

KIC 005631630

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})
005631630-01	OBS	2010.01	25.961853	138.970323	375.9	6.524	26.9	31.1	1.73	6369	3.71	123.39

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005631630-01	OBS	PC	0.88	0	0	0	0	CENT_KIC_POS

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

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

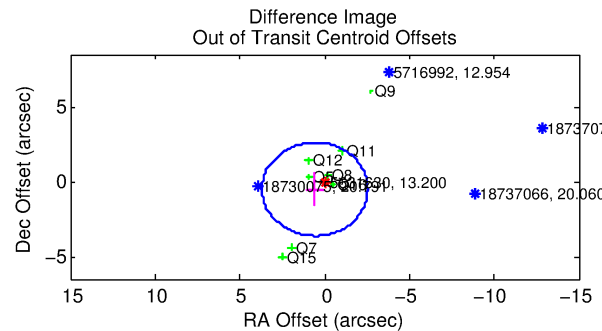
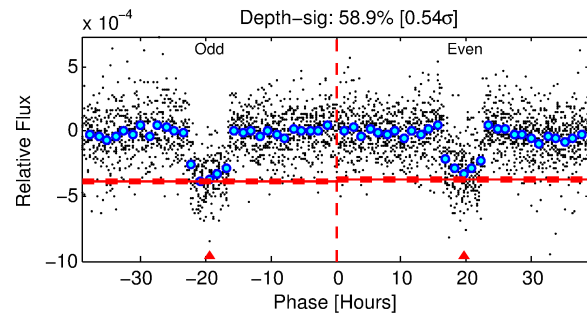
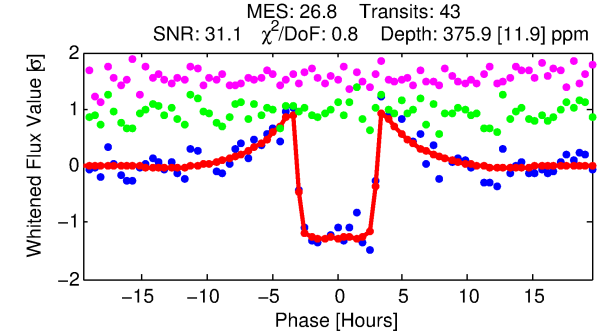
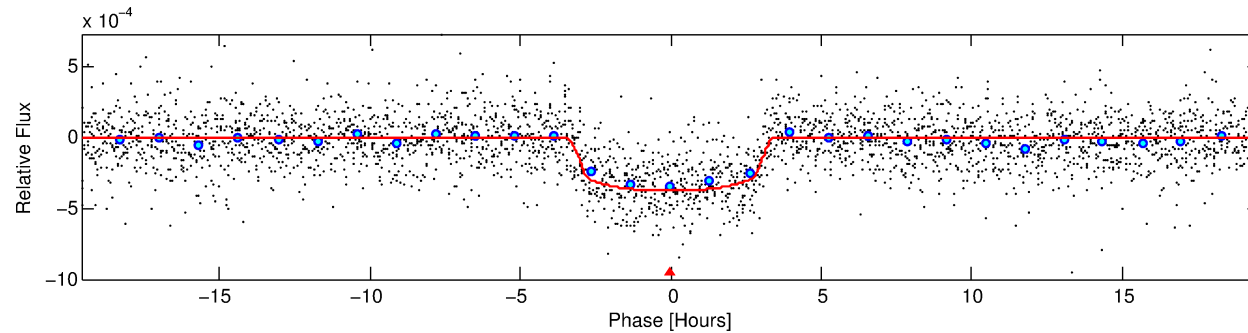
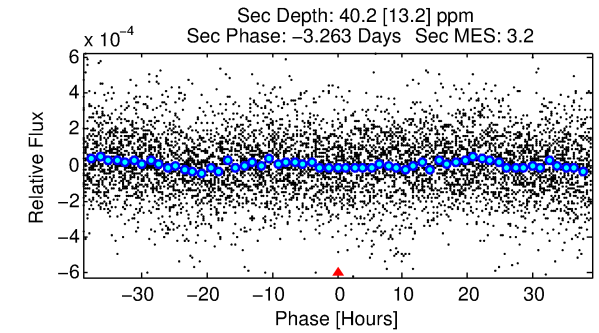
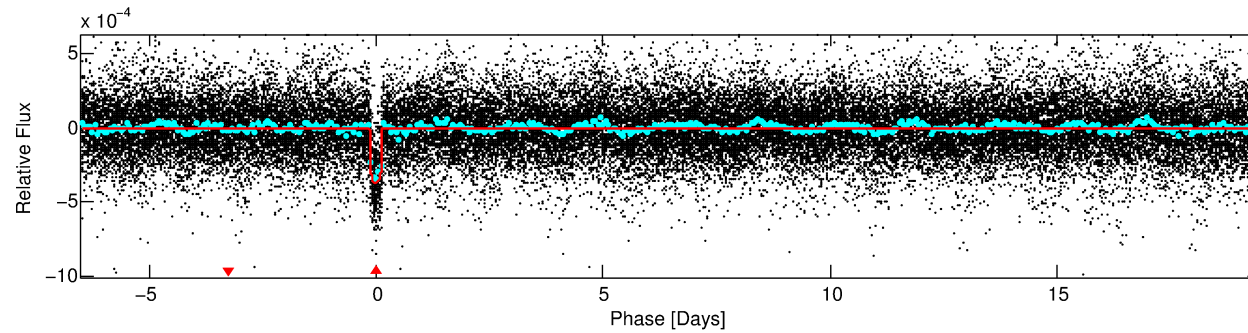
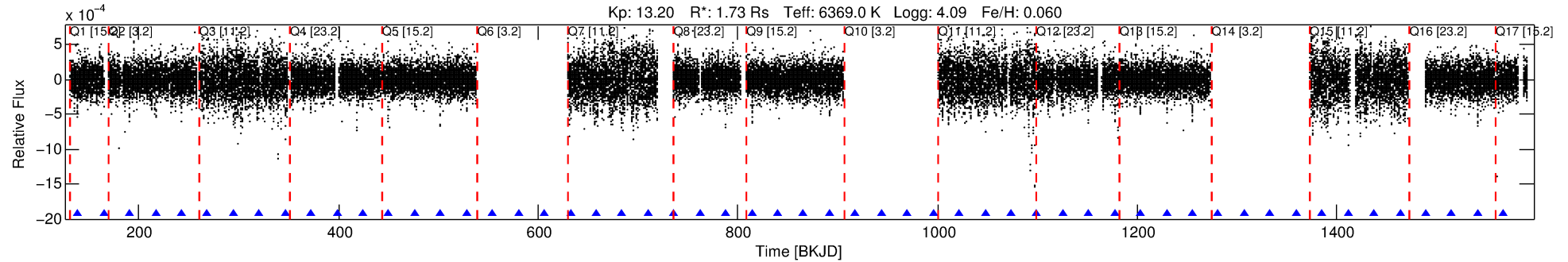
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005631630-01

No Significant Match Found

DV One-Page Summary

KIC: 5631630 Candidate: 1 of 1 Period: 25.962 d
KOI: K02010.01 Corr: 0.980



DV Fit Results:

Period = 25.96185 [0.00007] d
Epoch = 138.9703 [0.0023] BKJD
Rp/R* = 0.0196 [0.0015]
a/R* = 19.26 [7.60]
b = 0.80 [0.18]
Seff = 123.38 [38.27]
Teq = 850 [66] K
Rp = 3.71 [0.88] Re
a = 0.1890 [0.0378] AU
Ag = 57.54 [27.40] [2.06σ]
Teffp = 3619 [334] K [8.14σ]

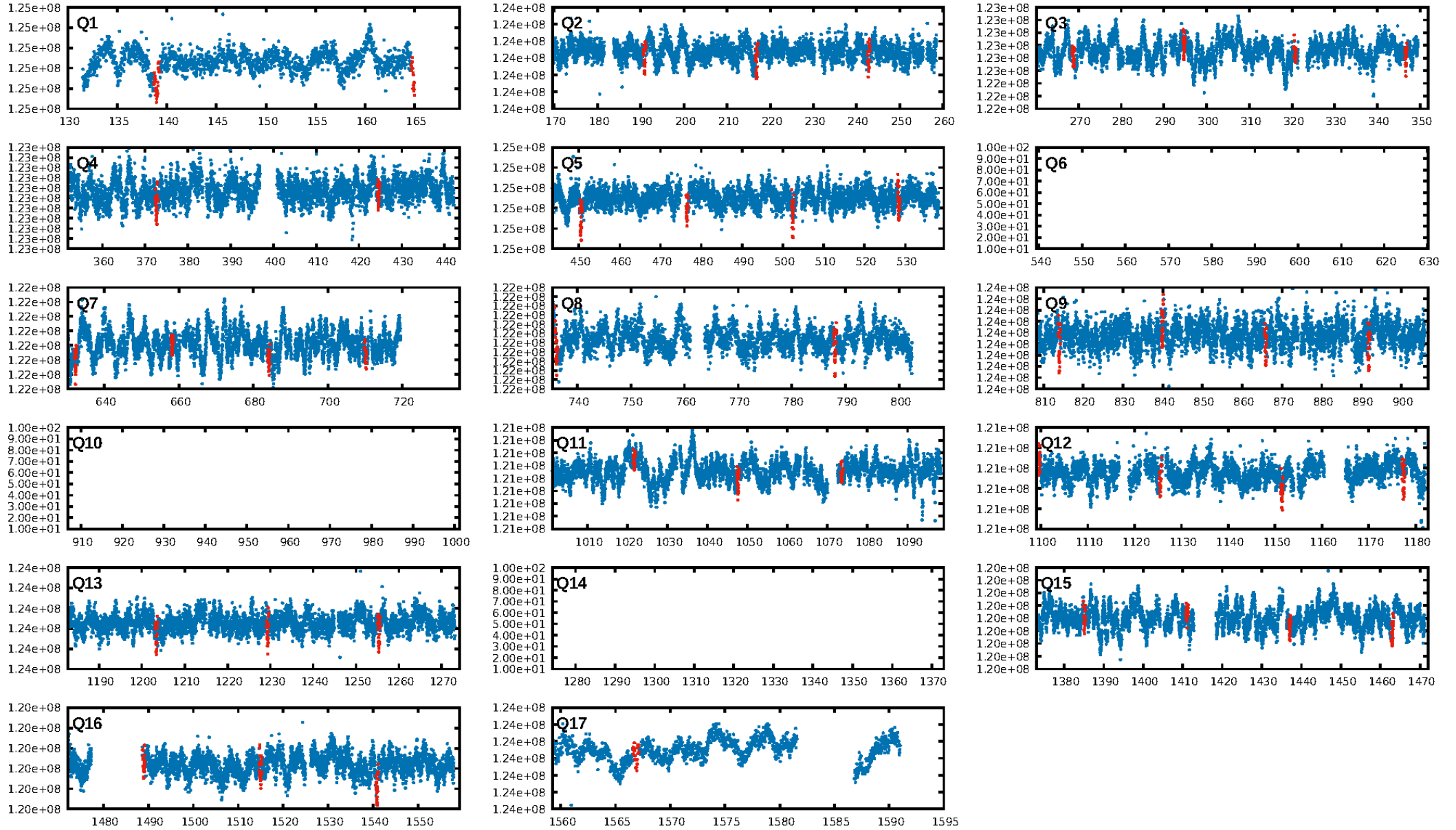
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 53.7%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 1.60e-154
RollingBand-fgt: 1.00 [40/40]
GhostDiagnostic-chr: 14.11
Centroid-sig: 0.1%
Centroid-so: 1.053 arcsec [2.32σ]
OotOffset-rm: 0.769 arcsec [0.74σ]
KicOffset-rm: 1.378 arcsec [1.48σ]
OotOffset-st: 0/3/3/2 [8]
KicOffset-st: 0/3/3/2 [8]
DiffImageQuality-fgm: 1.00 [8/8]
DiffImageOverlap-fno: 1.00 [14/14]

