

KIC 009518983

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})
009518983-01	OBS	No	280.153706	237.017927	127.2	23.507	7.3	6.9	2.13	5480	2.72	4.72

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009518983-01	OBS	FP	0.00	1	0	0	0	INDIV_TRANS_MARSHALL—ALL_TRANS_CHASES—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.

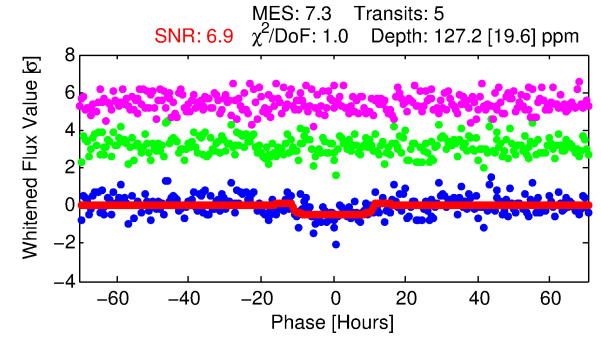
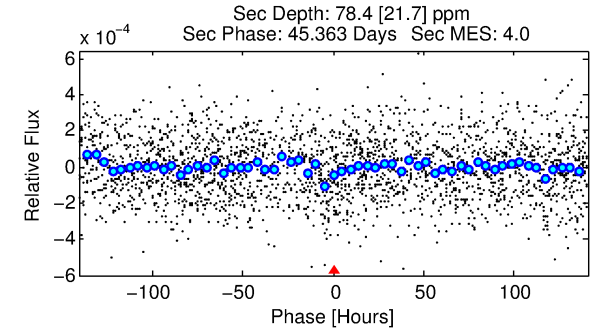
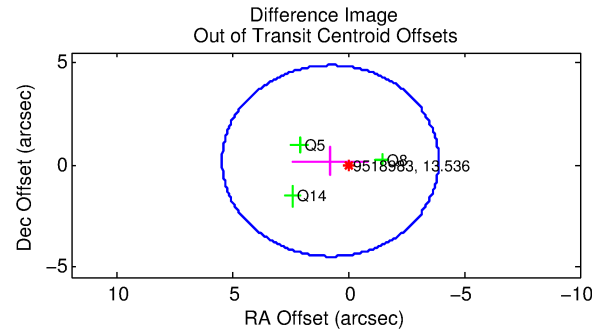
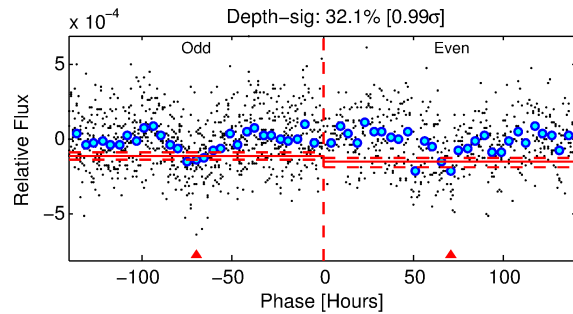
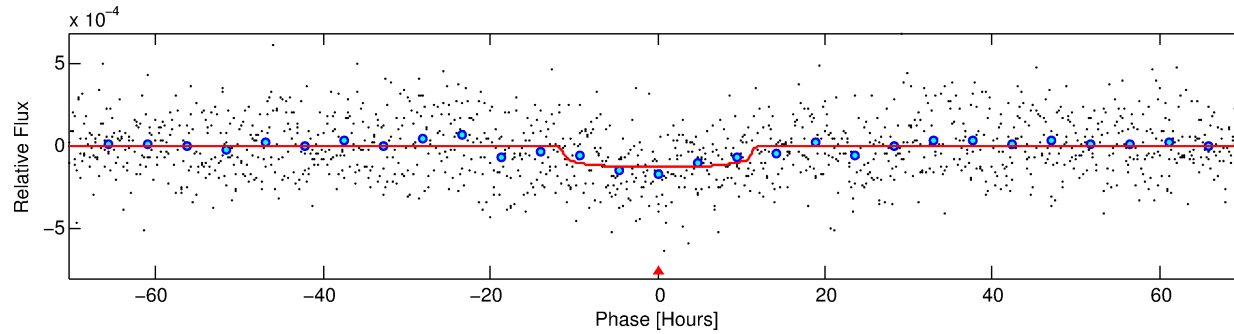
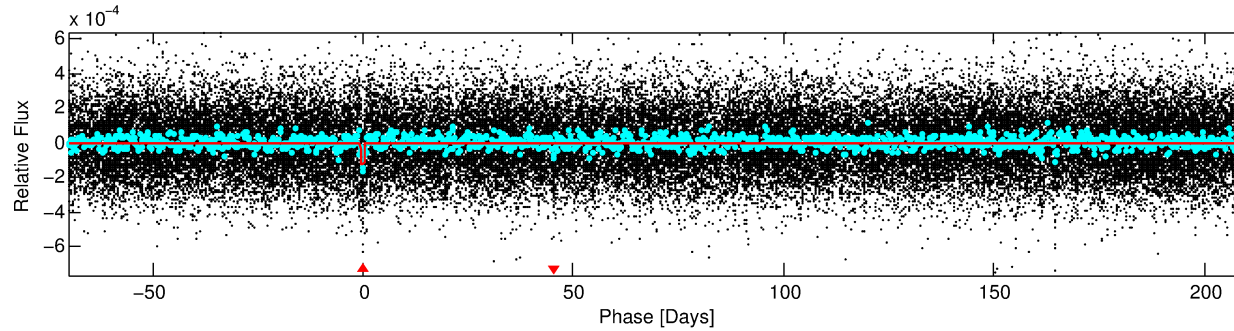
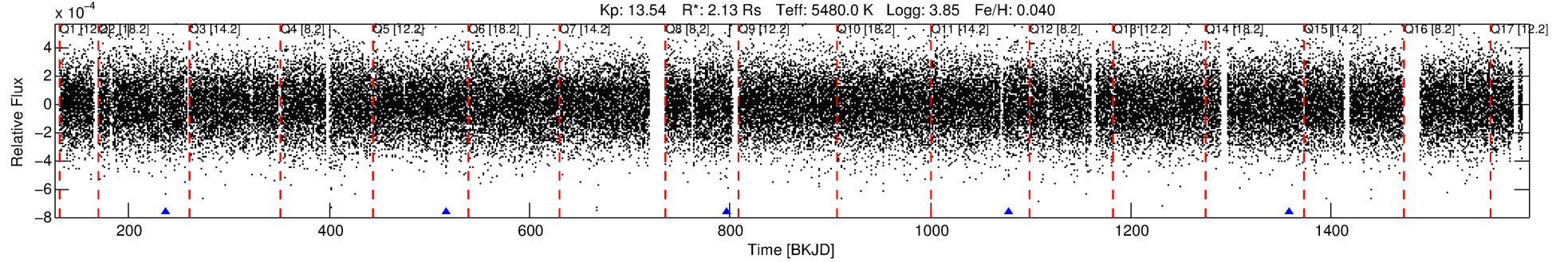
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009518983-01

No Significant Match Found

DV One-Page Summary

KIC: 9518983 Candidate: 1 of 1 Period: 280.154 d



DV Fit Results:

Period = 280.15371 [0.01453] d
Epoch = 237.0179 [0.0367] BKJD
Rp/R* = 0.0117 [0.0031]
a/R* = 53.20 [58.40]
b = 0.83 [0.43]
Seff = 4.72 [4.86]
Teq = 376 [97] K
Rp = 2.72 [1.76] Re
a = 0.8835 [0.5426] AU
Ag = 4553.29 [5411.27] [0.84σ]
Teffp = 4773 [735] K [5.93σ]

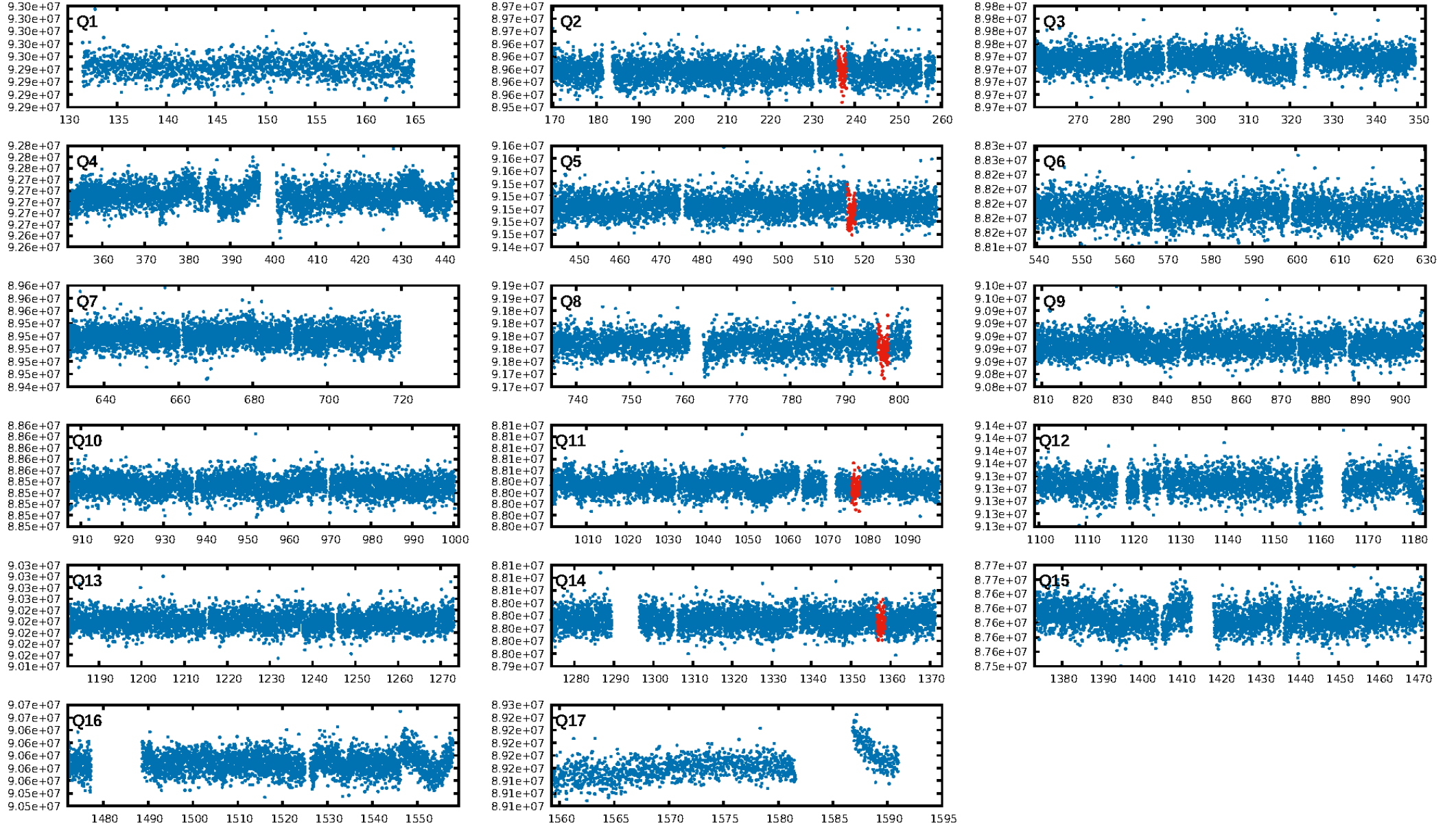
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 6.5%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 7.48e-10
RollingBand-fgt: 1.00 [5/5]
GhostDiagnostic-chr: 5.607
Centroid-sig: 0.1%
Centroid-so: 3.257 arcsec [2.07σ]
OotOffset-rm: 0.807 arcsec [0.52σ]
KicOffset-rm: 0.808 arcsec [0.50σ]
OotOffset-st: 1/0/1/1 [3]
KicOffset-st: 1/0/1/1 [3]
DiffImageQuality-fgm: 0.67 [2/3]
DiffImageOverlap-fno: 1.00 [5/5]

