

KIC 010226316

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})
010226316-01	OBS	No	0.660637	131.678490	20.9	2.483	8.9	5.9	0.94	5385	0.52	3300.18

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
010226316-01	OBS	FP	0.00	1	0	1	1	LPP_DV—CENT_RESOLVED_OFFSET—HALO_GHOST—EPHEM_MATCH

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

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

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

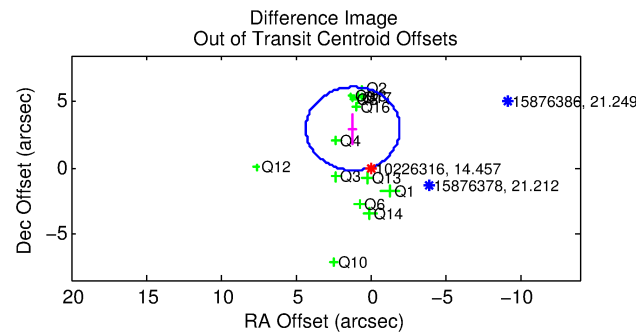
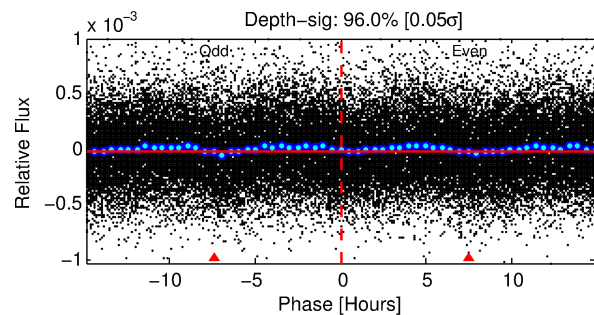
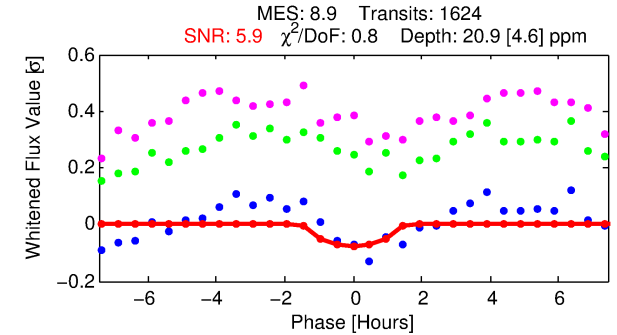
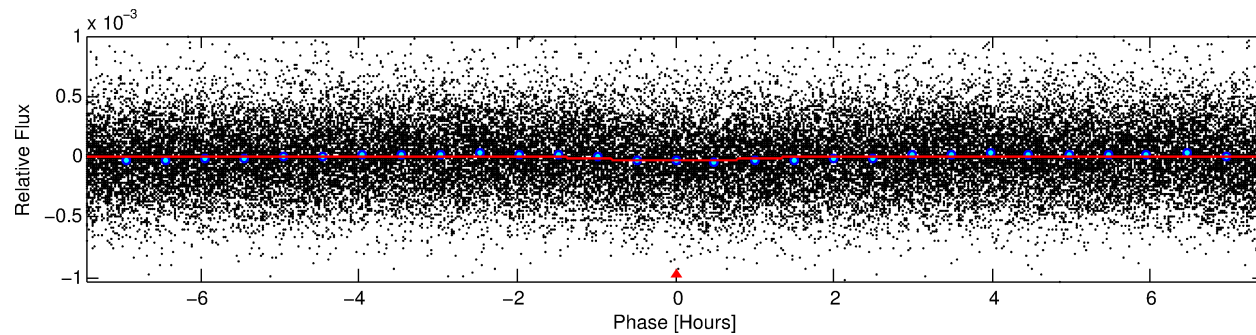
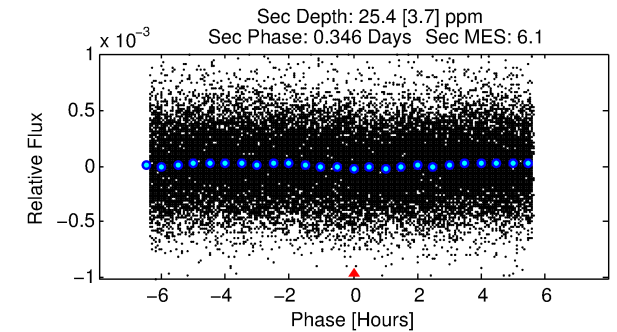
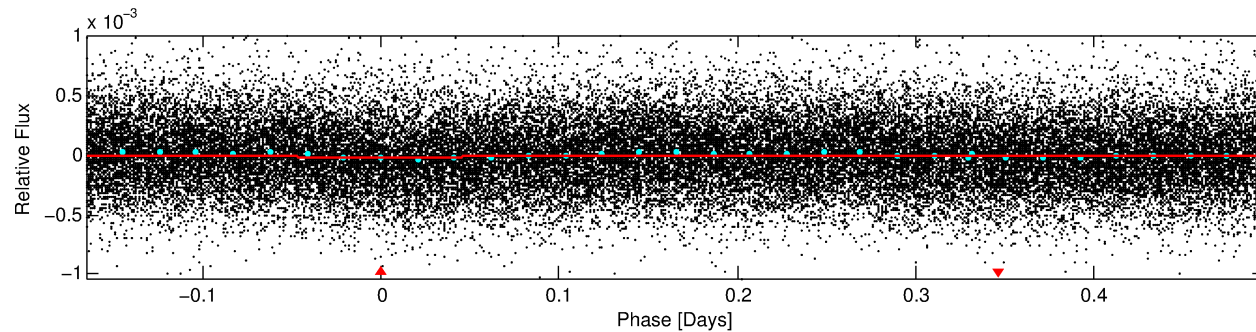
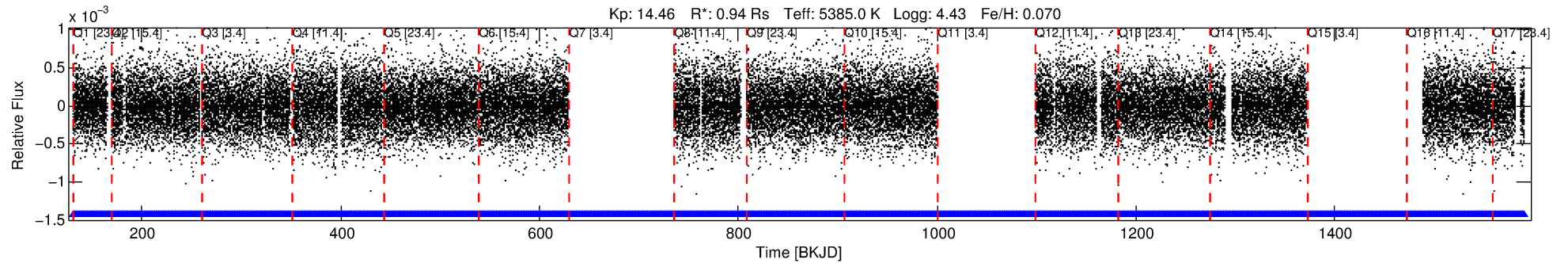
Ephemeris Match Information For 010226316-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
010226316-01	10226316	010226388-pri	10226388	1:1	64.7	7	14	10.77	14.46	12167.00	Direct-PRF	0	3.31	0.70

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

DV One-Page Summary

KIC: 10226316 Candidate: 1 of 1 Period: 0.661 d



DV Fit Results:

Period = 0.66064 [0.00002] d
Epoch = 131.6785 [0.0057] BKJD
Rp/R* = 0.0050 [0.0053]
a/R* = 1.31 [2.49]
b = 0.90 [1.00]
Seff = 3300.18 [1227.36]
Teff = 1933 [180] K
Rp = 0.52 [0.56] Re
a = 0.0141 [0.0031] AU
Ag = 10.51 [22.34] [0.43σ]
Teffp = 5380 [2836] K [1.21σ]

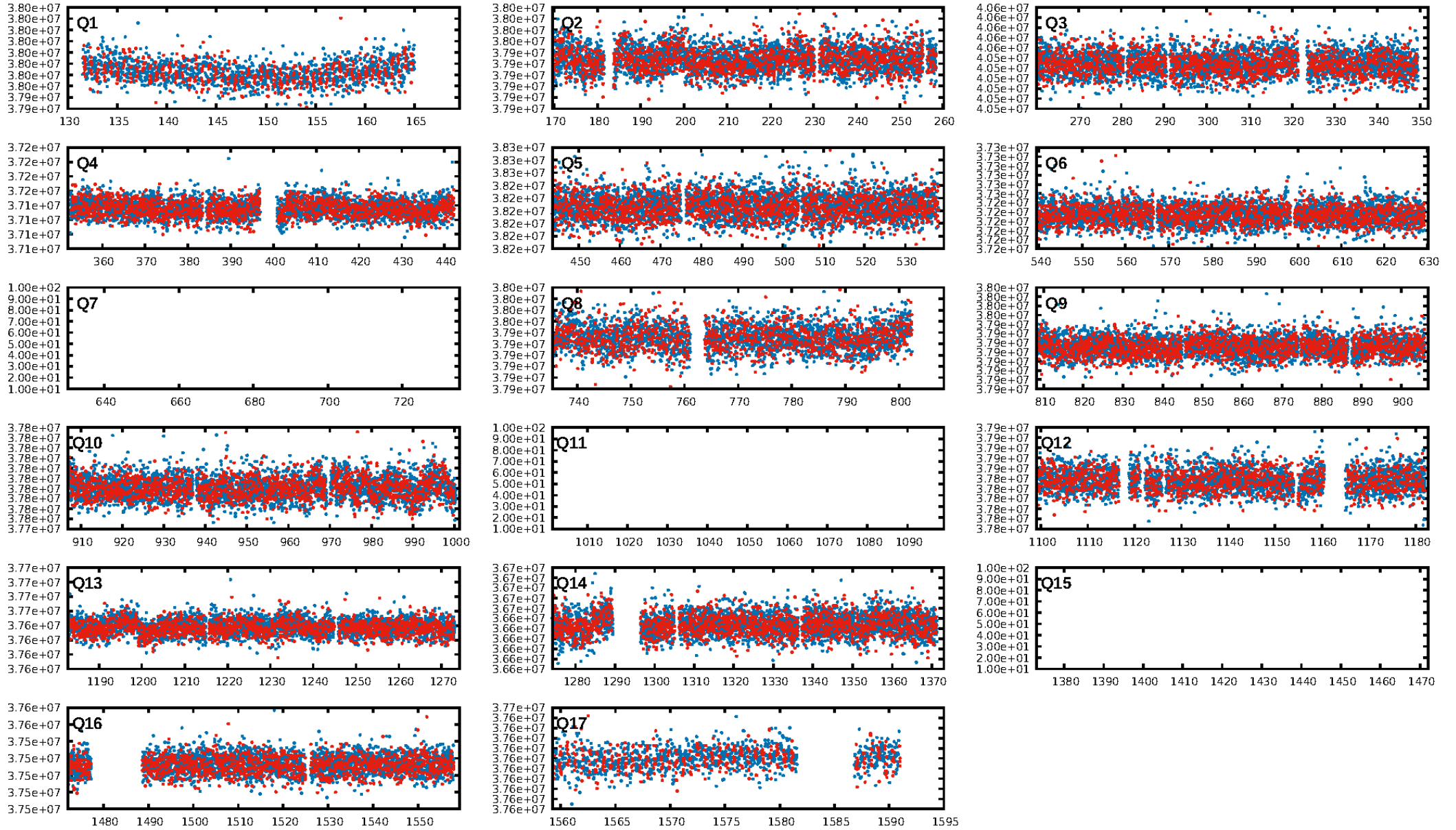
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.72e-18
RollingBand-fgt: 1.00 [1532/1532]
GhostDiagnostic-chr: -0.1887
Centroid-sig: 0.2%
Centroid-so: 4.851 arcsec [1.95σ]
OotOffset-rm: 3.172 arcsec [3.02σ]
KicOffset-rm: 2.992 arcsec [2.83σ]
OotOffset-st: 4/1/4/5 [14]
KicOffset-st: 4/1/4/5 [14]
DiffImageQuality-fgm: 0.00 [0/14]
DiffImageOverlap-fno: 1.00 [14/14]

