

KIC 005559903

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})
005559903-01	OBS	No	14.927139	134.267159	176.3	48.588	7.2	12.6	1.02	6214	2.44	95.36

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
005559903-01	OBS	FP	0.00	1	0	0	0	LPP_DV—MOD_NONUNIQ_DV

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

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

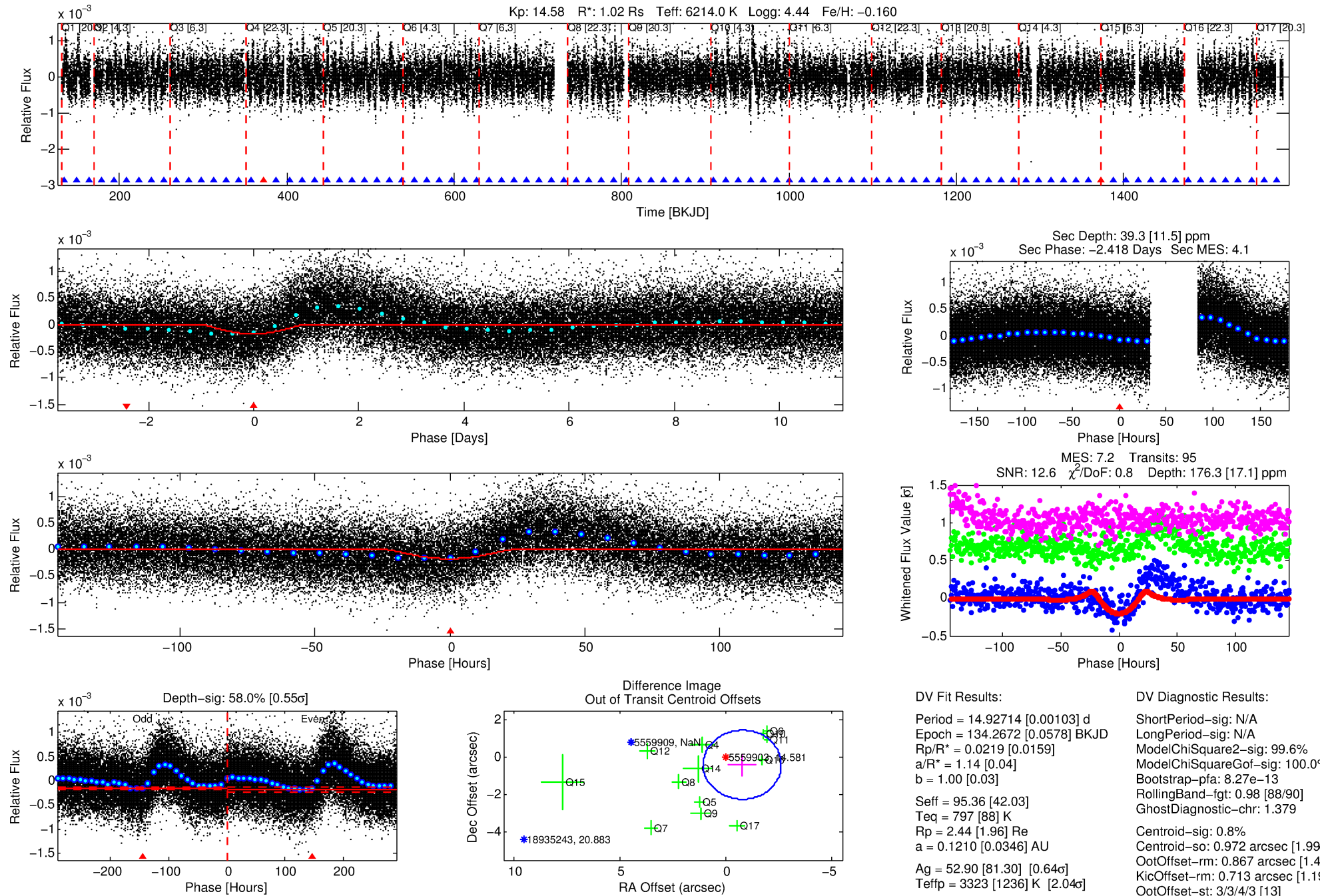
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 005559903-01

No Significant Match Found

DV One-Page Summary

KIC: 5559903 Candidate: 1 of 1 Period: 14.927 d



DV Fit Results:

Period = 14.92714 [0.00103] d
Epoch = 134.2672 [0.0578] BKJD
Rp/R* = 0.0219 [0.0159]
a/R* = 1.14 [0.04]
b = 1.00 [0.03]
Seff = 95.36 [42.03]
Teff = 797 [88] K
Rp = 2.44 [1.96] Re
a = 0.1210 [0.0346] AU
Ag = 52.90 [81.30] [0.64 σ]
Teffp = 3323 [1236] K [2.04 σ]

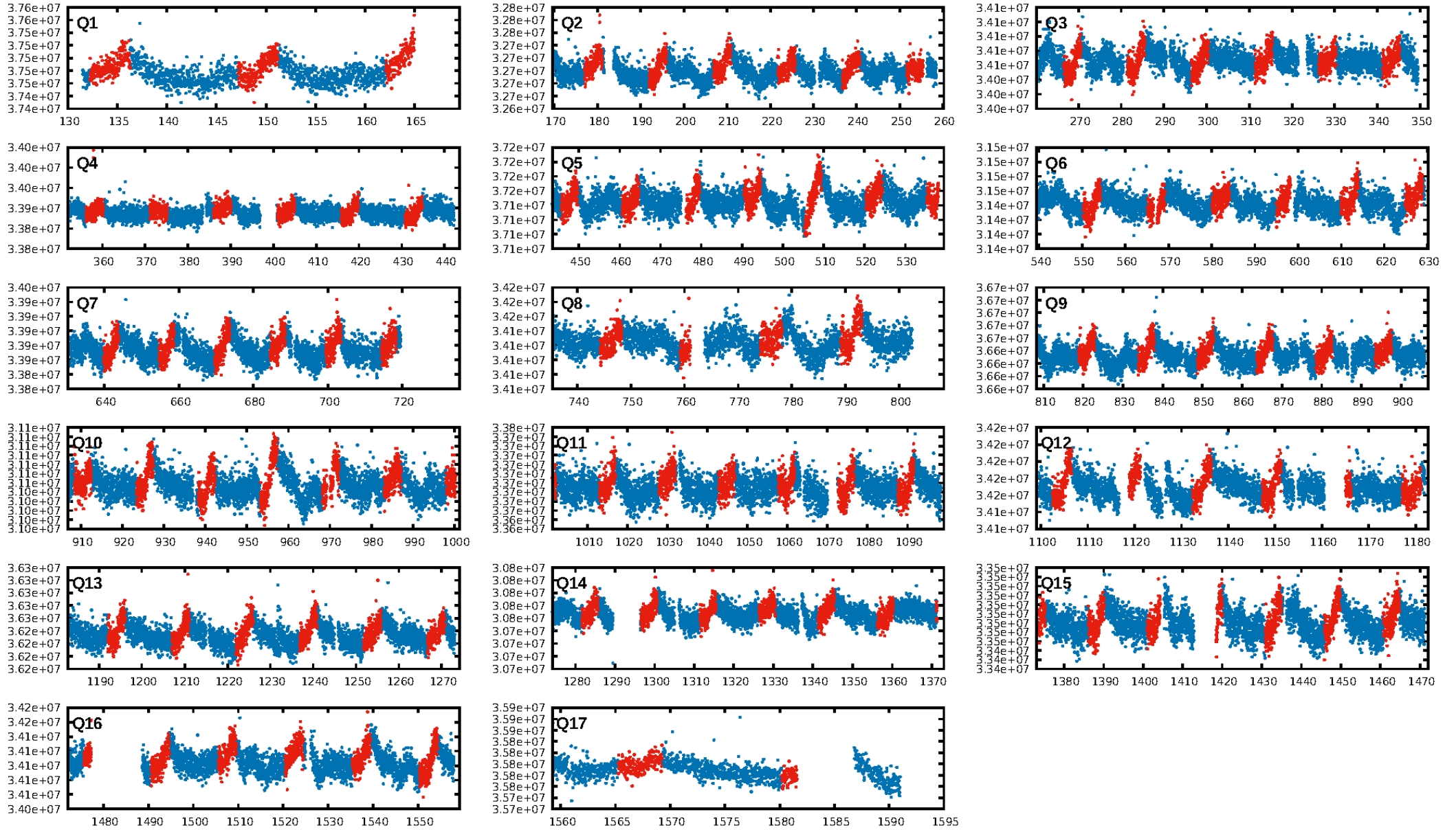
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.6%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 8.27e-13
RollingBand-fgt: 0.98 [88/90]
GhostDiagnostic-chr: 1.379
Centroid-sig: 0.8%
Centroid-so: 0.972 arcsec [1.99 σ]
OotOffset-rm: 0.867 arcsec [1.41 σ]
KicOffset-rm: 0.713 arcsec [1.19 σ]
OotOffset-st: 3/3/4/3 [13]
KicOffset-st: 3/3/4/3 [13]
DiffImageQuality-fgm: 0.62 [8/13]
DiffImageOverlap-fno: 1.00 [17/17]

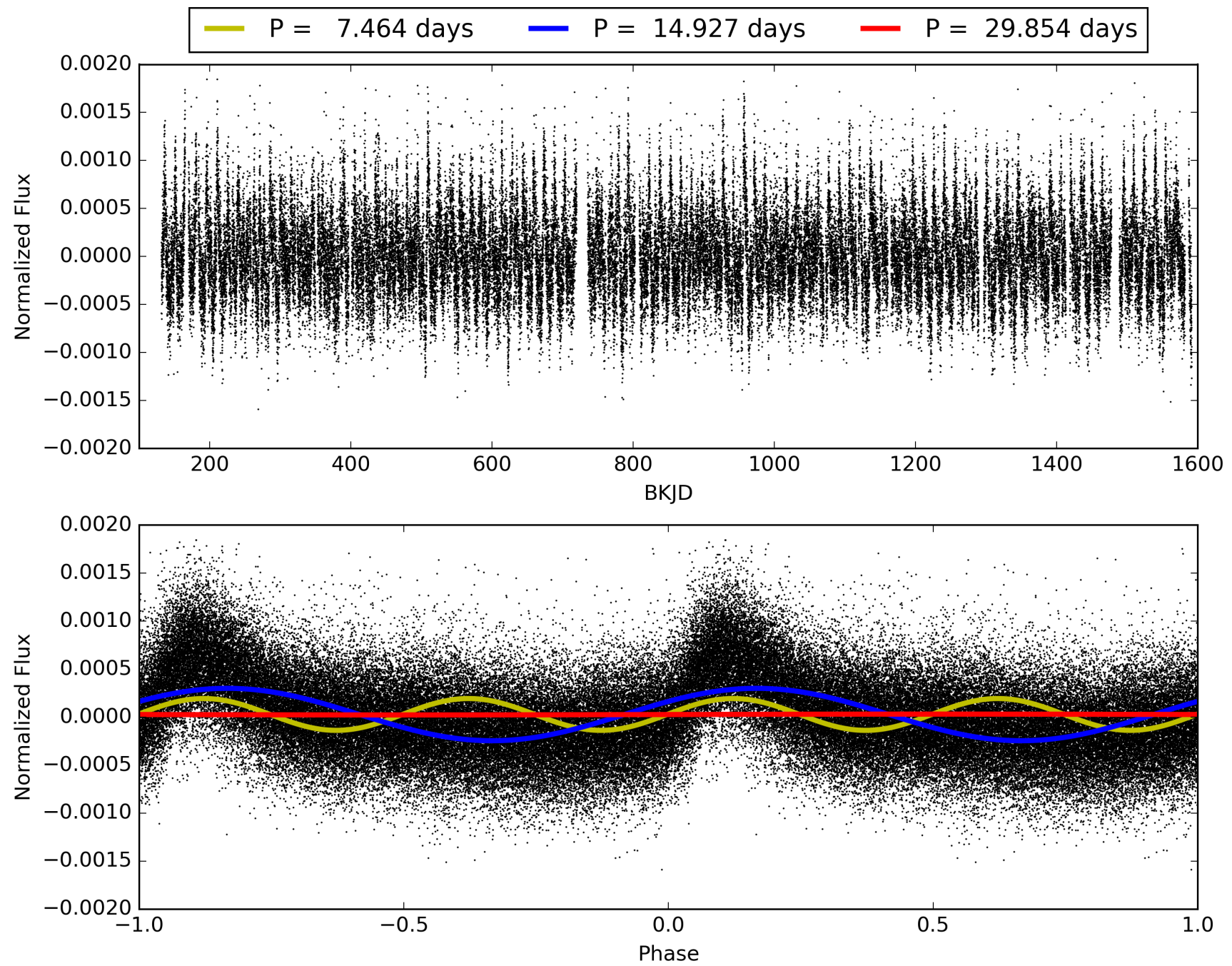
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 11:25:23 Z

