

KIC 006131130

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})
006131130-01	OBS	3307.01	10.507079	139.671899	272.3	2.926	9.5	10.5	0.86	5290	1.60	69.84

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
006131130-01	OBS	PC	0.96	0	0	0	0	NO_COMMENT

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 006131130-01

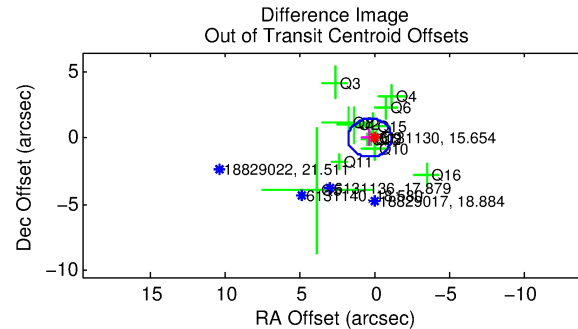
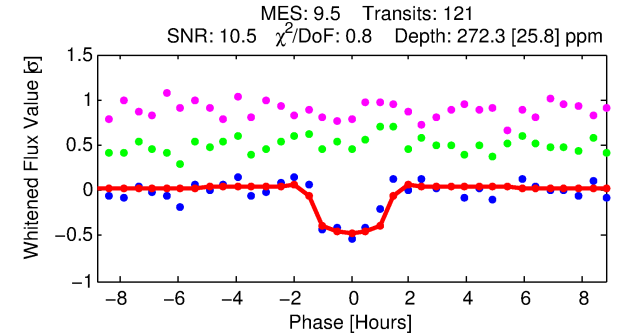
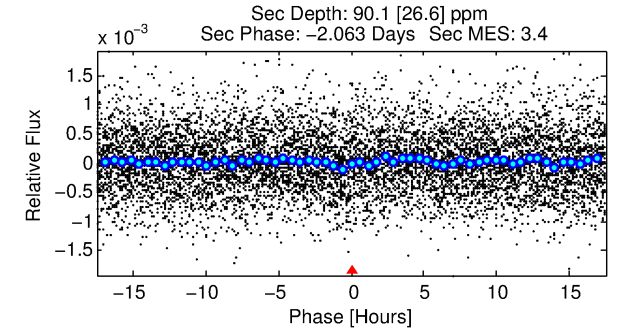
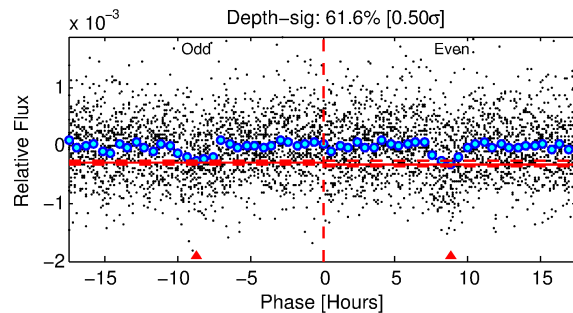
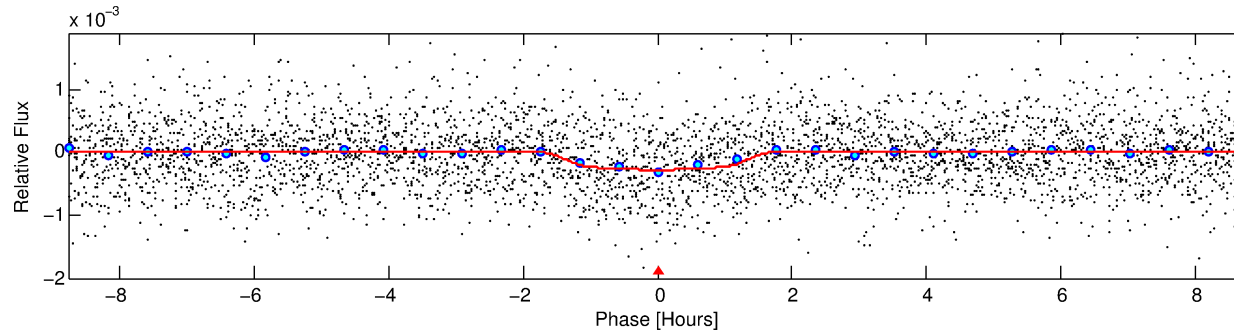
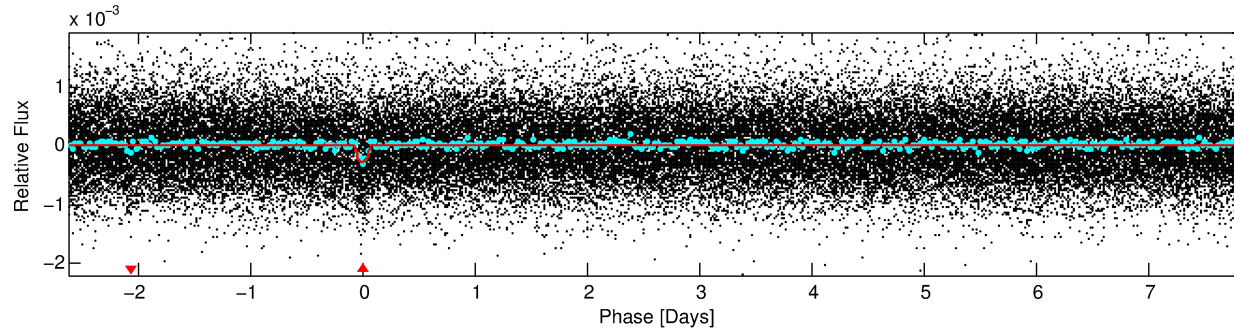
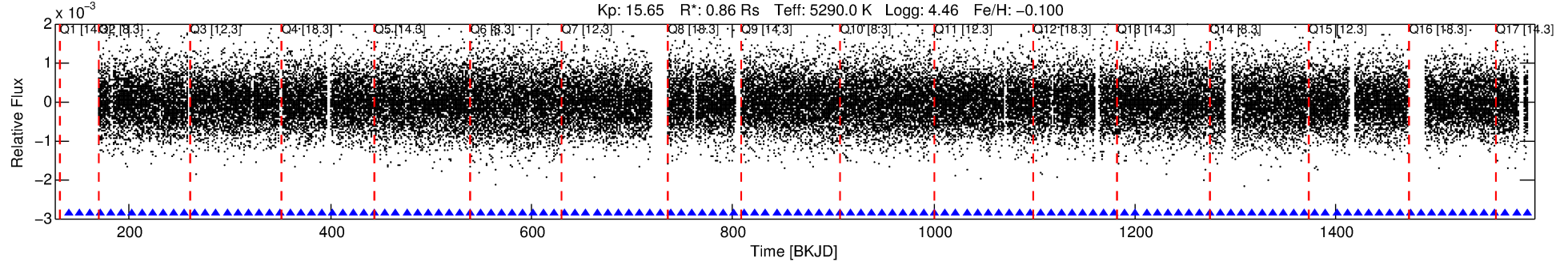
No Significant Match Found

DV One-Page Summary

KIC: 6131130 Candidate: 1 of 1 Period: 10.507 d

KOI: K03307.01 Corr: 0.932

Kp: 15.65 R*: 0.86 Rs Teff: 5290.0 K Logg: 4.46 Fe/H: -0.100



DV Fit Results:

Period = 10.50708 [0.00007] d
Epoch = 139.6719 [0.0057] BKJD
Rp/R* = 0.0170 [0.0156]
a/R* = 16.87 [61.59]
b = 0.81 [1.59]
Seff = 69.84 [18.39]
Teff = 737 [49] K
Rp = 1.60 [1.50] Re
a = 0.0867 [0.0133] AU
Ag = 145.04 [272.01] [0.53σ]
Teffp = 3955 [1844] K [1.74σ]

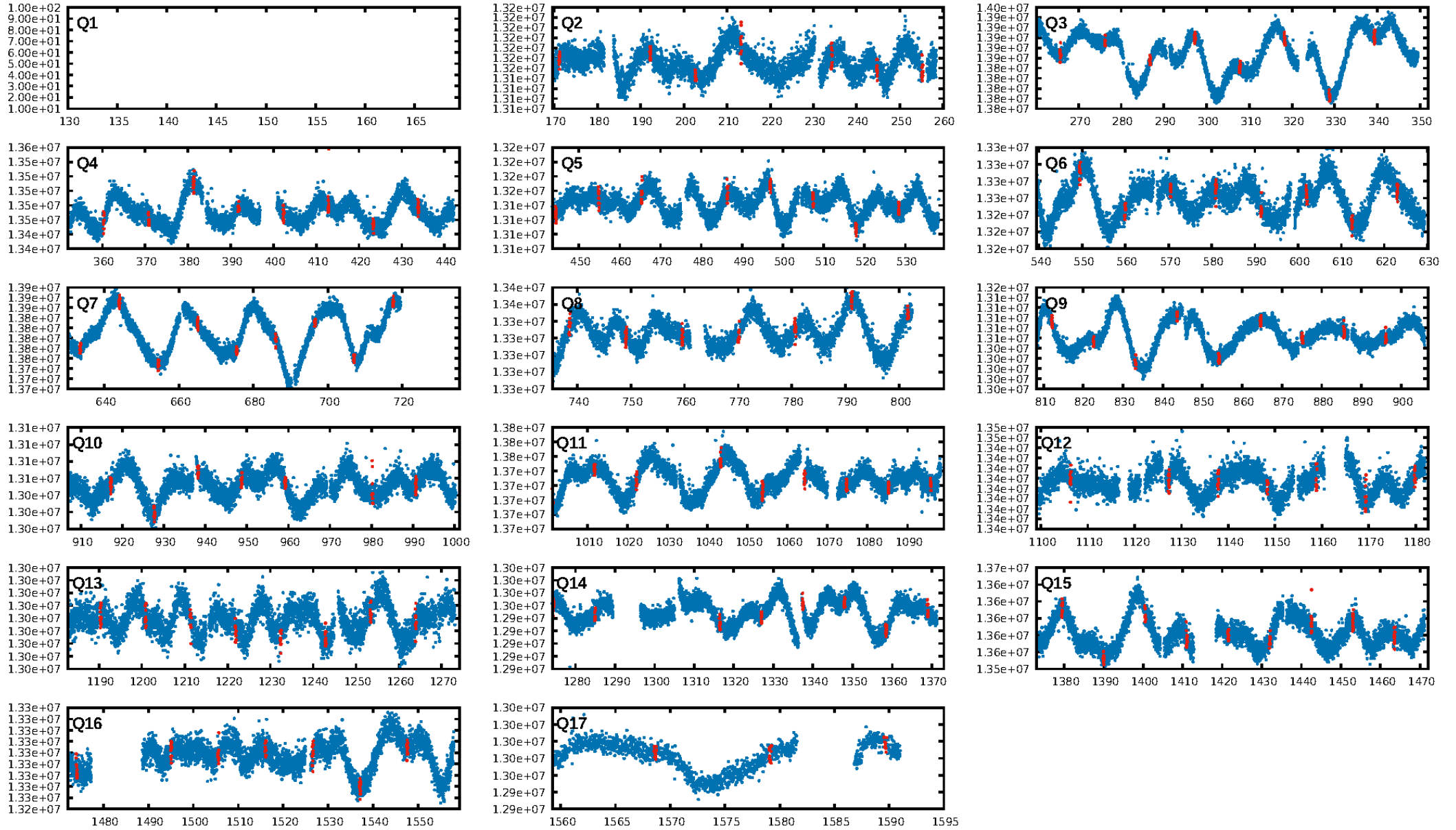
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 95.9%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 5.33e-21
RollingBand-fgt: 1.00 [118/118]
GhostDiagnostic-chr: 8.196
Centroid-sig: 0.1%
Centroid-so: 2.735 arcsec [2.32σ]
OotOffset-rm: 0.287 arcsec [0.59σ]
KicOffset-rm: 0.198 arcsec [0.36σ]
OotOffset-st: 3/4/4/2 [13]
KicOffset-st: 3/4/4/2 [13]
DiffImageQuality-fgm: 0.38 [5/13]
DiffImageOverlap-fno: 1.00 [16/16]

