

KIC 009549688

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})
009549688-01	OBS	No	0.659584	131.875295	5.1	4.088	7.8	4.0	2.56	6230	0.59	33822.95

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
009549688-01	OBS	FP	0.00	1	0	0	0	LPP_DV—LPP_ALT

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

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

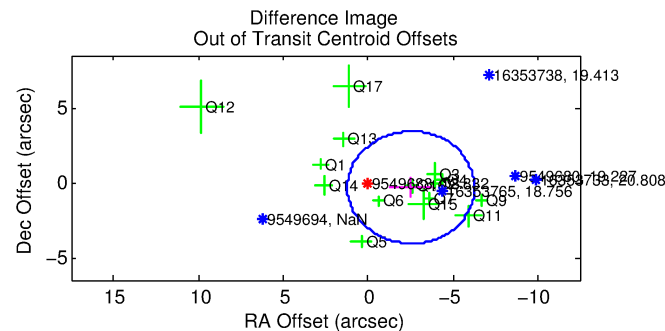
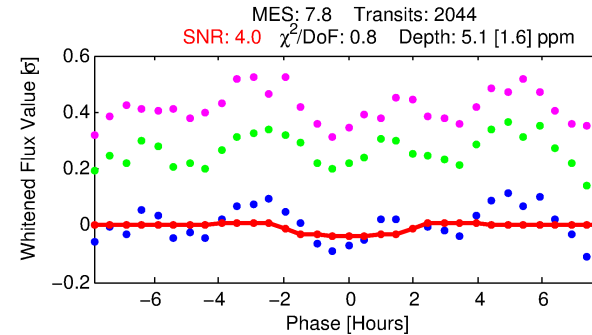
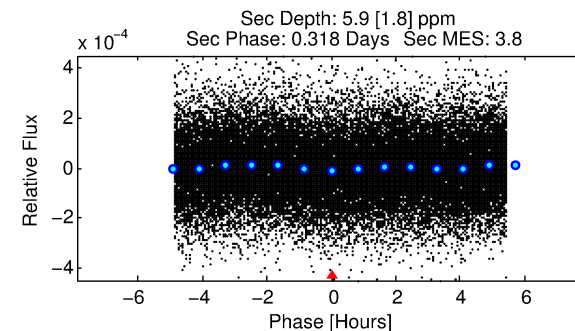
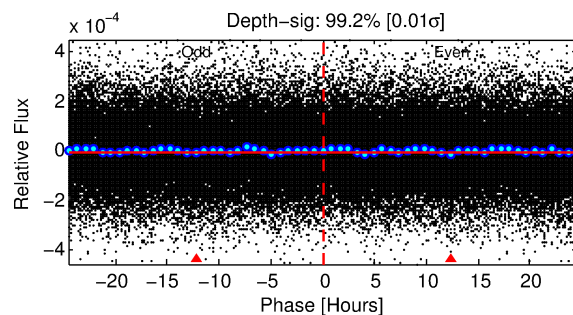
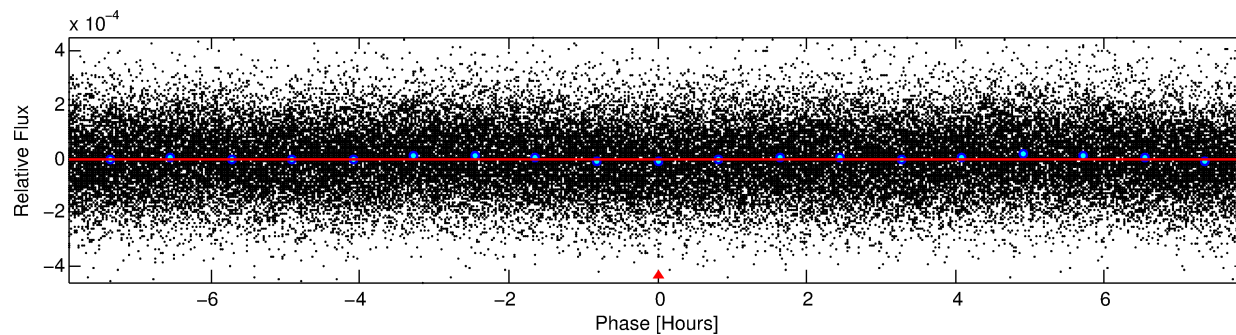
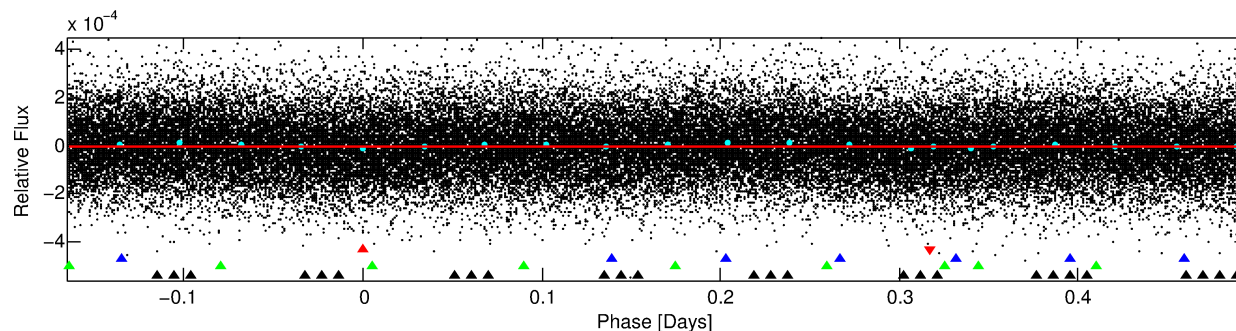
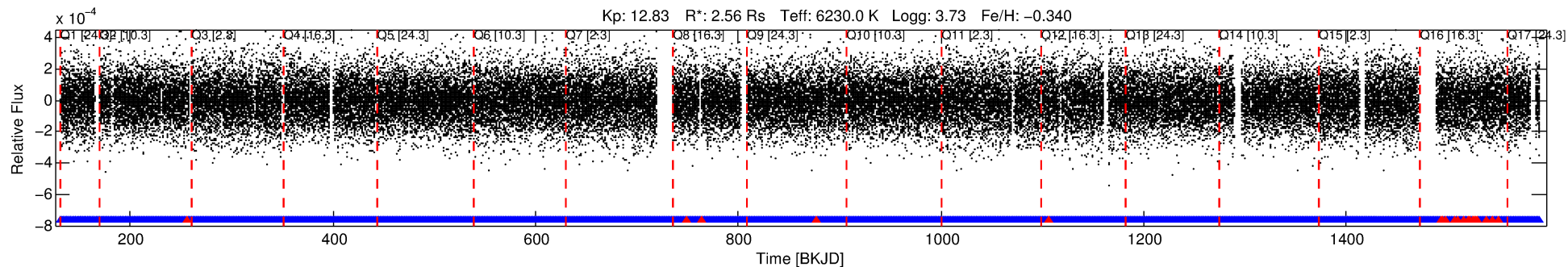
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 009549688-01

No Significant Match Found

DV One-Page Summary

KIC: 9549688 Candidate: 1 of 4 Period: 0.660 d



DV Fit Results:

Period = 0.65958 [0.00003] d
Epoch = 131.8753 [0.0103] BKJD
Rp/R* = 0.0021 [0.0033]
a/R* = 1.35 [4.92]
b = 0.30 [24.46]
Seff = 33822.95 [19354.09]
Teq = 3458 [495] K
Rp = 0.59 [0.94] Re
a = 0.0162 [0.0057] AU
Ag = 2.49 [7.96] [0.19 σ]
Teffp = 6718 [5287] K [0.61 σ]

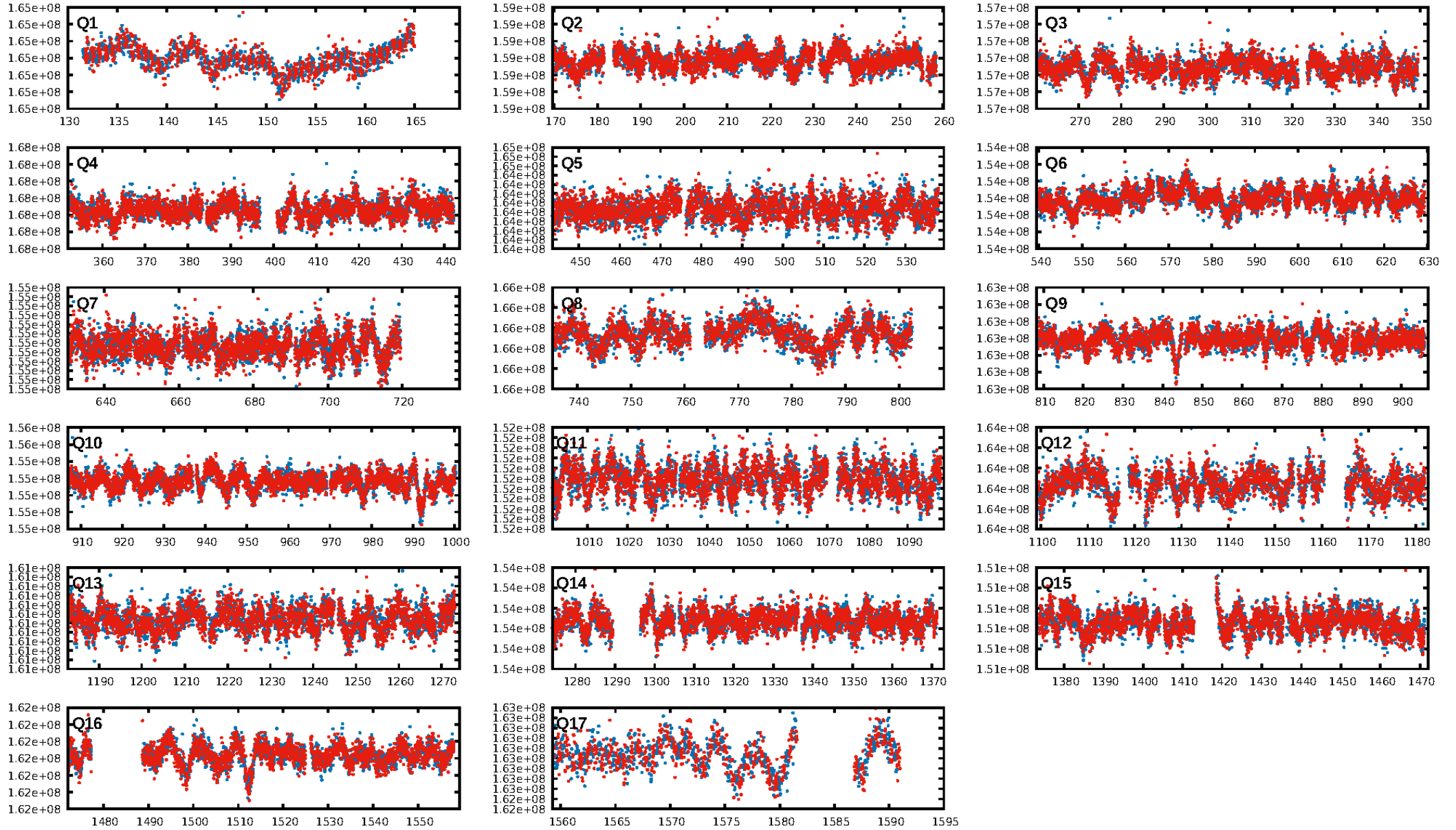
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: 100.0% [233.97 σ]
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 4.18e-09
RollingBand-fgt: 0.99 [1930/1951]
GhostDiagnostic-chr: 2.262
Centroid-sig: 0.5%
Centroid-so: 8.003 arcsec [2.16 σ]
OotOffset-rm: 2.558 arcsec [2.05 σ]
OotOffset-st: 2/4/4/5 [15]
KicOffset-rm: 2.464 arcsec [2.21 σ]
KicOffset-st: 2/4/4/5 [15]
DiffImageQuality-fgm: 0.47 [7/15]
DiffImageOverlap-fno: 1.00 [17/17]

