

KIC 011560397

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})
011560397-01	OBS	8056.01	0.527667	131.822151	21.6	1.657	11.4	10.9	2.64	6762	1.44	64089.80

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
011560397-01	OBS	FP	0.00	0	0	1	1	CENT_UNRESOLVED_OFFSET—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.

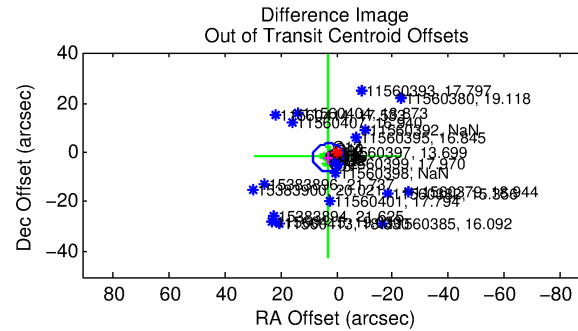
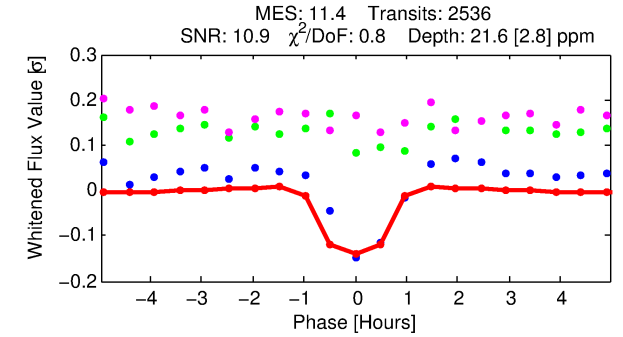
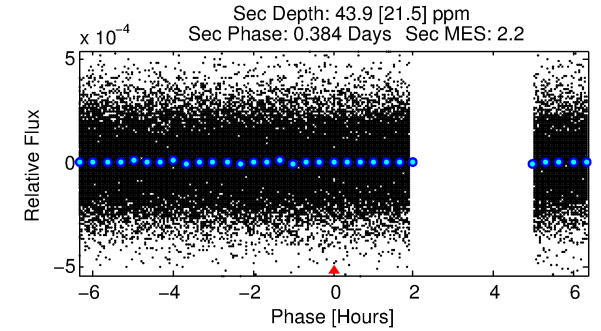
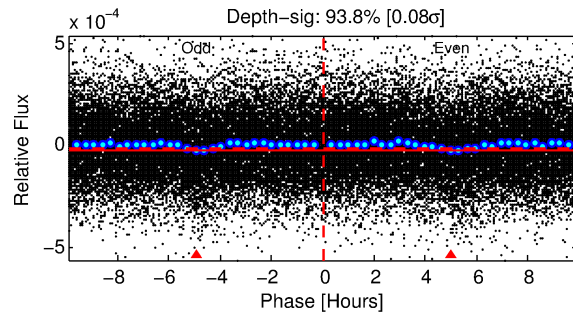
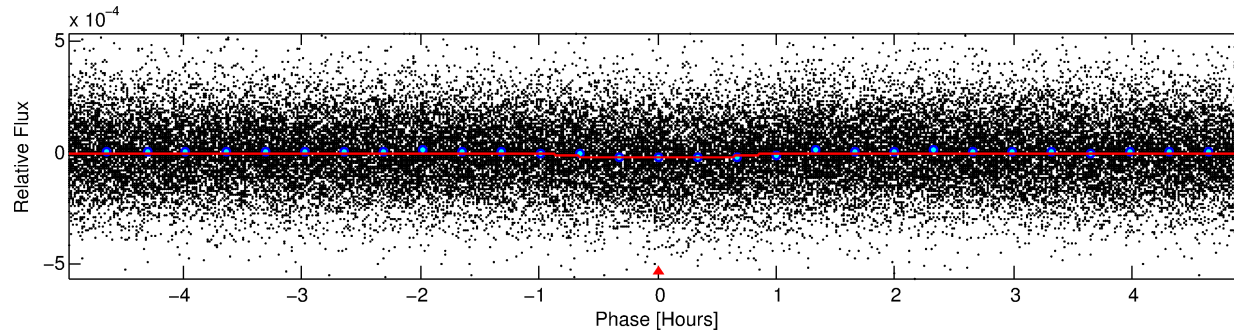
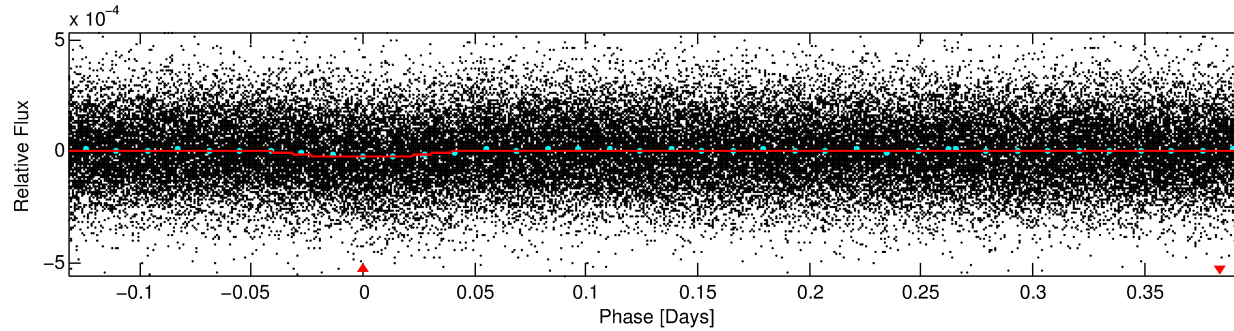
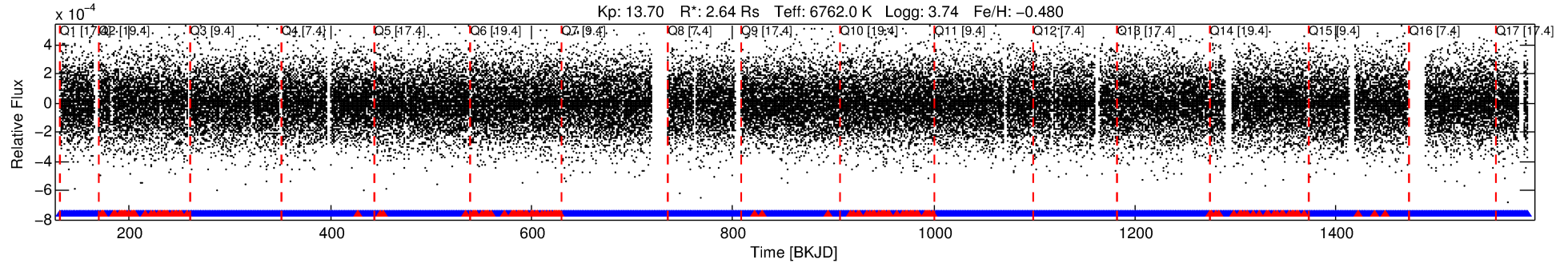
Ephemeris Match Information For 011560397-01

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
011560397-01	11560397	011560447-pri	11560447	1:1	93.5	-23	6	10.83	13.70	11832.00	Direct-PRF	0	2.75	1.00

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: 11560397 Candidate: 1 of 1 Period: 0.528 d



DV Fit Results:

Period = 0.52767 [0.00001] d
Epoch = 131.8222 [0.0021] BKJD
Rp/R* = 0.0050 [0.0014]
a/R* = 1.41 [1.18]
b = 0.91 [0.33]
Seff = 64089.80 [58914.86]
Teq = 4057 [932] K
Rp = 1.44 [0.86] Re
a = 0.0143 [0.0078] AU
Ag = 2.37 [2.78] [0.49 σ]
Teffp = 7781 [1478] K [2.13 σ]

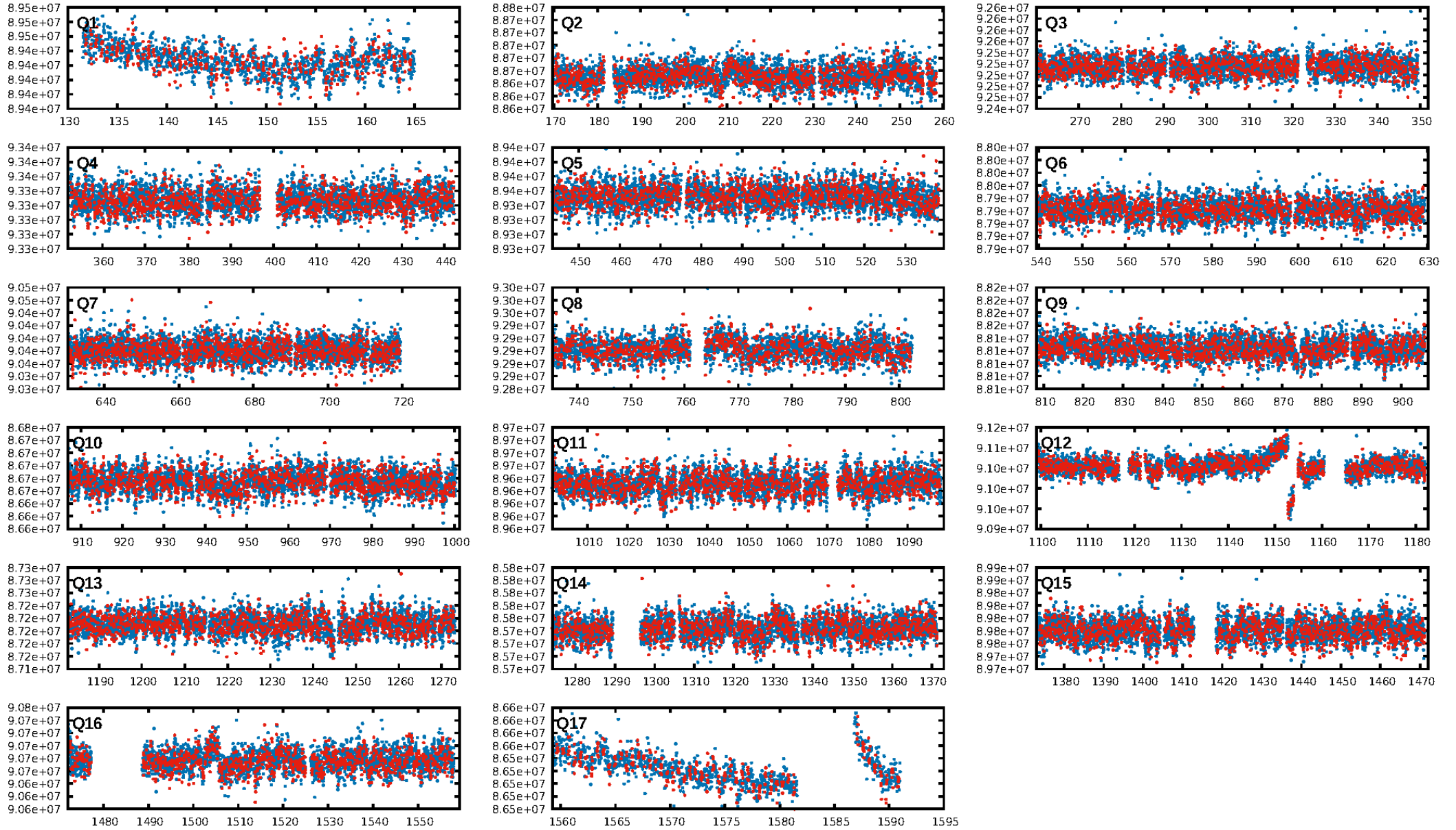
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 3.23e-27
RollingBand-fgt: 0.94 [2289/2423]
GhostDiagnostic-chr: 0.2891
Centroid-sig: 0.0%
Centroid-so: 5.955 arcsec [6.01 σ]
OotOffset-rm: 3.673 arcsec [1.94 σ]
KicOffset-rm: 3.696 arcsec [1.93 σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.12 [2/17]
DiffImageOverlap-fno: 1.00 [17/17]