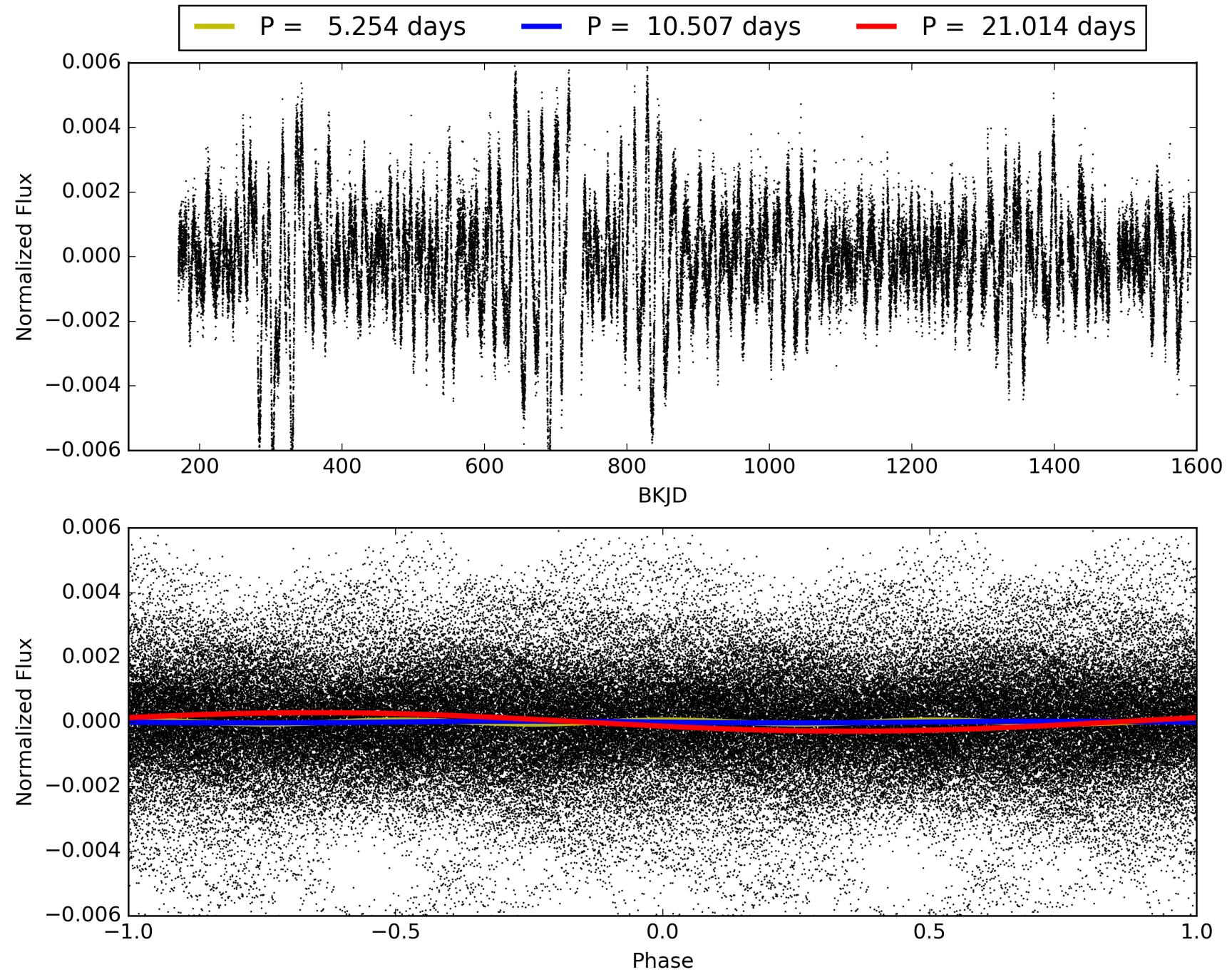
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 14:49:19 Z

