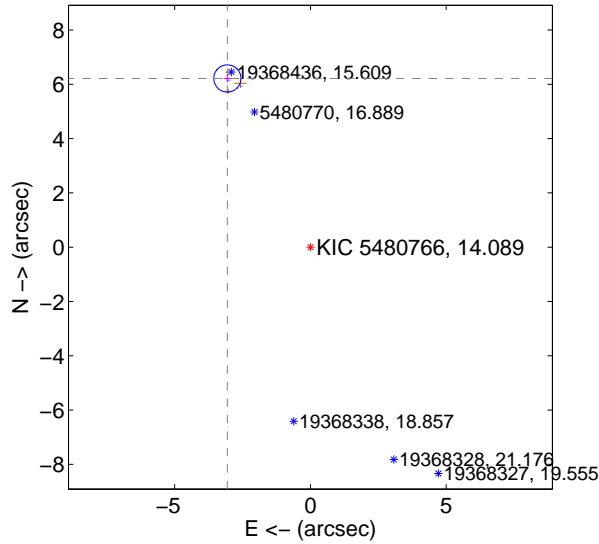
Supplemental centroid analysis for 005480766-04. Kepler magnitude: 14.09. Transit SNR 7.63

There are 2 quarters with good PRF difference image offsets

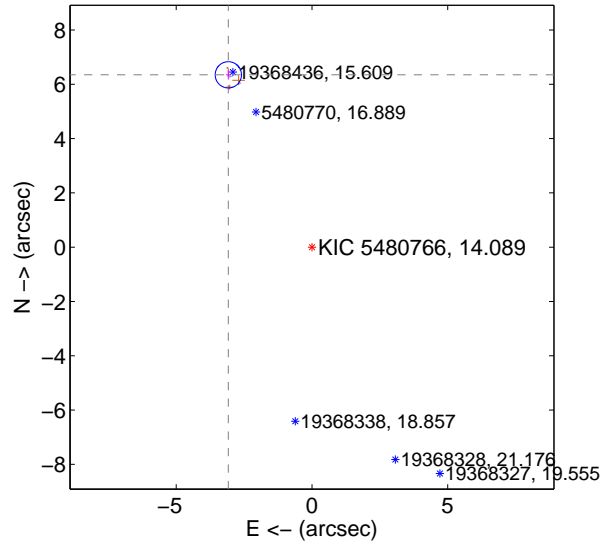
The direct PRF centroid is offset from the target star catalog position by about 0.17 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	6.926 \pm 0.167	41.52	3.059 \pm 0.137	6.214 \pm 0.141
PRF-fit source offset from KIC position	7.056 \pm 0.161	43.76	3.080 \pm 0.088	6.348 \pm 0.174
photometric centroid source offset	1.49 \pm 1.00	1.49	-1.15 \pm 0.83	0.95 \pm 1.22

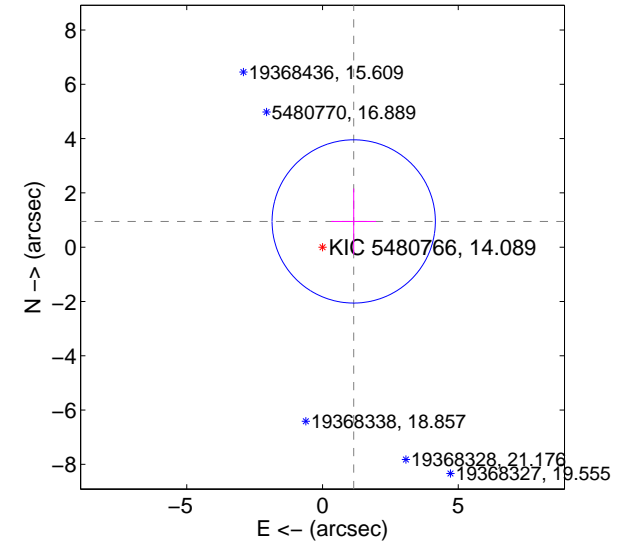
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

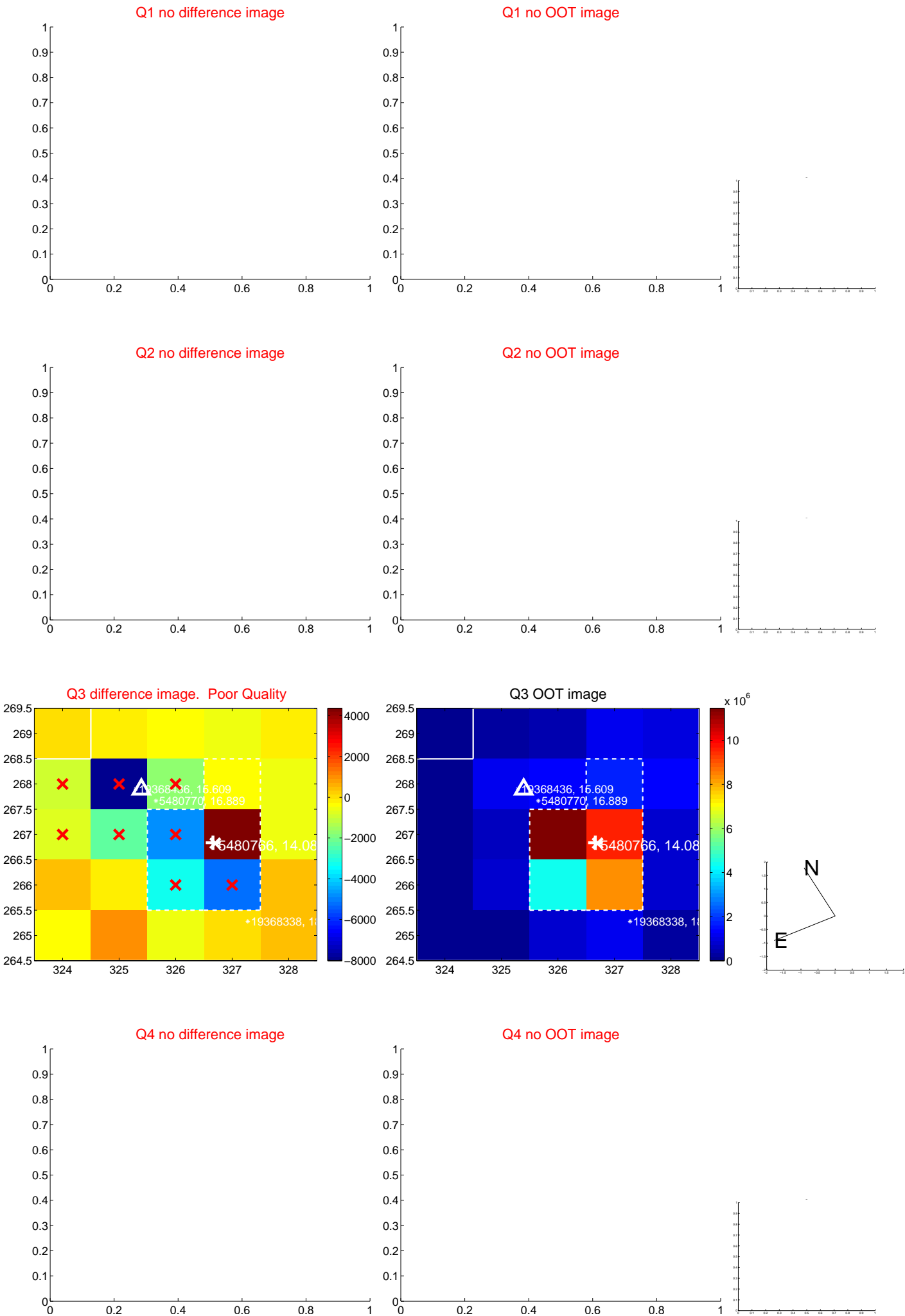


offset from photometric centroids

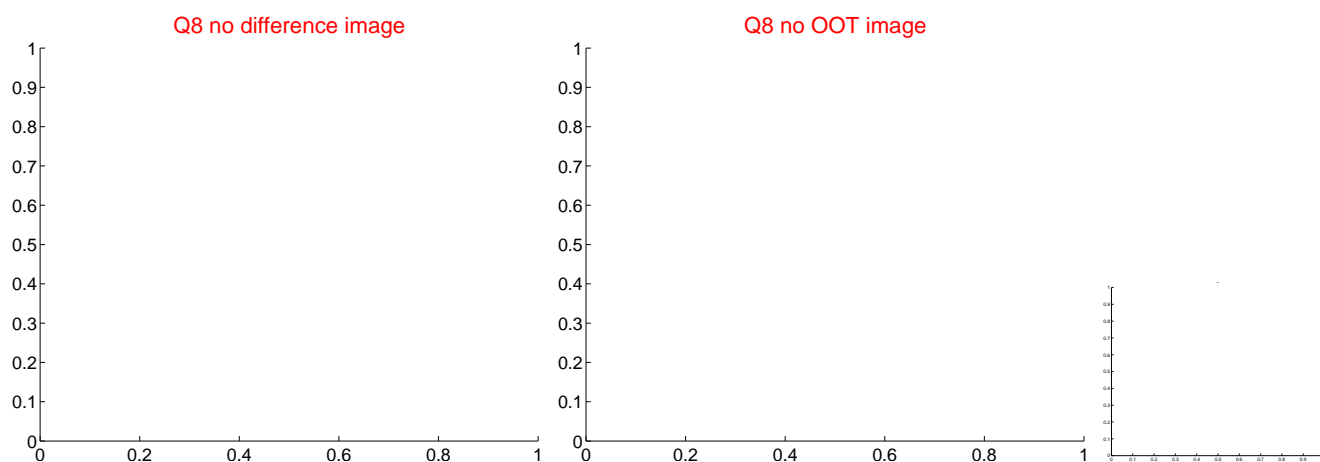
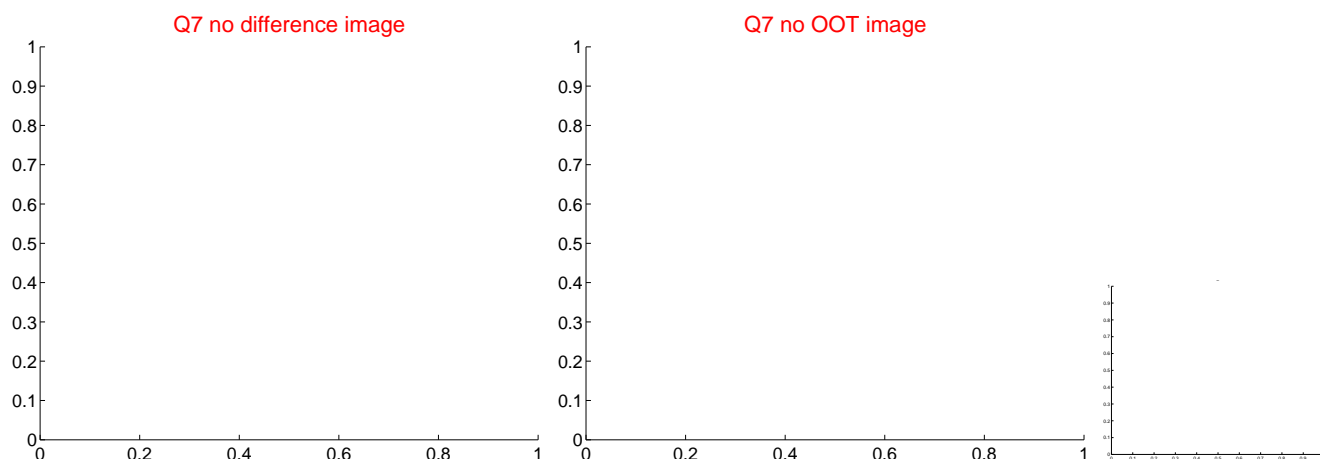
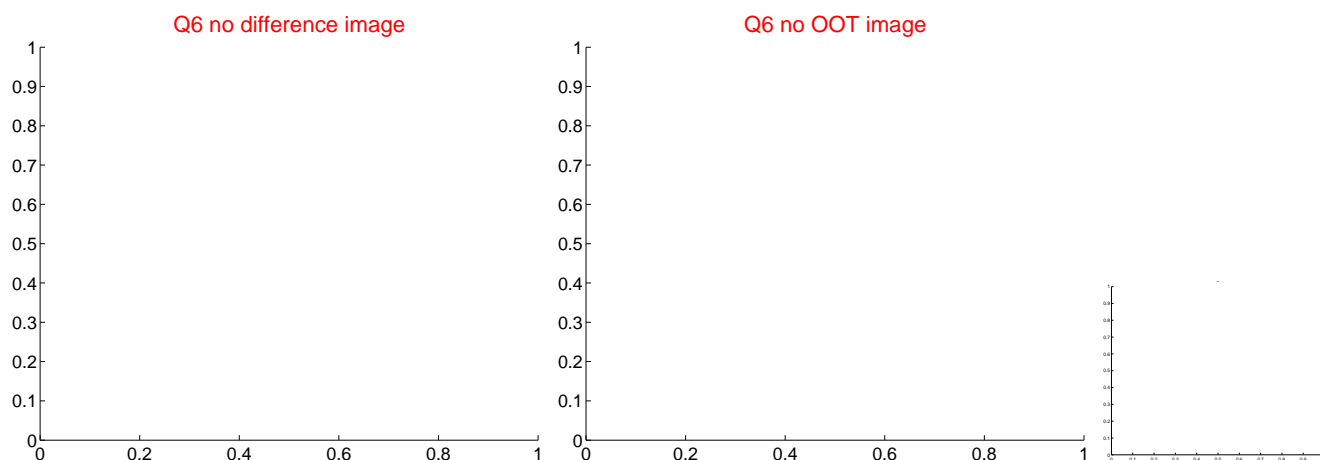
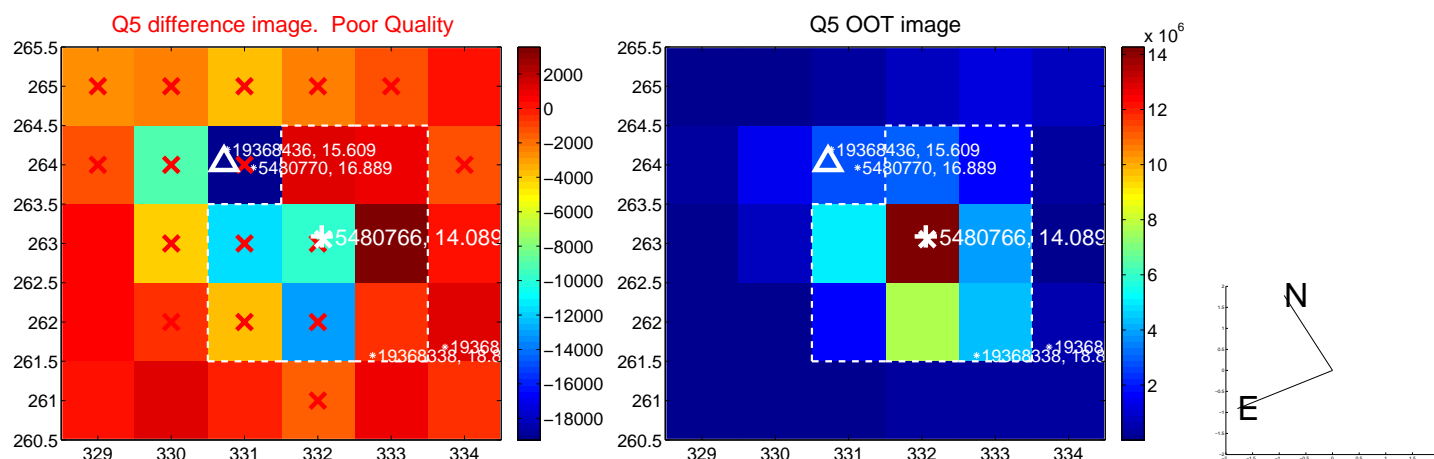