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

TCE 005559903-01, PDC Light Curves

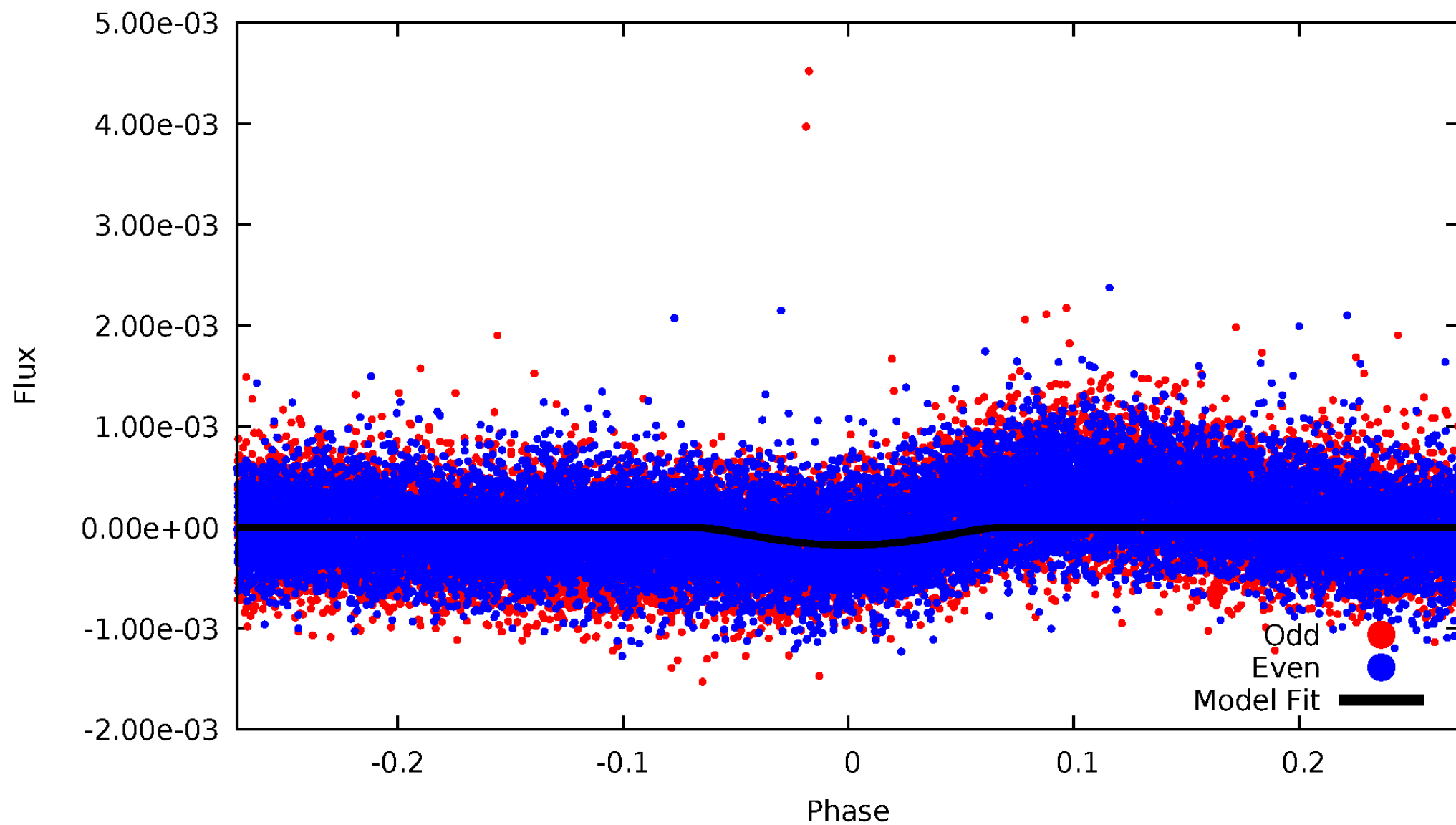


TCE 005559903-01



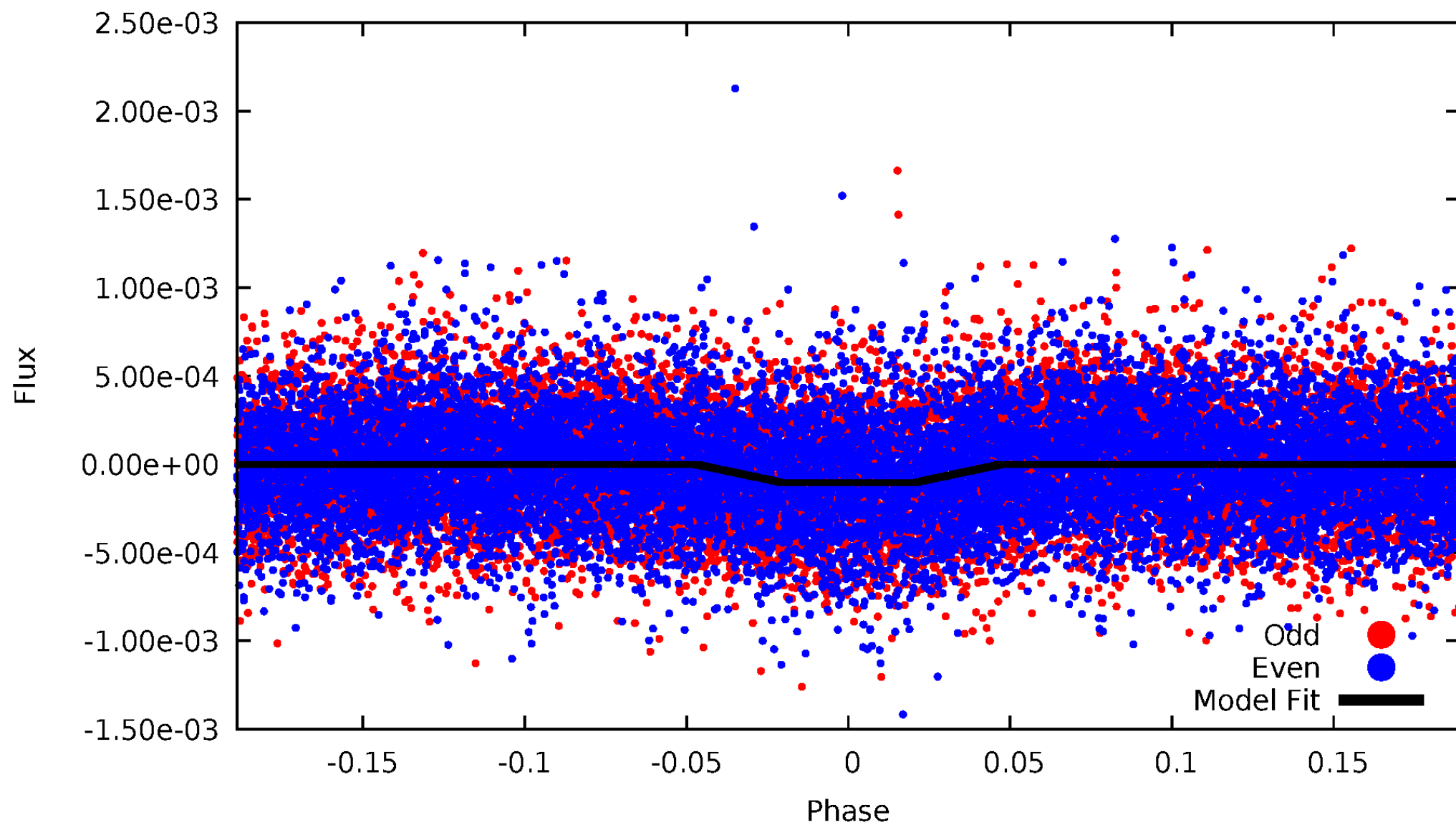
DV Odd/Even

TCE 005559903-01



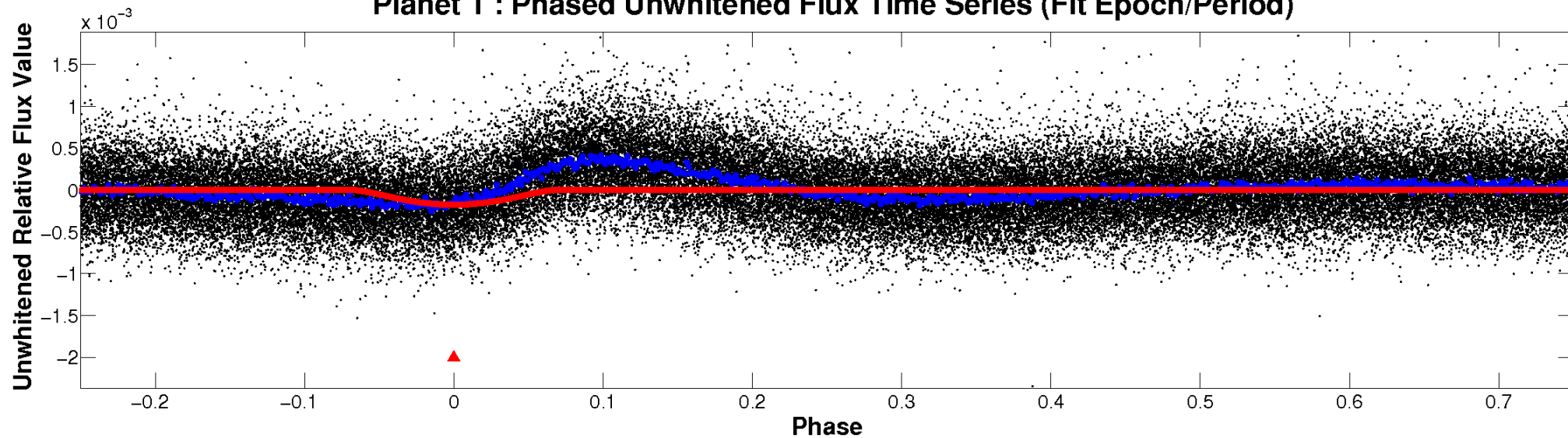
ALT Odd/Even

TCE 005559903-01

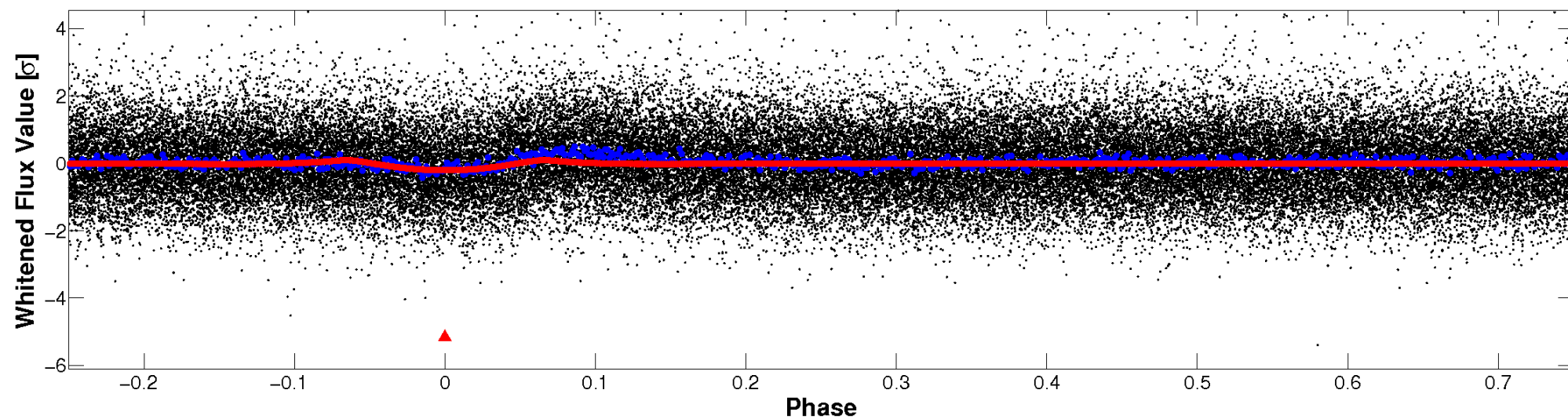