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

TCE 006131130-01, PDC Light Curves

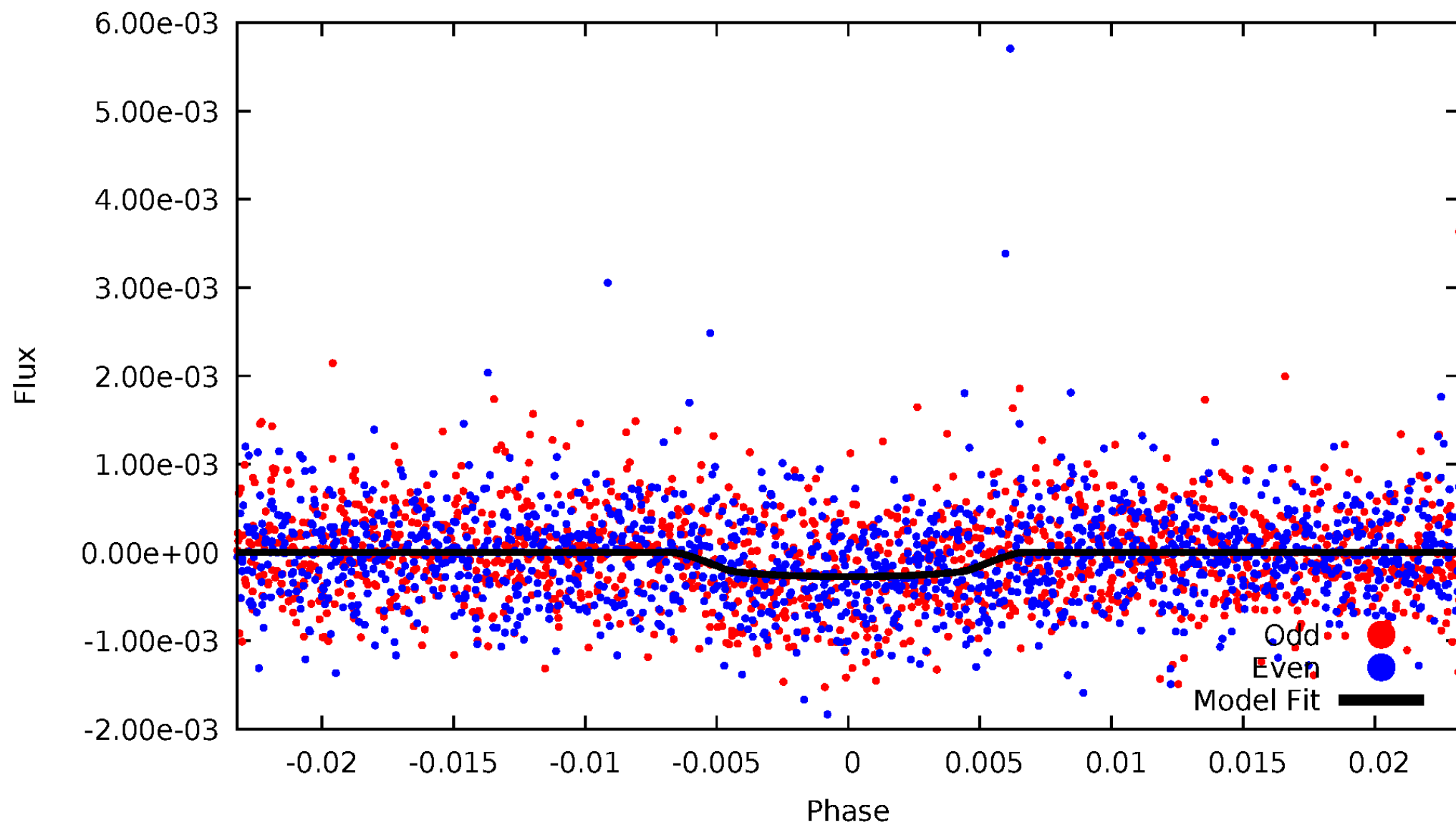


TCE 006131130-01



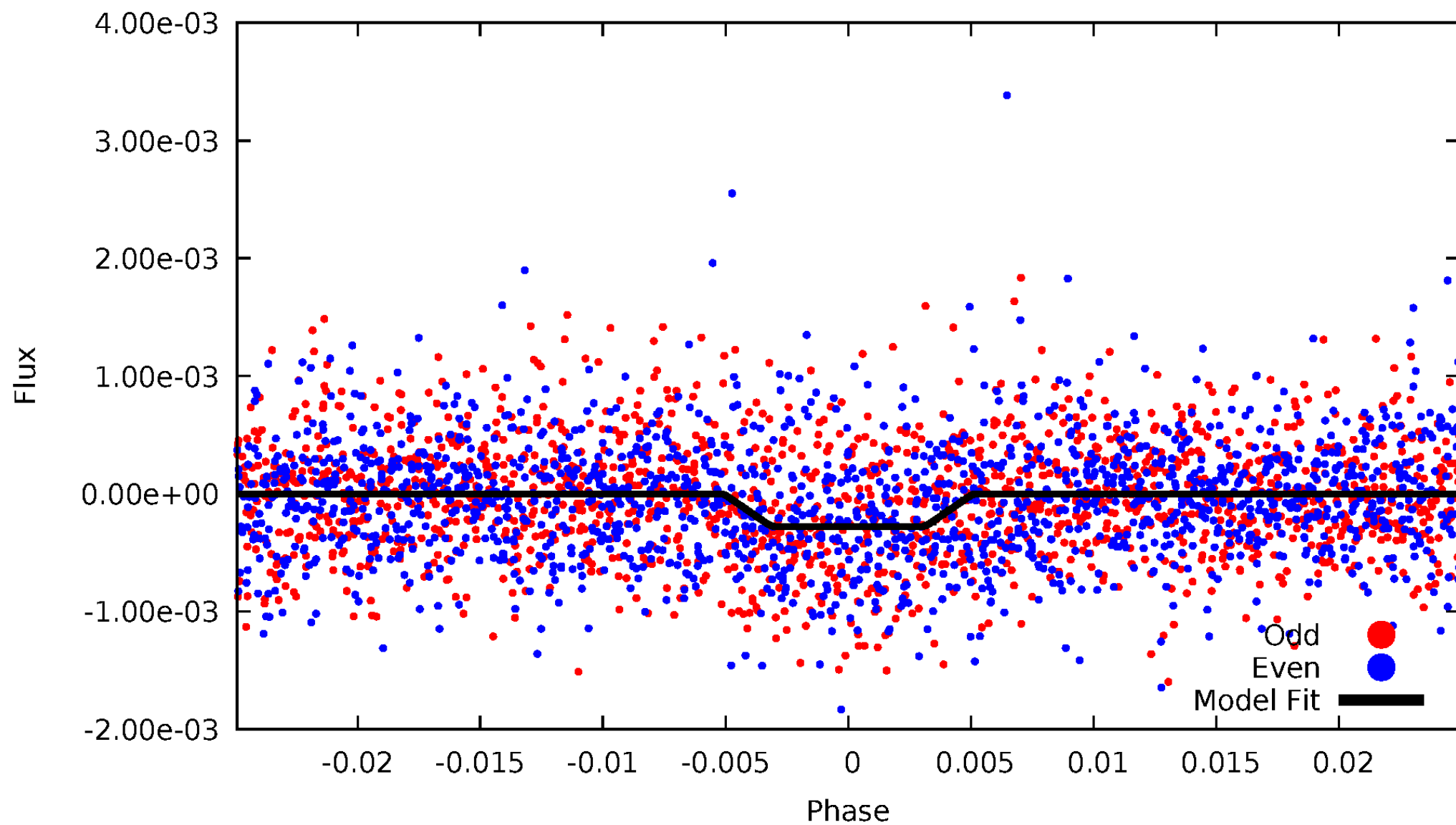
DV Odd/Even

TCE 006131130-01

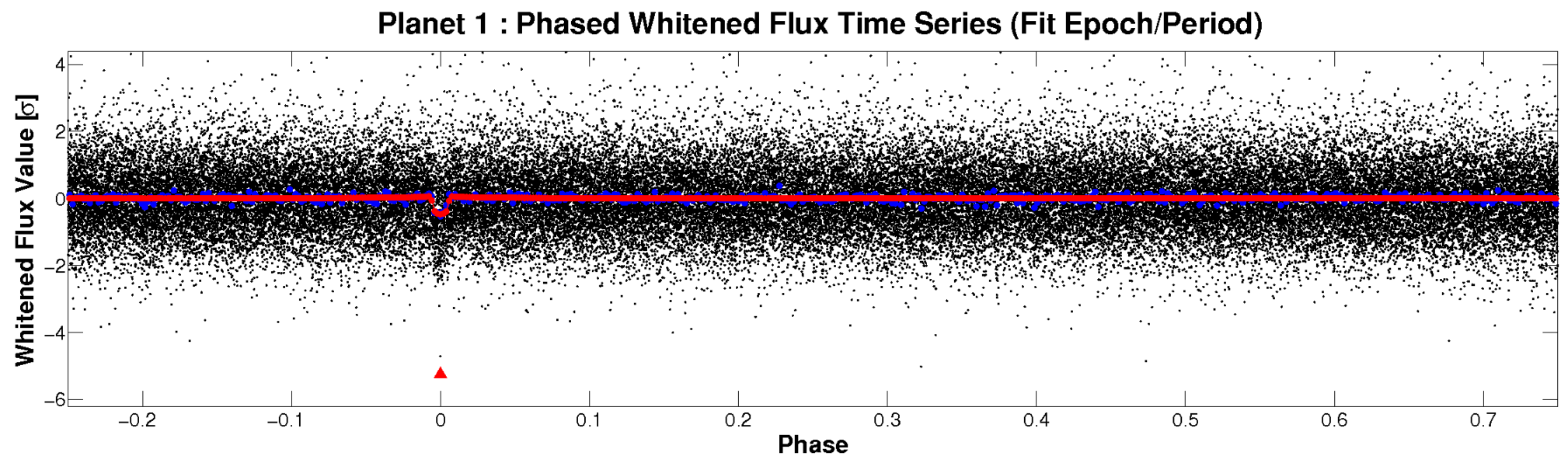
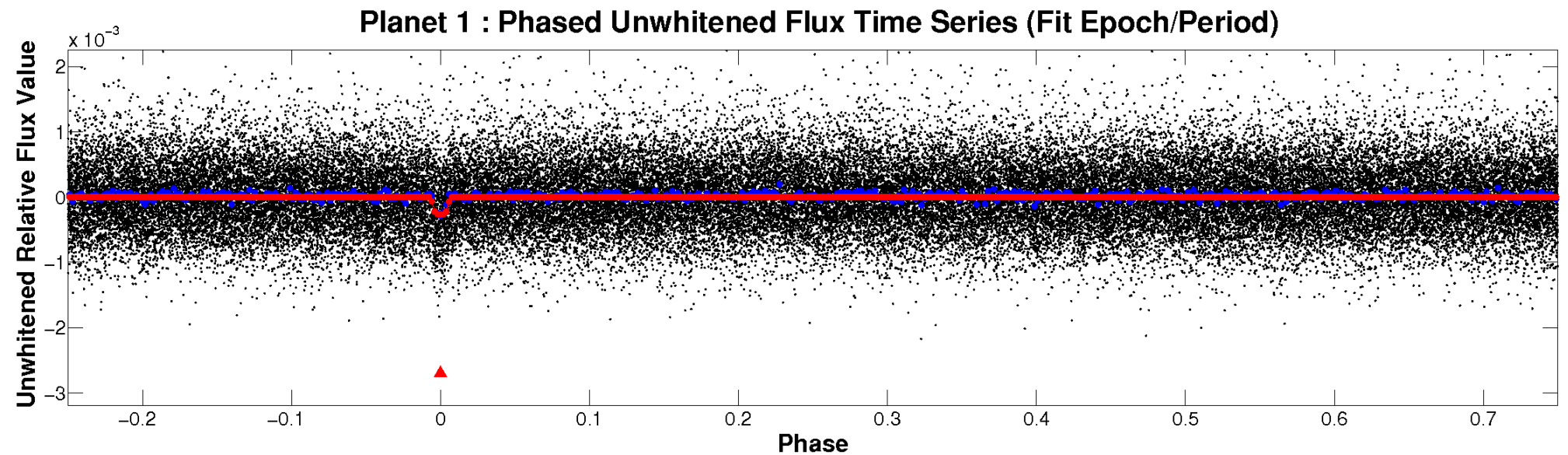