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

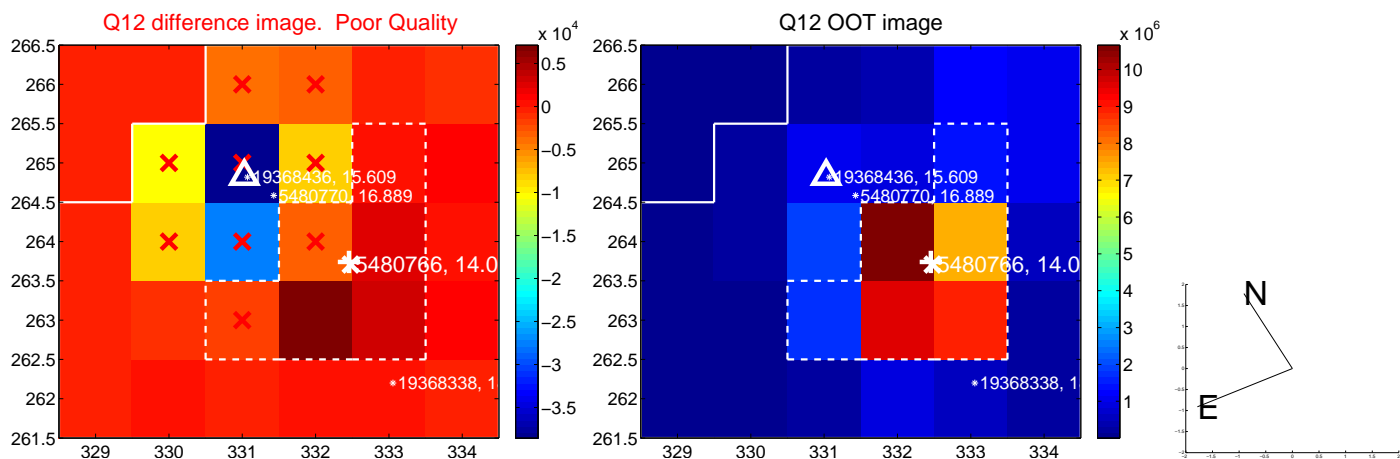
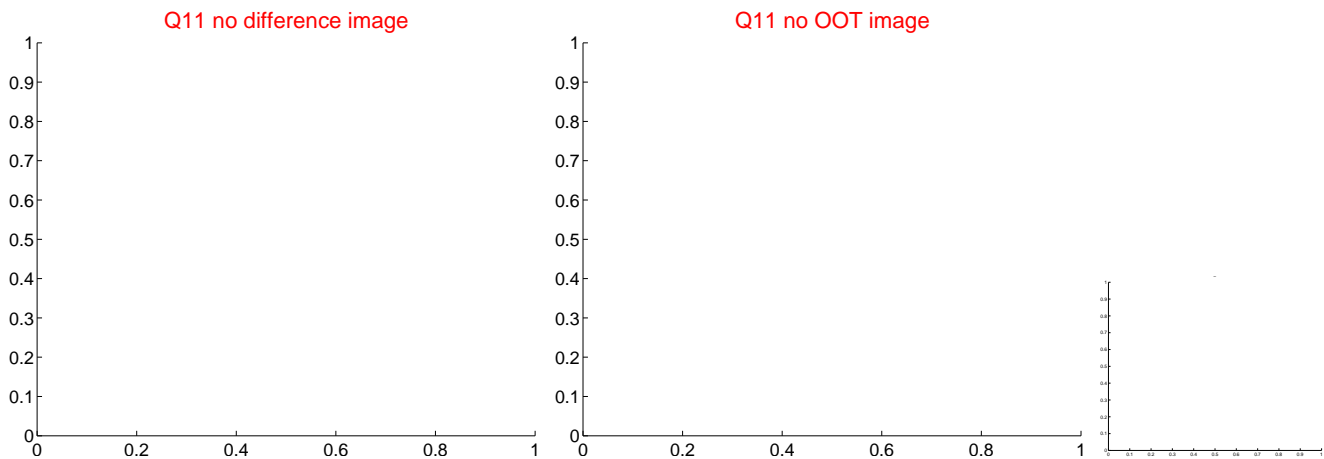
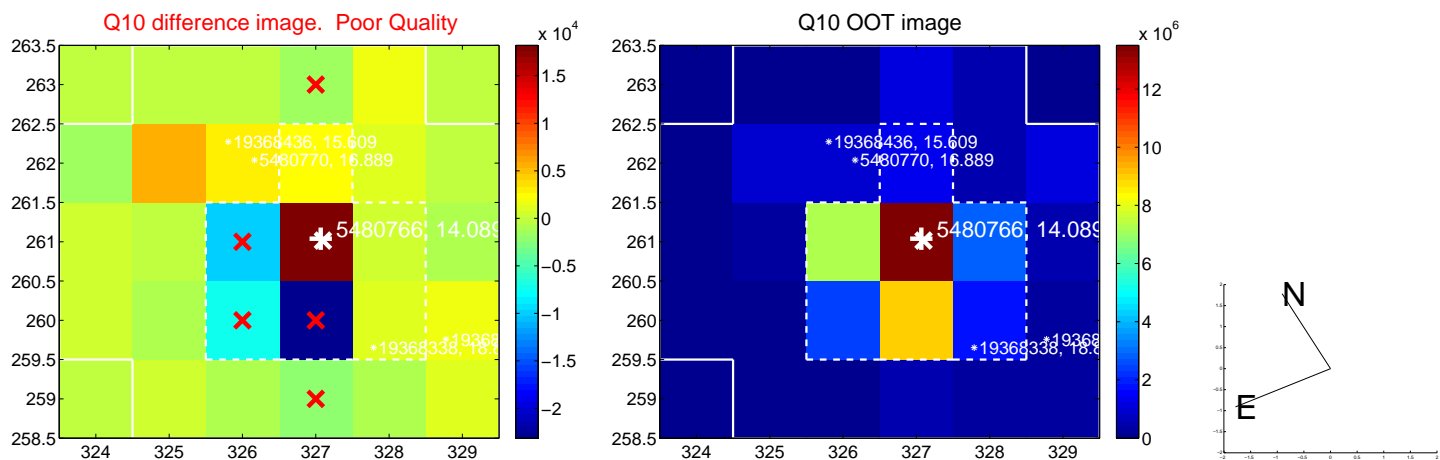
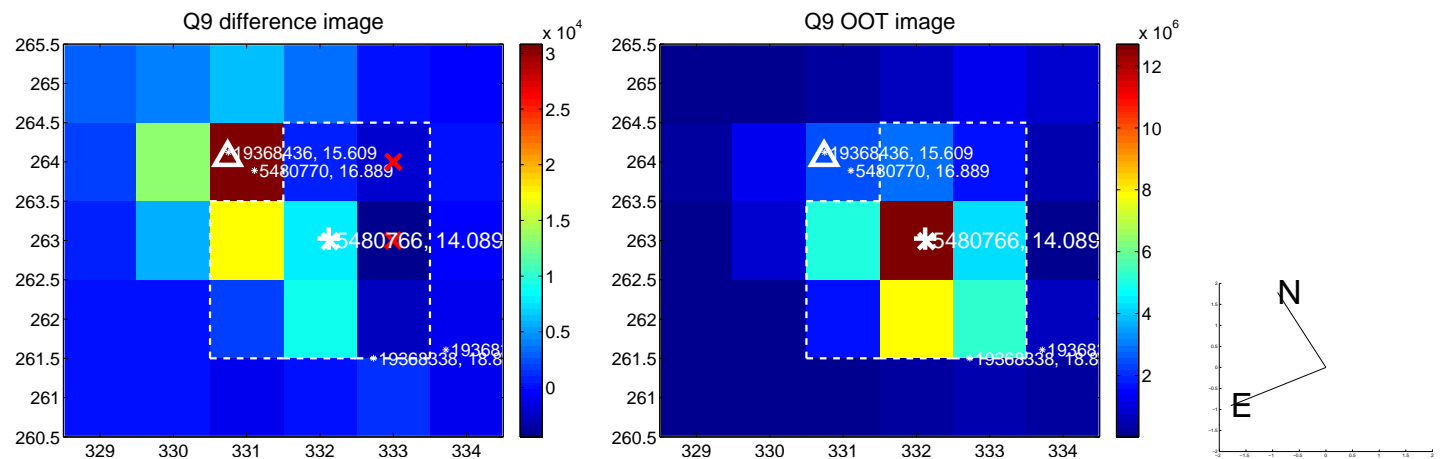
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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.

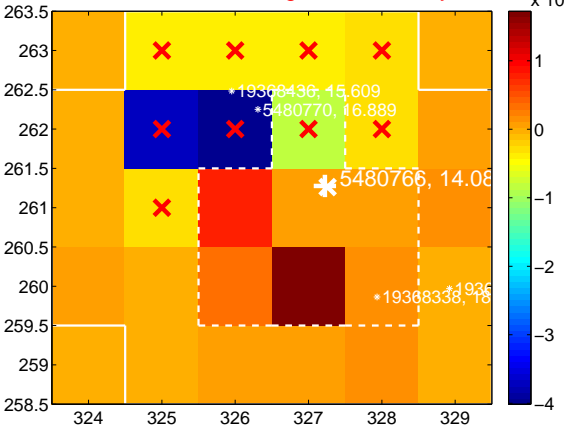
Q13 no difference image



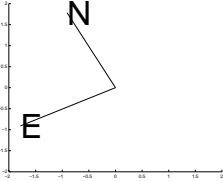
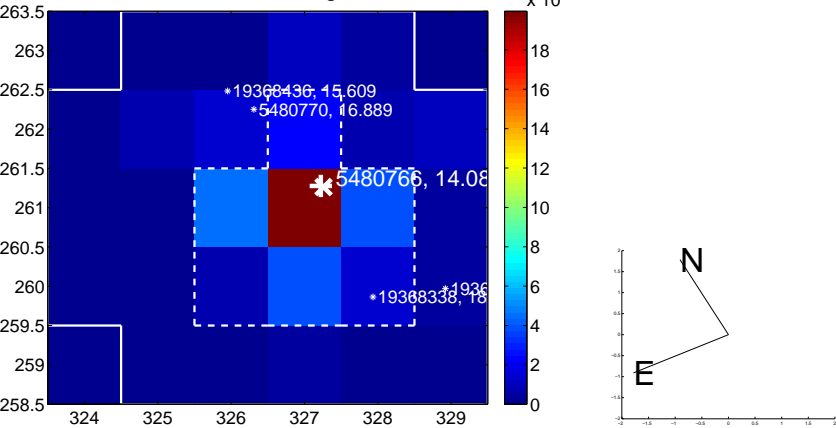
Q13 no OOT image



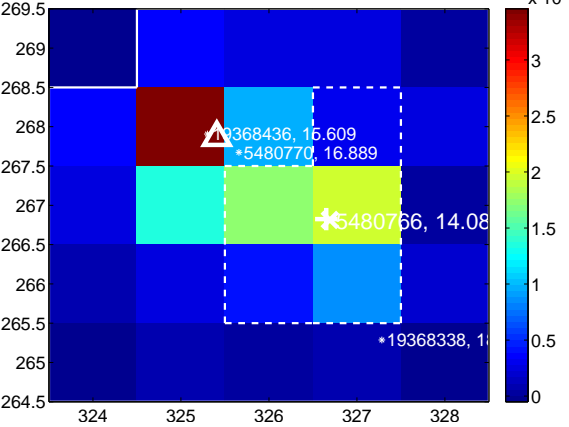
Q14 difference image. Poor Quality



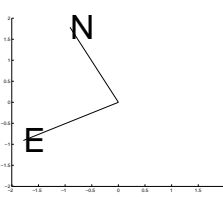
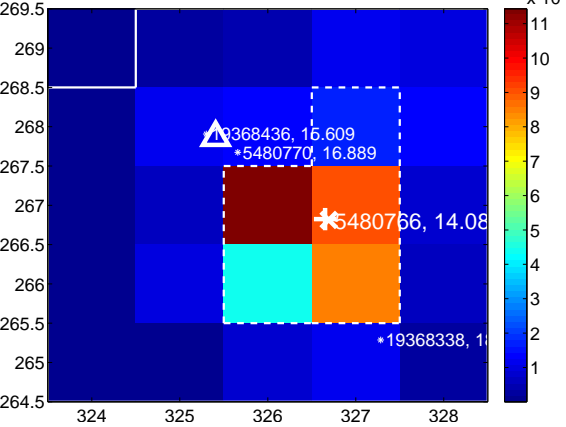
Q14 OOT image



