

KIC 004477104

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})
004477104-01	OBS	No	1.169091	131.607451	40.6	3.995	14.9	13.0	2.14	6873	1.59	13926.17

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
004477104-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV—MOD_NONUNIQ_ALT

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

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

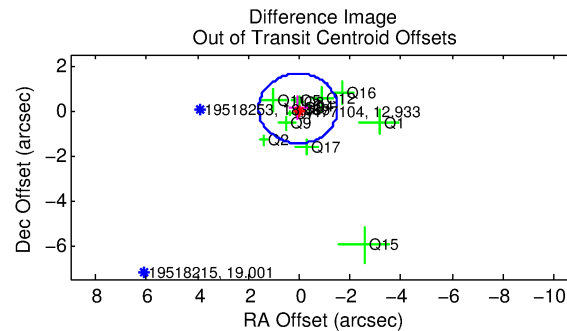
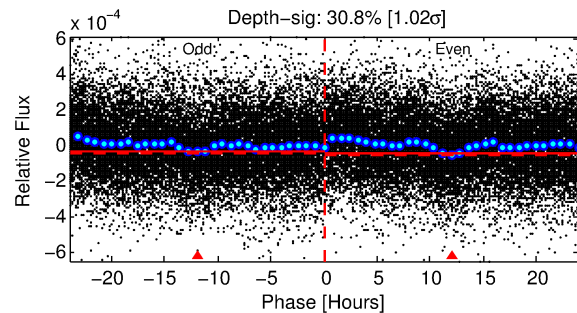
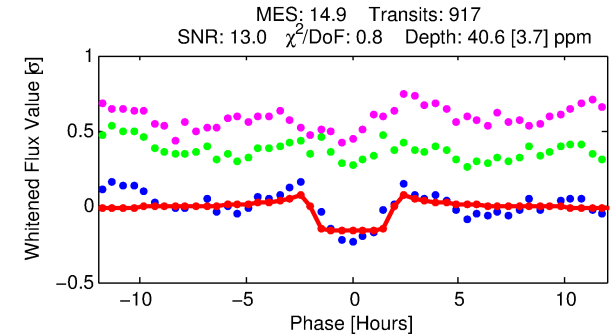
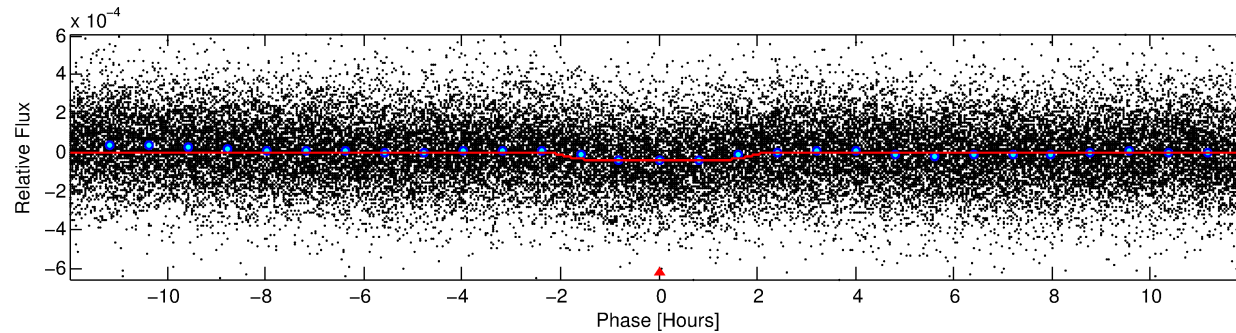
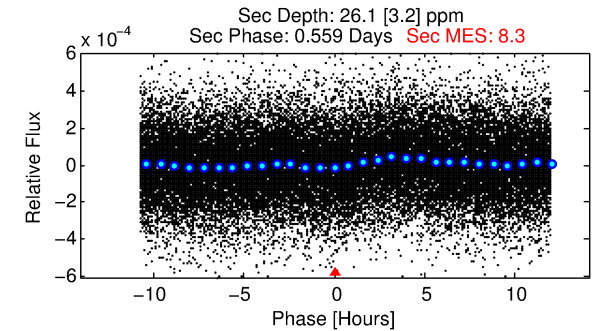
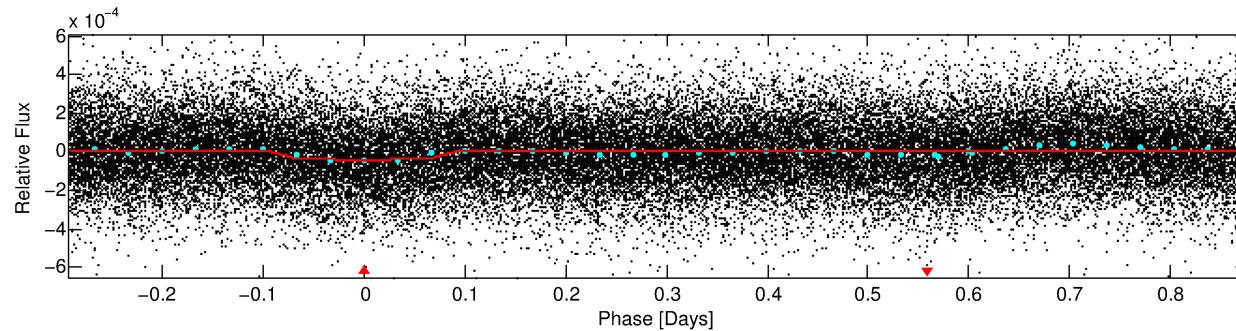
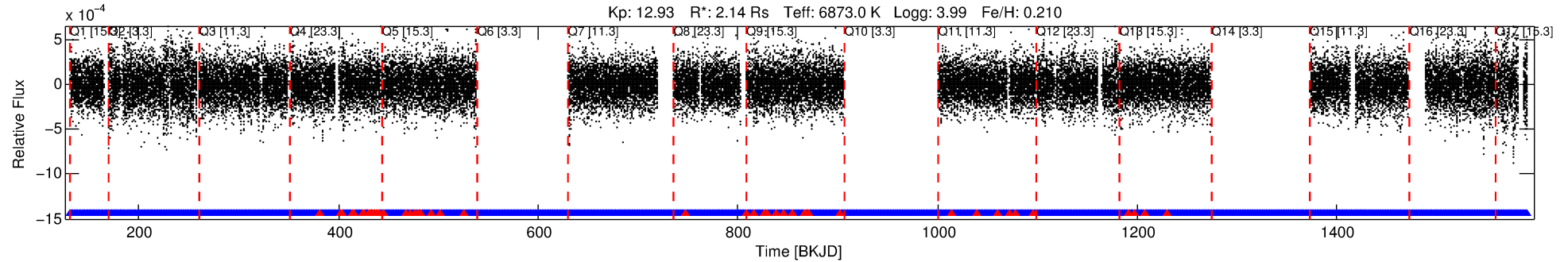
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 004477104-01

No Significant Match Found

DV One-Page Summary

KIC: 4477104 Candidate: 1 of 1 Period: 1.169 d



DV Fit Results:

Period = 1.16909 [0.00001] d
Epoch = 131.6075 [0.0023] BKJD
Rp/R* = 0.0068 [0.0016]
a/R* = 1.37 [0.90]
b = 0.90 [0.29]
Seff = 13926.17 [3387.86]
Teq = 2770 [168] K
Rp = 1.59 [0.49] Re
a = 0.0257 [0.0042] AU
Ag = 3.73 [2.02] [1.35σ]
Teffp = 5952 [731] K [4.24σ]

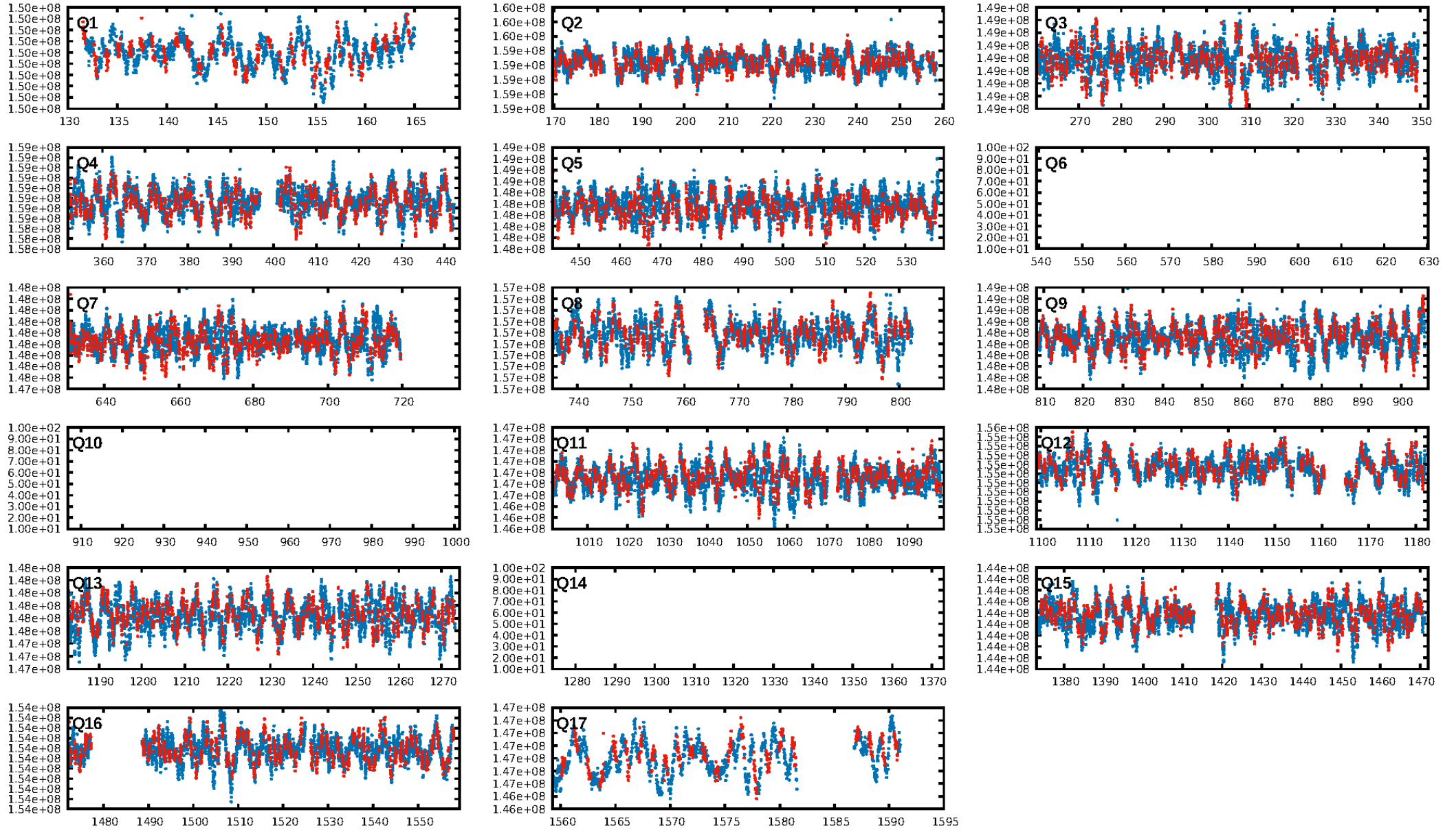
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 2.63e-40
RollingBand-fgt: 0.94 [814/865]
GhostDiagnostic-chr: 6.073
Centroid-sig: 87.7%
Centroid-so: 0.163 arcsec [0.31σ]
OotOffset-rm: 0.100 arcsec [0.19σ]
KicOffset-rm: 0.070 arcsec [0.14σ]
OotOffset-st: 1/4/4/4 [13]
KicOffset-st: 1/4/4/4 [13]
DiffImageQuality-fgm: 0.54 [7/13]
DiffImageOverlap-fno: 1.00 [14/14]