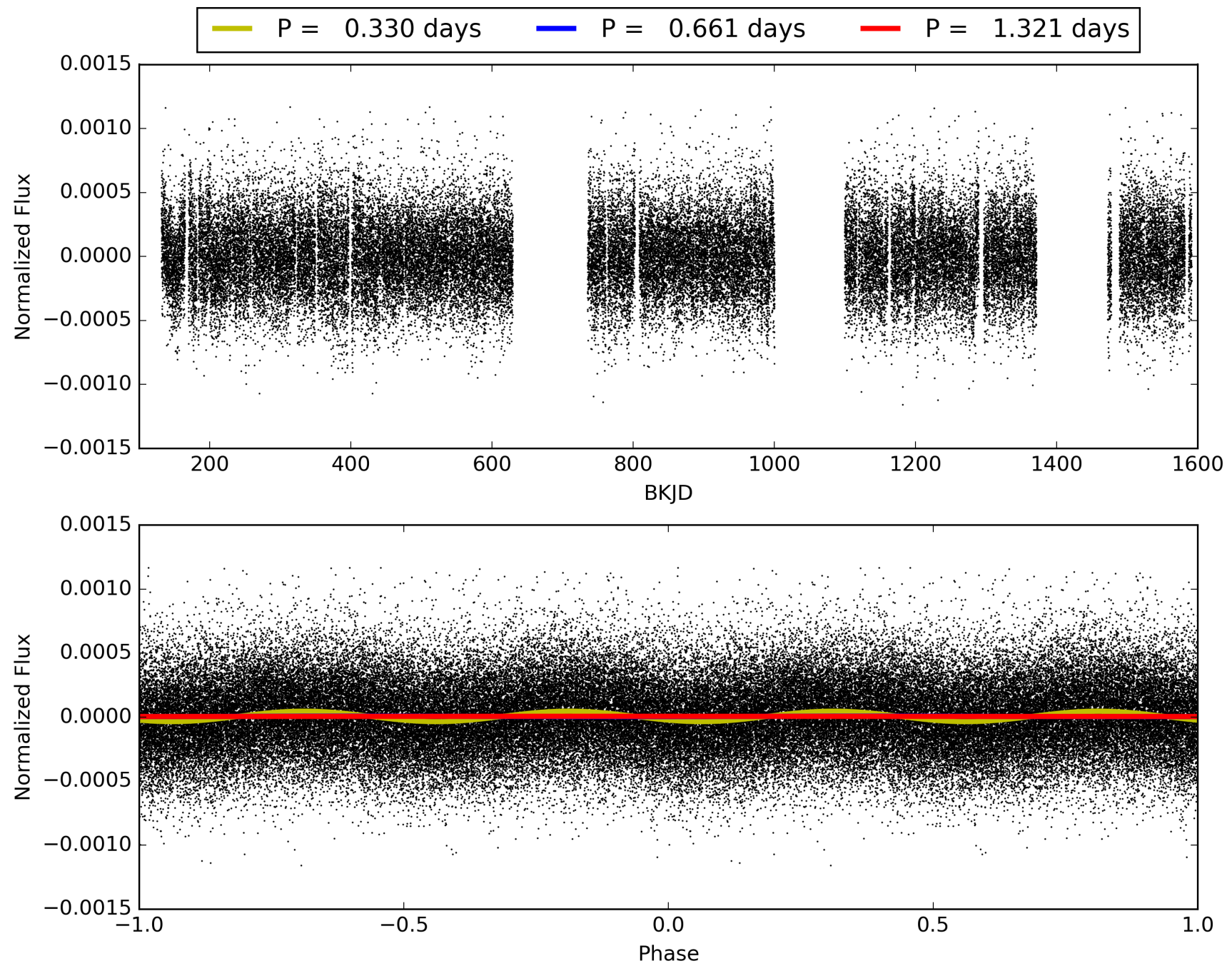
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 11:55:23 Z