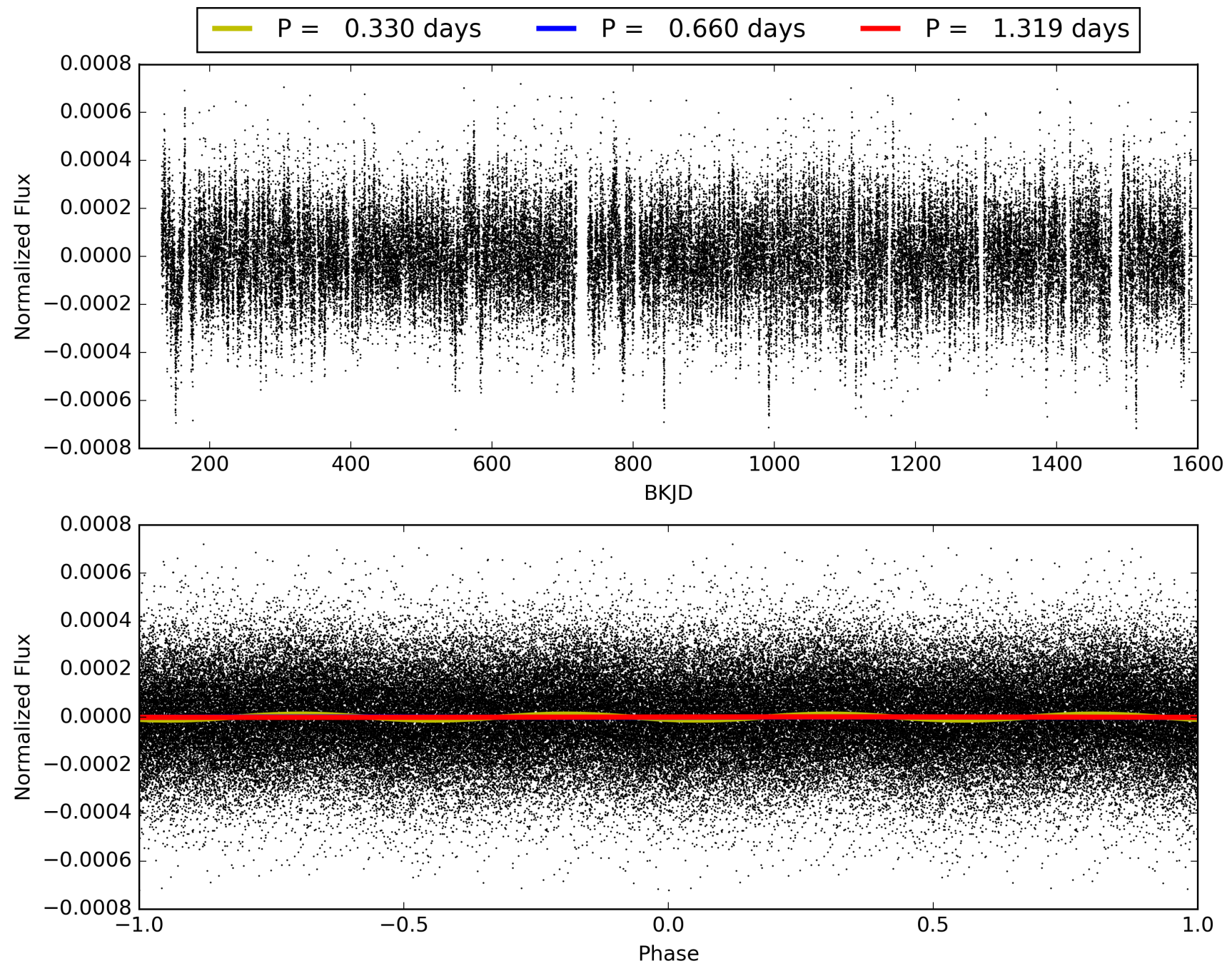
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 31-Jan-2016 16:16:23 Z