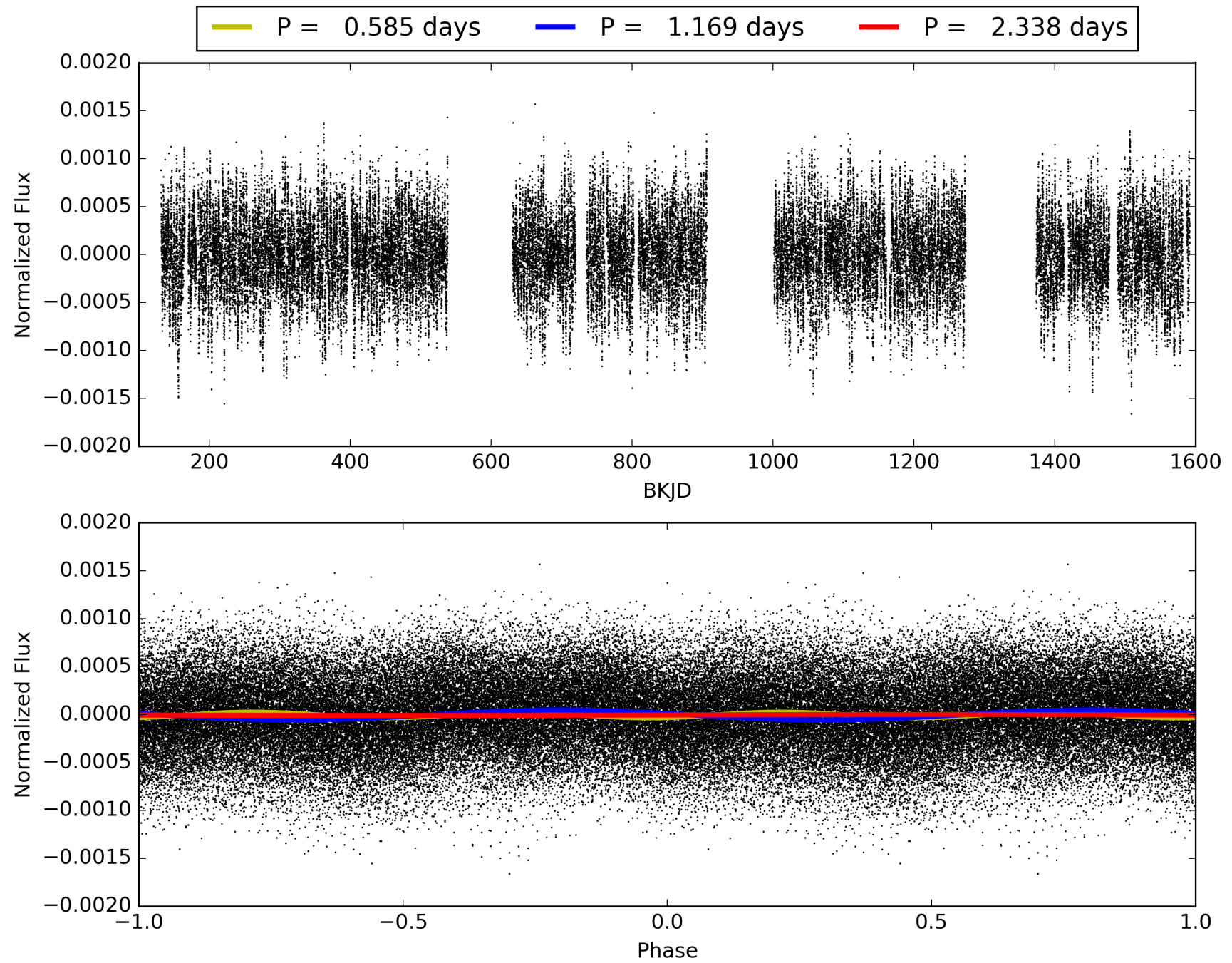
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 02:27:52 Z