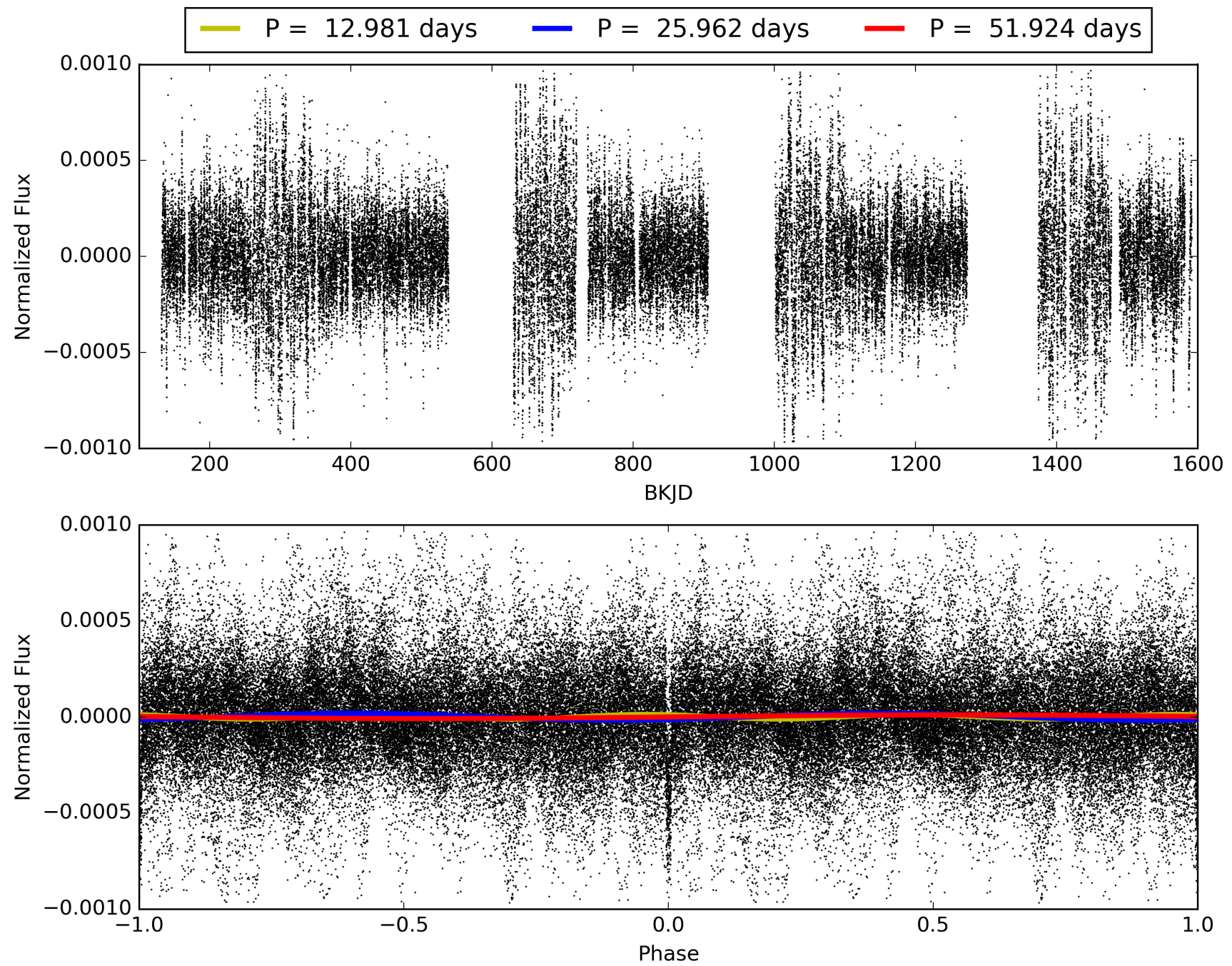
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 20:24:44 Z