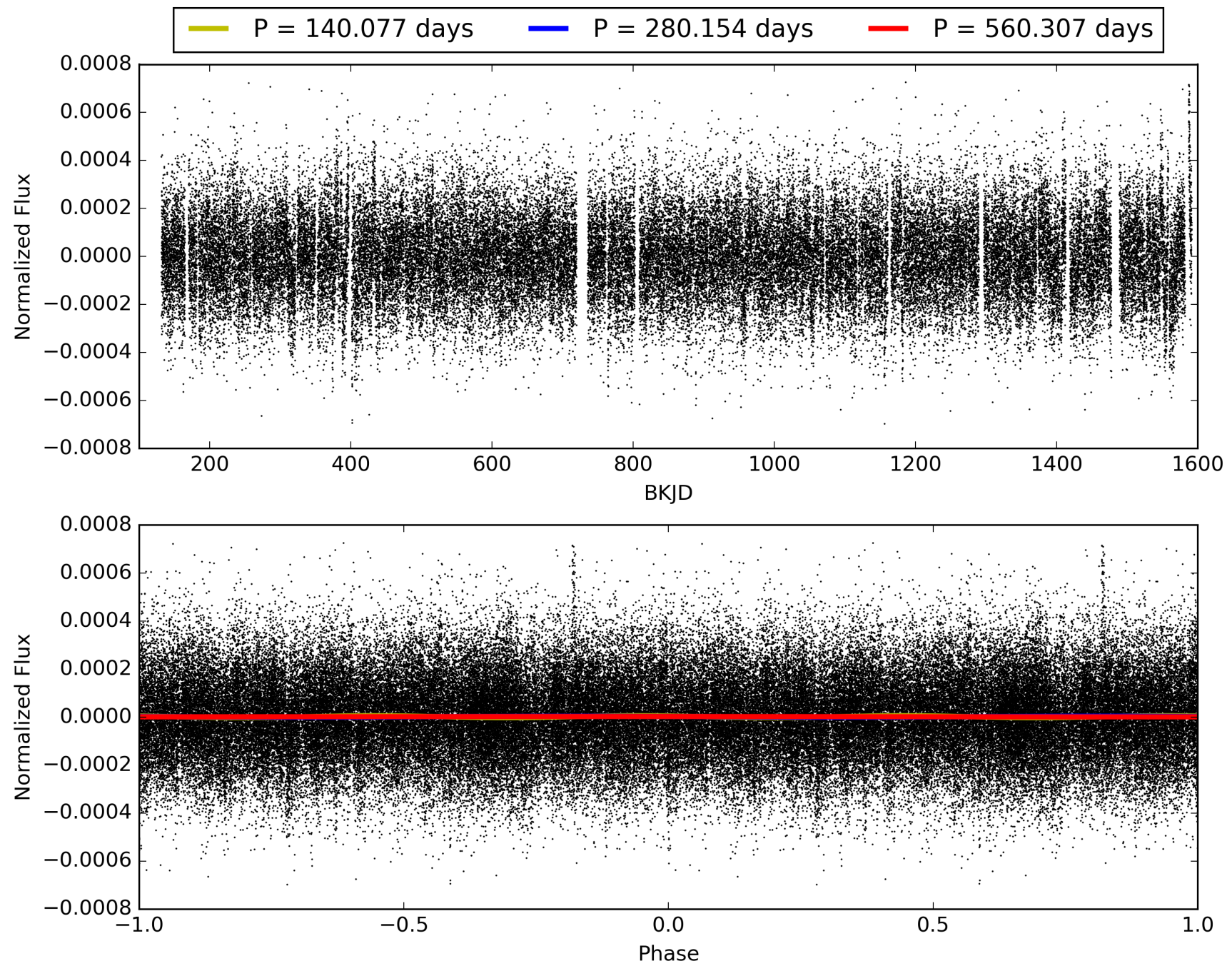
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 28-Jan-2016 20:05:25 Z