Non-Whitened Vs. Whitened Light Curve

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

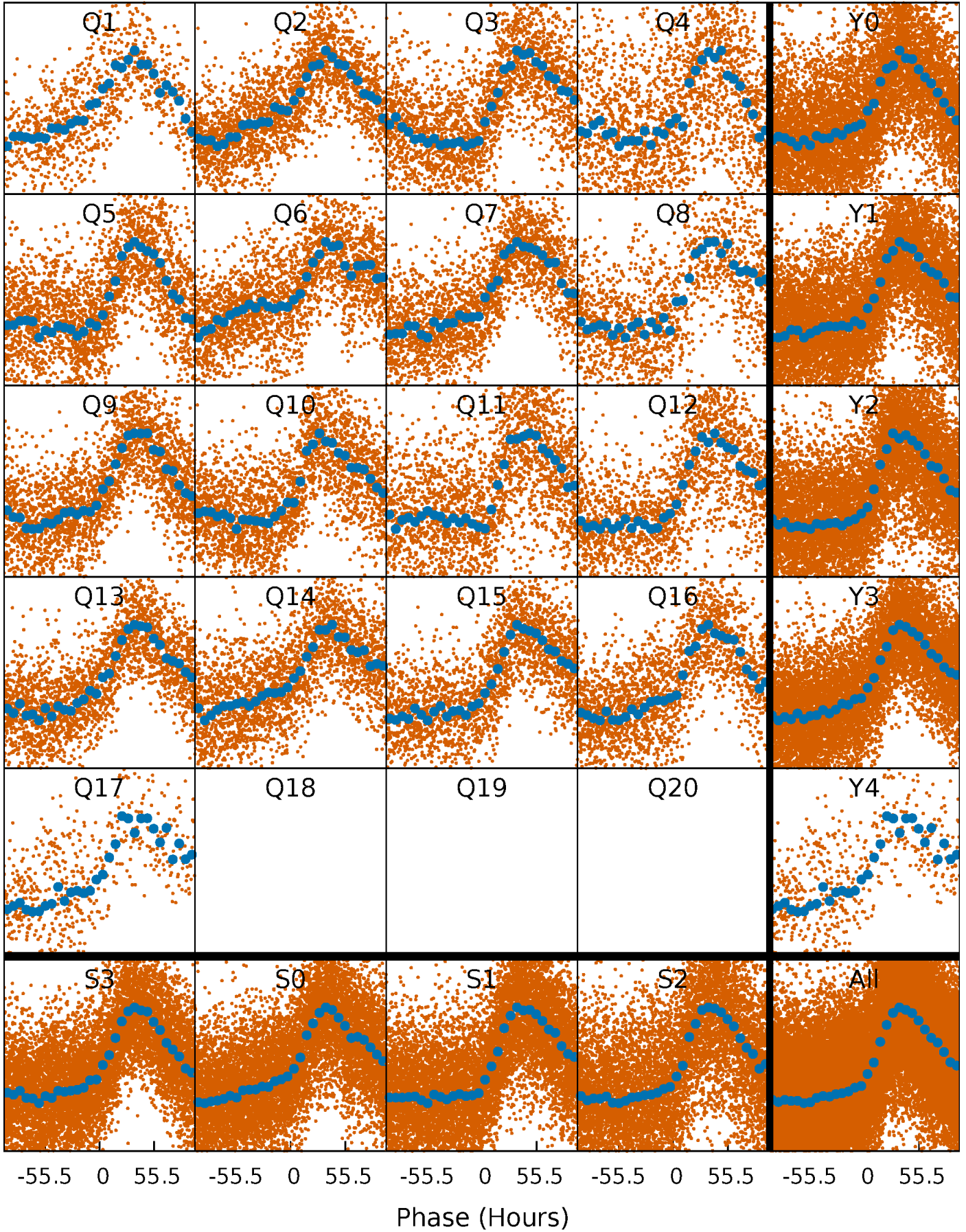


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



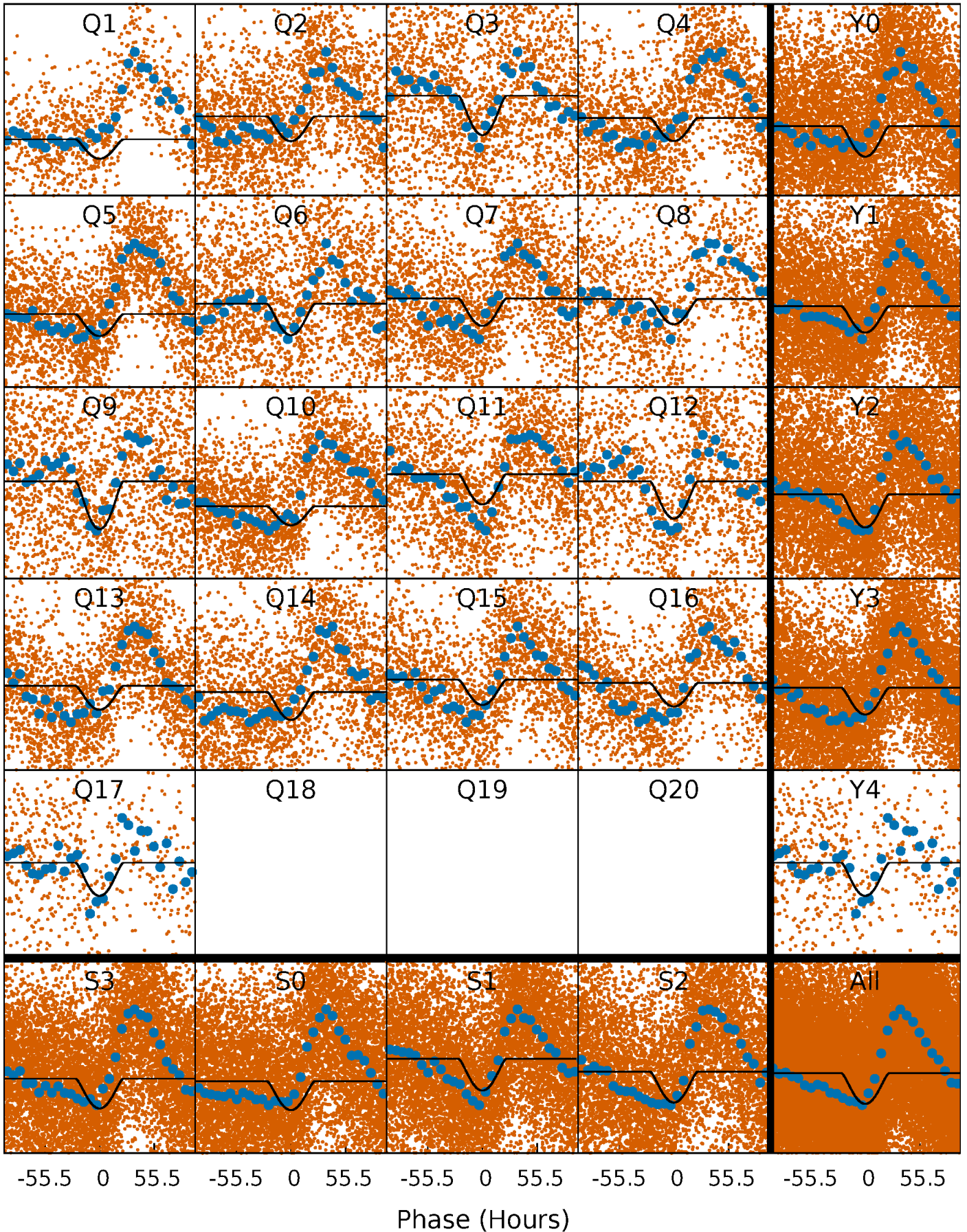
PDC Quarter-Phased Transit Curves

TCE 005559903-01 P= 14.927139 Days $T_0=134.267159$ (BKJD)