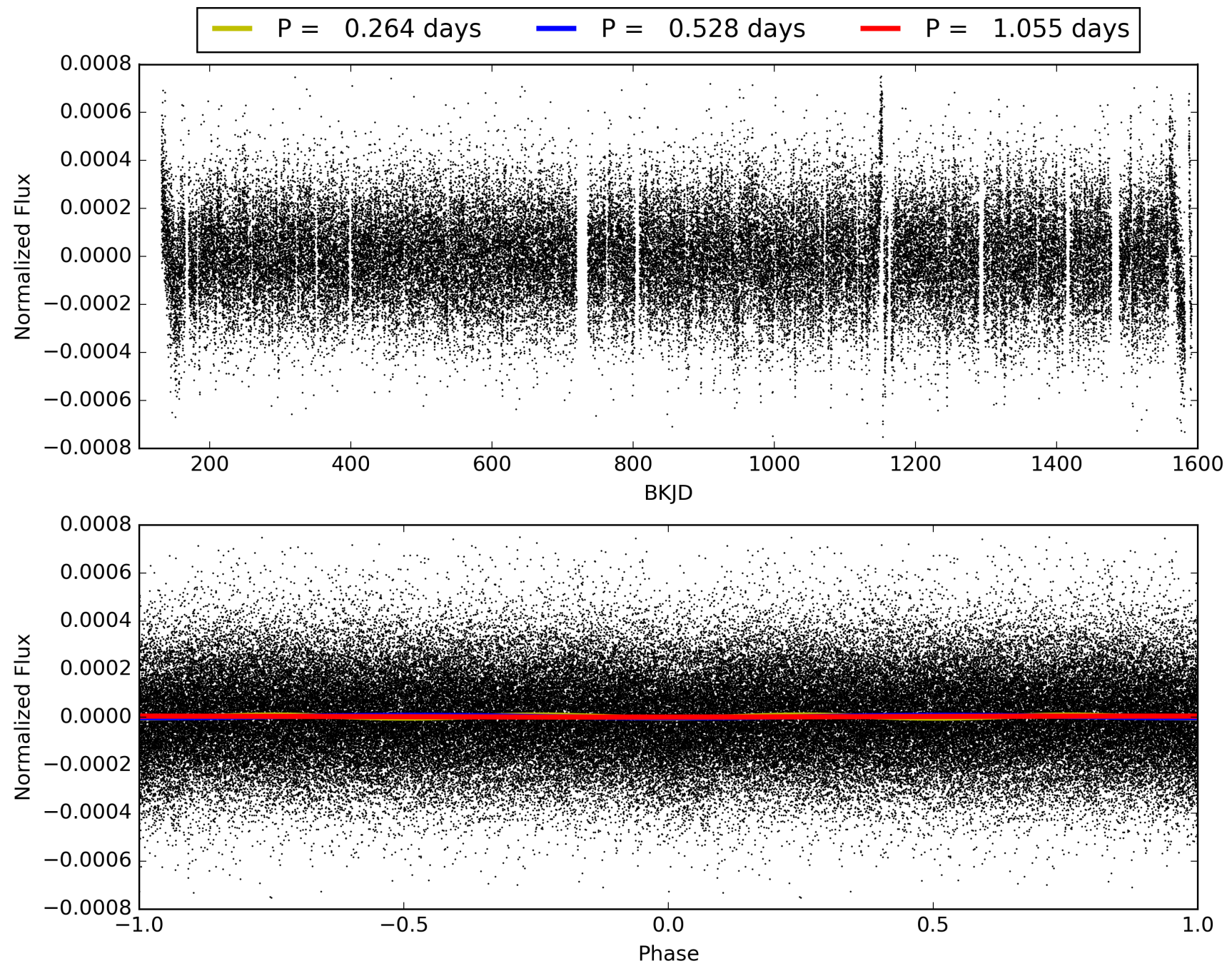
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 02:10:02 Z