ALT Odd/Even

TCE 006131130-01

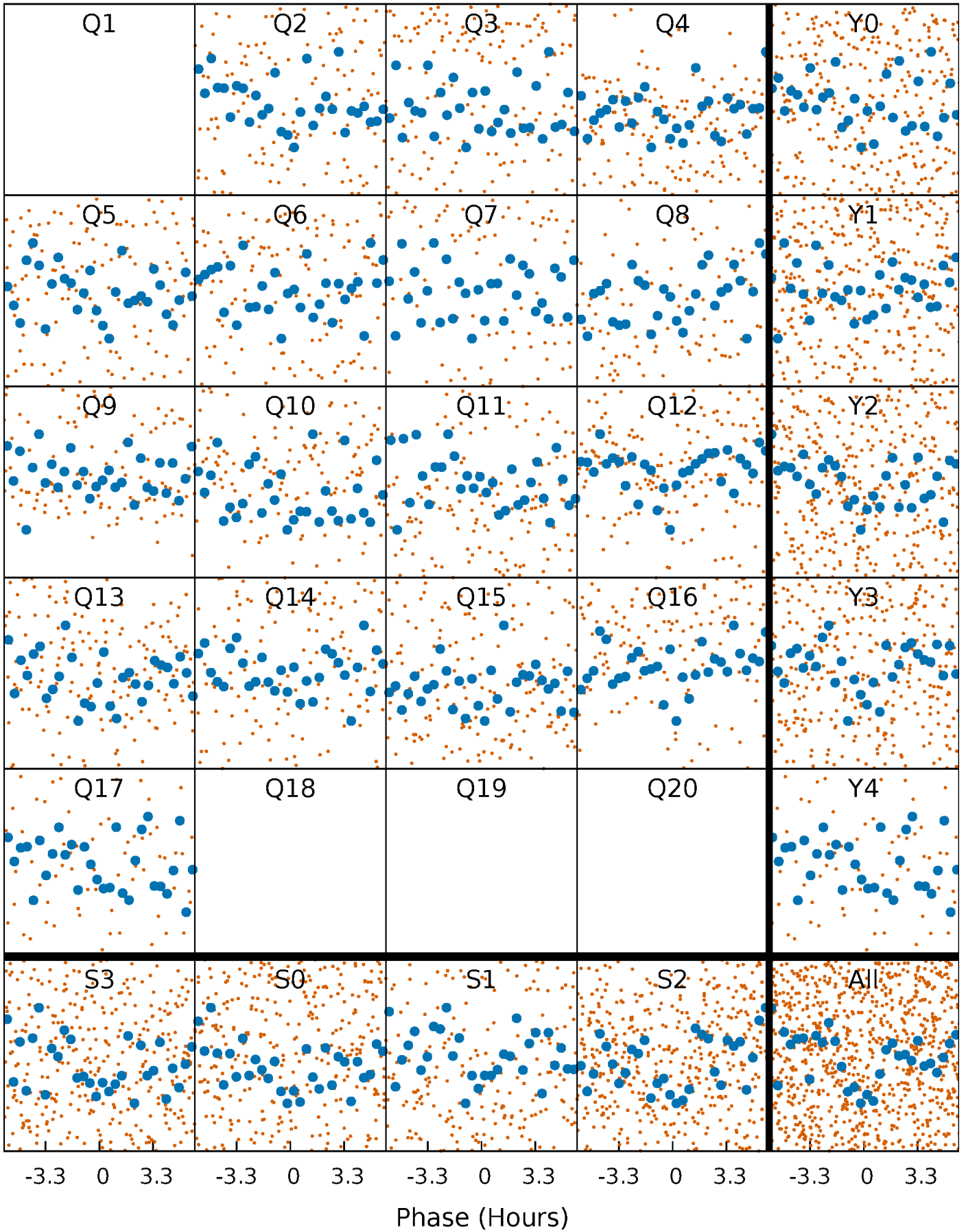


Non-Whitened Vs. Whitened Light Curve



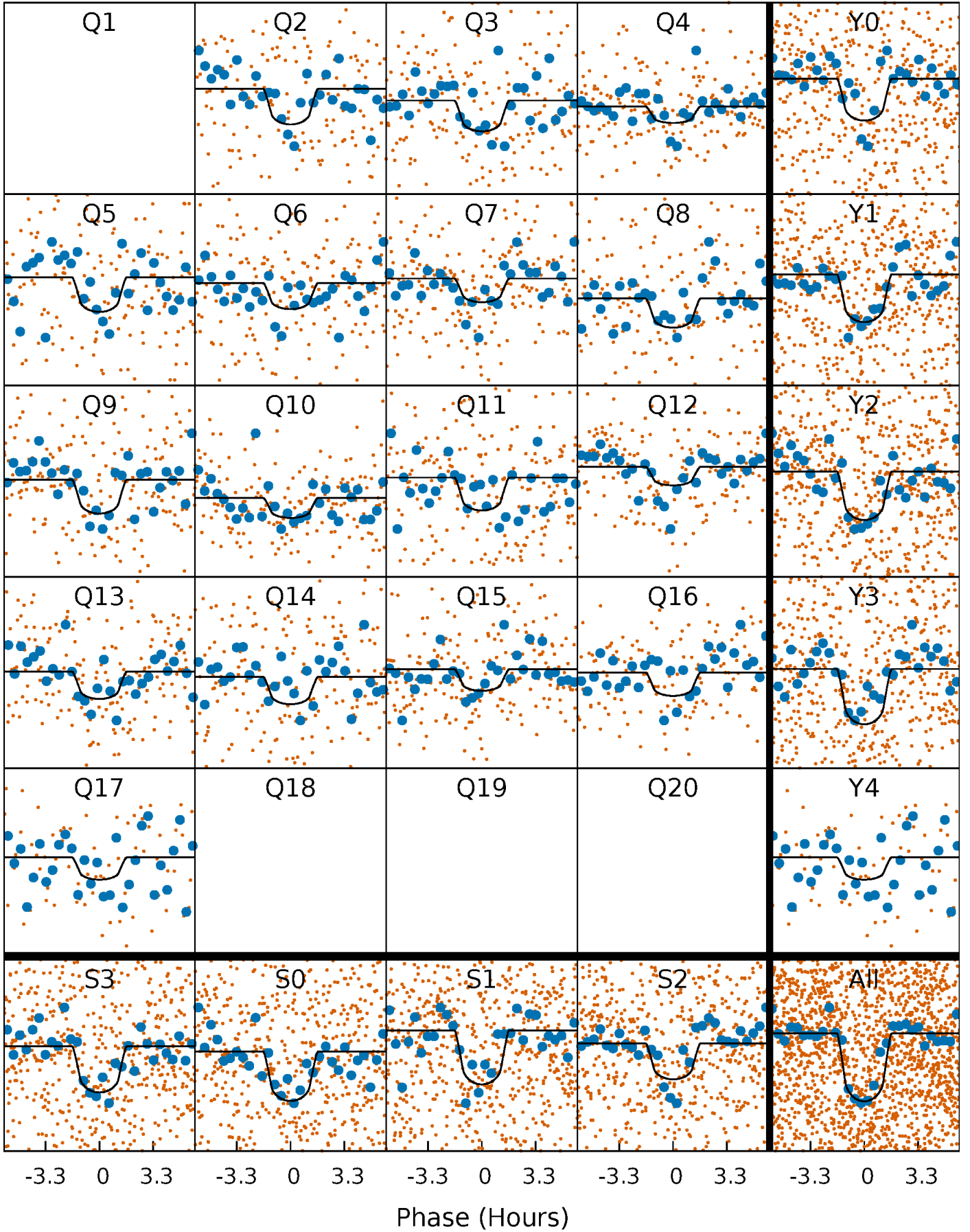
PDC Quarter-Phased Transit Curves

TCE 006131130-01 P= 10.507079 Days $T_0=139.671899$ (BKJD)



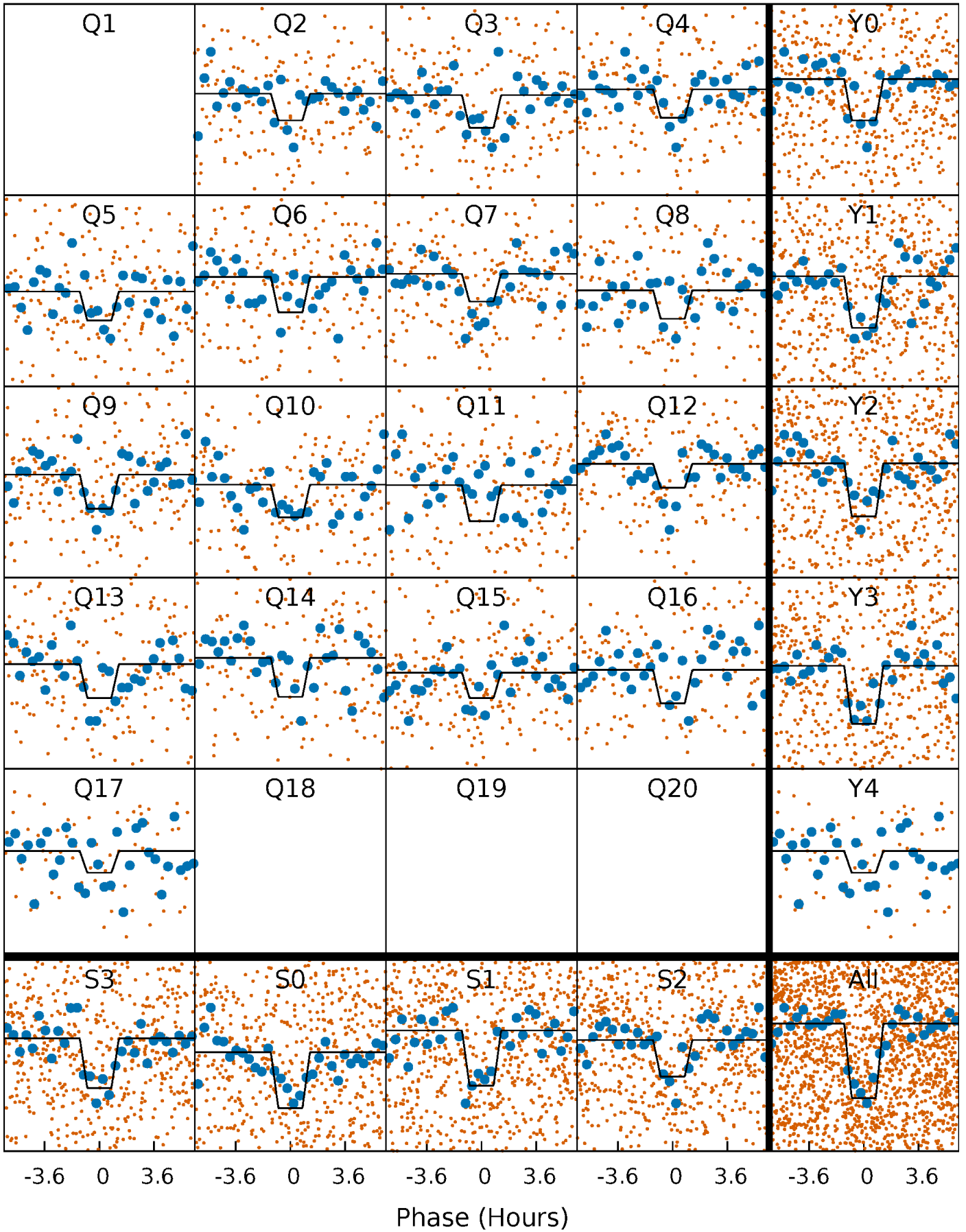
DV Quarter-Phased Transit Curves

TCE 006131130-01 P= 10.507079 Days $T_0=139.671899$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