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

TCE 010226316-01, PDC Light Curves

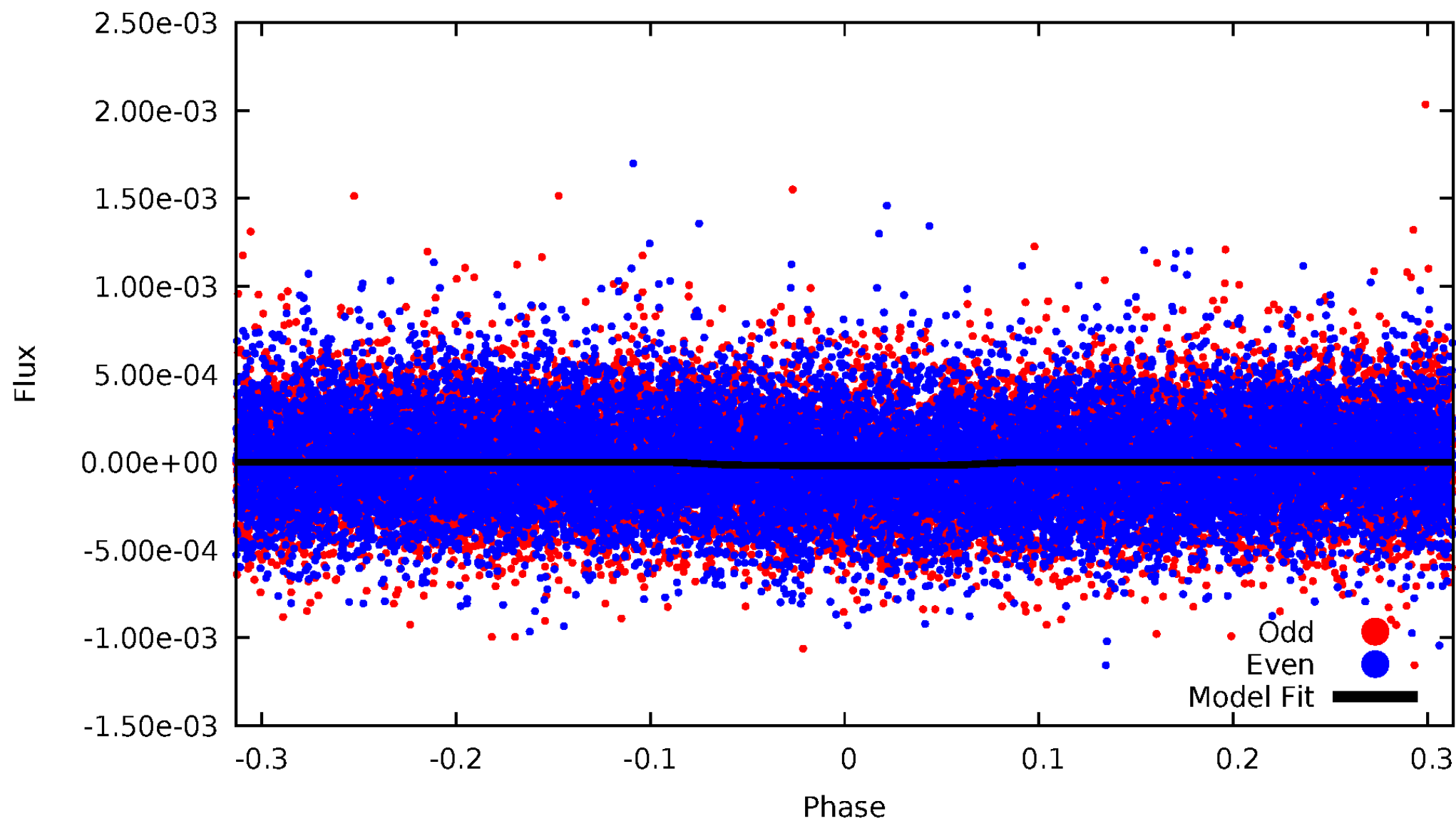


TCE 010226316-01



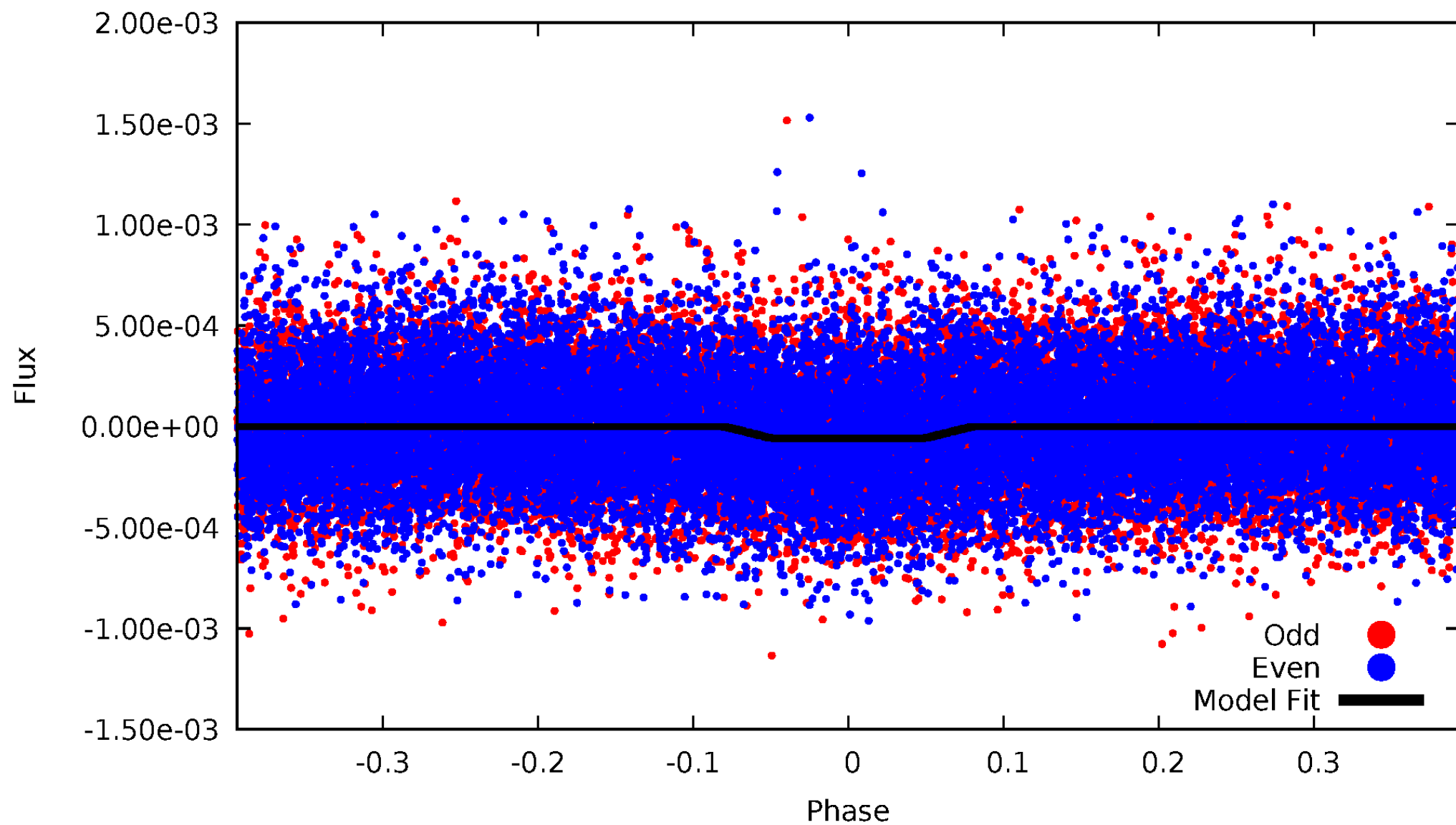
DV Odd/Even

TCE 010226316-01

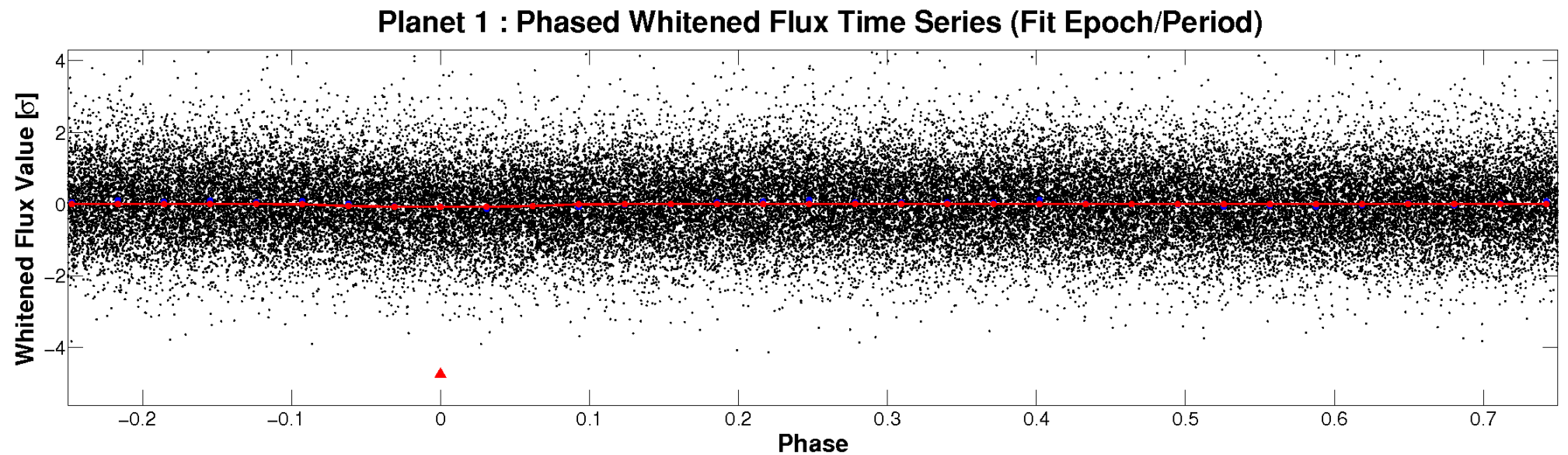
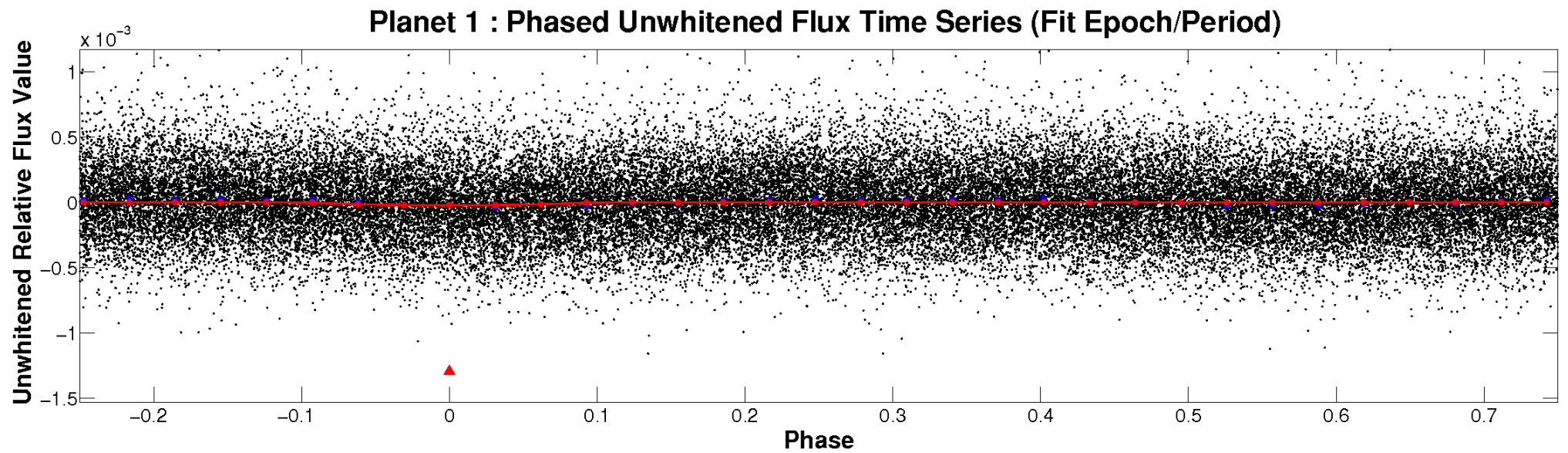


ALT Odd/Even

TCE 010226316-01

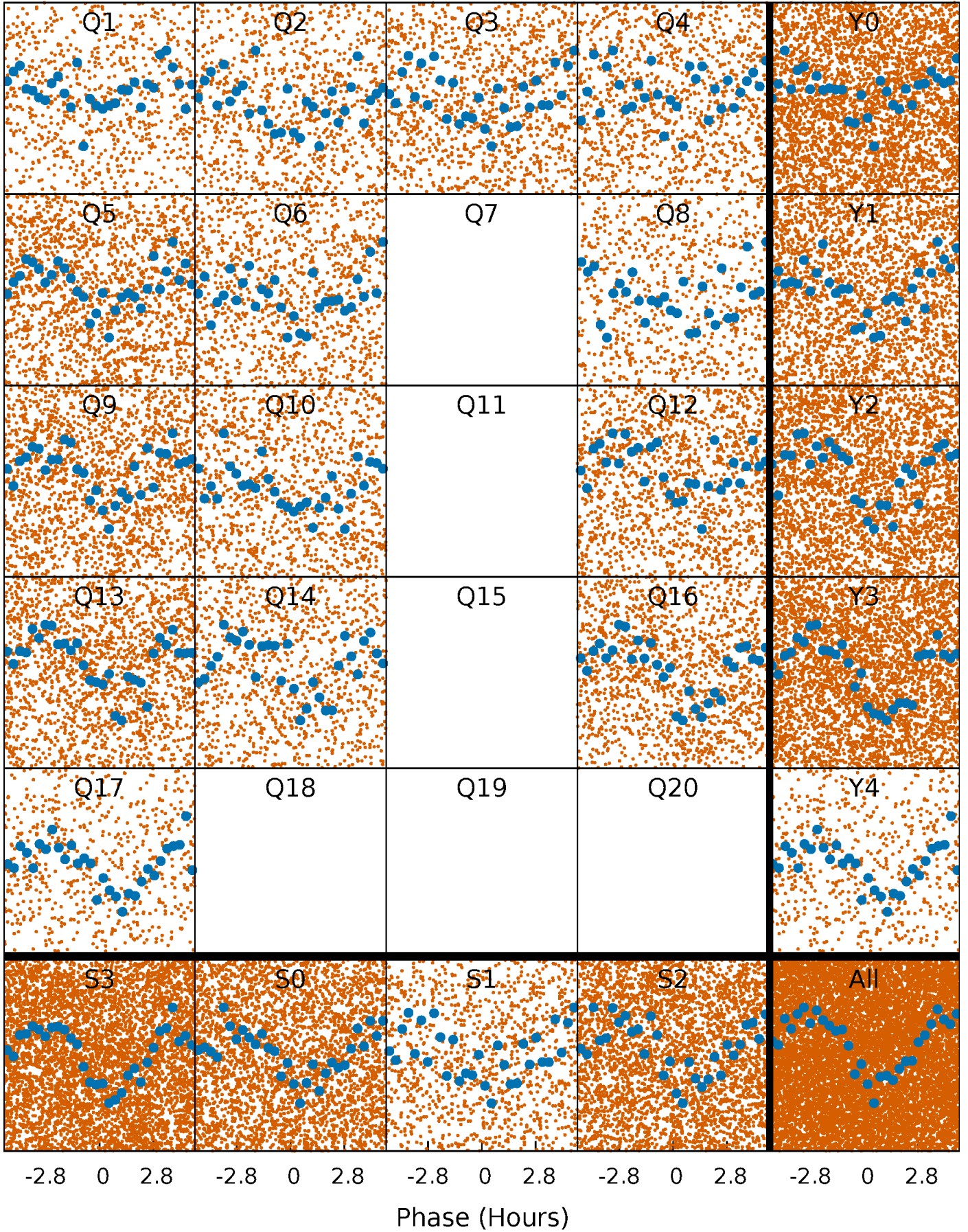


Non-Whitened Vs. Whitened Light Curve



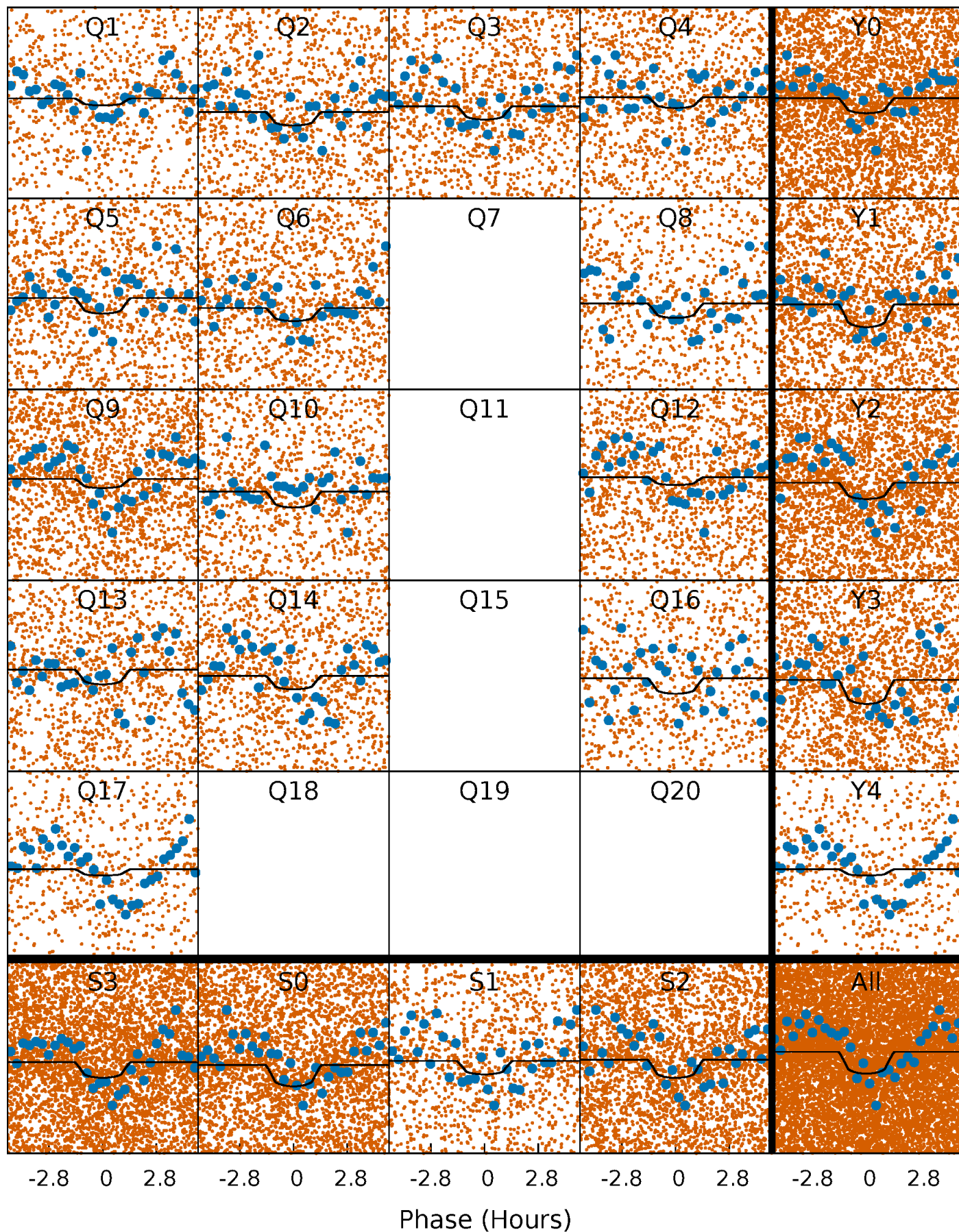
PDC Quarter-Phased Transit Curves

TCE 010226316-01 P= 0.660637 Days $T_0=131.678490$ (BKJD)