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

TCE 011560397-01, PDC Light Curves

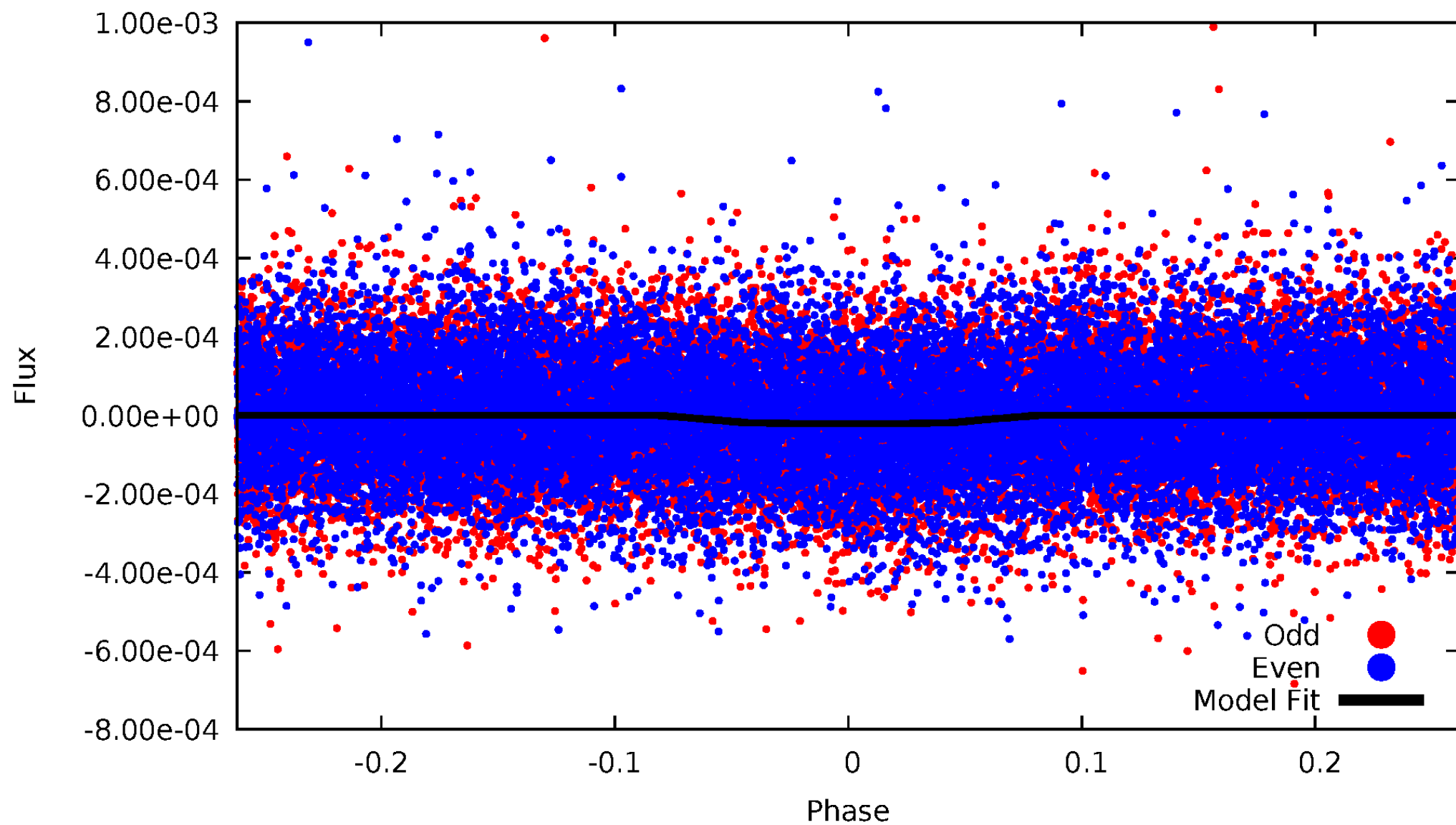


TCE 011560397-01



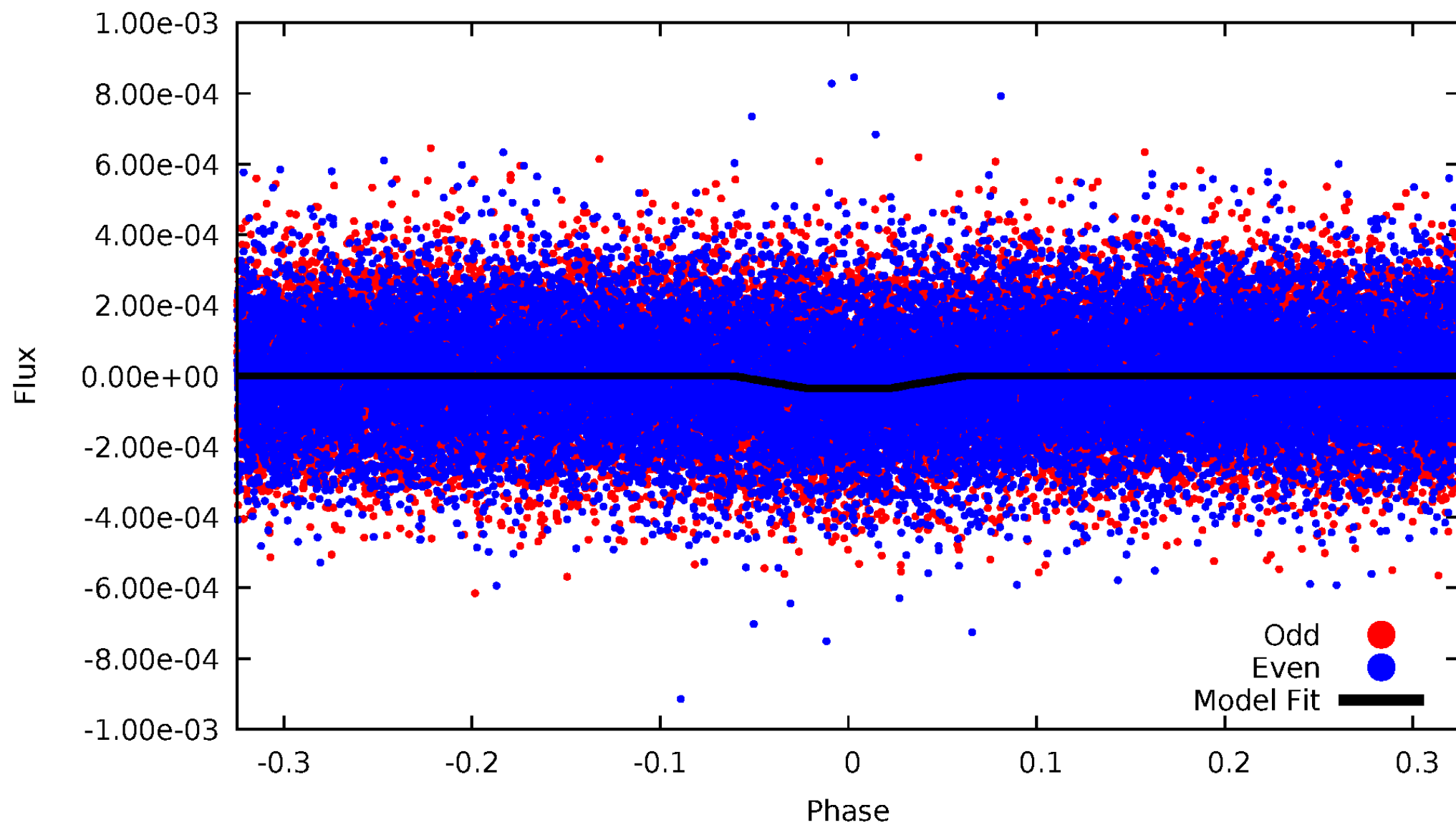
DV Odd/Even

TCE 011560397-01



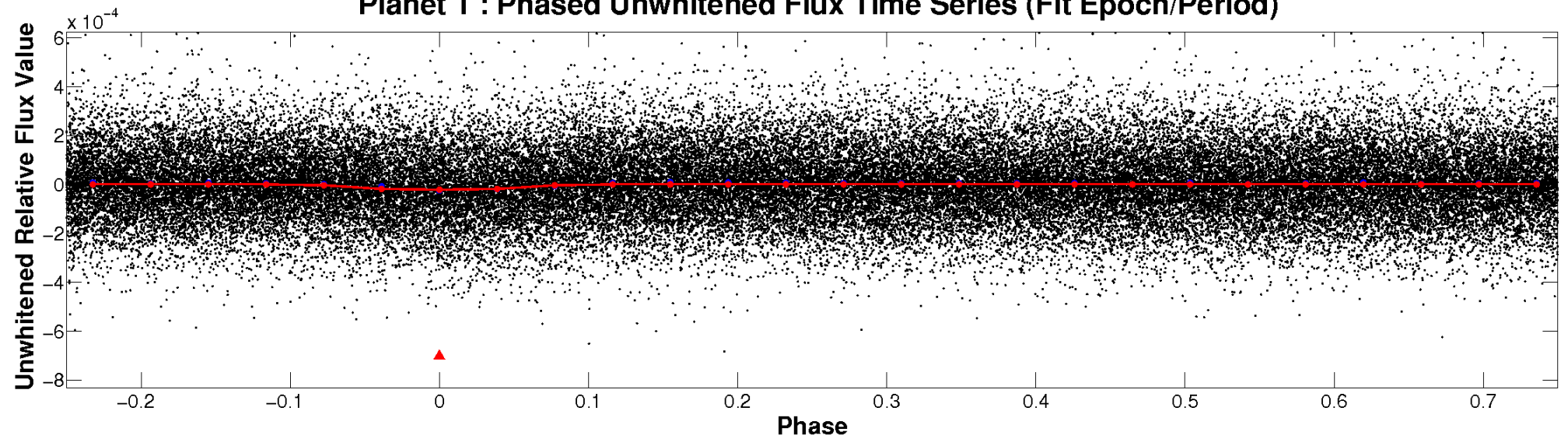
ALT Odd/Even

TCE 011560397-01

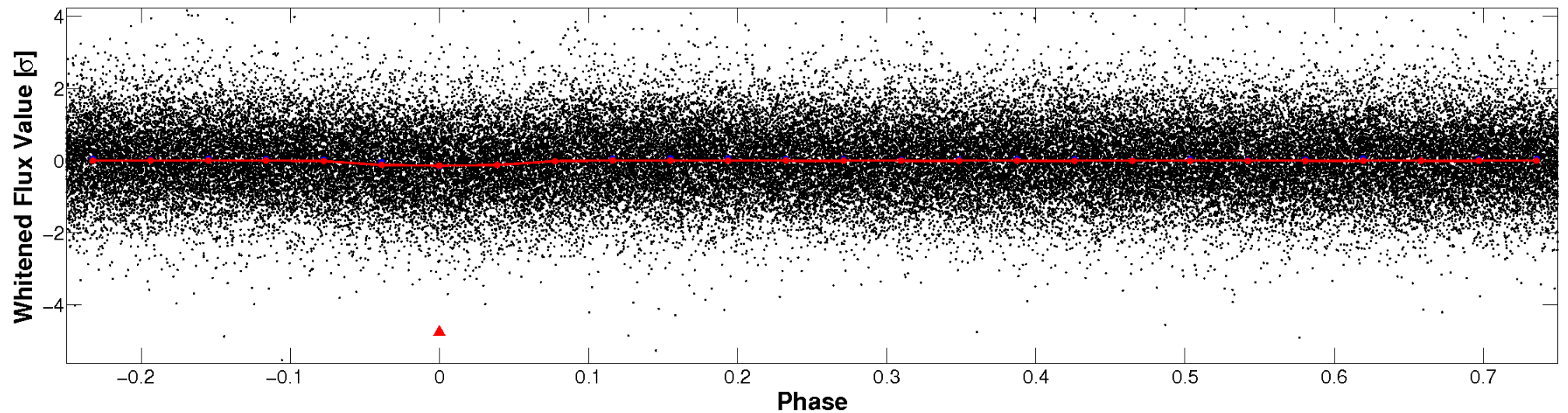


Non-Whitened Vs. Whitened Light Curve

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

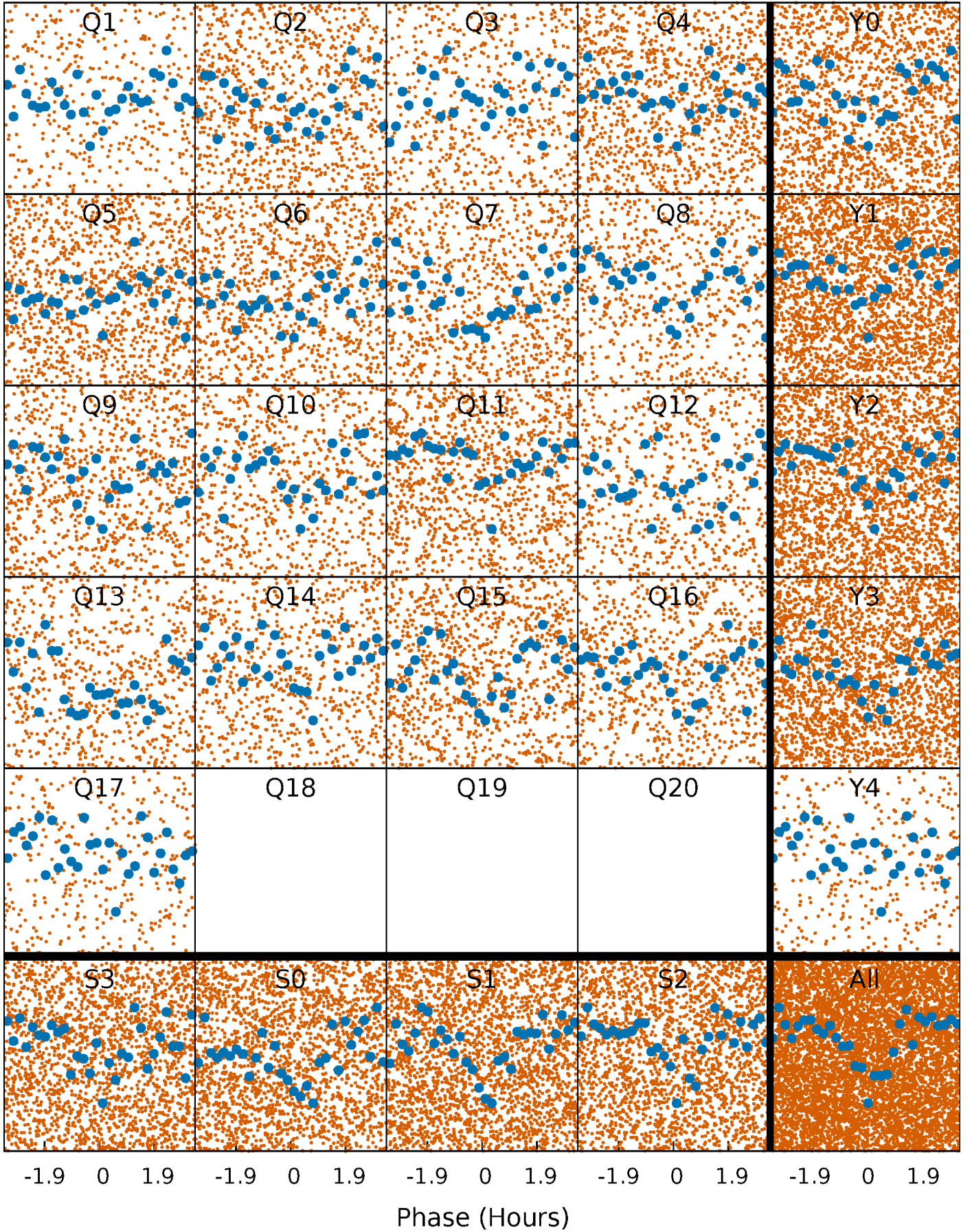


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



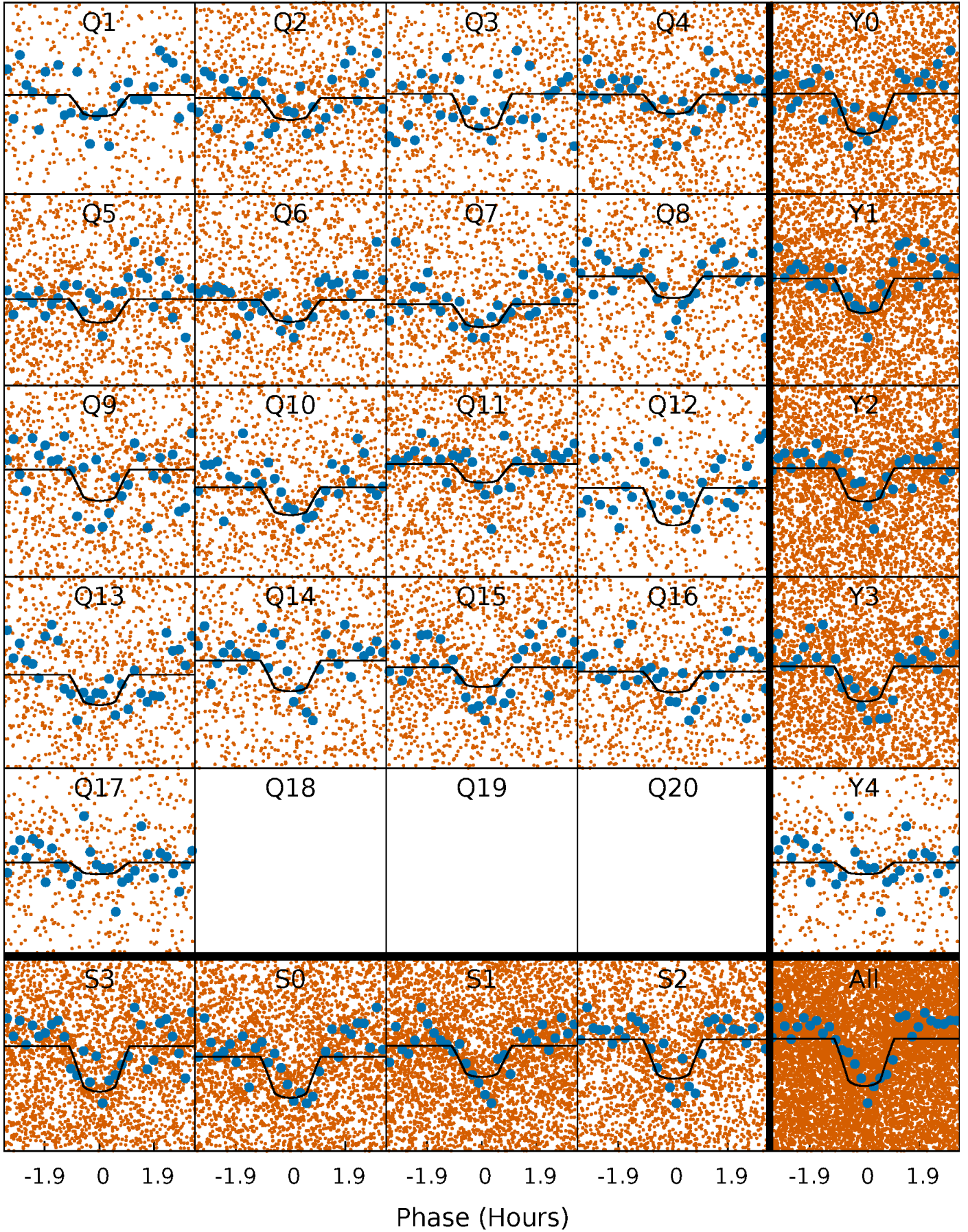
PDC Quarter-Phased Transit Curves

TCE 011560397-01 P= 0.527667 Days $T_0=131.822151$ (BKJD)