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

TCE 009518983-01, PDC Light Curves

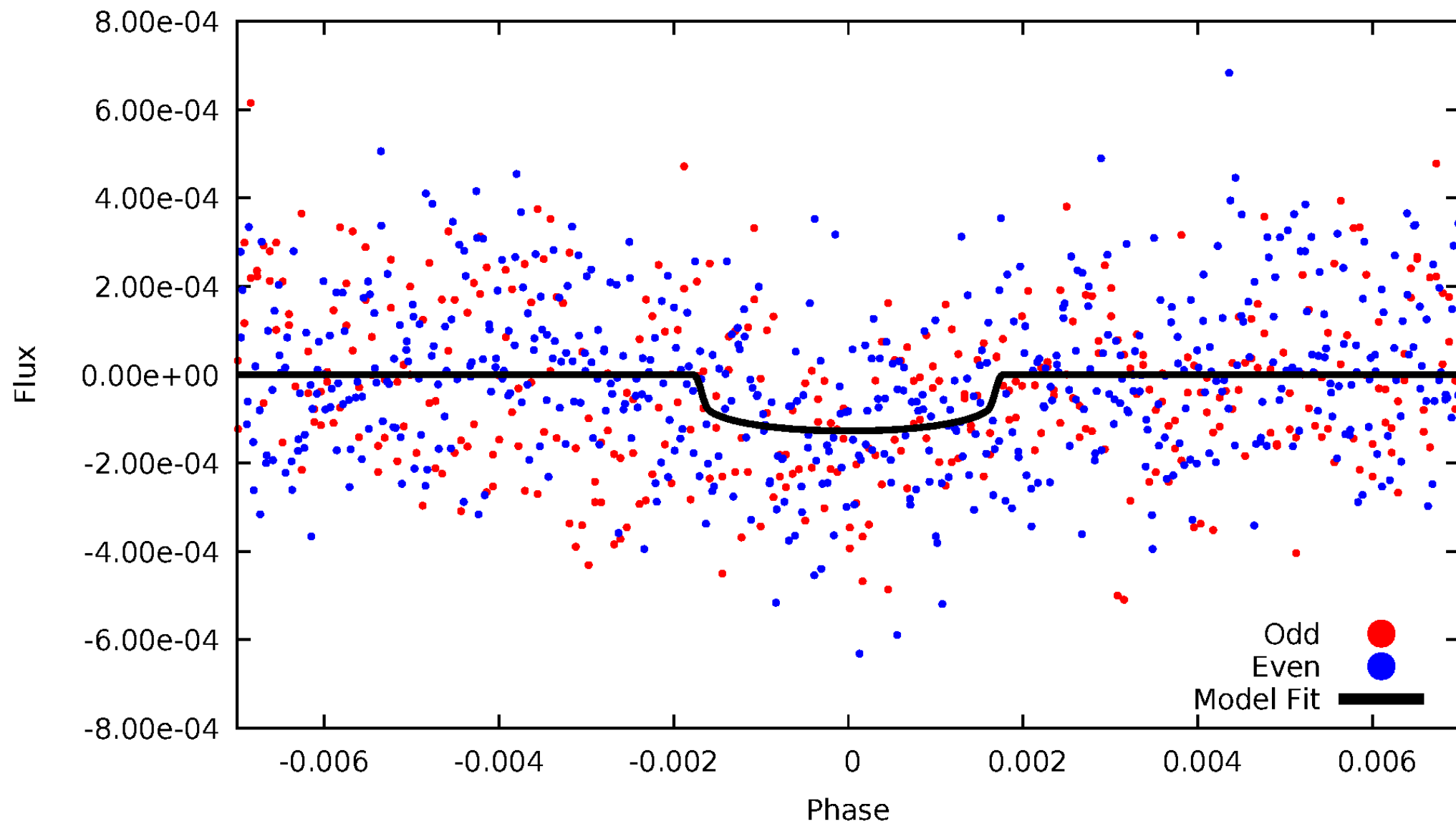


TCE 009518983-01



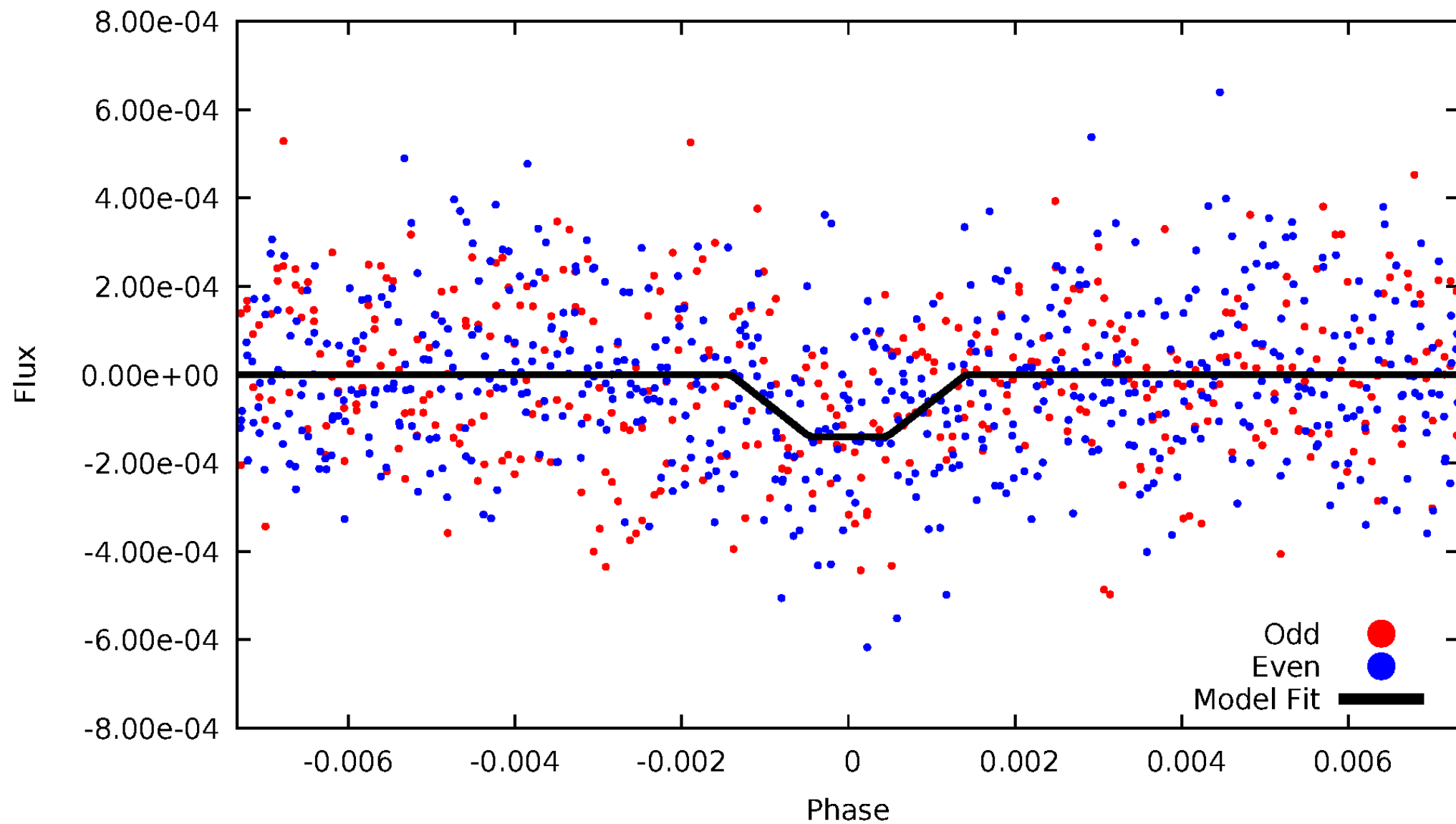
DV Odd/Even

TCE 009518983-01

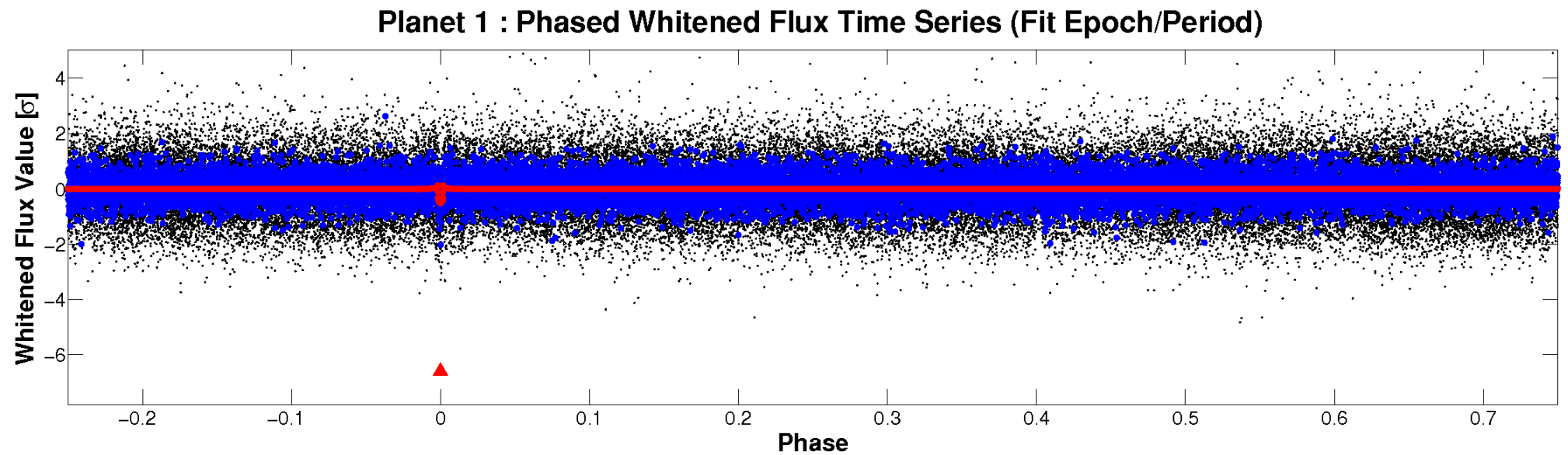
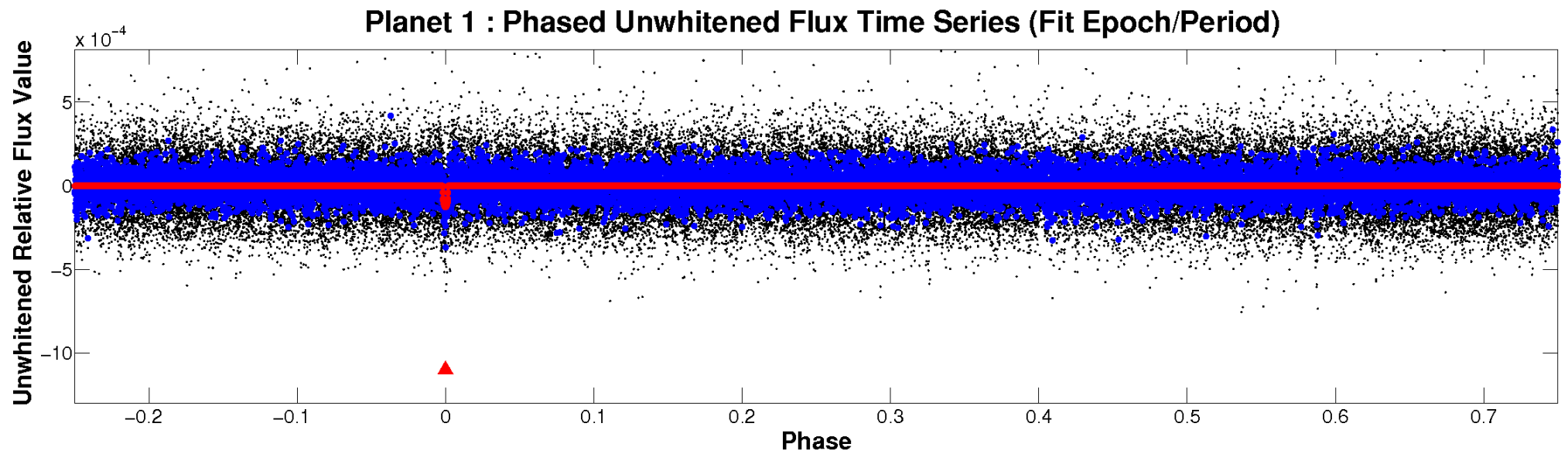