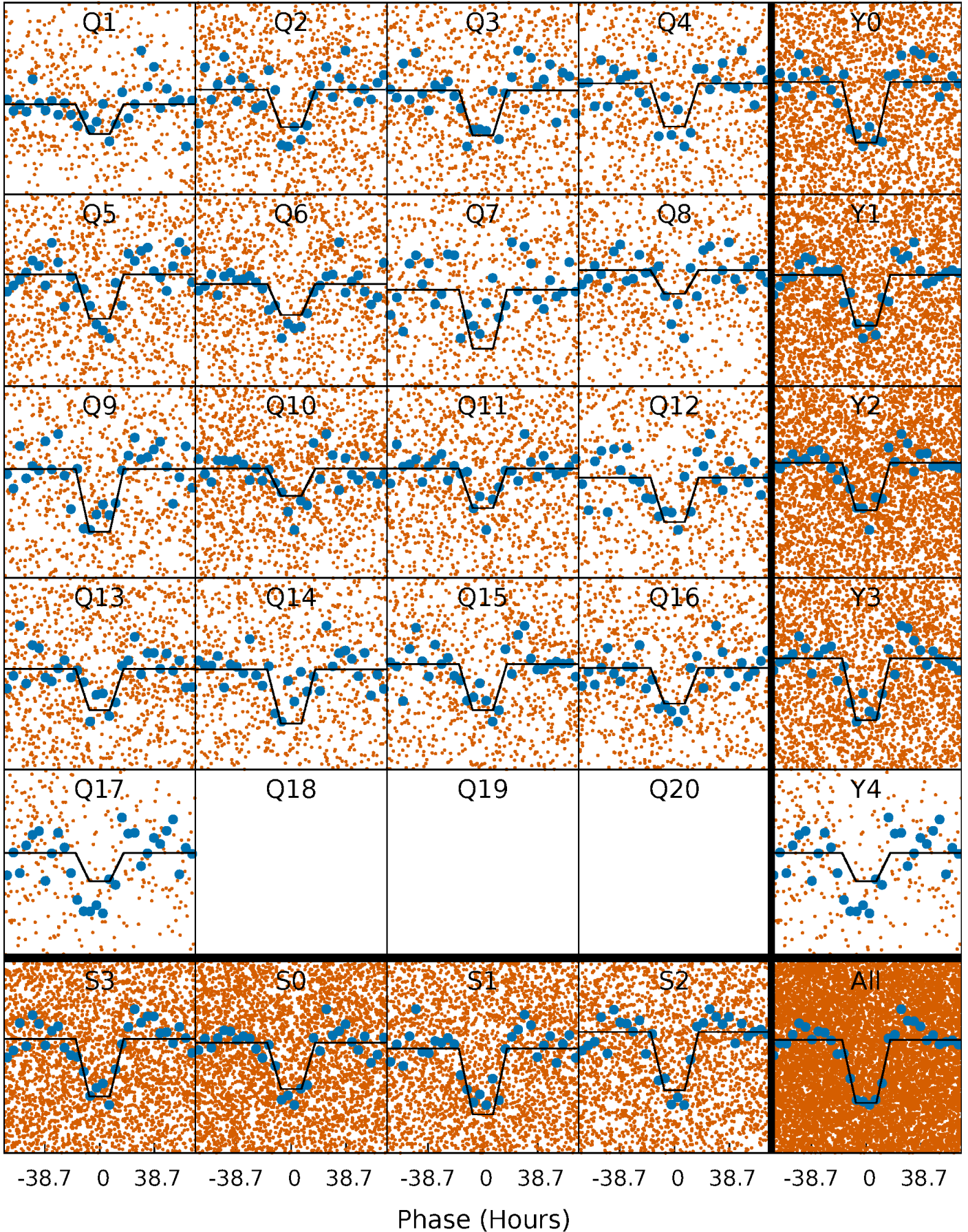
DV Quarter-Phased Transit Curves

TCE 005559903-01 P= 14.927139 Days $T_0=134.267159$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

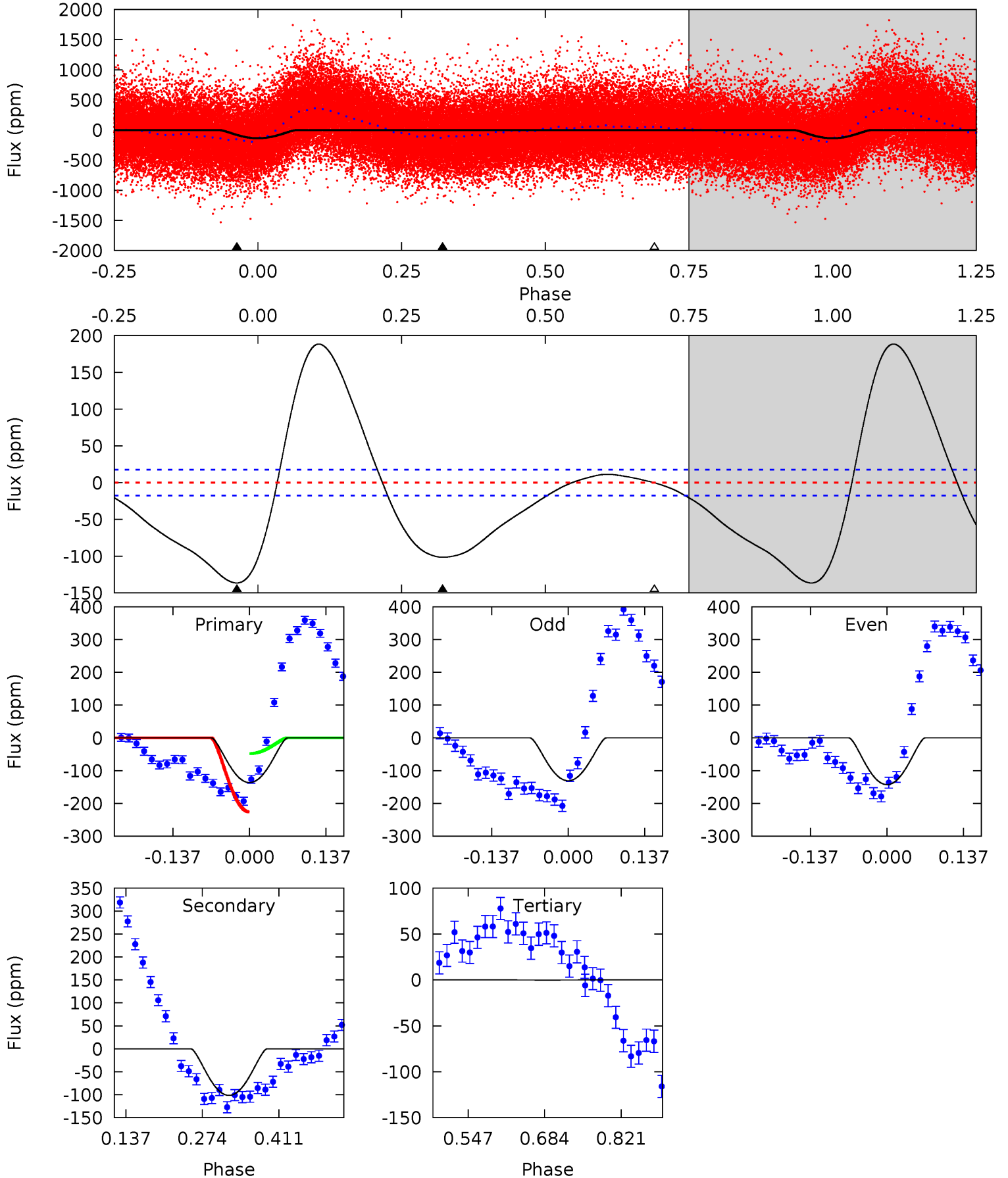
TCE 005559903-01 P= 14.928800 Days $T_0=134.274173$ (BKJD)



DV Model-Shift Uniqueness Test

005559903-01, P = 14.927139 Days, E = 119.340020 Days

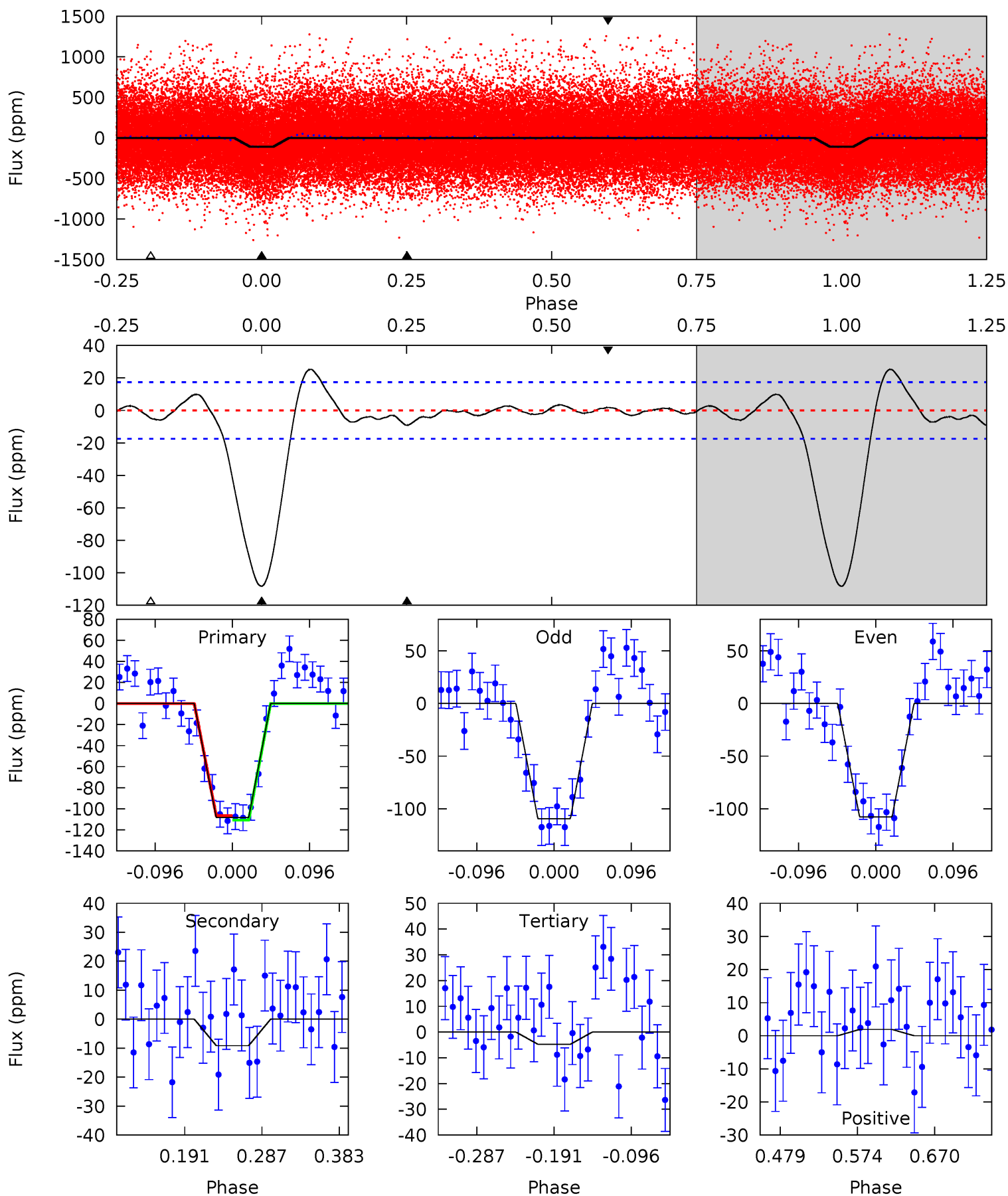
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
35.0	26.0	0.04	0	4.50	1.49	16.7	34.9	35.0	26.0	26.0	1.53	1.04	0.58	22.2