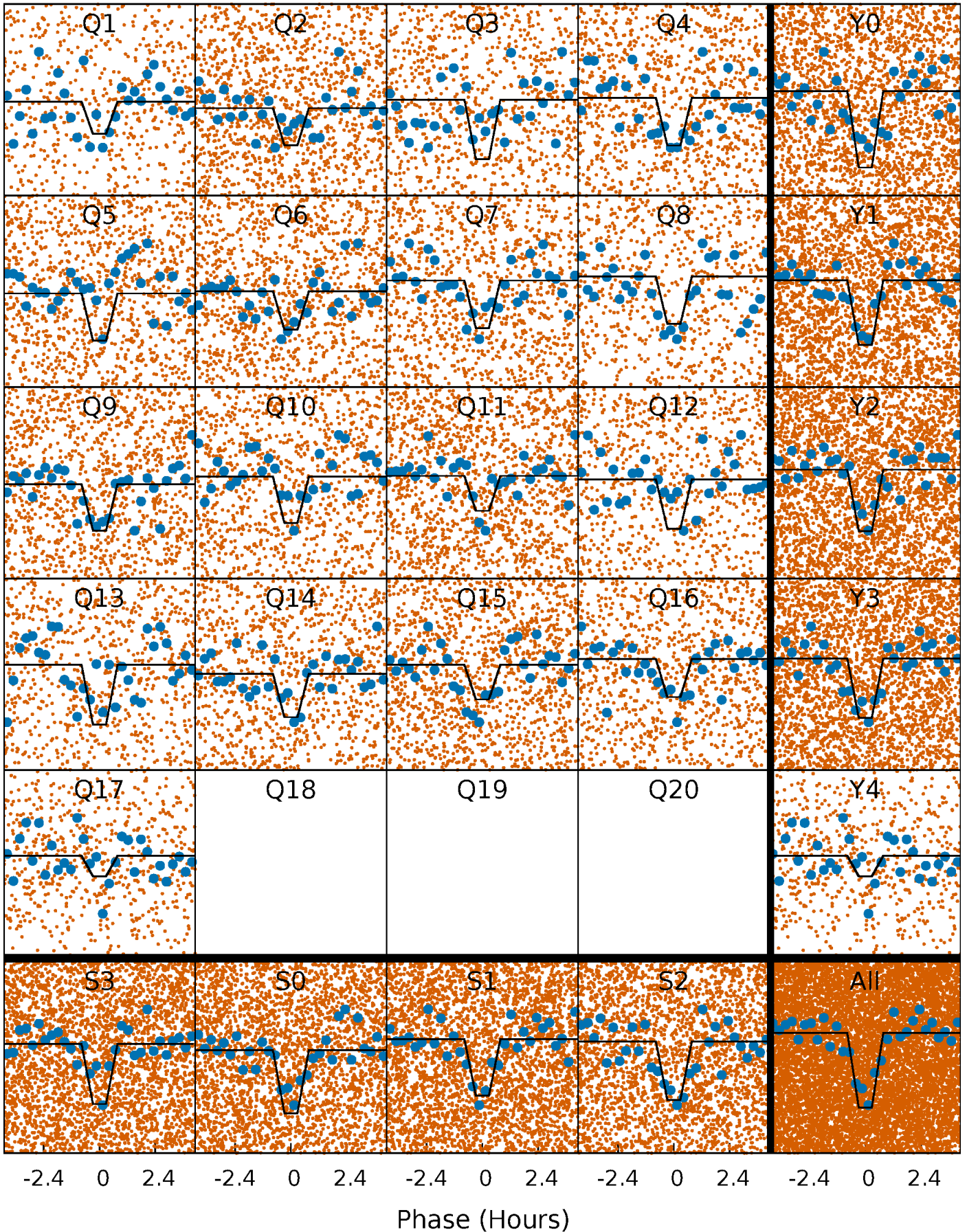
DV Quarter-Phased Transit Curves

TCE 011560397-01 P= 0.527667 Days $T_0=131.822151$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

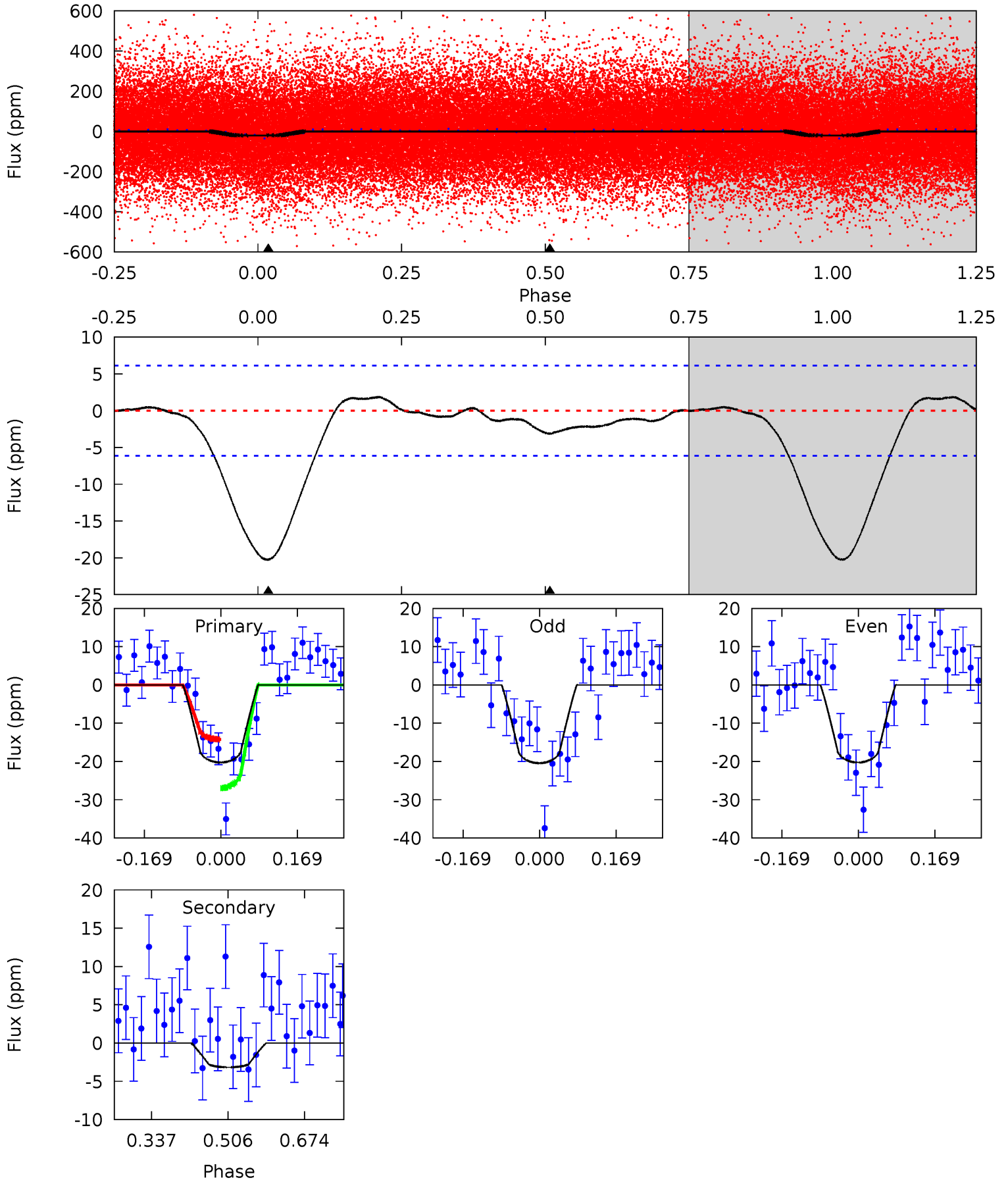
TCE 011560397-01 P= 0.527674 Days $T_0=131.820469$ (BKJD)



DV Model-Shift Uniqueness Test

011560397-01, P = 0.527667 Days, E = 131.294484 Days

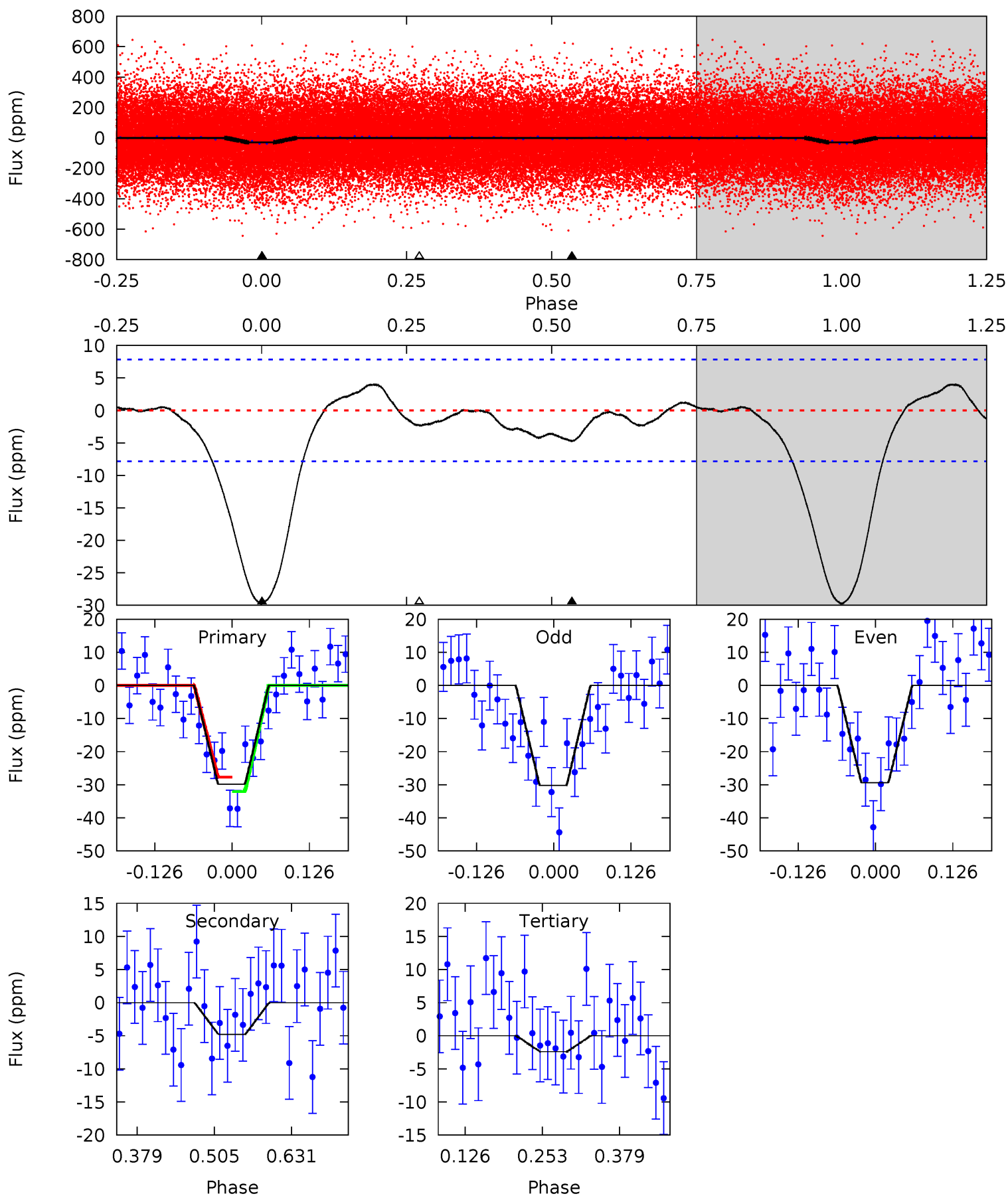
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
14.7	2.30	0	0	4.45	1.38	0.60	14.7	14.7	2.30	2.30	0.07	0.98	0.08	4.64