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

TCE 005631630-01, PDC Light Curves

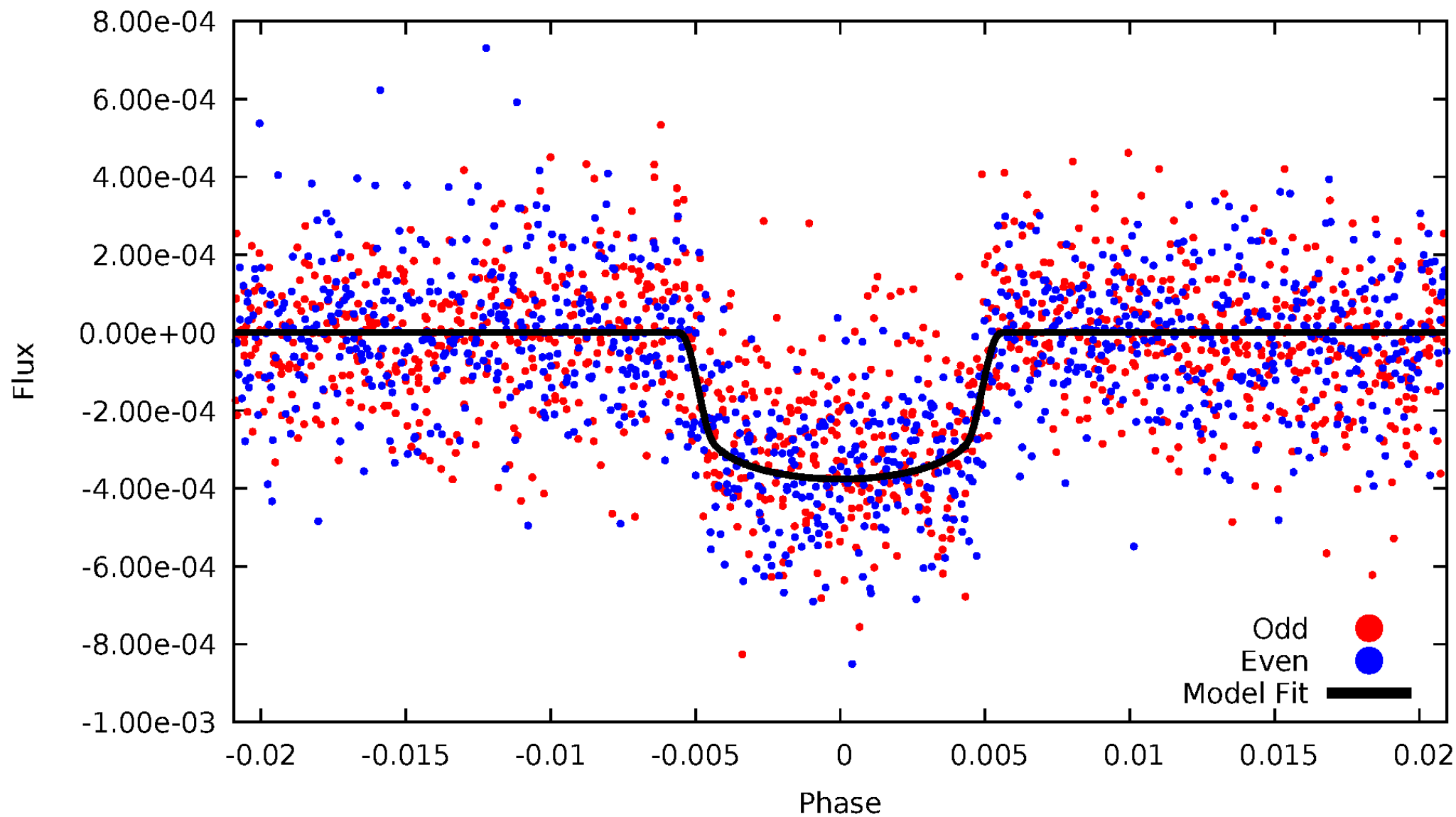


TCE 005631630-01



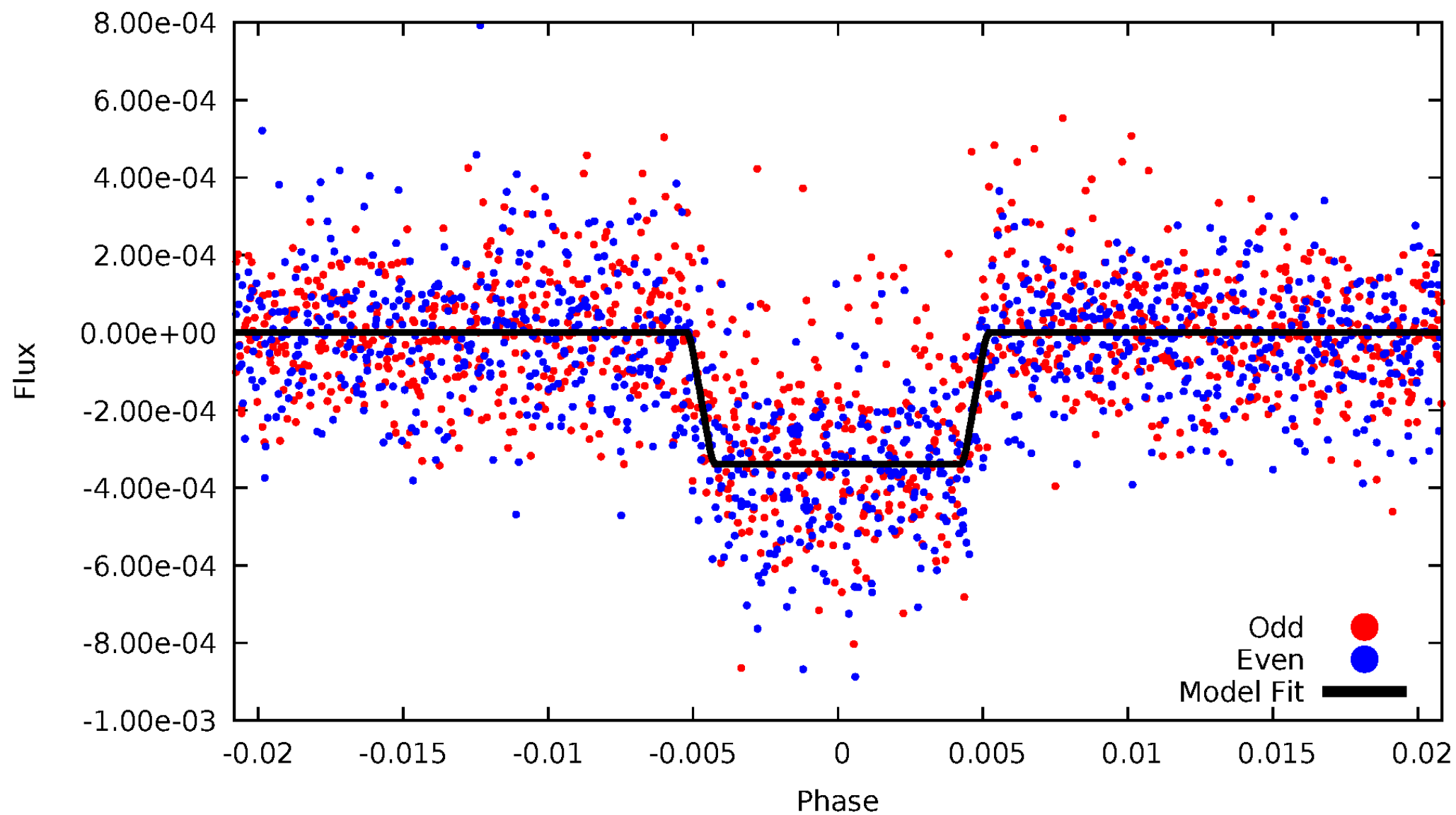
DV Odd/Even

TCE 005631630-01

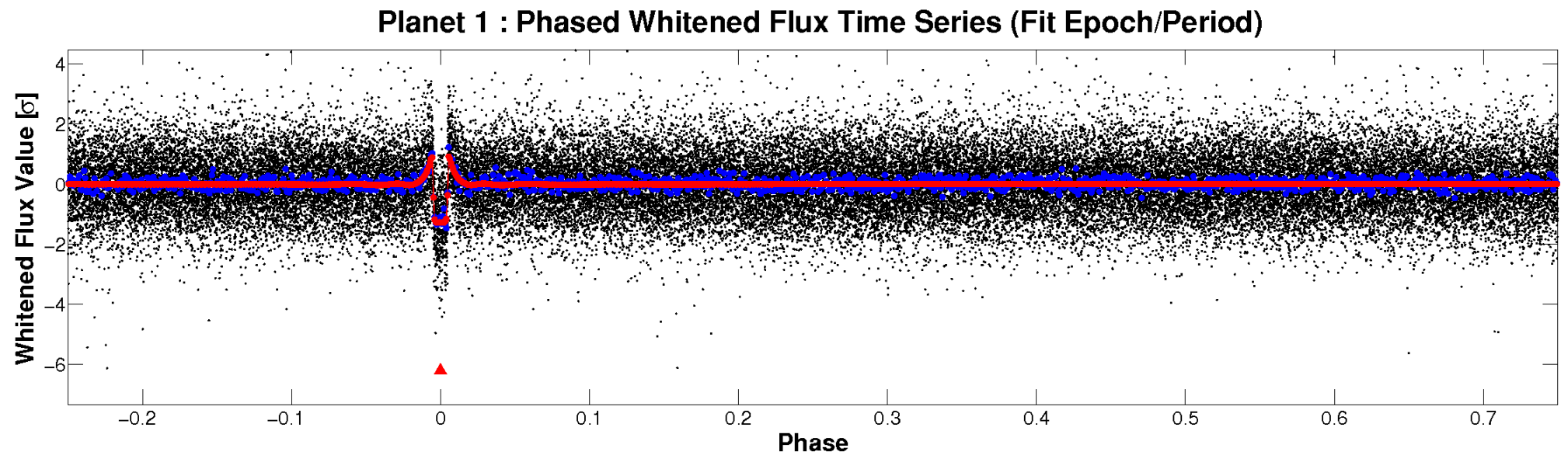
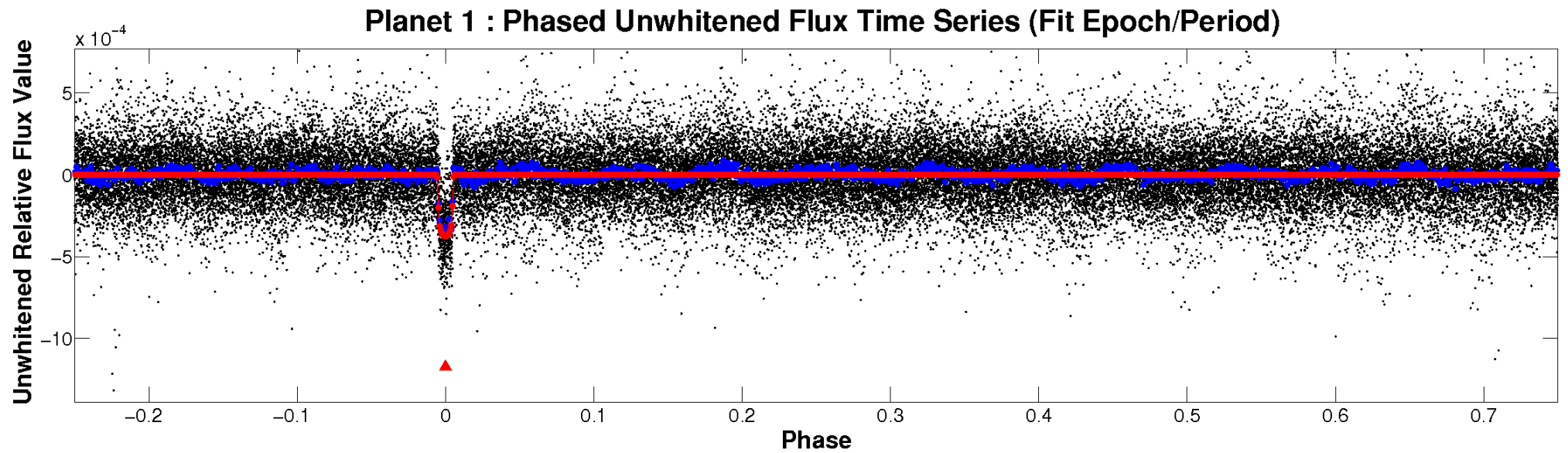