Alt Model-Shift Uniqueness Test

005559903-01, P = 14.928800 Days, E = 119.345373 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
28.4	2.39	1.25	0.50	4.57	1.67	1.12	27.1	27.9	1.15	1.89	0.23	1.10	0.19	0.56



Stellar Parameters For KIC 005559903

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6214^{+175}_{-240}	$4.444^{+0.070}_{-0.224}$	$-0.160^{+0.250}_{-0.300}$	$1.022^{+0.350}_{-0.117}$	$1.051^{+0.154}_{-0.139}$	$1.385^{+0.419}_{-0.757}$
	+3%/-4%	+2%/-5%	+156%/-188%	+34%/-11%	+15%/-13%	+30%/-55%
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 005559903-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-101 ± 4	$2.59^{+1.92}_{-1.49}$	1135^{+85}_{-65}	4370^{+2014}_{-762}	120^{+571}_{-82}
Alt.	-9 ± 4	$1.83^{+1.59}_{-1.24}$	1128^{+93}_{-60}	3249^{+1623}_{-594}	19^{+198}_{-14}

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 $A_{obs} \gg 1.0$

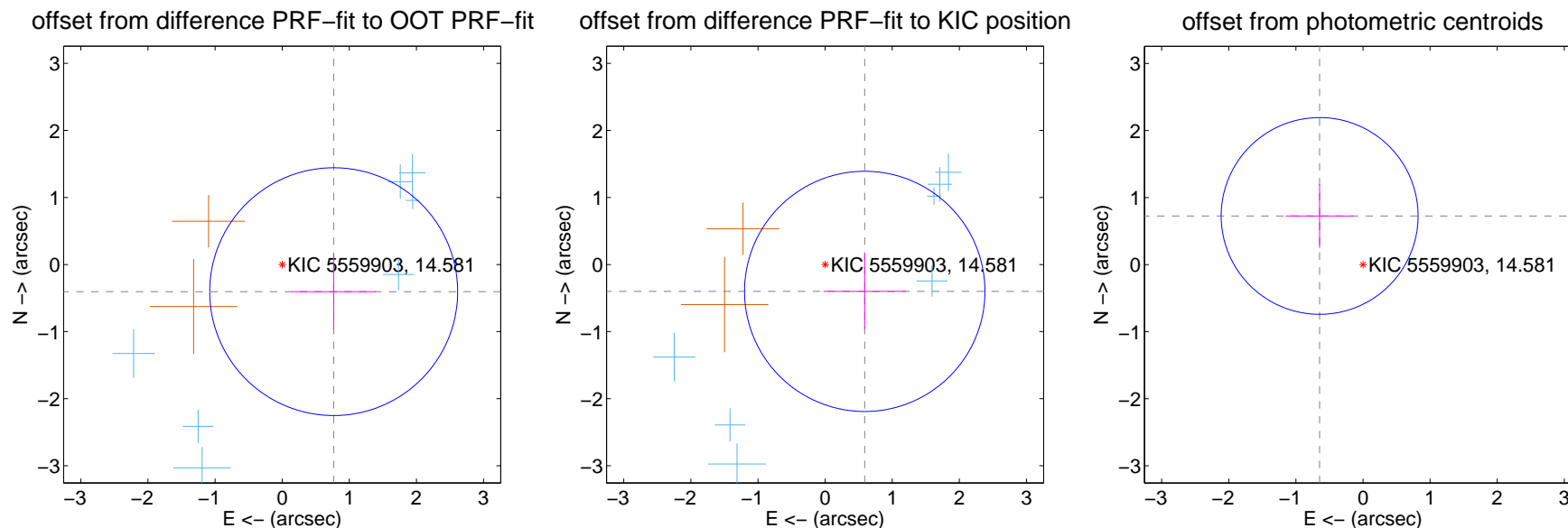
DV Centroid Data

Supplemental centroid analysis for 005559903-01. Kepler magnitude: 14.58. Transit SNR 12.65

There are 8 quarters with good PRF difference image offsets

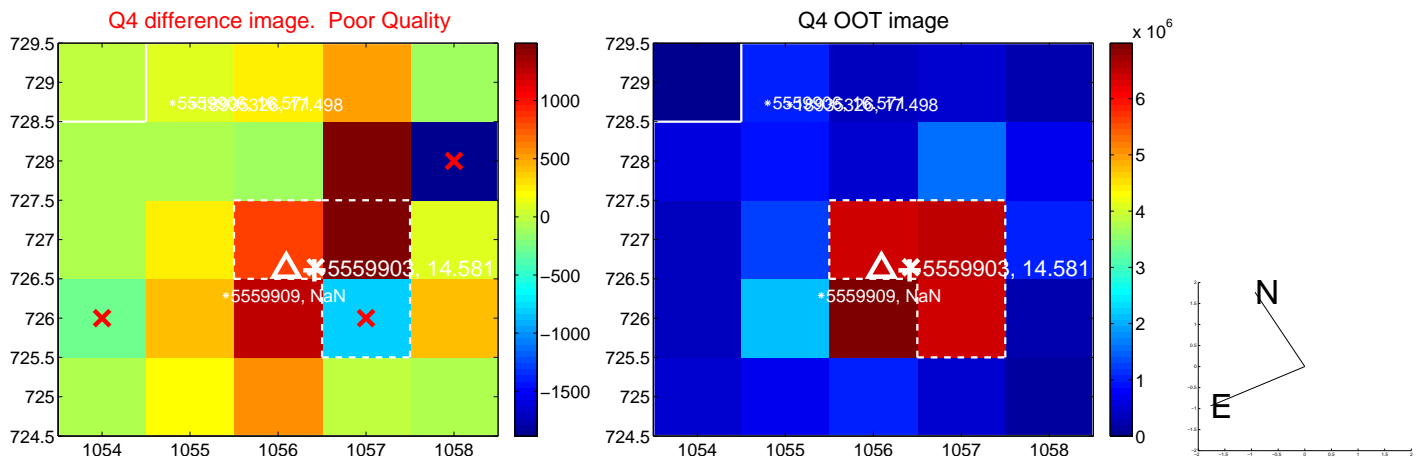
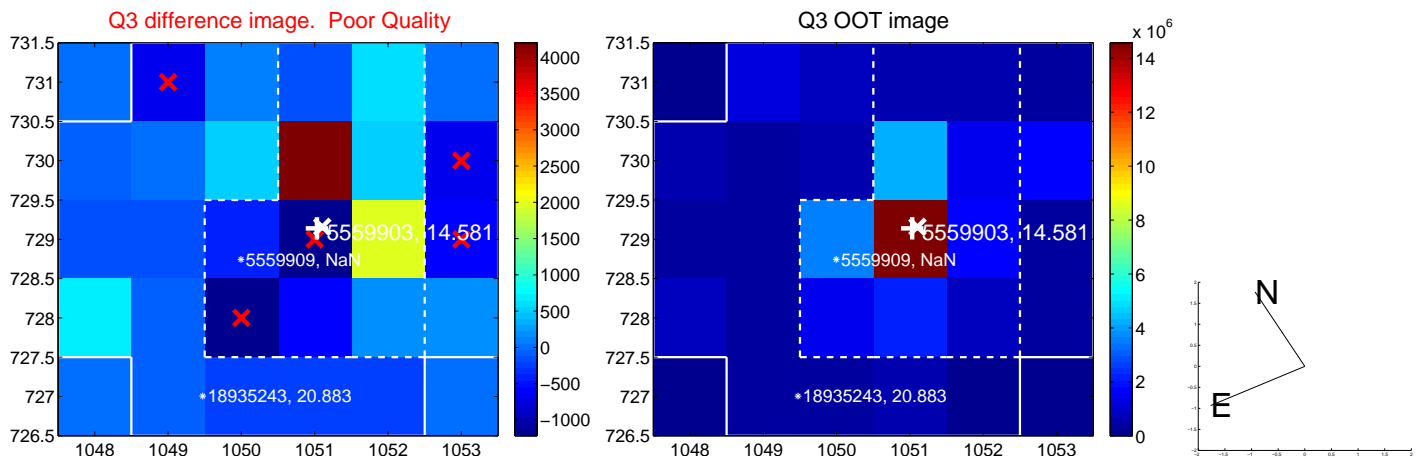
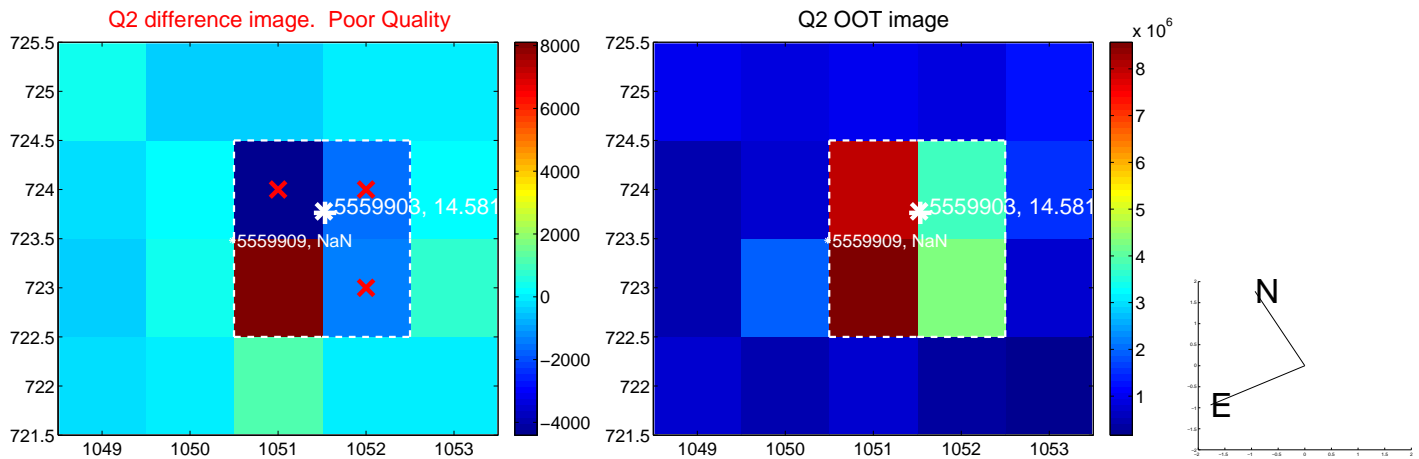
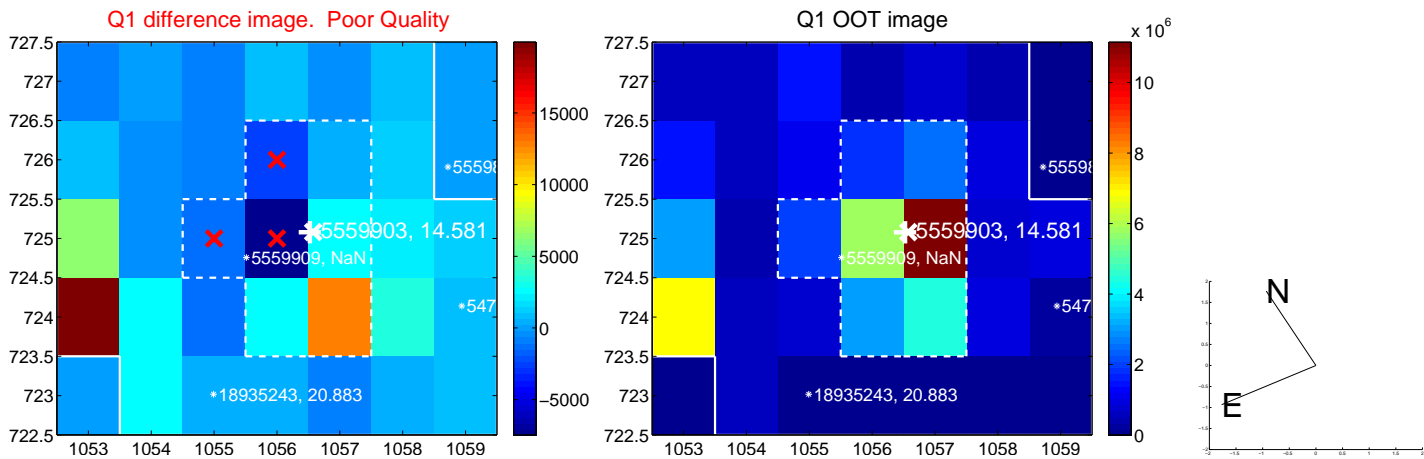
The direct PRF centroid is offset from the target star catalog position by about 0.18 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.867 ± 0.616	1.41	-0.767 ± 0.629	-0.404 ± 0.565
PRF-fit source offset from KIC position	0.713 ± 0.597	1.19	-0.590 ± 0.612	-0.400 ± 0.562
photometric centroid source offset	0.97 ± 0.49	1.99	0.65 ± 0.51	0.73 ± 0.47