Alt Model-Shift Uniqueness Test

011560397-01, P = 0.527674 Days, E = 131.292795 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
17.2	2.75	1.38	0	4.52	1.53	0.93	15.8	17.2	1.37	2.75	0.23	0.95	0.12	1.25



Stellar Parameters For KIC 011560397

	$T_{\text{eff}} (K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M (M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6762^{+214}_{-262}	$3.738^{+0.544}_{-0.096}$	$-0.480^{+0.300}_{-0.300}$	$2.637^{+0.464}_{-1.391}$	$1.386^{+0.189}_{-0.351}$	$0.106^{+0.705}_{-0.032}$
	+3%/-4%	+15%/-3%	+62%/-62%	+18%/-53%	+14%/-25%	+662%/-30%
Source	PHO54	PHO54	PHO54	DSEP		

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

Secondary Eclipse Parameters for KIC 011560397-01 / KOI 8056.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-3 ± 1	$1.29^{+0.51}_{-0.46}$	5509^{+421}_{-759}	-3719^{+7762}_{-723}	$0.201^{+0.305}_{-0.110}$
Alt.	-5 ± 2	$1.53^{+0.54}_{-0.56}$	5489^{+397}_{-696}	-3571^{+7615}_{-801}	$0.223^{+0.324}_{-0.114}$

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 $A_{obs} \gg 1.0$

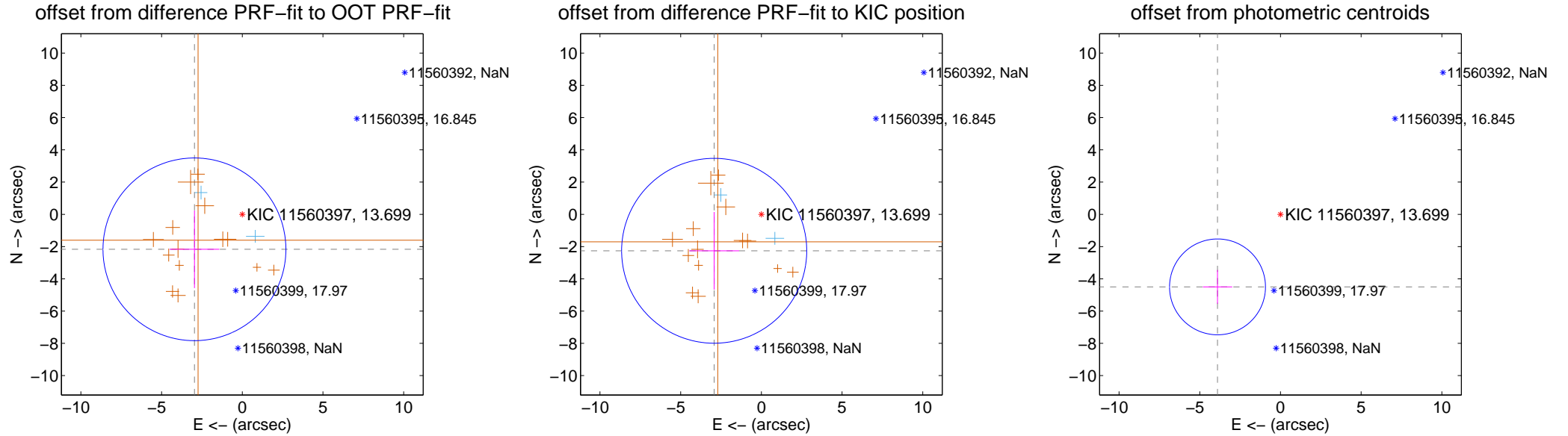
DV Centroid Data

Supplemental centroid analysis for 011560397-01. Kepler magnitude: 13.70. Transit SNR 10.88

There are 2 quarters with good PRF difference image offsets

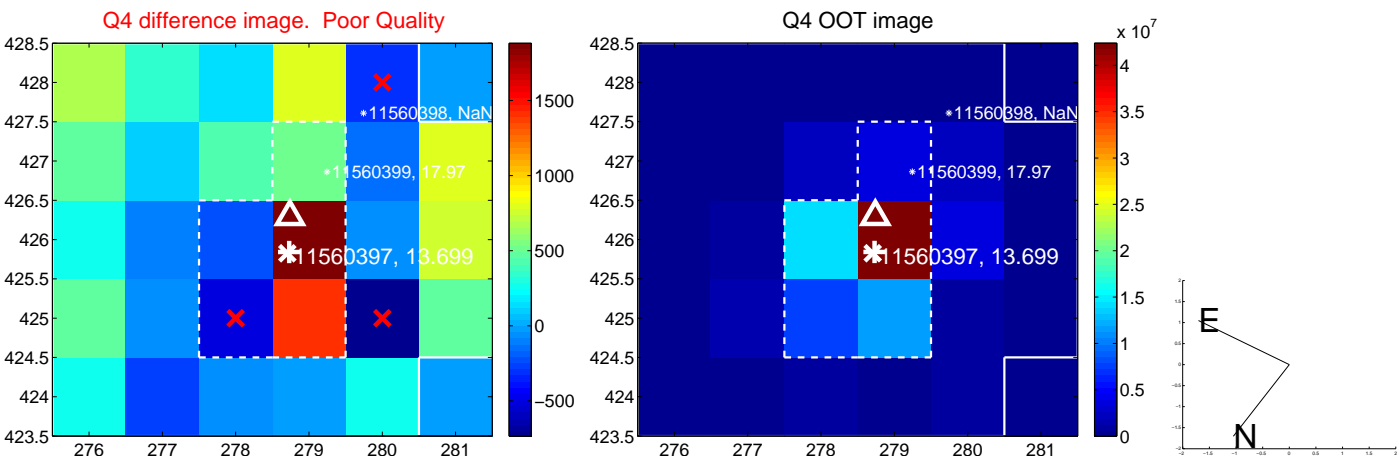
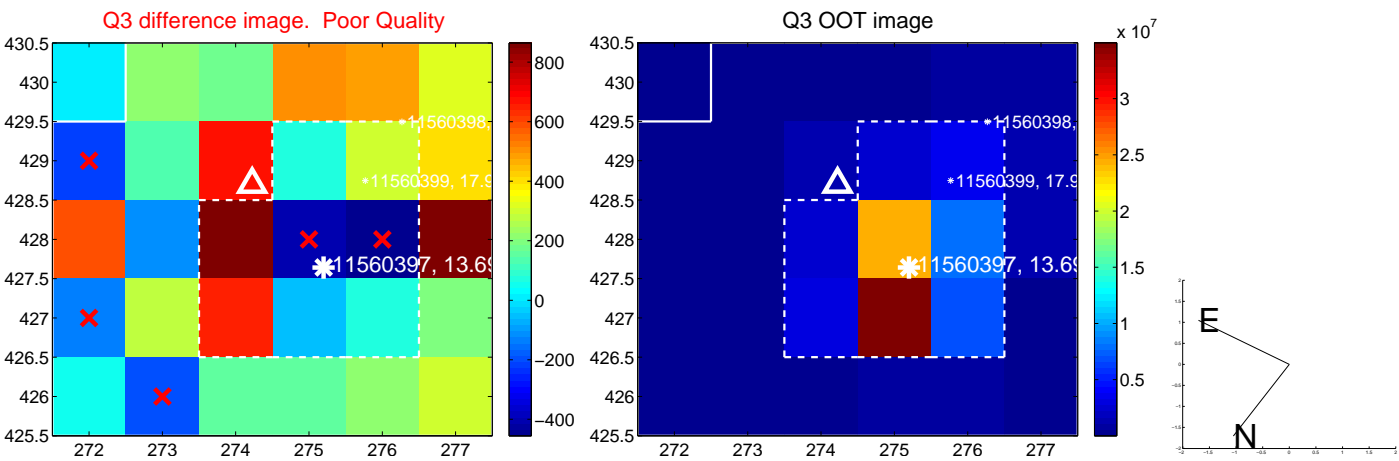
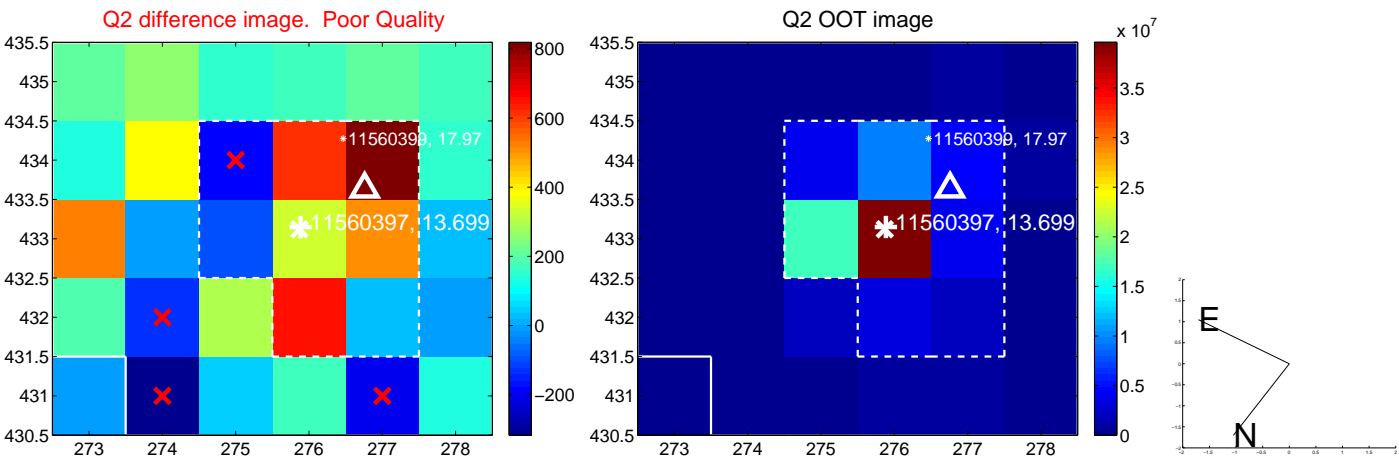
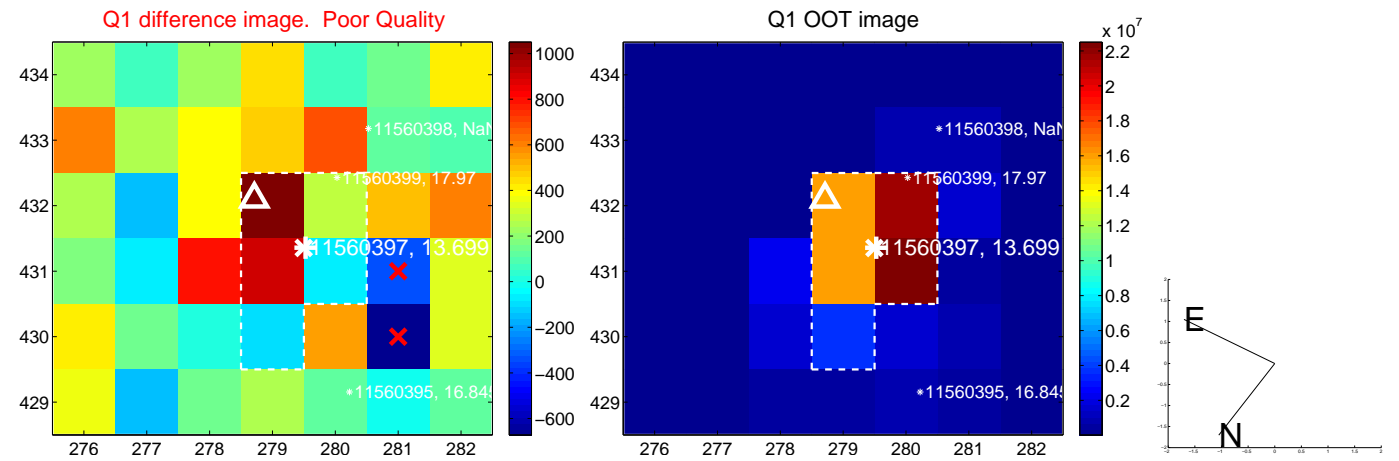
The direct PRF centroid is offset from the target star catalog position by about 0.10 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	3.673 ± 1.889	1.94	2.964 ± 1.541	-2.169 ± 2.408
PRF-fit source offset from KIC position	3.696 ± 1.912	1.93	2.924 ± 1.541	-2.261 ± 2.408
photometric centroid source offset	5.96 ± 0.99	6.01	3.90 ± 0.91	-4.50 ± 1.05