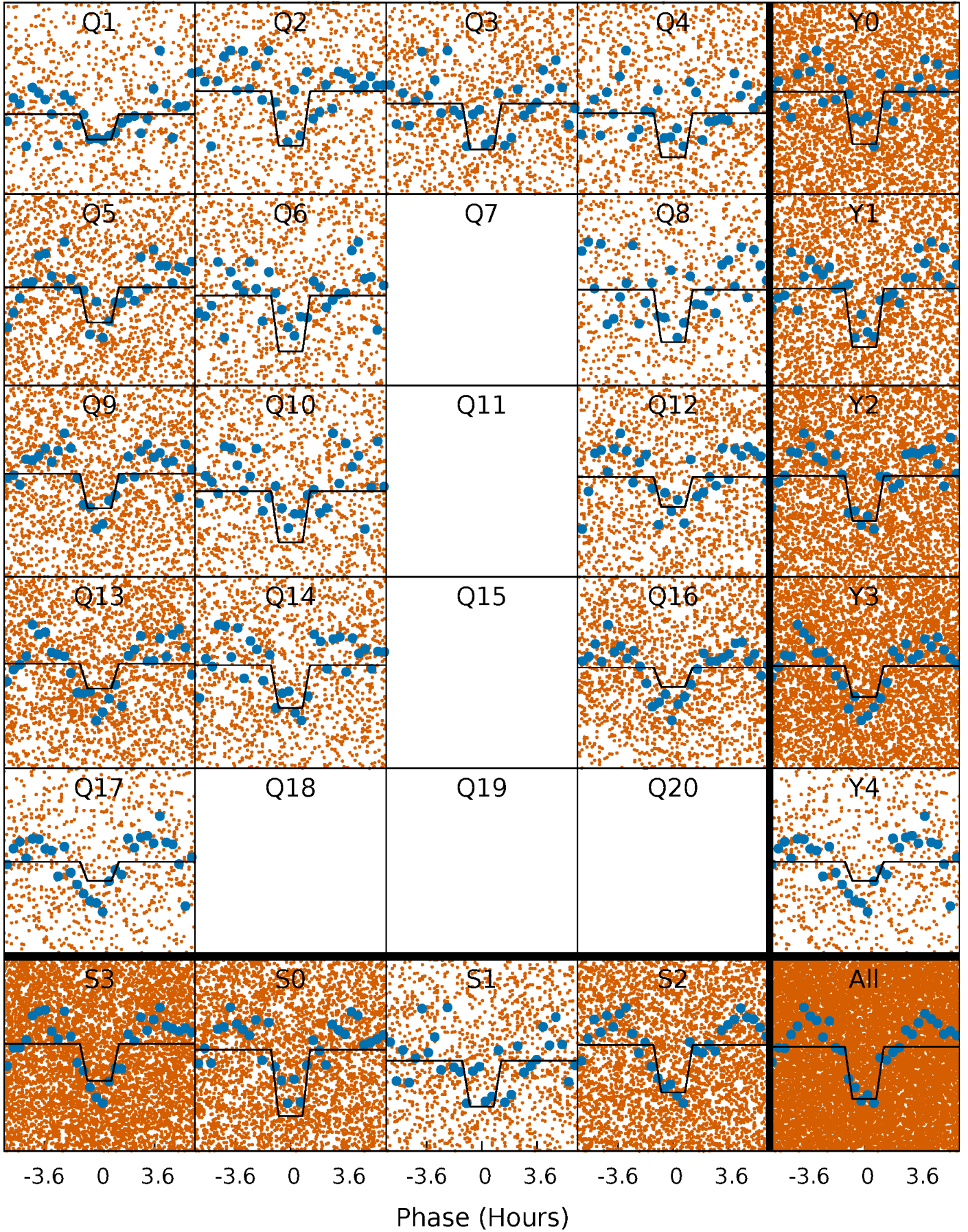
DV Quarter-Phased Transit Curves

TCE 010226316-01 P= 0.660637 Days $T_0=131.678490$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

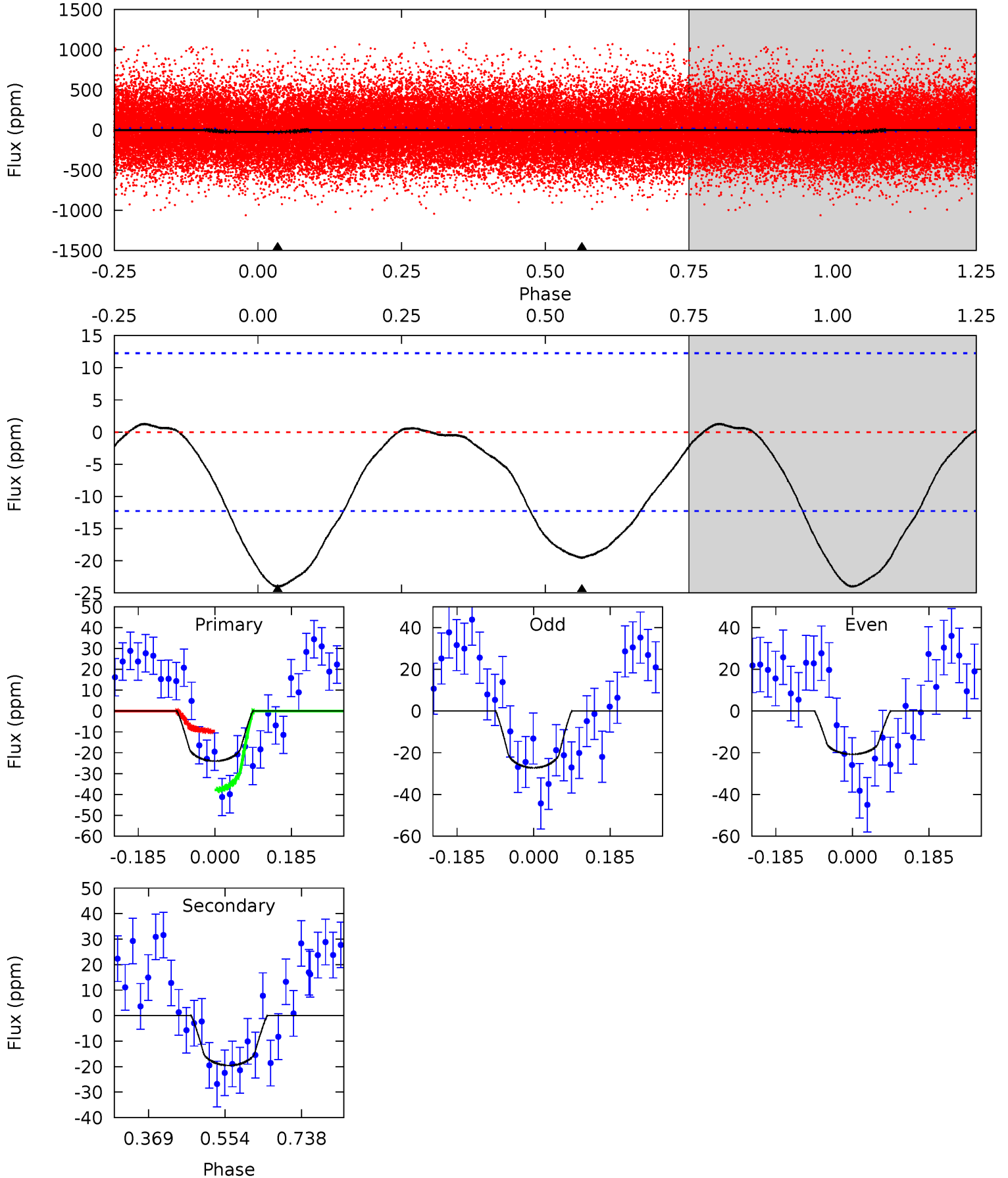
TCE 010226316-01 P= 0.660672 Days $T_0=131.664473$ (BKJD)