ALT Odd/Even

TCE 009518983-01

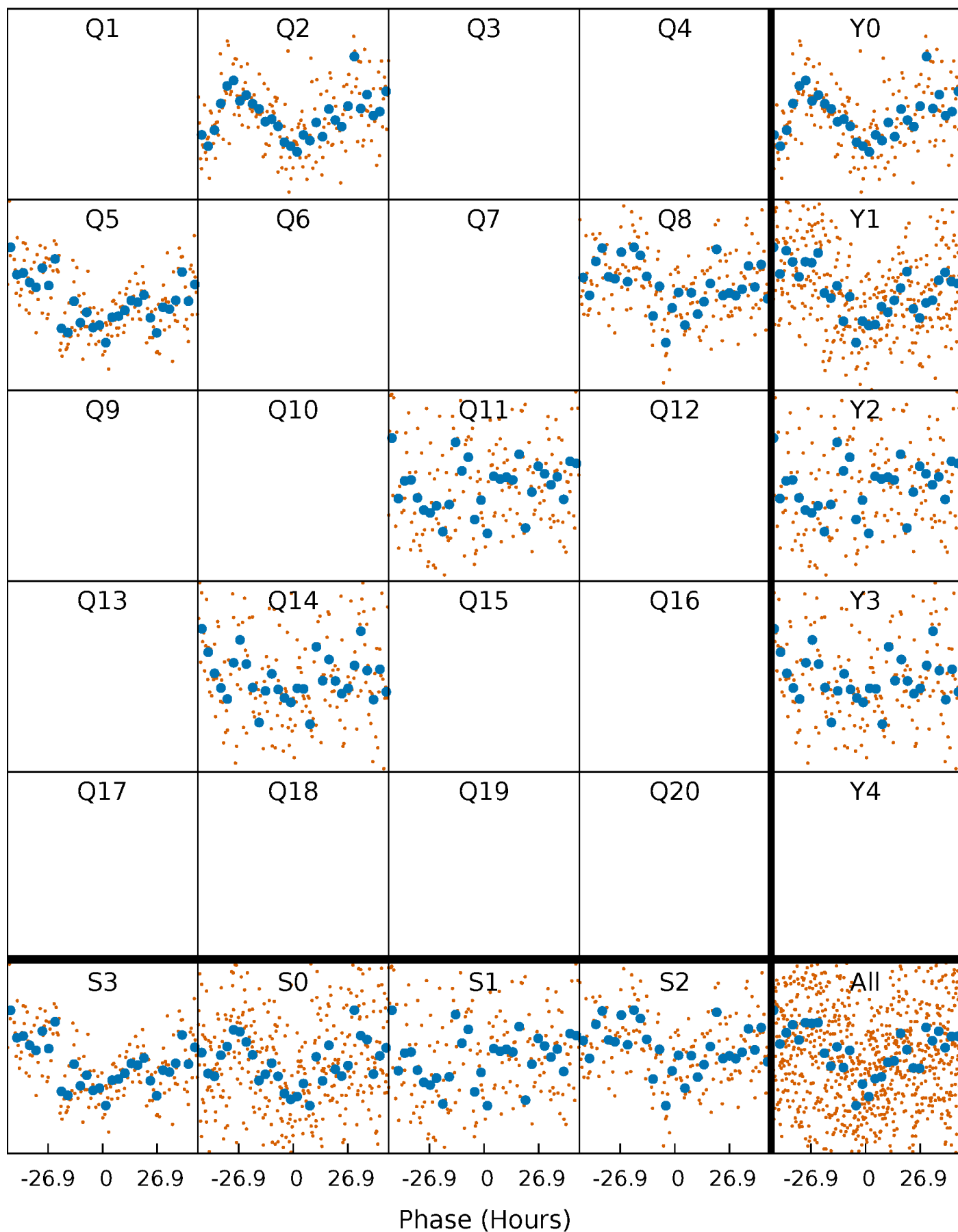


Non-Whitened Vs. Whitened Light Curve



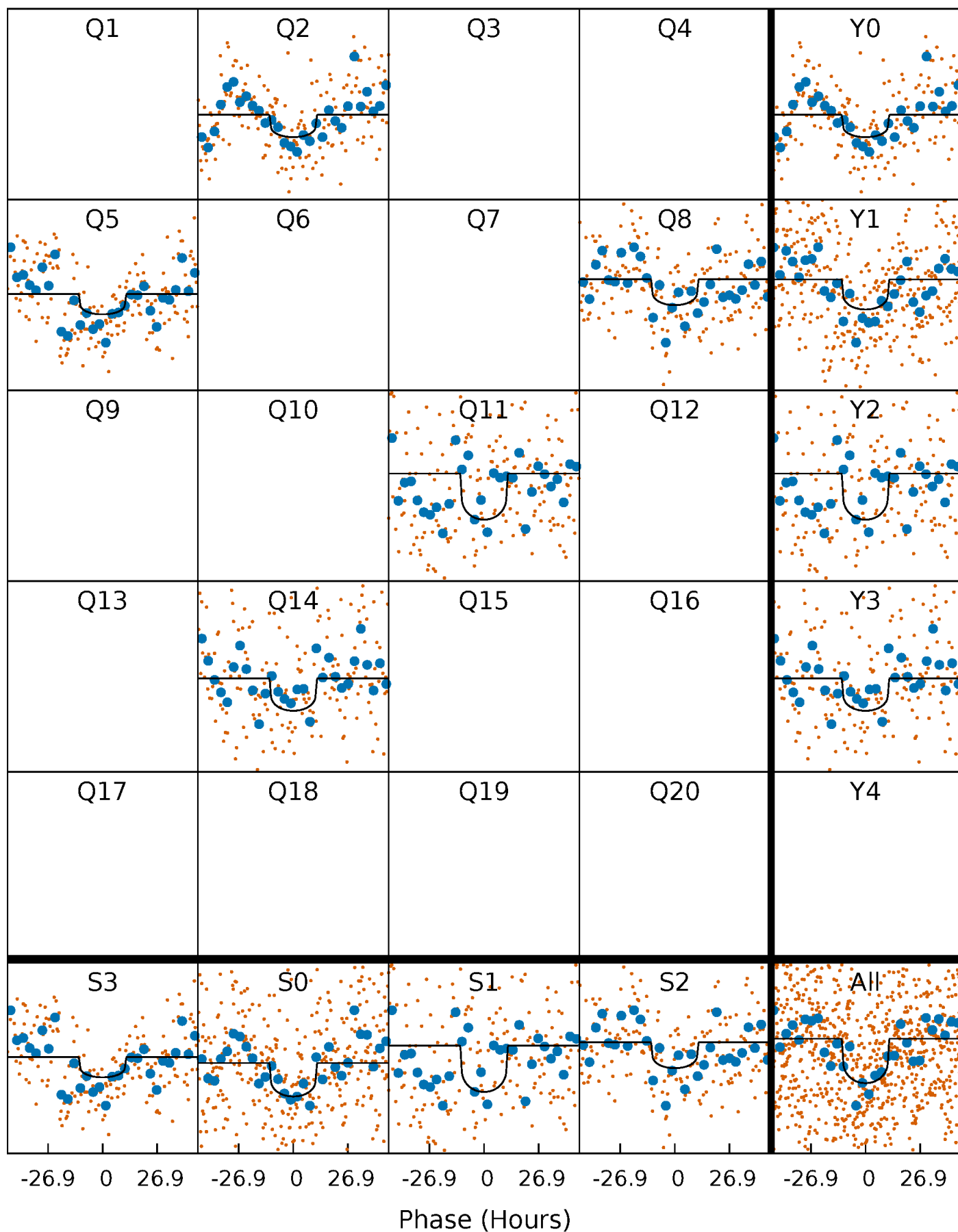
PDC Quarter-Phased Transit Curves

TCE 009518983-01 P=280.153706 Days $T_0=237.017928$ (BKJD)



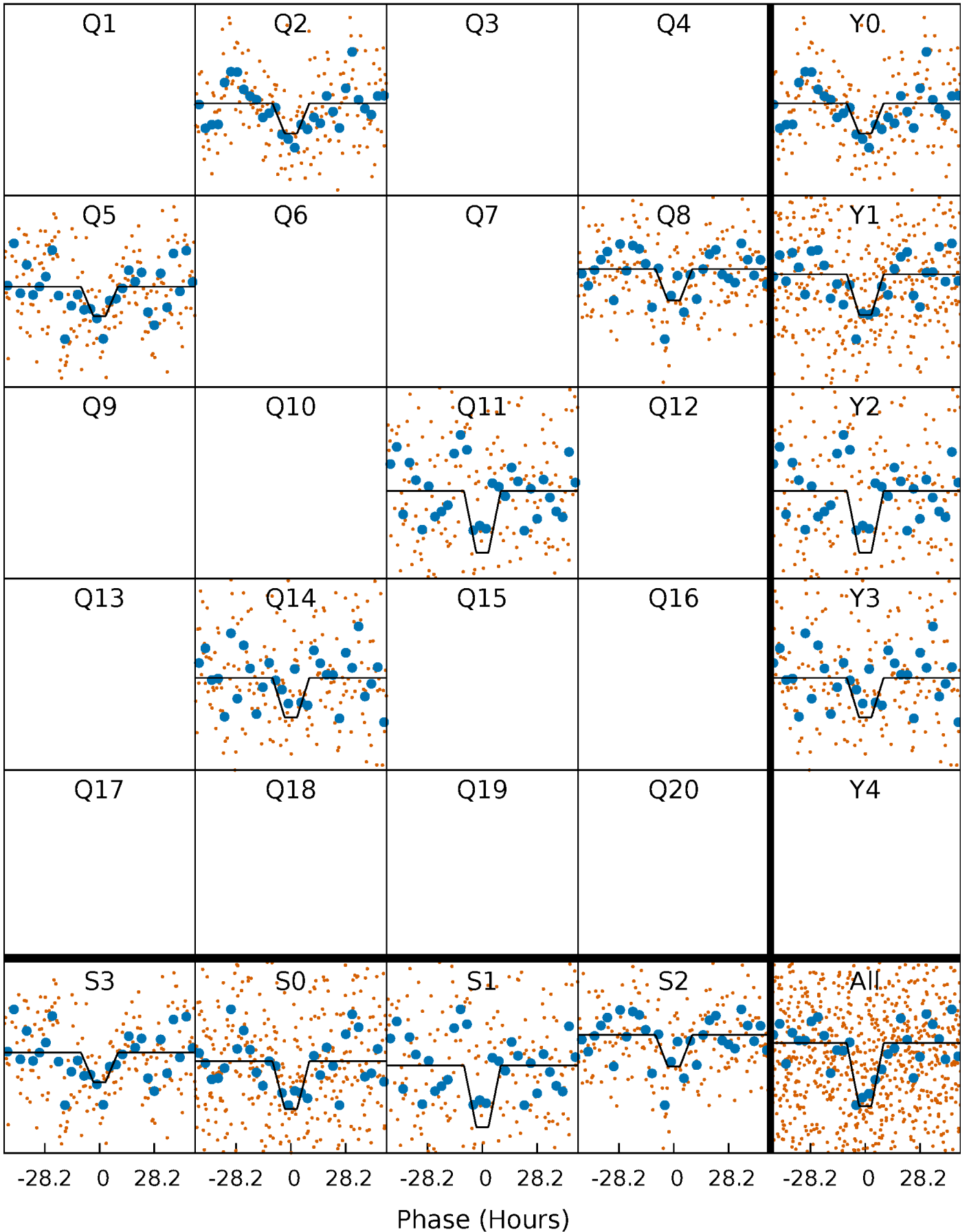
DV Quarter-Phased Transit Curves

TCE 009518983-01 P=280.153706 Days $T_0=237.017928$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

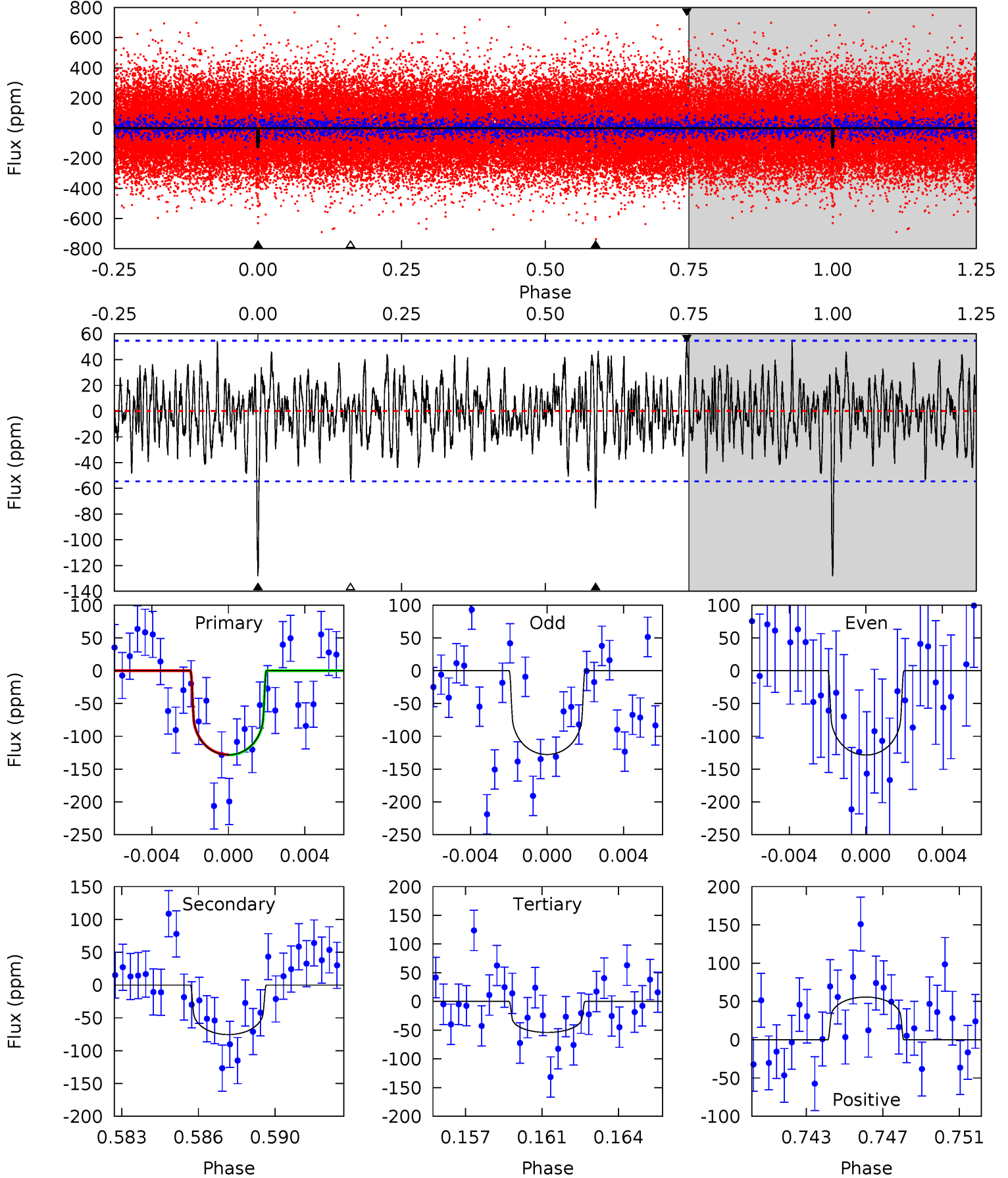
TCE 009518983-01 P=280.164541 Days $T_0=236.989406$ (BKJD)