ALT Odd/Even

TCE 005631630-01

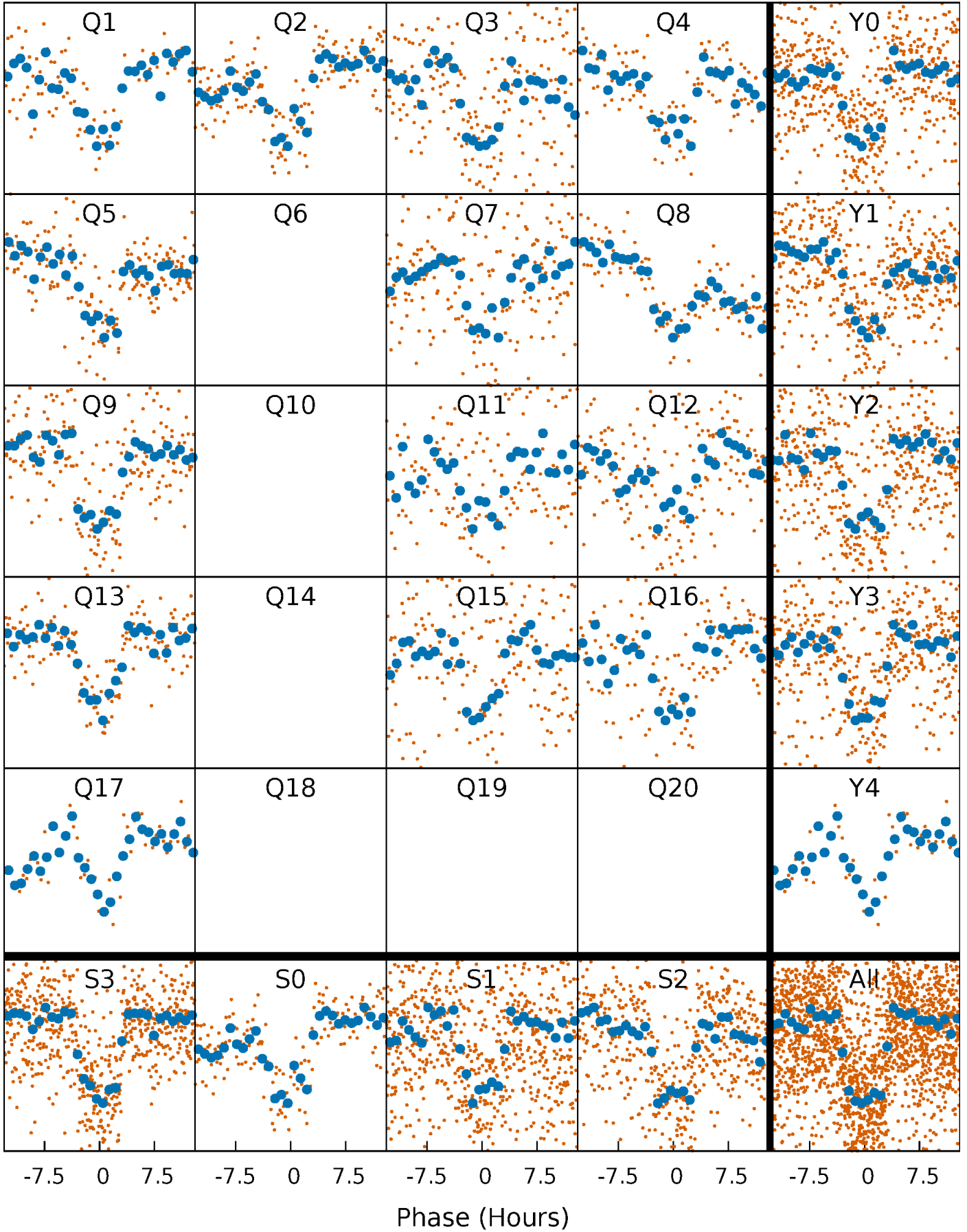


Non-Whitened Vs. Whitened Light Curve



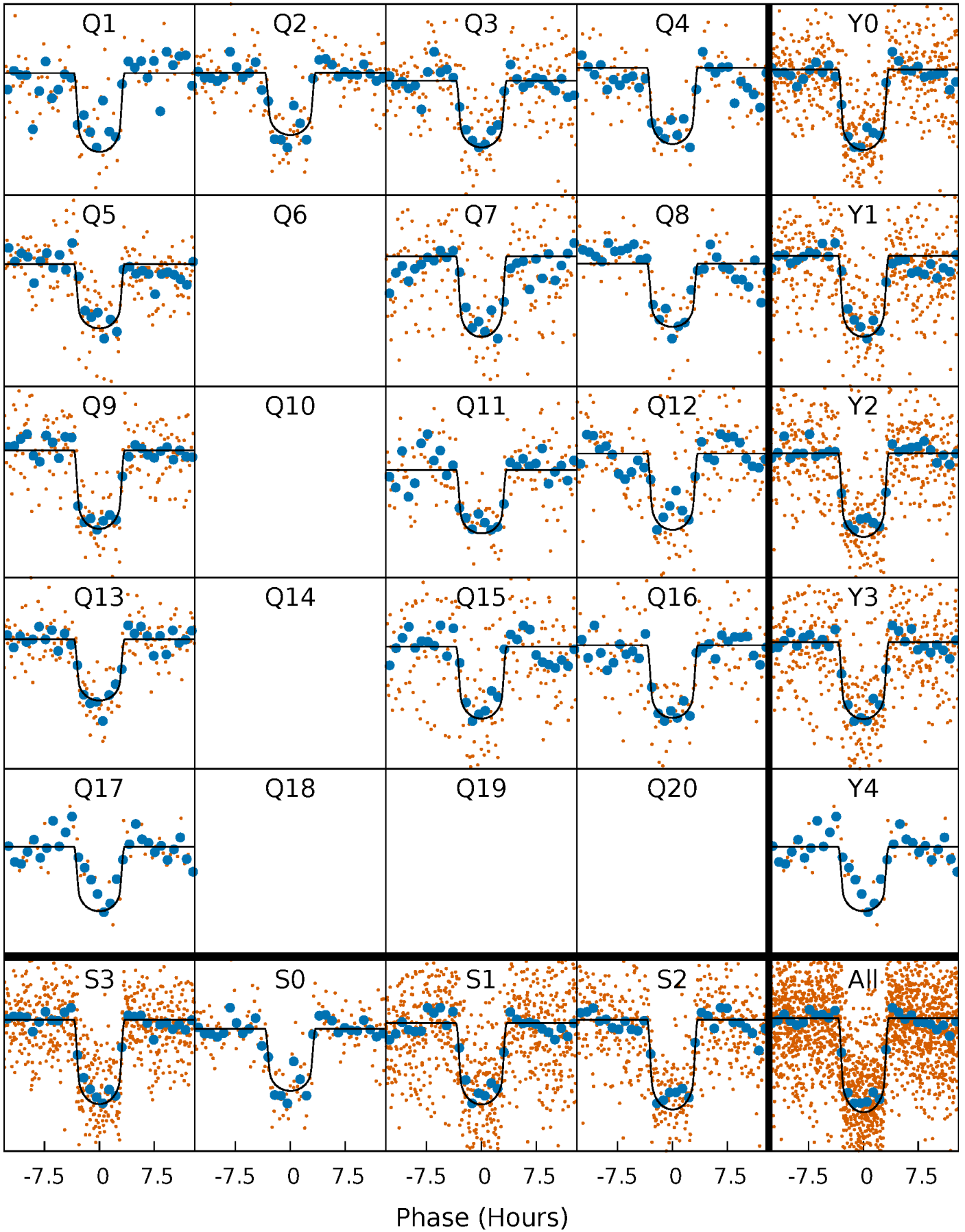
PDC Quarter-Phased Transit Curves

TCE 005631630-01 P= 25.961853 Days $T_0=138.970323$ (BKJD)



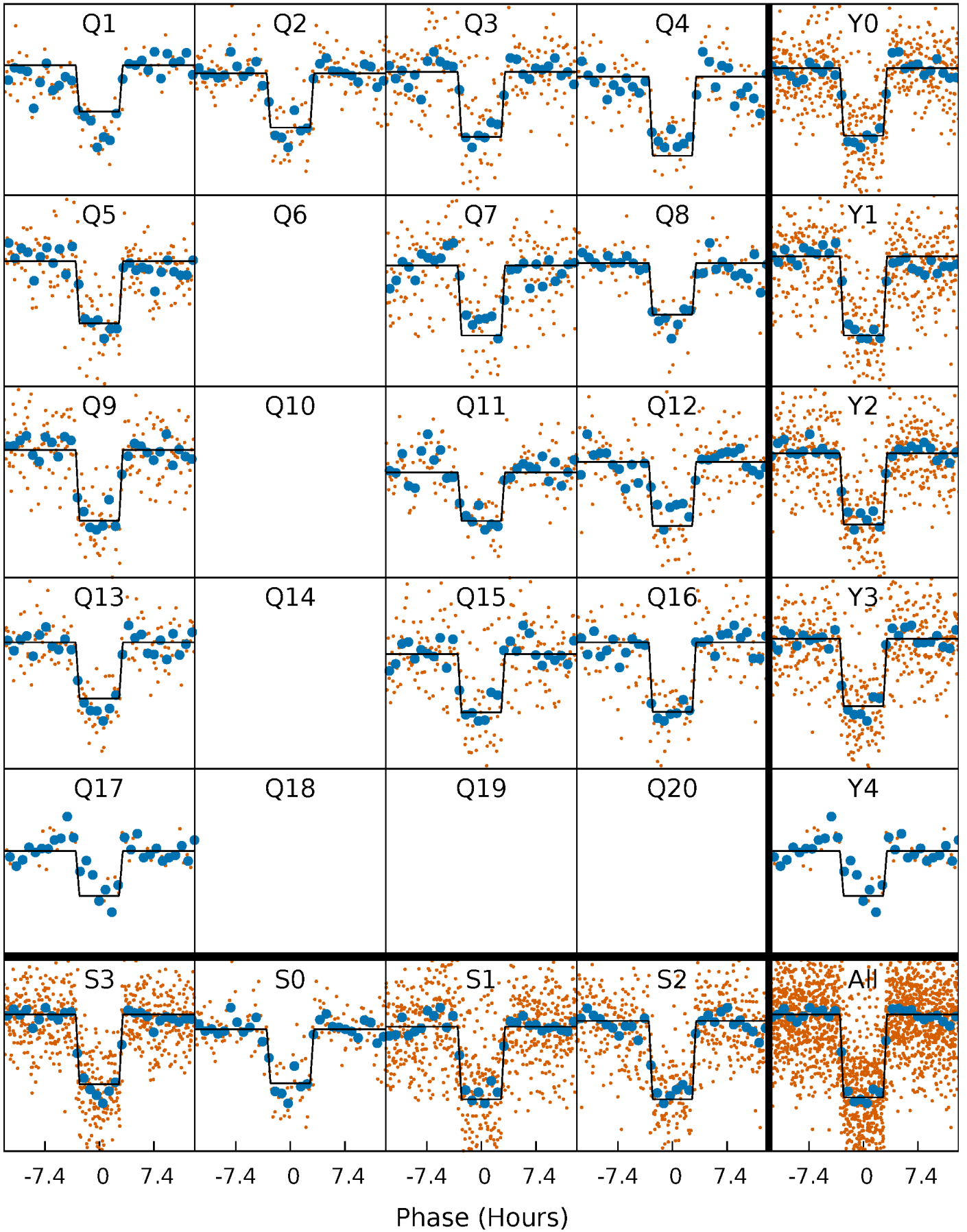
DV Quarter-Phased Transit Curves

TCE 005631630-01 P= 25.961853 Days $T_0=138.970323$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