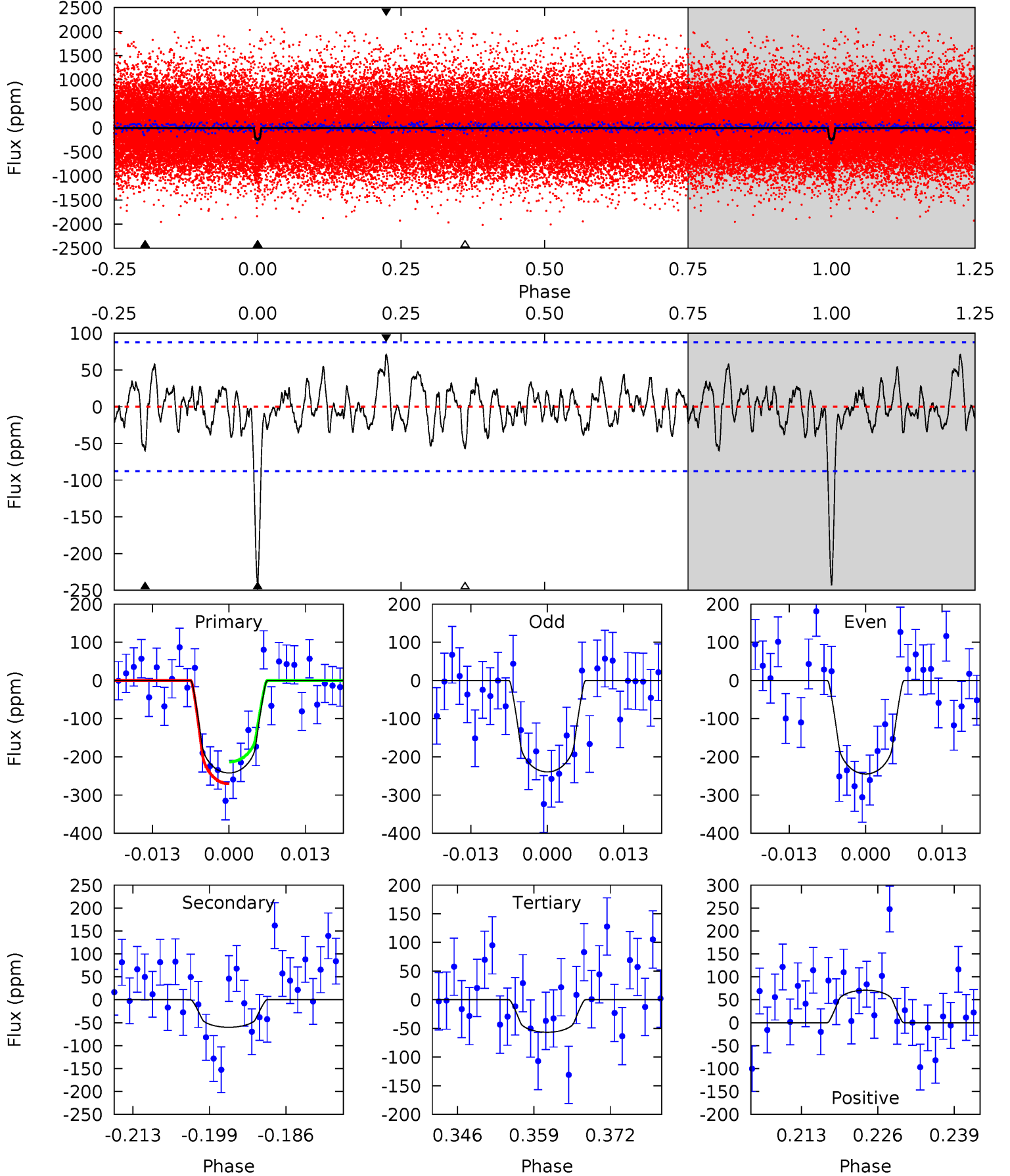
TCE 006131130-01 P= 10.507081 Days $T_0=139.666334$ (BKJD)



DV Model-Shift Uniqueness Test

006131130-01, $P = 10.507079$ Days, $E = 139.671899$ Days

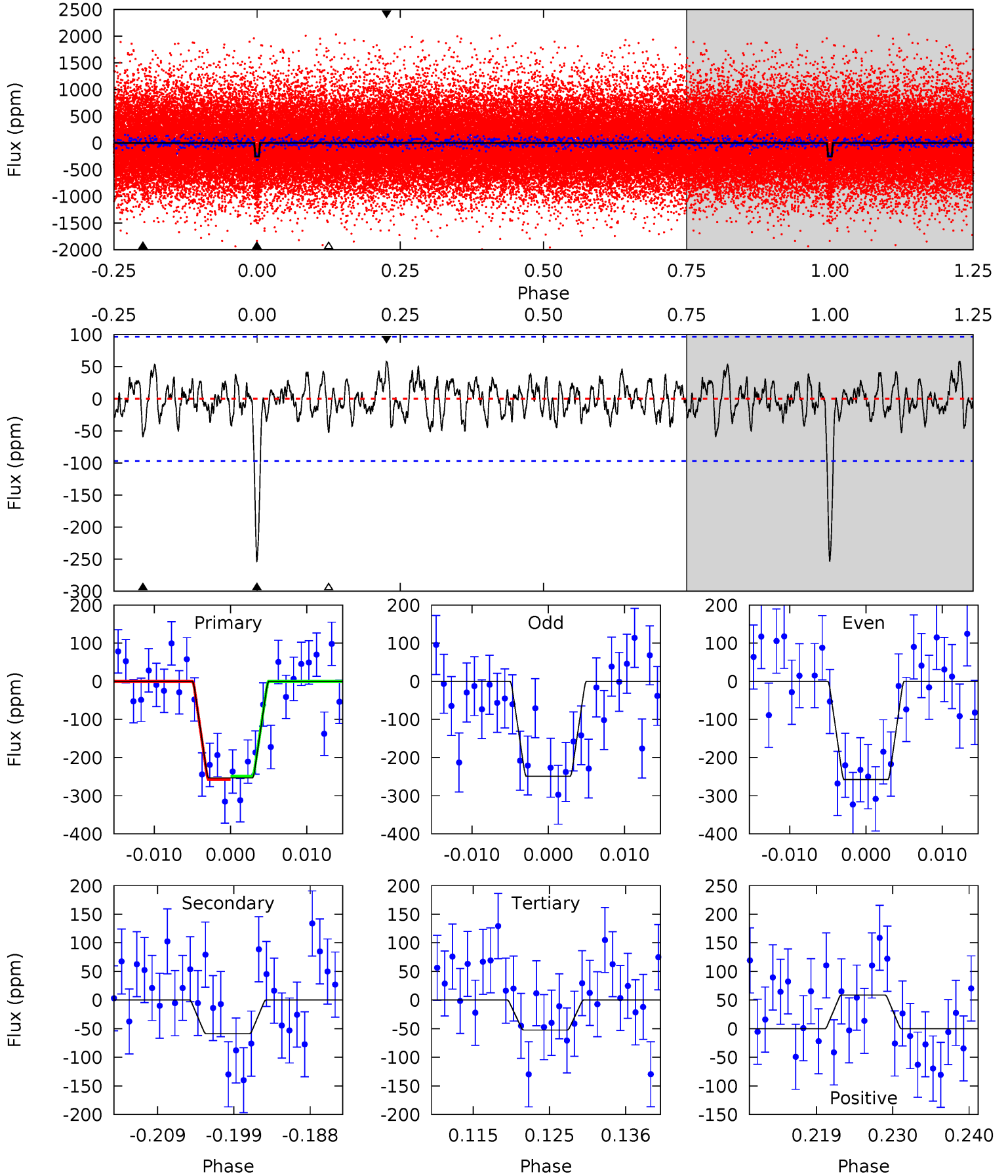
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.7	3.40	3.21	4.01	4.97	2.48	1.26	10.5	9.70	0.19	-0.61	0.16	0.95	0.23	1.63



Alt Model-Shift Uniqueness Test

006131130-01, P = 10.507081 Days, E = 139.666334 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
13.1	3.04	2.72	3.04	5.02	2.56	1.10	10.4	10.1	0.32	-0.01	0.22	0.96	0.19	0.23



Stellar Parameters For KIC 006131130

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5290^{+167}_{-167}	$4.460^{+0.117}_{-0.130}$	$-0.100^{+0.300}_{-0.300}$	$0.865^{+0.151}_{-0.113}$	$0.788^{+0.113}_{-0.061}$	$1.714^{+0.819}_{-0.649}$
	+3%/-3%	+3%/-3%	+300%/-300%	+17%/-13%	+14%/-8%	+48%/-38%
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 006131130-01 / KOI 3307.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-60 ± 18	$1.85^{+1.33}_{-1.10}$	1030^{+59}_{-54}	3714^{+1520}_{-636}	74^{+382}_{-51}
Alt.	-59 ± 19	$1.78^{+1.54}_{-1.05}$	1033^{+55}_{-54}	3748^{+1520}_{-708}	76^{+382}_{-56}

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 $A_{obs} \gg 1.0$

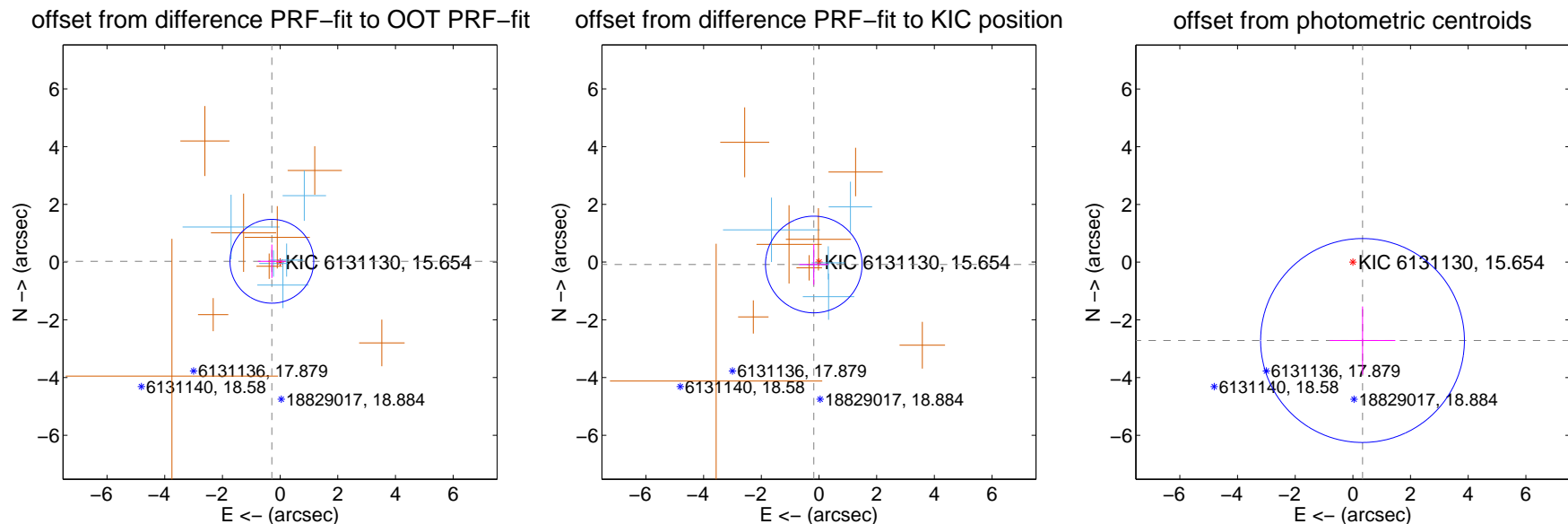
DV Centroid Data

Supplemental centroid analysis for 006131130-01. Kepler magnitude: 15.65. Transit SNR 10.55