DV Model-Shift Uniqueness Test

010226316-01, P = 0.660637 Days, E = 131.017853 Days

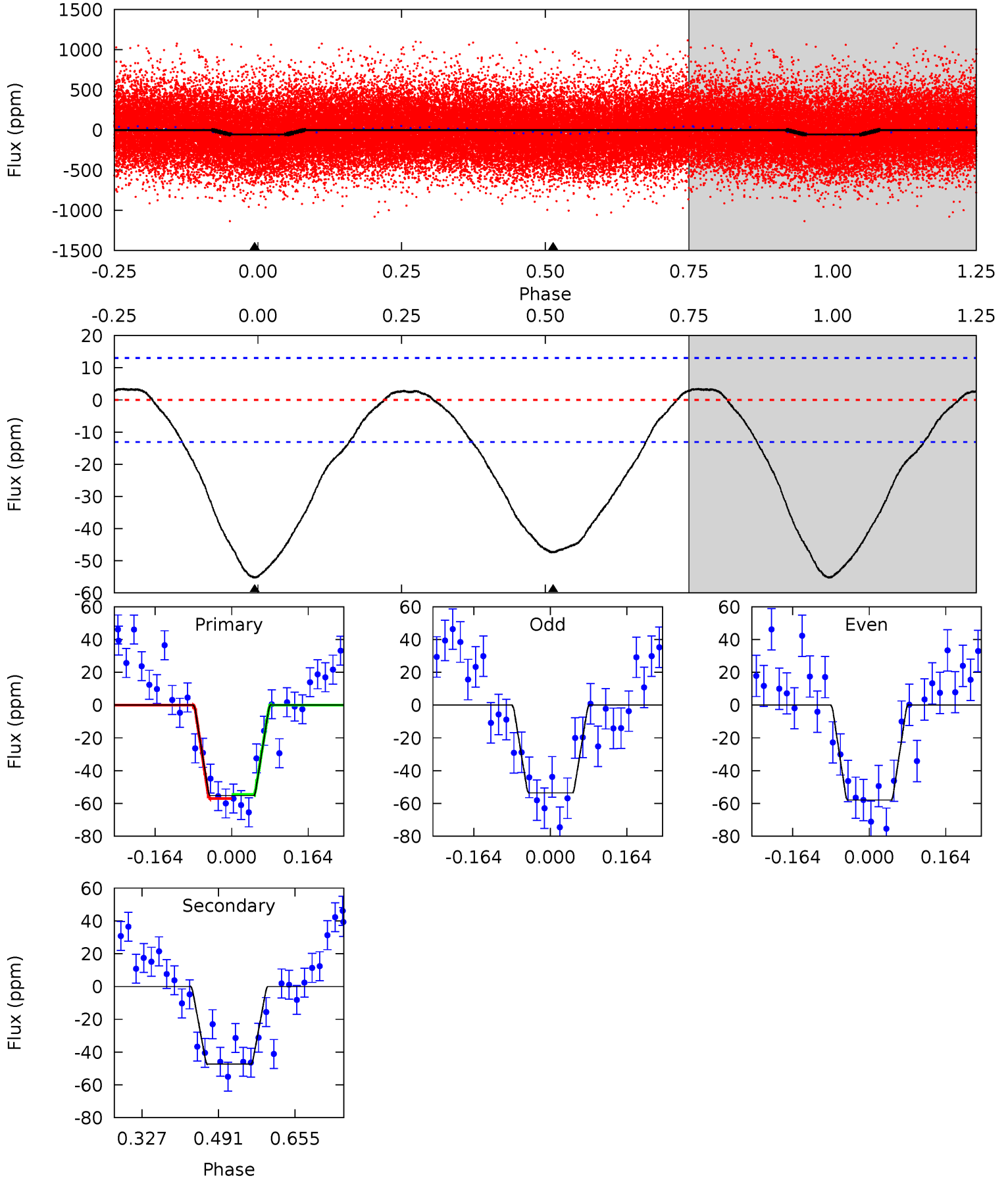
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
8.68	7.06	0	0	4.43	1.33	0.31	8.68	8.68	7.06	7.06	1.18	0.92	0.05	5.14



Alt Model-Shift Uniqueness Test

010226316-01, P = 0.660672 Days, E = 131.003801 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
18.9	16.2	0	0	4.46	1.39	1.47	18.9	18.9	16.2	16.2	0.74	0.92	0.06	0.44



Stellar Parameters For KIC 010226316

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5385^{+239}_{-239}	$4.432^{+0.120}_{-0.180}$	$0.070^{+0.250}_{-0.300}$	$0.936^{+0.245}_{-0.132}$	$0.864^{+0.119}_{-0.073}$	$1.483^{+0.820}_{-0.723}$
	+4%/-4%	+3%/-4%	+357%/-429%	+26%/-14%	+14%/-8%	+55%/-49%
Source	PHO1	KIC0	KIC0	DSEP		

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

Secondary Eclipse Parameters for KIC 010226316-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-20 ± 3	$0.67^{+0.48}_{-0.42}$	2724^{+189}_{-178}	4550^{+3283}_{-898}	$4.960^{+33.614}_{-3.360}$
Alt.	-47 ± 3	$0.85^{+0.57}_{-0.48}$	2723^{+213}_{-170}	4967^{+2630}_{-919}	$7.289^{+31.590}_{-4.700}$

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 $A_{obs} \gg 1.0$

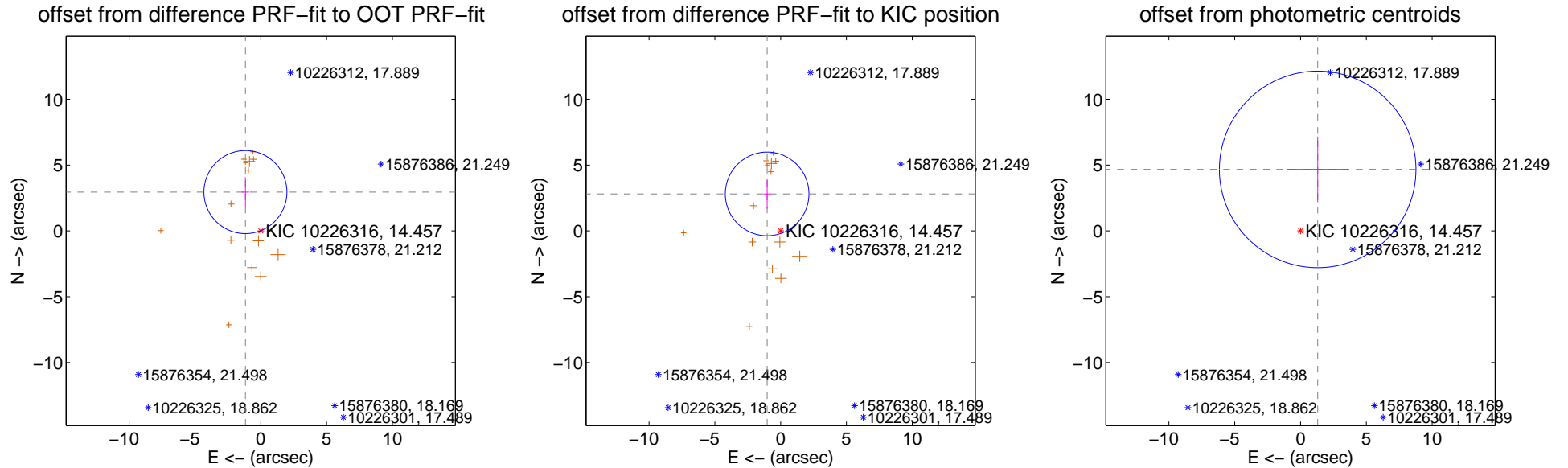
DV Centroid Data

Supplemental centroid analysis for 010226316-01. Kepler magnitude: 14.46. Transit SNR 5.87

There are 0 quarters with good PRF difference image offsets

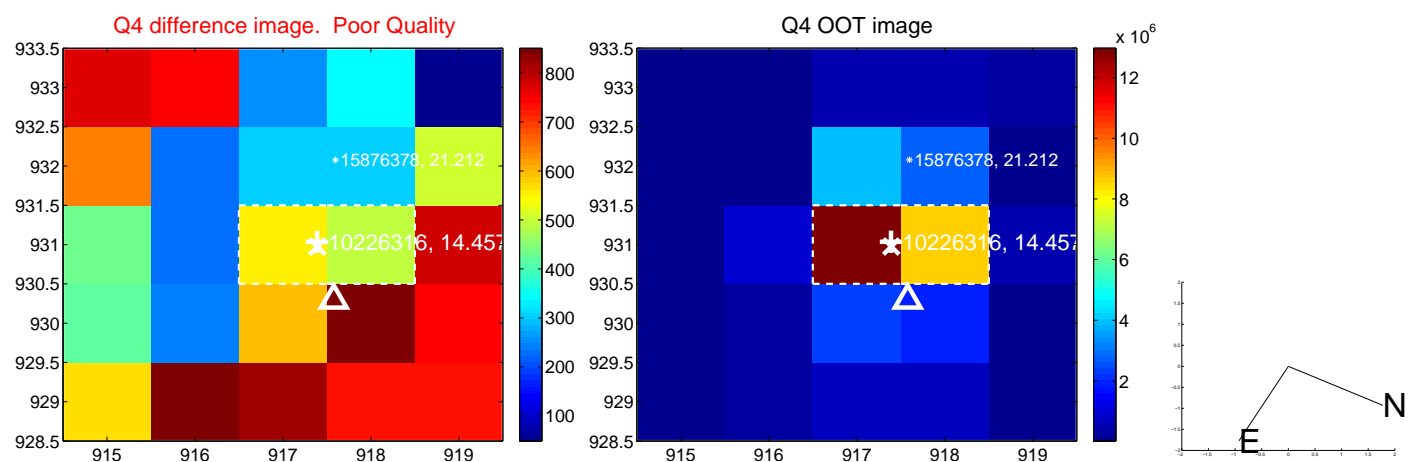
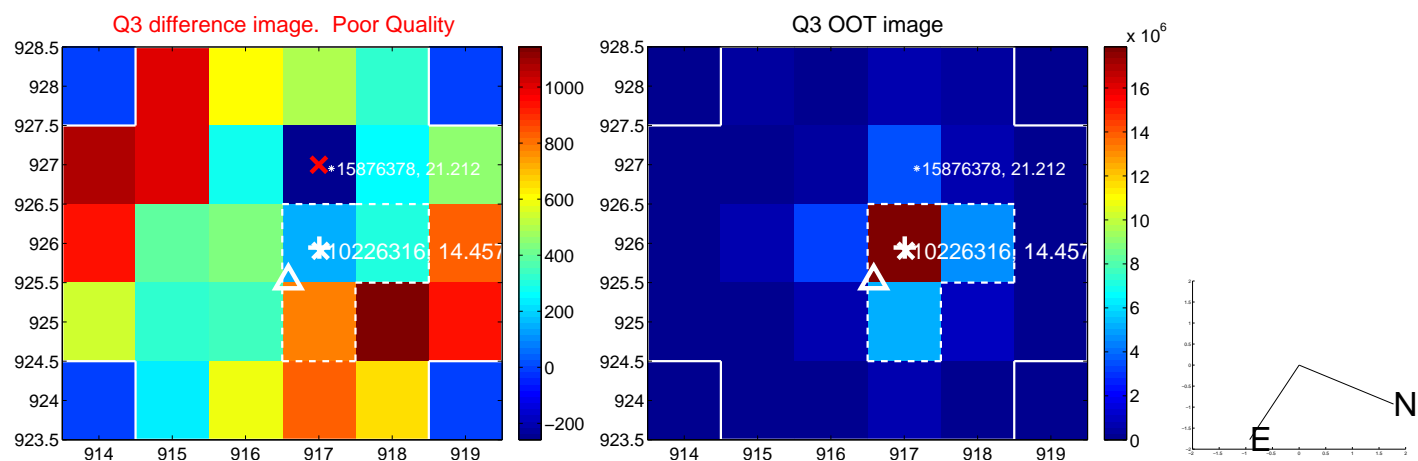
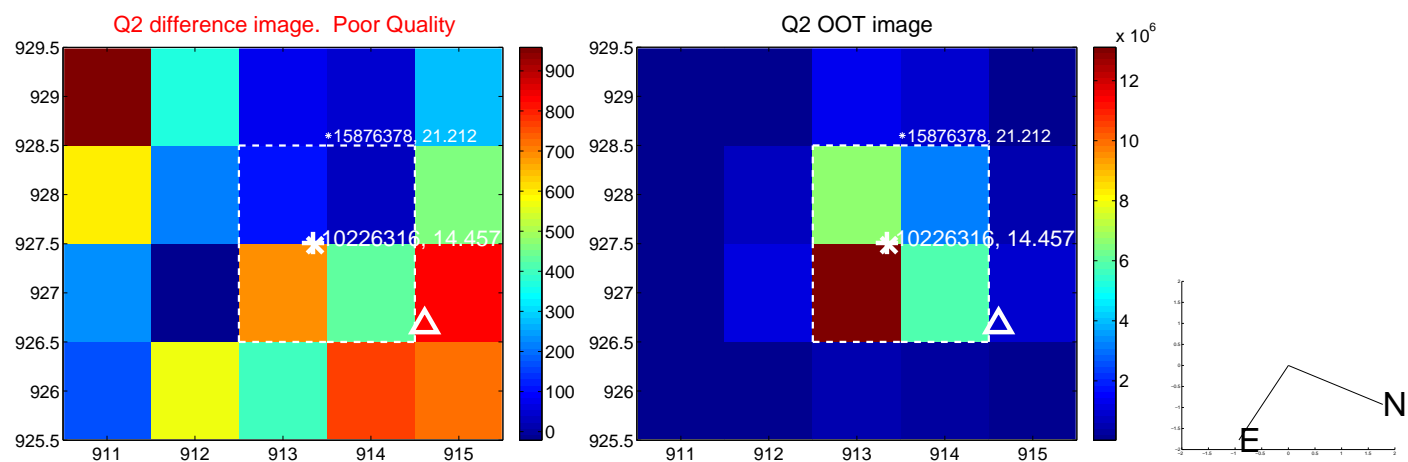
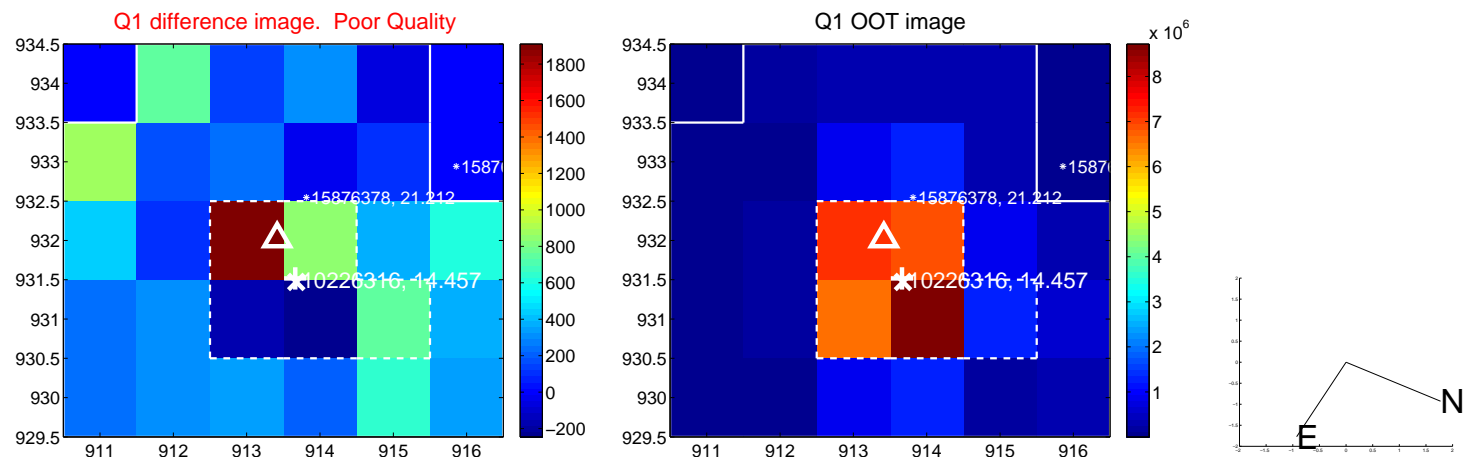
The direct PRF centroid is offset from the target star catalog position by about 0.22 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.172 ± 1.051	3.02	1.166 ± 0.281	2.950 ± 1.125
PRF-fit source offset from KIC position	2.992 ± 1.059	2.83	1.028 ± 0.279	2.810 ± 1.123
photometric centroid source offset	4.85 ± 2.49	1.95	-1.30 ± 2.36	4.67 ± 2.50

