

KIC 008552583

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})
008552583-01	OBS	1265.01	1.061921	131.731357	151.6	1.750	19.8	23.8	0.87	5730	1.27	1799.16

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008552583-01	OBS	FP	0.00	0	1	1	1	MOD_SEC_ALT—CENT_FEW_DIFFS—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 008552583-01

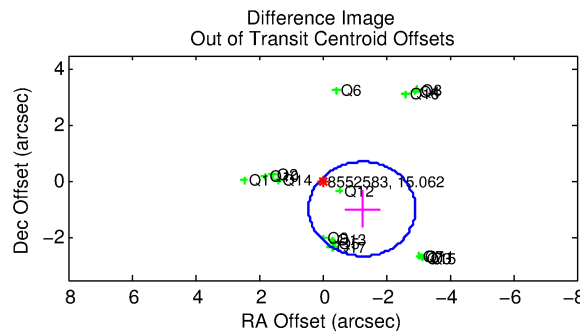
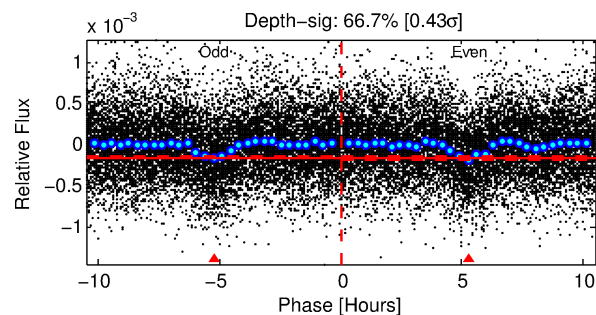
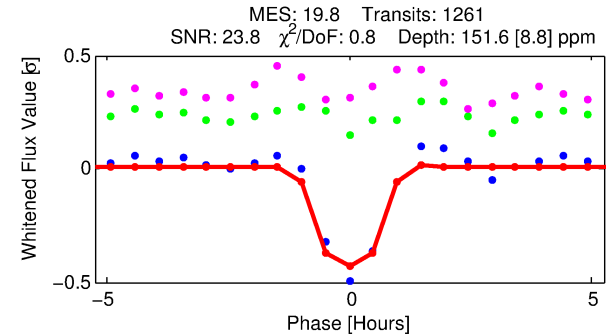
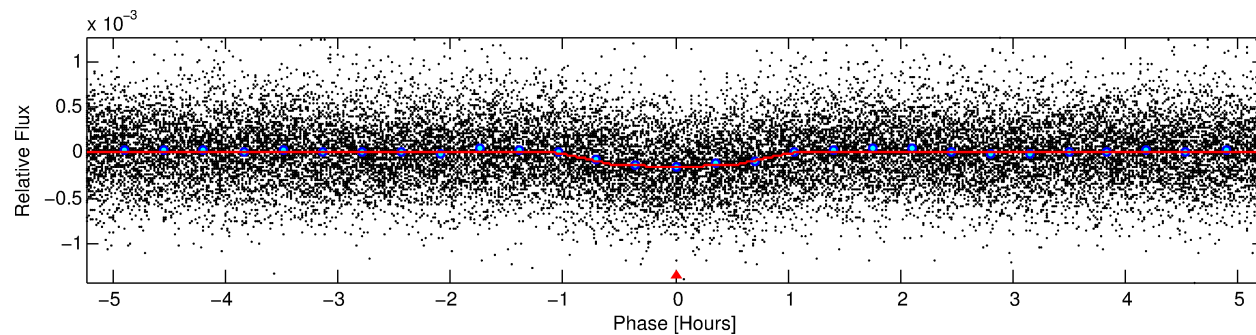
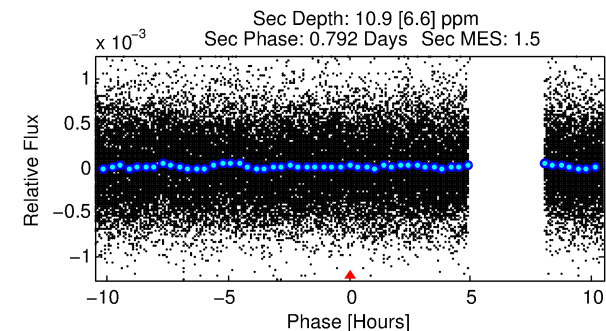
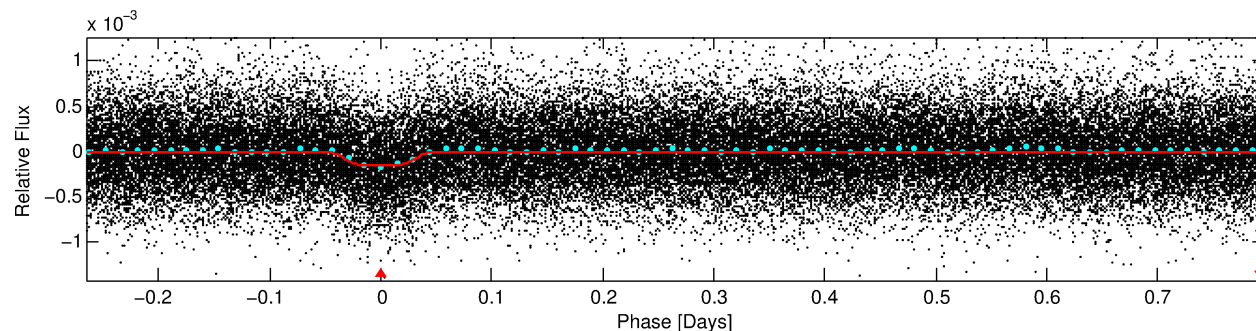
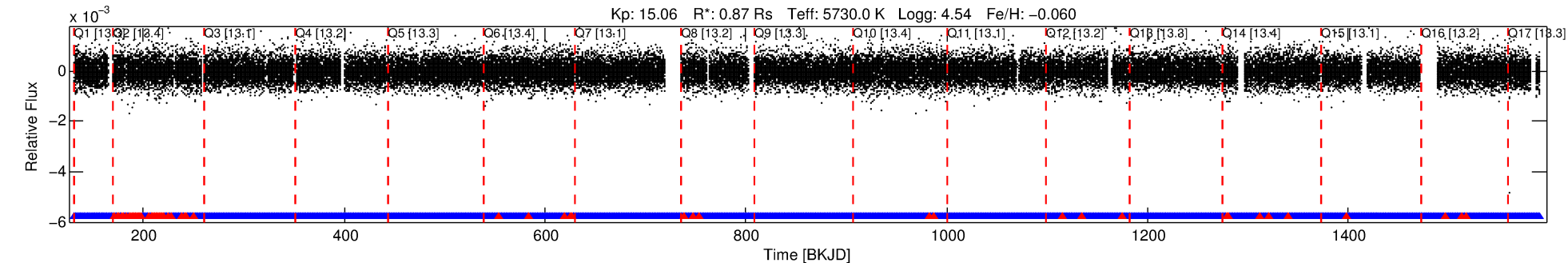
TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist ($''$)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
008552583-01	8552583	008552540-01	8552540	1:1	102.6	23	-13	10.29	15.06	3058.10	Direct-PRF	0	1.36	0.86

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: 8552583 Candidate: 1 of 1 Period: 1.062 d
KOI: K01265 Corr: No Ephemeris Match

Kp: 15.06 R*: 0.87 Rs Teff: 5730.0 K Logg: 4.54 Fe/H: -0.060



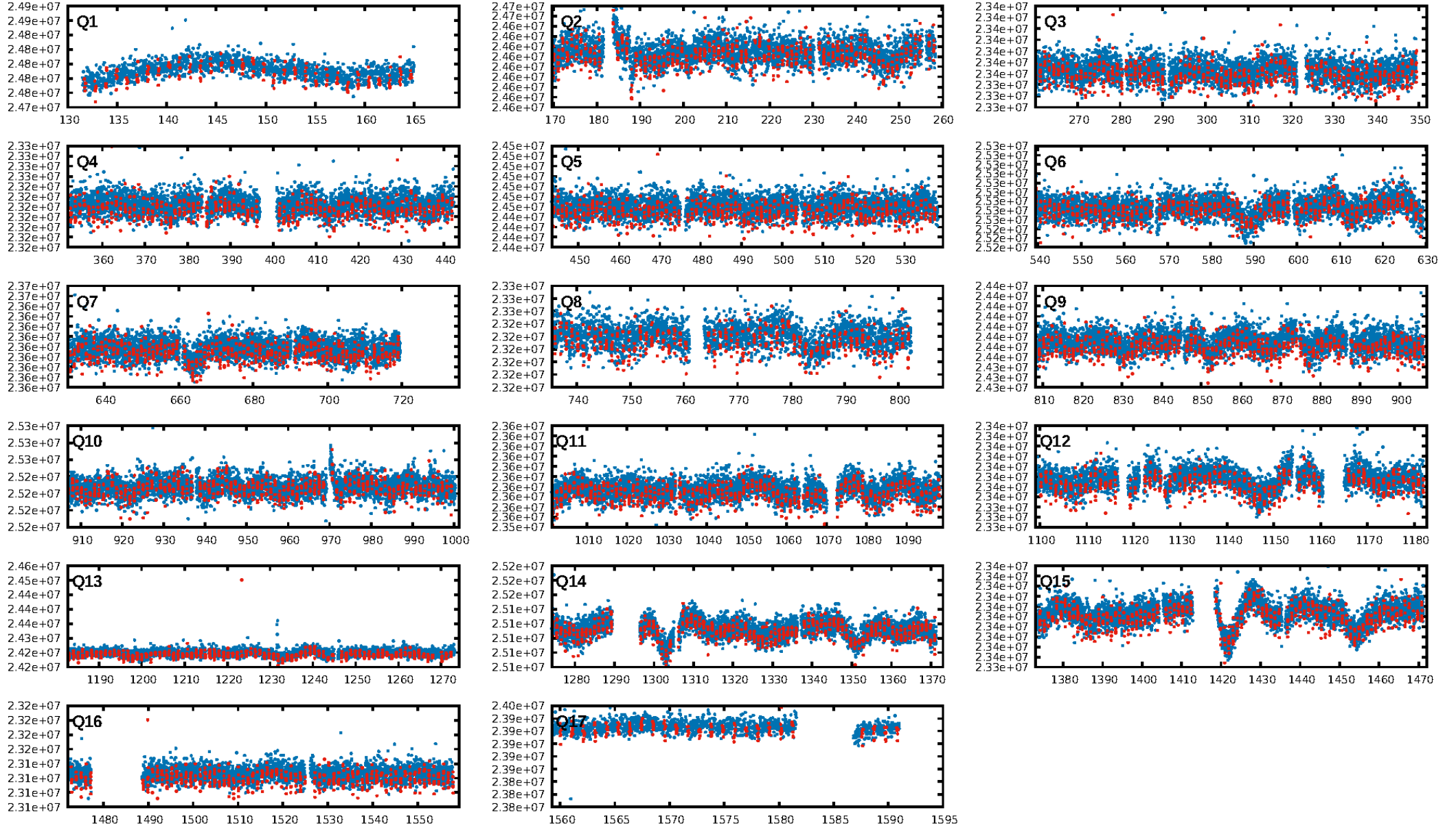
DV Fit Results:

Period = 1.06192 [0.00000] d
Epoch = 131.7314 [0.0011] BKJD
Rp/R* = 0.0134 [0.0053]
a/R* = 2.38 [3.64]
b = 0.90 [0.41]
Seff = 1799.16 [591.91]
Teq = 1661 [137] K
Rp = 1.27 [0.59] Re
a = 0.0202 [0.0042] AU
Ag = 1.50 [1.55] [0.32σ]
Teffp = 2840 [710] K [1.63σ]

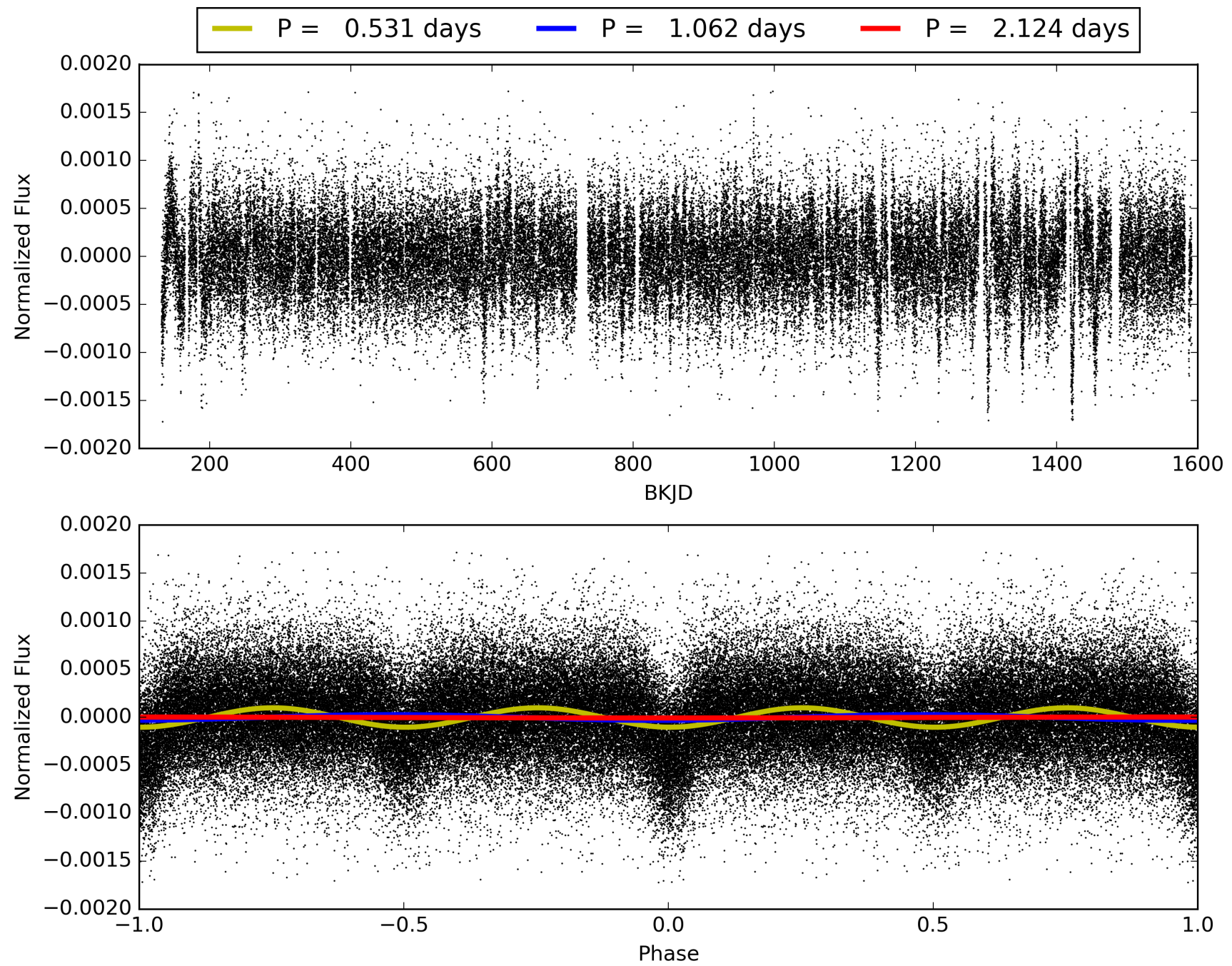
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: 1.34e-85
RollingBand-fgt: 0.95 [1143/1204]
GhostDiagnostic-chr: 0.03734
Centroid-sig: 0.0%
Centroid-so: 6.668 arcsec [11.52σ]
OotOffset-rm: 1.580 arcsec [2.82σ]
KicOffset-rm: 1.569 arcsec [2.79σ]
OotOffset-st: 4/4/4/5 [17]
KicOffset-st: 4/4/4/5 [17]
DiffImageQuality-fgm: 0.00 [0/17]
DiffImageOverlap-fno: 1.00 [17/17]