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

TCE 004477104-01, PDC Light Curves

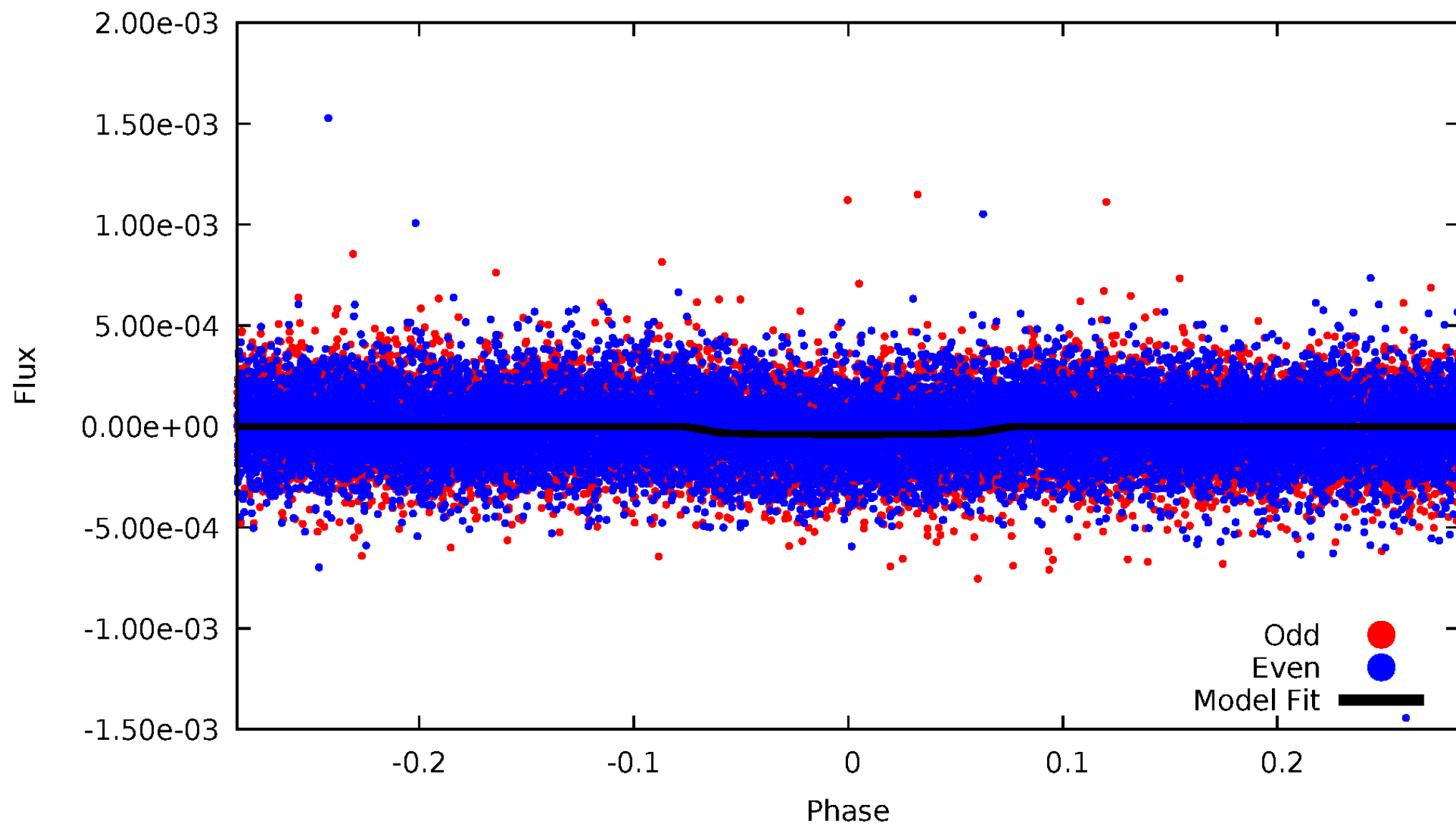


TCE 004477104-01



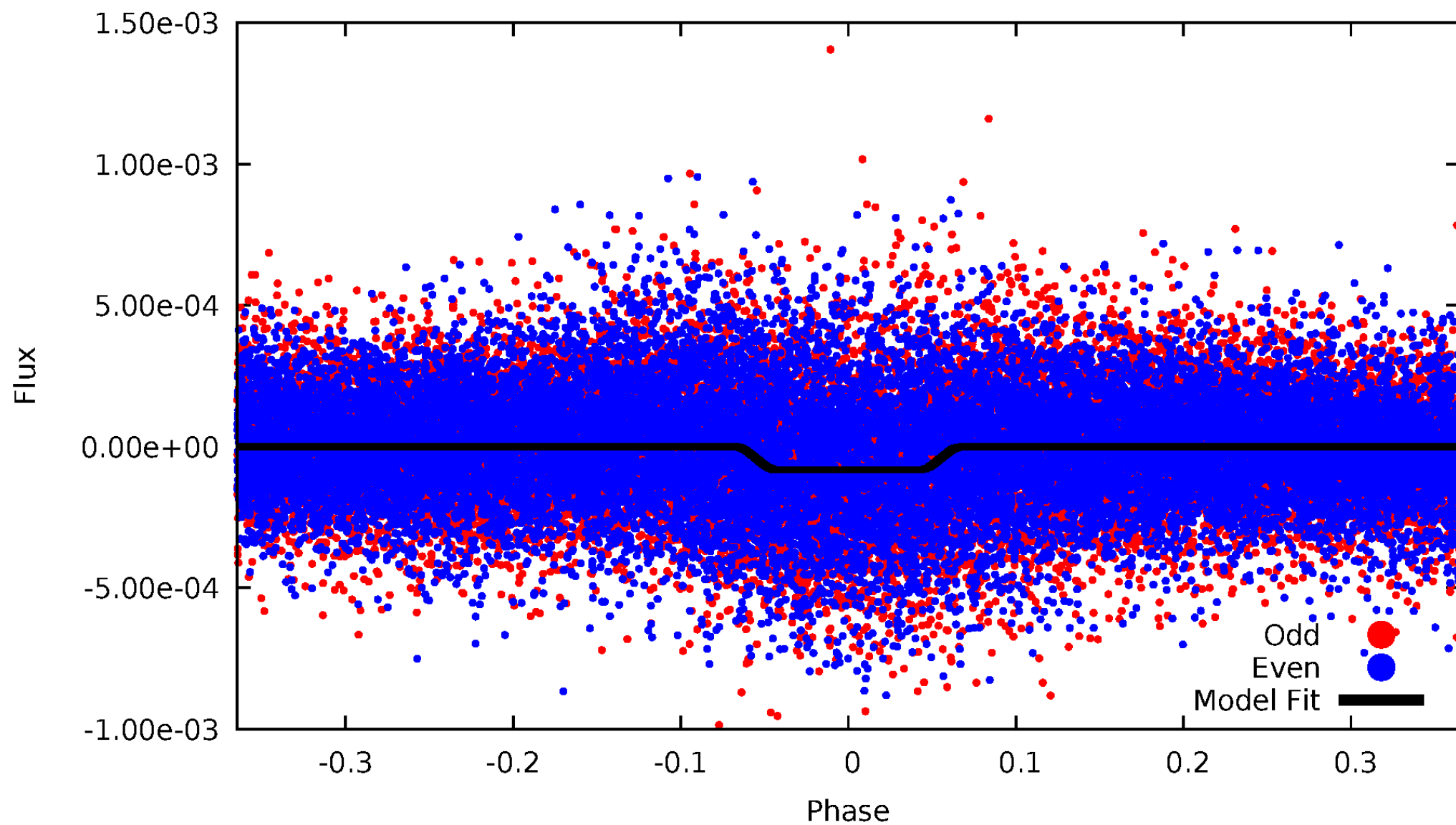
DV Odd/Even

TCE 004477104-01



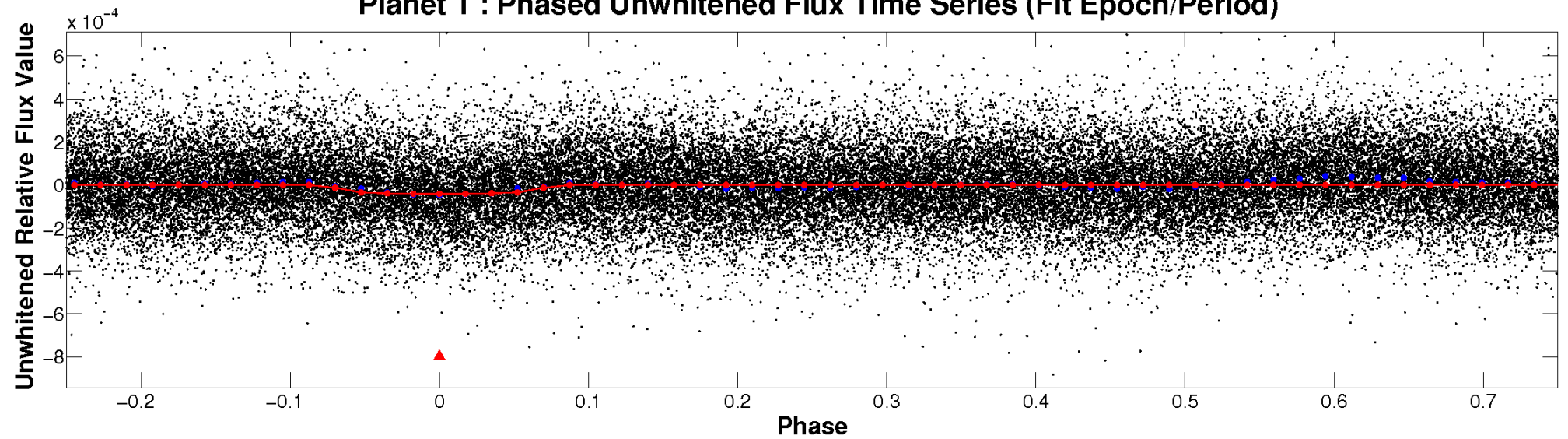
ALT Odd/Even

TCE 004477104-01

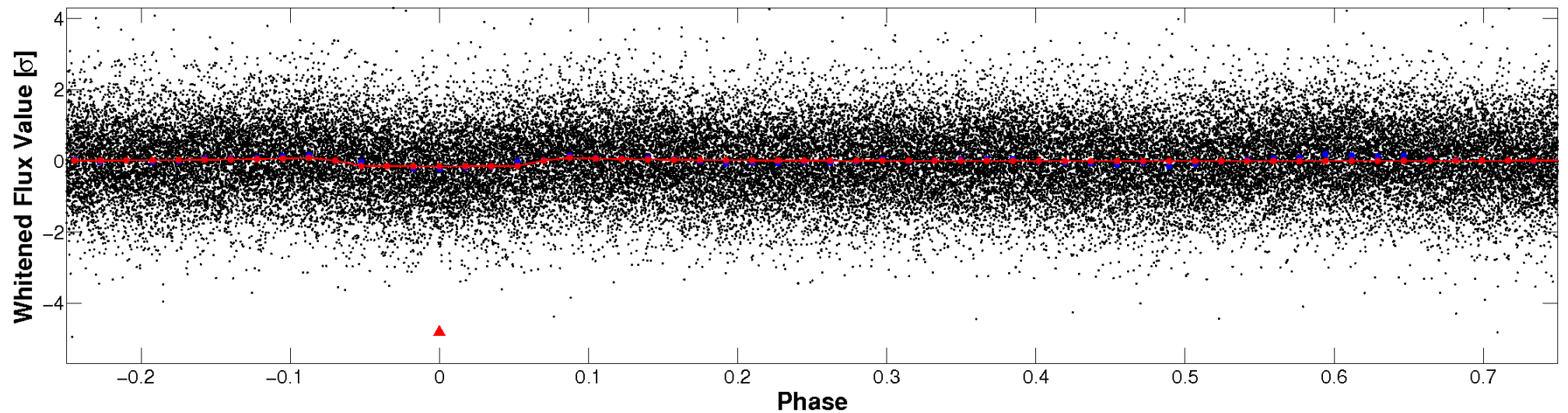


Non-Whitened Vs. Whitened Light Curve

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

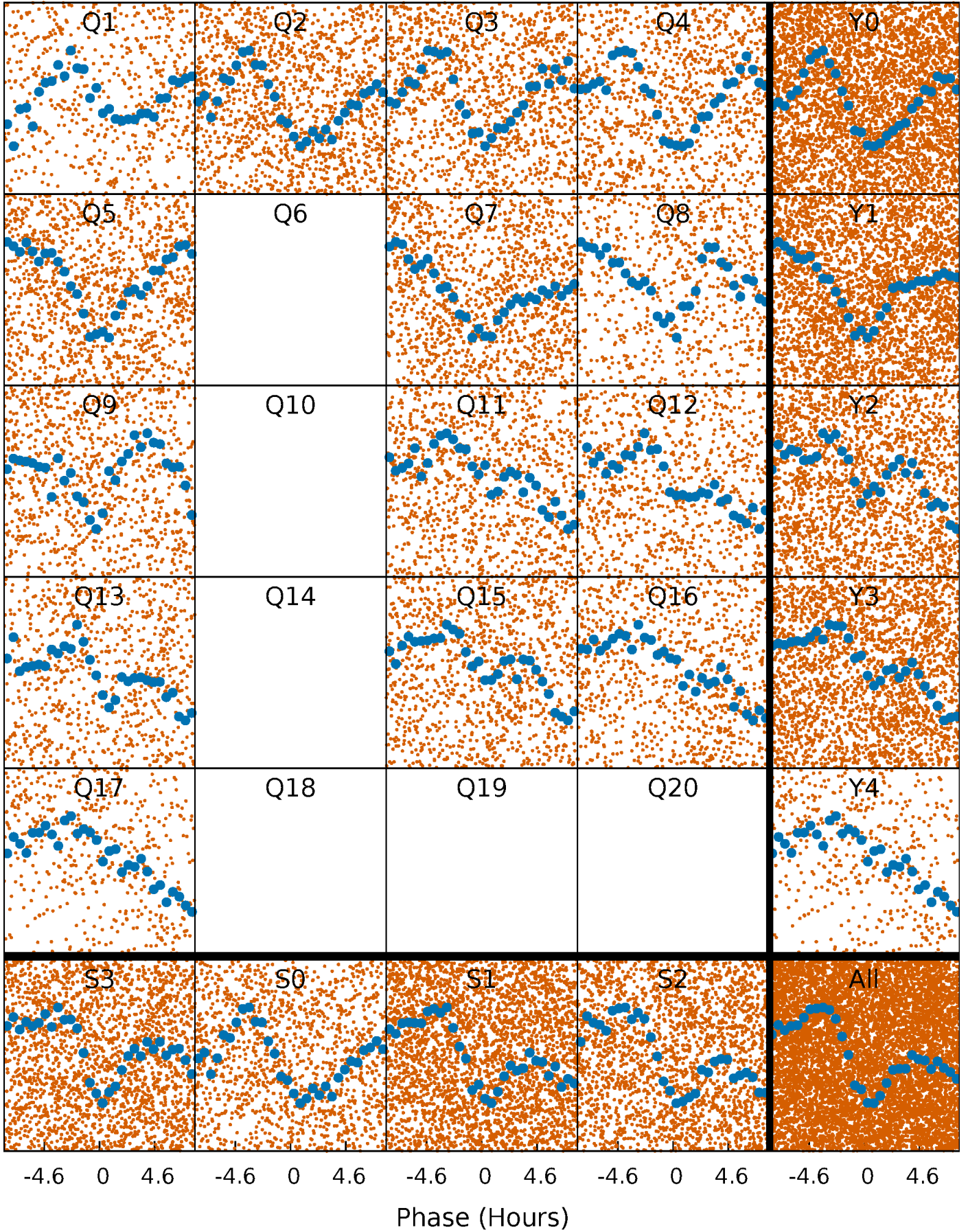