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

TCE 009549688-01, PDC Light Curves

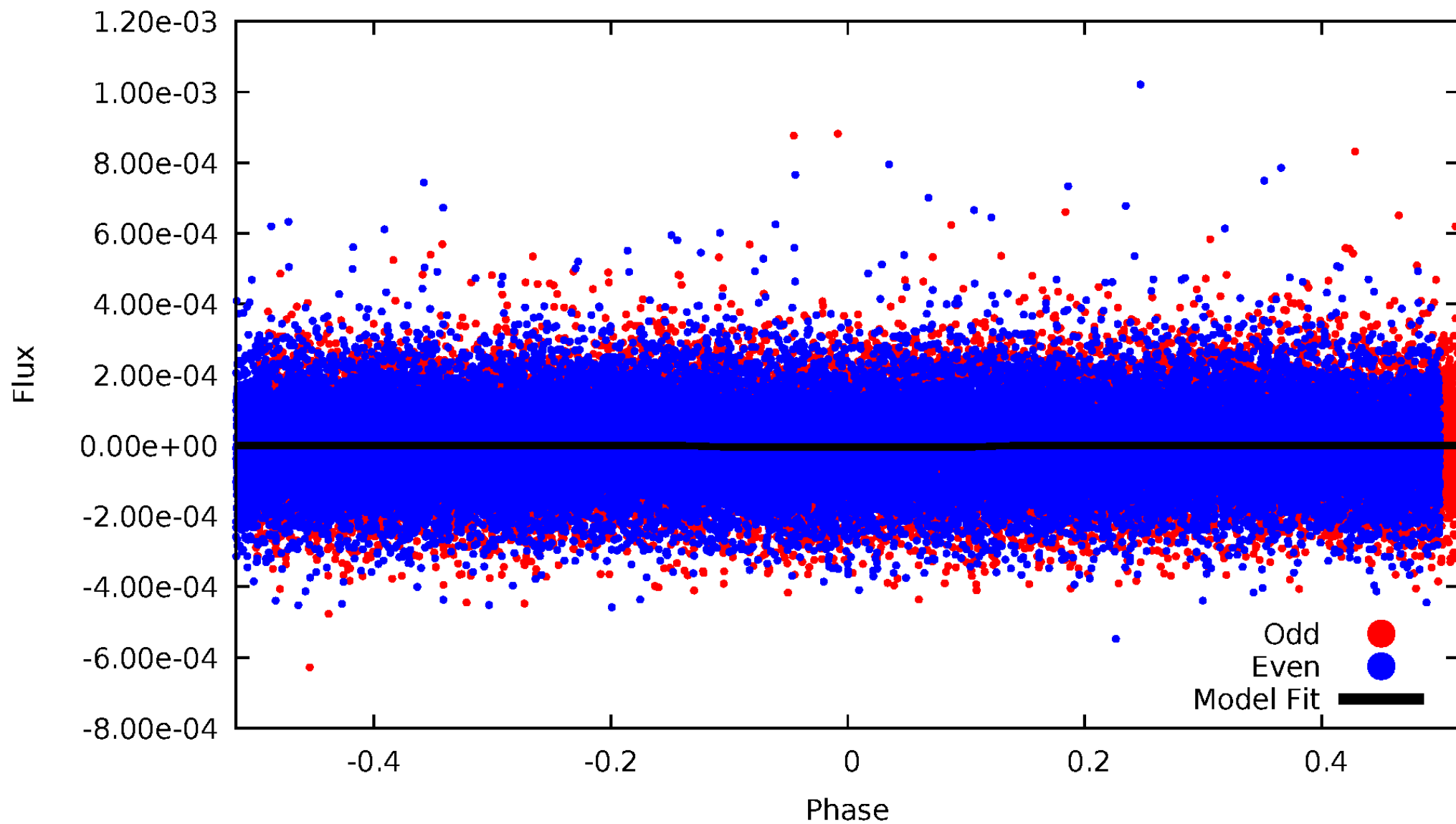


TCE 009549688-01



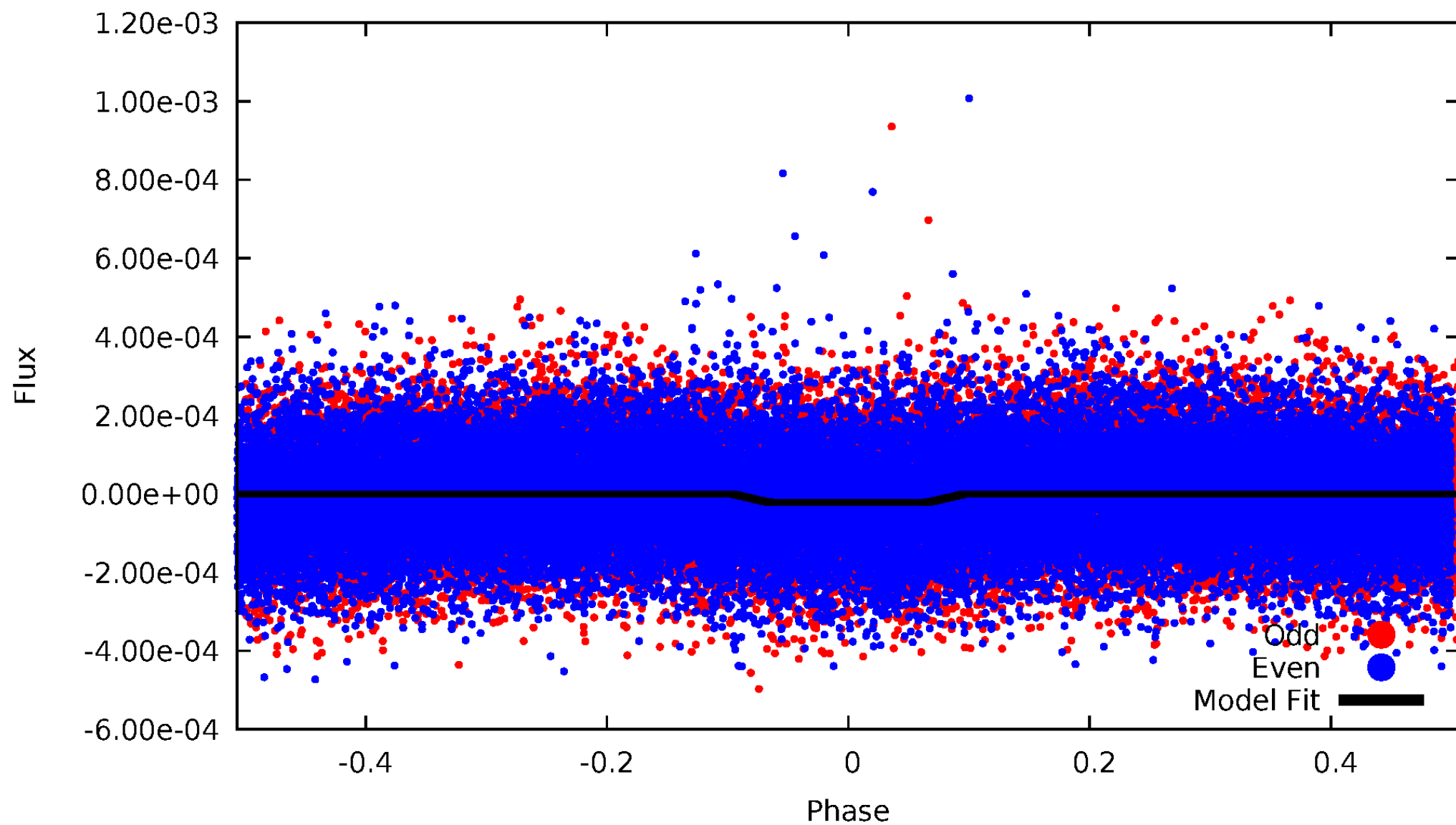
DV Odd/Even

TCE 009549688-01



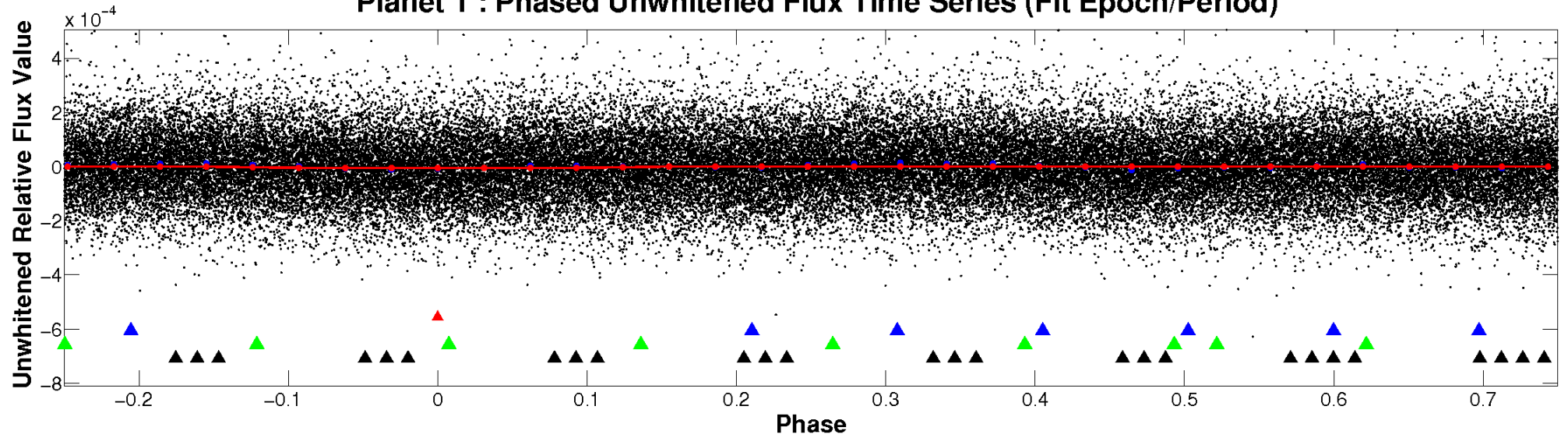
ALT Odd/Even

TCE 009549688-01

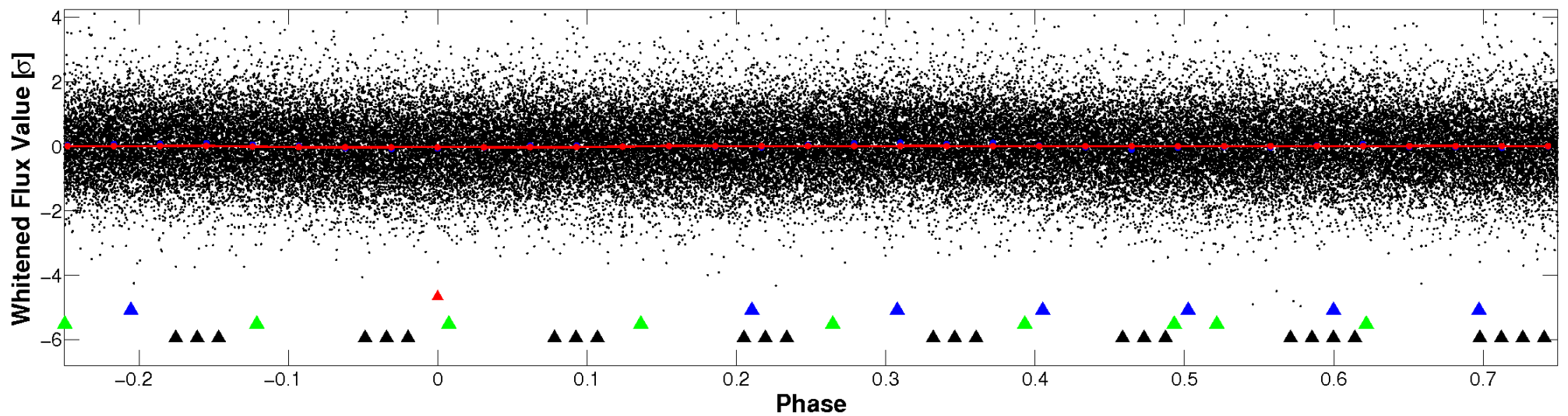


Non-Whitened Vs. Whitened Light Curve

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

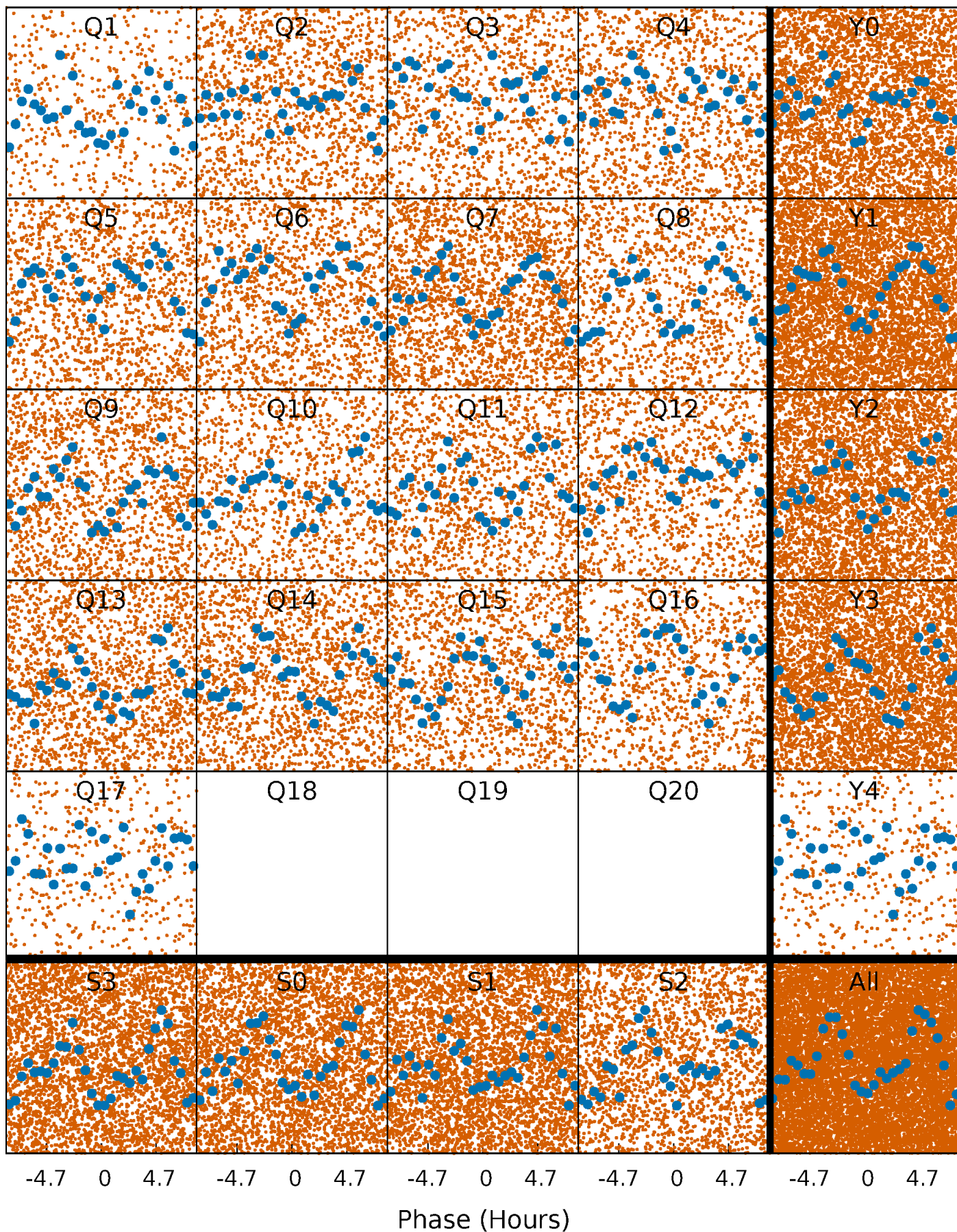


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



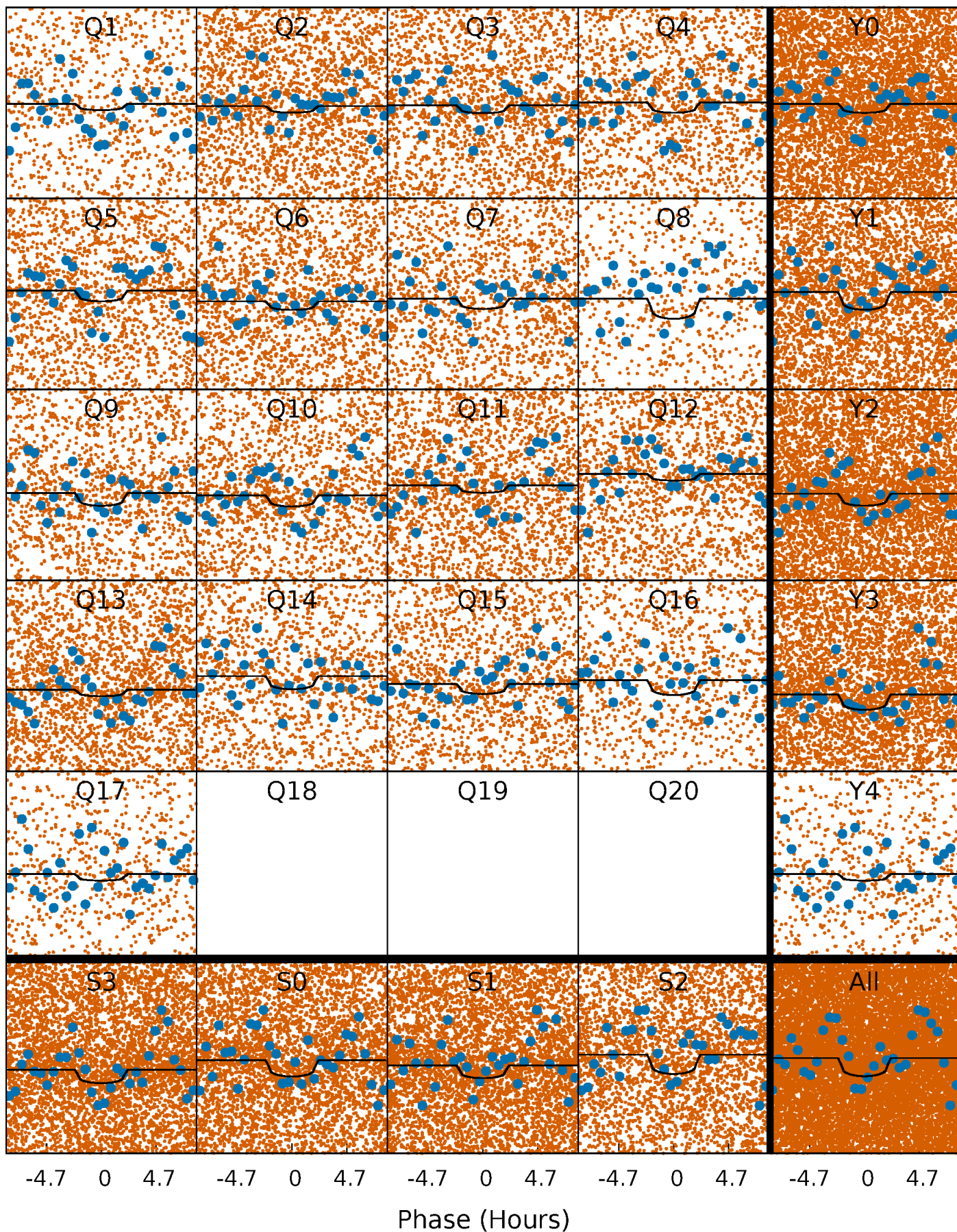
PDC Quarter-Phased Transit Curves

TCE 009549688-01 P= 0.659584 Days $T_0=131.875295$ (BKJD)