Q15 difference image



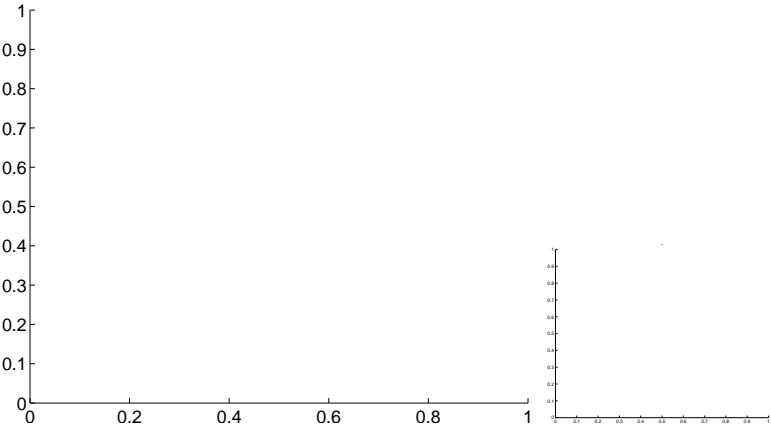
Q15 OOT image



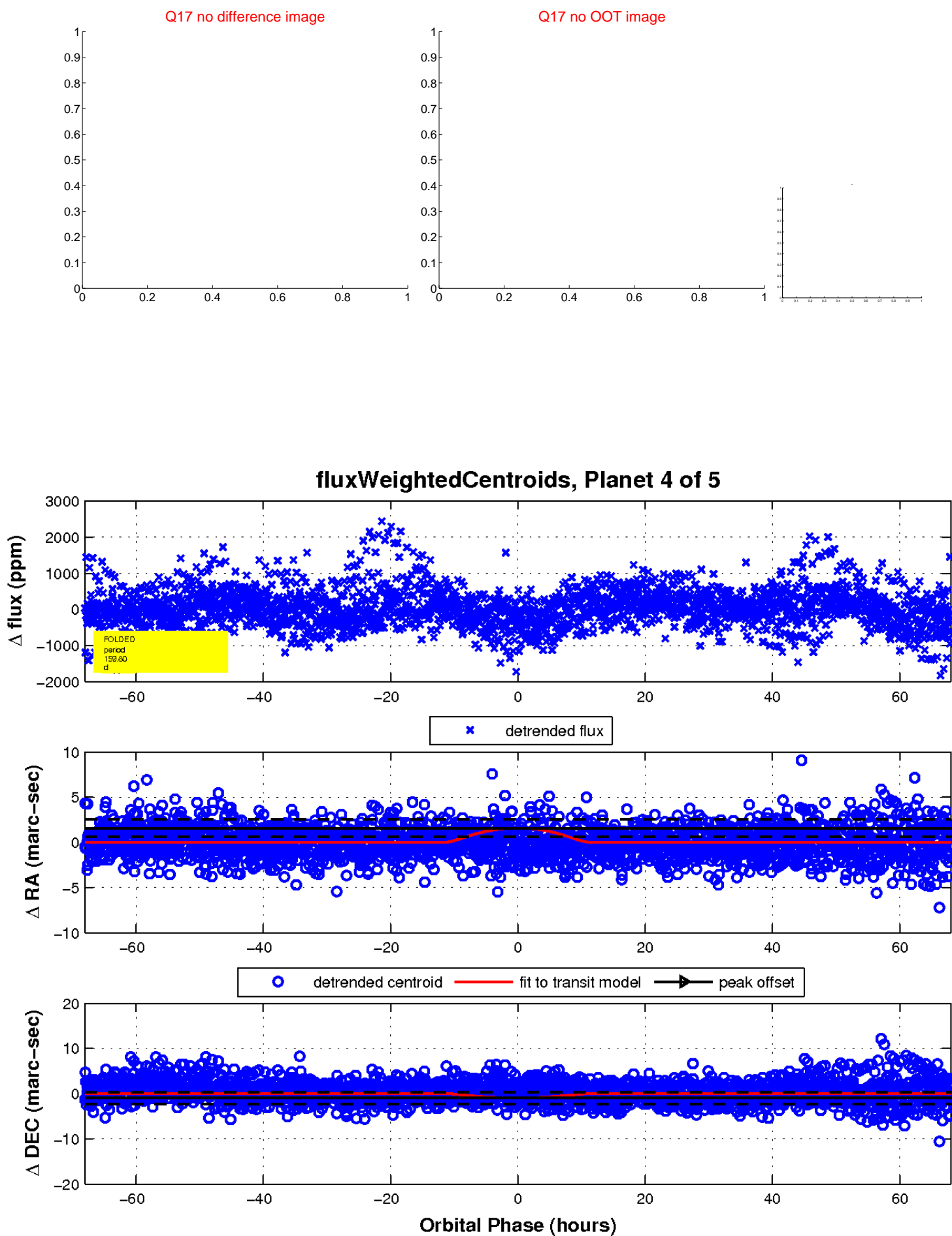
Q16 no difference image



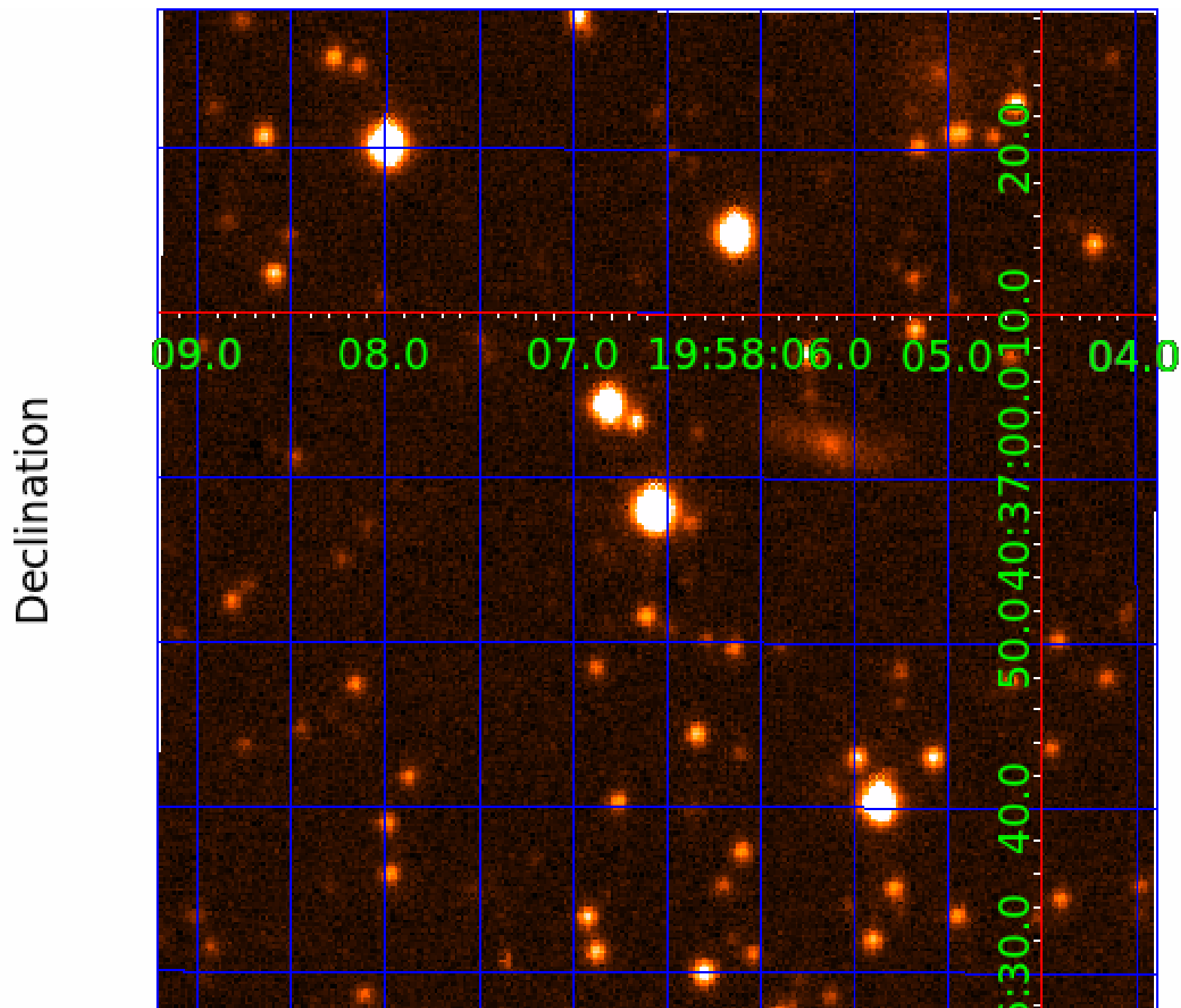
Q16 no OOT image



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



UKIRT Image



KIC 005480766

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})
005480766-01	OBS	No	2.162551	131.892351	18.4	8.283	12.0	2.4	1.05	6510	0.47	1558.97
005480766-02	OBS	No	366.598512	149.064621	524.6	5.595	19.4	3.8	1.05	6510	3.15	1.66
005480766-03	OBS	No	4.323525	134.972761	186.9	15.721	12.0	12.2	1.05	6510	1.85	618.98
005480766-04	OBS	No	159.799677	182.306776	946.9	22.686	7.6	7.6	1.05	6510	4.40	5.03
005480766-05	OBS	No	264.221815	183.267372	988.1	19.862	7.4	7.0	1.05	6510	4.17	2.57

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005480766-01	OBS	FP	0.00	1	0	1	0	LPP_DV—MOD_NONUNIQ_DV—HALO_GHOST
005480766-02	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_CHASES_MARSHALL_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—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-03	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_SKYE_ZUMA—LPP_DV—LPP_ALT—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT
005480766-04	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE_MARSHALL—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_ALT—INCONSISTENT_TRANS—CENT_FEW_DIFFS
005480766-05	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_RUBBLE—TRANS_GAPPED—LPP_DV—ALL_TRANS_CHASES—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT—CENT_FEW_DIFFS