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



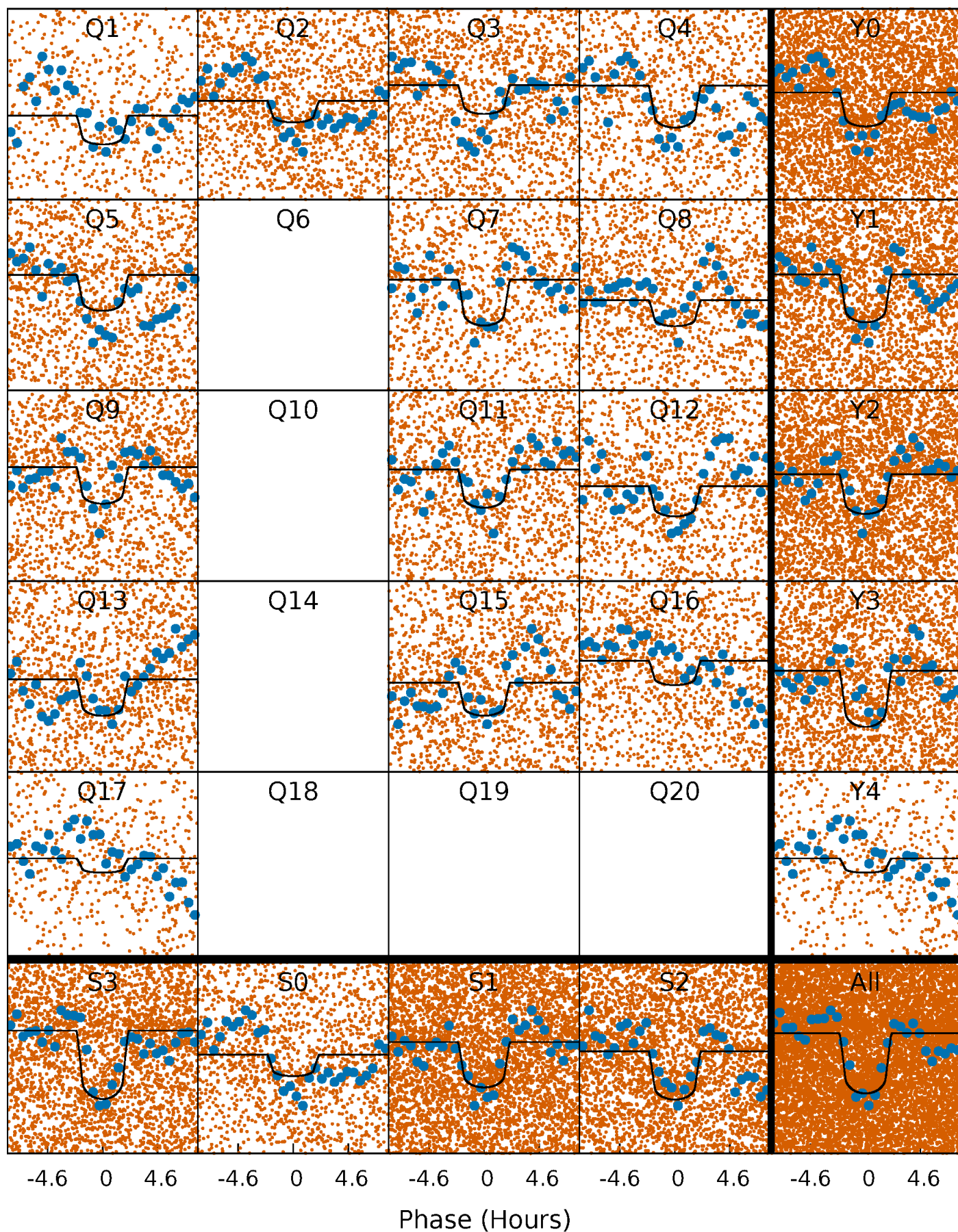
PDC Quarter-Phased Transit Curves

TCE 004477104-01 P= 1.169091 Days $T_0=131.607451$ (BKJD)



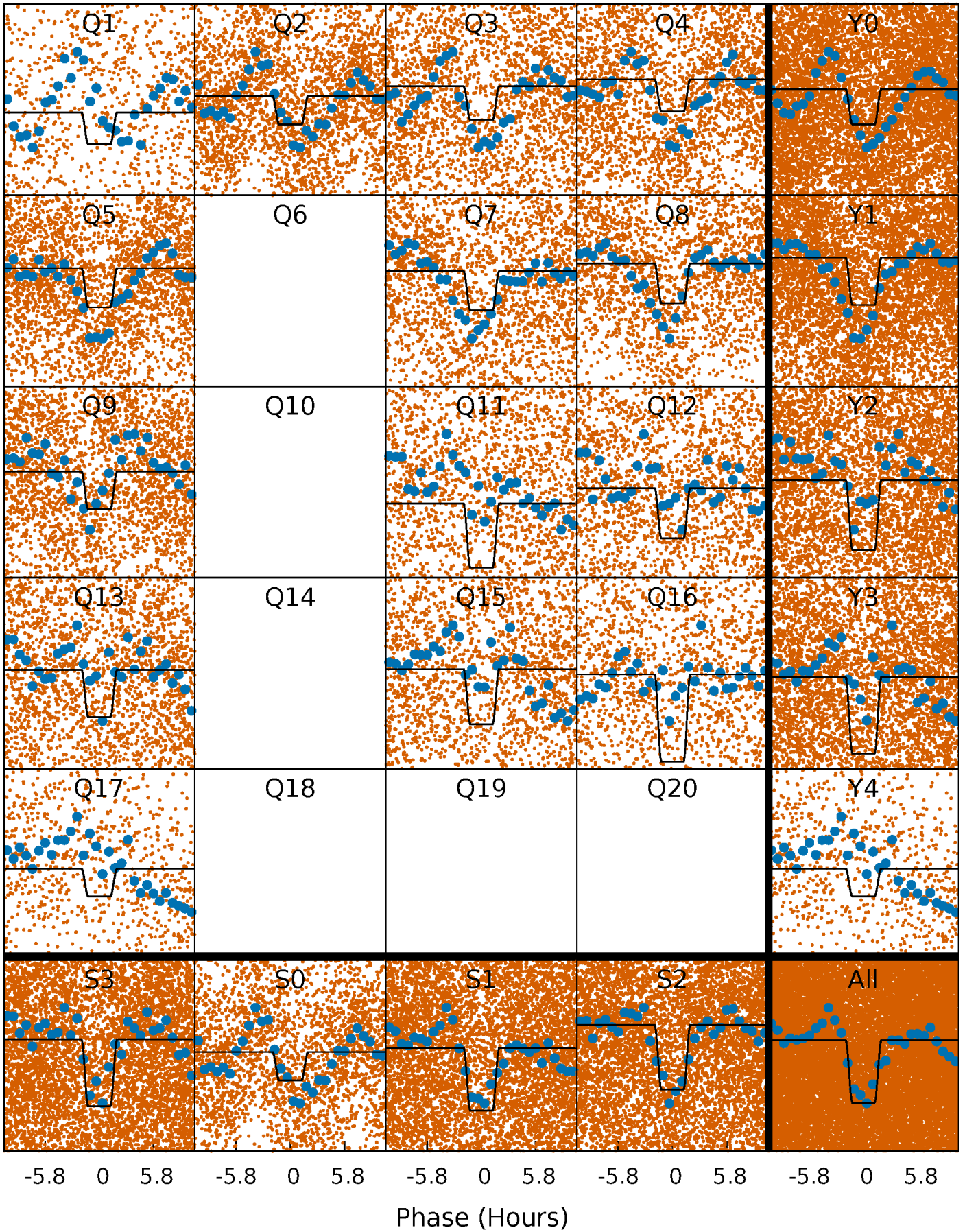
DV Quarter-Phased Transit Curves

TCE 004477104-01 P= 1.169091 Days $T_0=131.607451$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

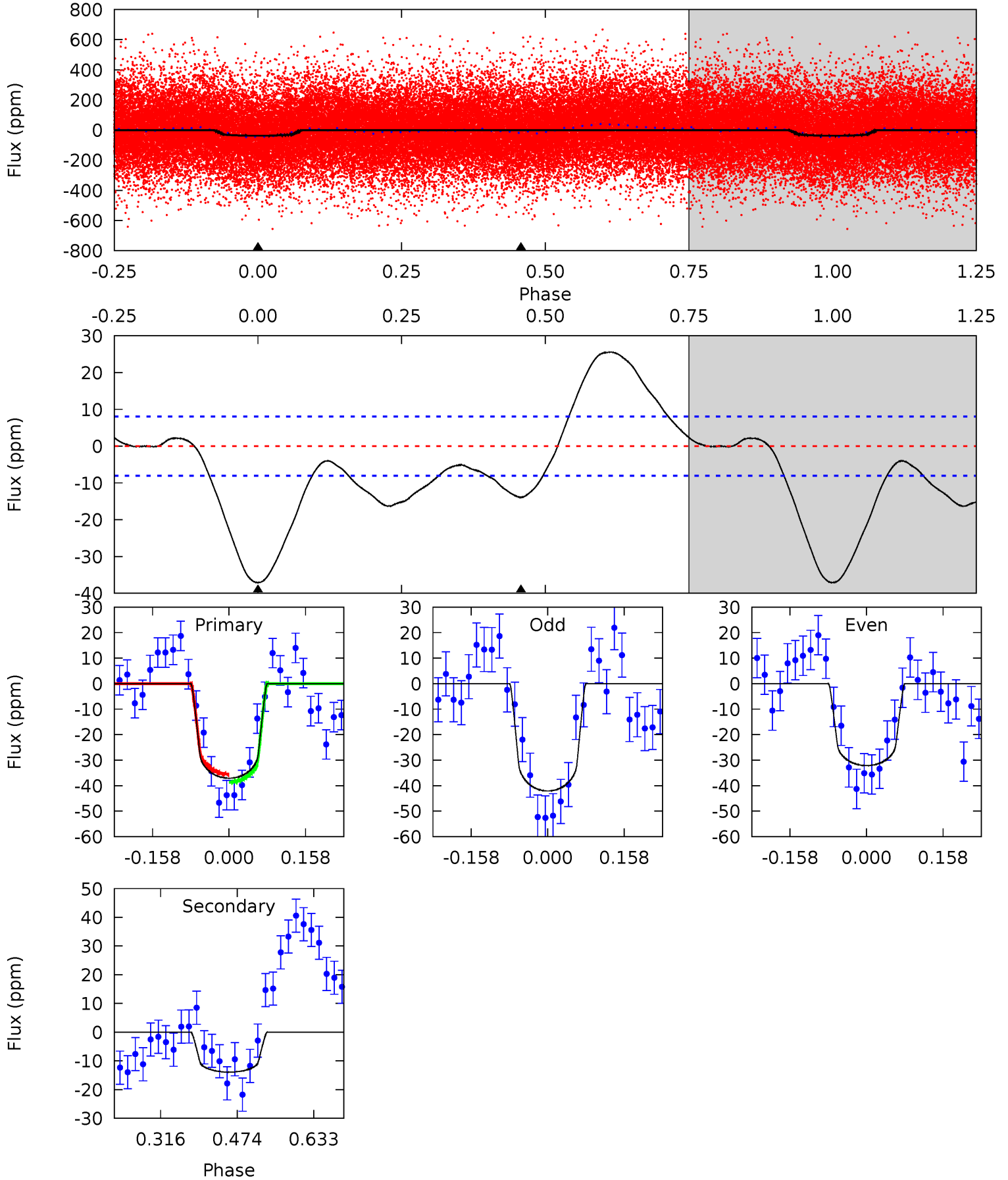
TCE 004477104-01 P= 1.169129 Days $T_0=131.603297$ (BKJD)