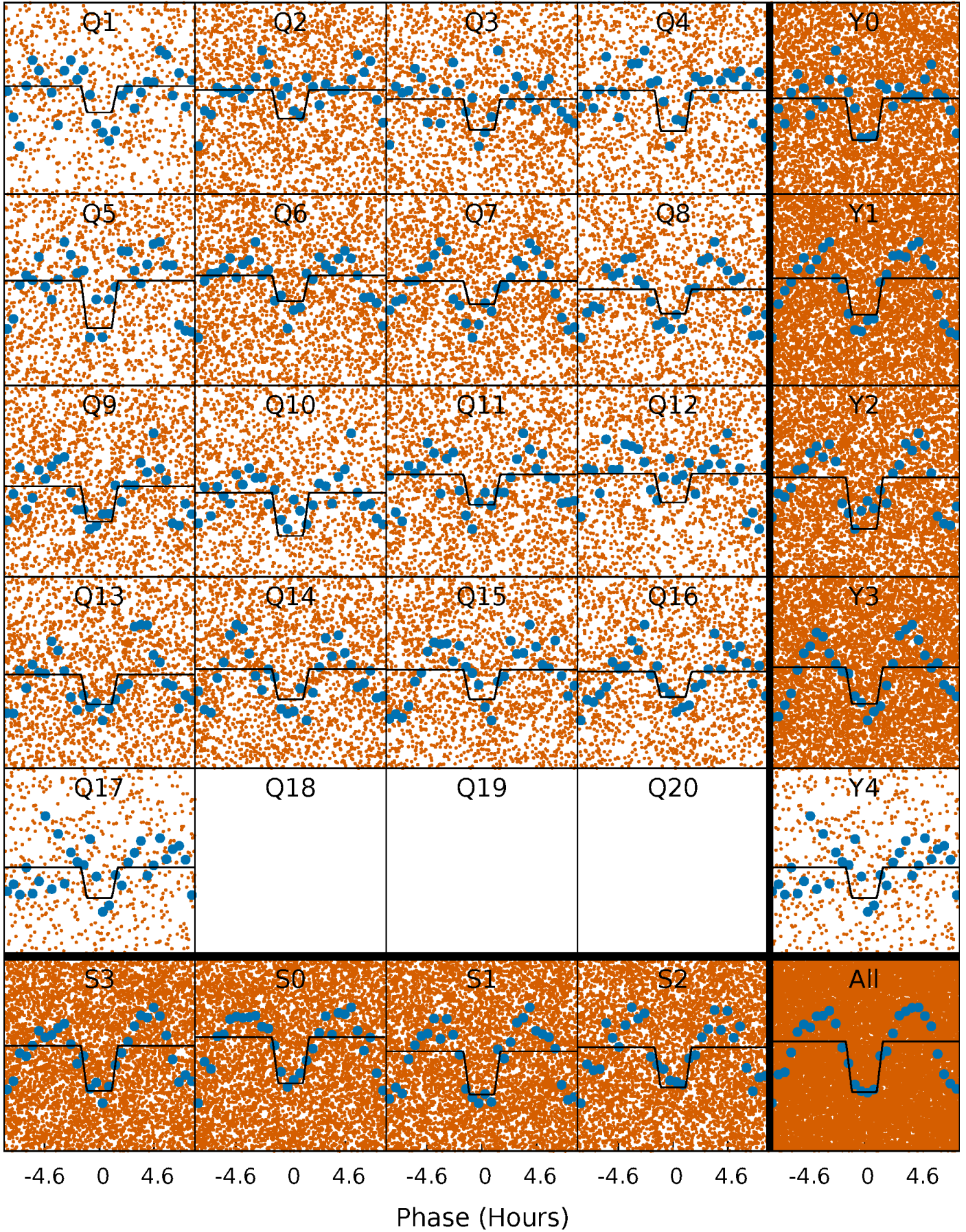
DV Quarter-Phased Transit Curves

TCE 009549688-01 P= 0.659584 Days $T_0=131.875295$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

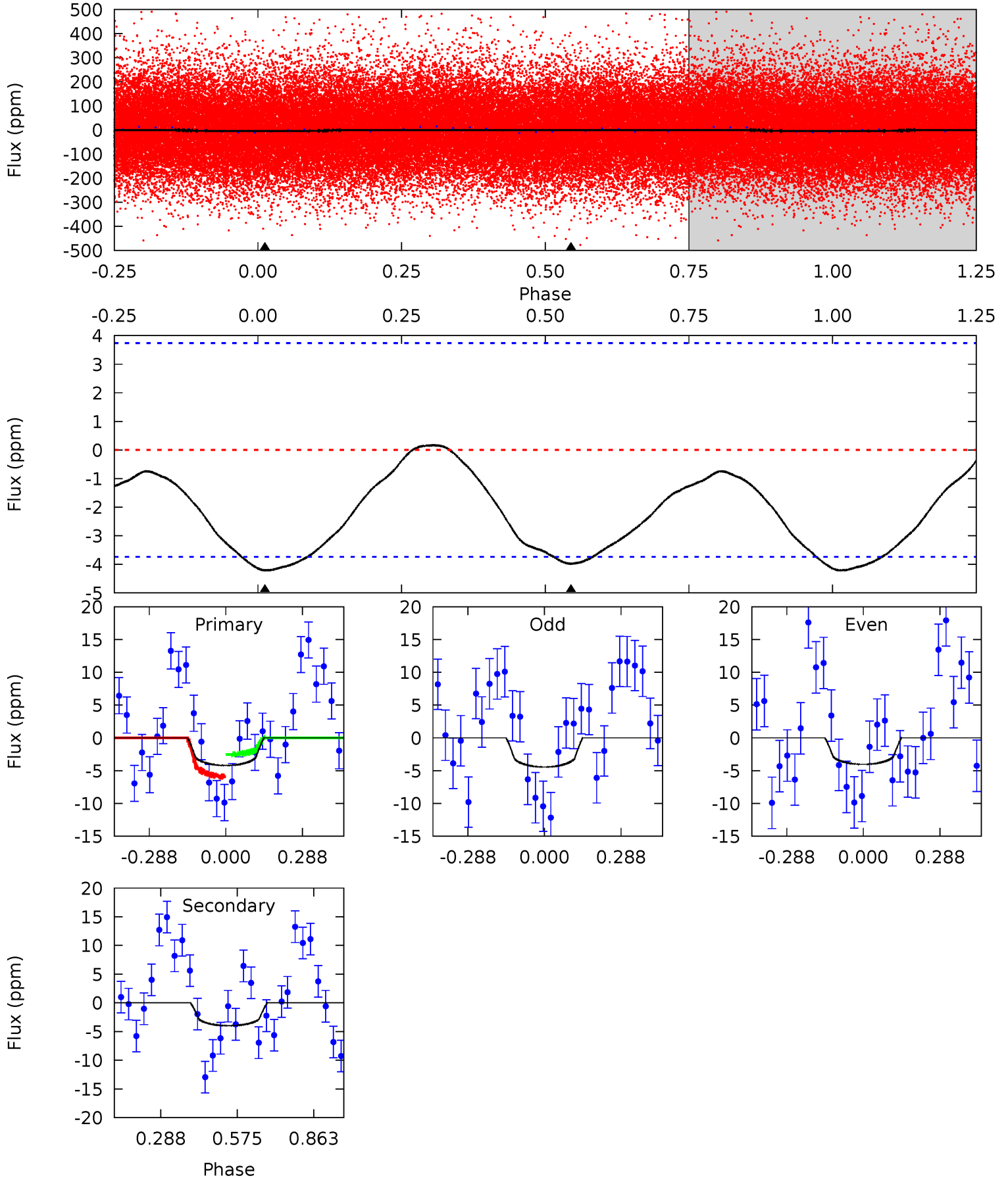
TCE 009549688-01 P= 0.659655 Days $T_0=131.827951$ (BKJD)