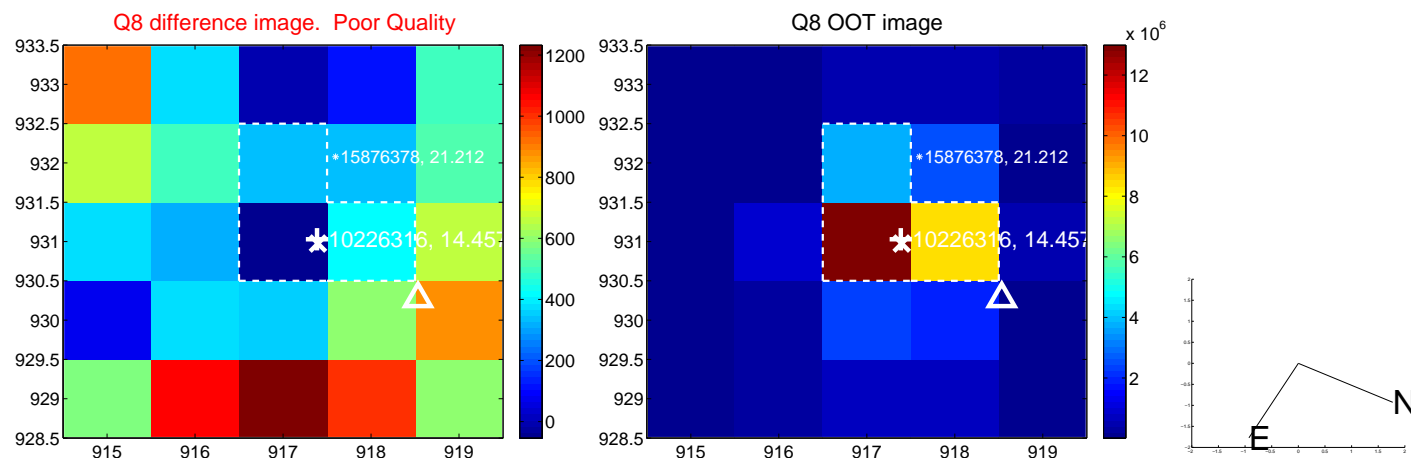
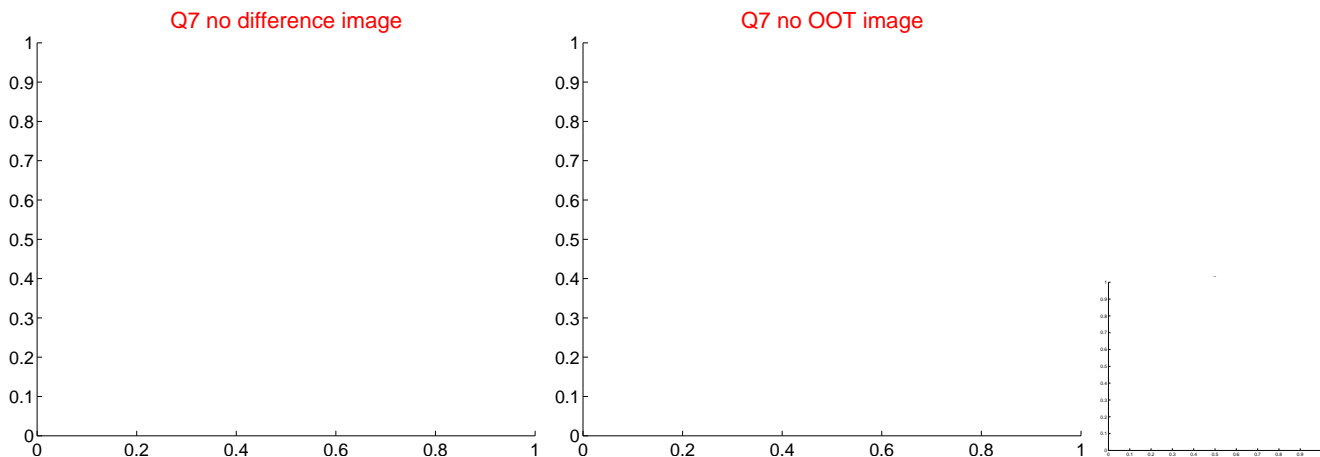
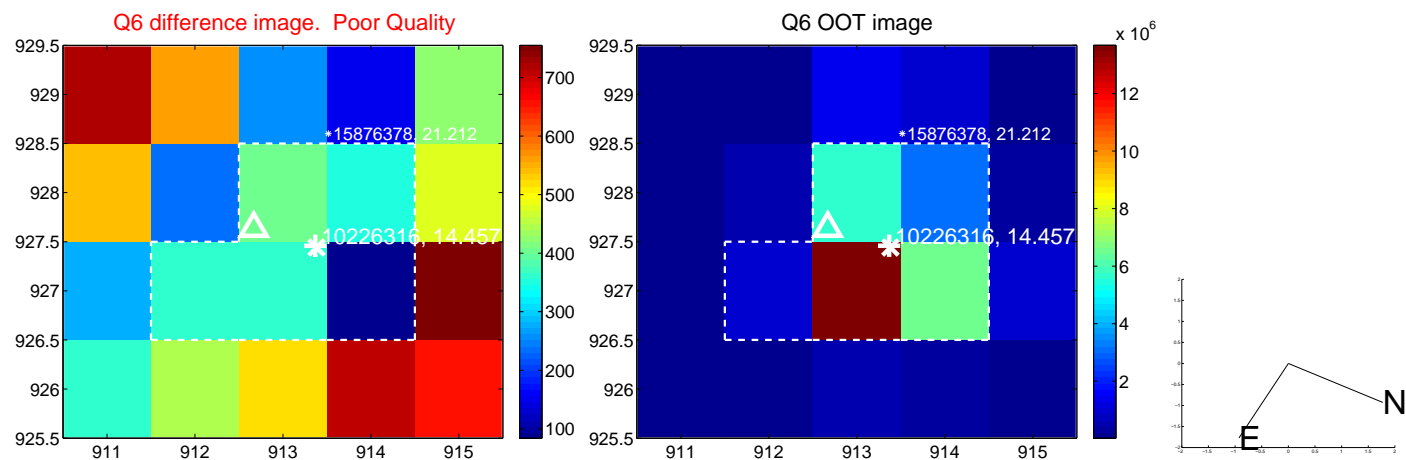
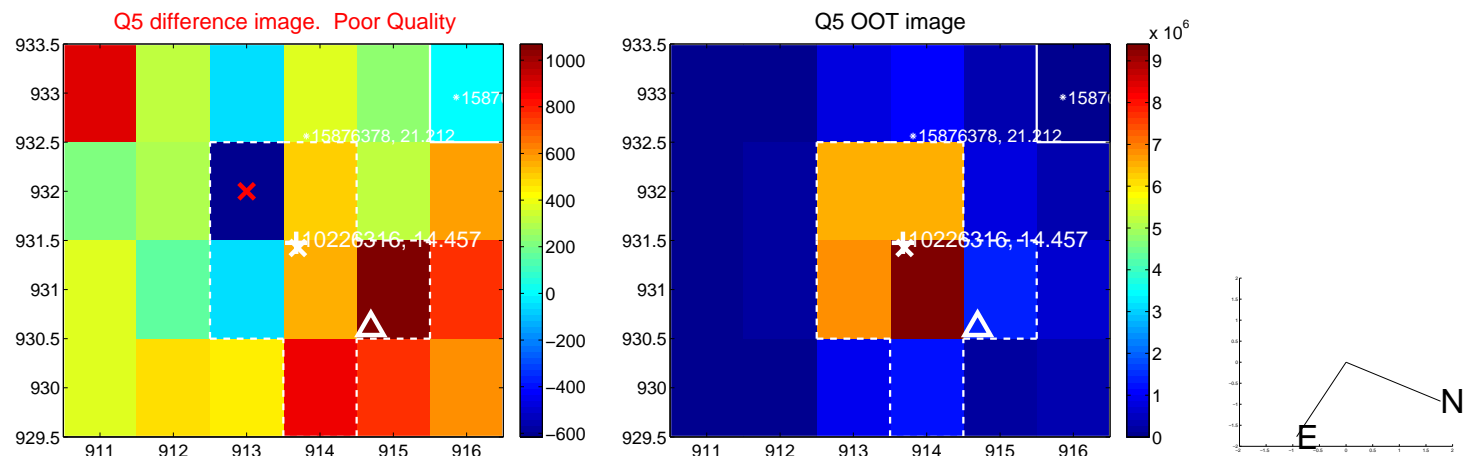