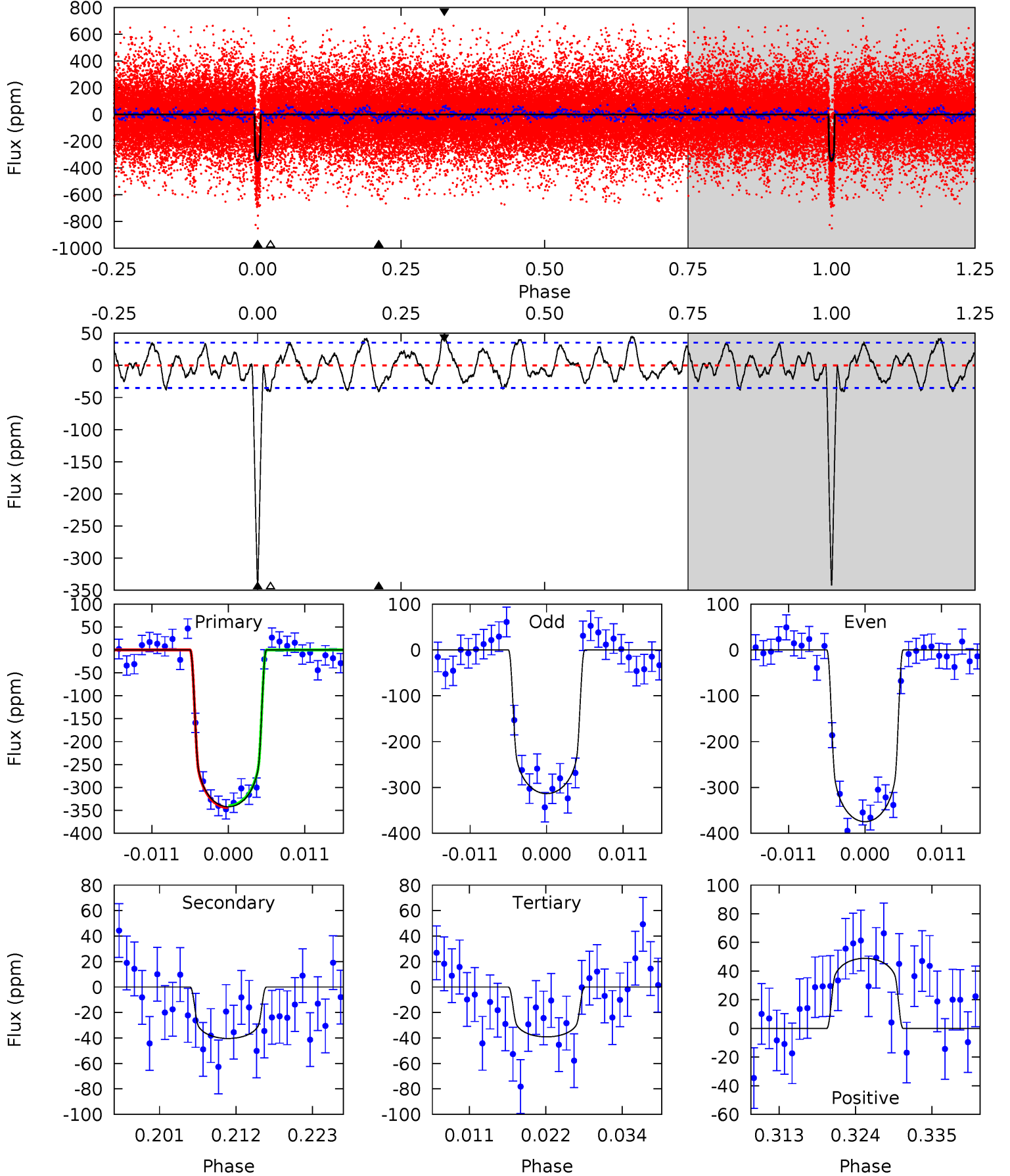
TCE 005631630-01 P= 25.962143 Days $T_0=138.963276$ (BKJD)



DV Model-Shift Uniqueness Test

005631630-01, $P = 25.961853$ Days, $E = 113.008470$ Days

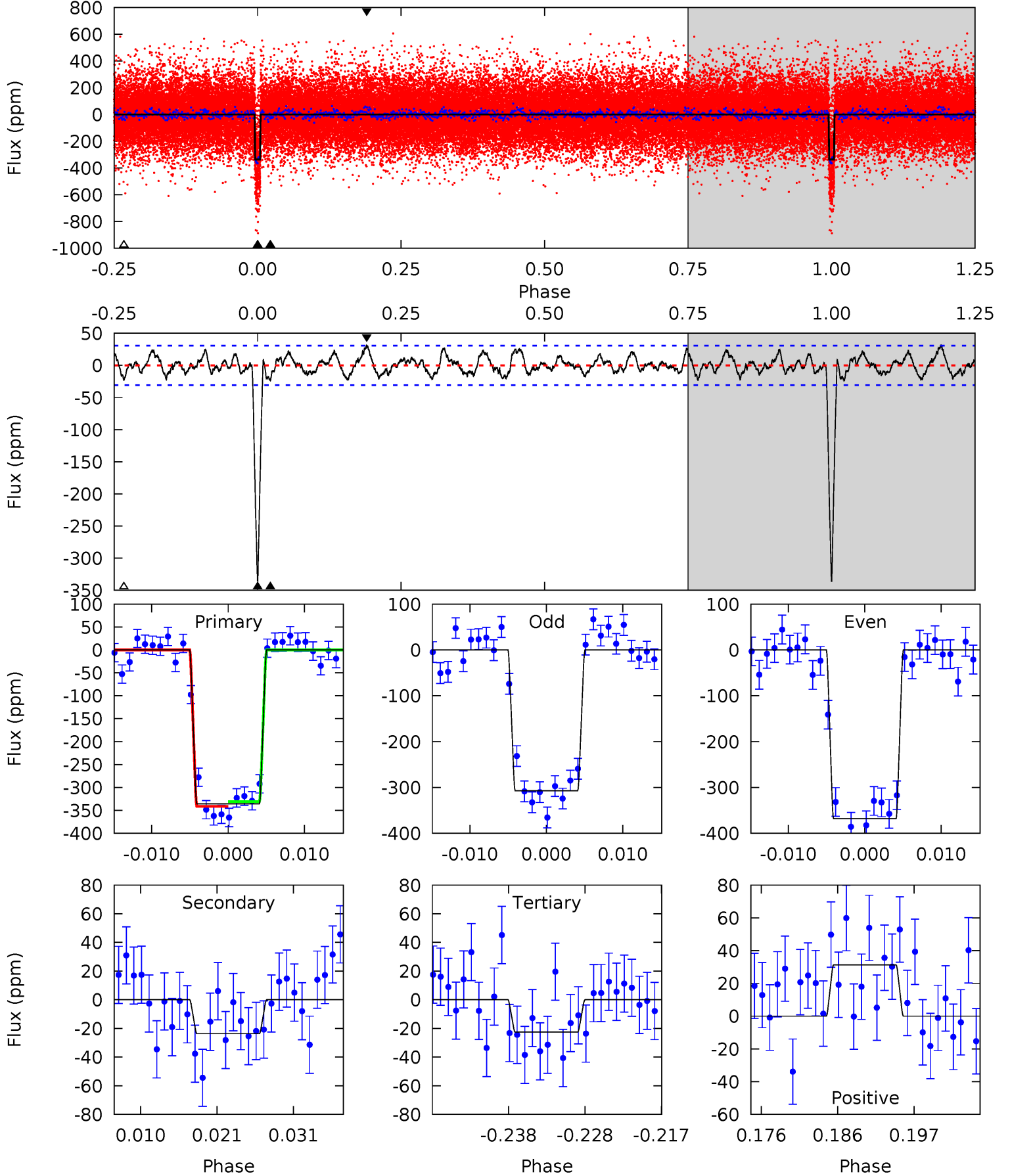
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
48.5	5.73	5.55	6.93	5.01	2.54	2.67	43.0	41.6	0.18	-1.21	4.35	0.95	0.13	0.27



Alt Model-Shift Uniqueness Test

005631630-01, $P = 25.962143$ Days, $E = 113.001133$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
54.8	3.85	3.68	5.10	5.02	2.56	1.76	51.1	49.7	0.18	-1.25	4.97	0.93	0.09	0.87



Stellar Parameters For KIC 005631630

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6369^{+77}_{-83}	$4.088^{+0.174}_{-0.116}$	$0.060^{+0.150}_{-0.150}$	$1.729^{+0.315}_{-0.386}$	$1.337^{+0.123}_{-0.148}$	$0.364^{+0.315}_{-0.122}$
	+1%/-1%	+4%/-3%	+250%/-250%	+18%/-22%	+9%/-11%	+87%/-34%
Source	SPE90	SPE90	SPE90	DSEP		

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

Secondary Eclipse Parameters for KIC 005631630-01 / KOI 2010.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-40 ± 7	$3.70^{+0.48}_{-0.50}$	1185^{+60}_{-62}	3949^{+166}_{-164}	58^{+20}_{-15}
Alt.	-24 ± 6	$3.42^{+0.46}_{-0.49}$	1180^{+57}_{-67}	3681^{+205}_{-201}	39^{+19}_{-13}

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 $A_{obs} \gg 1.0$

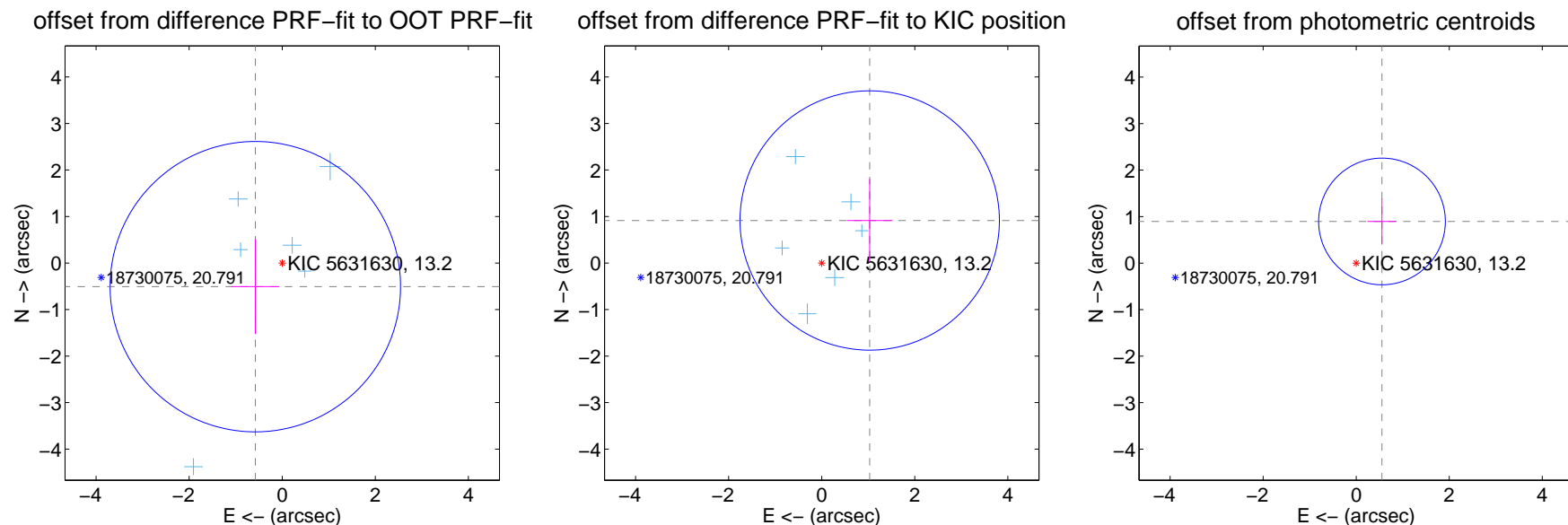
DV Centroid Data

Supplemental centroid analysis for 005631630-01. Kepler magnitude: 13.20. Transit SNR 31.13