DV Model-Shift Uniqueness Test

009549688-01, P = 0.659584 Days, E = 131.215711 Days

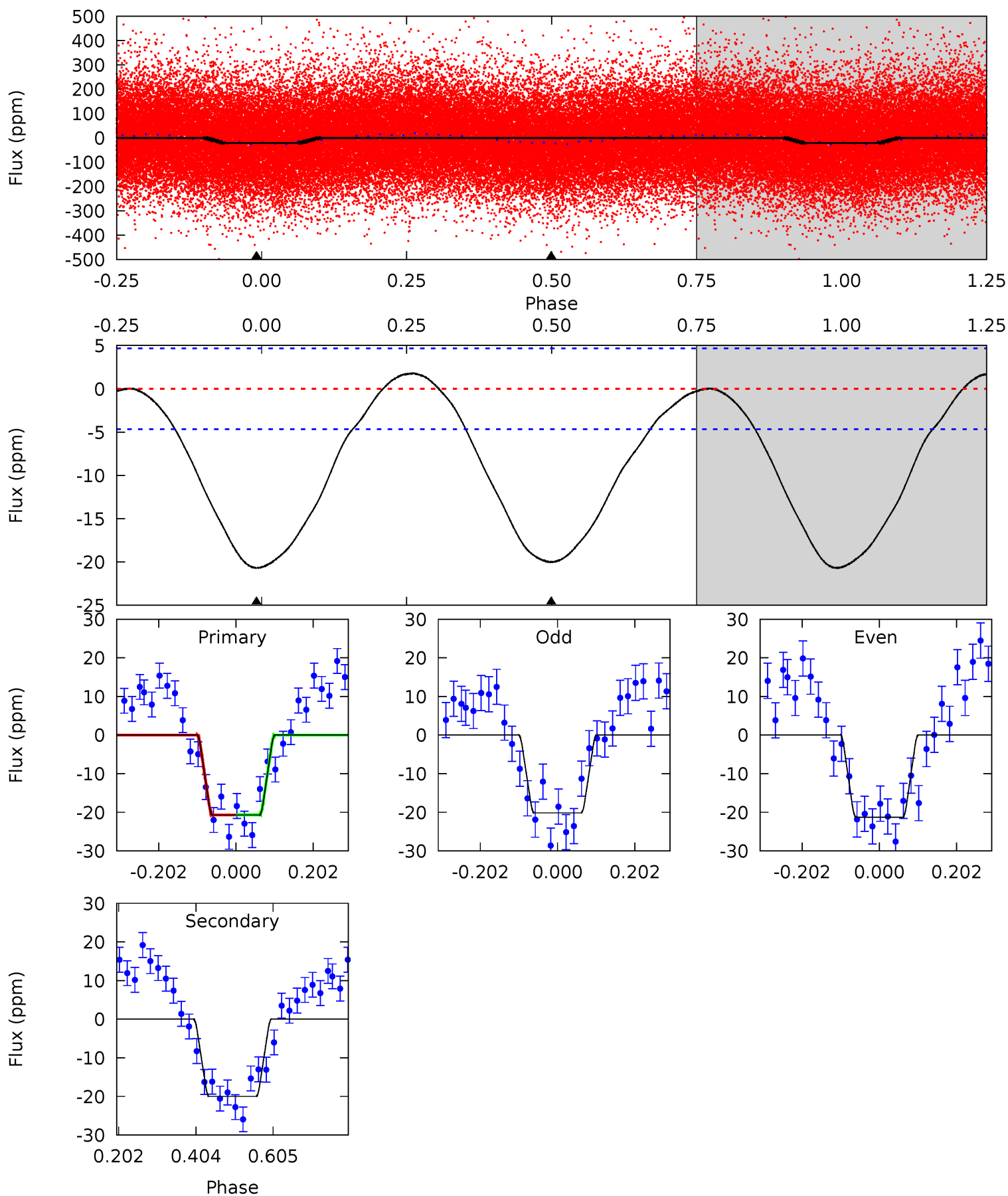
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
4.89	4.63	0	0	4.34	1.06	0.51	4.89	4.89	4.63	4.63	0.24	0.98	0.04	1.94



Alt Model-Shift Uniqueness Test

009549688-01, P = 0.659655 Days, E = 131.168296 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
19.6	18.9	0	0	4.42	1.28	1.08	19.6	19.6	18.9	18.9	0.52	0.94	0.08	0.02



Stellar Parameters For KIC 009549688

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6230^{+171}_{-171}	$3.735^{+0.328}_{-0.103}$	$-0.340^{+0.350}_{-0.300}$	$2.565^{+0.410}_{-0.957}$	$1.305^{+0.233}_{-0.285}$	$0.109^{+0.244}_{-0.036}$
	+3%/-3%	+9%/-3%	+103%/-88%	+16%/-37%	+18%/-22%	+224%/-33%
Source	PHO1	FLK73	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 009549688-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-4 ± 1	$0.86^{+0.77}_{-0.56}$	4743^{+286}_{-467}	4429^{+3713}_{-7823}	$0.768^{+5.316}_{-0.549}$
Alt.	-20 ± 1	$1.25^{+0.91}_{-0.71}$	4751^{+290}_{-453}	5705^{+4015}_{-1490}	$1.939^{+8.294}_{-1.323}$

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 $A_{obs} \gg 1.0$

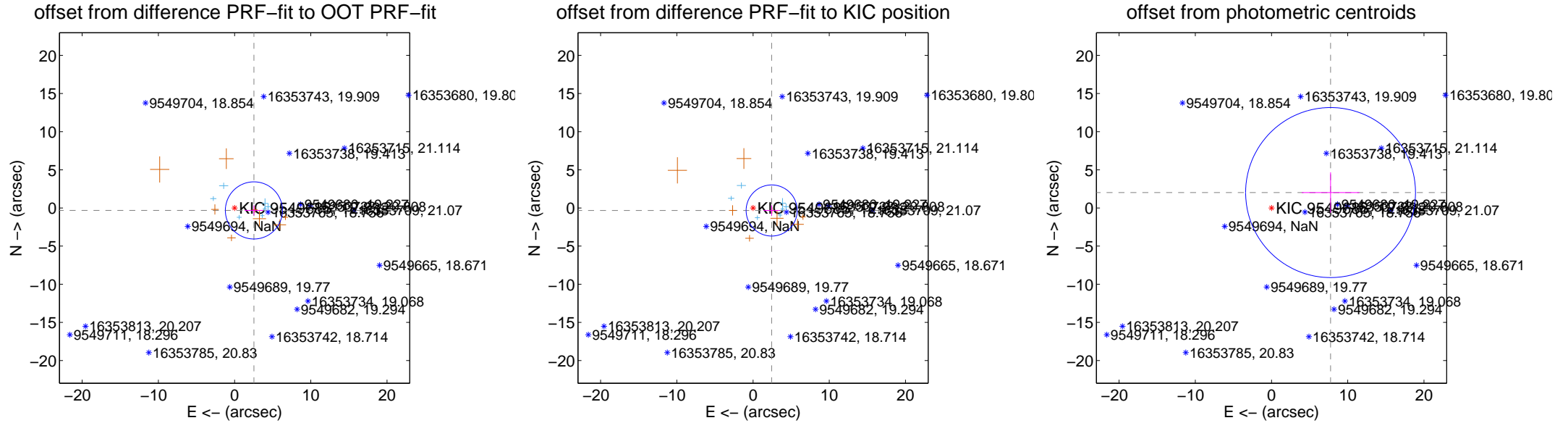
DV Centroid Data

Supplemental centroid analysis for 009549688-01. Kepler magnitude: 12.83. Transit SNR 4.02

There are 7 quarters with good PRF difference image offsets

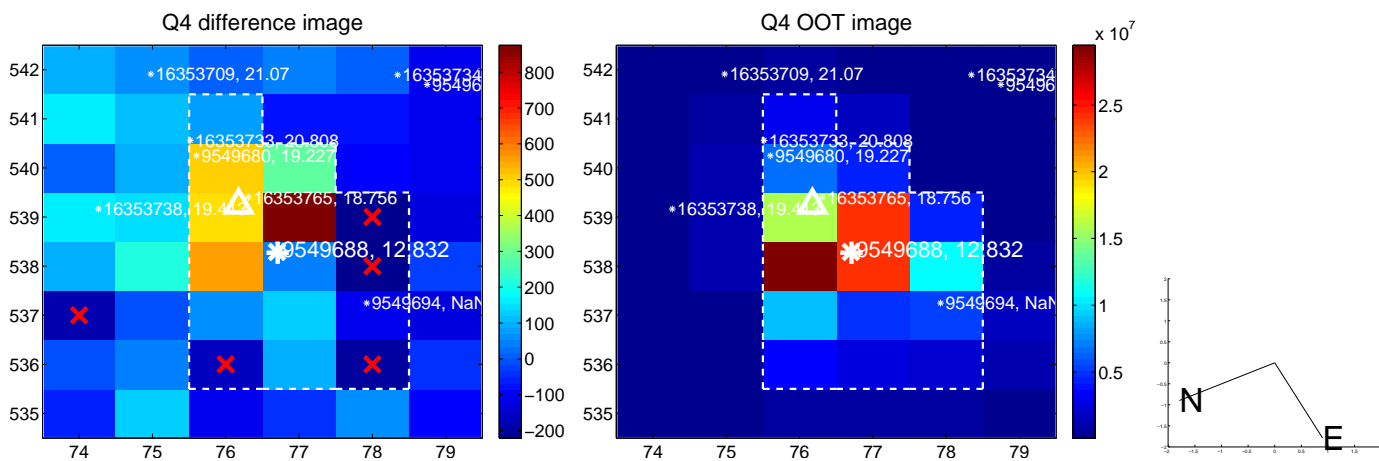
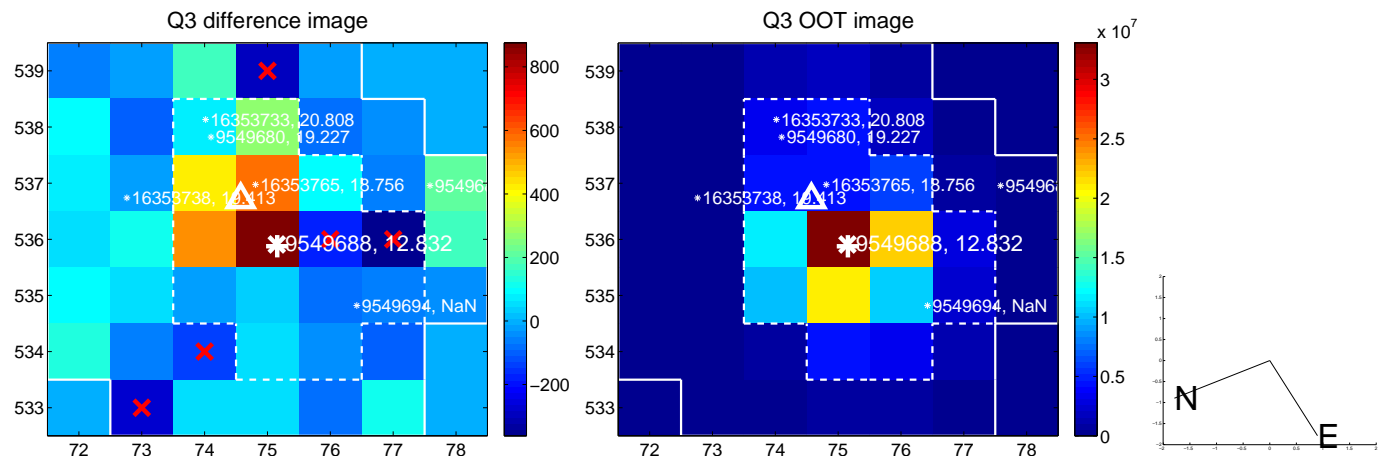
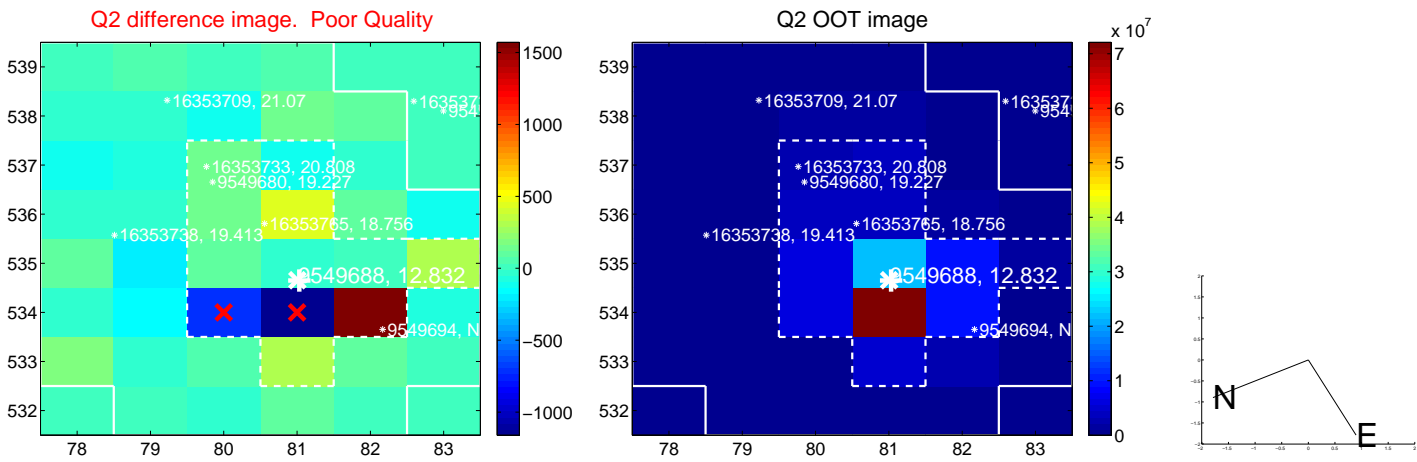
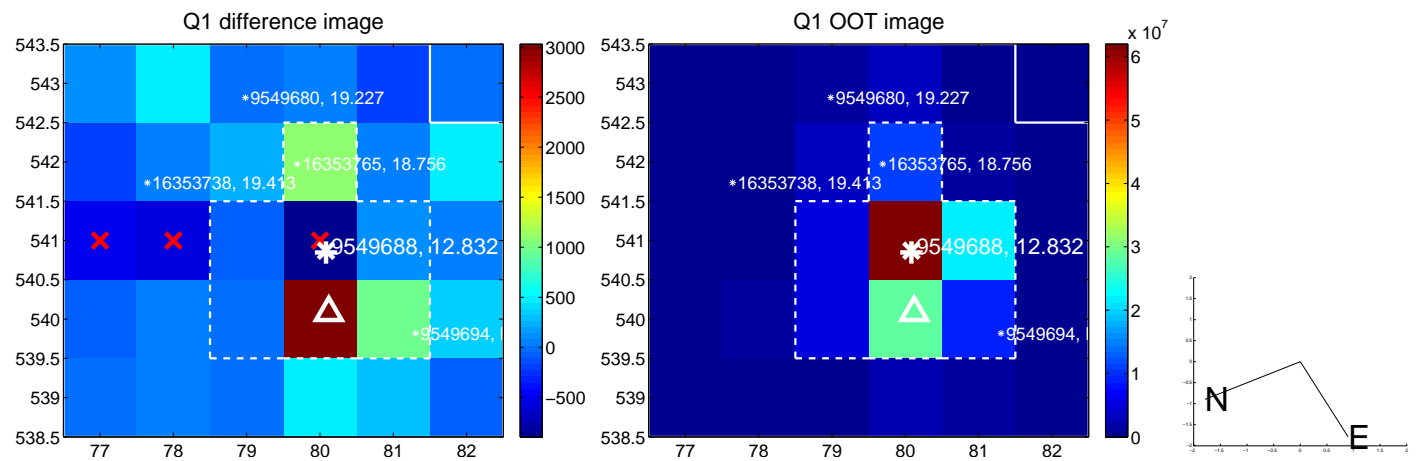
The direct PRF centroid is offset from the target star catalog position by about 0.11 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.558 ± 1.249	2.05	-2.537 ± 1.203	-0.323 ± 0.666
PRF-fit source offset from KIC position	2.464 ± 1.116	2.21	-2.442 ± 1.071	-0.332 ± 0.674
photometric centroid source offset	8.00 ± 3.71	2.16	-7.74 ± 3.77	2.02 ± 2.65