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

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

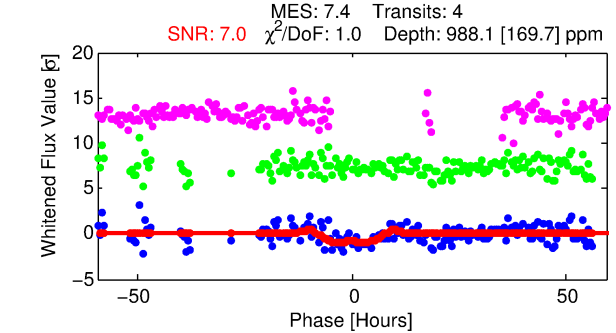
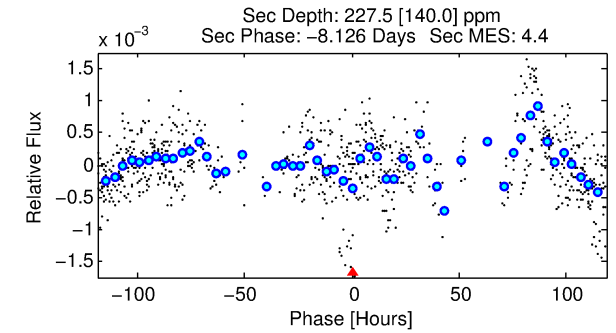
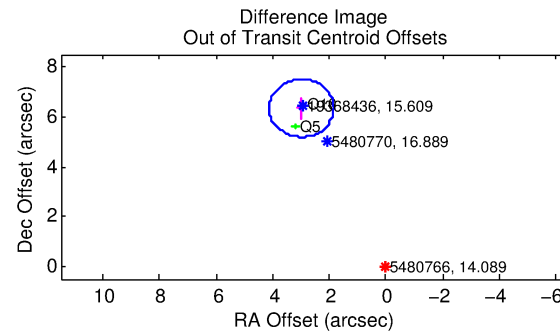
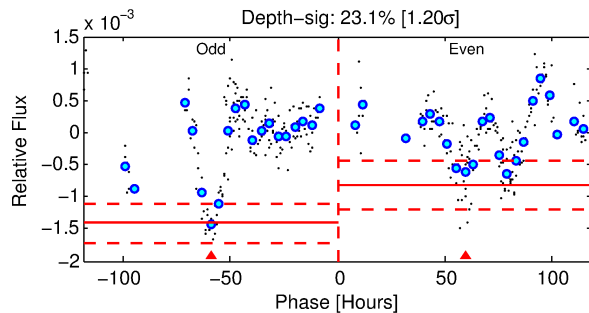
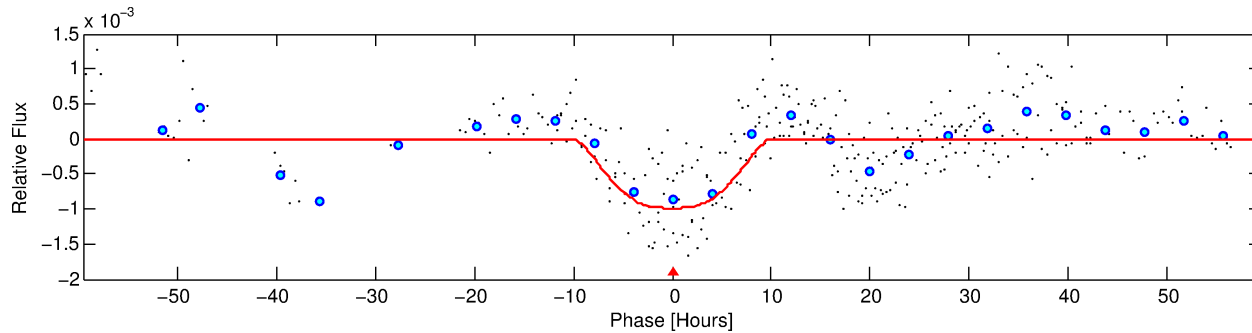
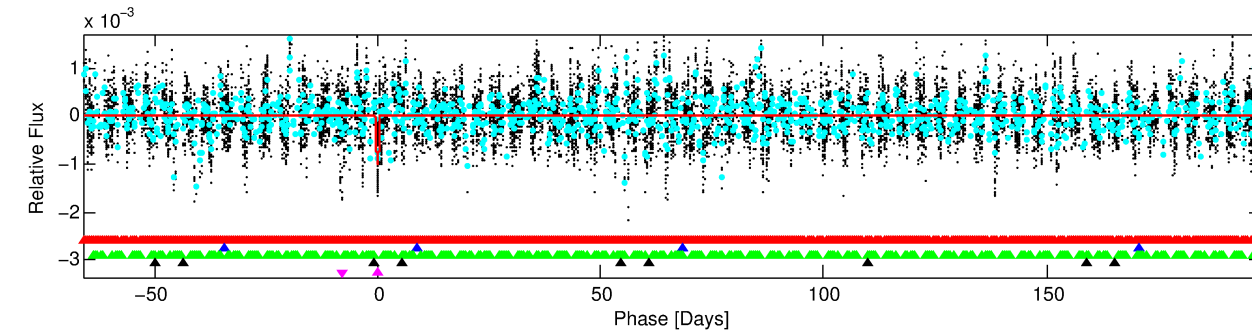
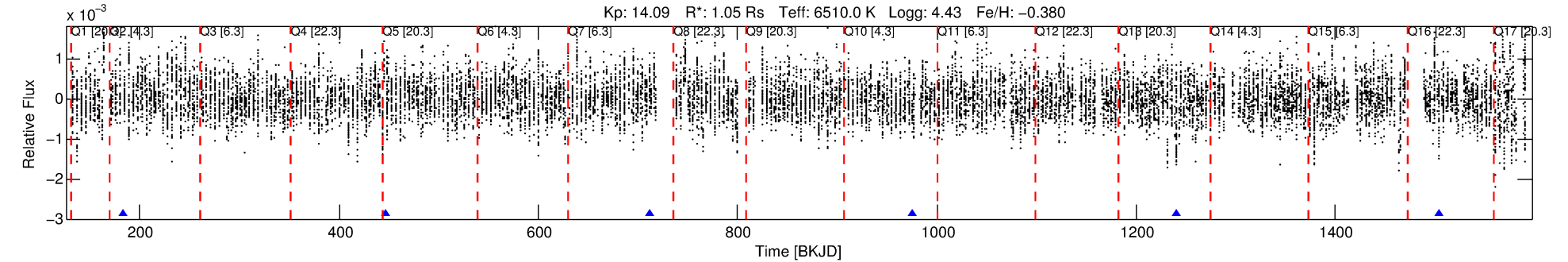
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005480766-05

No Significant Match Found

DV One-Page Summary

KIC: 5480766 Candidate: 5 of 5 Period: 264.222 d



DV Fit Results:

Period = 264.22182 [0.03098] d
Epoch = 183.2674 [0.1195] BKJD
Rp/R* = 0.0364 [0.0035]
a/R* = 39.47 [5.18]
b = 0.96 [0.01]
Seff = 2.57 [0.95]
Teq = 323 [30] K
Rp = 4.17 [1.24] Re
a = 0.8291 [0.1967] AU
Ag = 4954.07 [3621.11] [1.37σ]
Teffp = 4188 [689] K [5.61σ]

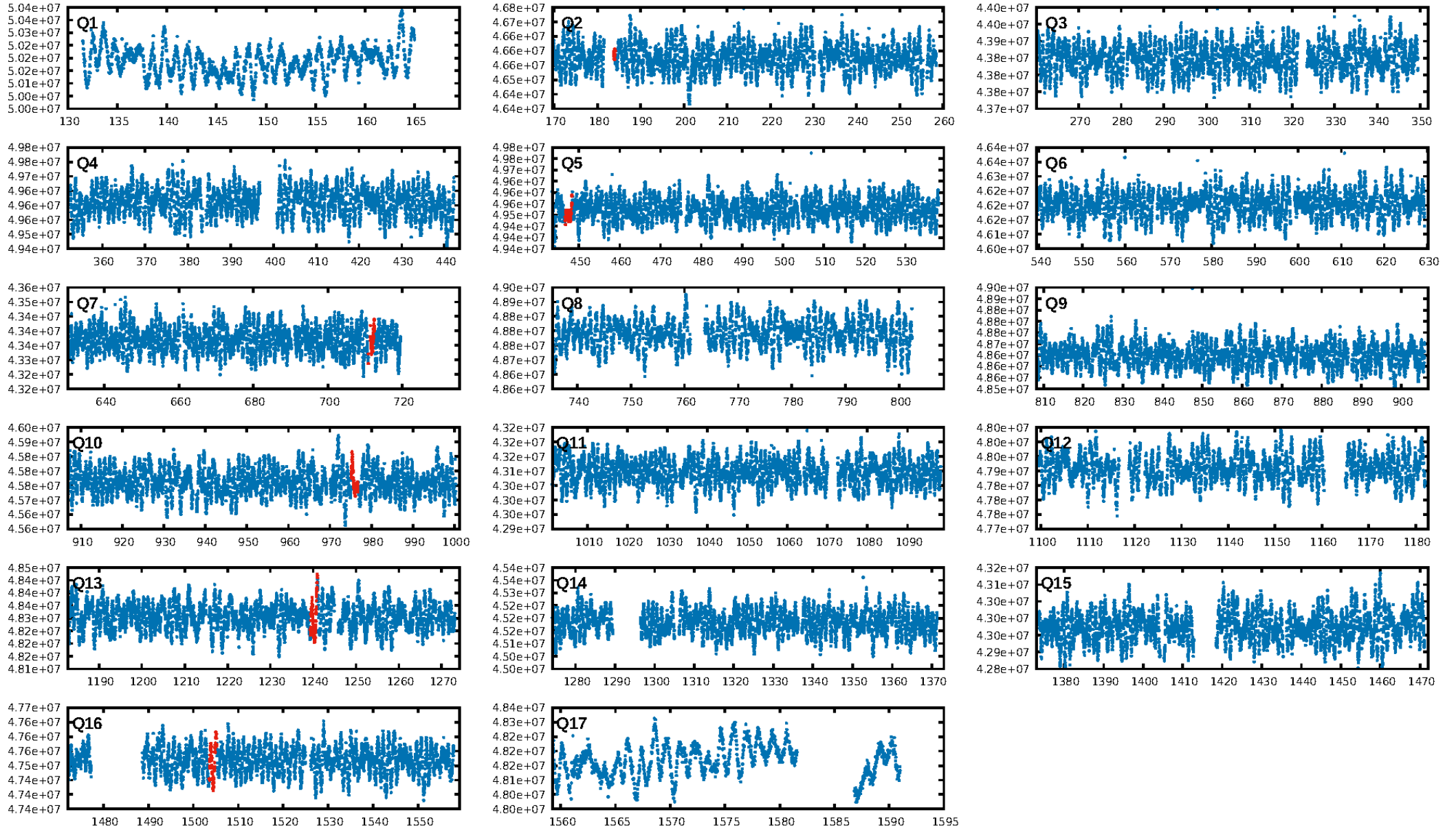
DV Diagnostic Results:

ShortPeriod-sig: 100.0% [83.12σ]
LongPeriod-sig: 100.0% [119.07σ]
ModelChiSquare2-sig: 52.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.39e-07
RollingBand-fgt: 1.00 [4/4]
GhostDiagnostic-chr: 1.191
Centroid-sig: 11.2%
Centroid-so: 1.290 arcsec [0.91σ]
OotOffset-rm: 7.011 arcsec [18.26σ]
KicOffset-rm: 7.162 arcsec [19.15σ]
OotOffset-st: 1/0/0/1 [2]
KicOffset-st: 1/0/0/1 [2]
DiffImageQuality-fgm: 0.50 [1/2]
DiffImageOverlap-fno: 0.00 [0/2]

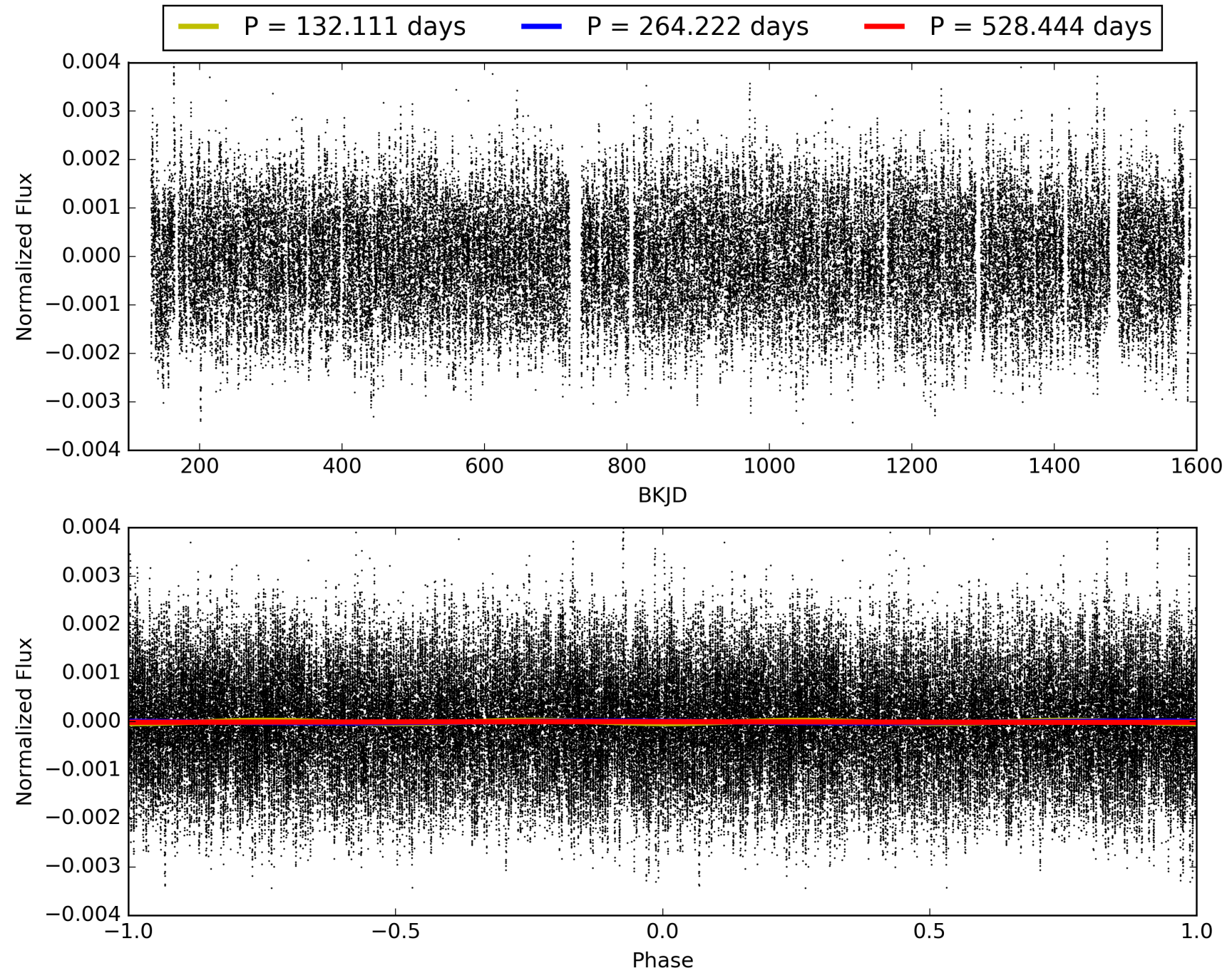
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 03:05:20 Z