There are 8 quarters with good PRF difference image offsets

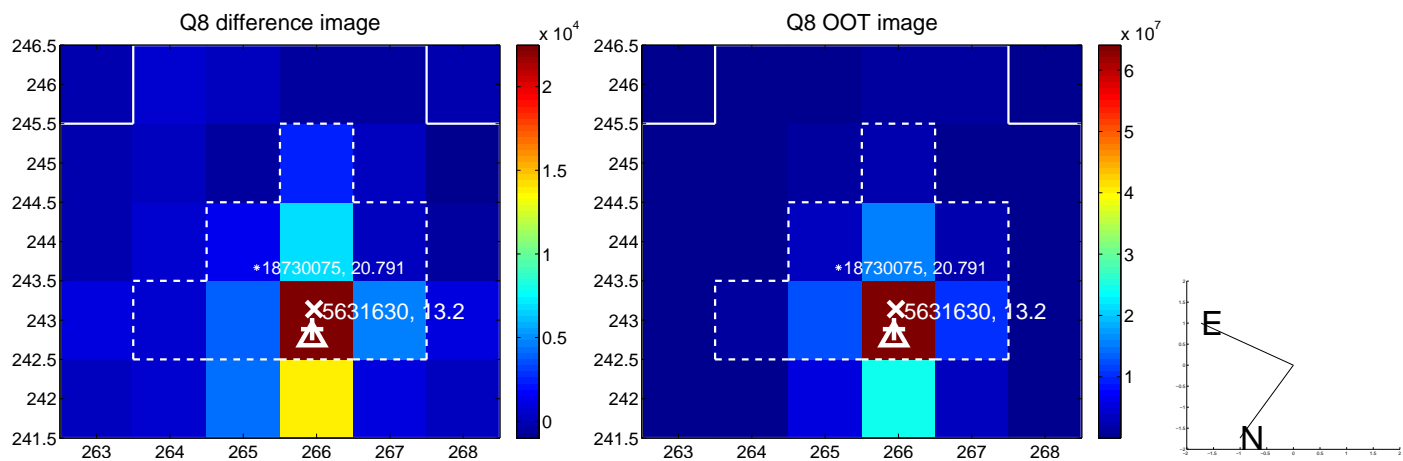
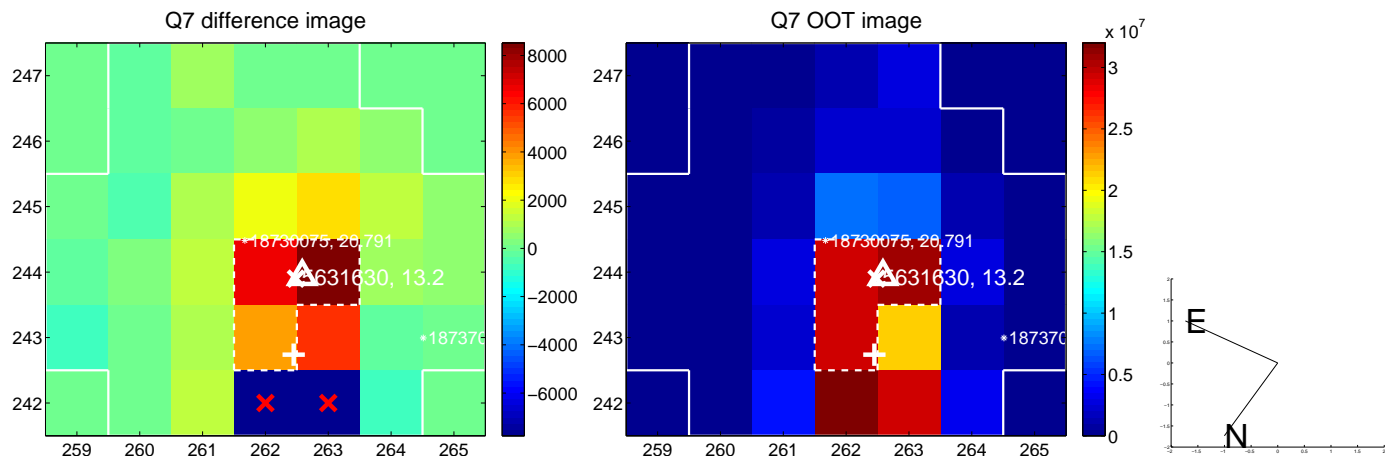
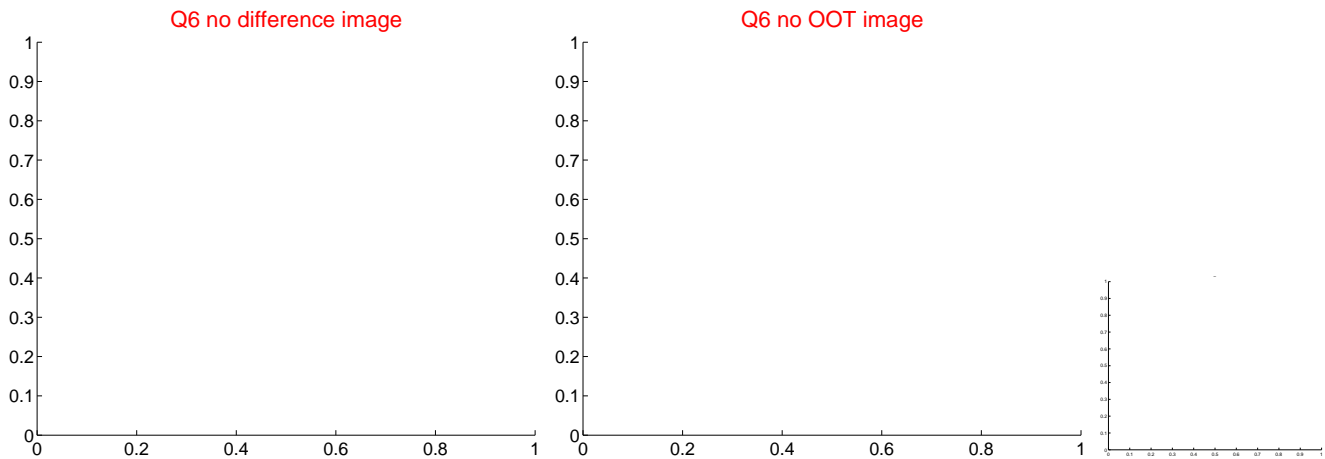
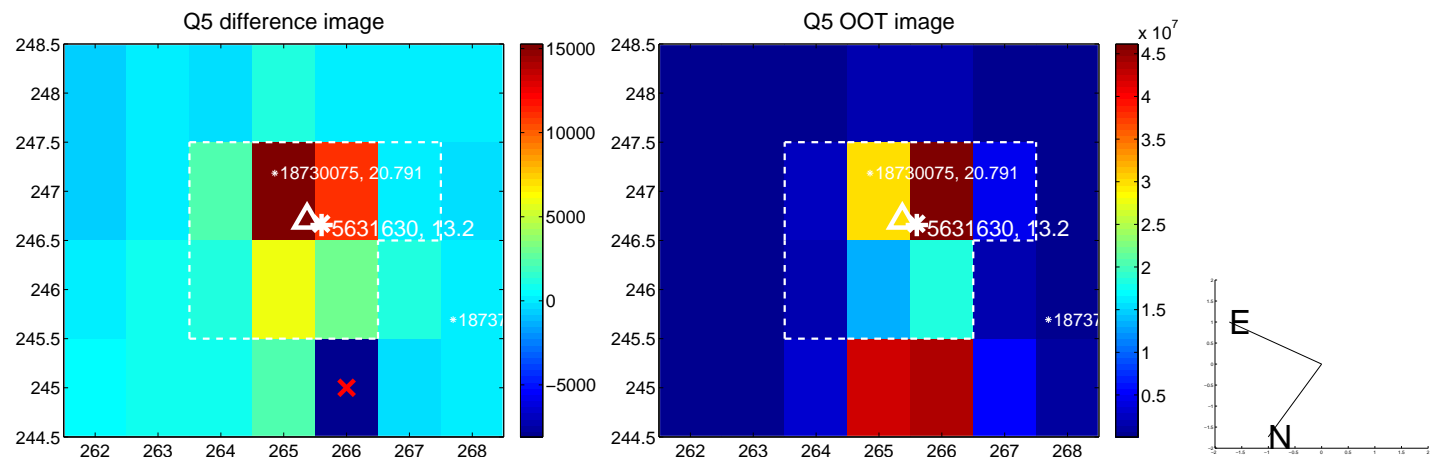
The direct PRF centroid is offset from the target star catalog position by about 0.95 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.769 ± 1.040	0.74	0.578 ± 0.517	-0.508 ± 1.021
PRF-fit source offset from KIC position	1.378 ± 0.929	1.48	-1.031 ± 0.490	0.915 ± 0.893
photometric centroid source offset	1.05 ± 0.45	2.32	-0.55 ± 0.31	0.90 ± 0.50