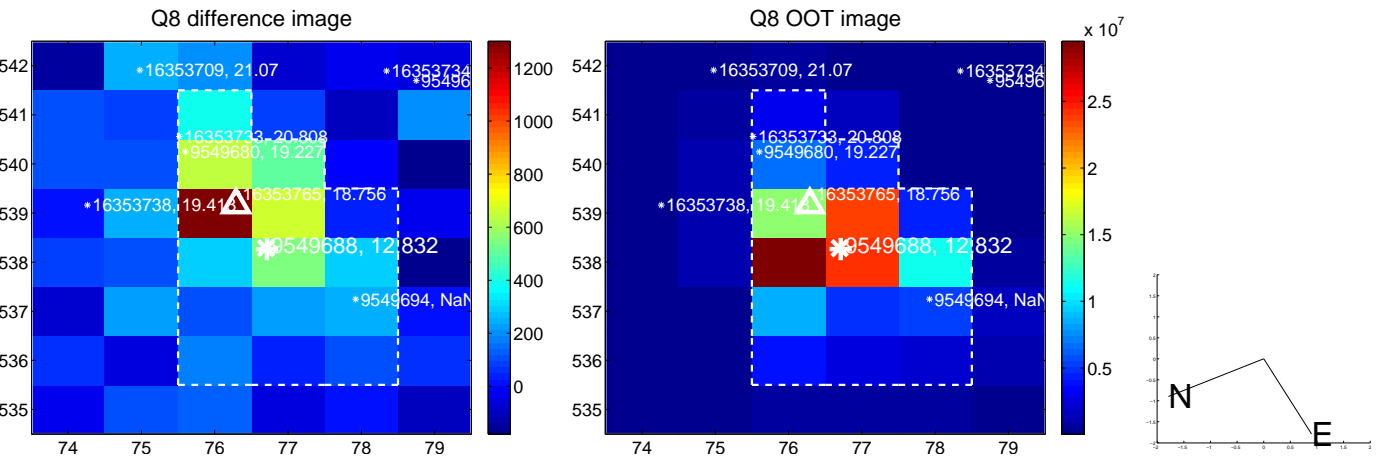
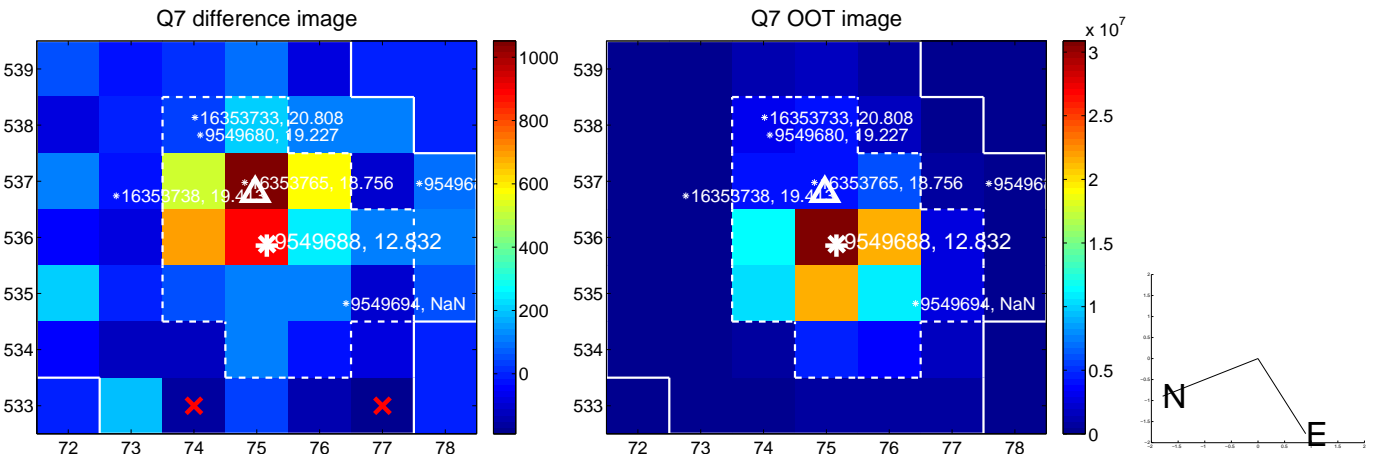
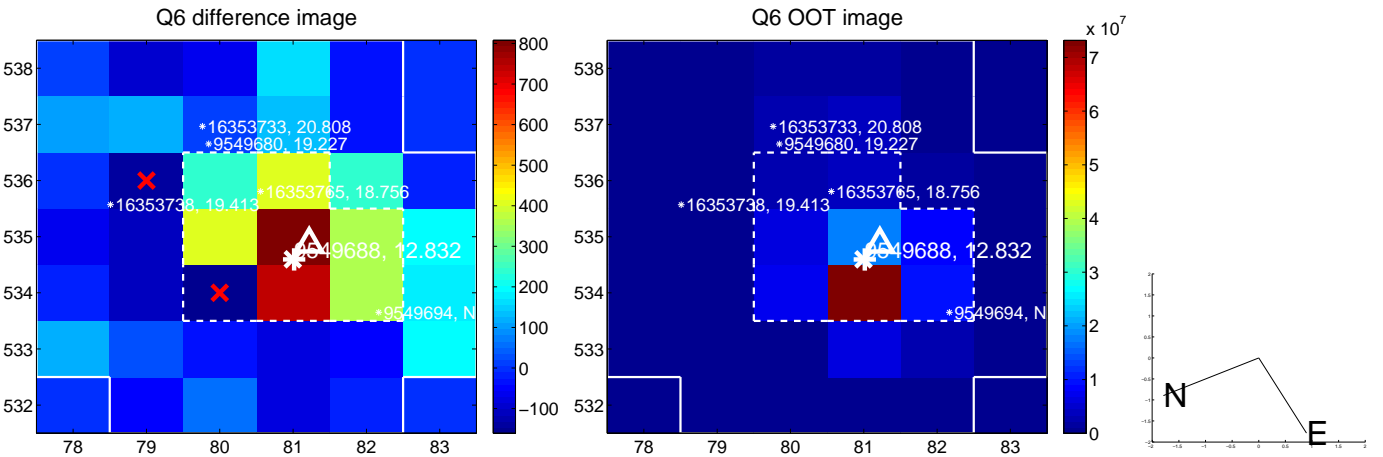
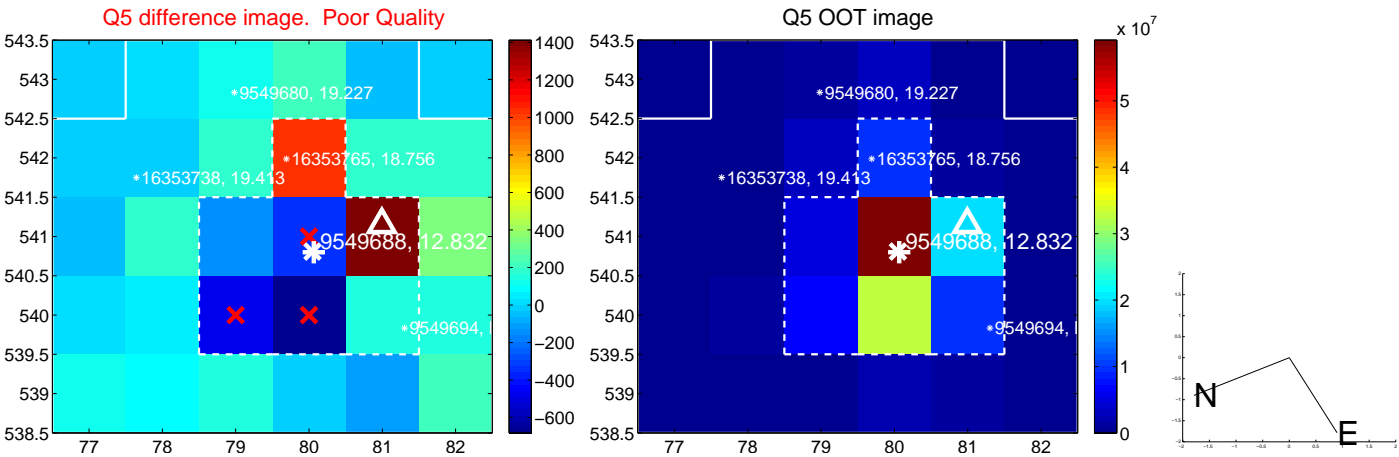