DV Model-Shift Uniqueness Test

009518983-01, P = 280.153706 Days, E = 237.017928 Days

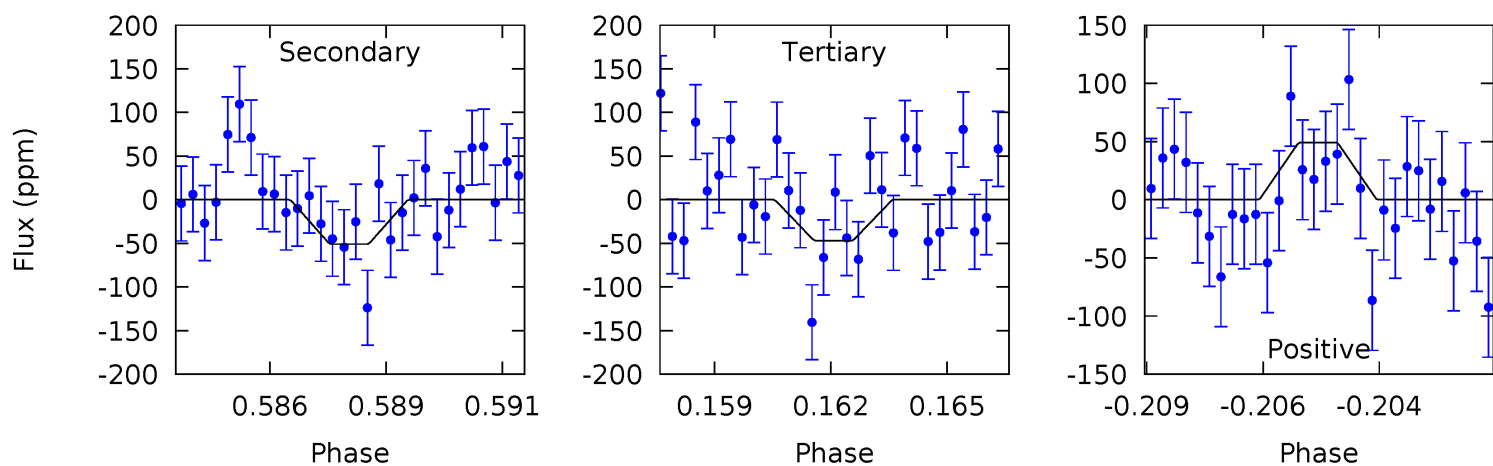
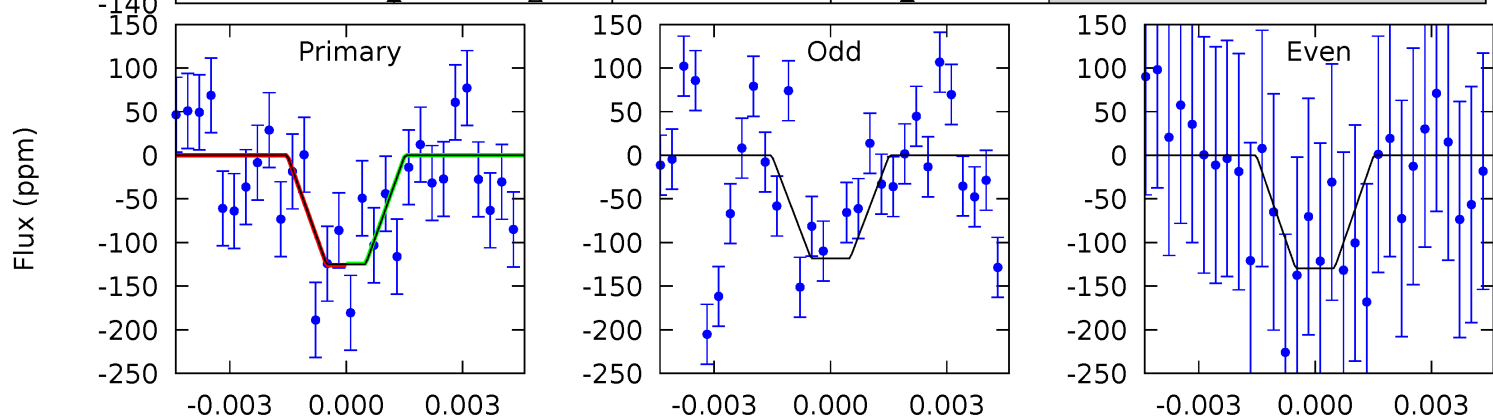
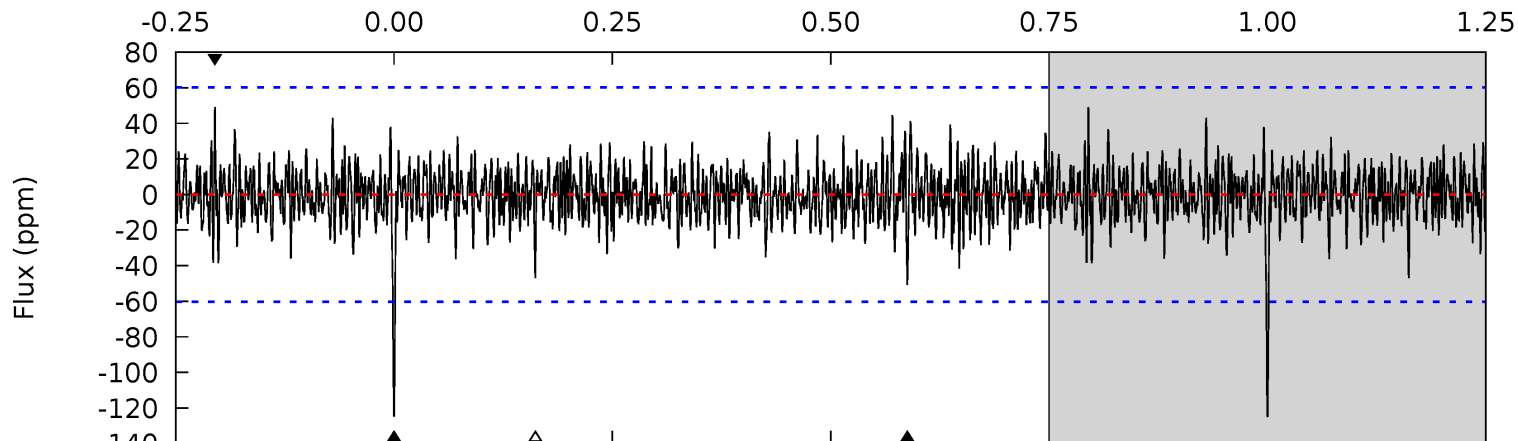
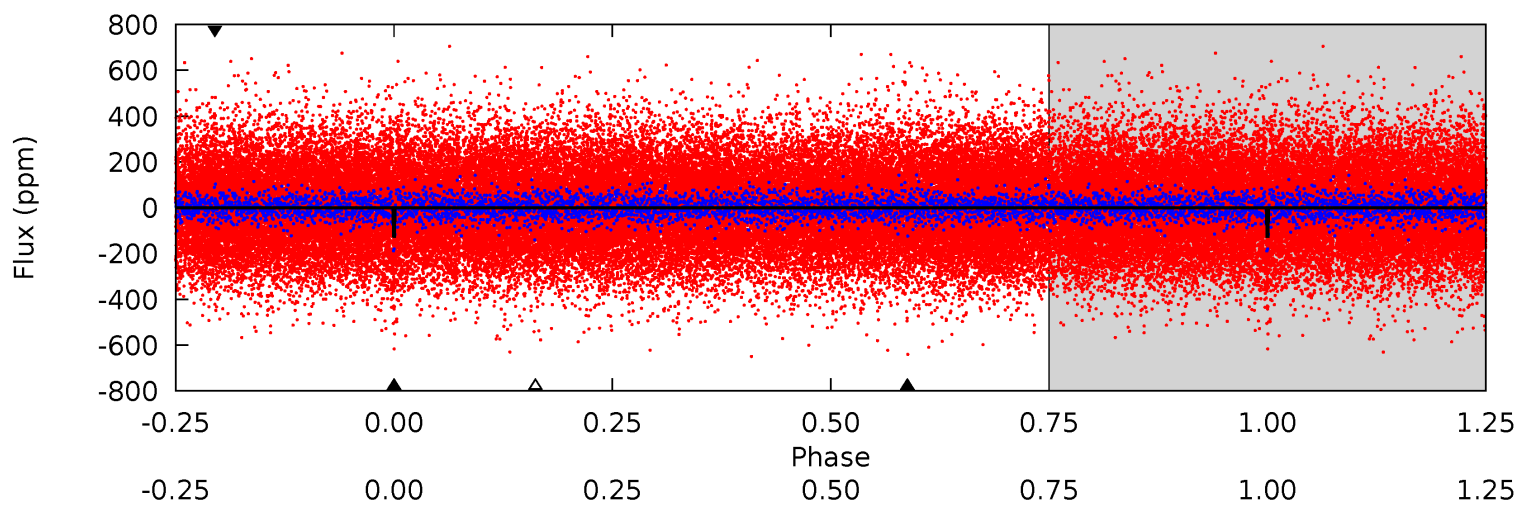
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
12.3	7.21	5.16	5.33	5.22	2.91	1.72	7.10	6.93	2.05	1.89	0.04	0.84	0.30	0.04



Alt Model-Shift Uniqueness Test

009518983-01, P = 280.164541 Days, E = 236.989406 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	4.44	4.09	4.29	5.27	2.99	1.14	6.83	6.63	0.35	0.15	0.48	0.80	0.28	0.08



Stellar Parameters For KIC 009518983

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	5480^{+168}_{-151}	$3.848^{+0.616}_{-0.154}$	$0.040^{+0.300}_{-0.250}$	$2.135^{+0.628}_{-1.255}$	$1.173^{+0.143}_{-0.286}$	$0.170^{+1.331}_{-0.078}$
	+3%/-3%	+16%/-4%	+750%/-625%	+29%/-59%	+12%/-24%	+784%/-46%
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 009518983-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-75 ± 10	$2.42^{+0.95}_{-0.90}$	511^{+44}_{-76}	4796^{+737}_{-447}	5349^{+7716}_{-2527}
Alt.	-51 ± 11	$2.44^{+1.01}_{-0.88}$	510^{+46}_{-75}	4421^{+583}_{-439}	3515^{+4892}_{-1814}