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

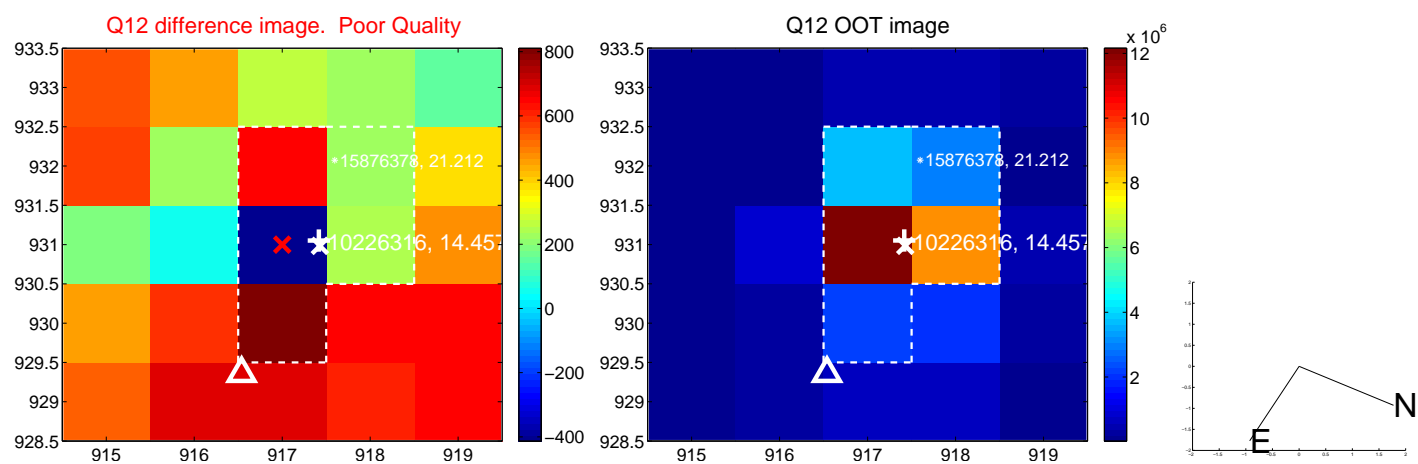
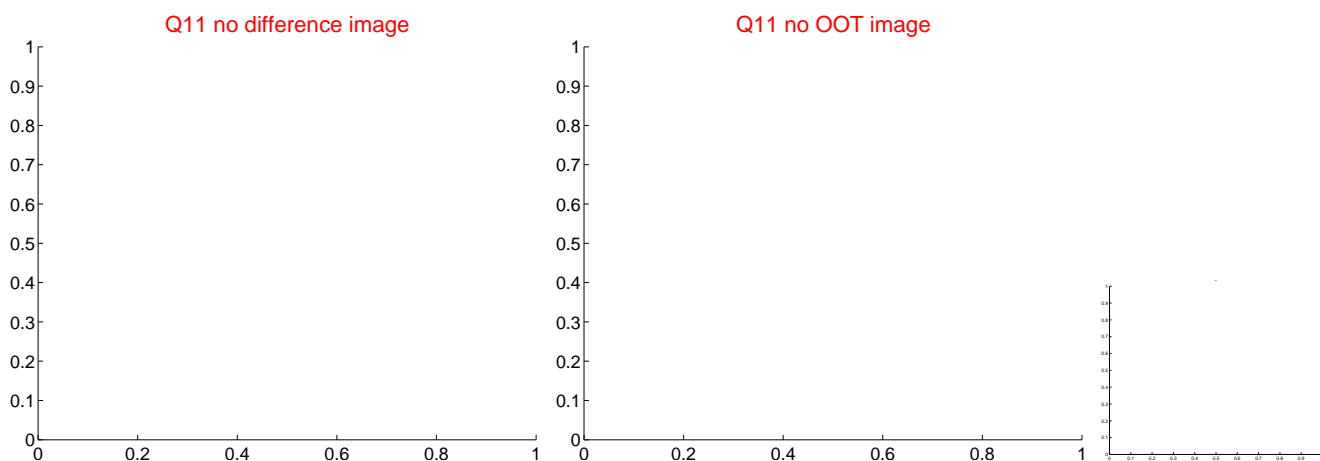
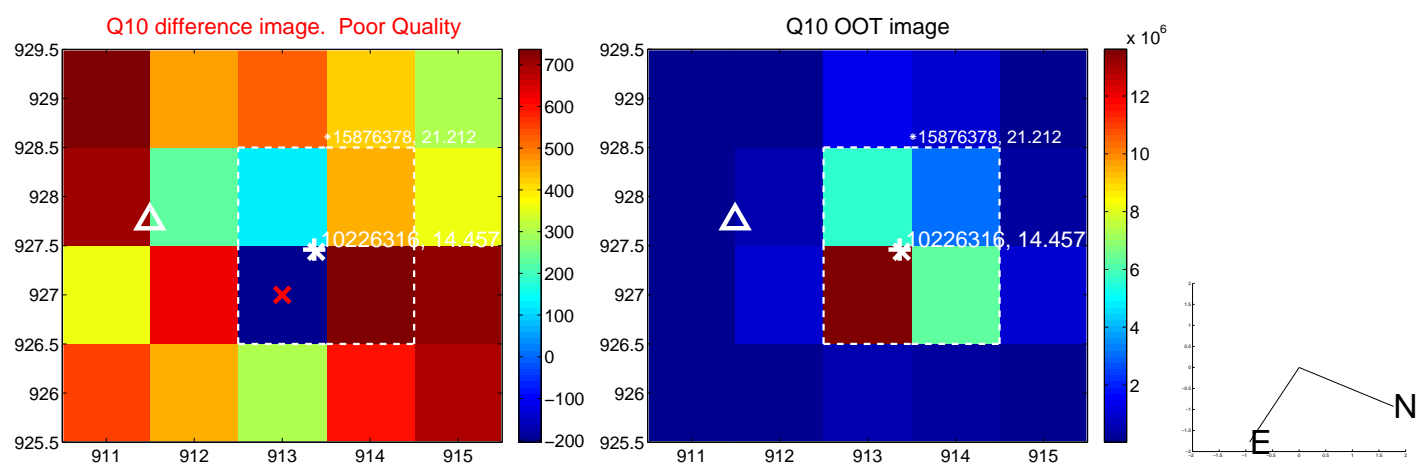
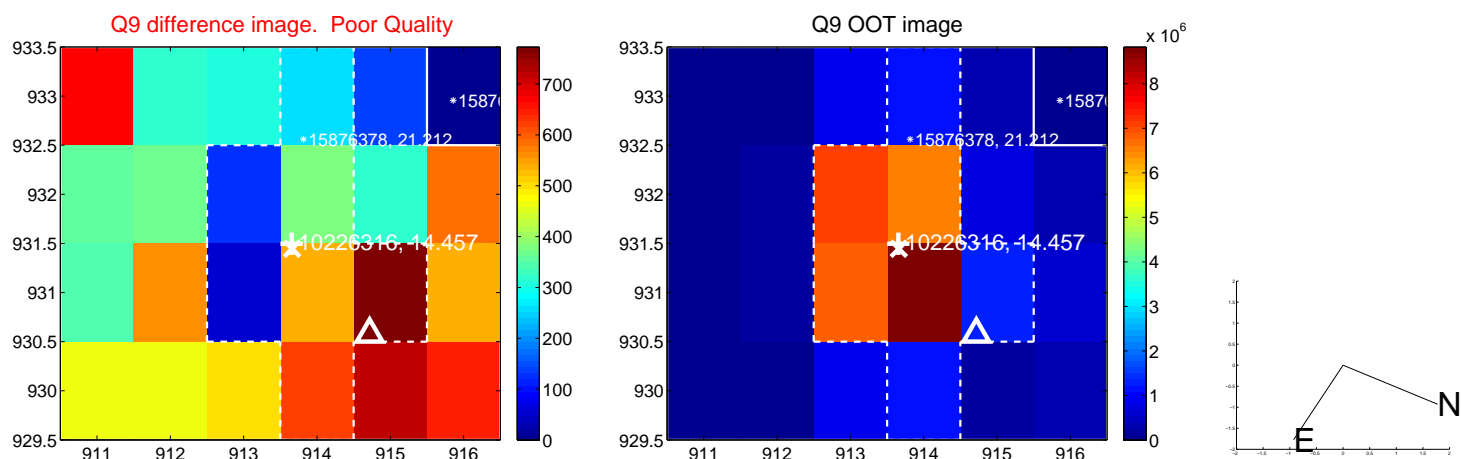
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