DV Model-Shift Uniqueness Test

004477104-01, P = 1.169091 Days, E = 130.438360 Days

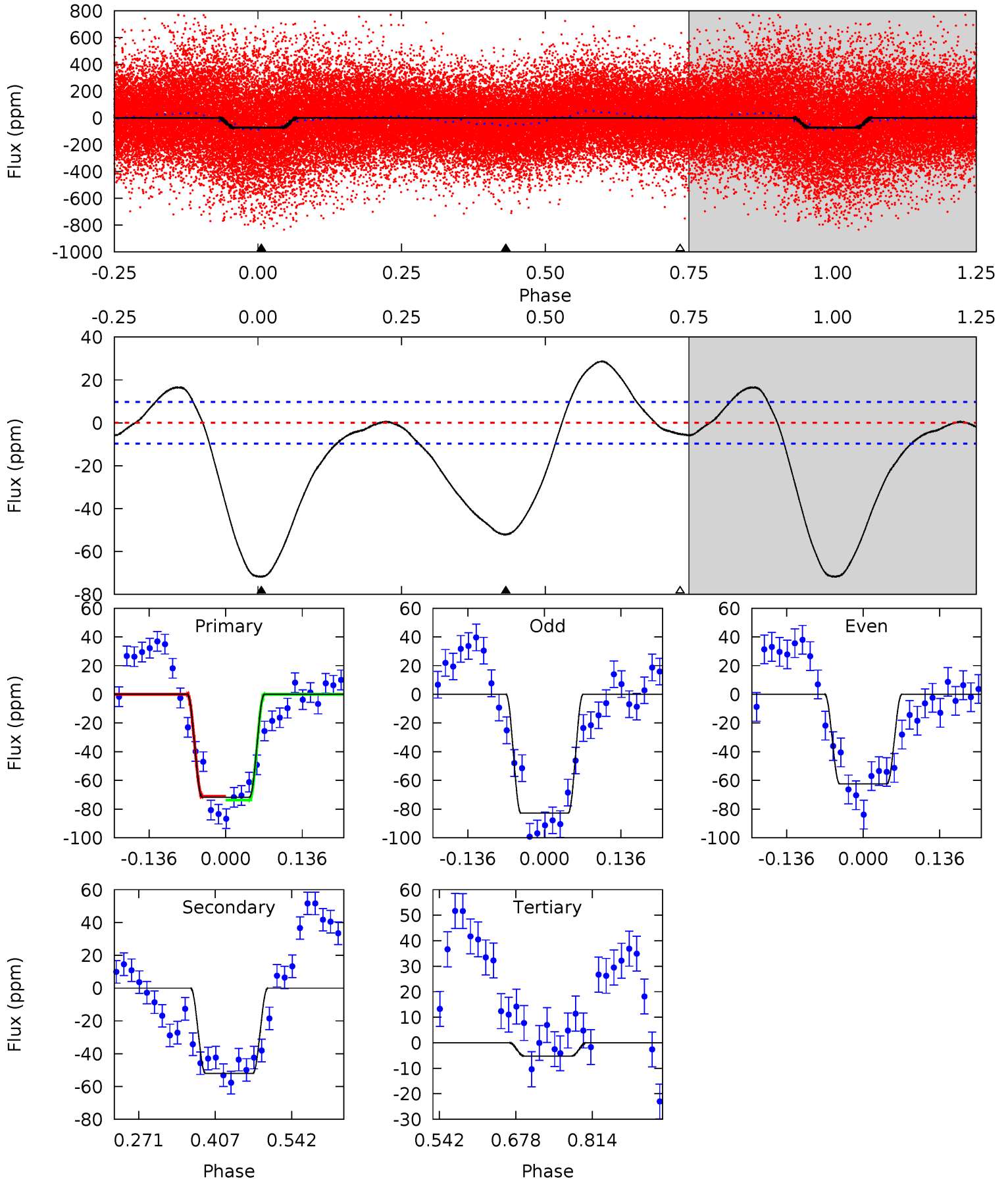
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.6	7.74	0	0	4.47	1.41	7.20	20.6	20.6	7.74	7.74	2.77	1.01	0.41	0.88



Alt Model-Shift Uniqueness Test

004477104-01, P = 1.169129 Days, E = 130.434168 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.2	24.1	2.41	0	4.50	1.49	5.28	30.8	33.2	21.7	24.1	4.72	0.96	0.29	0.62



Stellar Parameters For KIC 004477104

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	6873^{+92}_{-72}	$3.994^{+0.130}_{-0.117}$	$0.210^{+0.100}_{-0.150}$	$2.144^{+0.413}_{-0.413}$	$1.654^{+0.141}_{-0.156}$	$0.236^{+0.171}_{-0.085}$
	+1%/-1%	+3%/-3%	+48%/-71%	+19%/-19%	+9%/-9%	+72%/-36%
Source	SPE68	SPE68	SPE68	DSEP		

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

Secondary Eclipse Parameters for KIC 004477104-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-14 ± 2	$1.60^{+0.43}_{-0.41}$	3873^{+179}_{-173}	4941^{+727}_{-505}	$1.982^{+1.572}_{-0.746}$
Alt.	-52 ± 2	$2.14^{+0.42}_{-0.45}$	3873^{+184}_{-199}	5964^{+679}_{-474}	$4.186^{+2.483}_{-1.326}$

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

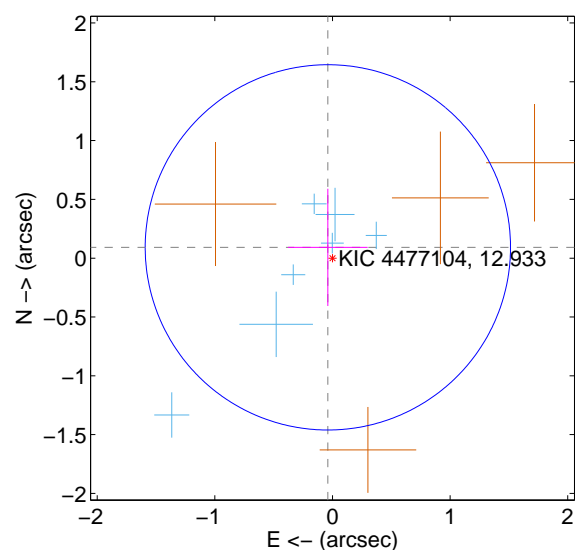
Supplemental centroid analysis for 004477104-01. Kepler magnitude: 12.93. Transit SNR 12.98

There are 7 quarters with good PRF difference image offsets

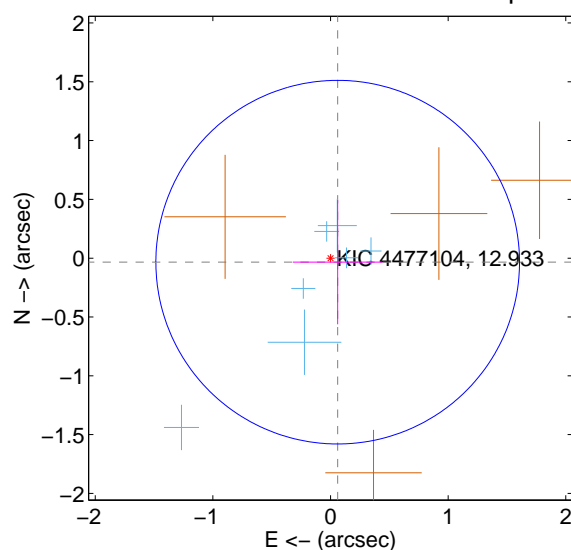
The direct PRF centroid is offset from the target star catalog position by about 0.20 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.100 ± 0.518	0.19	0.039 ± 0.339	0.092 ± 0.499
PRF-fit source offset from KIC position	0.070 ± 0.515	0.14	-0.061 ± 0.381	-0.034 ± 0.528
photometric centroid source offset	0.16 ± 0.52	0.31	0.13 ± 0.50	-0.10 ± 0.54

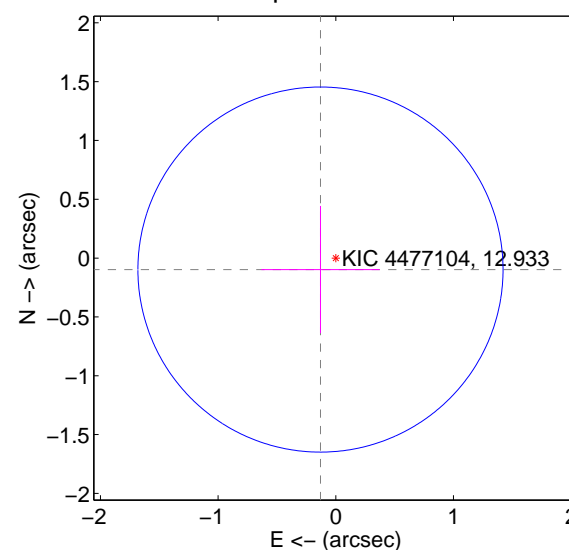
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