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

TCE 005480766-05, PDC Light Curves

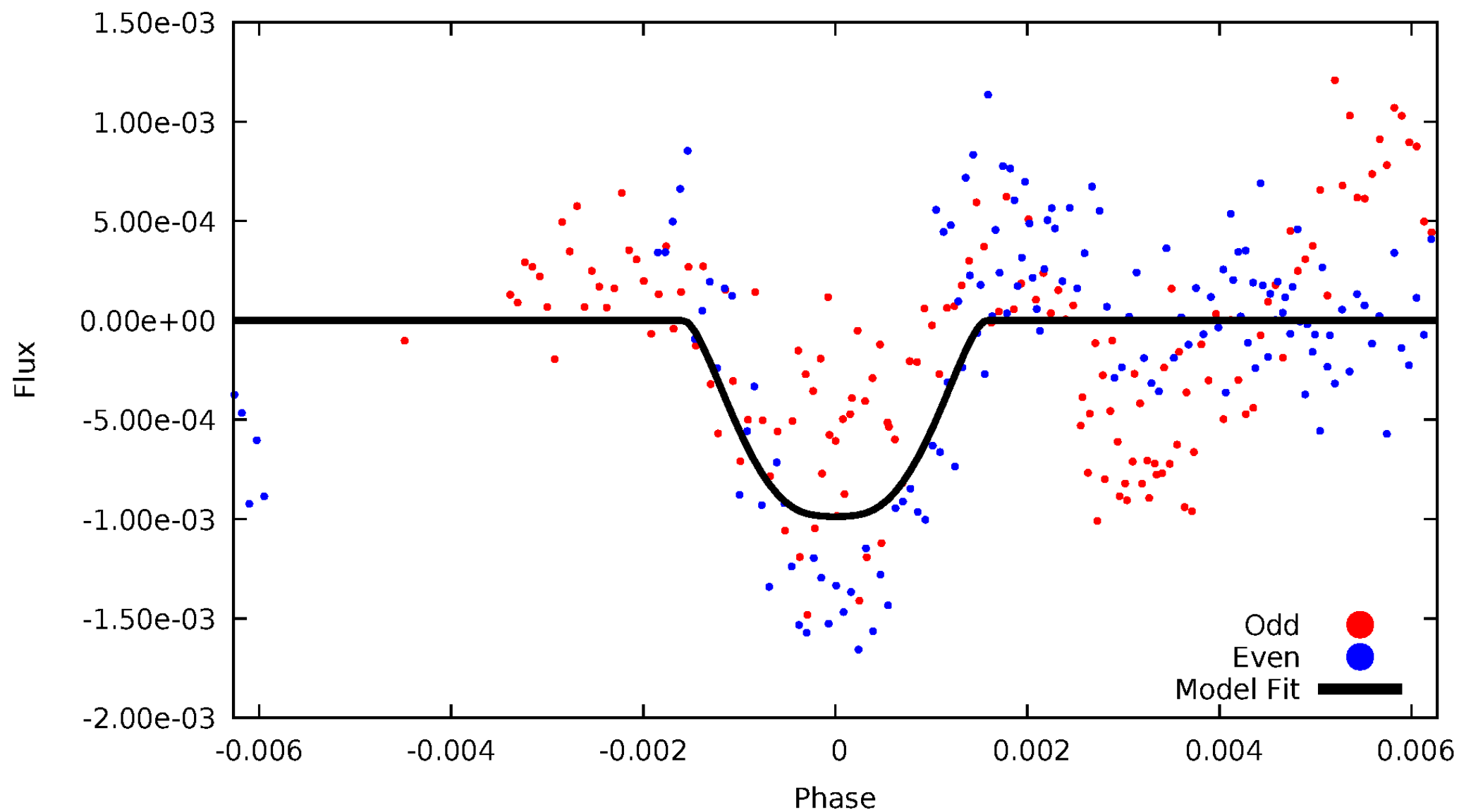


TCE 005480766-05



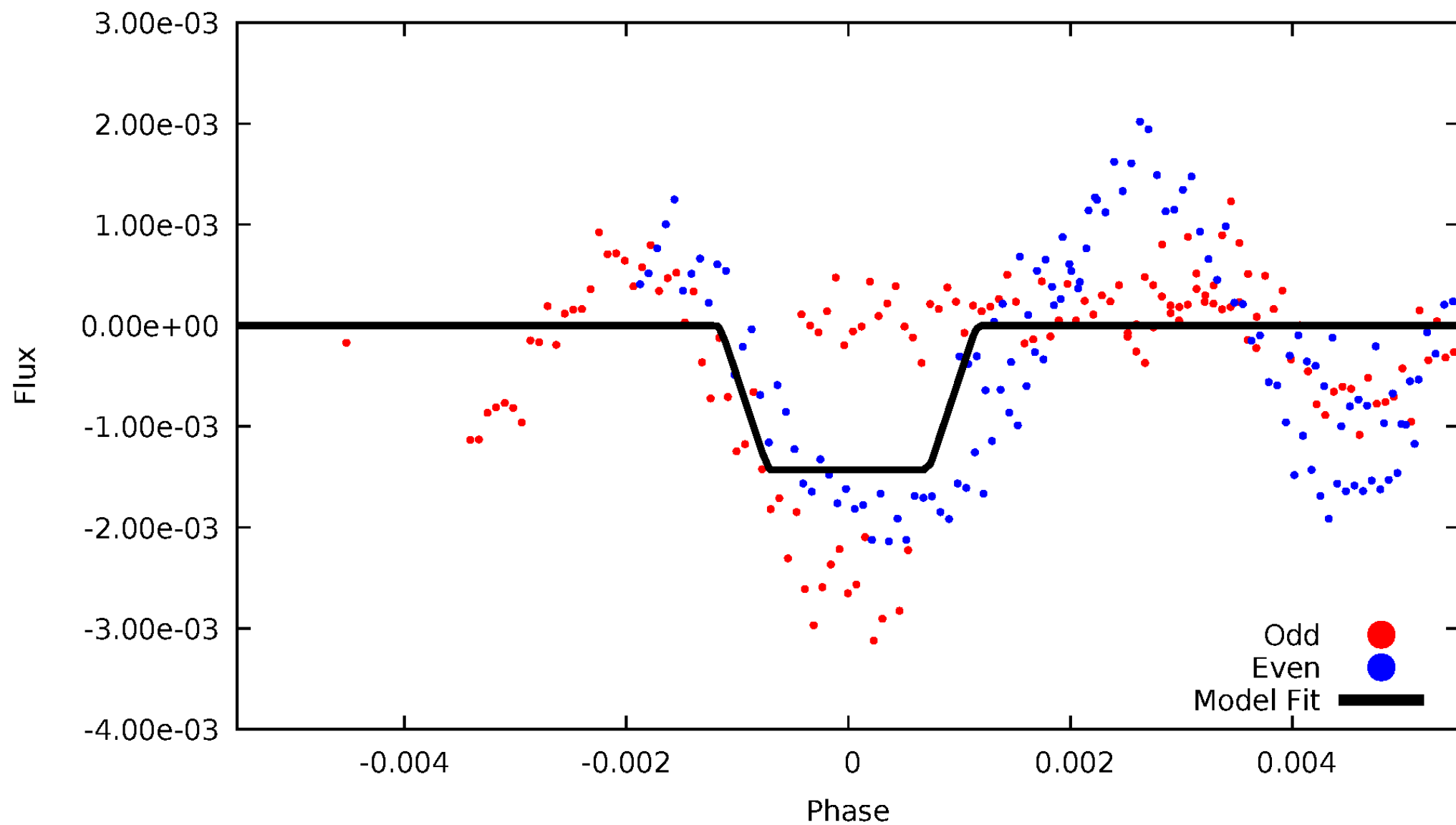
DV Odd/Even

TCE 005480766-05



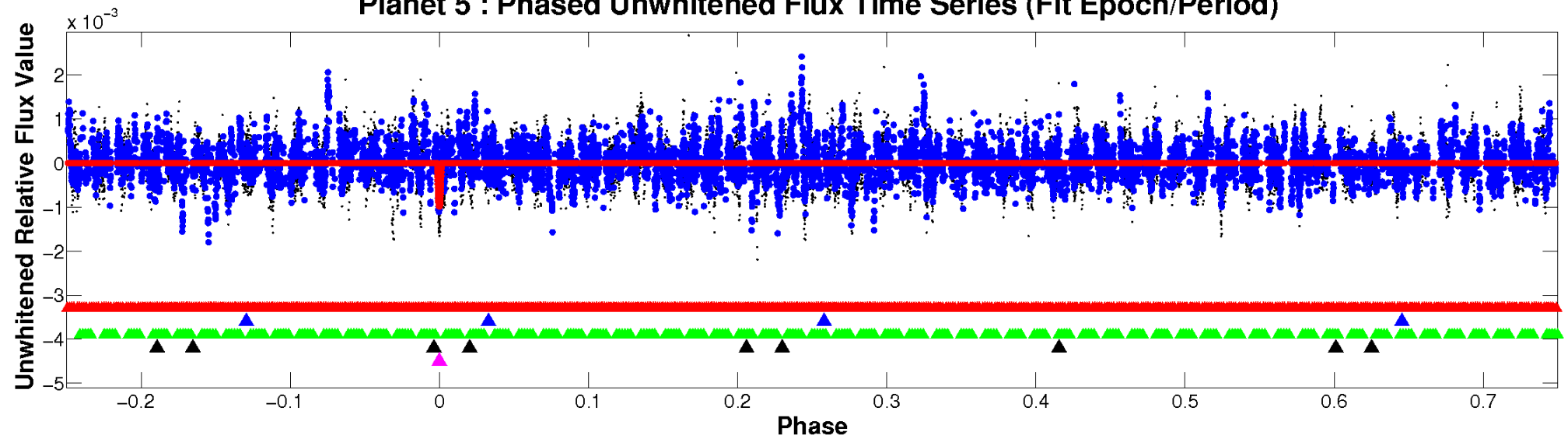
ALT Odd/Even

TCE 005480766-05

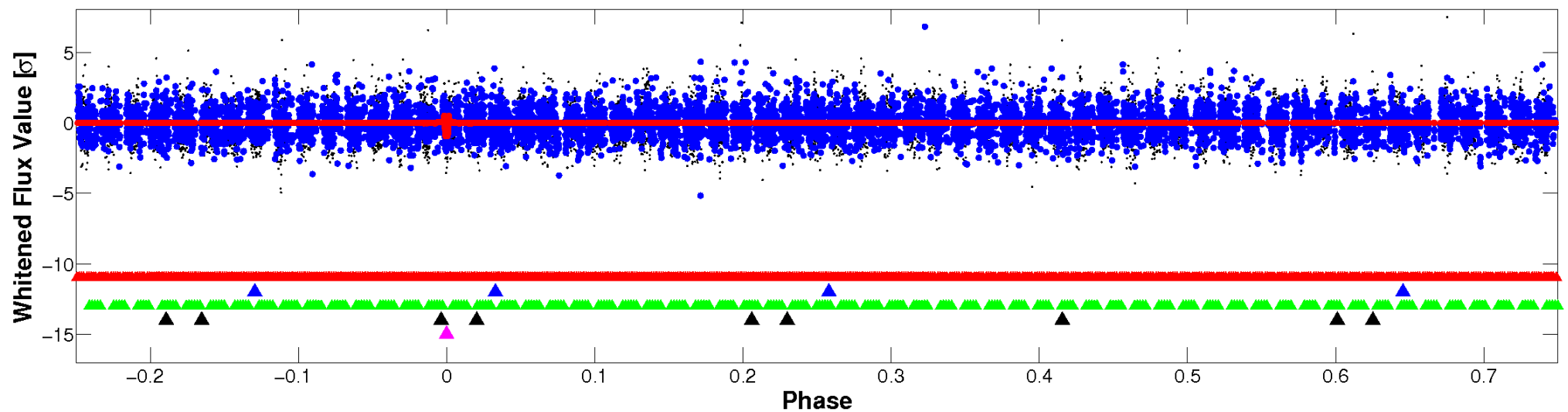


Non-Whitened Vs. Whitened Light Curve

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

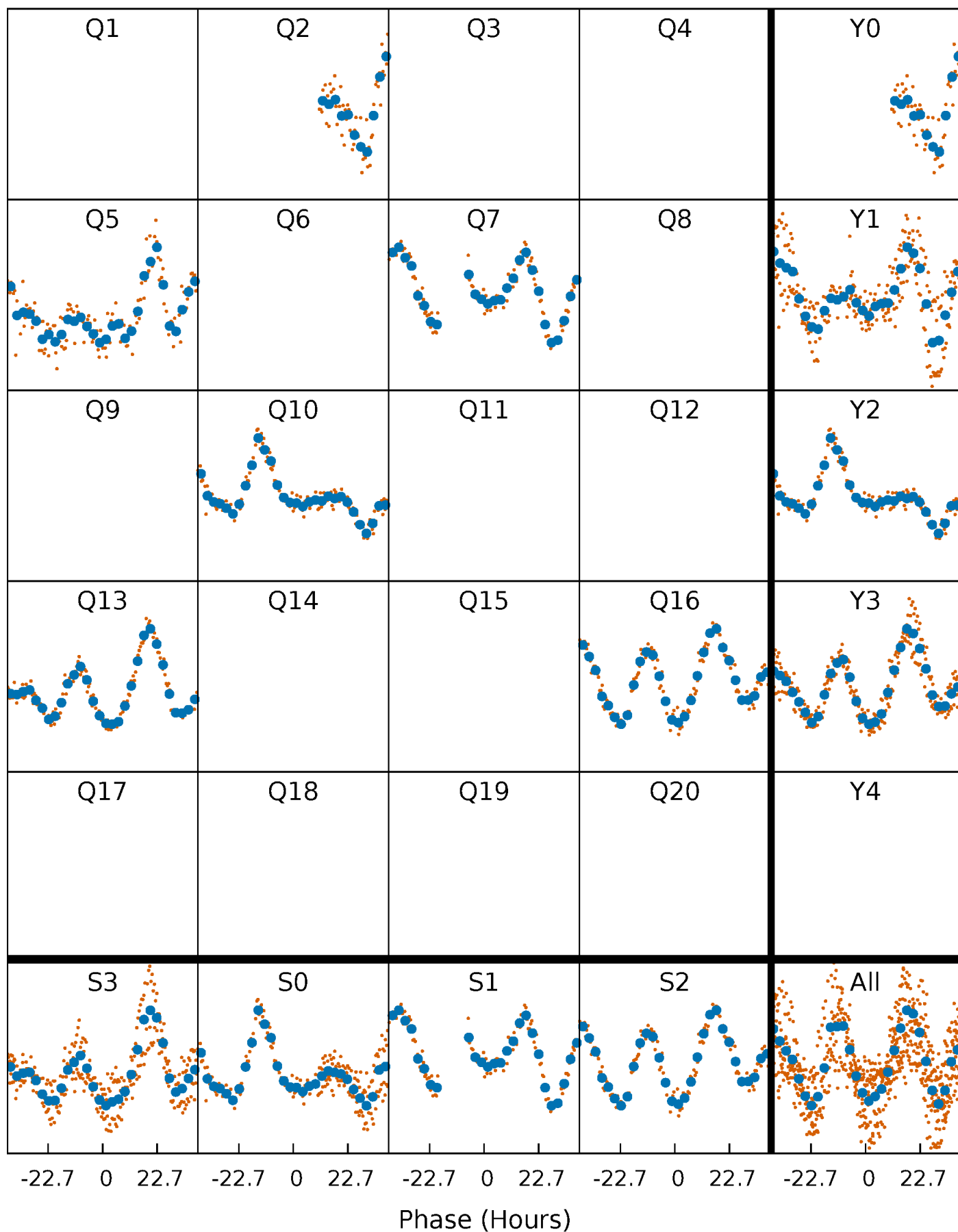


Planet 5 : Phased Whitened Flux Time Series (Fit Epoch/Period)