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 $A_{obs} \gg 1.0$

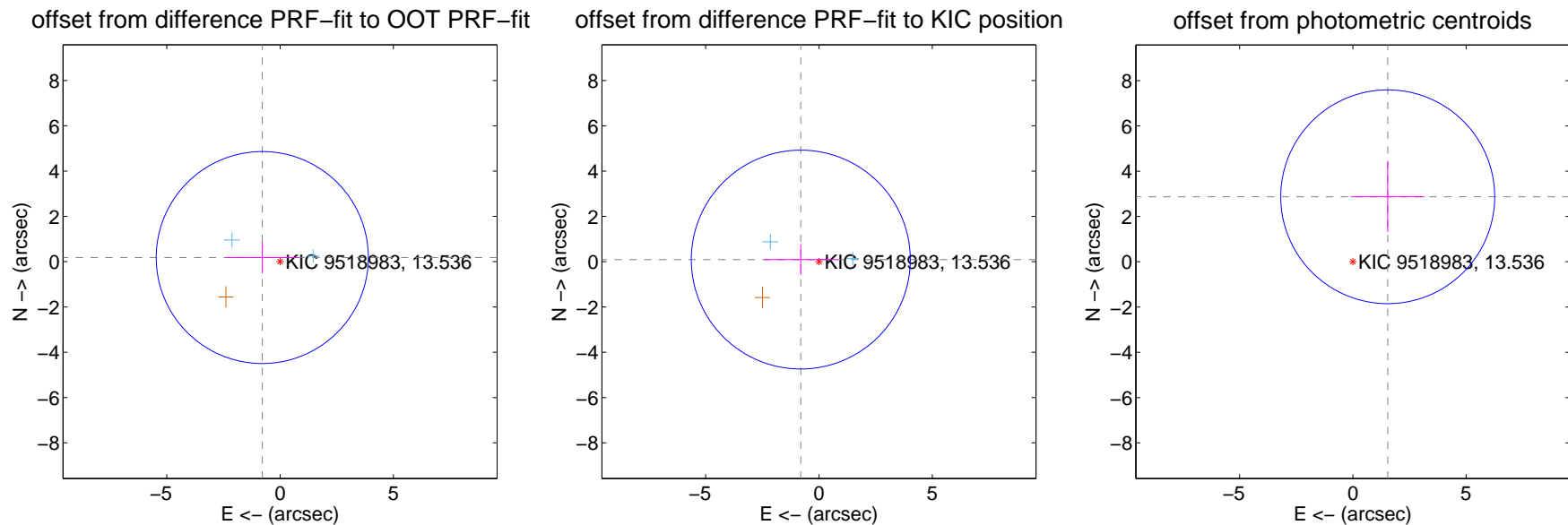
DV Centroid Data

Supplemental centroid analysis for 009518983-01. Kepler magnitude: 13.54. Transit SNR 6.90

There are 2 quarters with good PRF difference image offsets

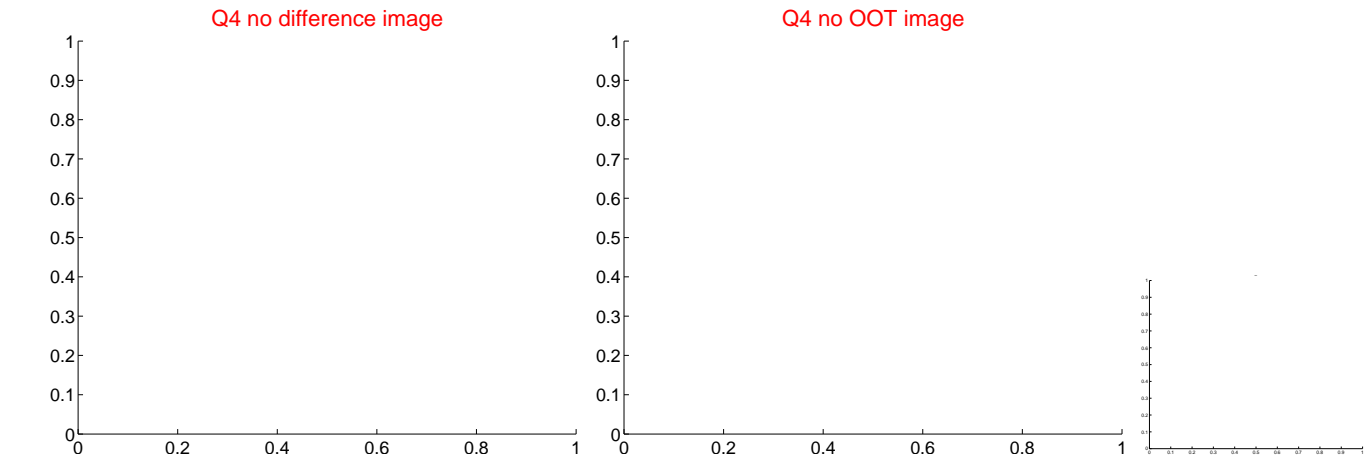
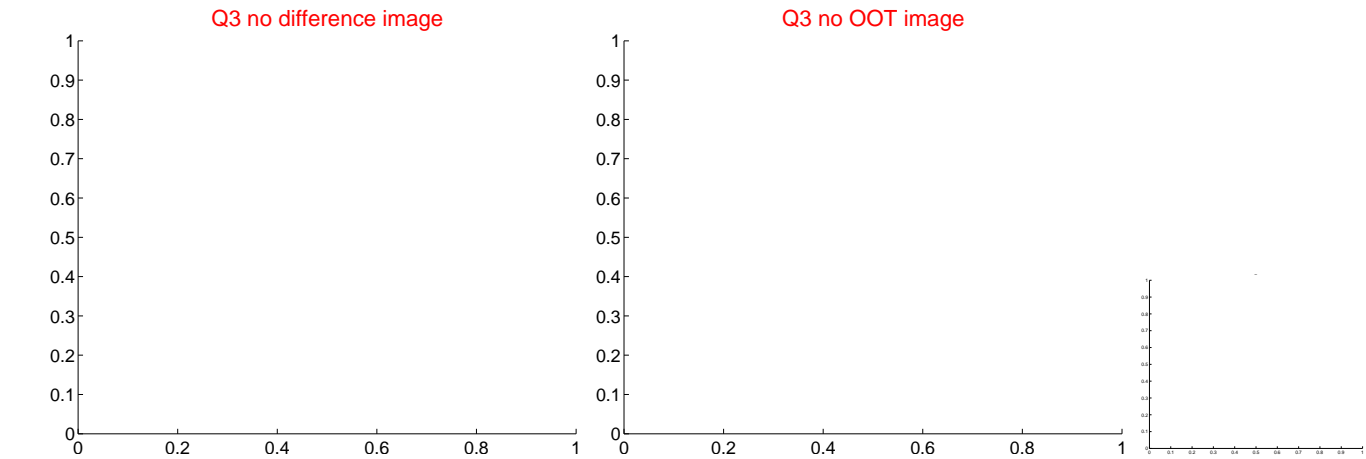
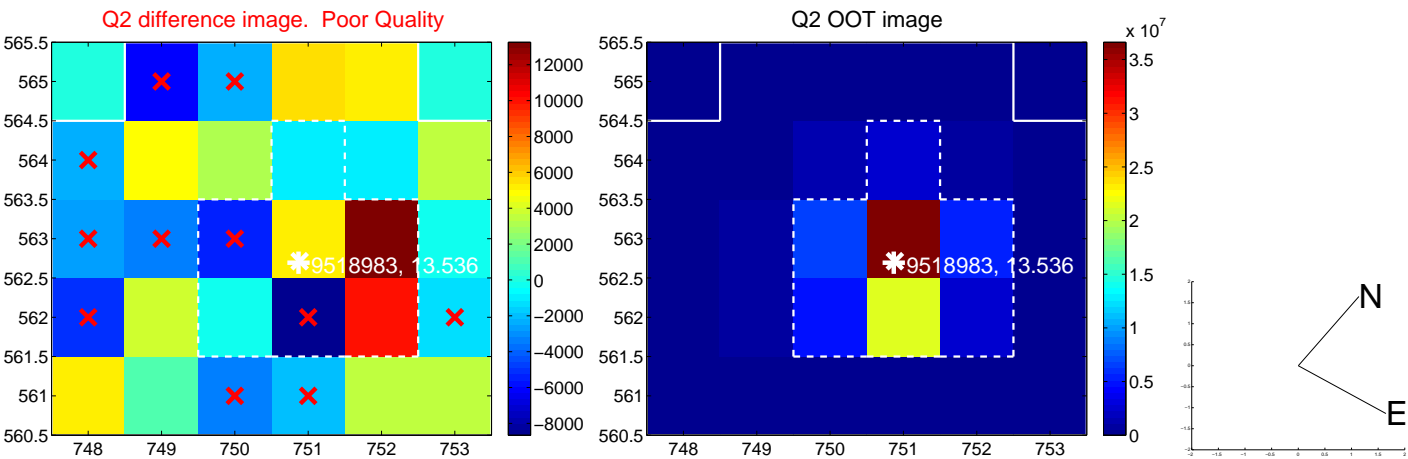
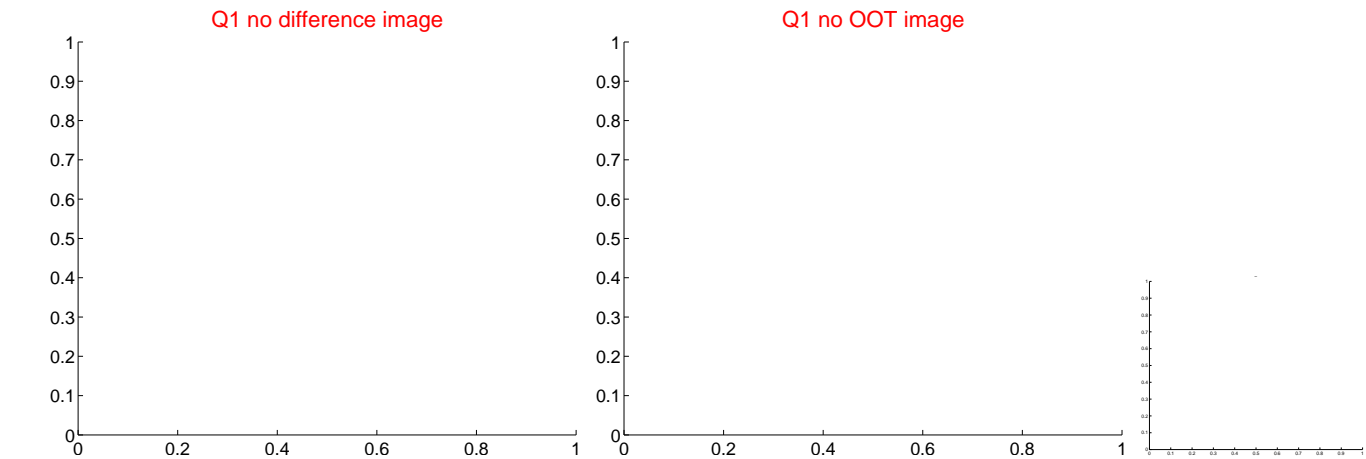
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.807 ± 1.560	0.52	0.786 ± 1.593	0.183 ± 0.694
PRF-fit source offset from KIC position	0.808 ± 1.610	0.50	0.803 ± 1.619	0.094 ± 0.674
photometric centroid source offset	3.26 ± 1.57	2.07	-1.54 ± 1.62	2.87 ± 1.56