There are 5 quarters with good PRF difference image offsets

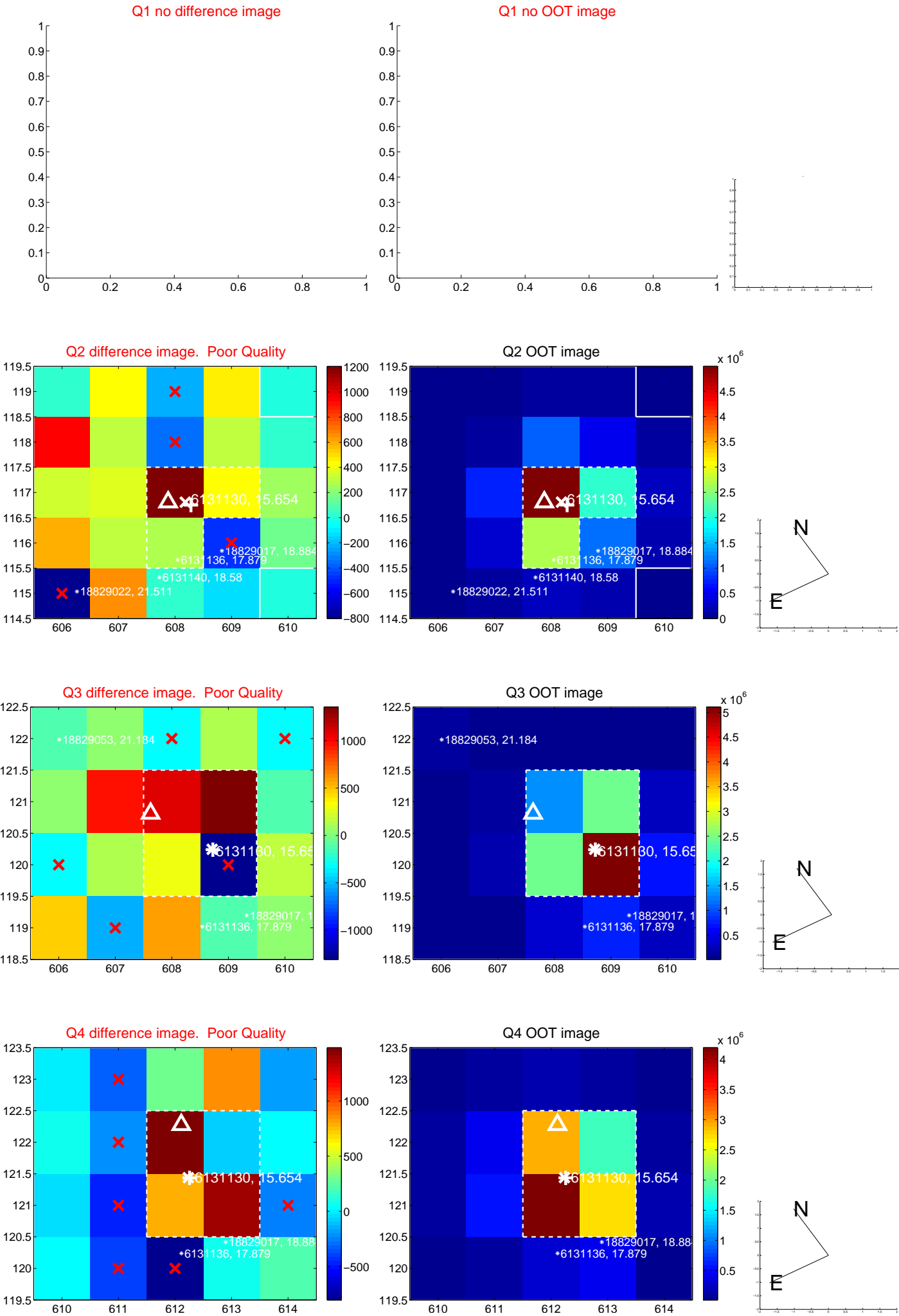
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.287 ± 0.484	0.59	0.286 ± 0.481	0.028 ± 0.578
PRF-fit source offset from KIC position	0.198 ± 0.558	0.36	0.180 ± 0.505	-0.083 ± 0.701
photometric centroid source offset	2.73 ± 1.18	2.32	-0.34 ± 1.14	-2.71 ± 1.18

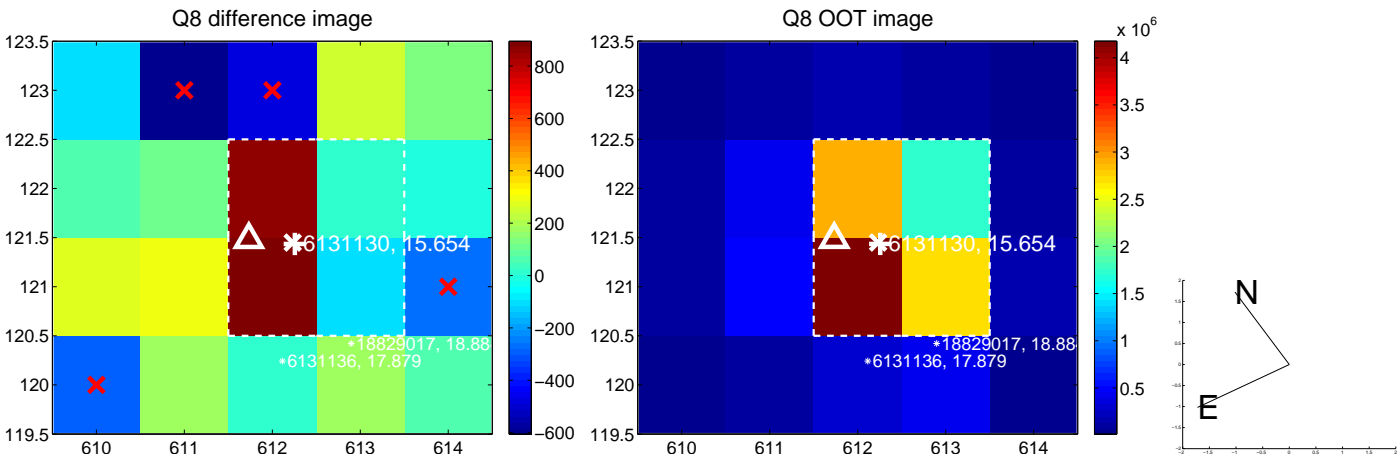
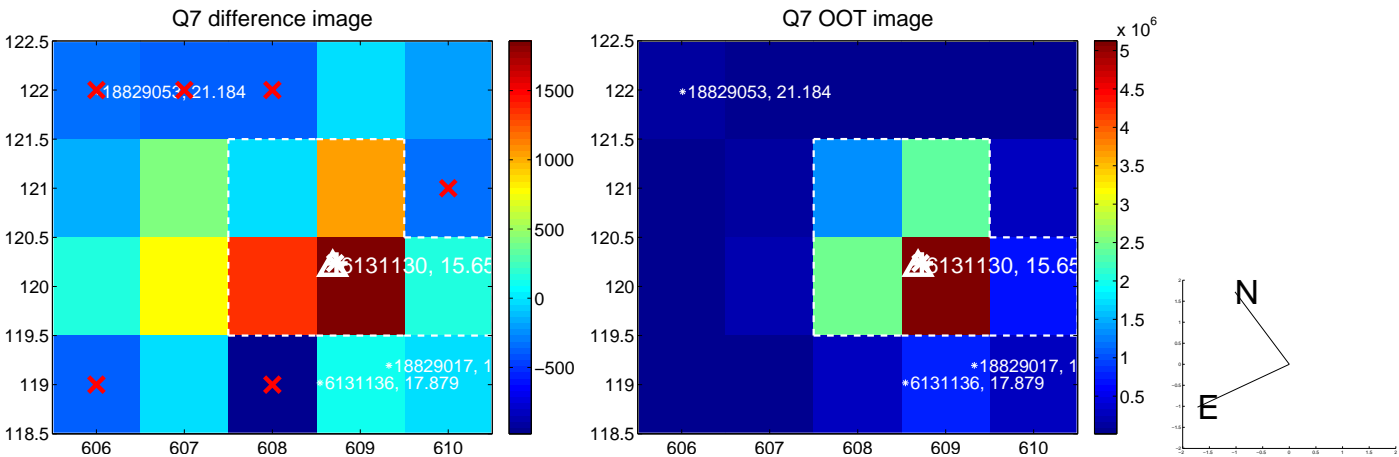
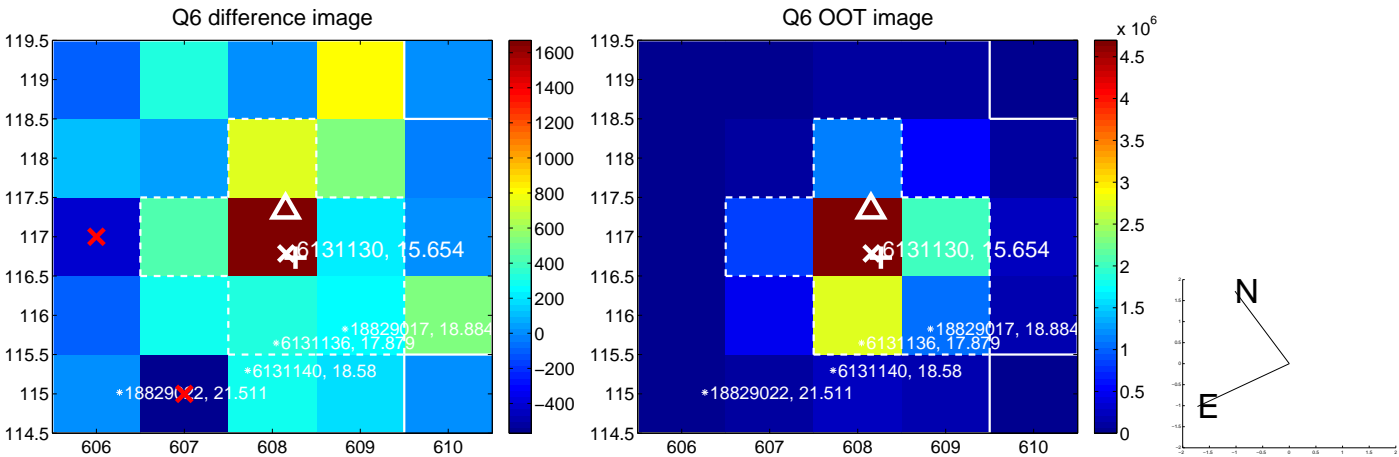
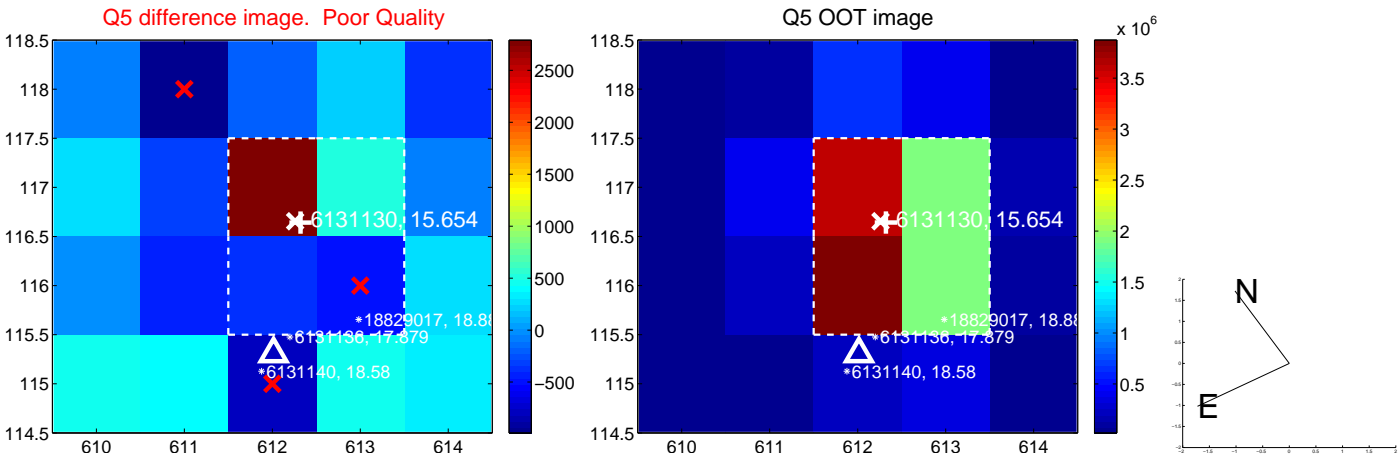