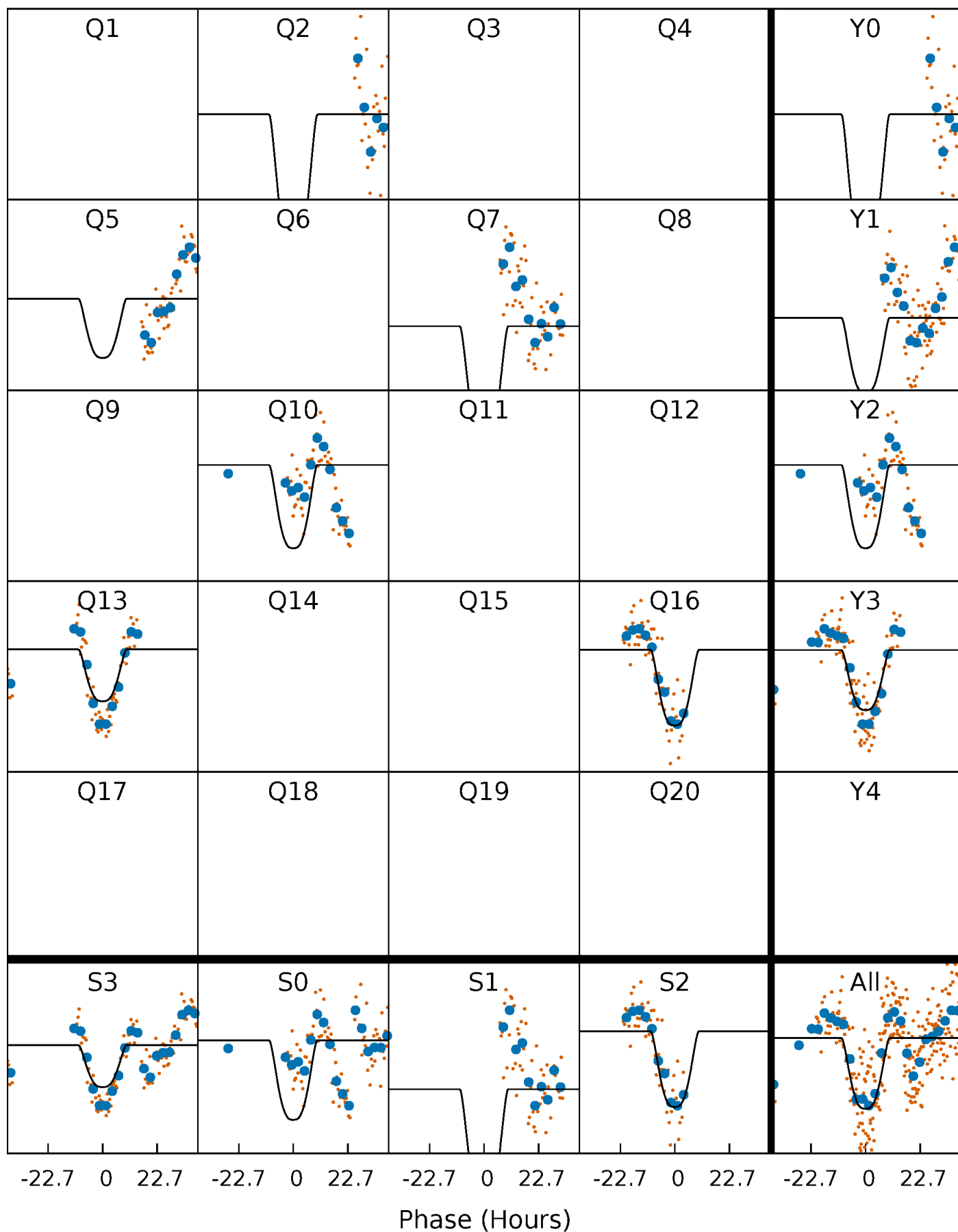
PDC Quarter-Phased Transit Curves

TCE 005480766-05 $P=264.221815$ Days $T_0=183.267372$ (BKJD)



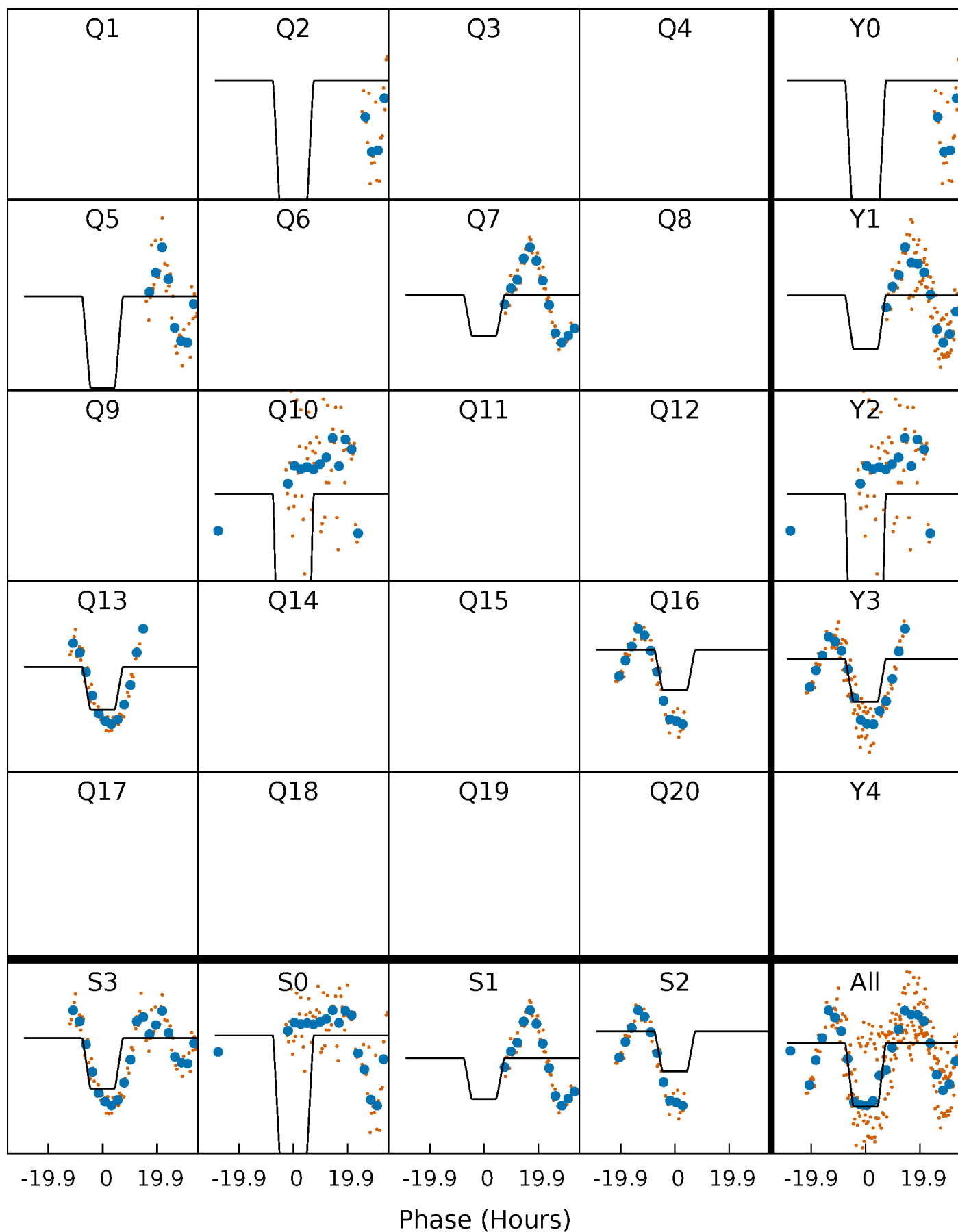
DV Quarter-Phased Transit Curves

TCE 005480766-05 $P=264.221815$ Days $T_0=183.267372$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

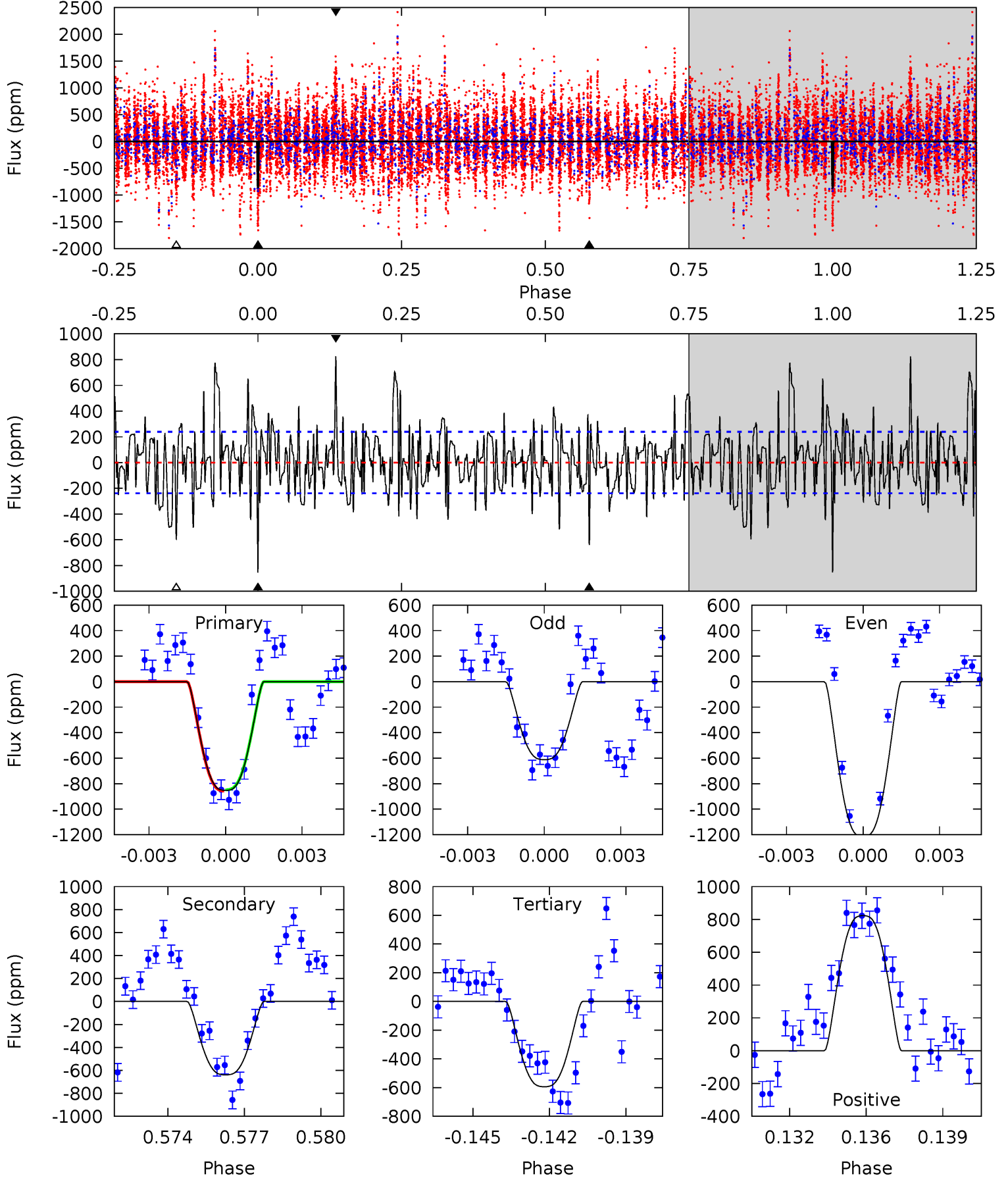
TCE 005480766-05 $P=264.219553$ Days $T_0=183.284132$ (BKJD)