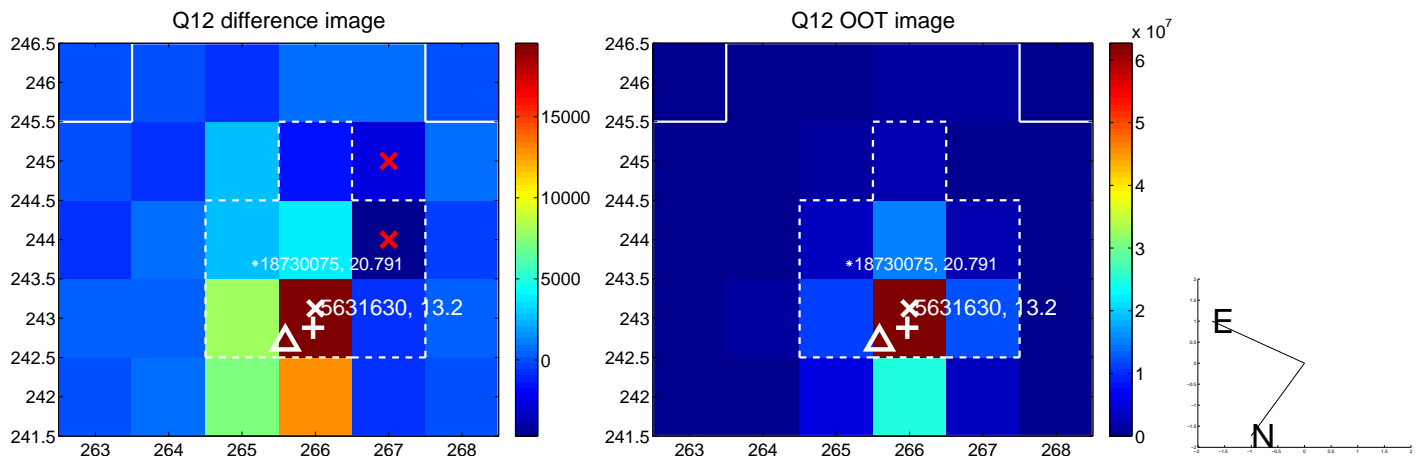
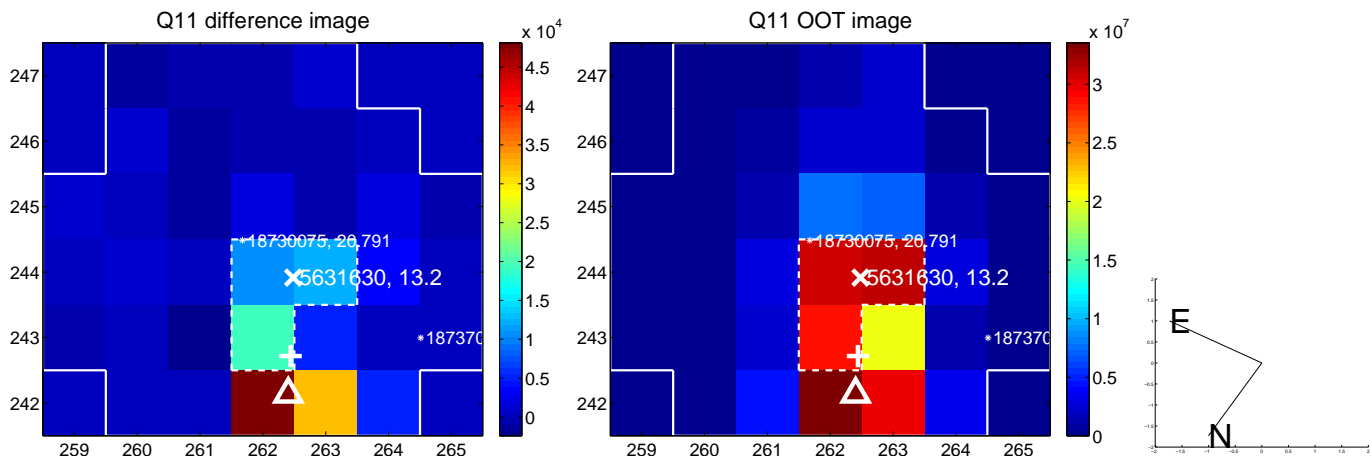
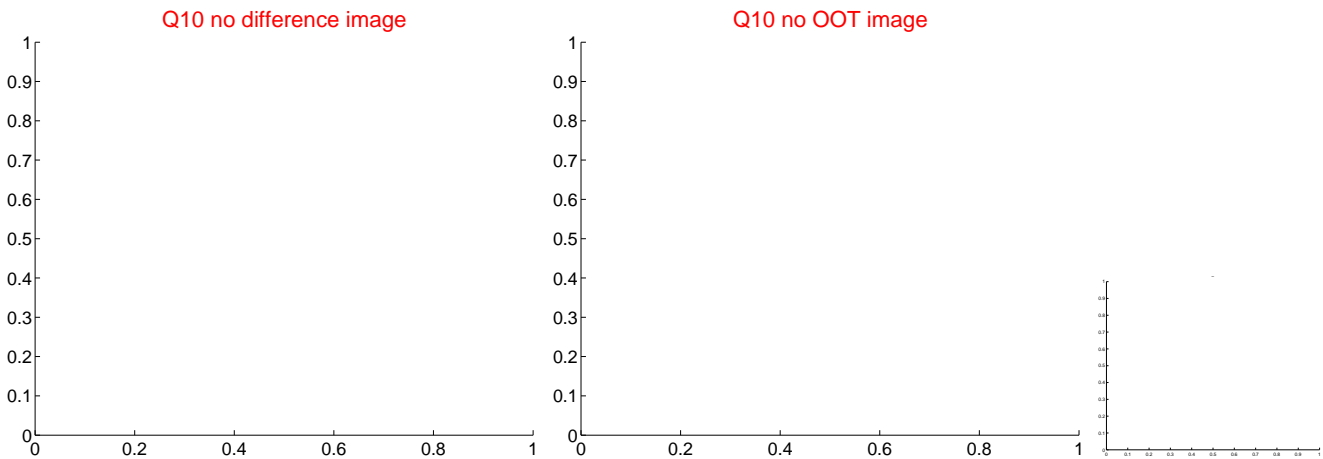
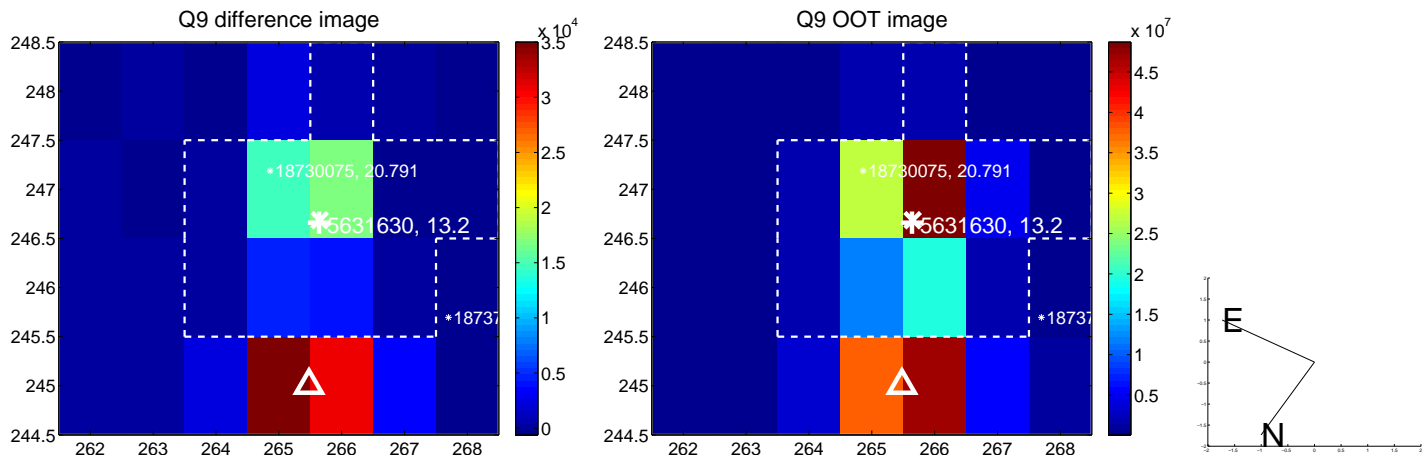