TCE 008552583-01, PDC Light Curves

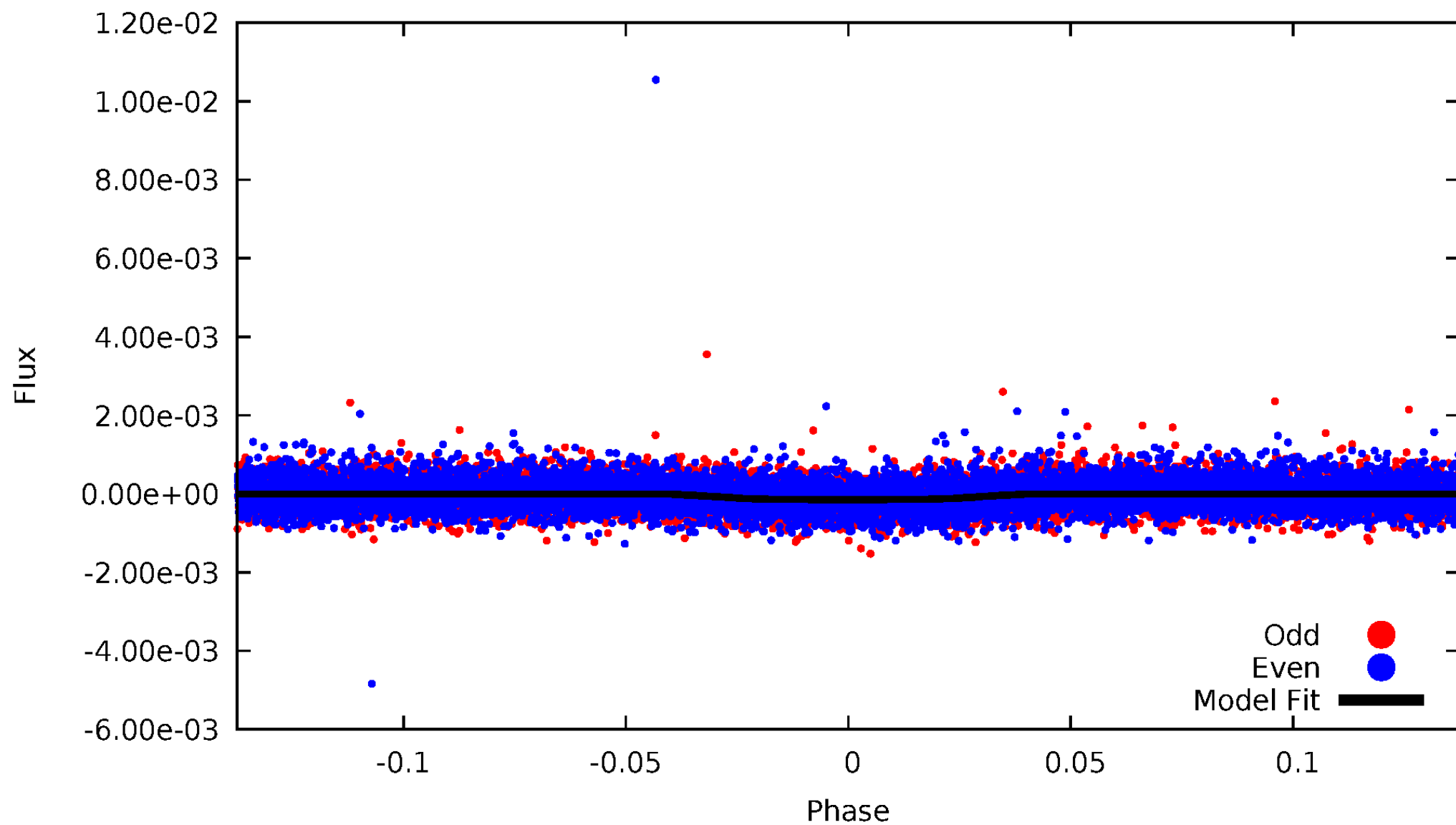


TCE 008552583-01



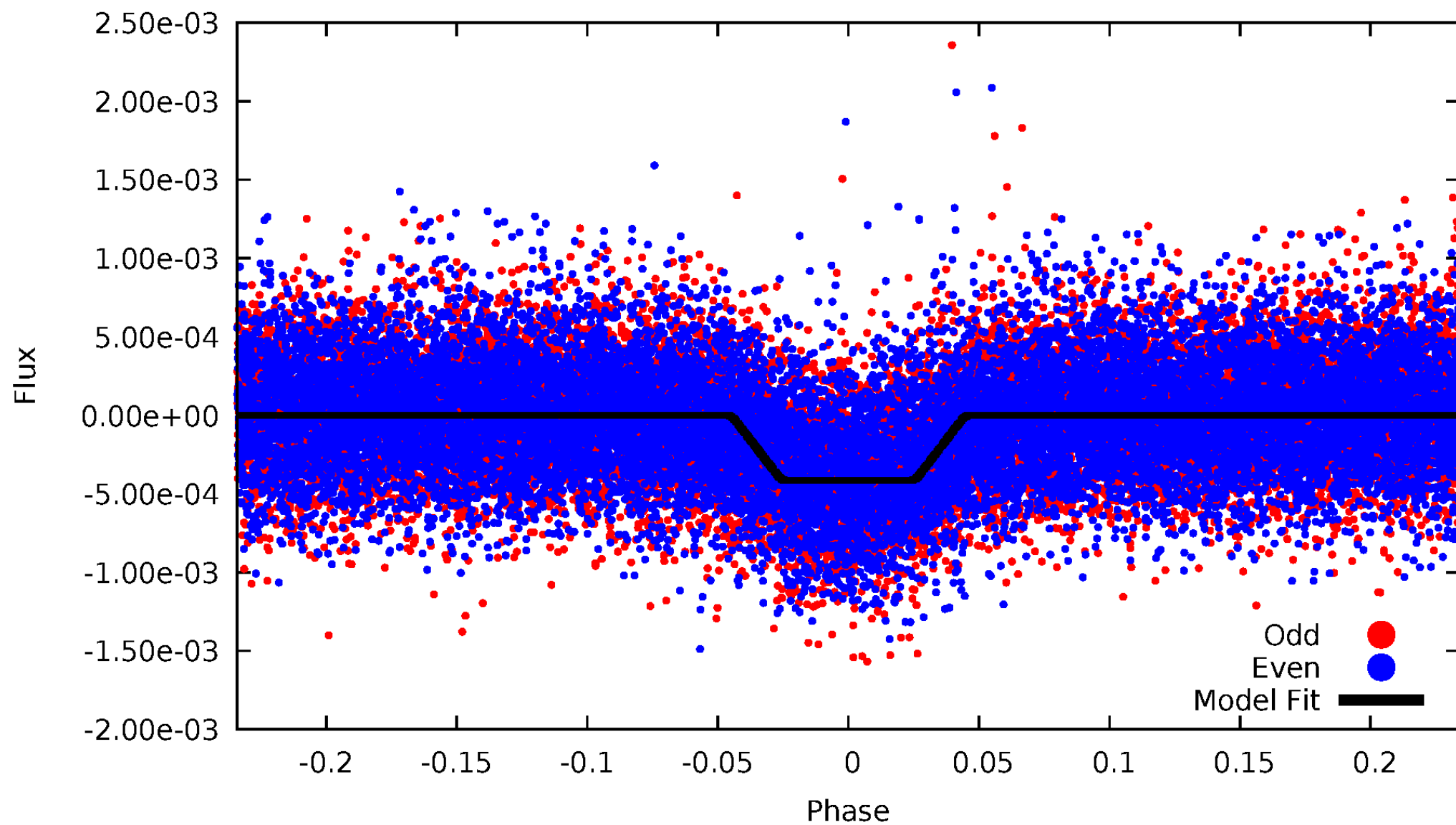
DV Odd/Even

TCE 008552583-01



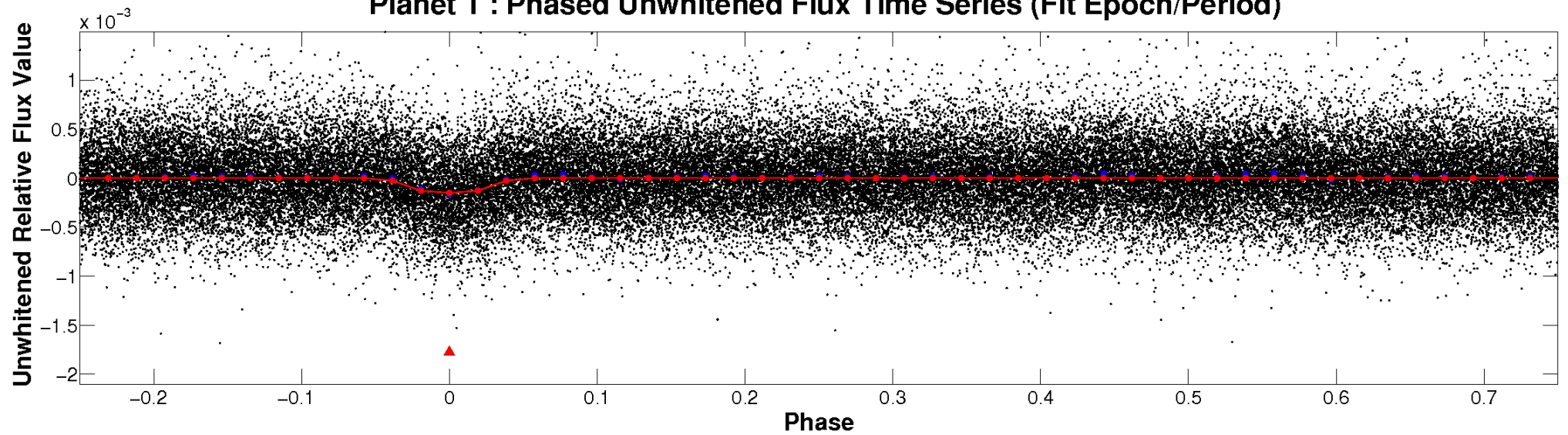
ALT Odd/Even

TCE 008552583-01

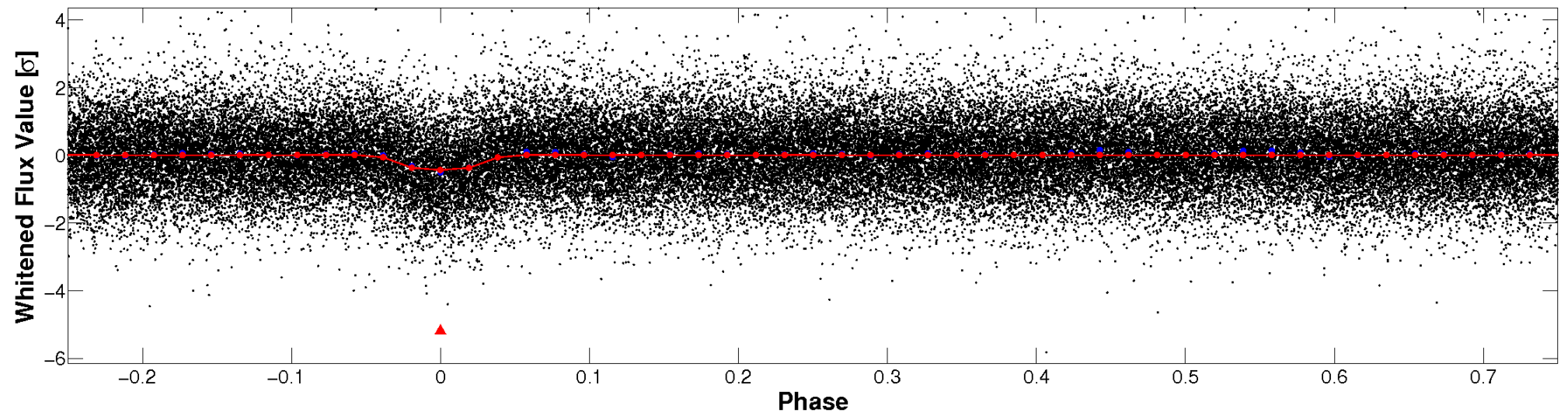


Non-Whitened Vs. Whitened Light Curve

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

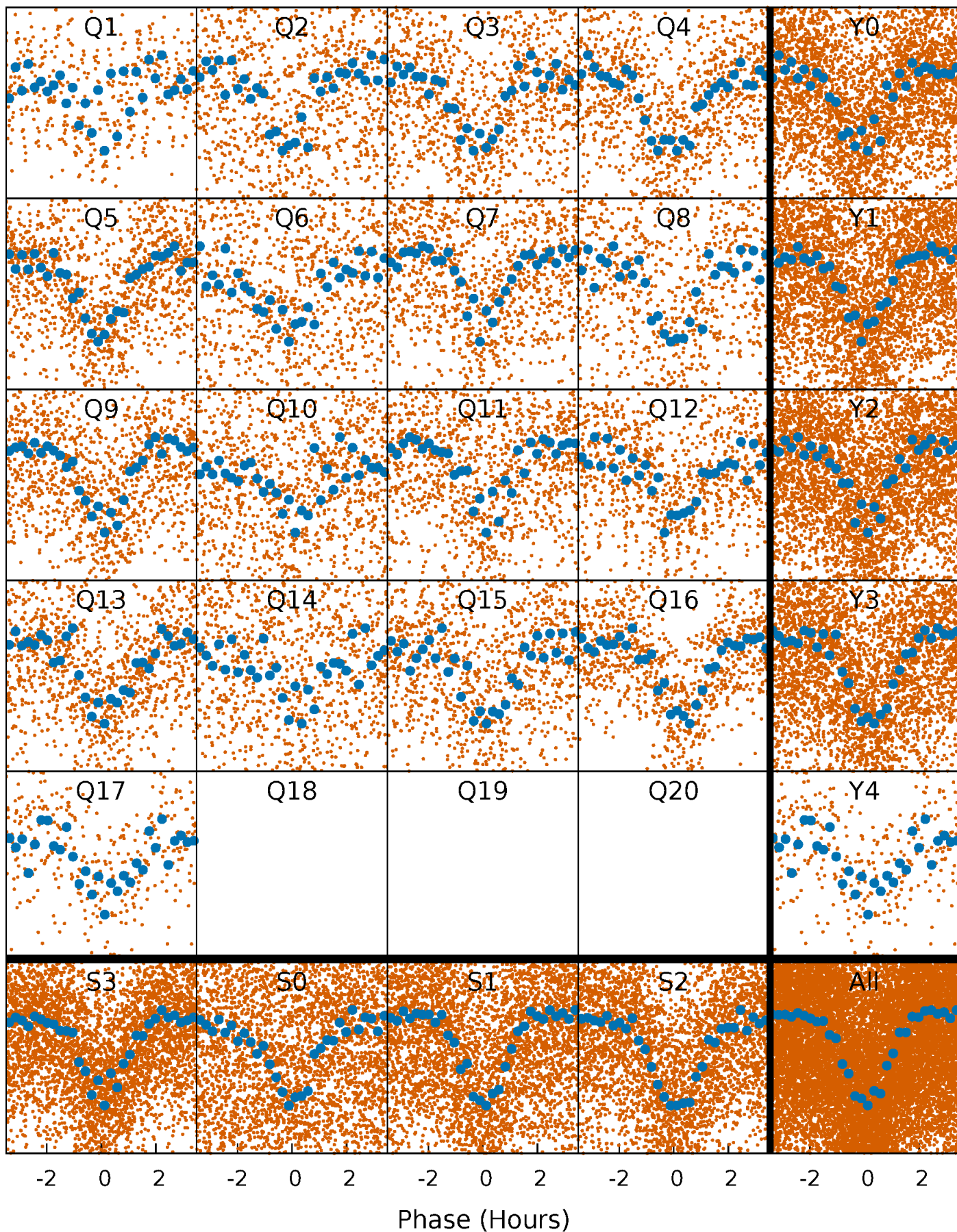


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



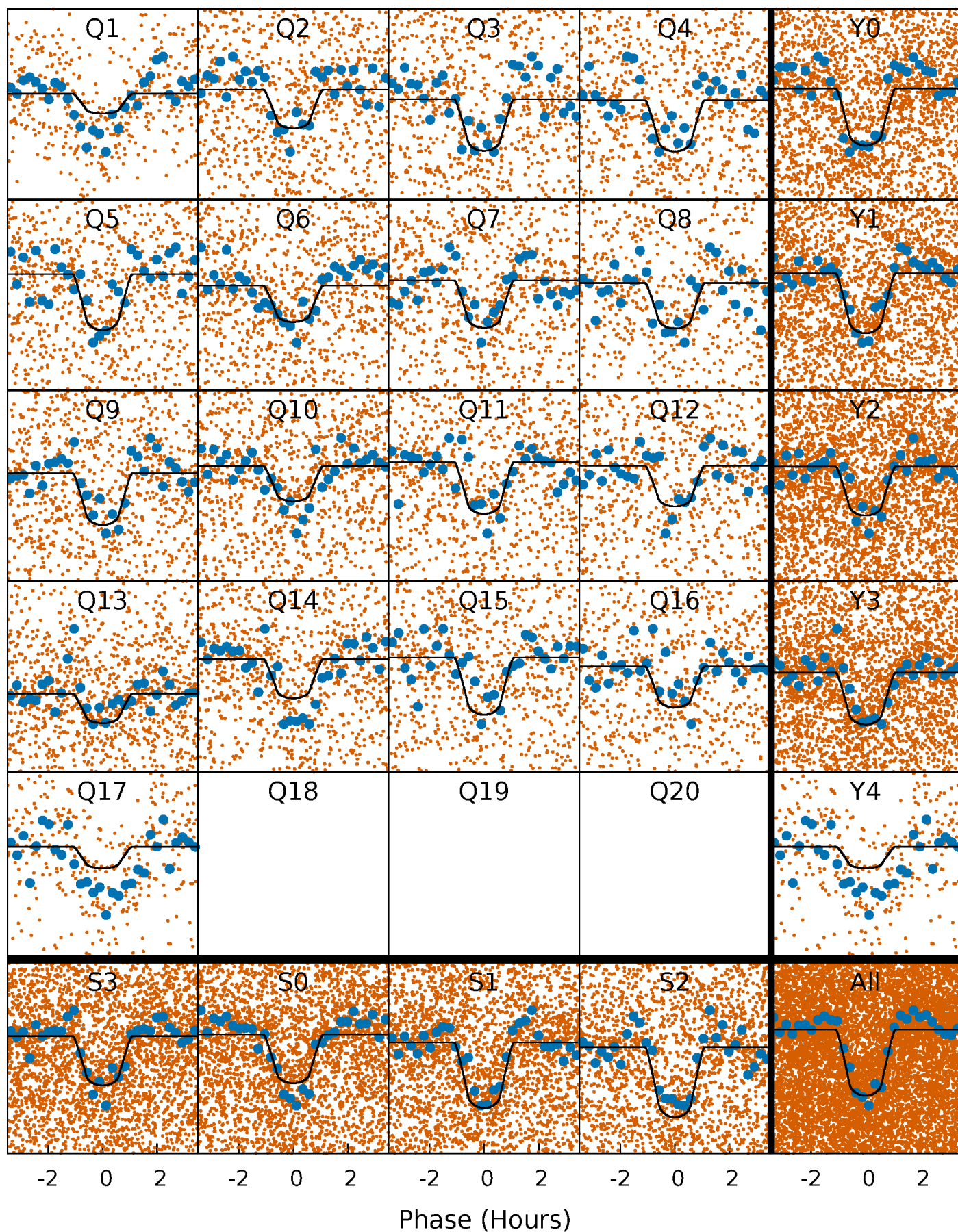
PDC Quarter-Phased Transit Curves

TCE 008552583-01 P= 1.061921 Days $T_0=131.731357$ (BKJD)