DV Model-Shift Uniqueness Test

005480766-05, P = 264.221815 Days, E = 183.267372 Days

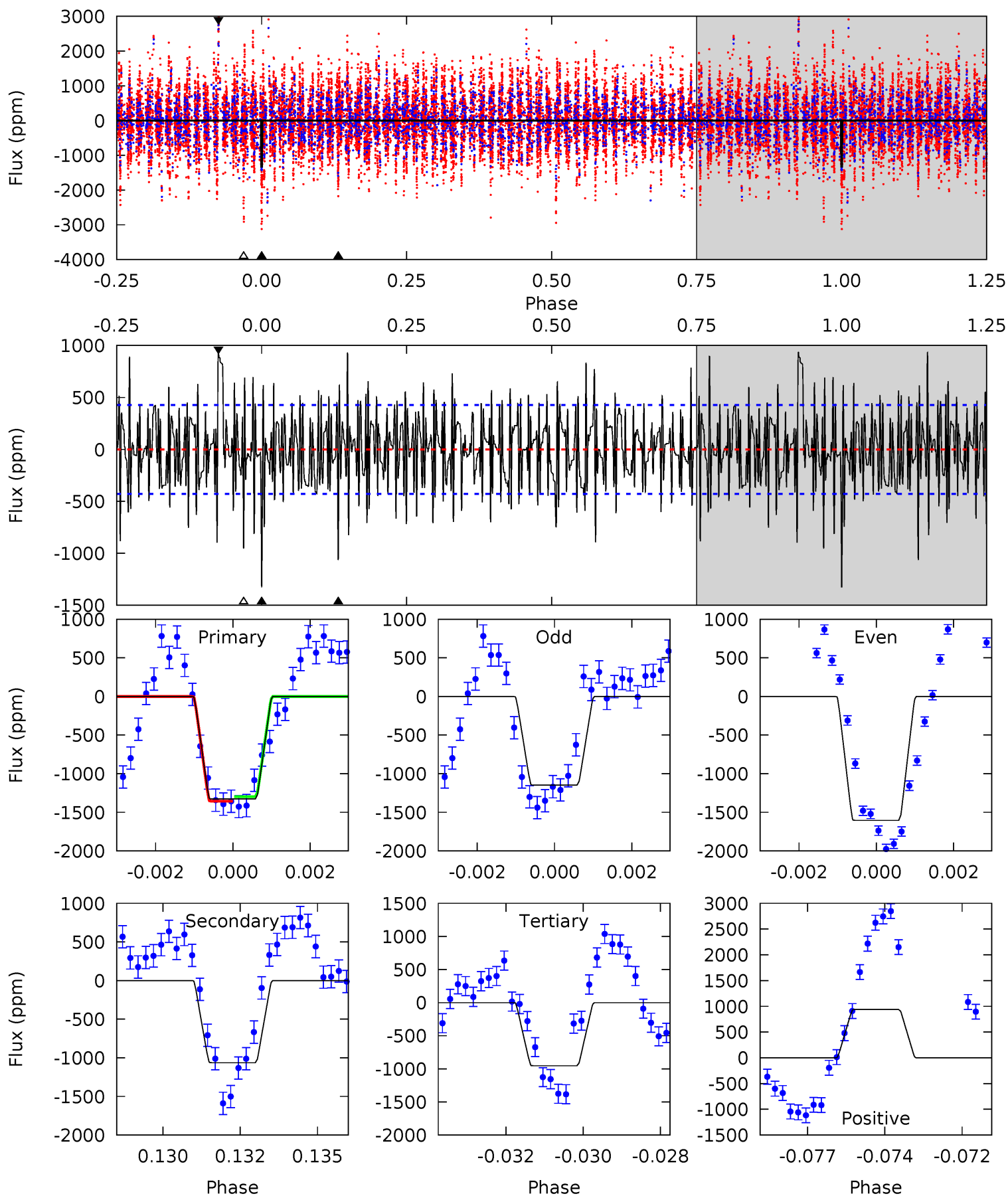
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.7	14.0	13.0	18.1	5.24	2.95	4.42	5.68	0.65	0.99	-4.04	6.57	0.49	0.49	0.11



Alt Model-Shift Uniqueness Test

005480766-05, P = 264.219553 Days, E = 183.284132 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
16.5	13.2	11.8	11.6	5.30	3.05	3.93	4.64	4.84	1.37	1.57	2.77	0.91	0.41	0.36



Stellar Parameters For KIC 005480766

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6510^{+155}_{-214}	$4.434^{+0.062}_{-0.188}$	$-0.380^{+0.250}_{-0.350}$	$1.048^{+0.296}_{-0.127}$	$1.086^{+0.146}_{-0.146}$	$1.329^{+0.433}_{-0.671}$
	+2%/-3%	+1%/-4%	+66%/-92%	+28%/-12%	+13%/-13%	+33%/-50%
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 005480766-05 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{\text{max}} (K)$	$T_{\text{obs}} (K)$	A_{obs}
DV	-640 ± 46	$4.29^{+0.72}_{-0.55}$	458^{+30}_{-22}	5432^{+321}_{-266}	12725^{+4082}_{-3120}
Alt.	-1064 ± 81	$4.46^{+0.78}_{-0.60}$	459^{+32}_{-23}	6022^{+357}_{-318}	19546^{+6252}_{-5061}

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

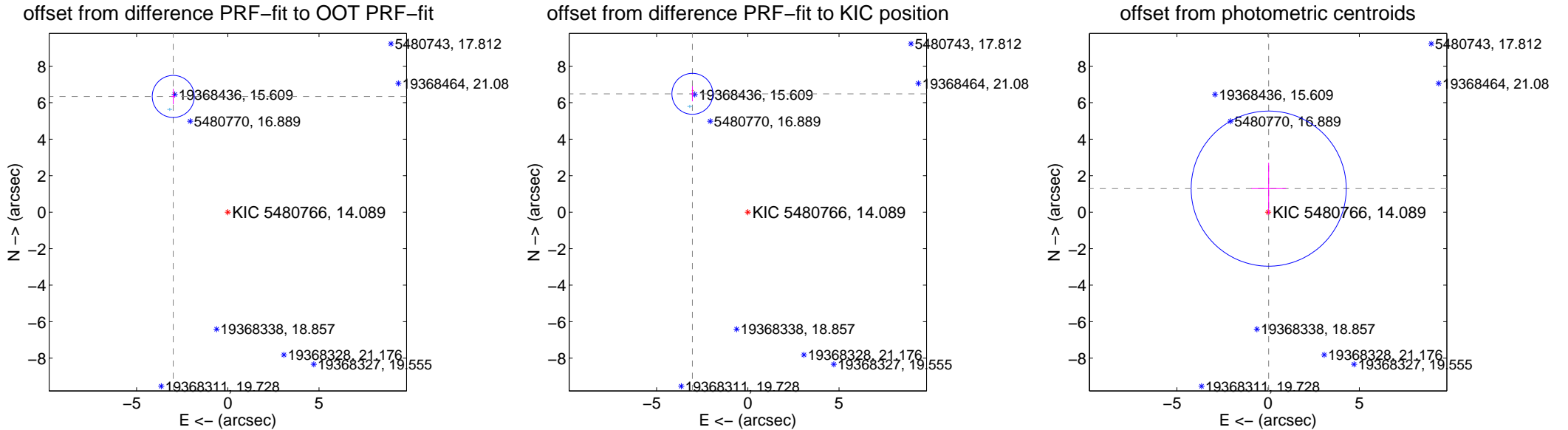
DV Centroid Data

Supplemental centroid analysis for 005480766-05. Kepler magnitude: 14.09. Transit SNR 7.02

There are 1 quarters with good PRF difference image offsets

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

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	7.011 \pm 0.384	18.26	2.990 \pm 0.108	6.341 \pm 0.421
PRF-fit source offset from KIC position	7.162 \pm 0.374	19.15	3.039 \pm 0.091	6.485 \pm 0.411
photometric centroid source offset	1.29 \pm 1.42	0.91	-0.03 \pm 0.95	1.29 \pm 1.42

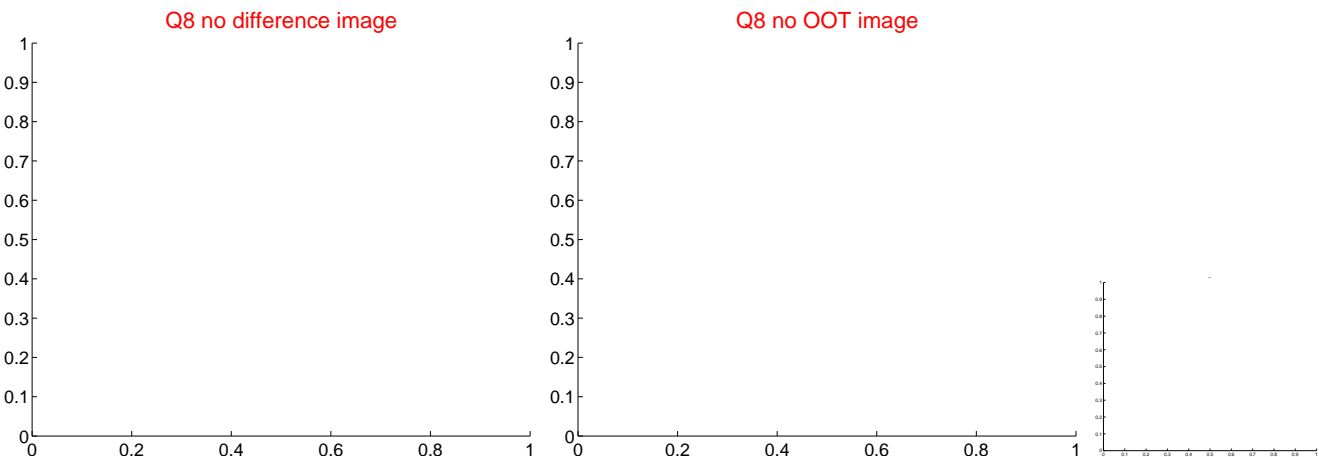
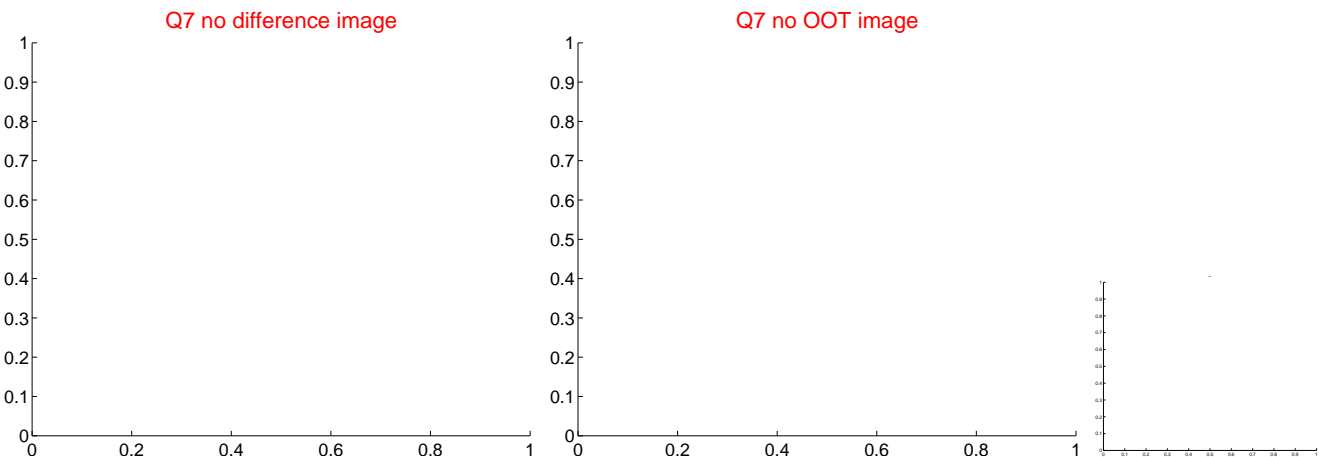
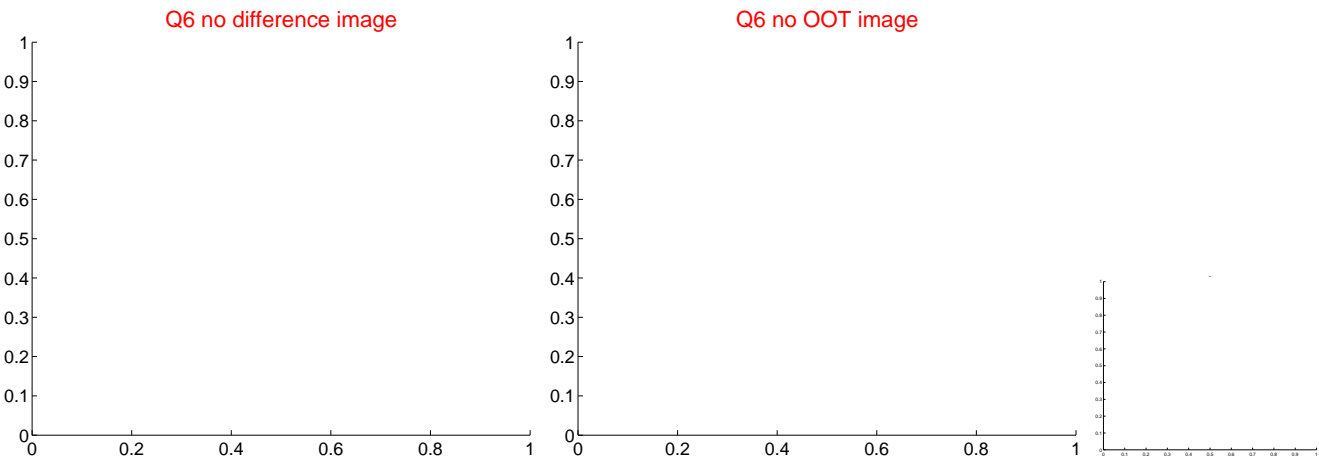
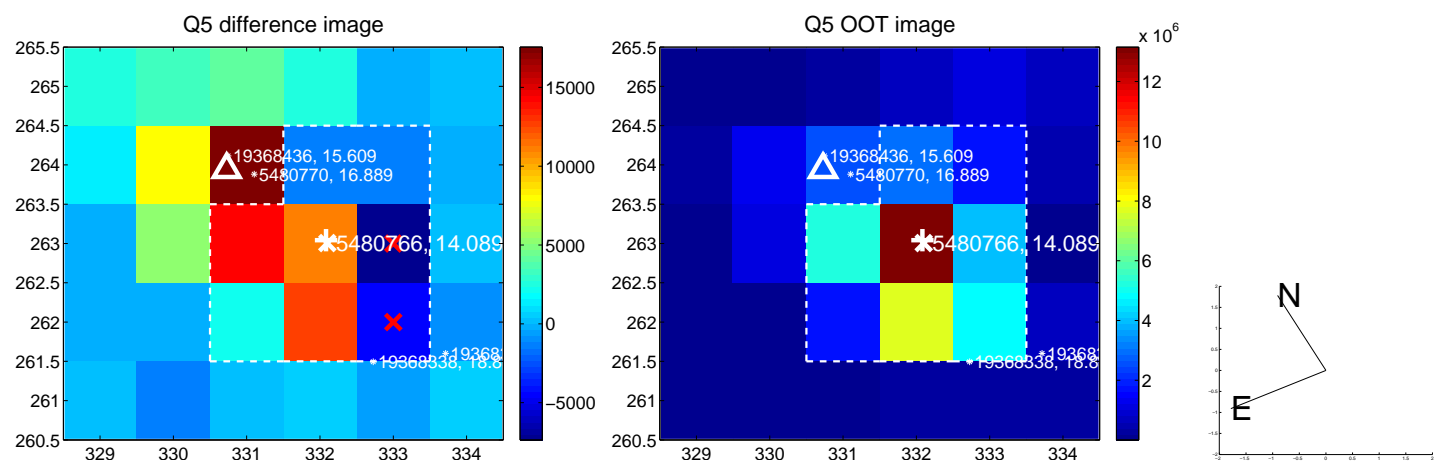