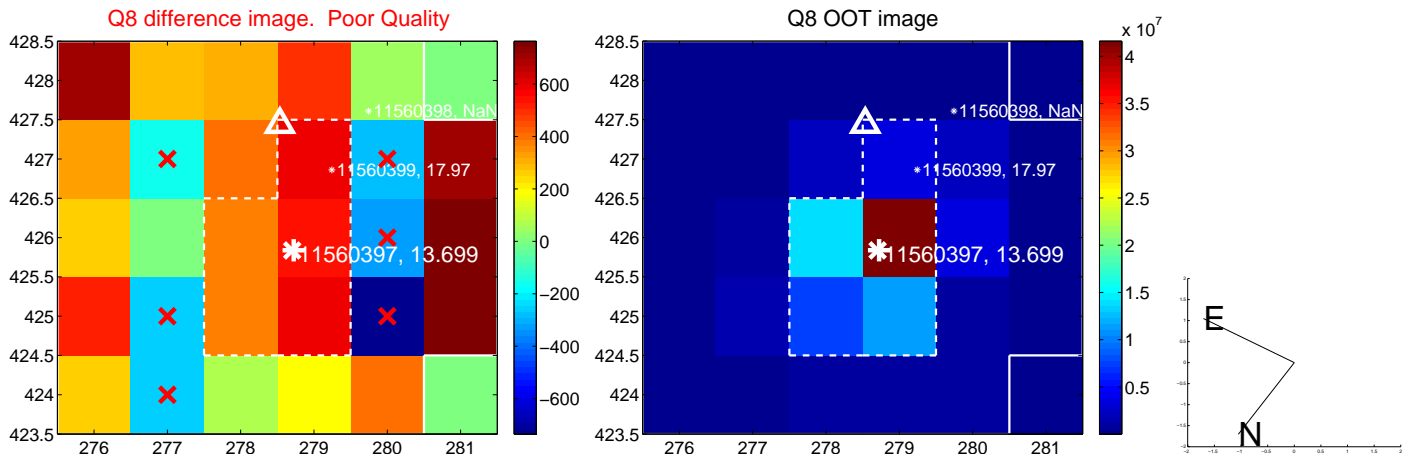
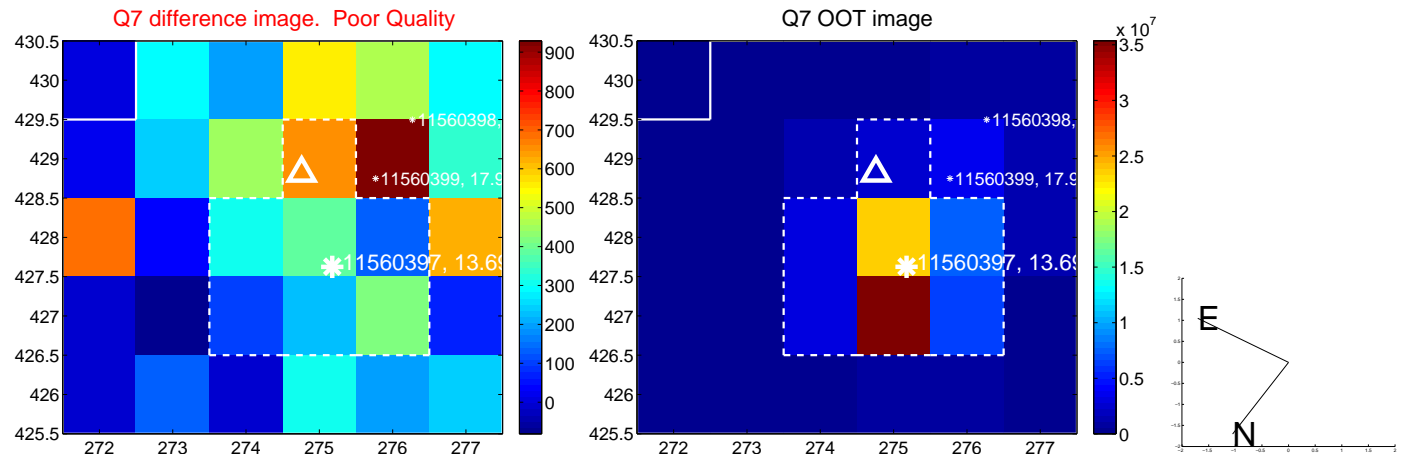
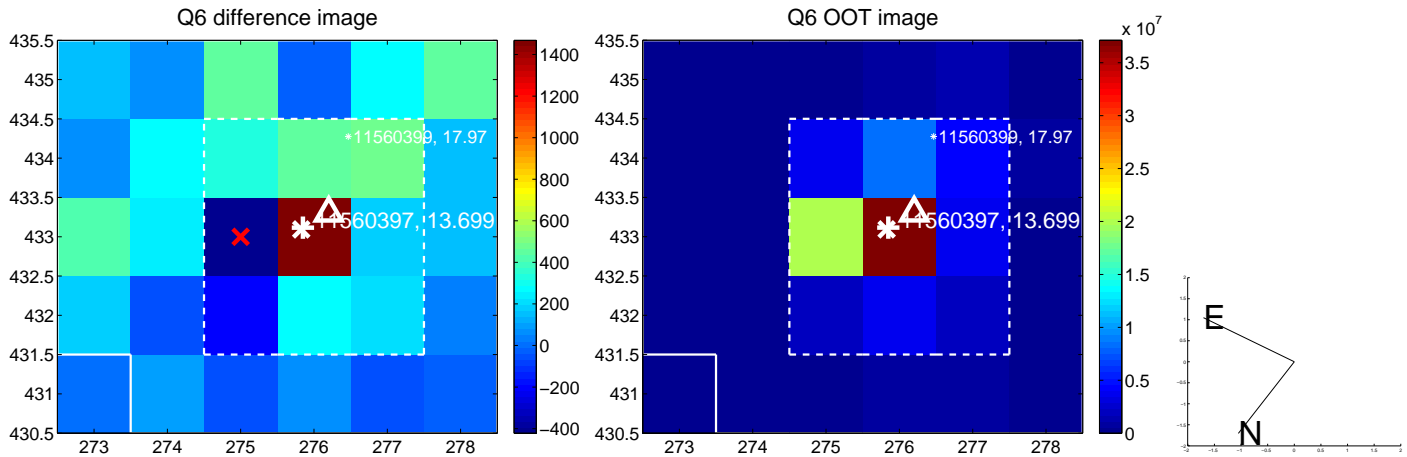
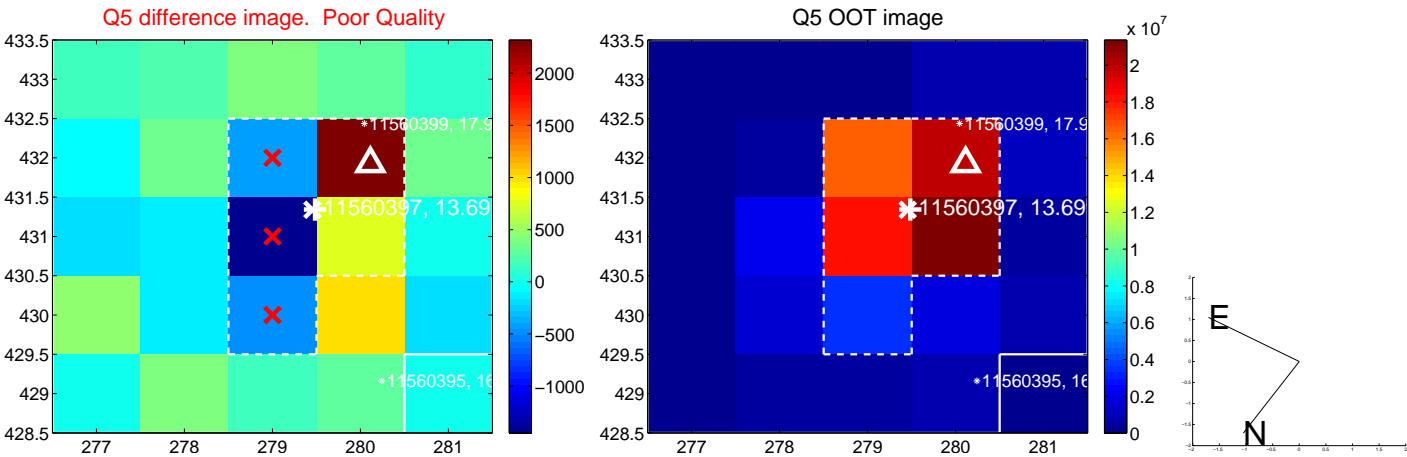