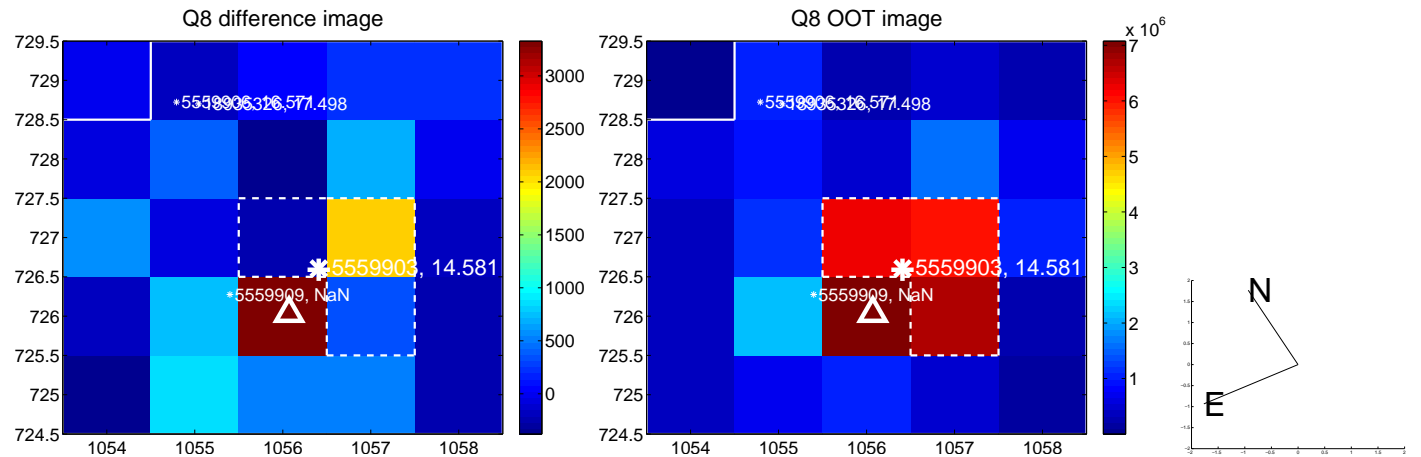
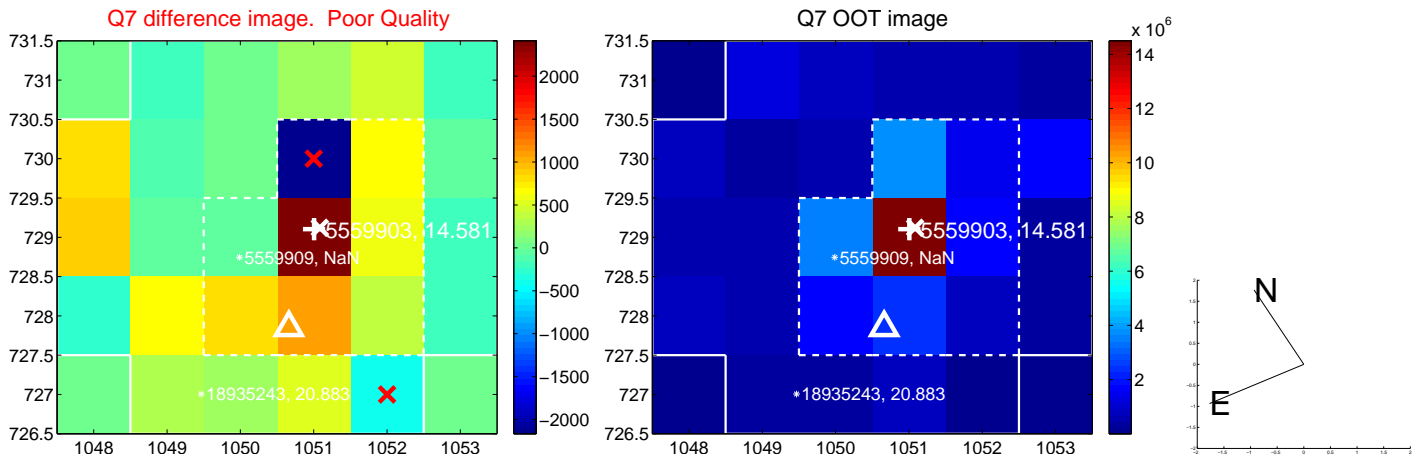
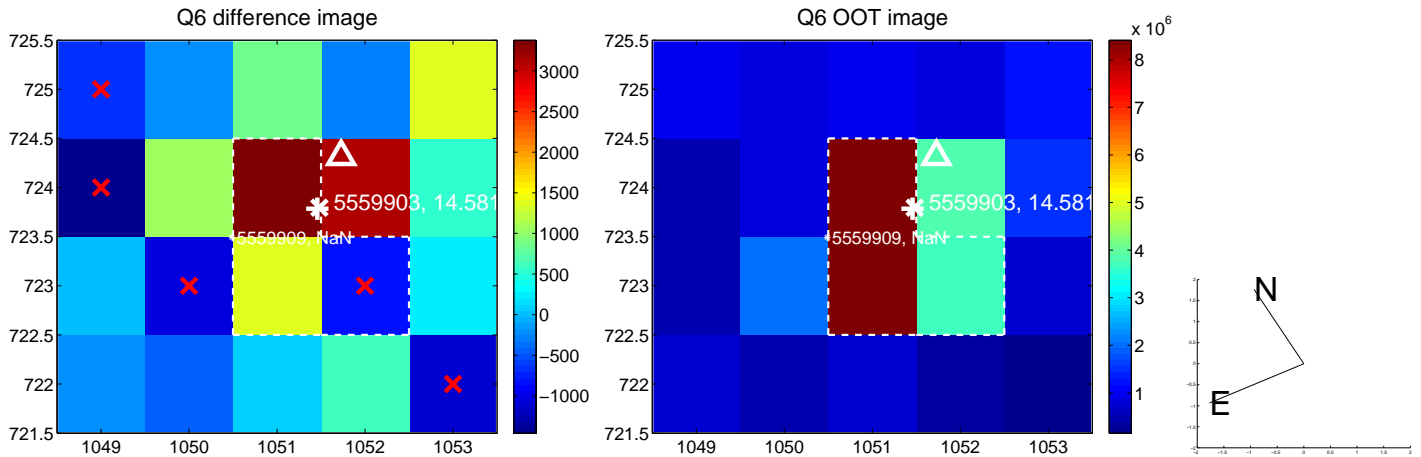
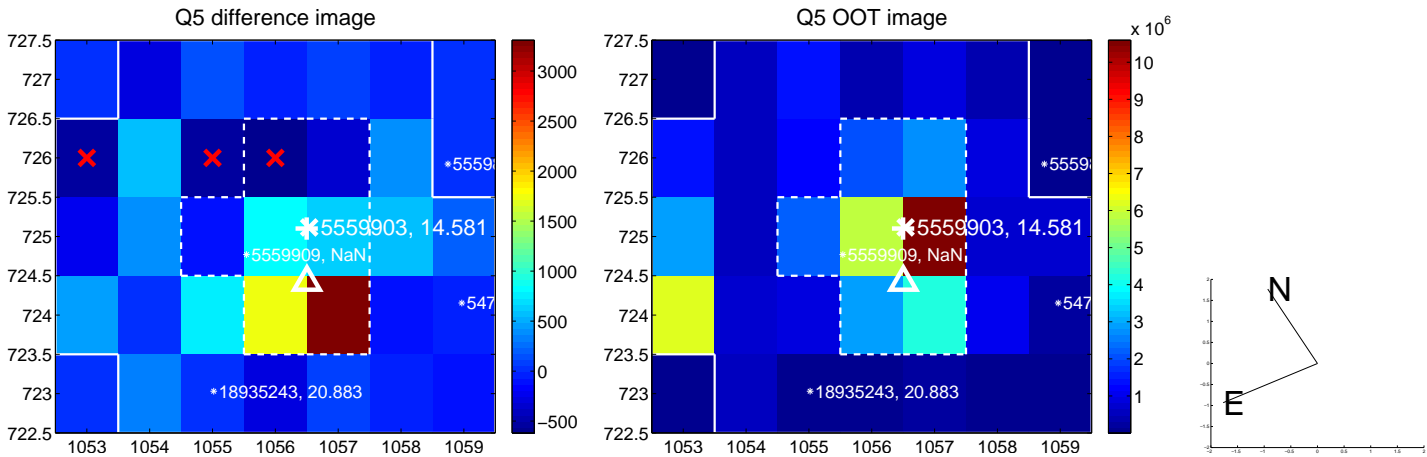