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses:** good quarterly centroid offsets; **Vermillion crosses:** bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

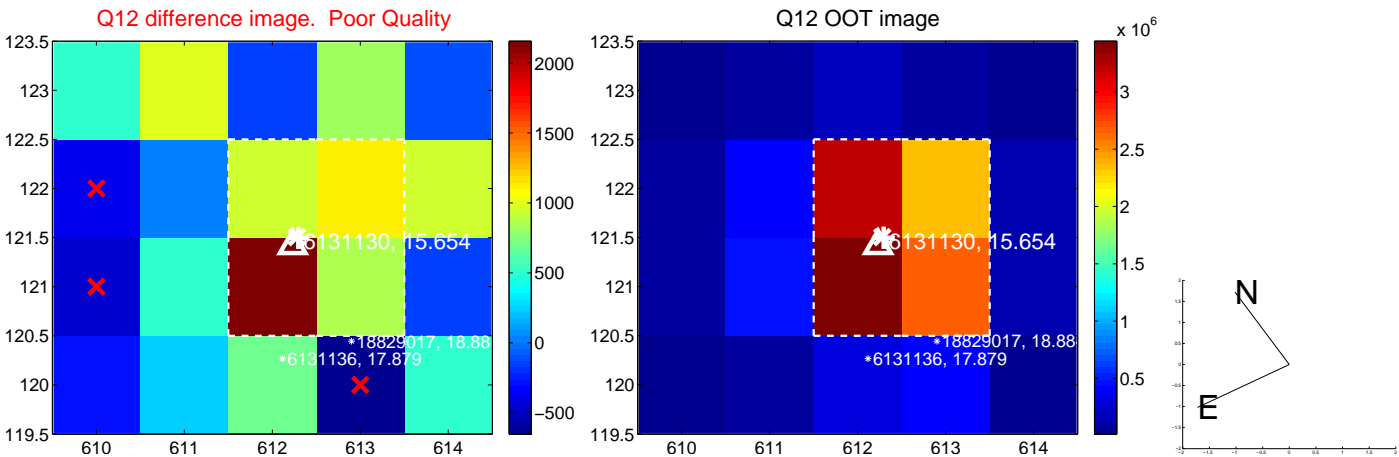
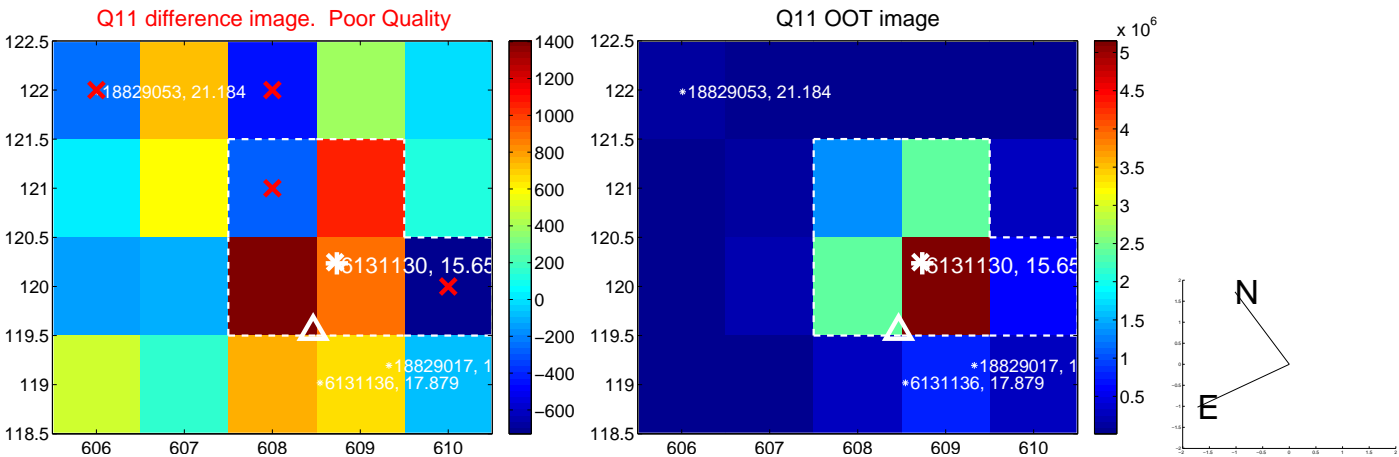
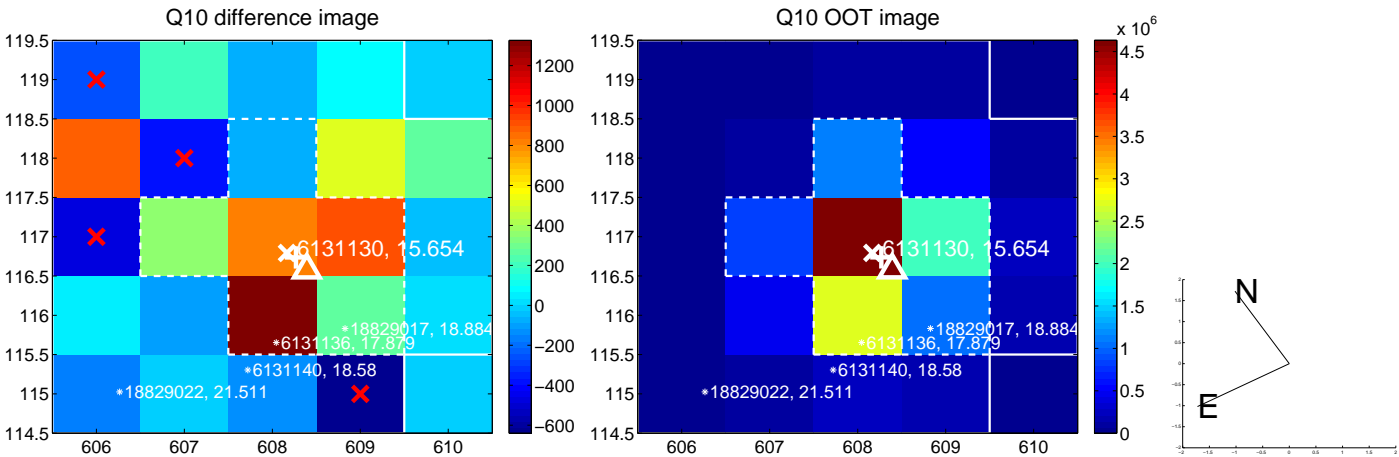
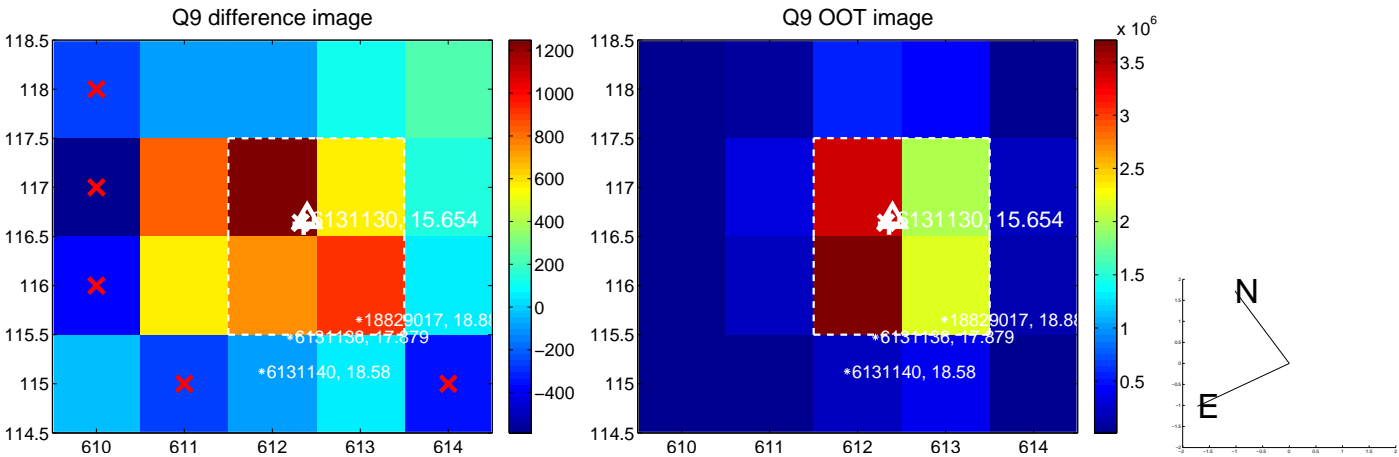
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