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

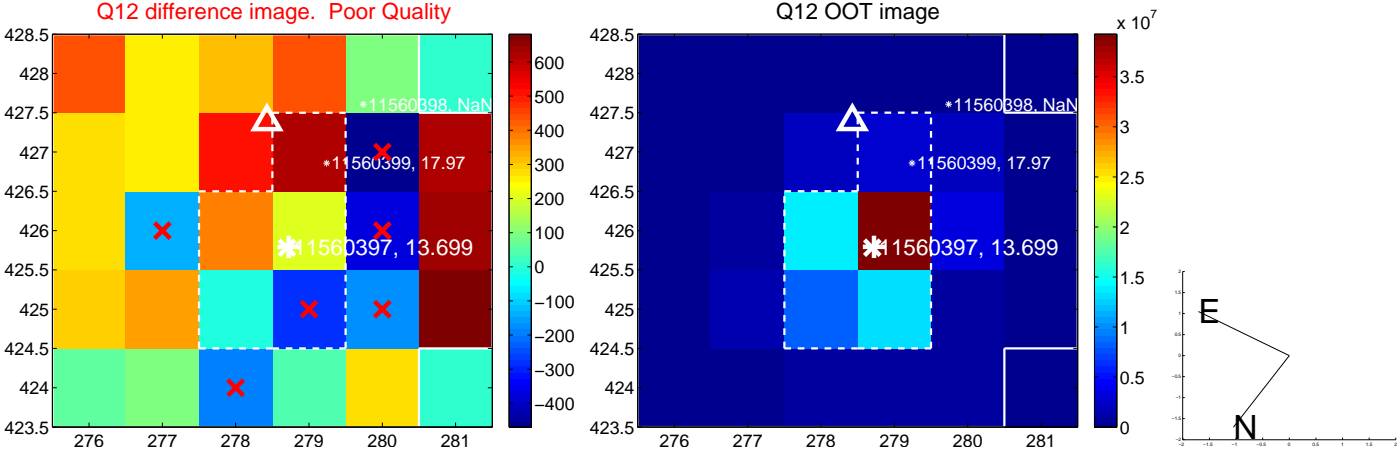
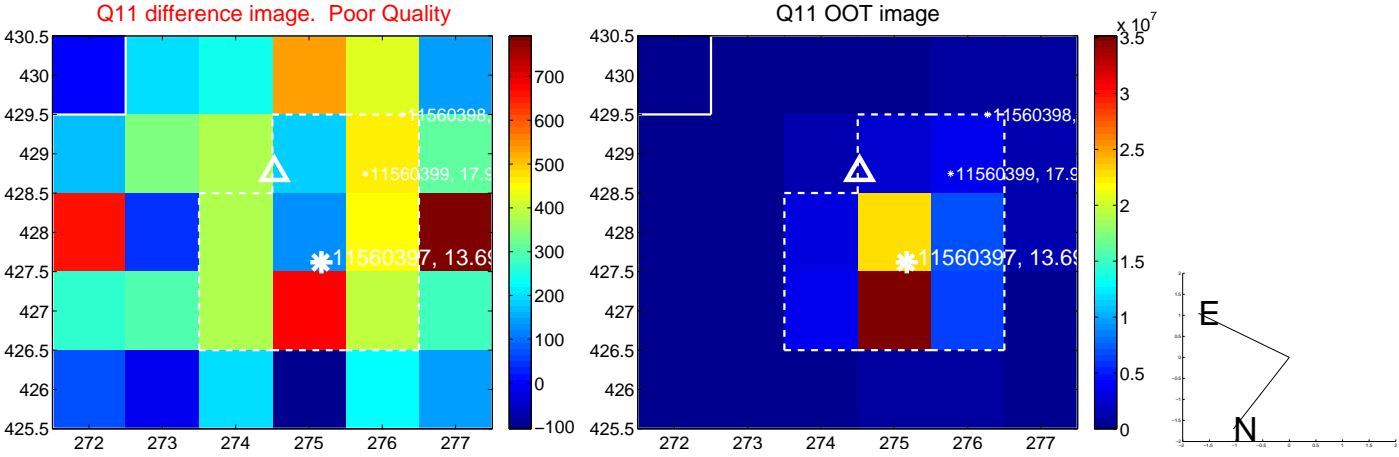
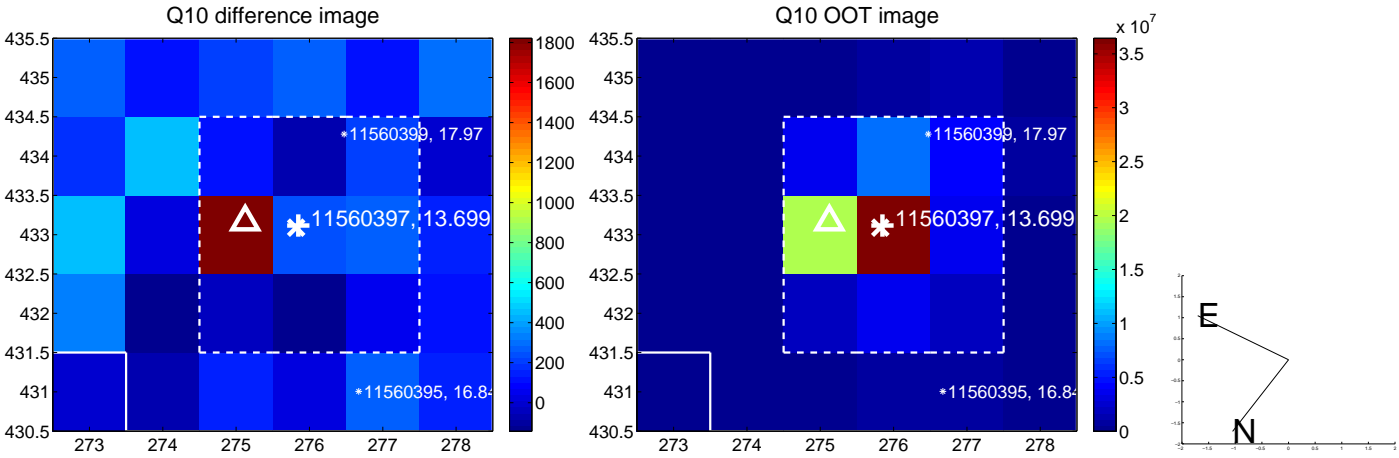
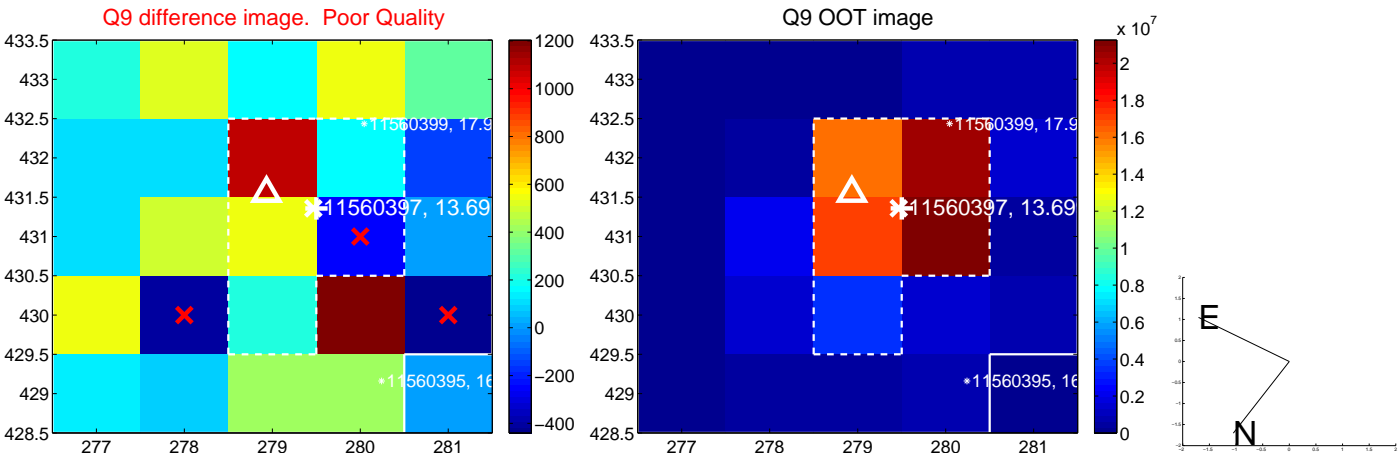
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