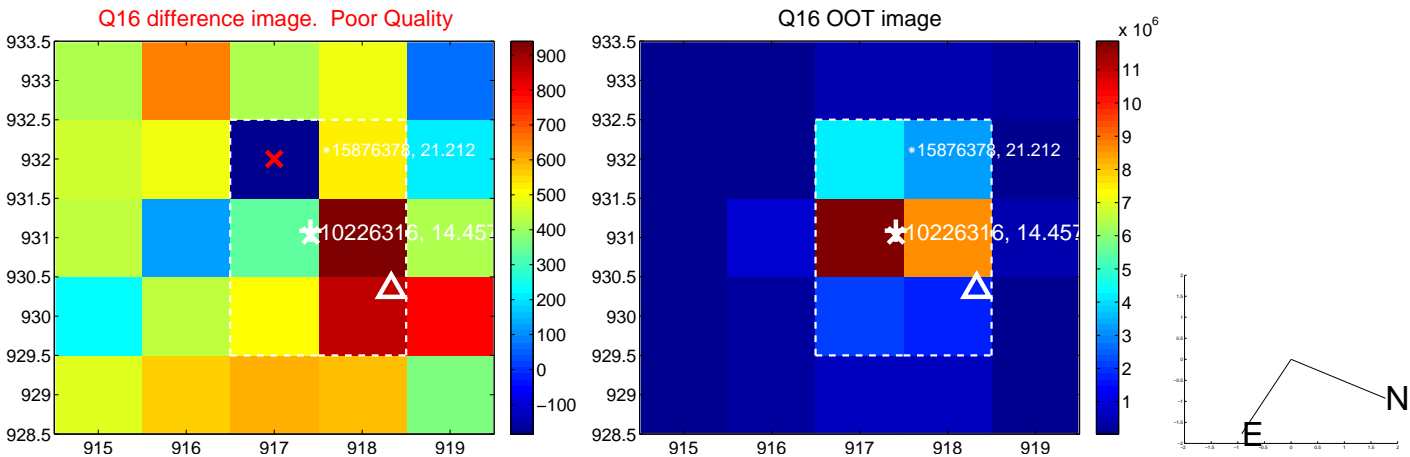
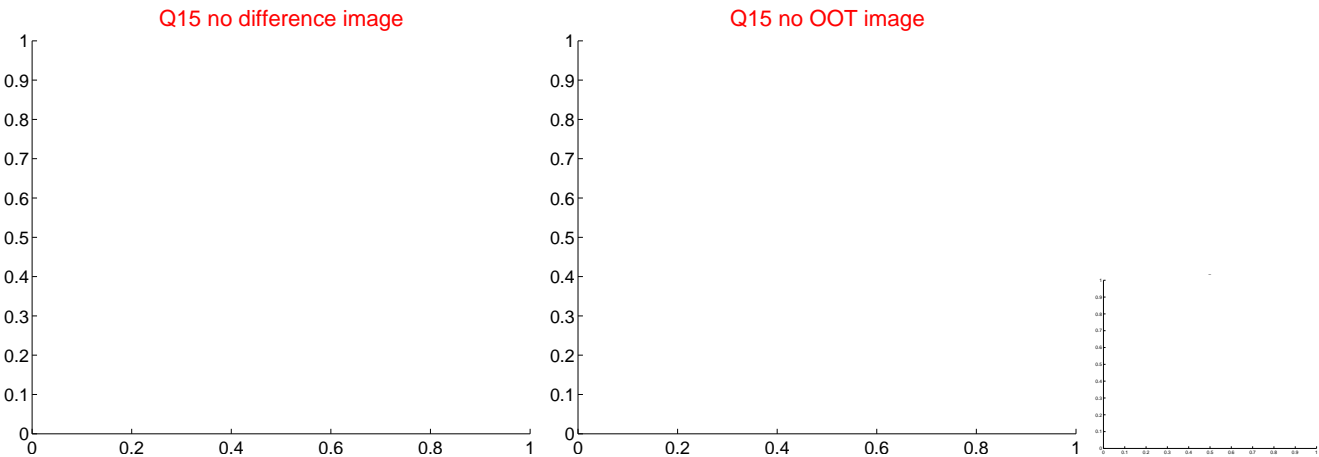
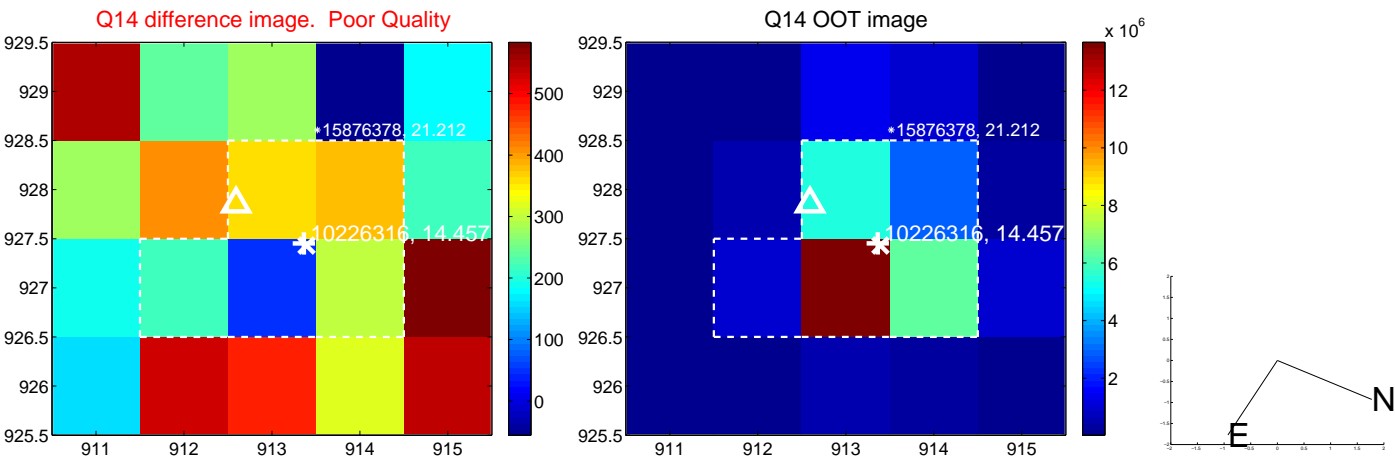
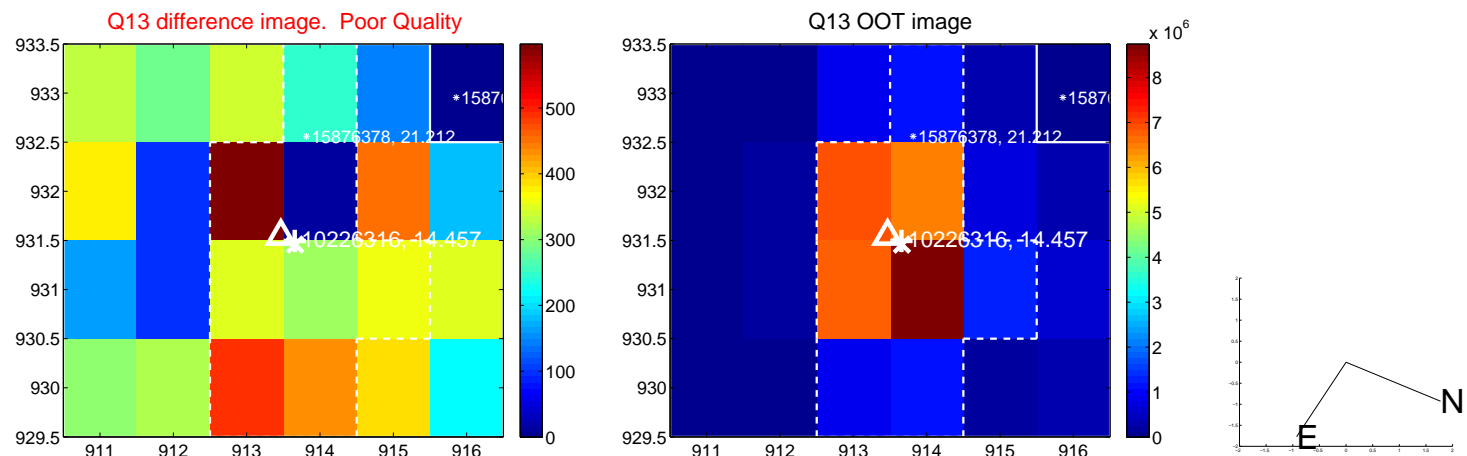
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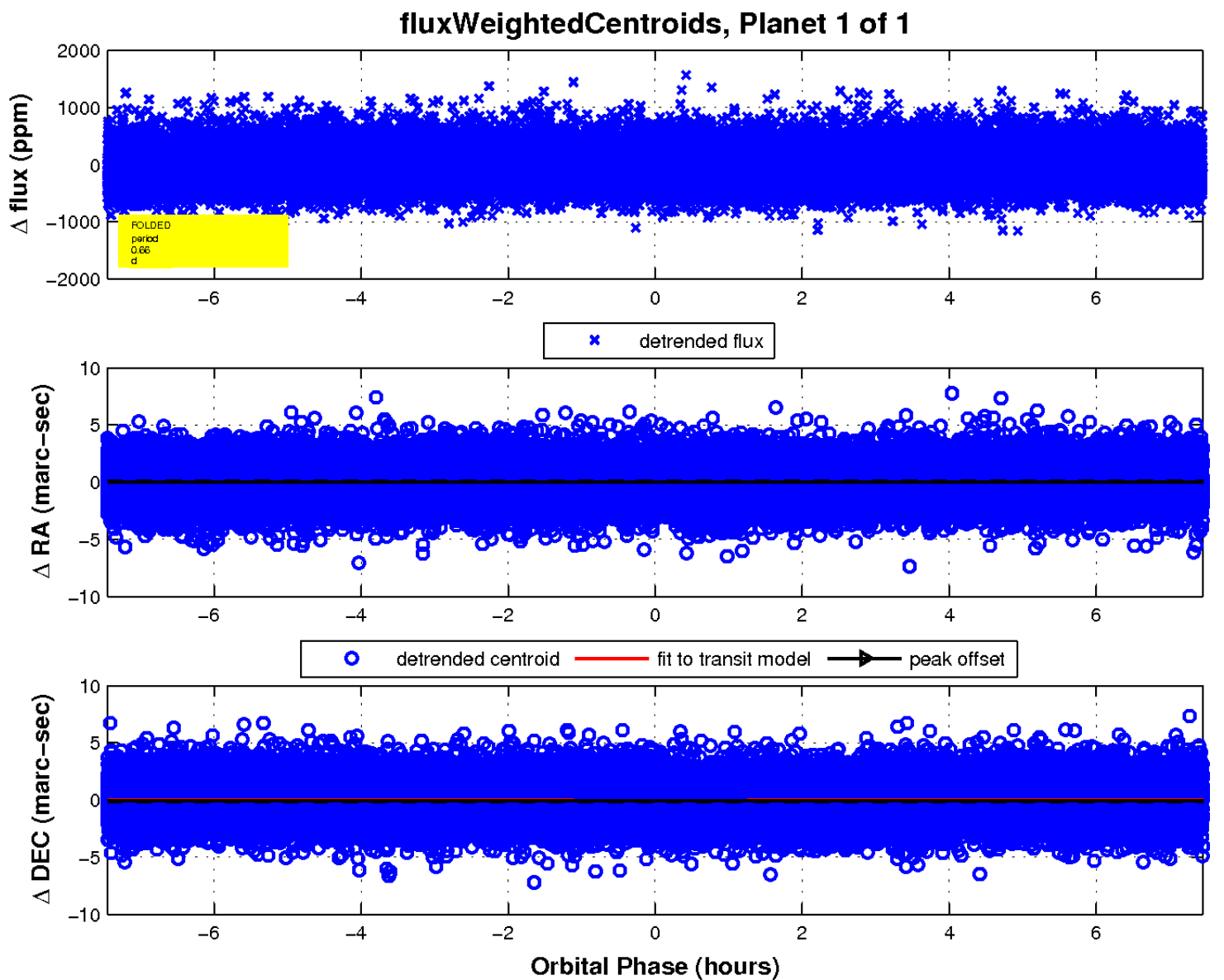
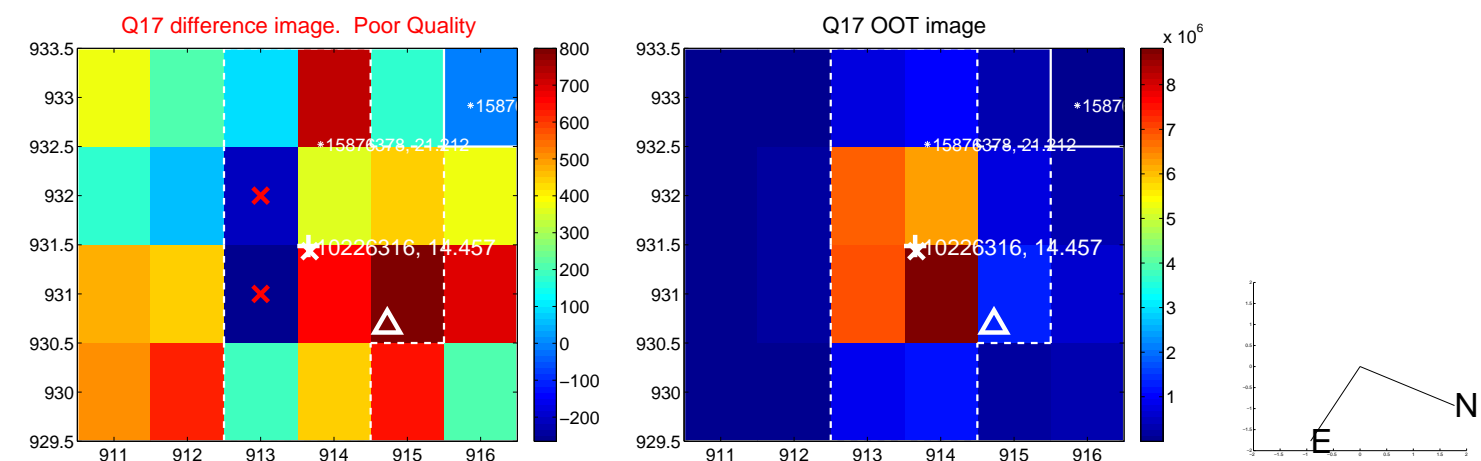
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UKIRT Image

Declination