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

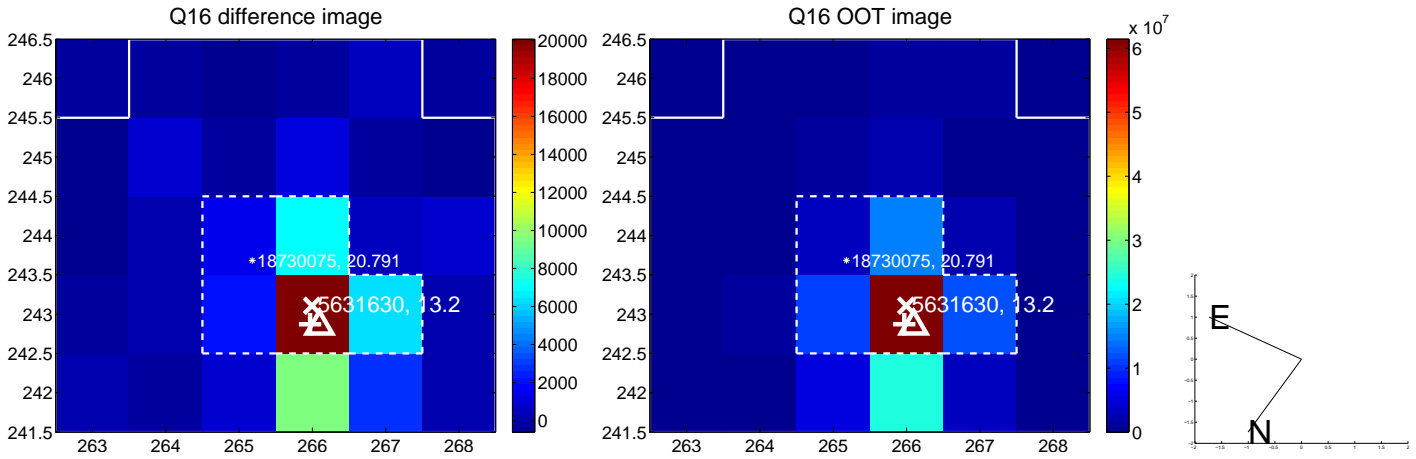
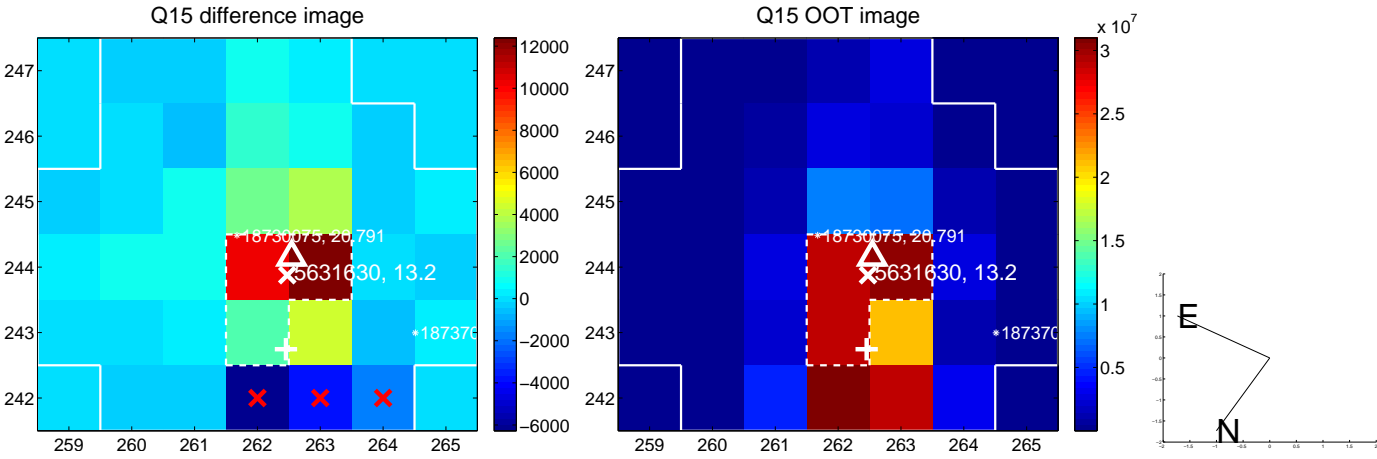
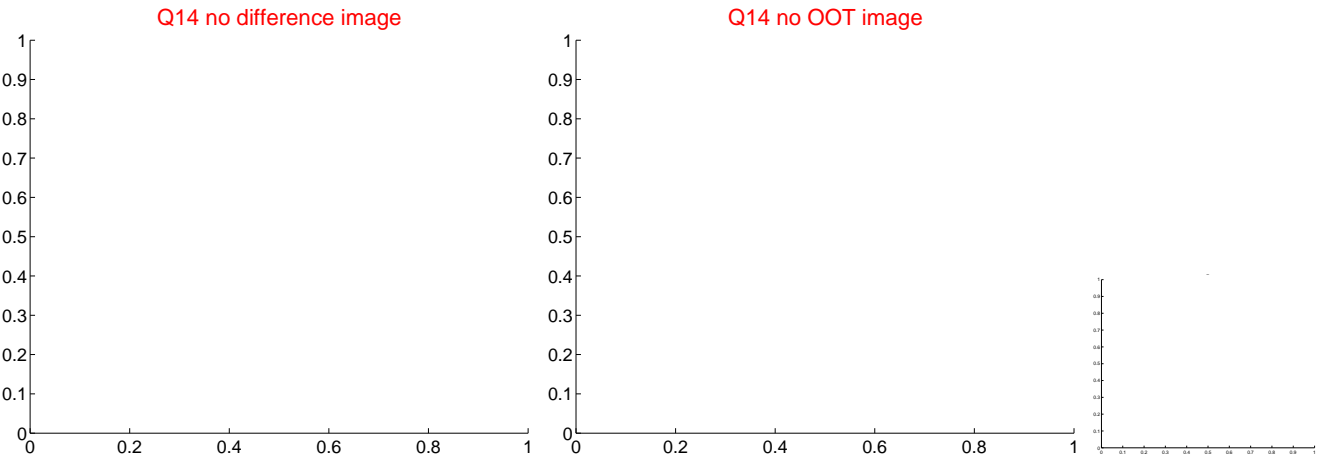
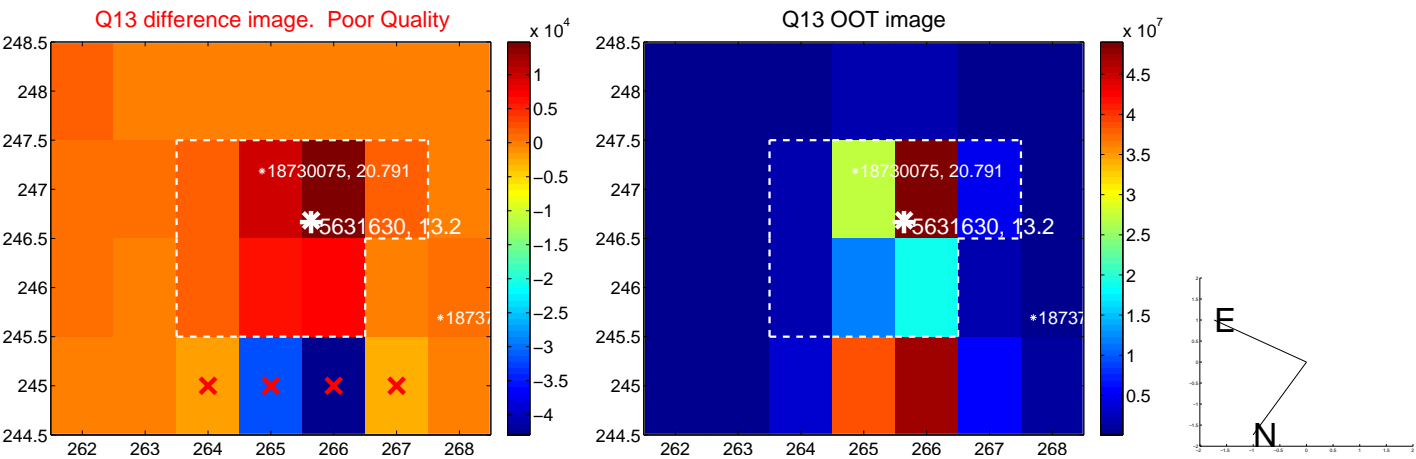
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



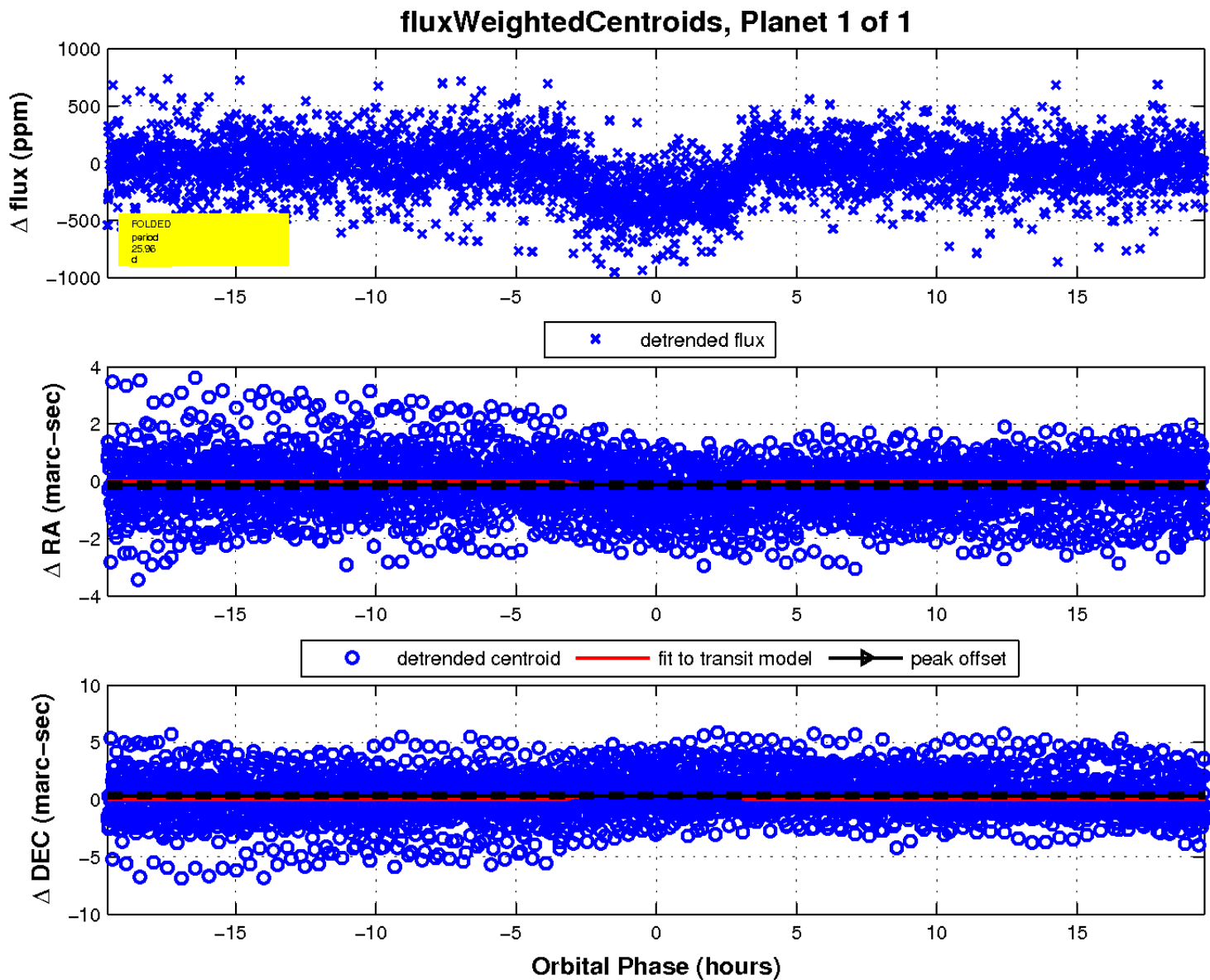
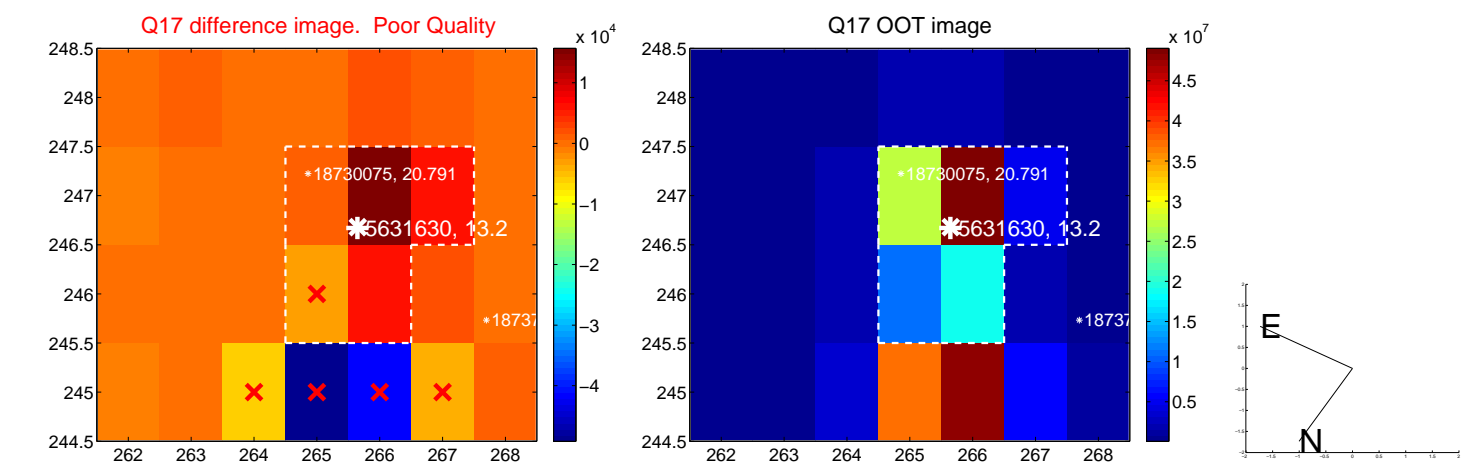
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