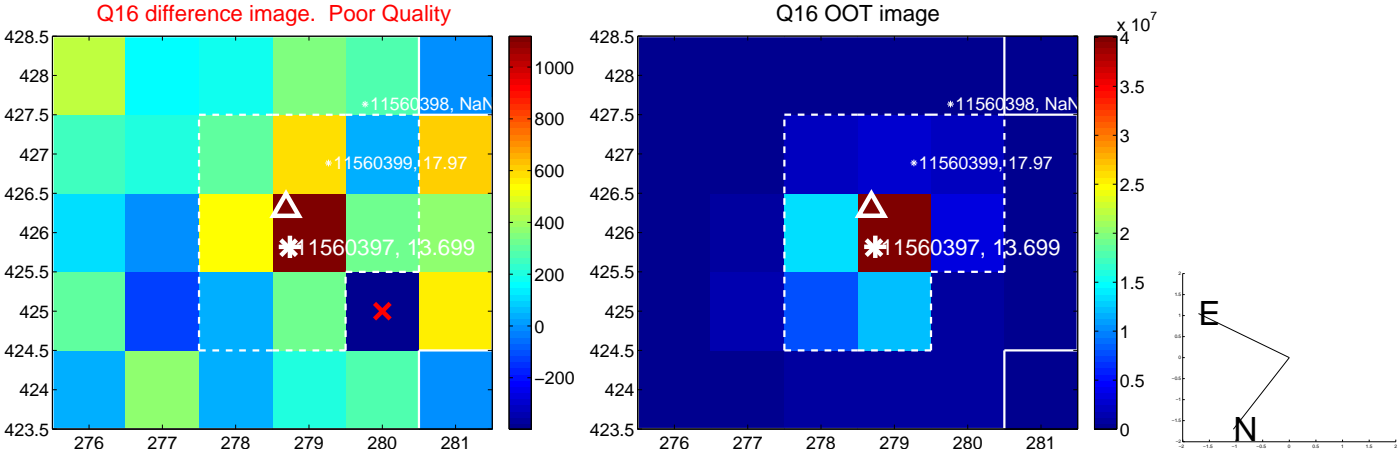
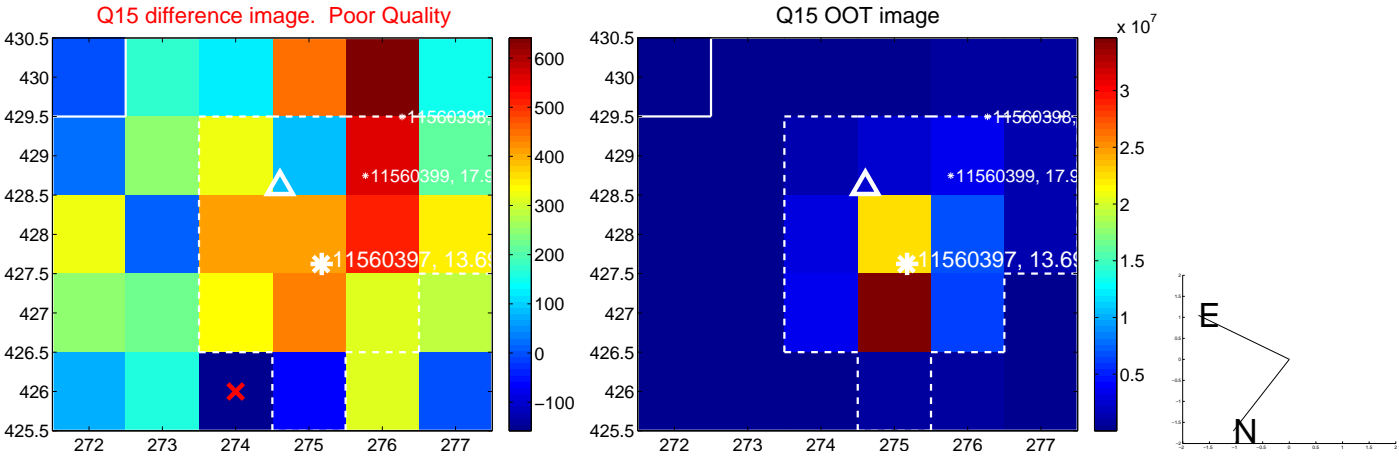
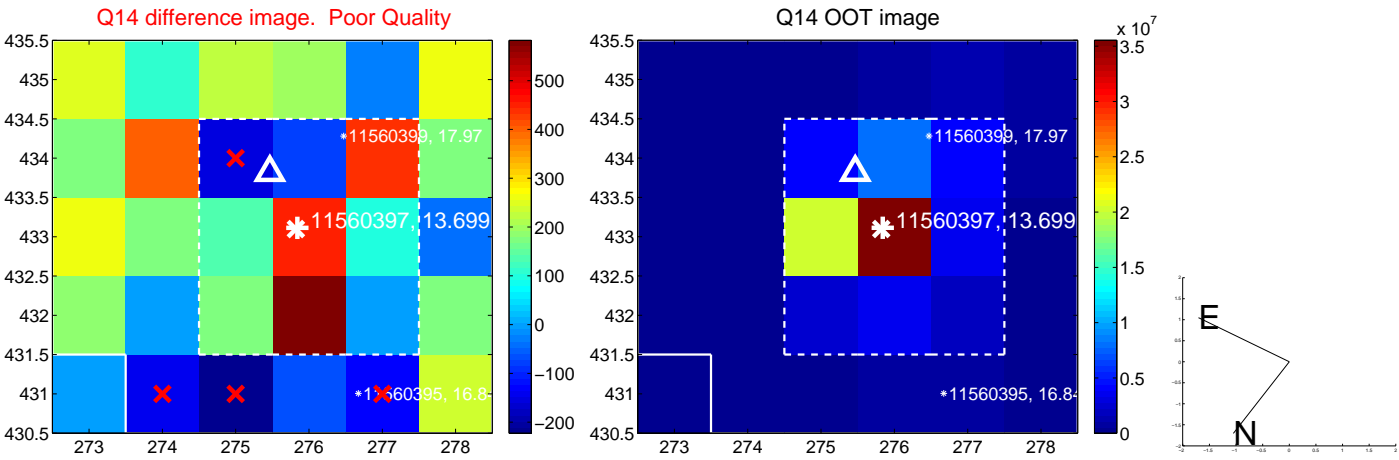
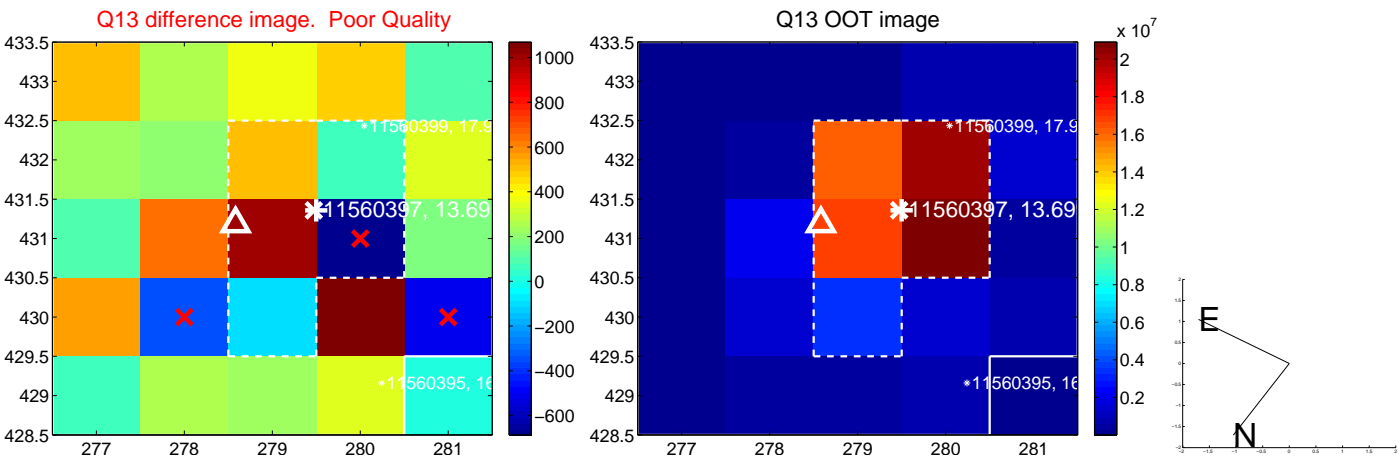
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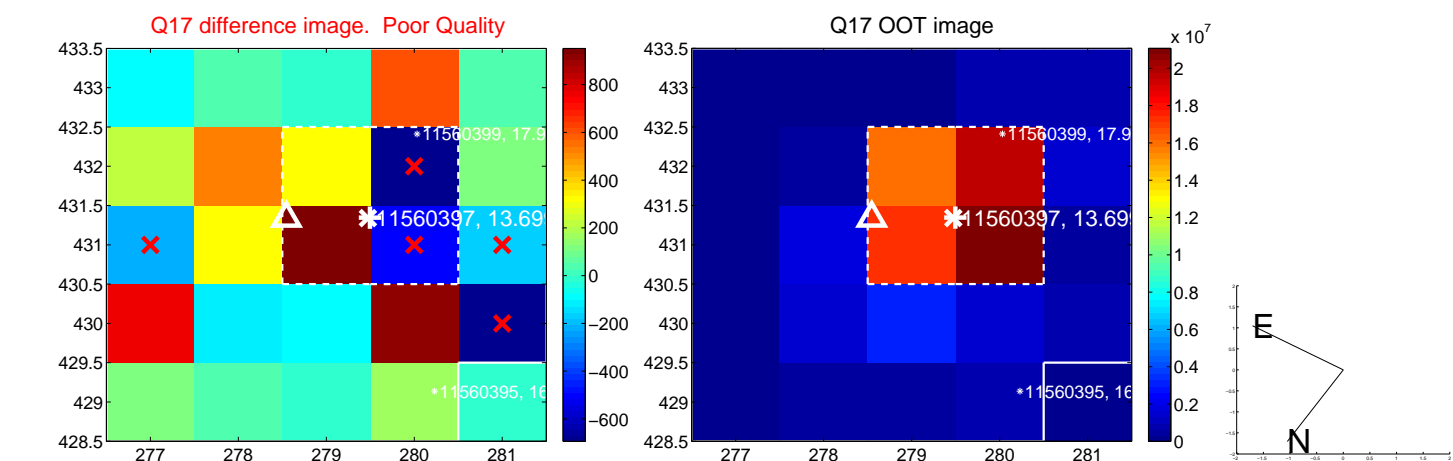
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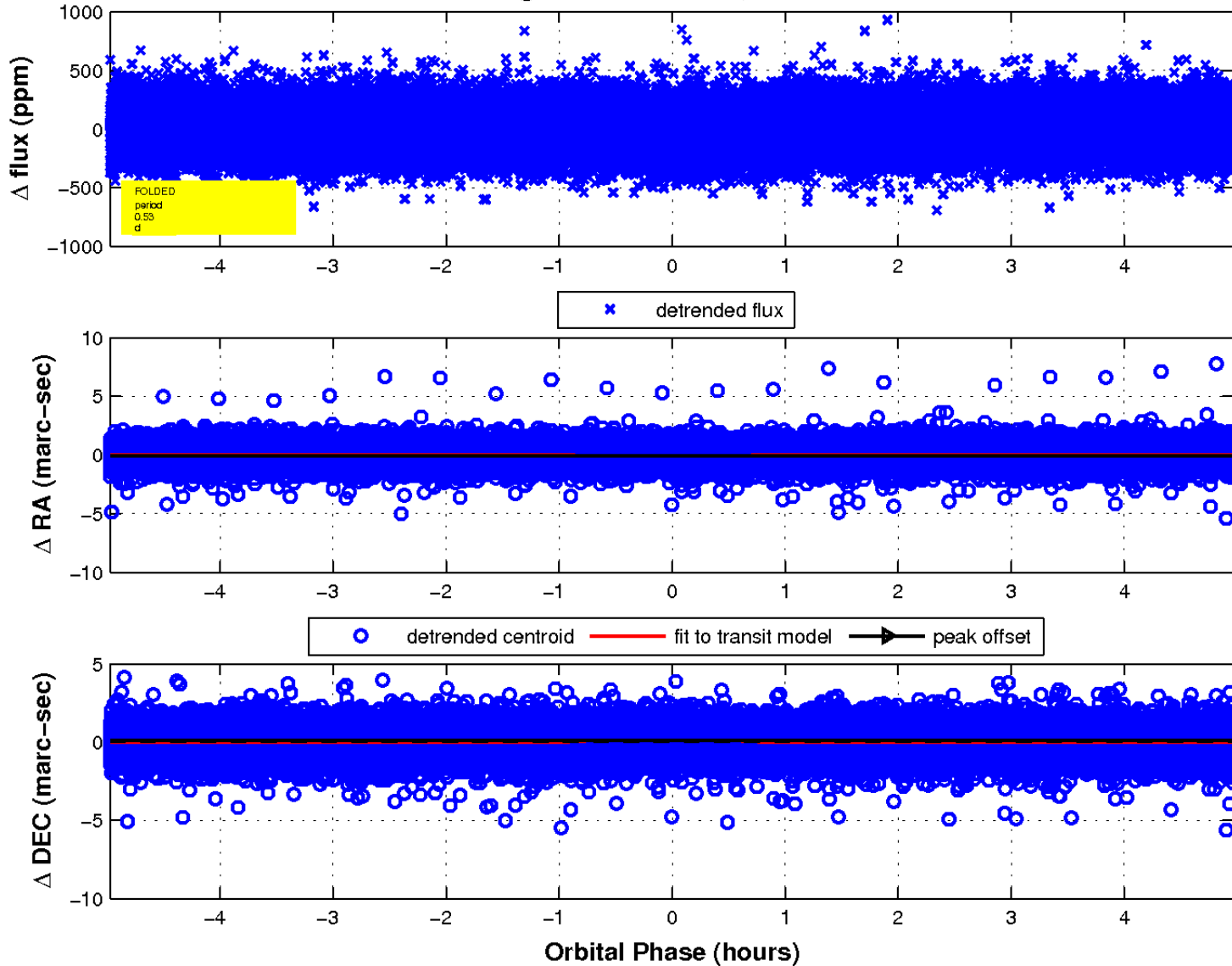
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fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