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

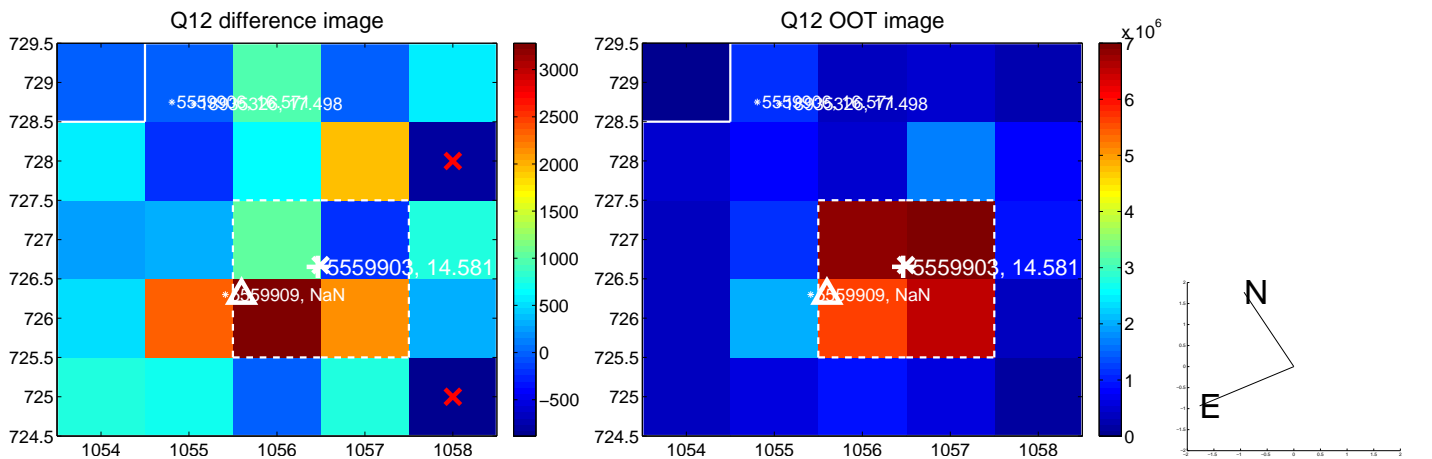
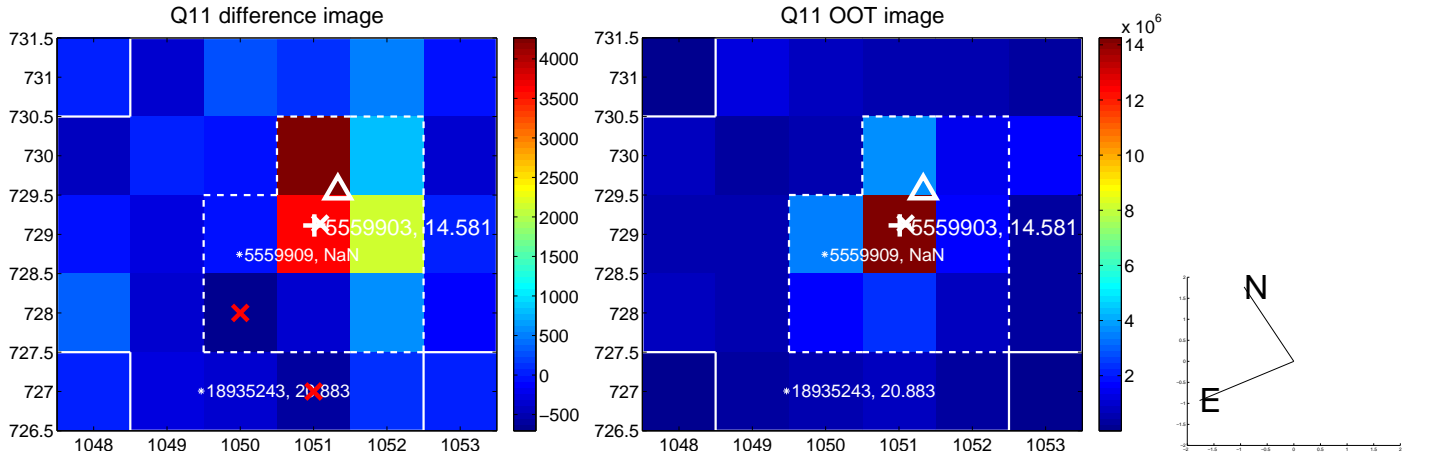
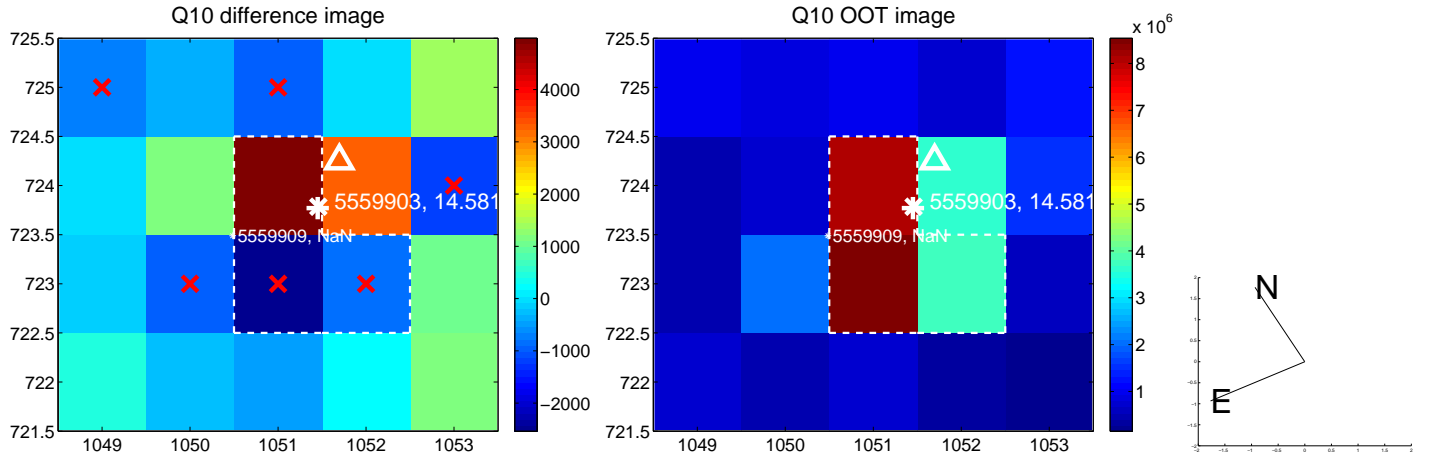
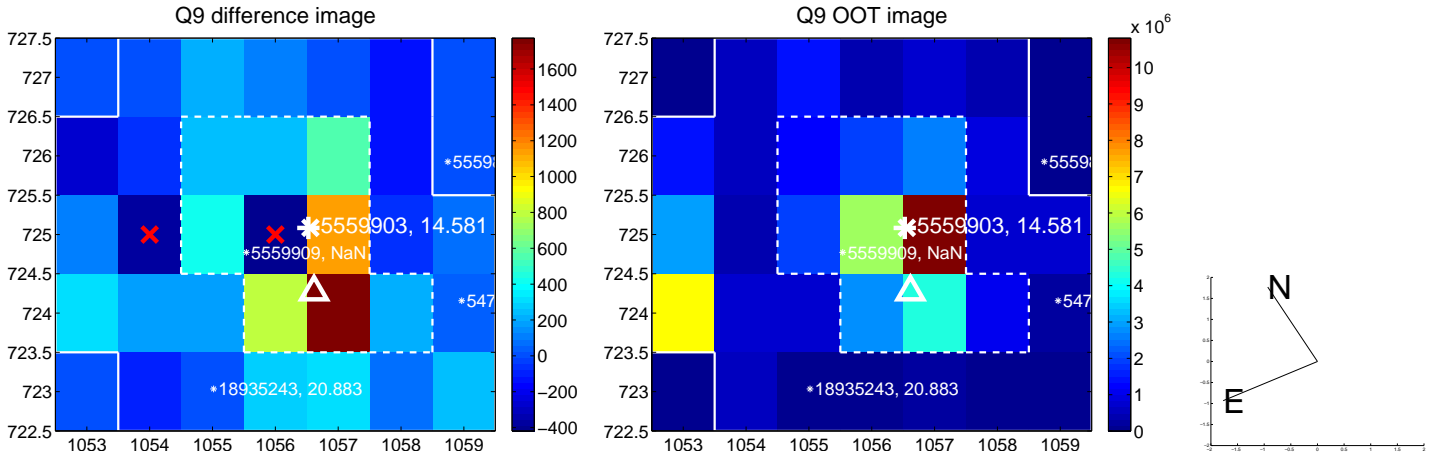
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