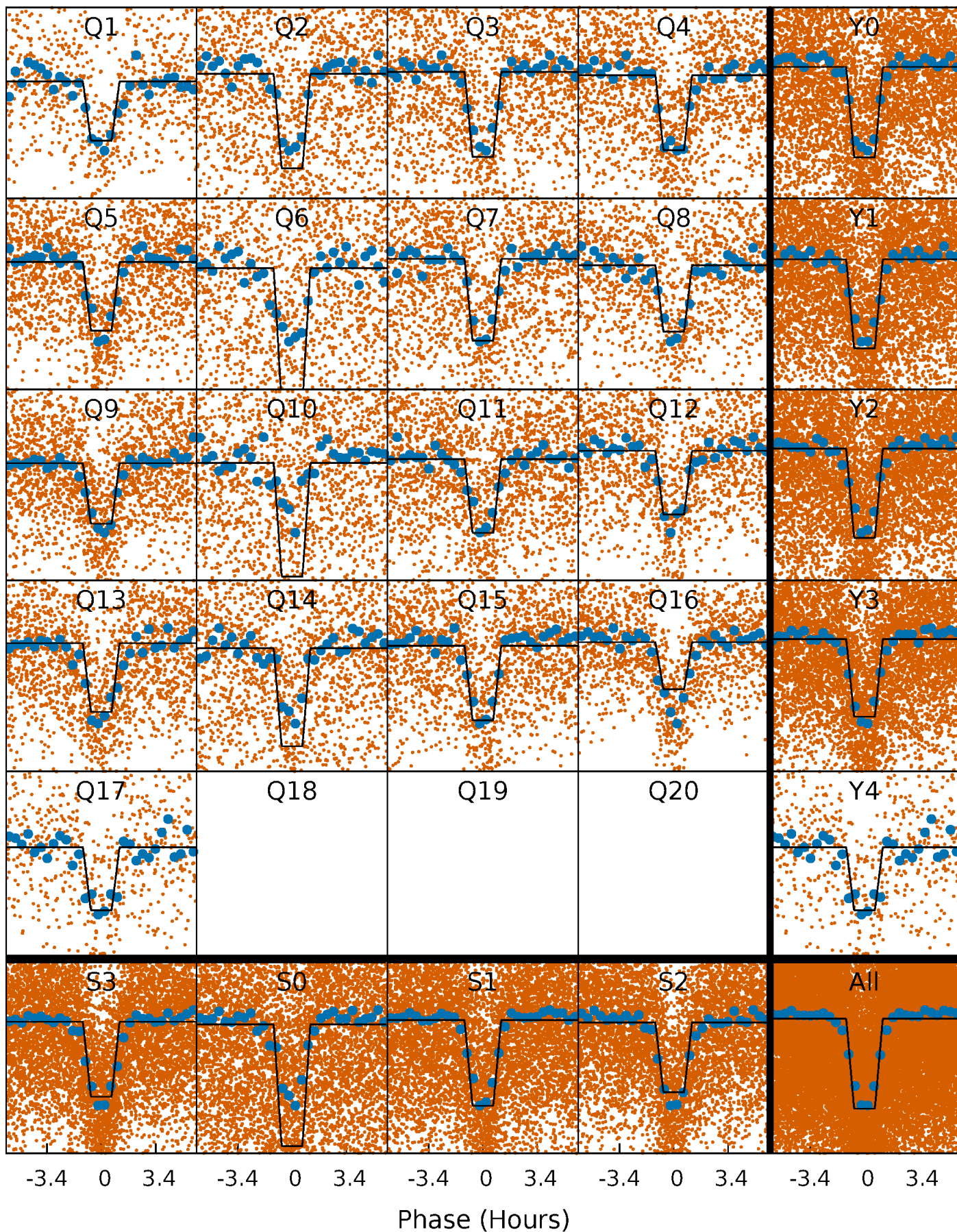
DV Quarter-Phased Transit Curves

TCE 008552583-01 P= 1.061921 Days $T_0=131.731357$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

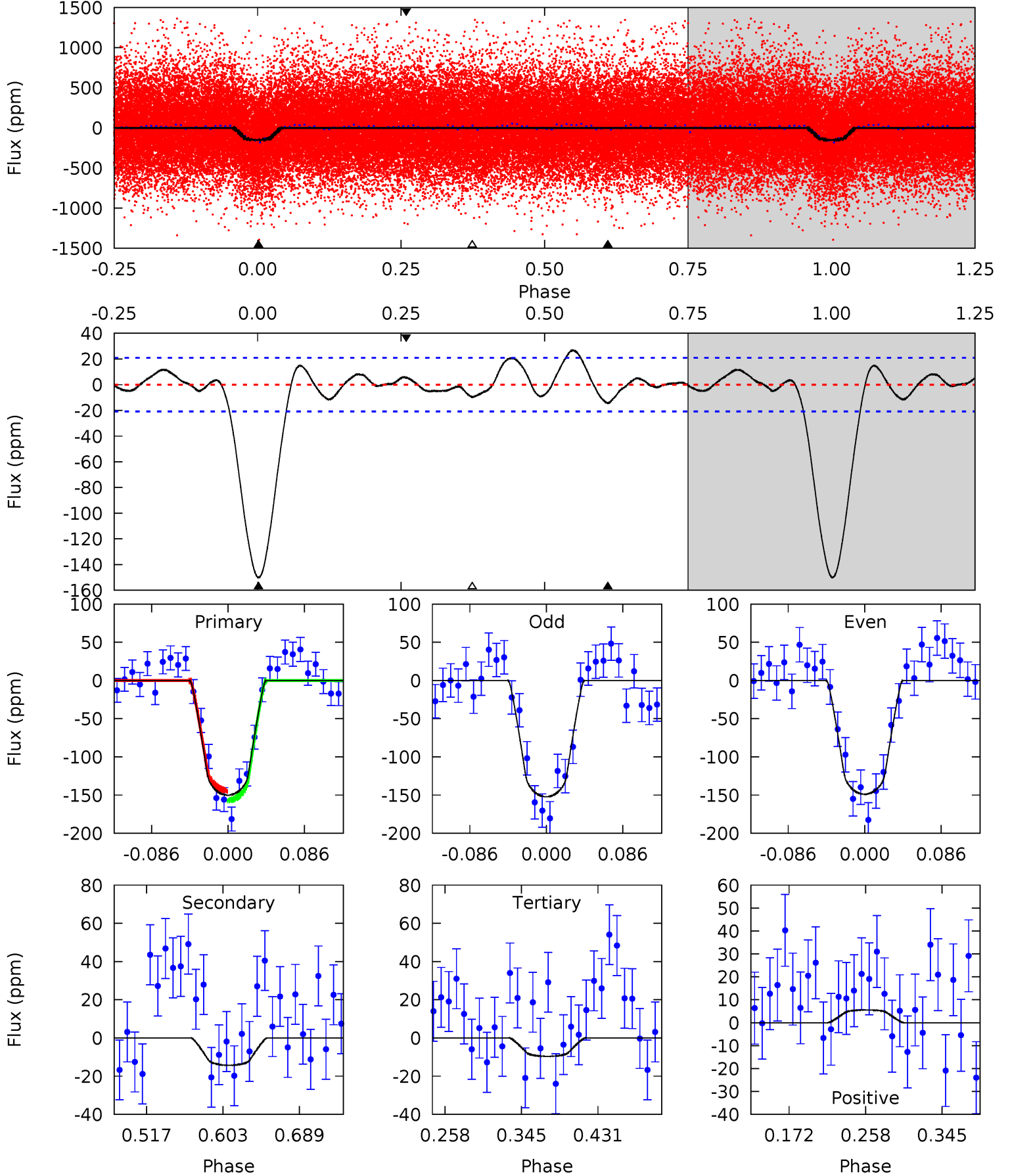
TCE 008552583-01 P= 1.061937 Days $T_0=131.722570$ (BKJD)