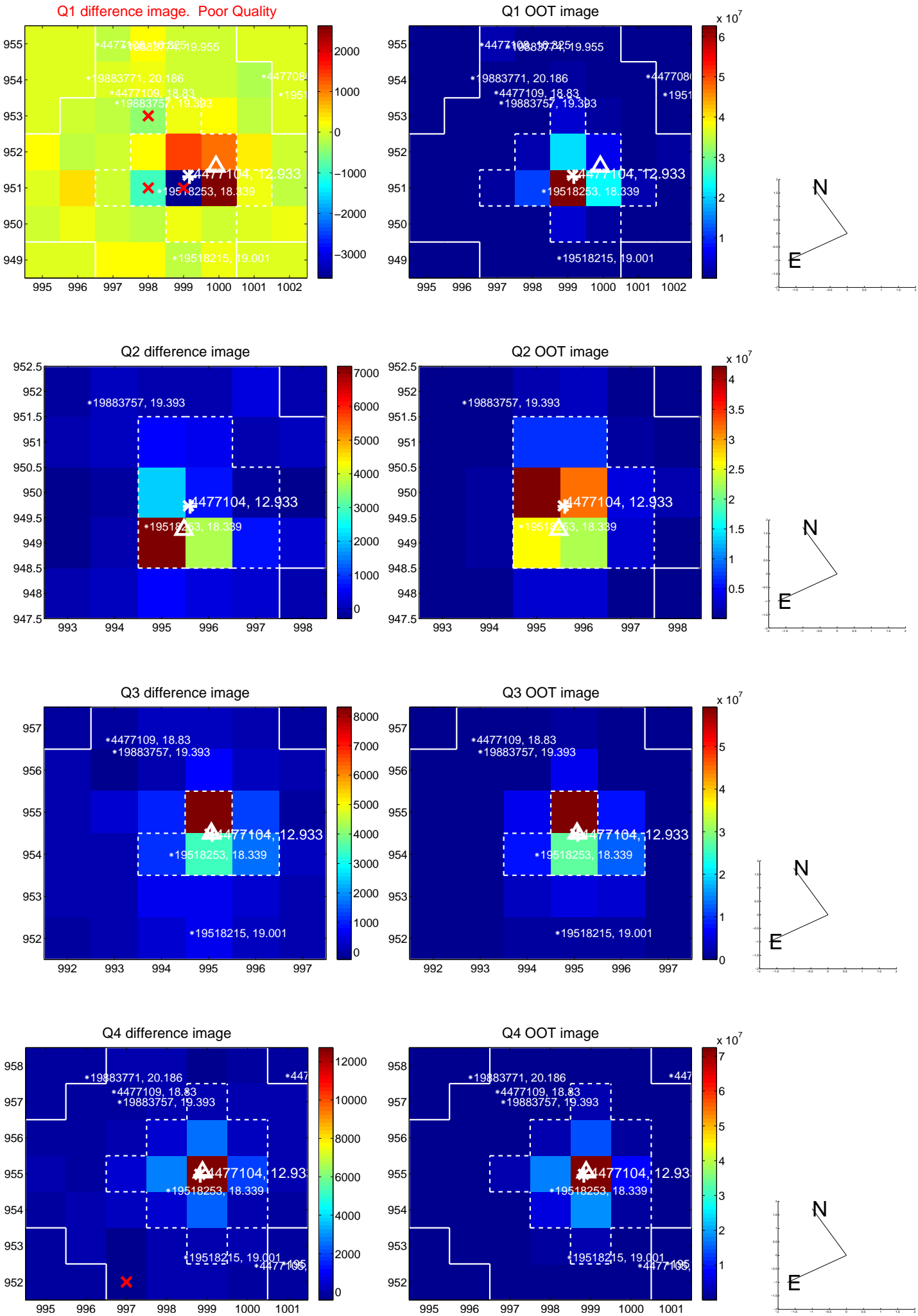


offset from photometric centroids

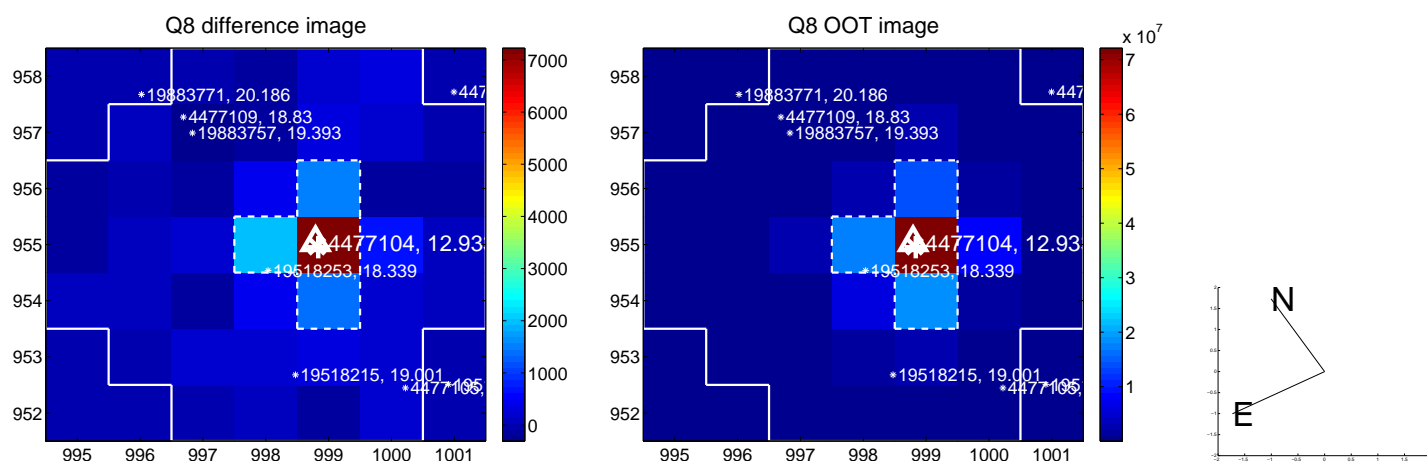
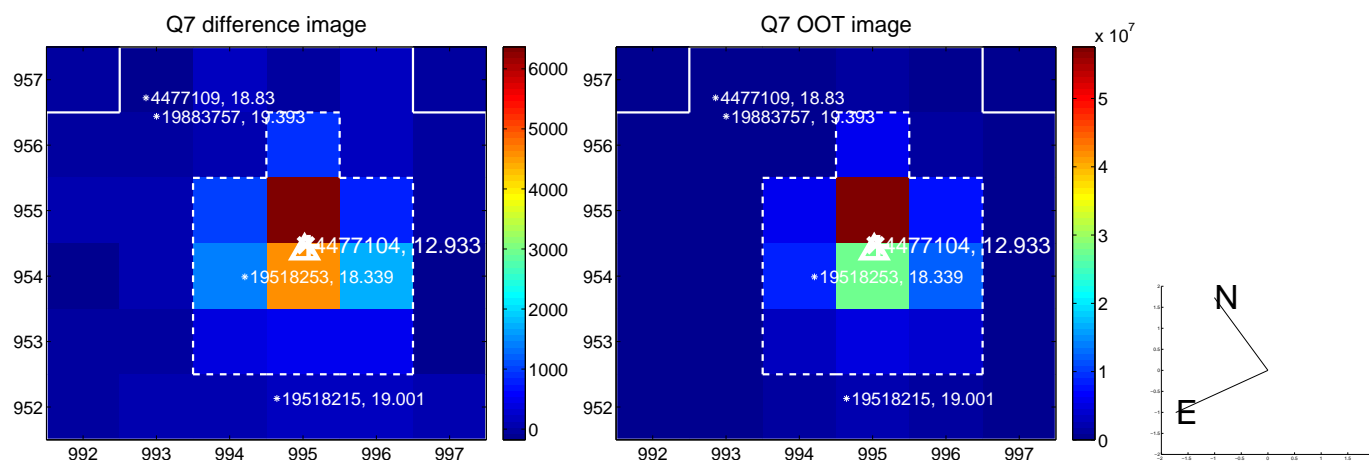
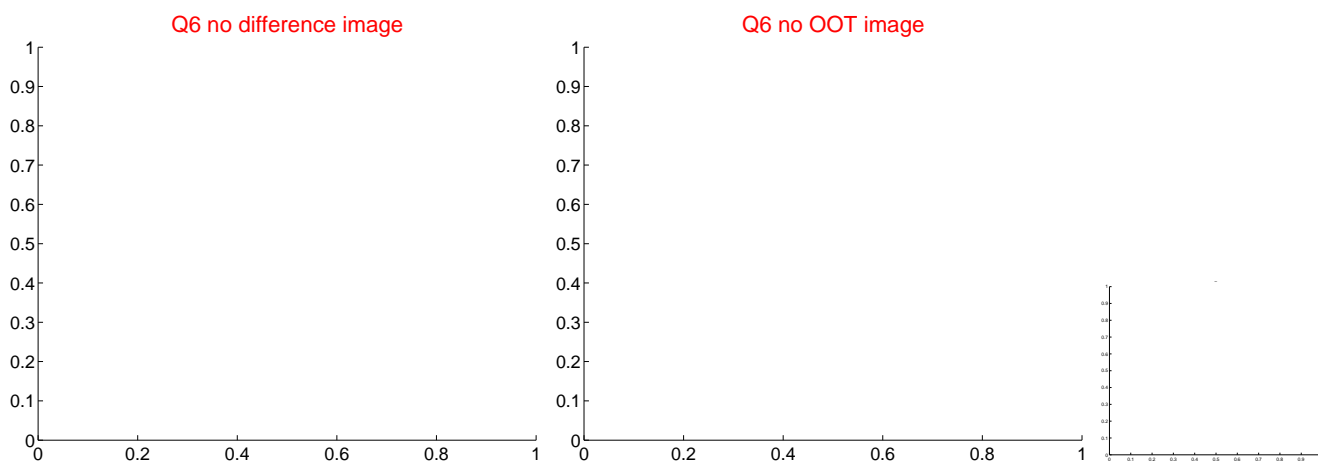
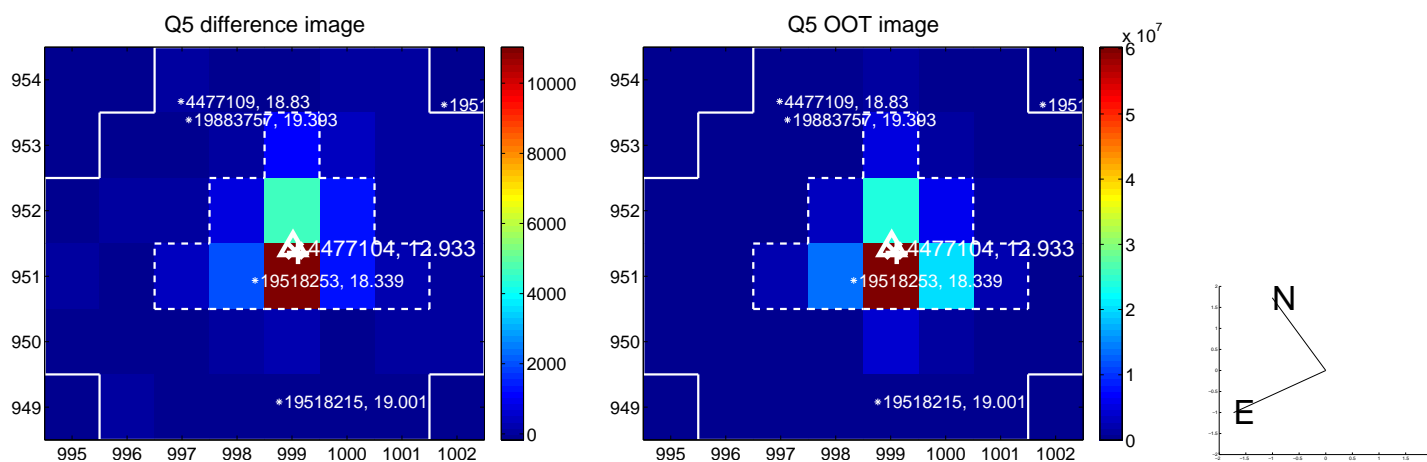