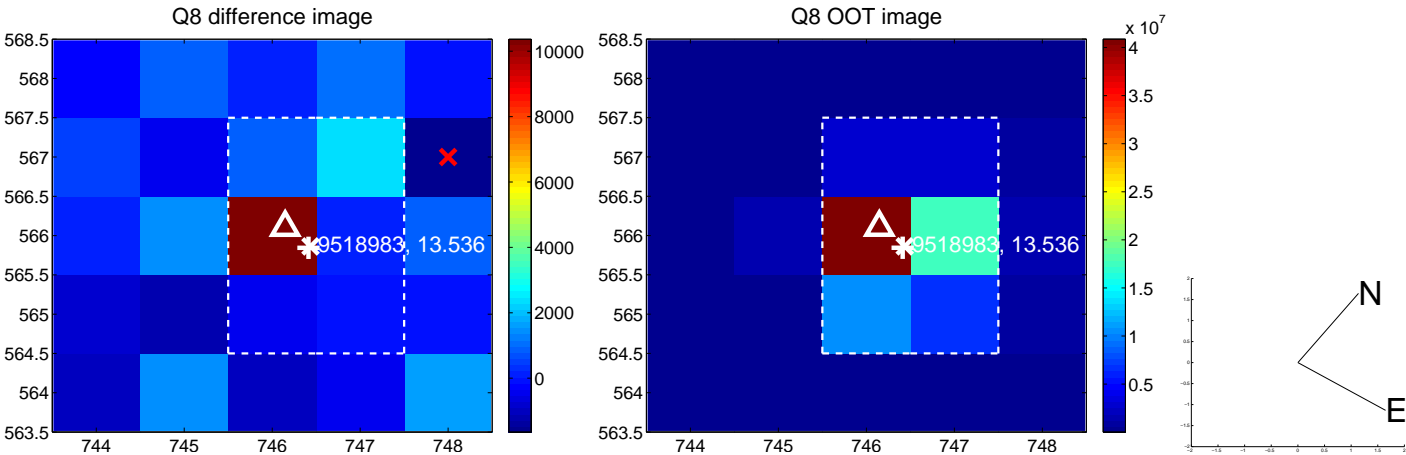
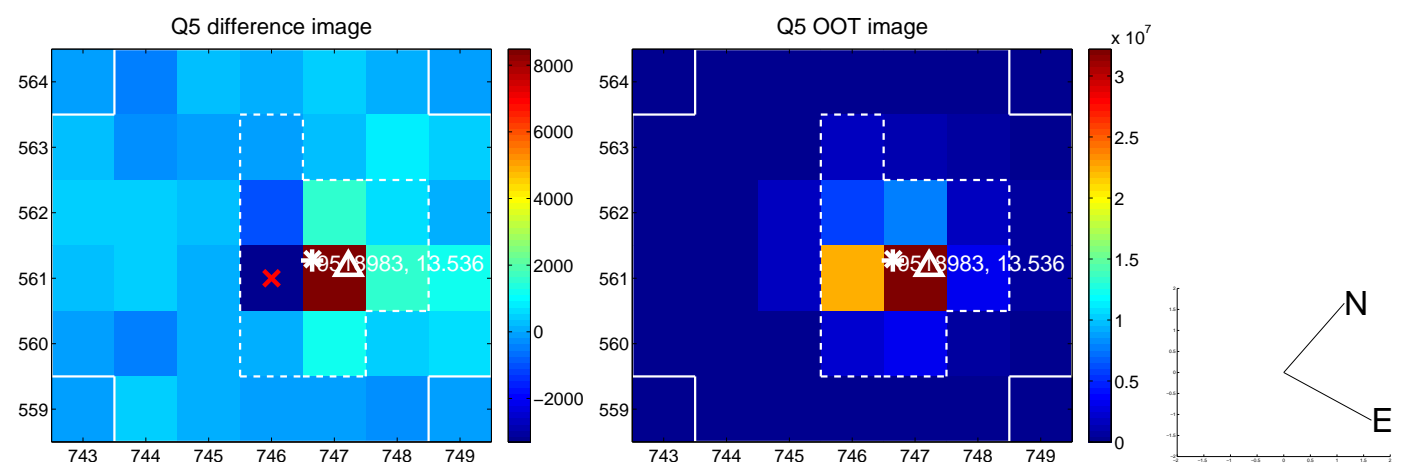


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

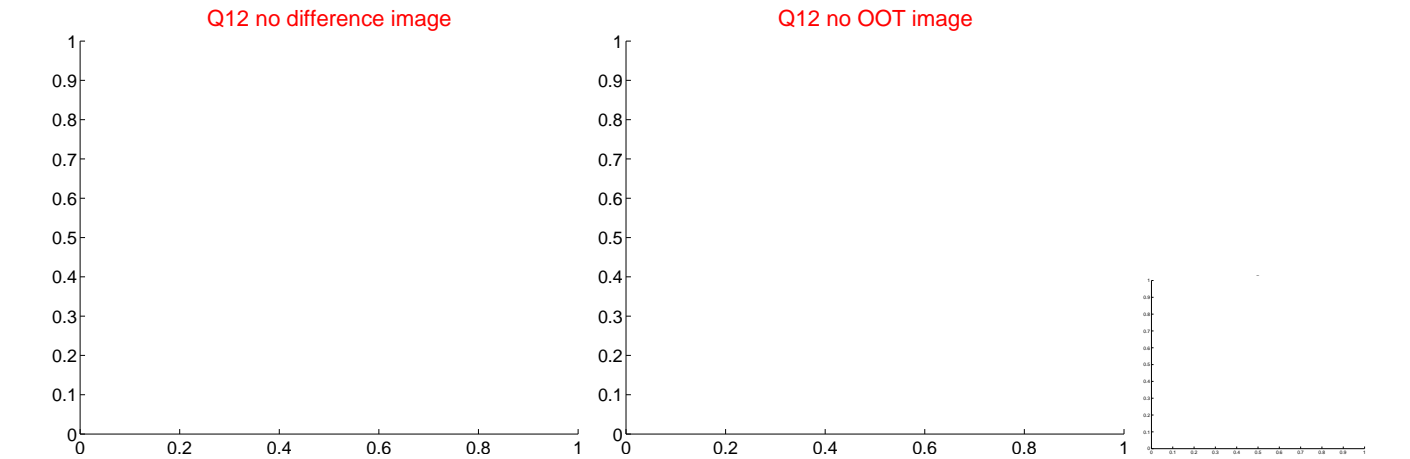
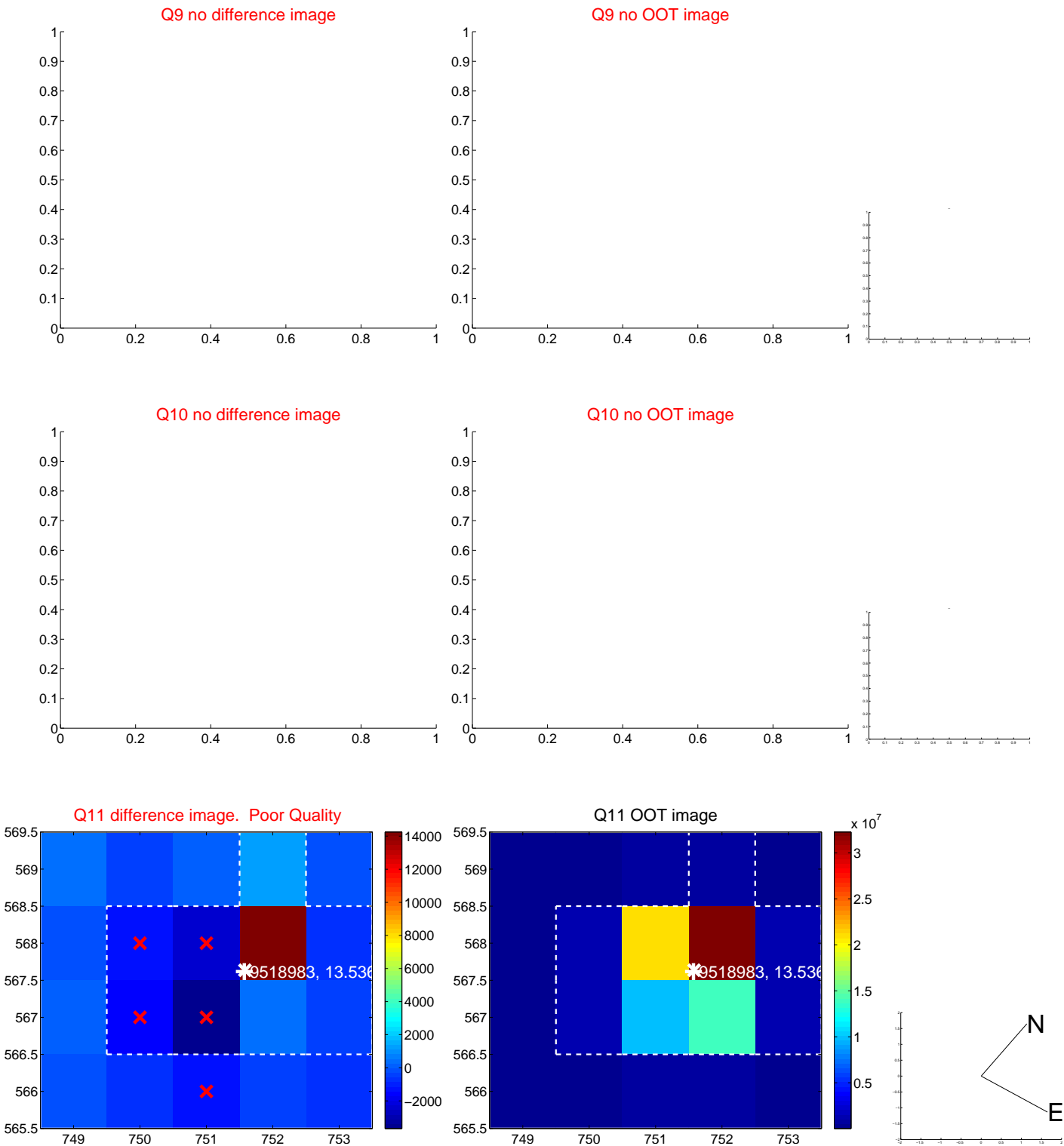
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