DV Model-Shift Uniqueness Test

008552583-01, P = 1.061921 Days, E = 130.669436 Days

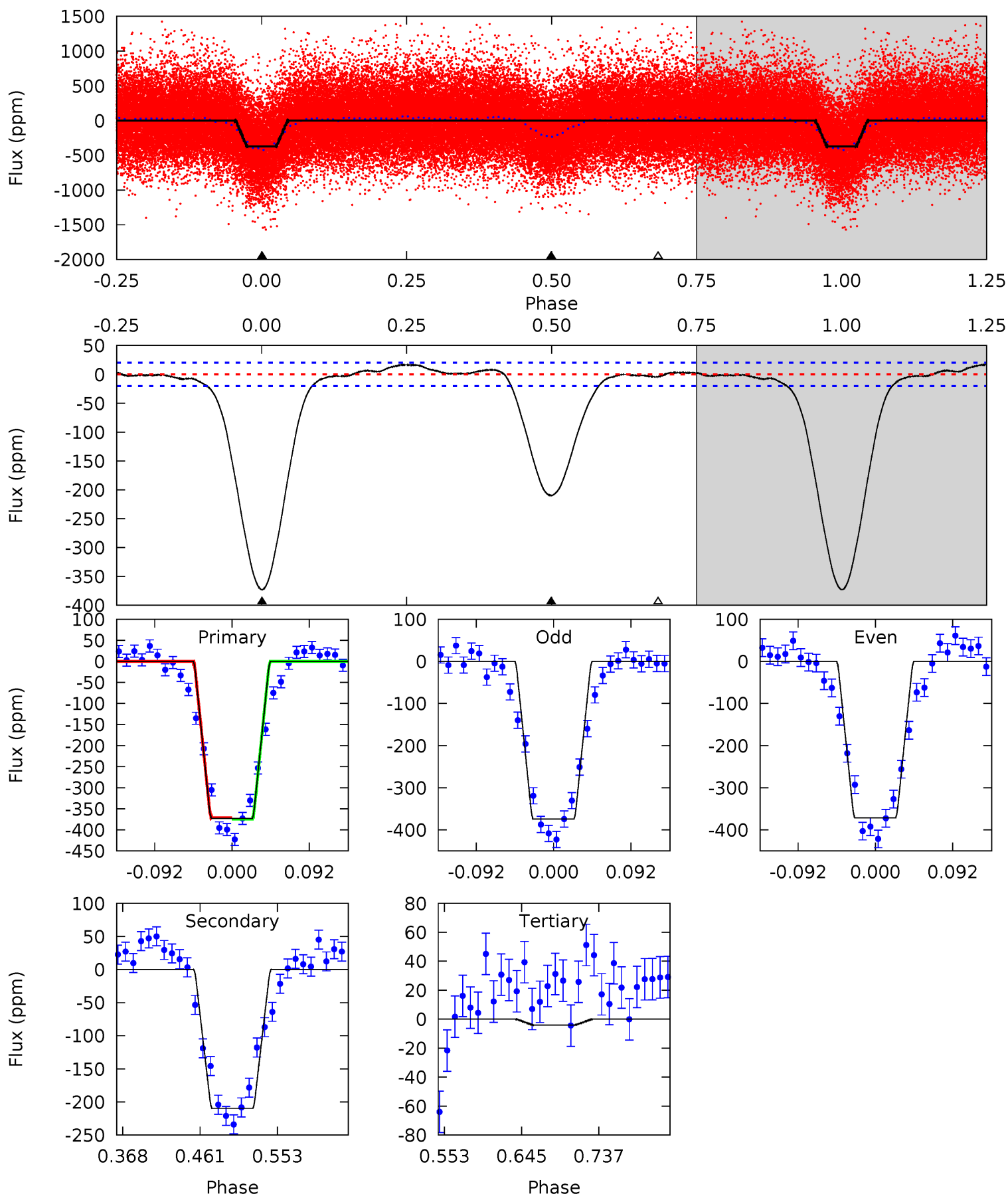
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
33.0	3.14	2.11	1.22	4.60	1.72	1.51	30.9	31.8	1.03	1.93	0.36	1.00	0.15	1.41



Alt Model-Shift Uniqueness Test

008552583-01, P = 1.061937 Days, E = 130.660633 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
84.4	47.5	0.92	0	4.58	1.68	1.60	83.4	84.4	46.6	47.5	0.36	1.00	0.04	0.39



Stellar Parameters For KIC 008552583

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5730^{+156}_{-173}	$4.545^{+0.042}_{-0.168}$	$-0.060^{+0.300}_{-0.300}$	$0.870^{+0.215}_{-0.072}$	$0.968^{+0.093}_{-0.114}$	$2.069^{+0.361}_{-0.935}$
	+3%/-3%	+1%/-4%	+500%/-500%	+25%/-8%	+10%/-12%	+17%/-45%
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 008552583-01 / KOI 1265.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-14 ± 5	$1.30^{+0.56}_{-0.51}$	2358^{+136}_{-100}	3433^{+785}_{-504}	$1.873^{+3.397}_{-1.063}$
Alt.	-210 ± 4	$1.98^{+0.61}_{-0.52}$	2358^{+135}_{-102}	4902^{+713}_{-474}	12^{+10}_{-5}

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 $A_{obs} \gg 1.0$

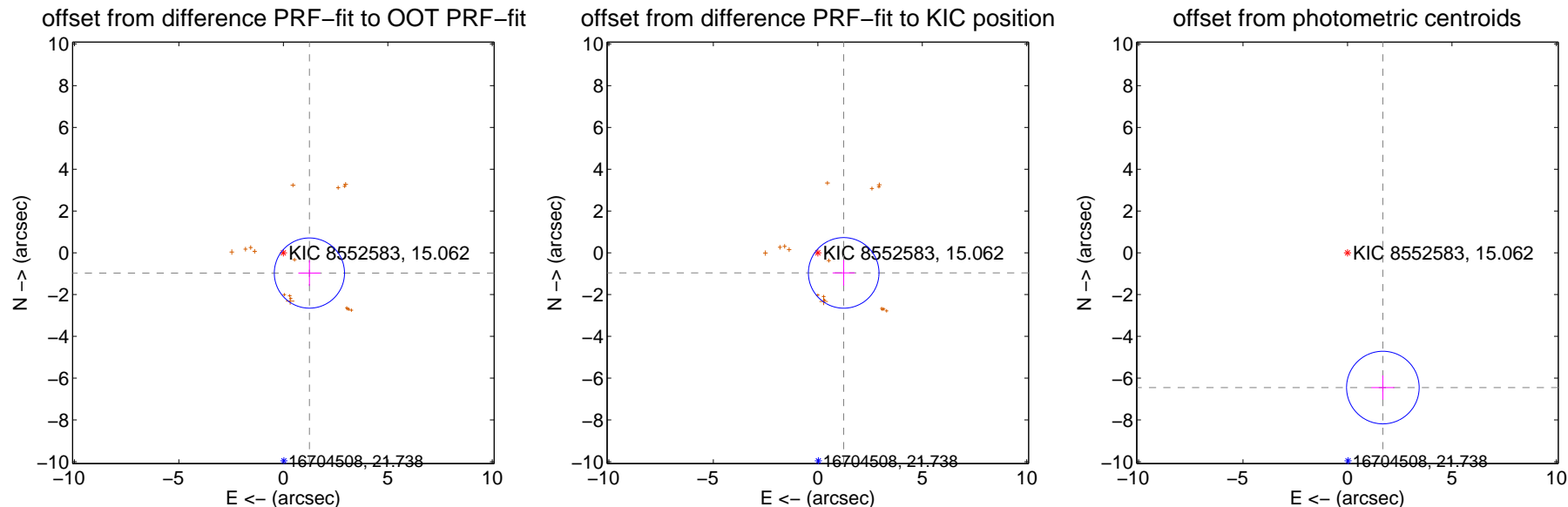
DV Centroid Data

Supplemental centroid analysis for 008552583-01. Kepler magnitude: 15.06. Transit SNR 23.77

There are 0 quarters with good PRF difference image offsets

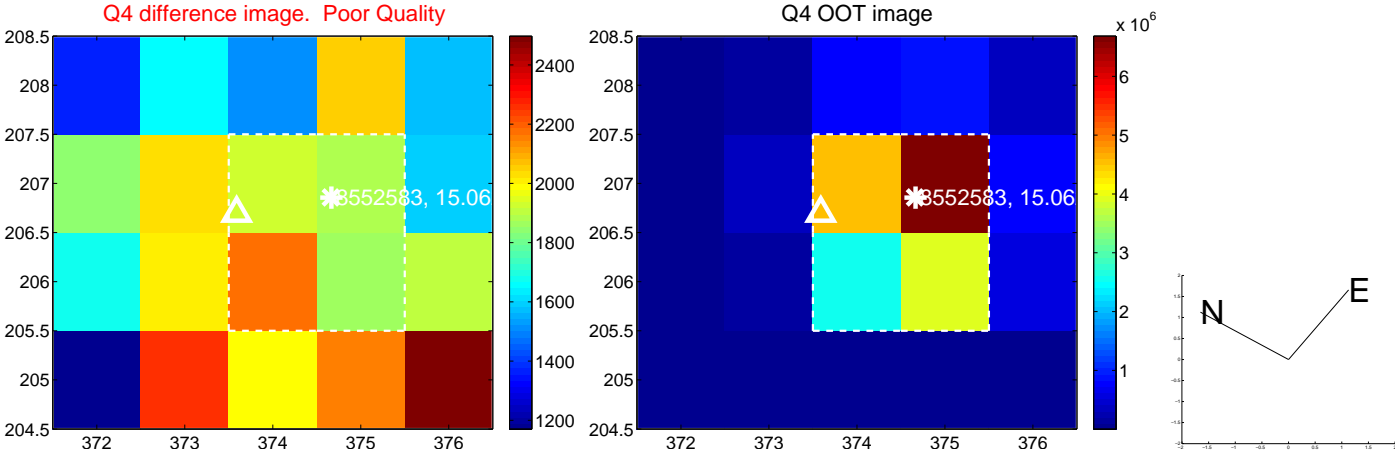
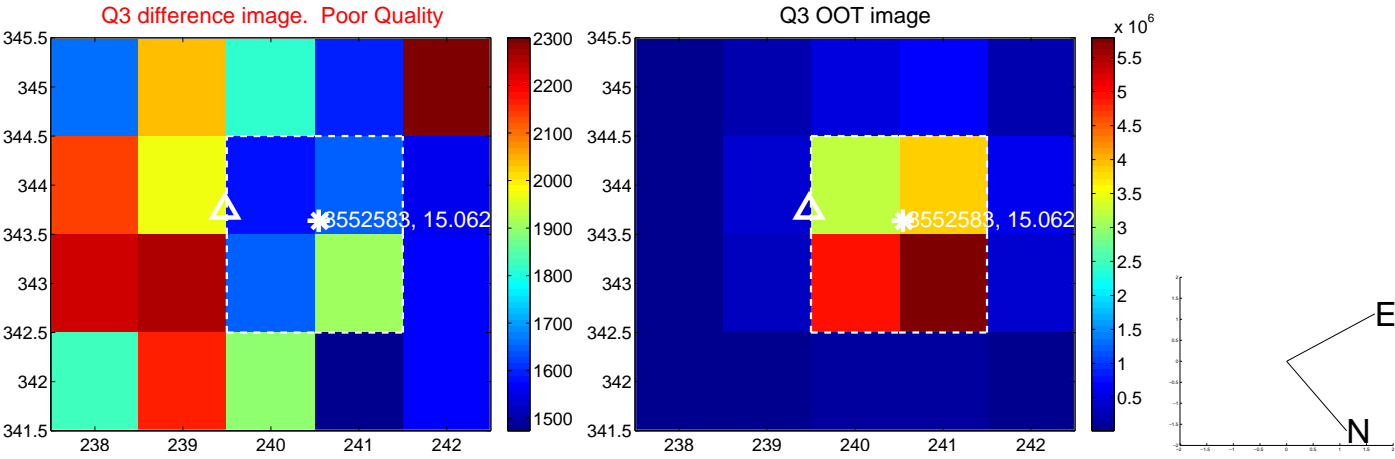
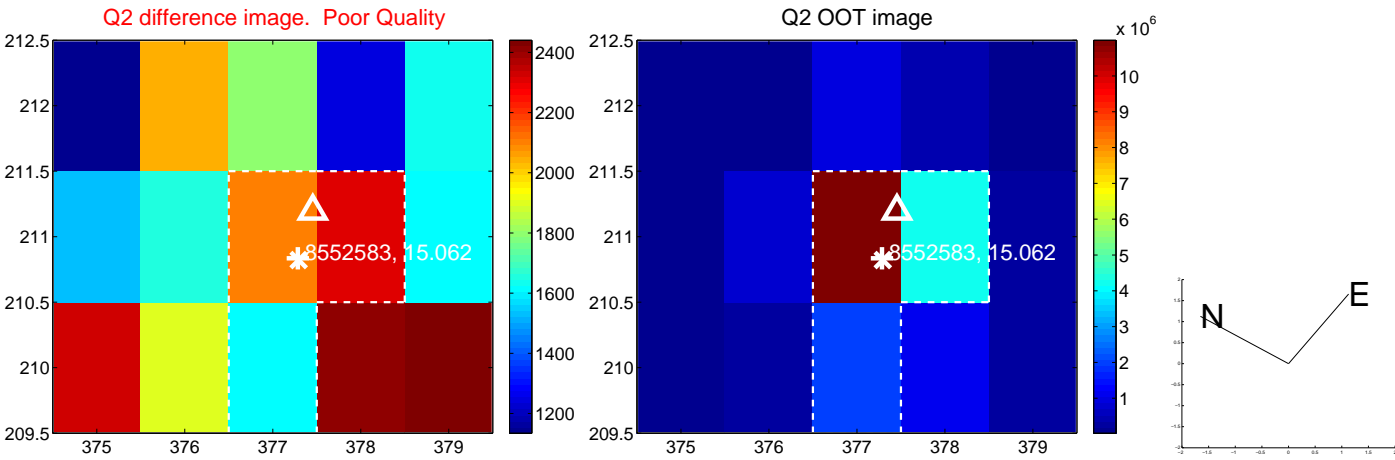
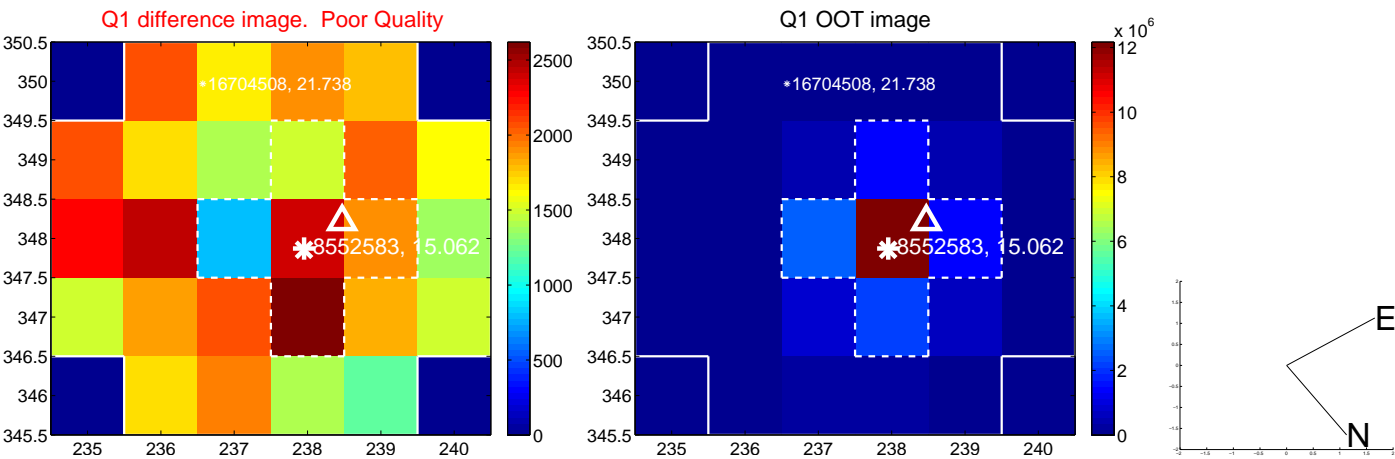
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.580 ± 0.560	2.82	-1.247 ± 0.526	-0.970 ± 0.611
PRF-fit source offset from KIC position	1.569 ± 0.563	2.79	-1.239 ± 0.532	-0.963 ± 0.612
photometric centroid source offset	6.67 ± 0.58	11.52	-1.69 ± 0.55	-6.45 ± 0.58