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets**; **Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

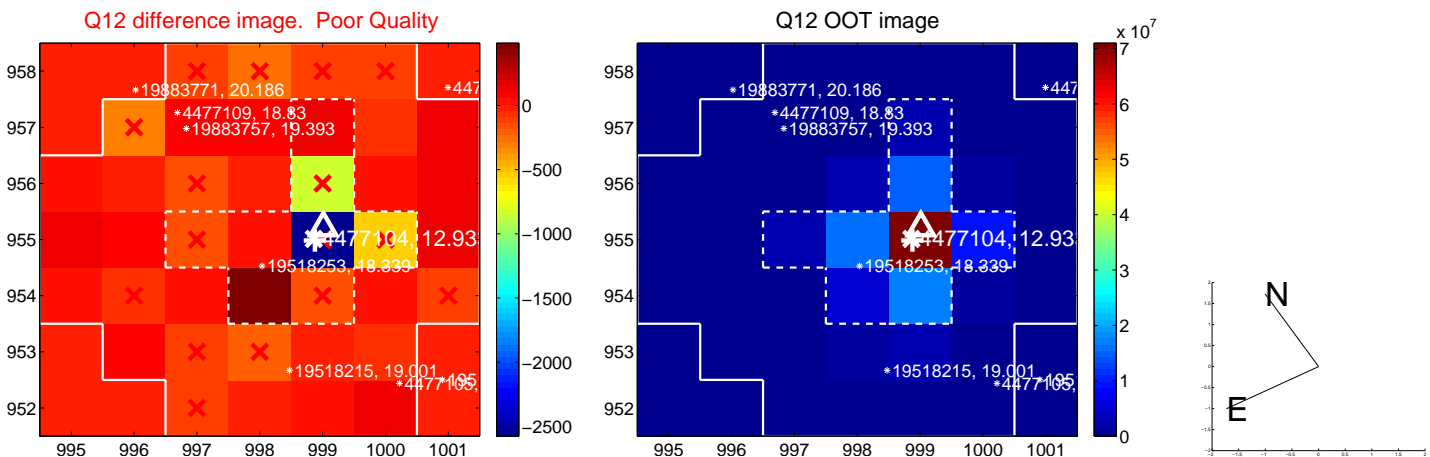
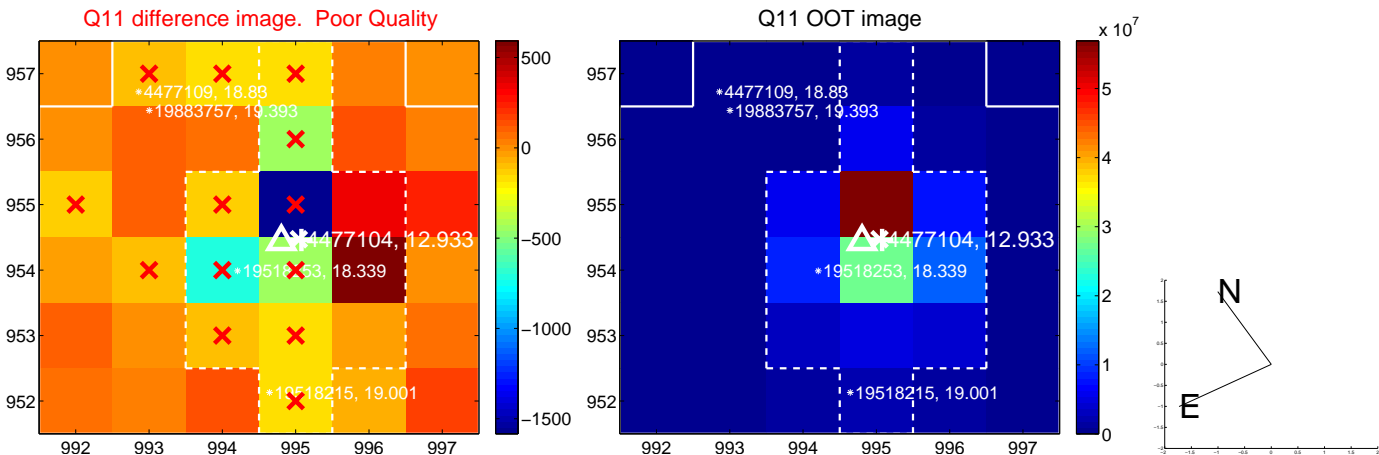
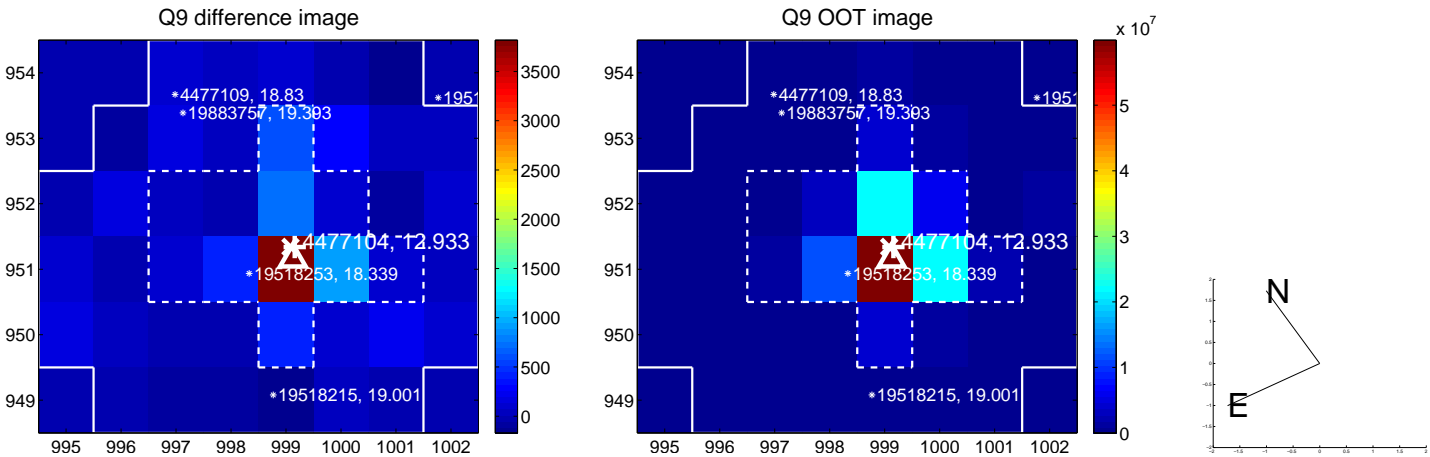
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