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

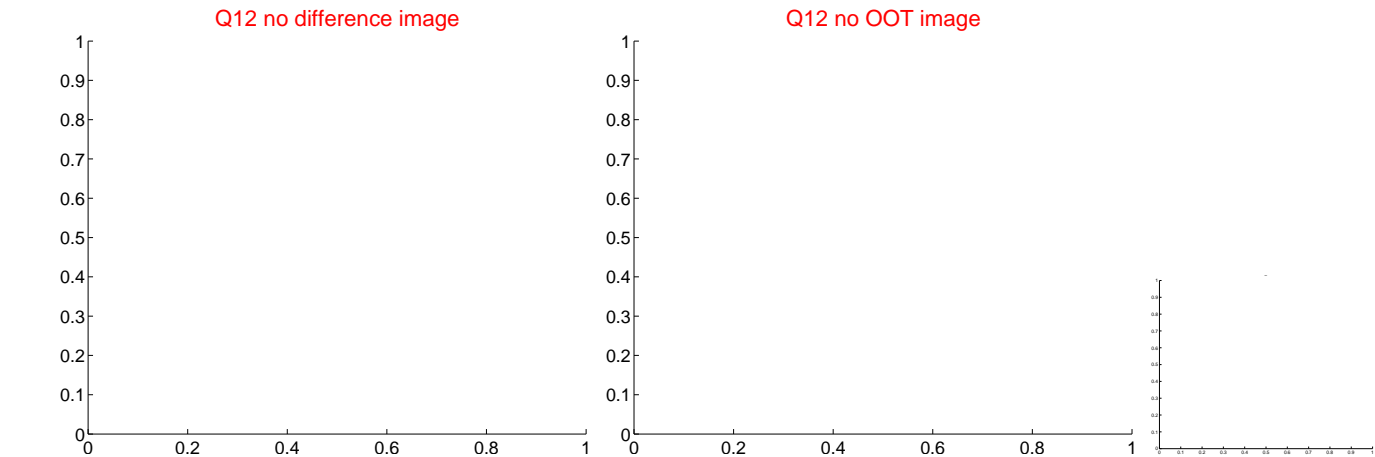
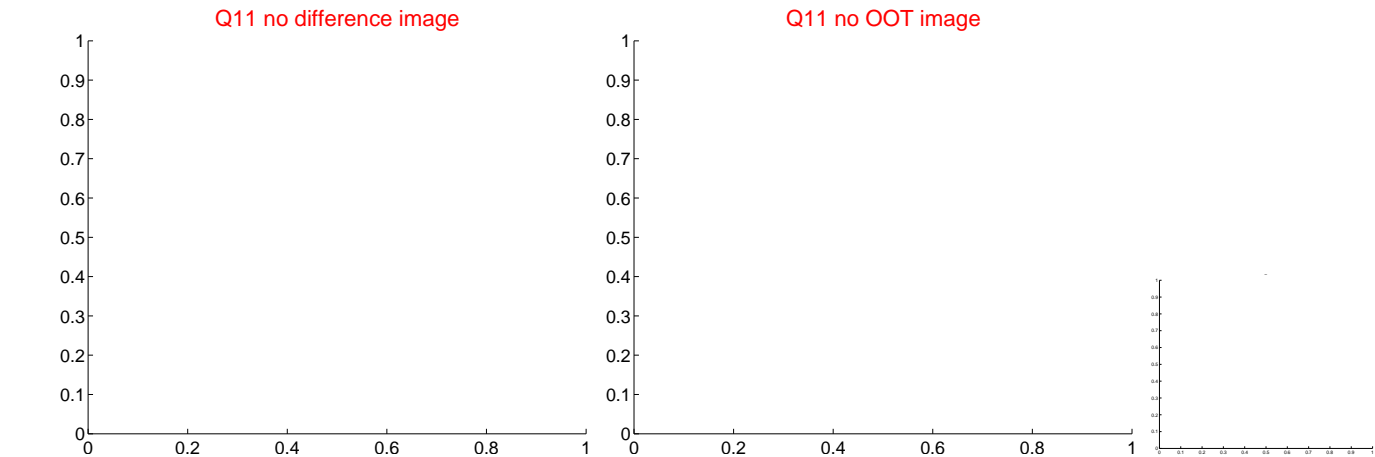
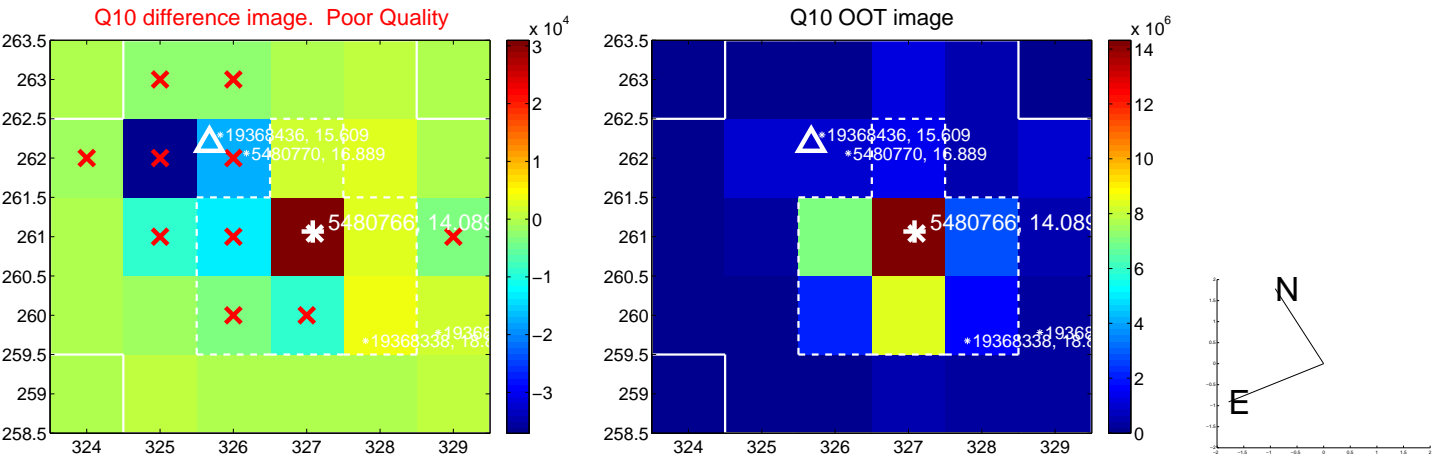
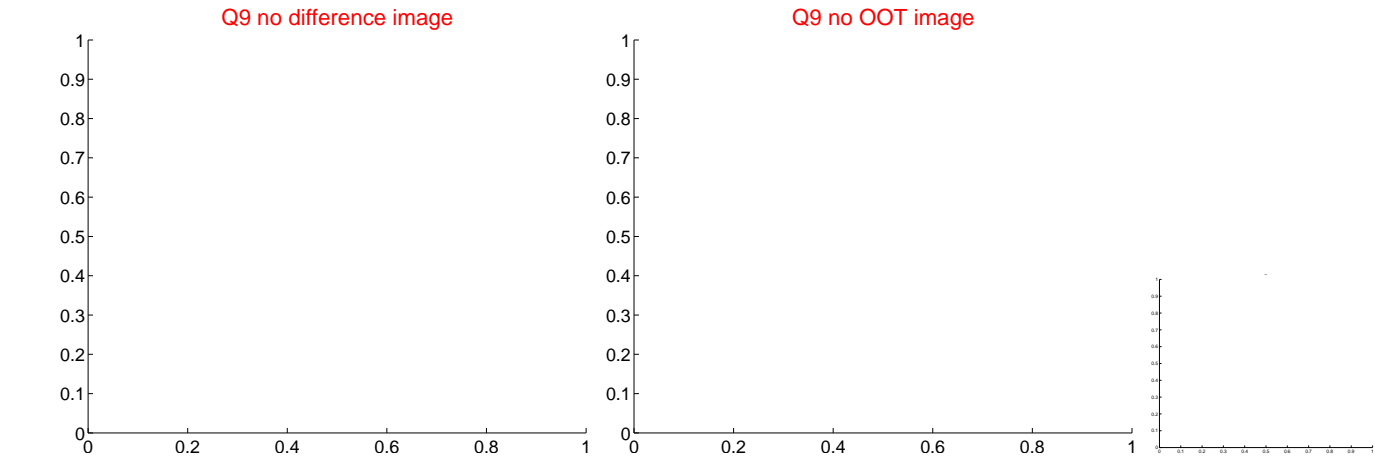
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



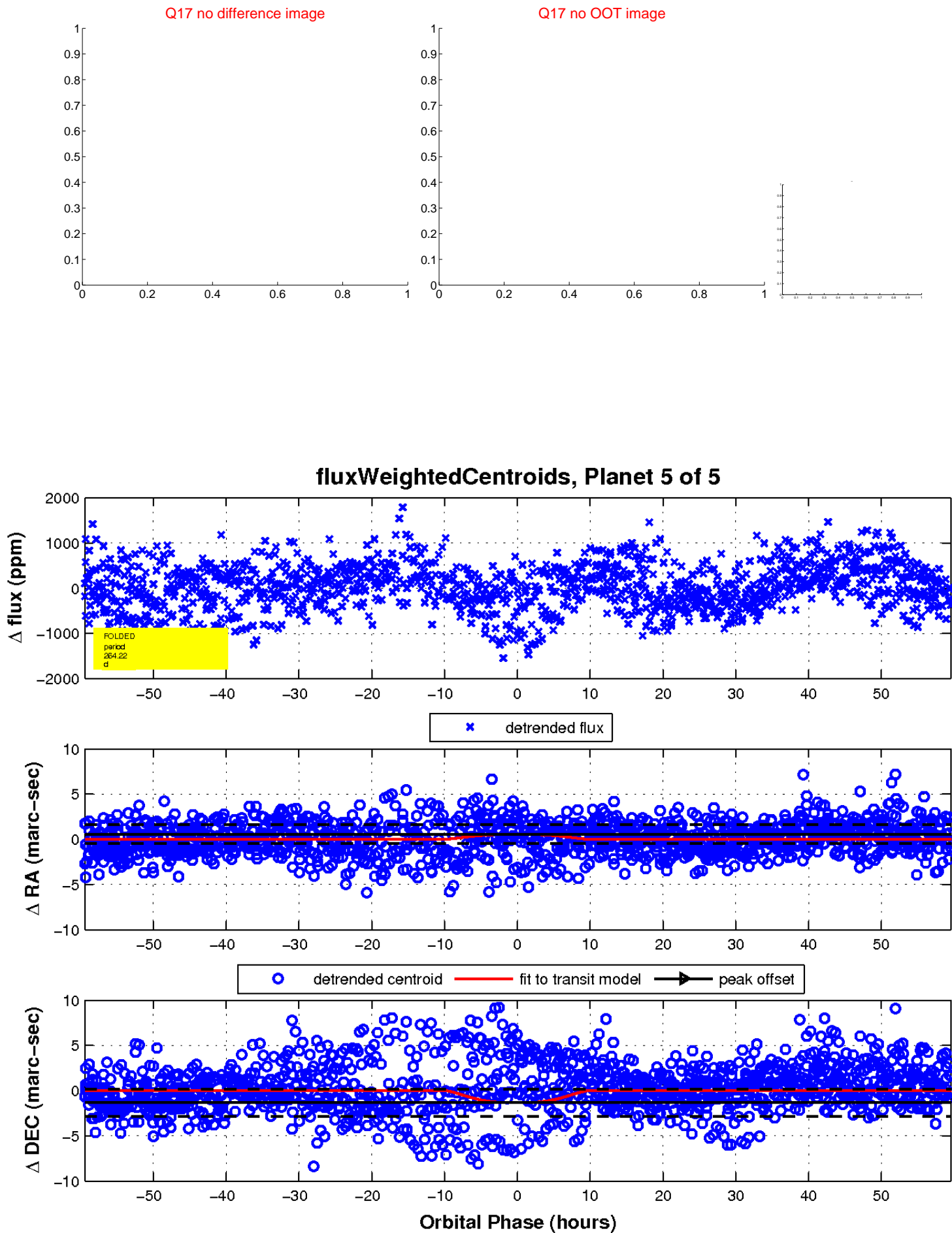
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UKIRT Image