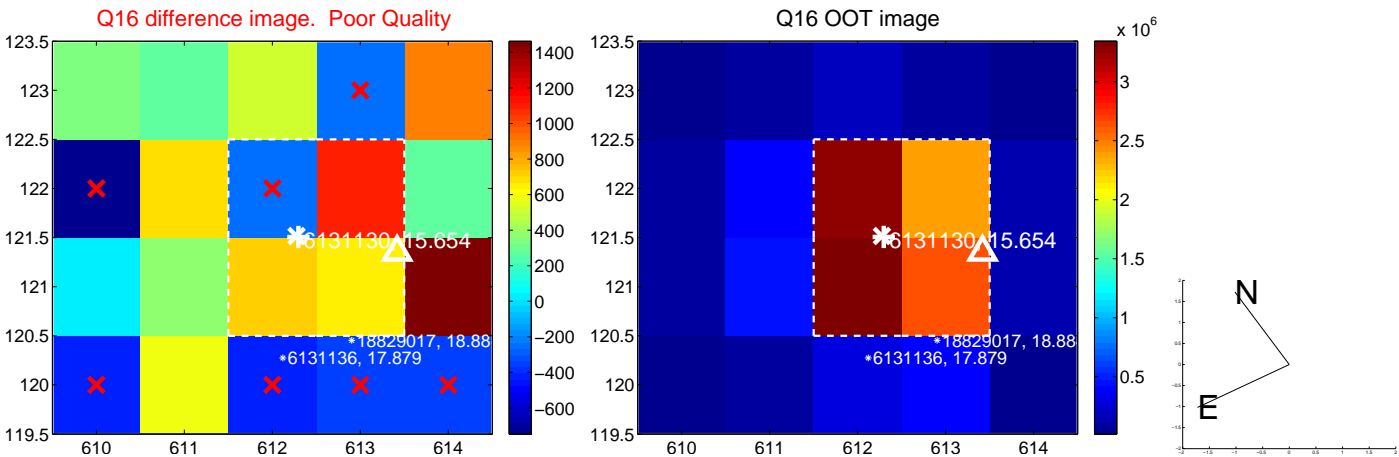
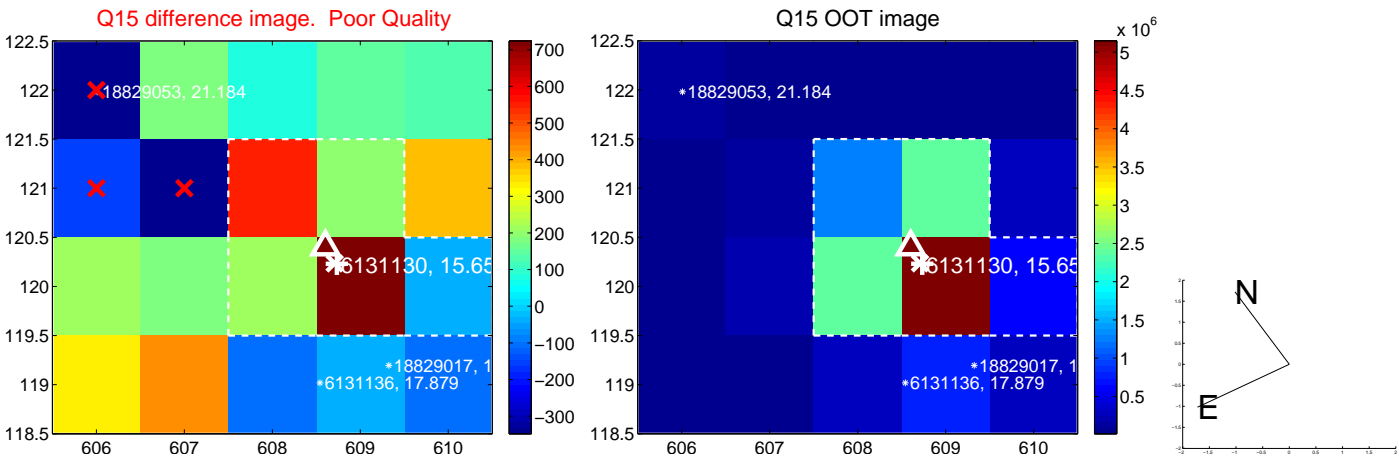
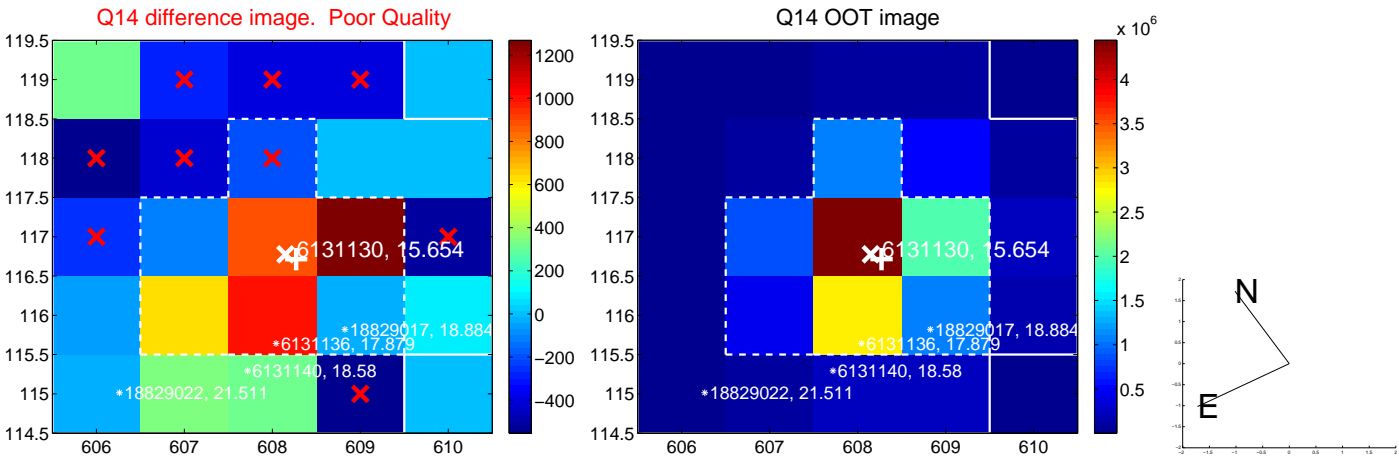
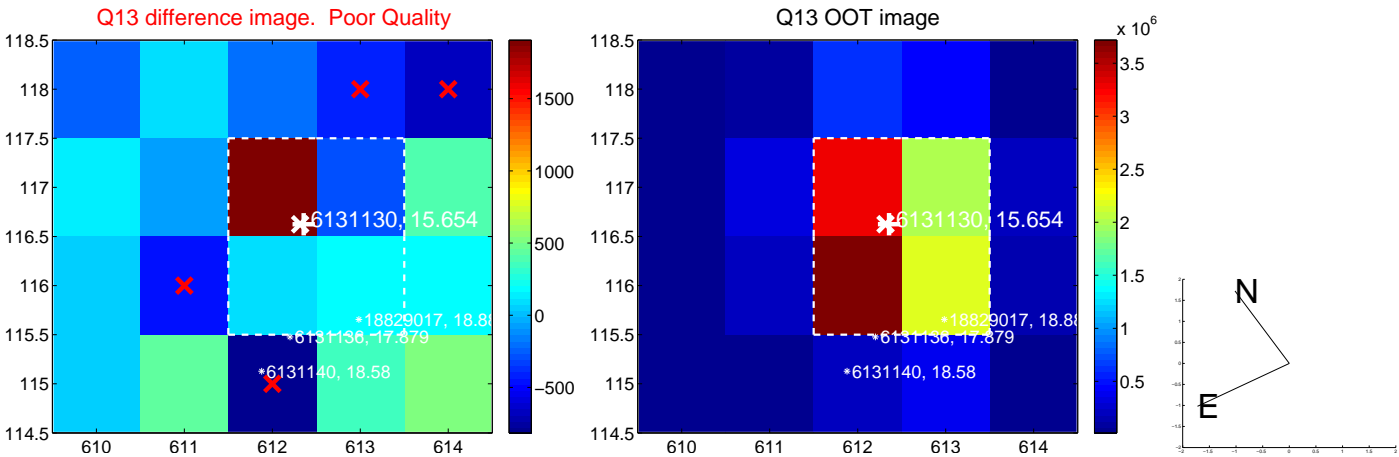
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