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets**; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

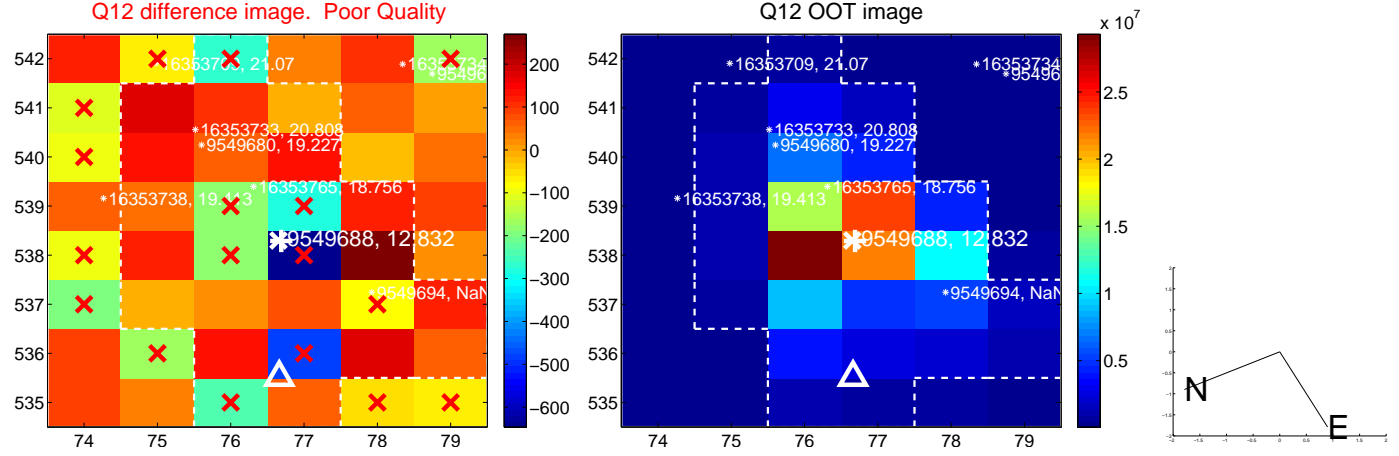
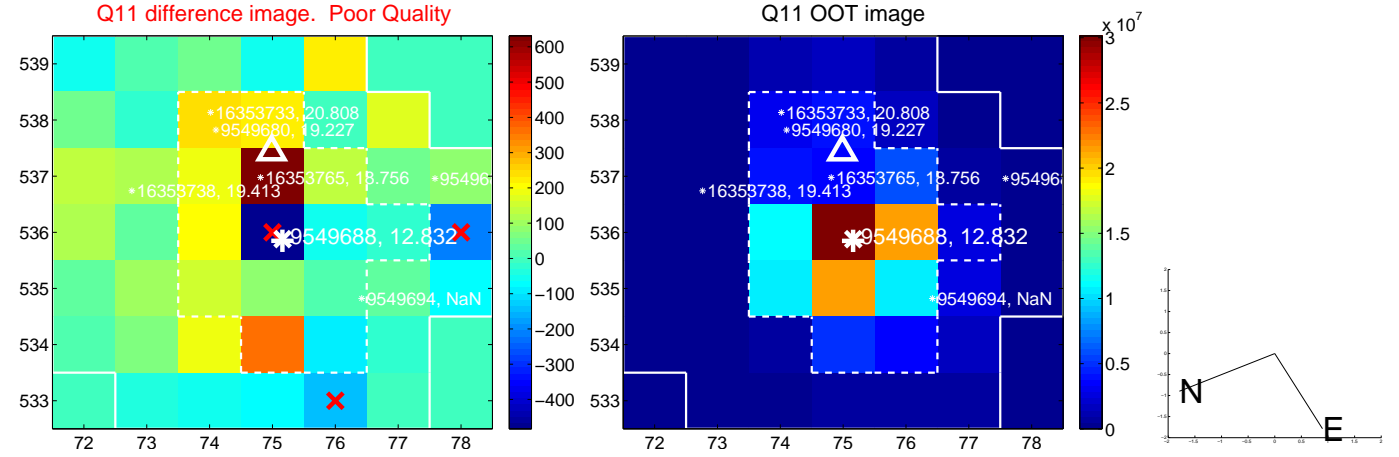
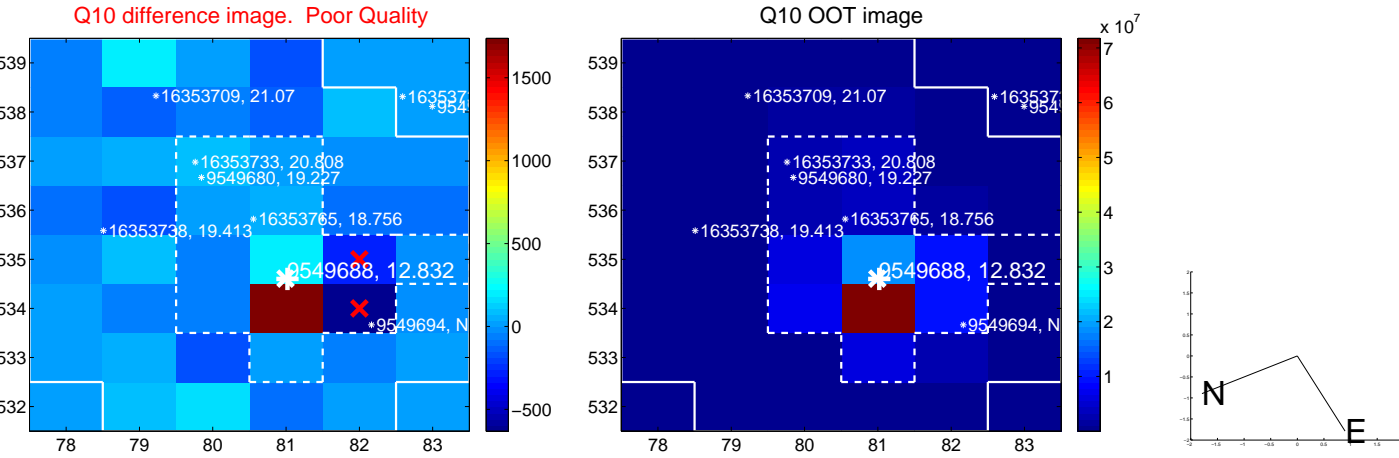
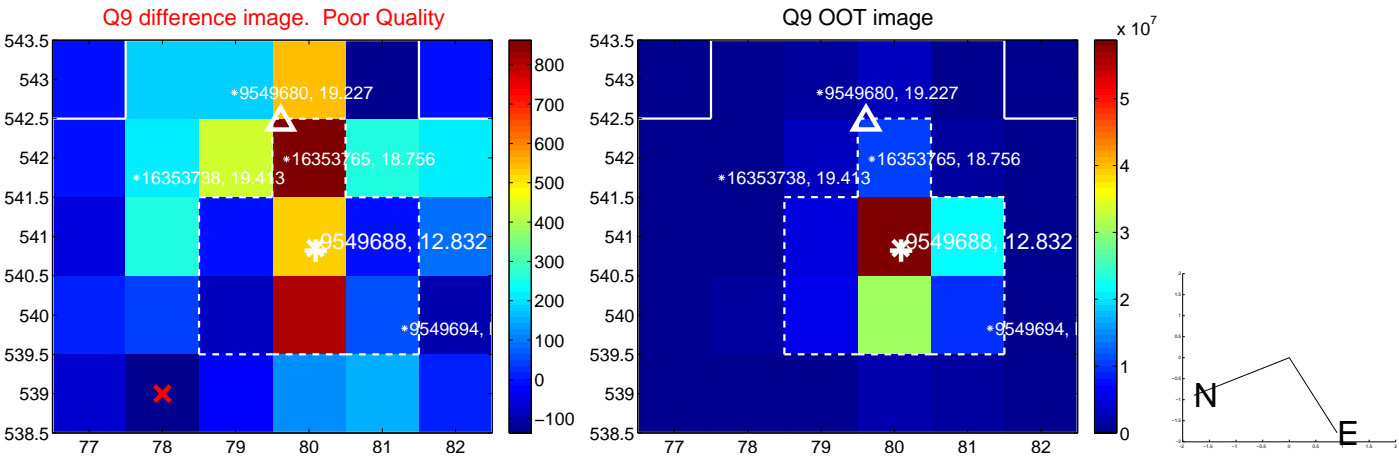
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