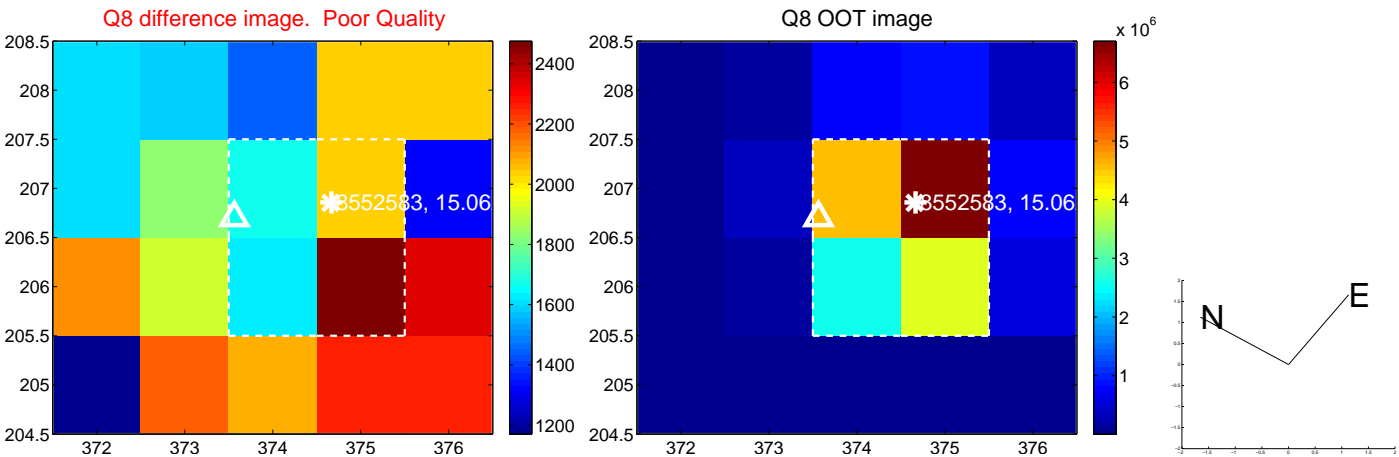
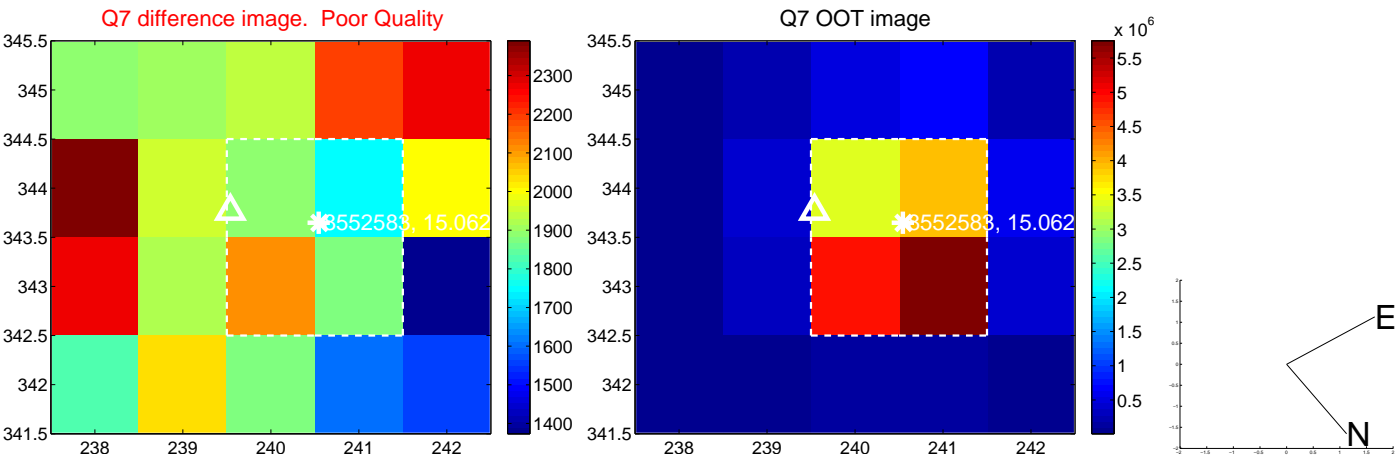
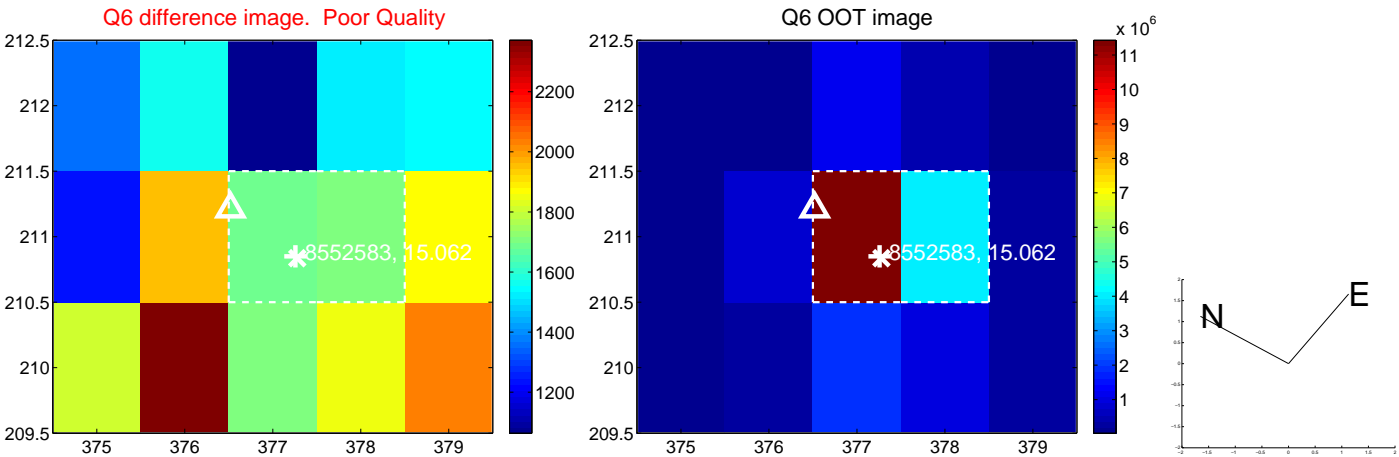
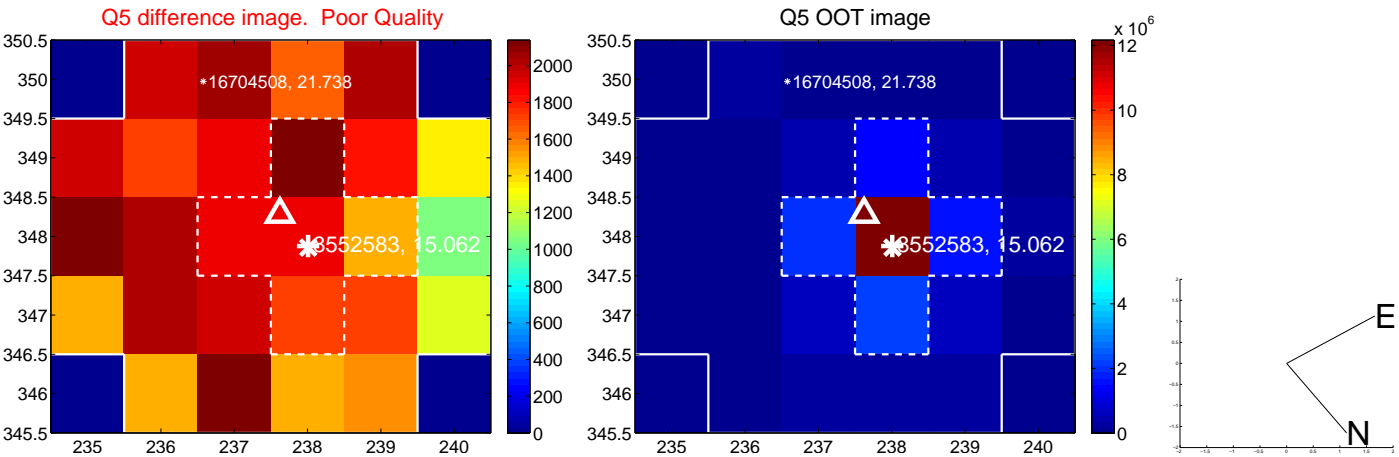