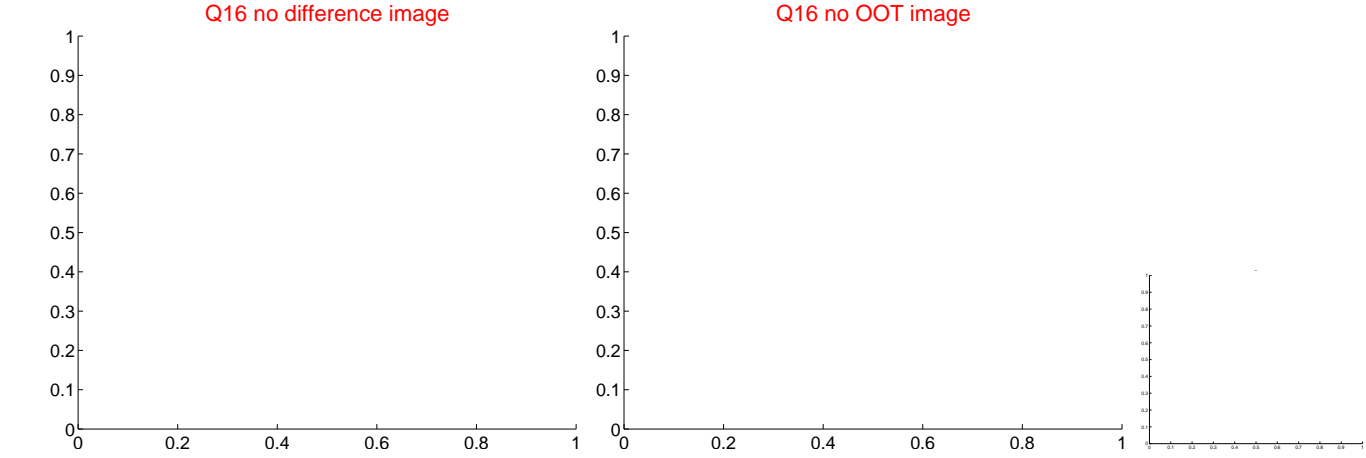
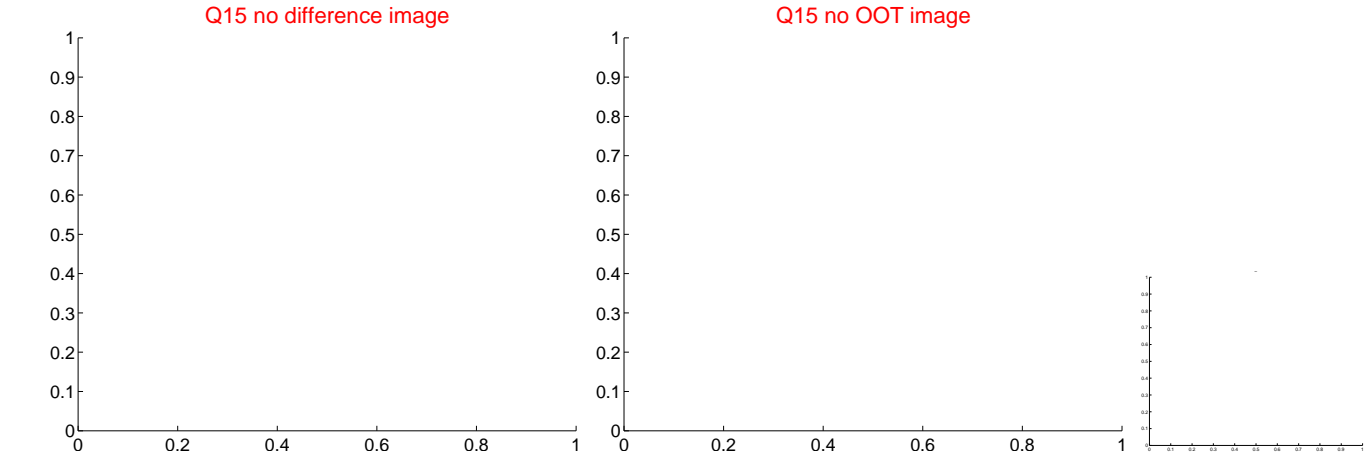
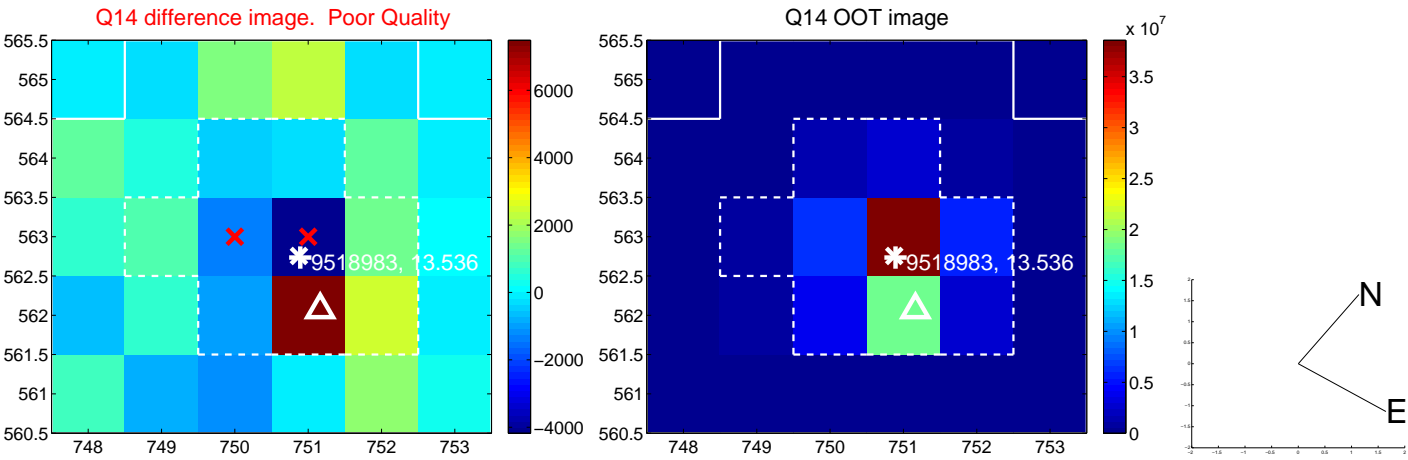
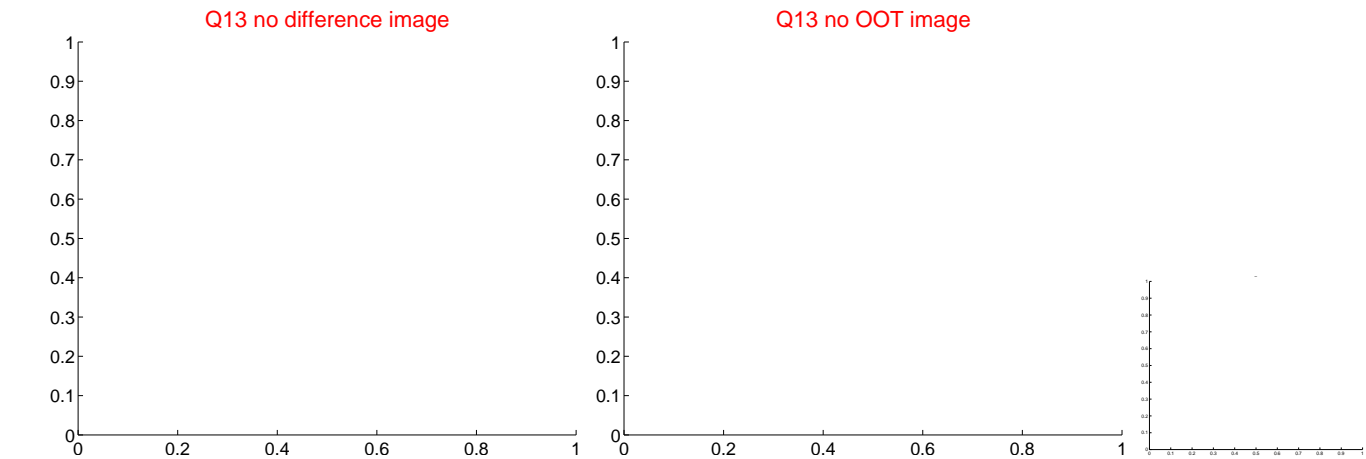
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



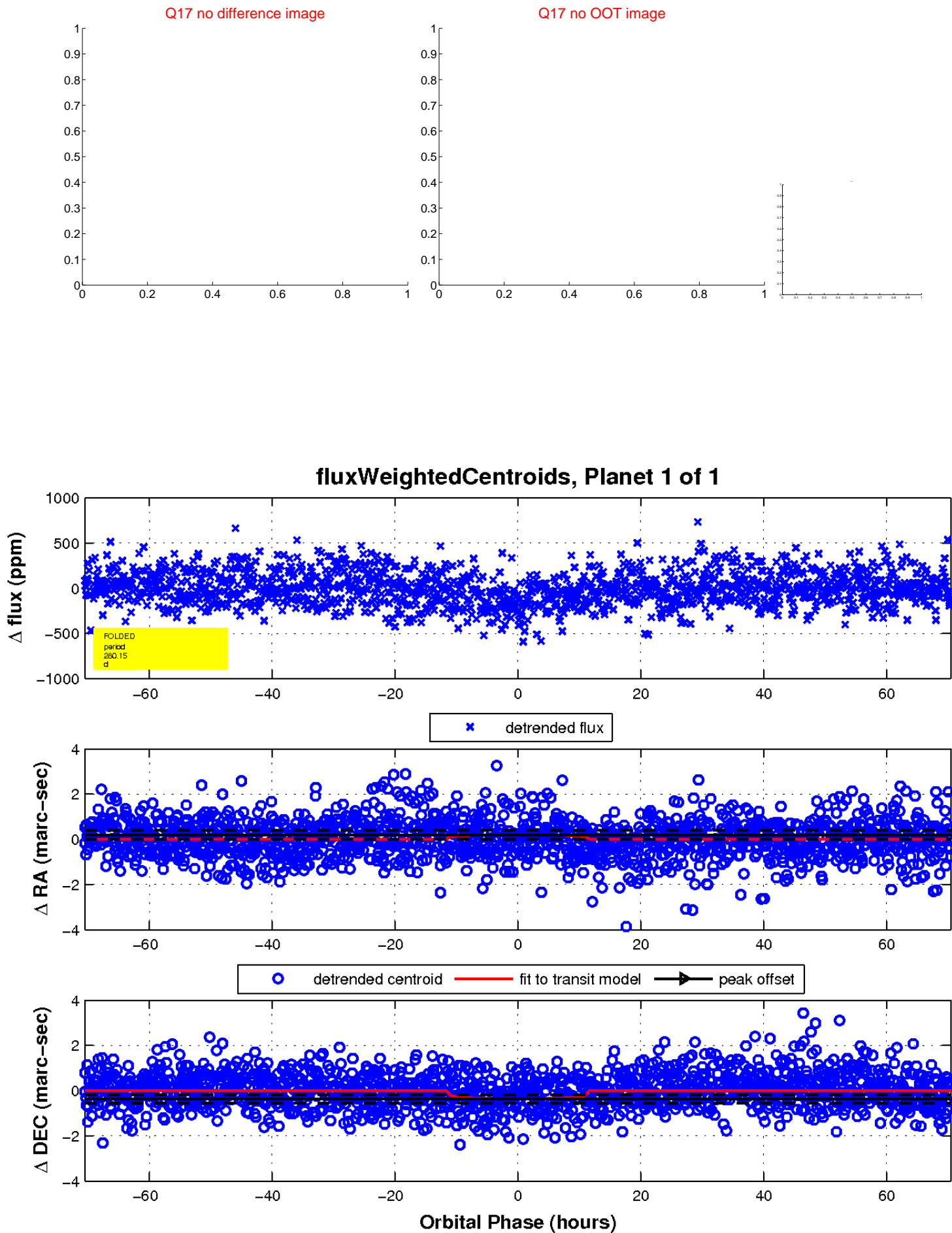
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