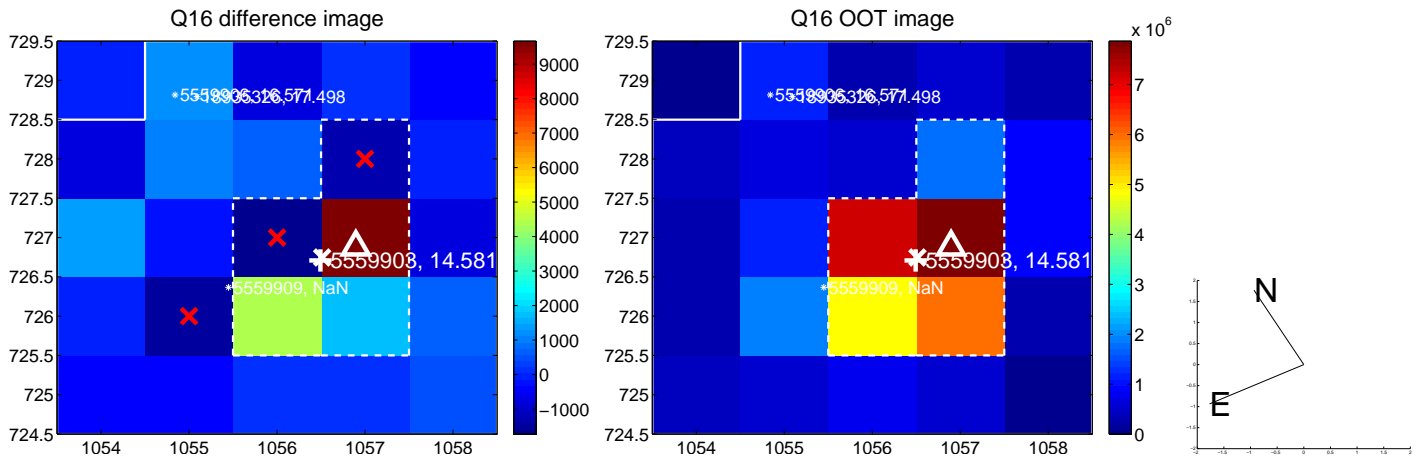
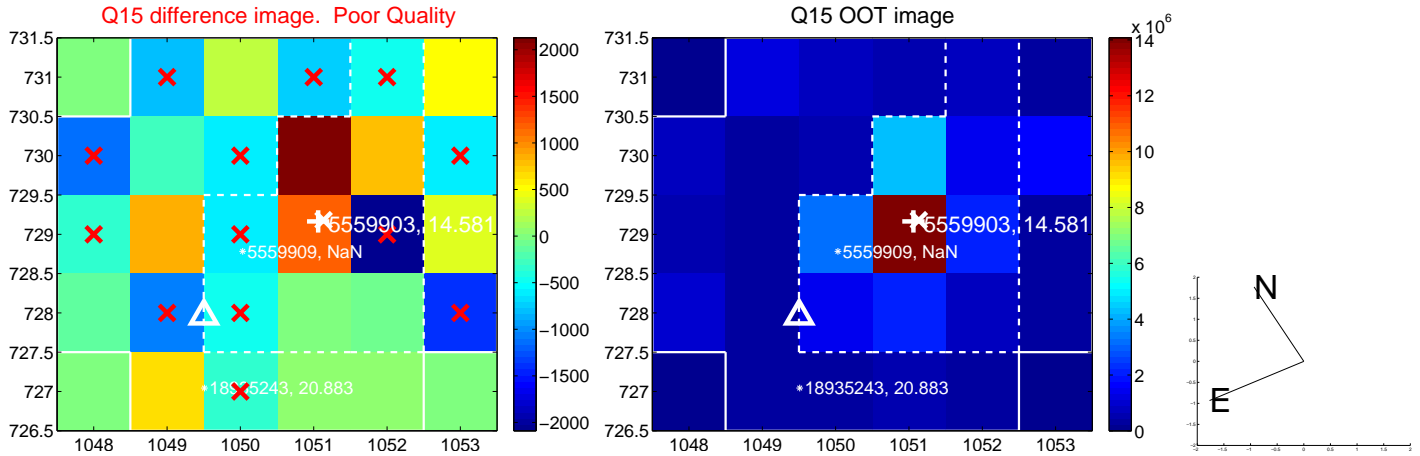
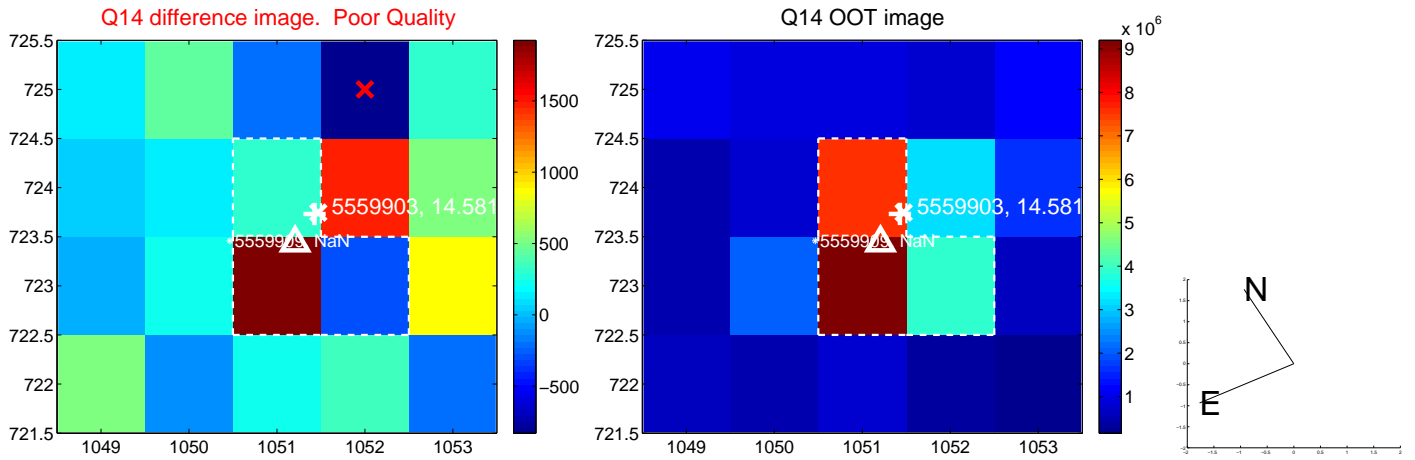
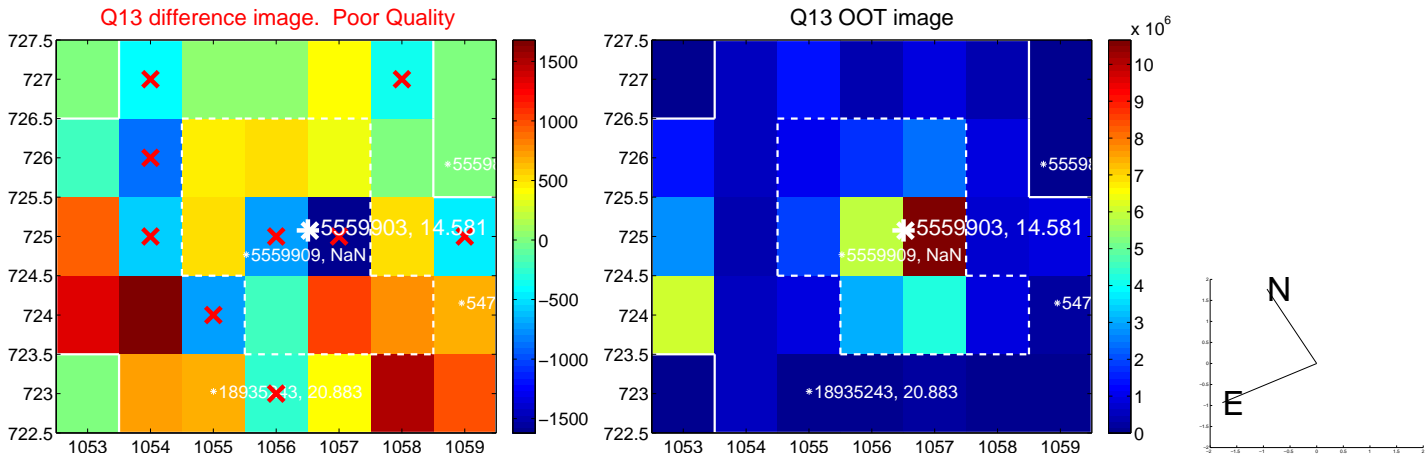
white \times : KIC target position; $+$: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



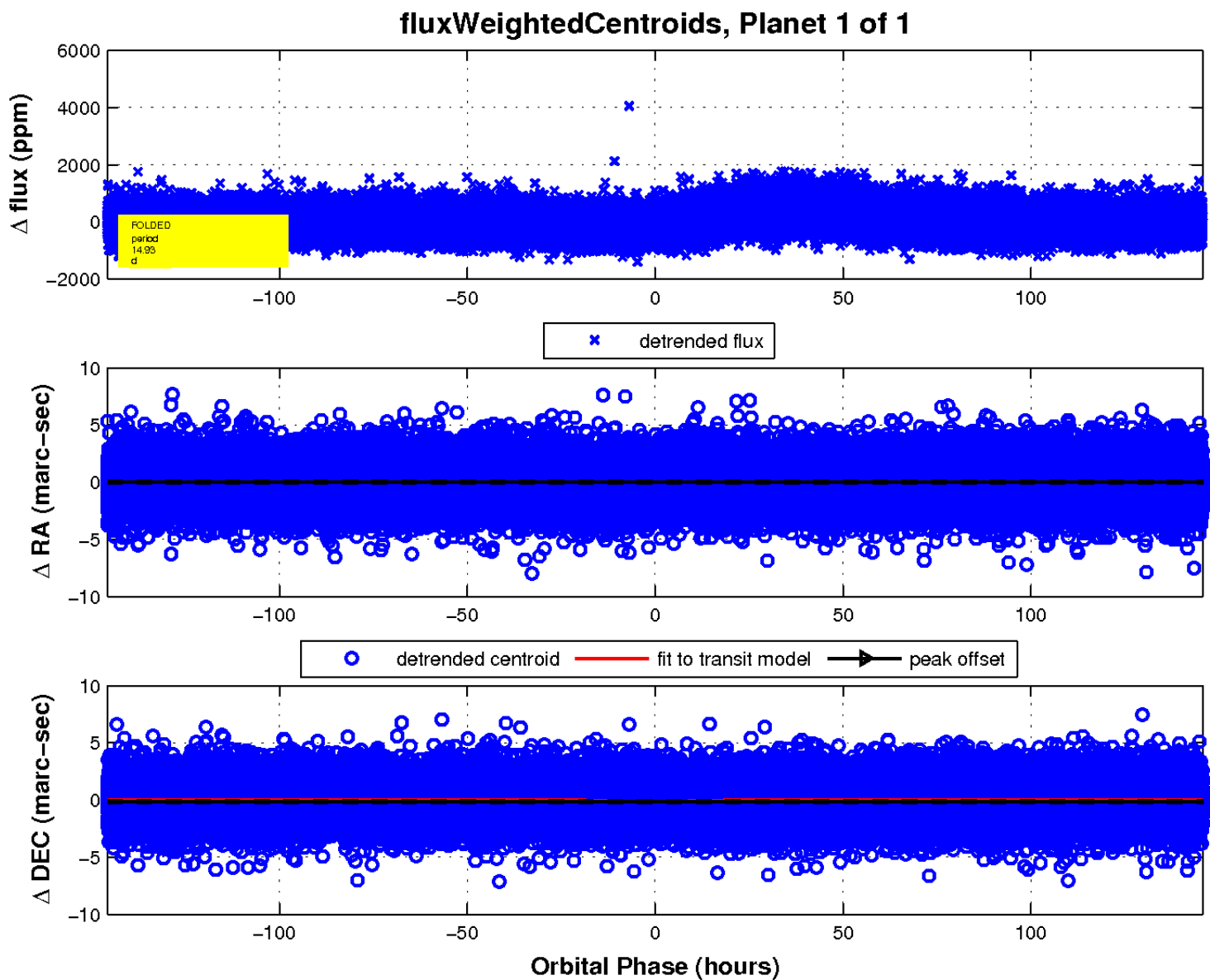
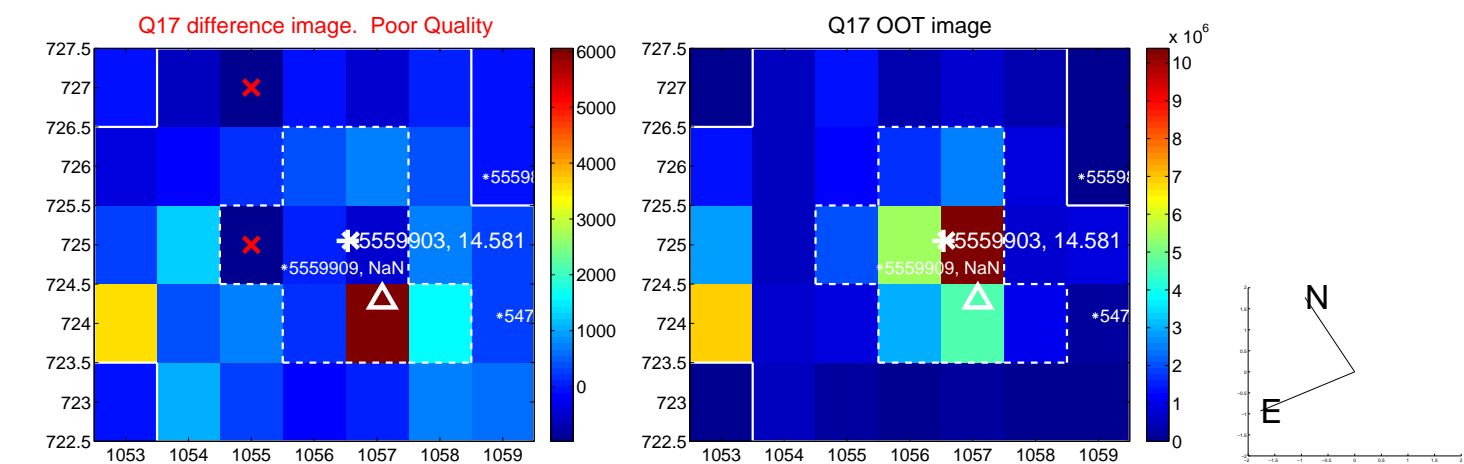
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UKIRT Image