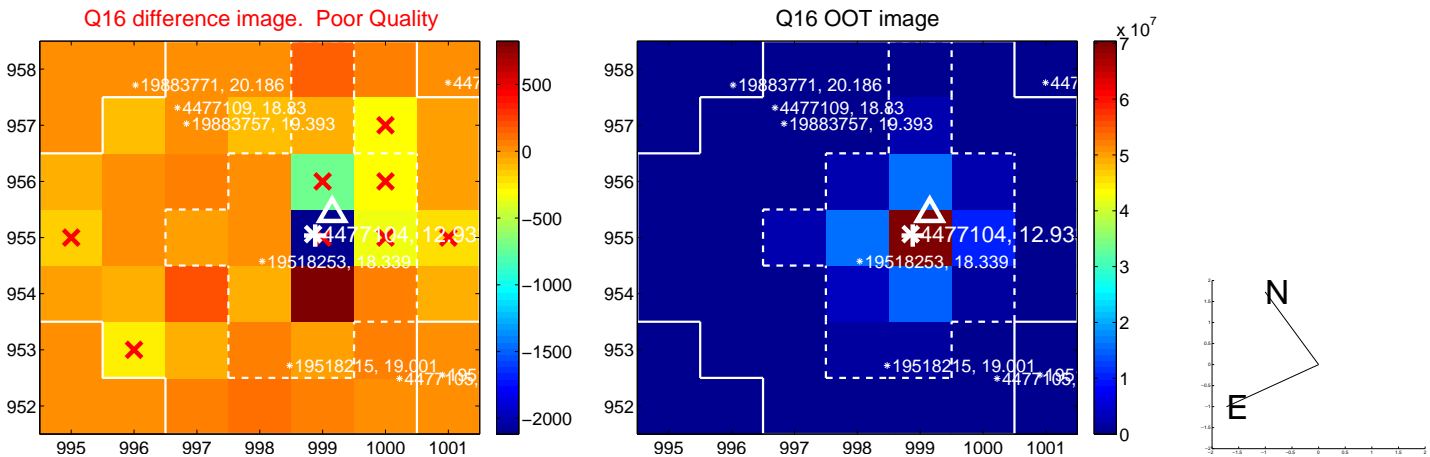
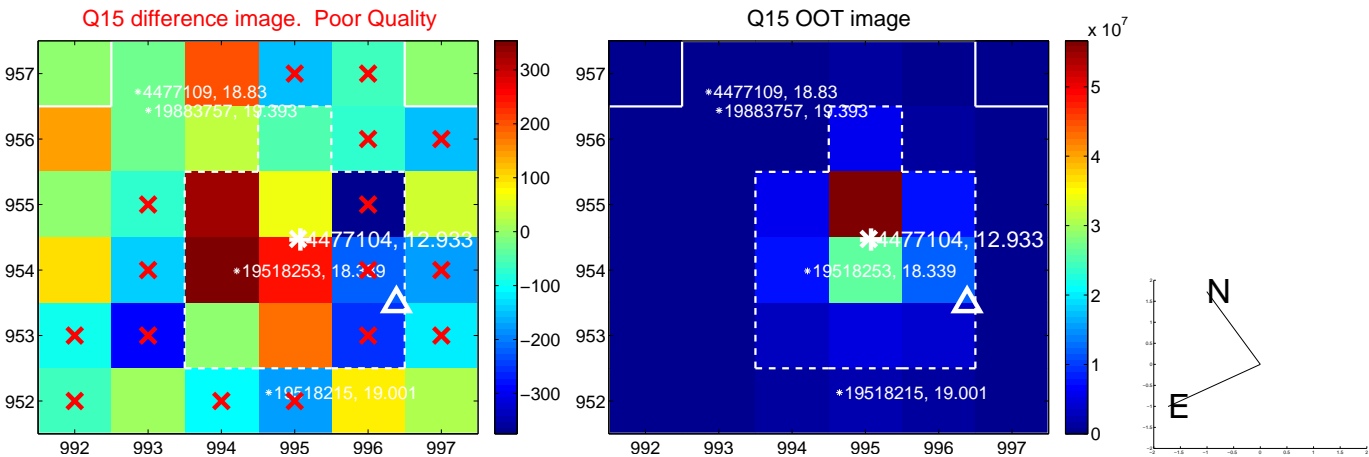
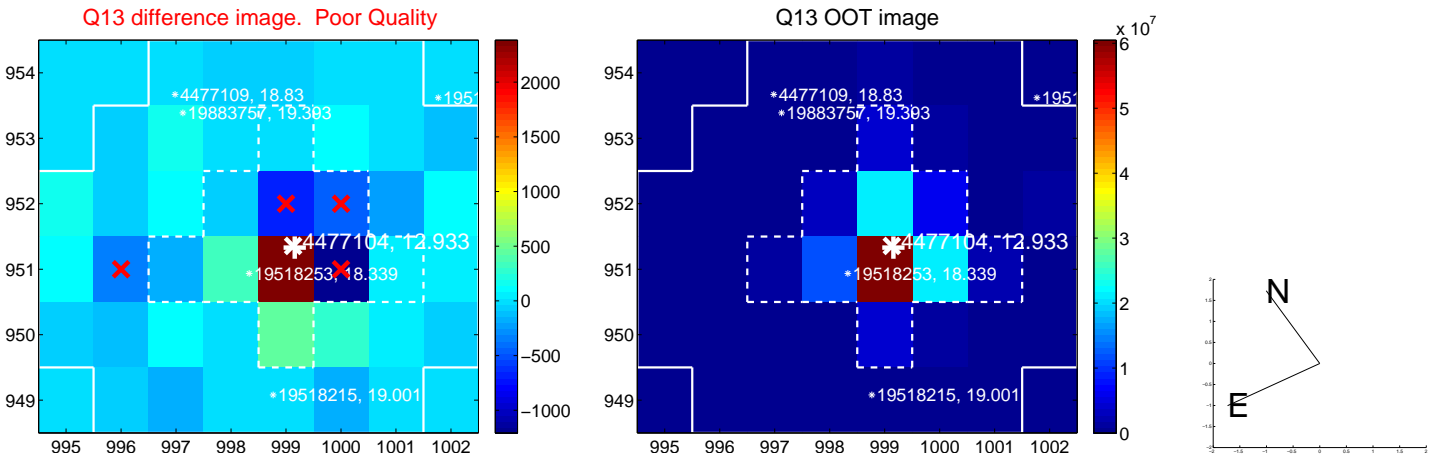
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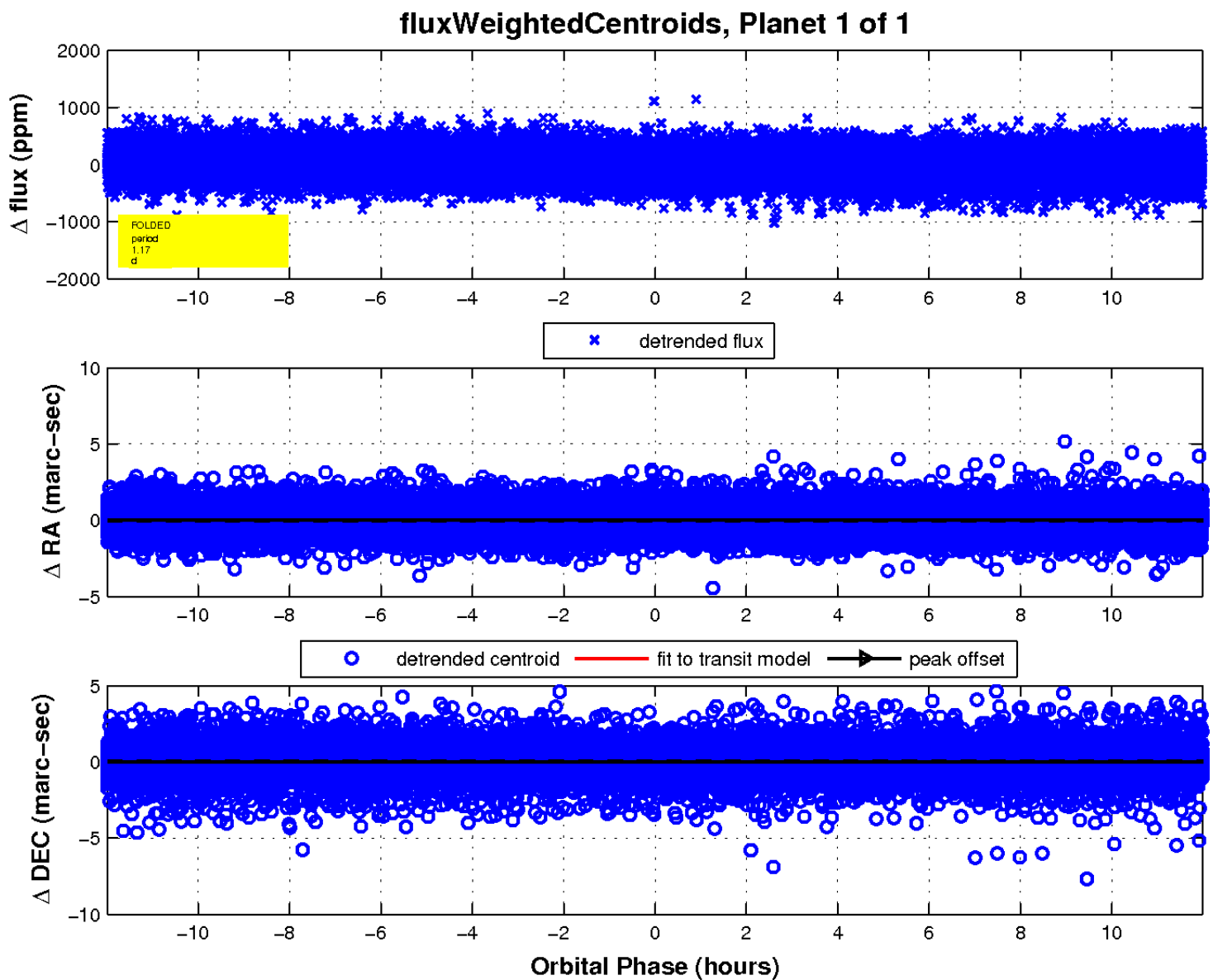
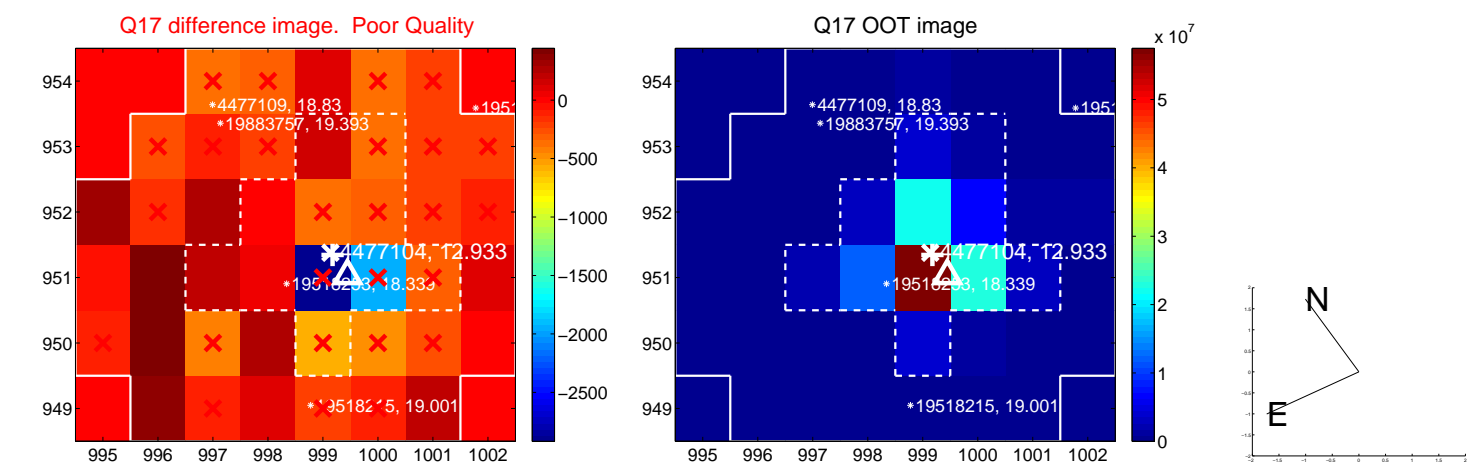
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UKIRT Image

Declination