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

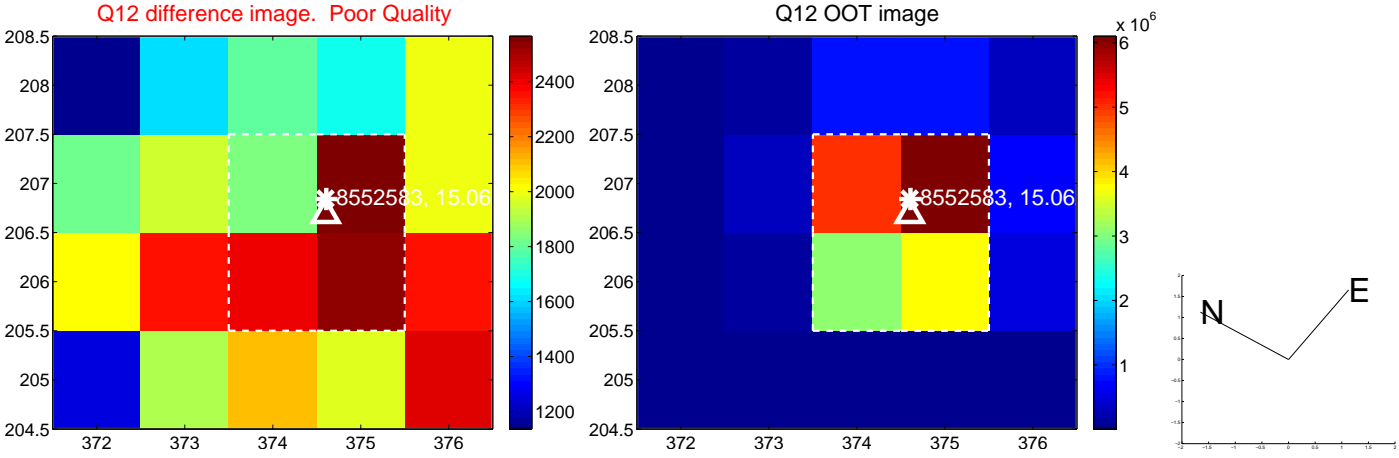
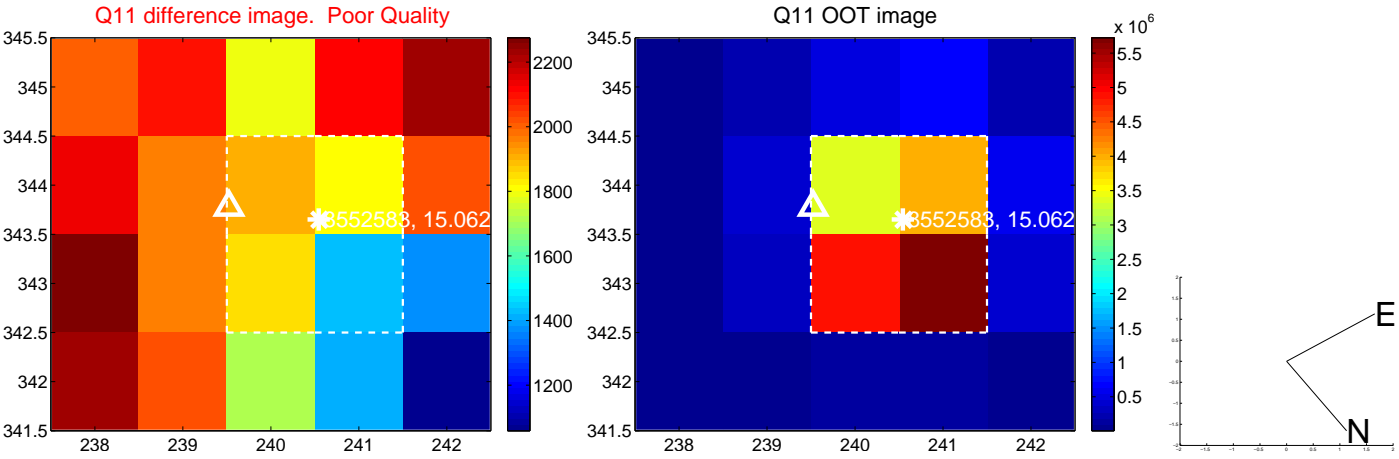
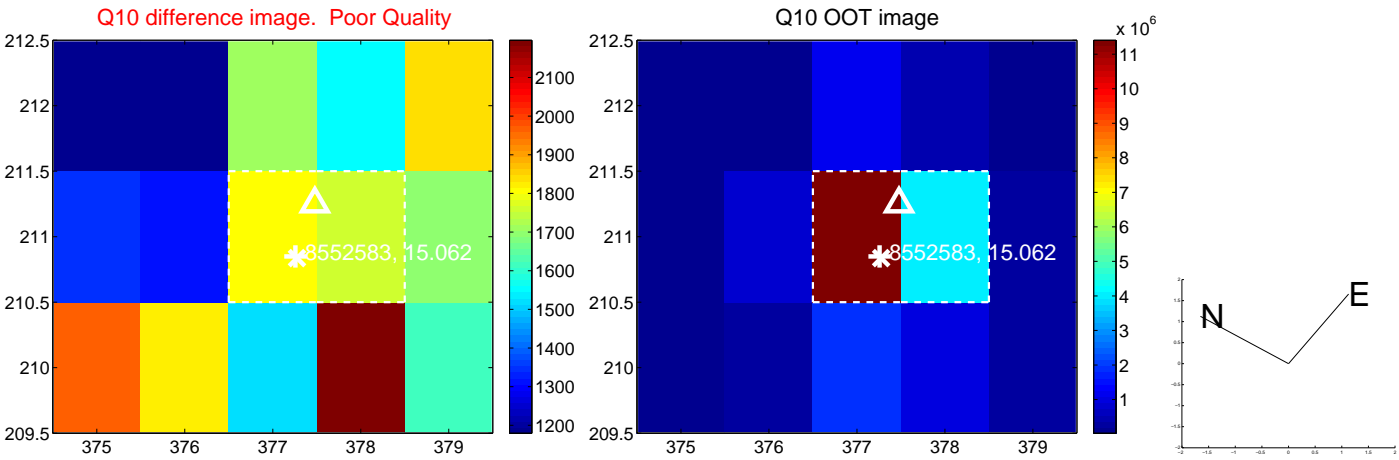
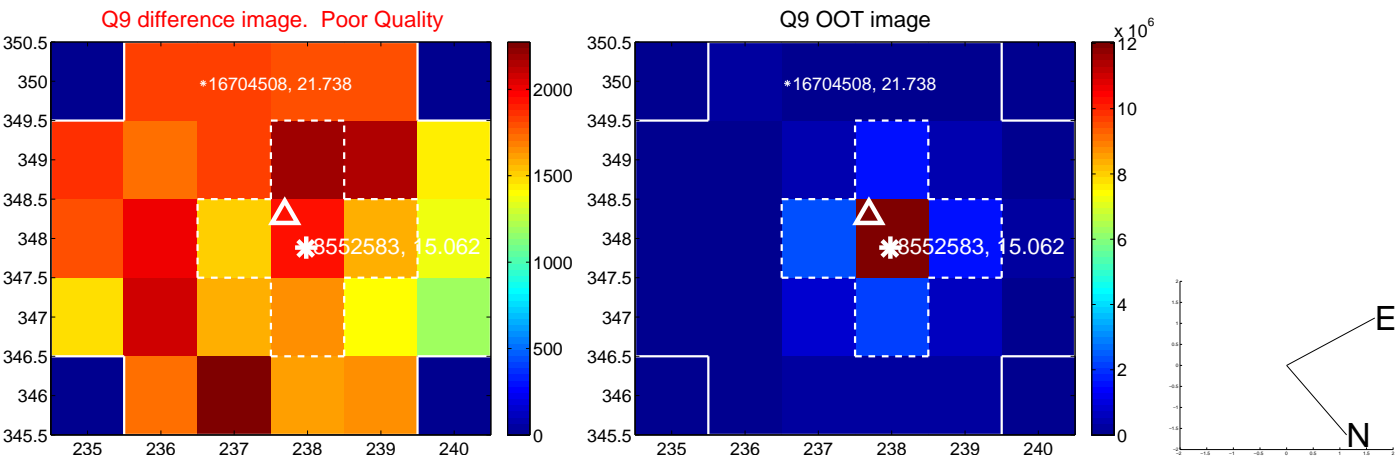
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