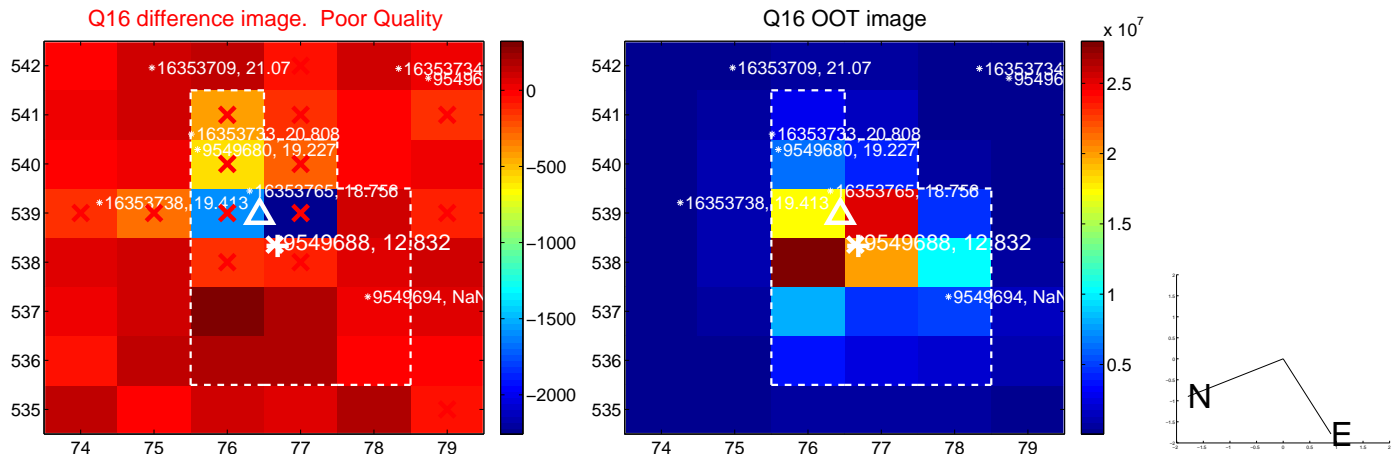
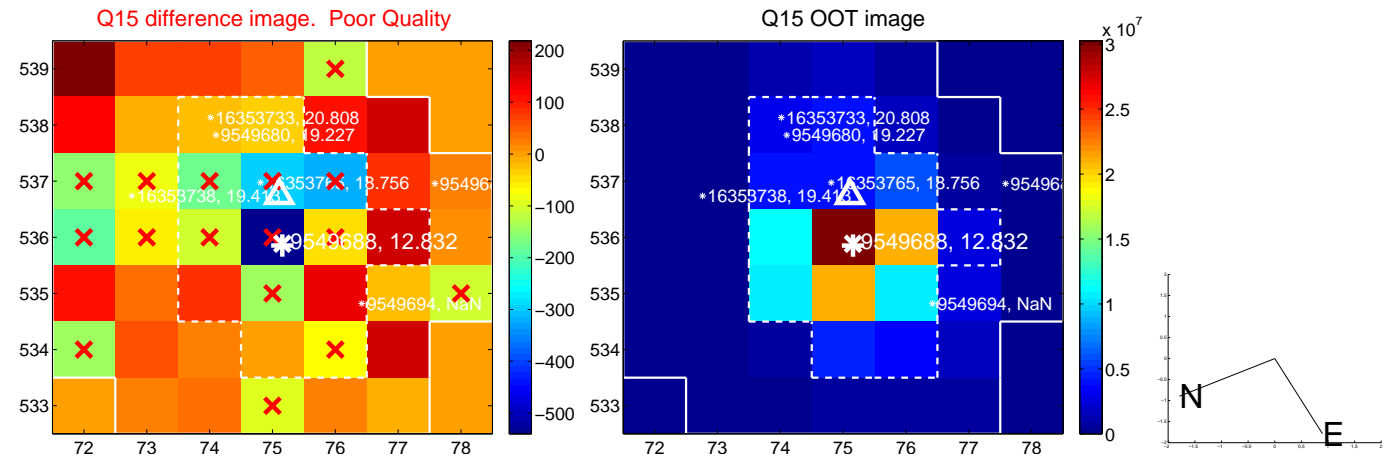
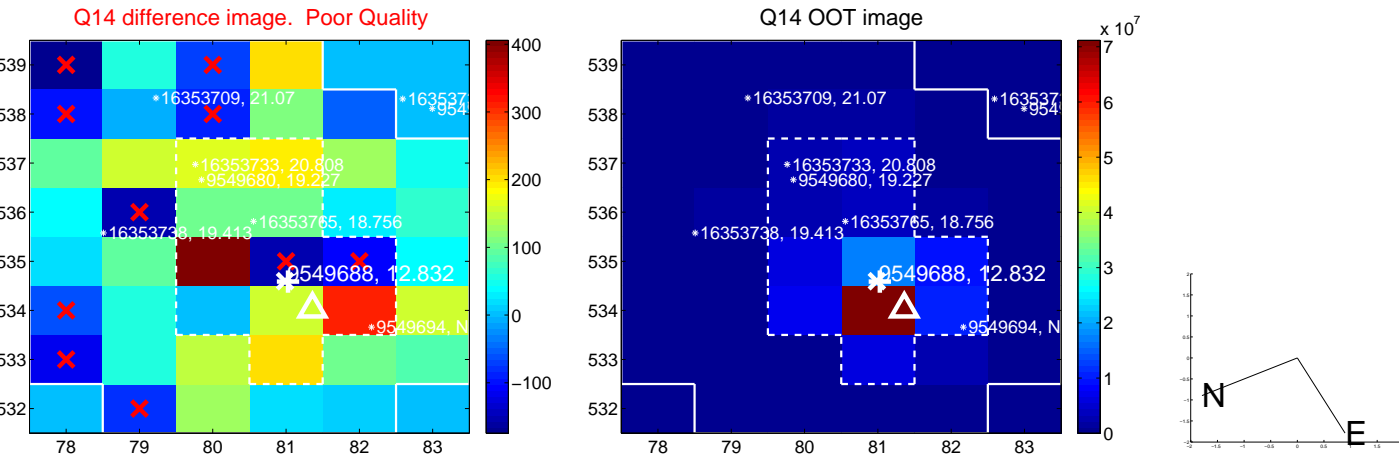
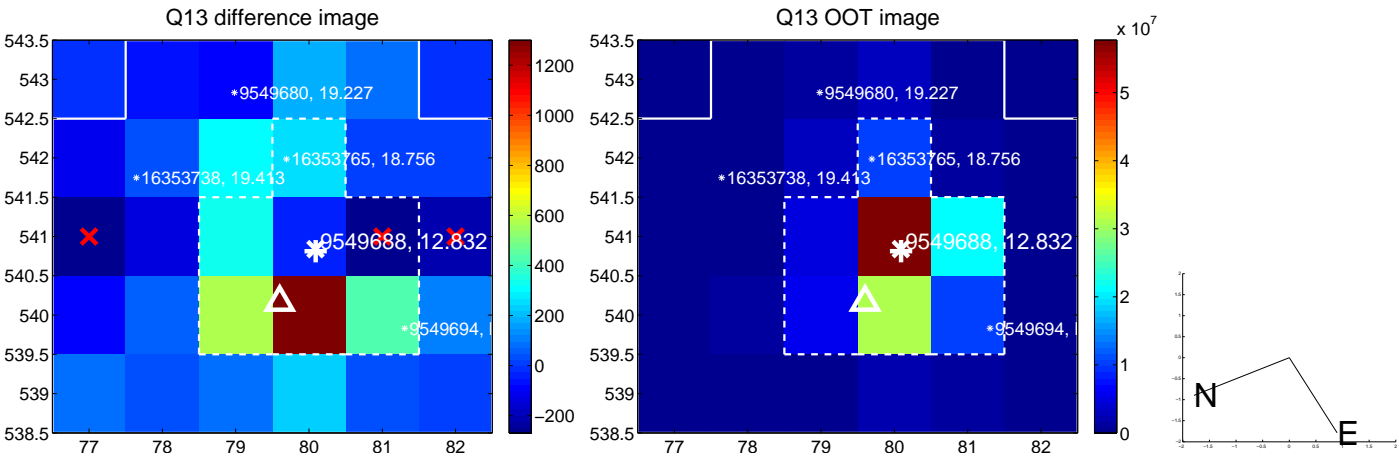
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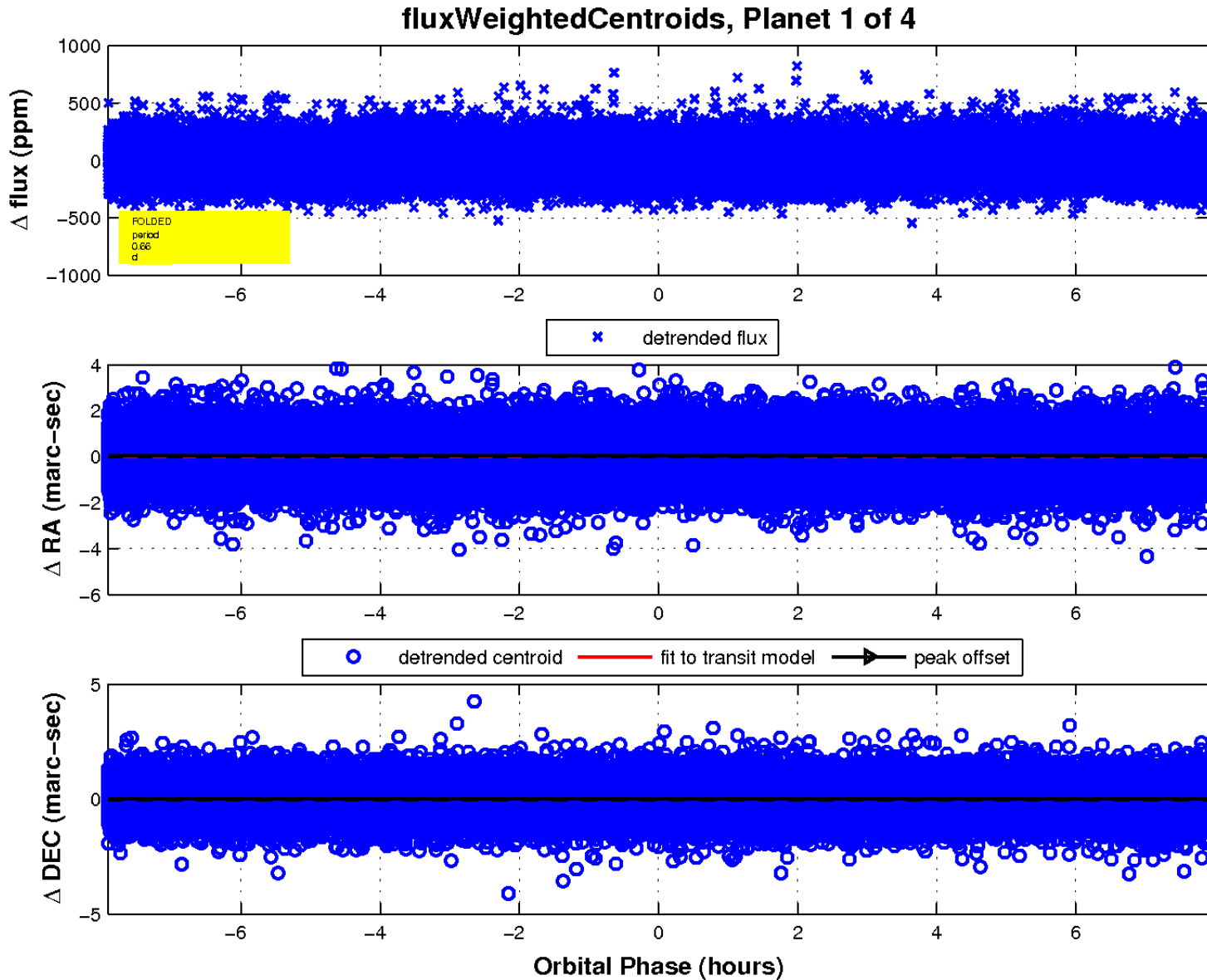
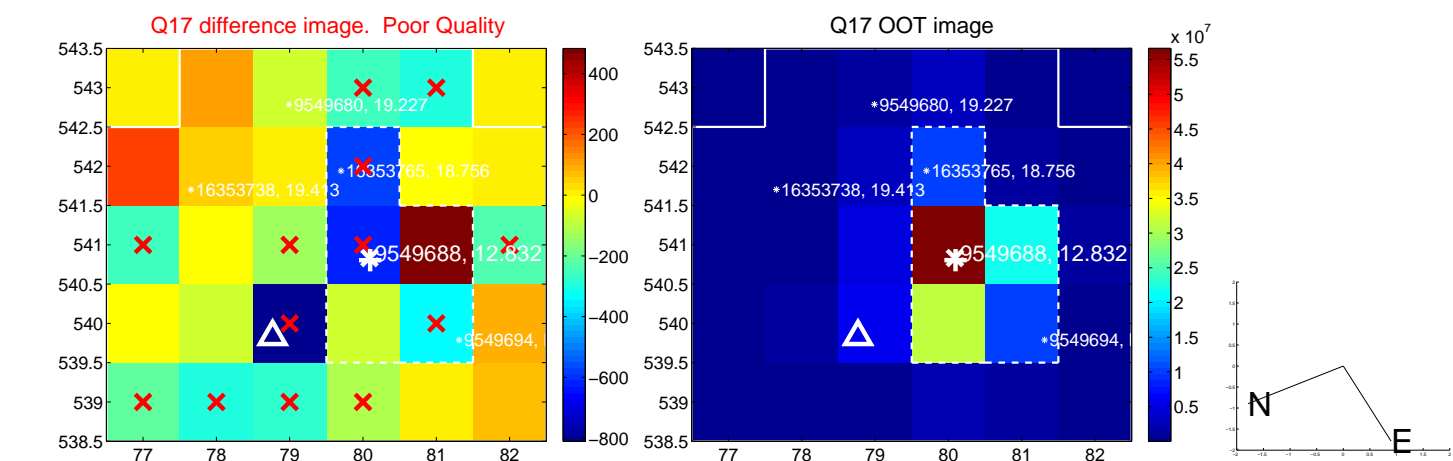
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UKIRT Image