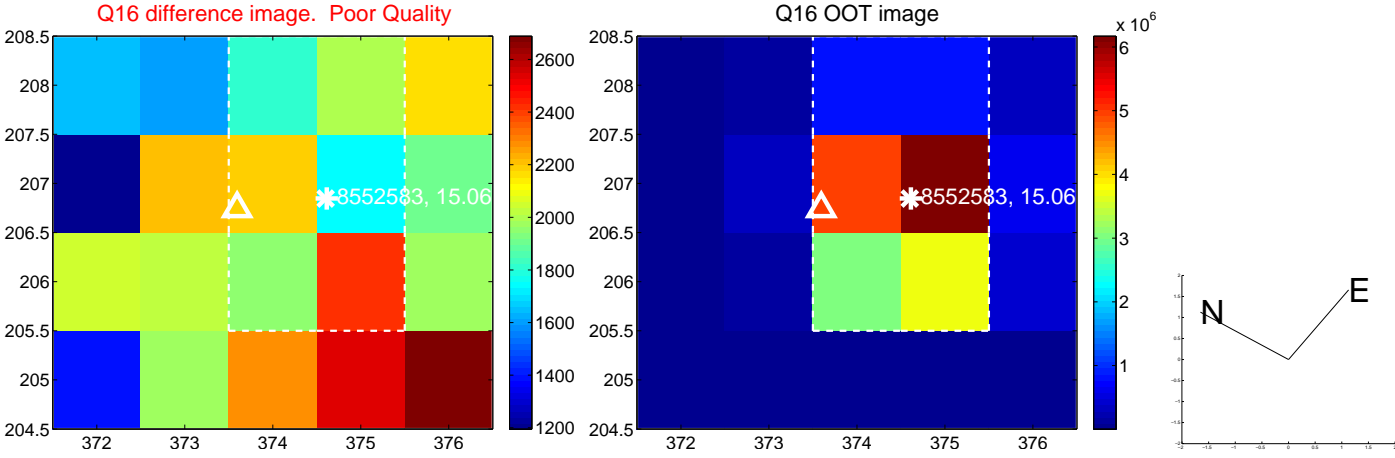
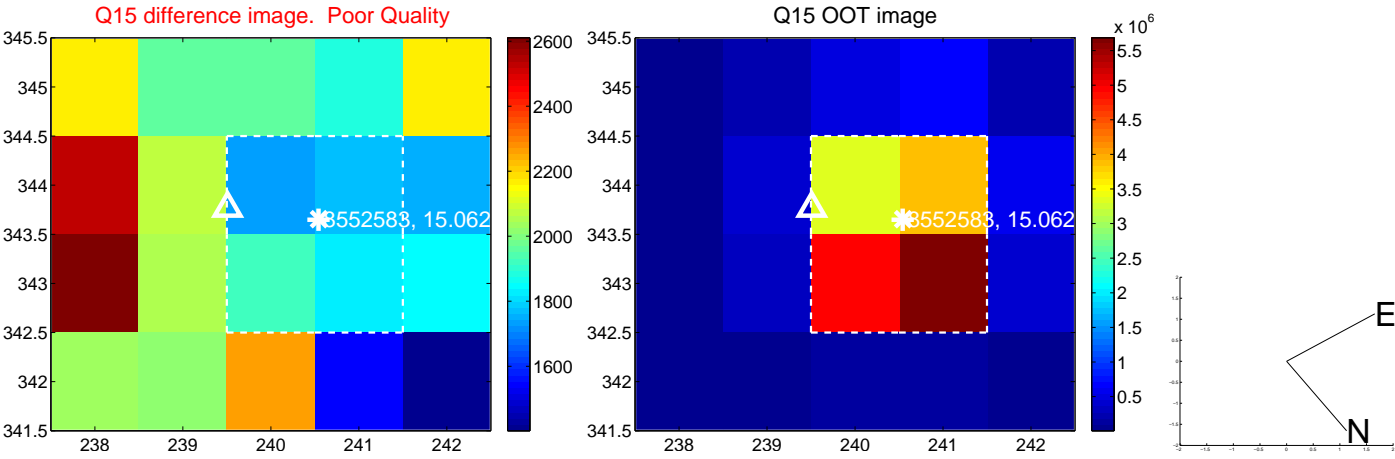
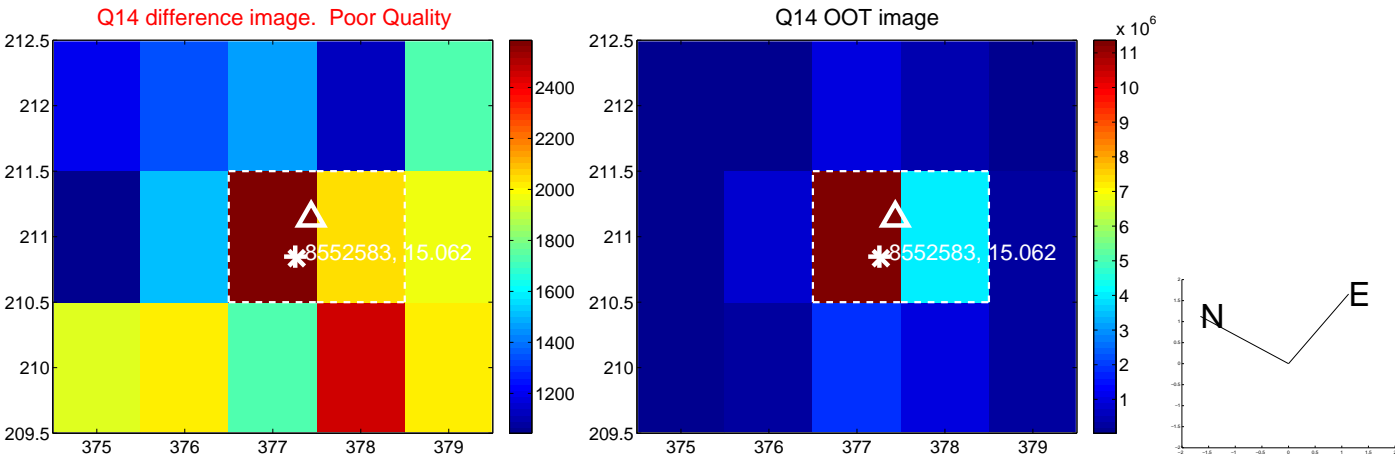
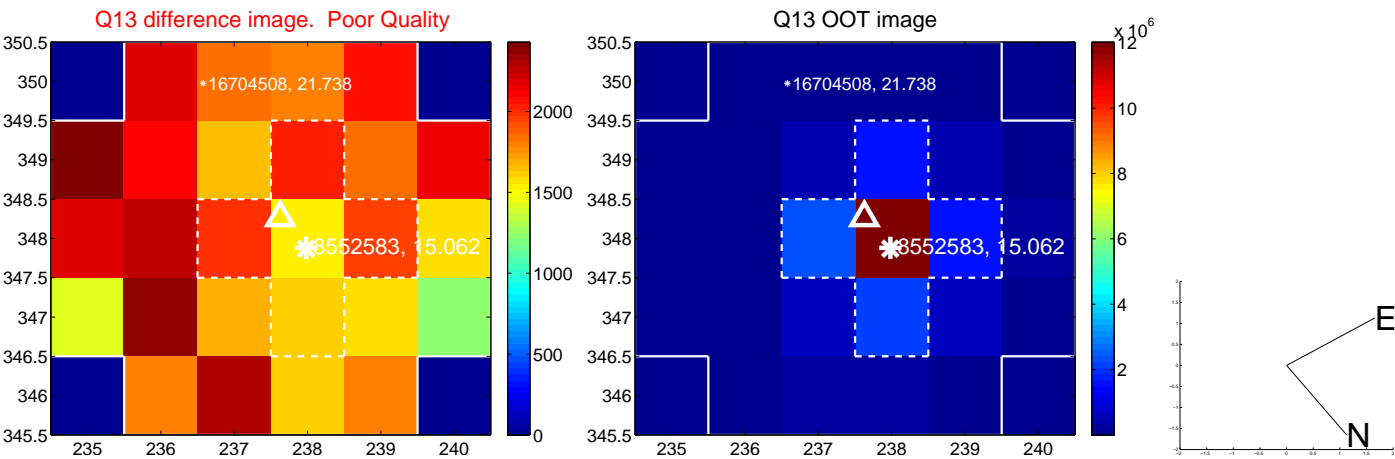
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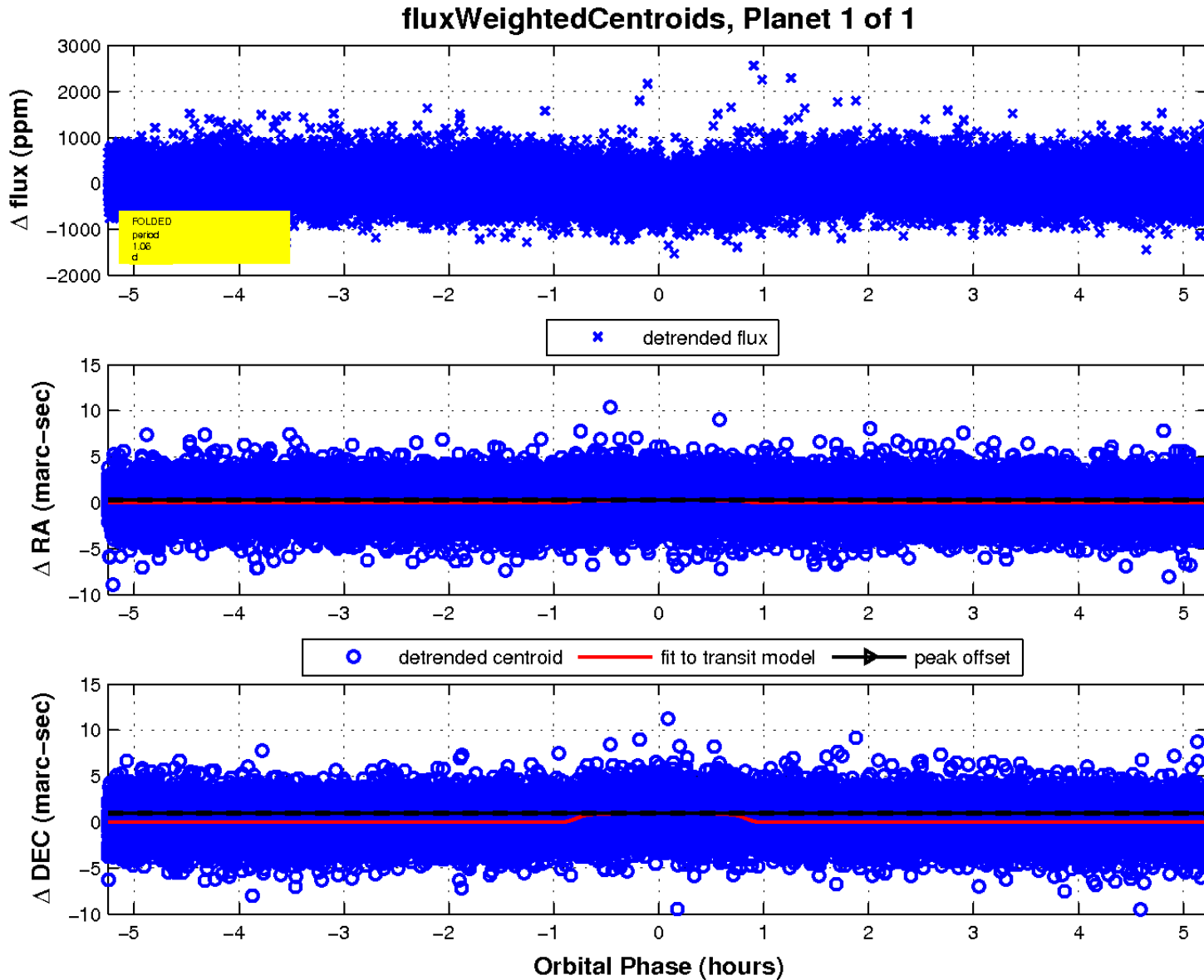
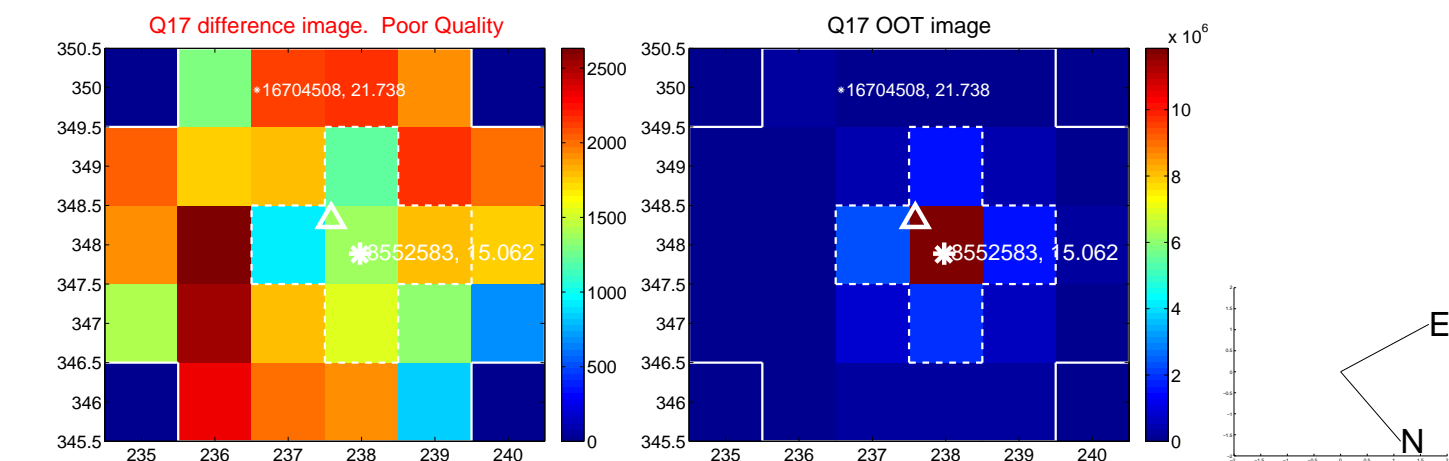
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UKIRT Image

Declination

