

KIC 012066583

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})
012066583-01	OBS	No	0.549144	131.996283	8.8	5.140	8.6	6.3	1.34	5582	0.39	9272.75

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
012066583-01	OBS	FP	0.00	1	0	1	1	LPP_DV—MOD_NONUNIQ_ALT—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.

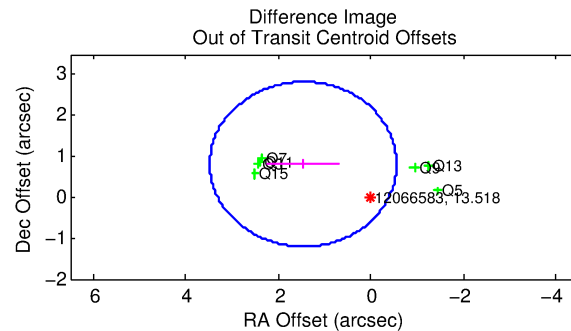
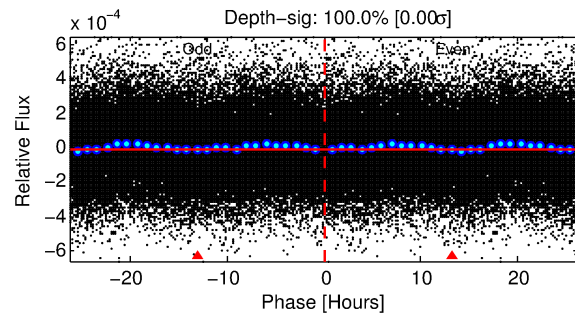
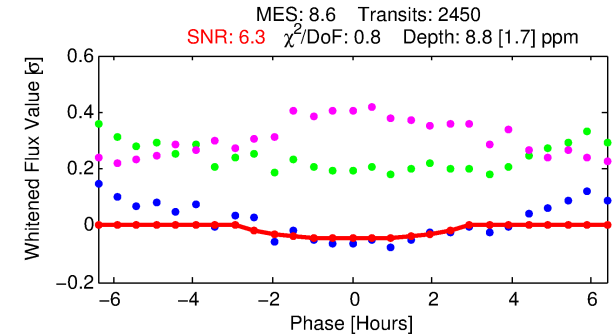
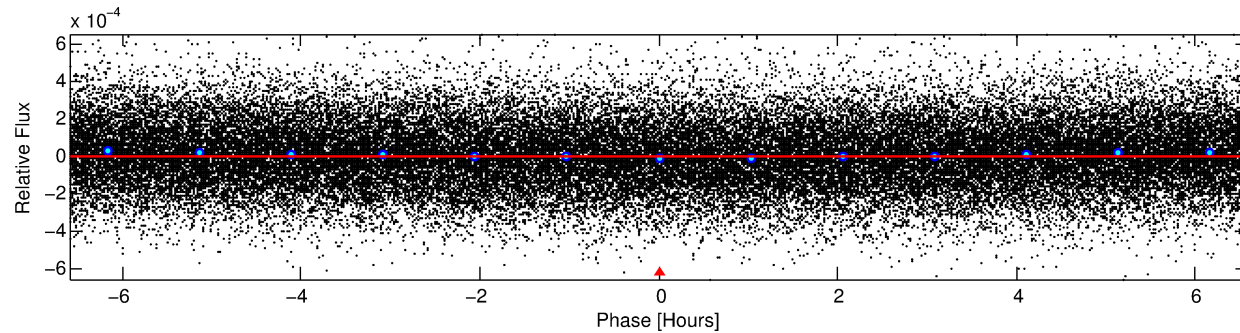
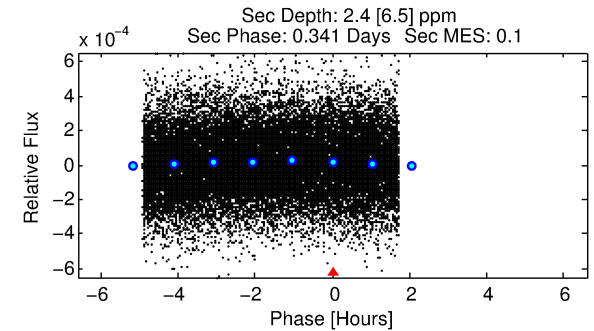
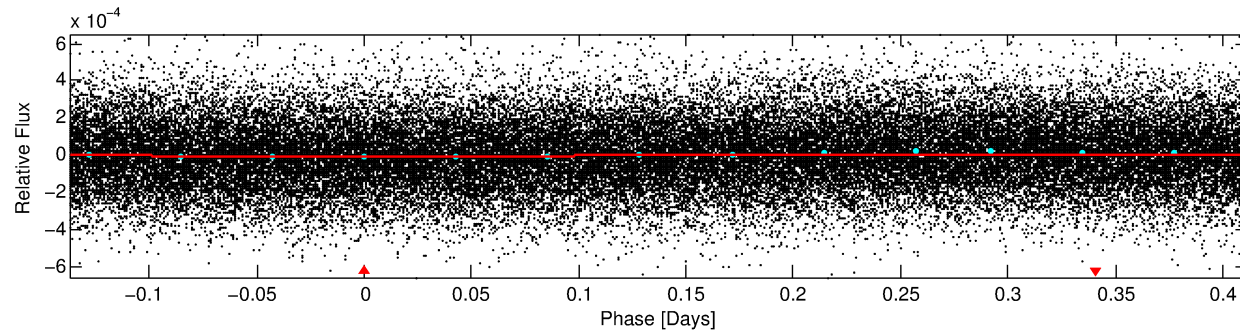
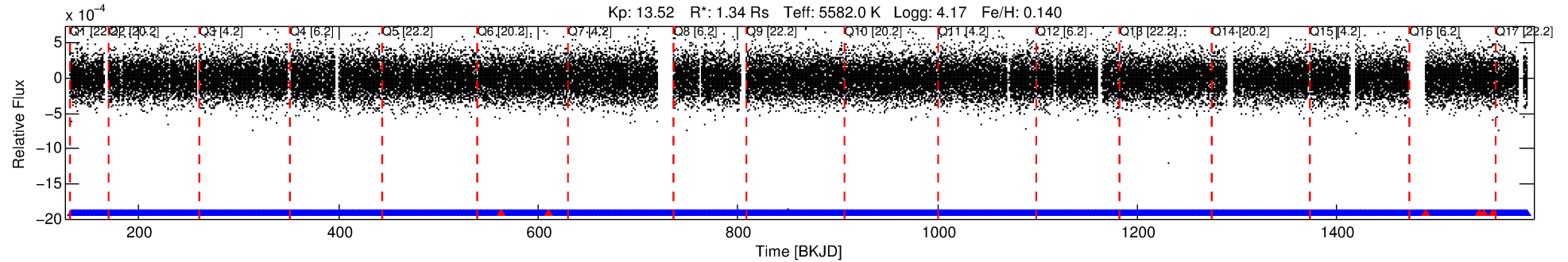
Ephemeris Match Information For 012066583-01

TCE (1)	KIC	Parent (2)	Parent KIC	$P_1:P_2$	Dist (μ)	Δ Row	Δ Col	m_2	m_1	D_2/D_1	Mechanism	Flag	σ_P	σ_T
012066583-01	12066583	012066629-01	12066629	1:1	49.5	-9	-9	15.07	13.52	3.22	Direct-PRF	1	1.39	2.67

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: 12066583 Candidate: 1 of 1 Period: 0.549 d



DV Fit Results:

Period = 0.54914 [0.00002] d
Epoch = 131.9963 [0.0095] BKJD
Rp/R* = 0.0027 [0.0049]
a/R* = 1.07 [0.91]
b = 0.10 [74.98]
Seff = 9272.75 [4789.88]
Teff = 2502 [323] K
Rp = 0.39 [0.73] Re
a = 0.0130 [0.0040] AU
Ag = 1.44 [6.62] [0.07σ]
Teffp = 4234 [4855] K [0.36σ]

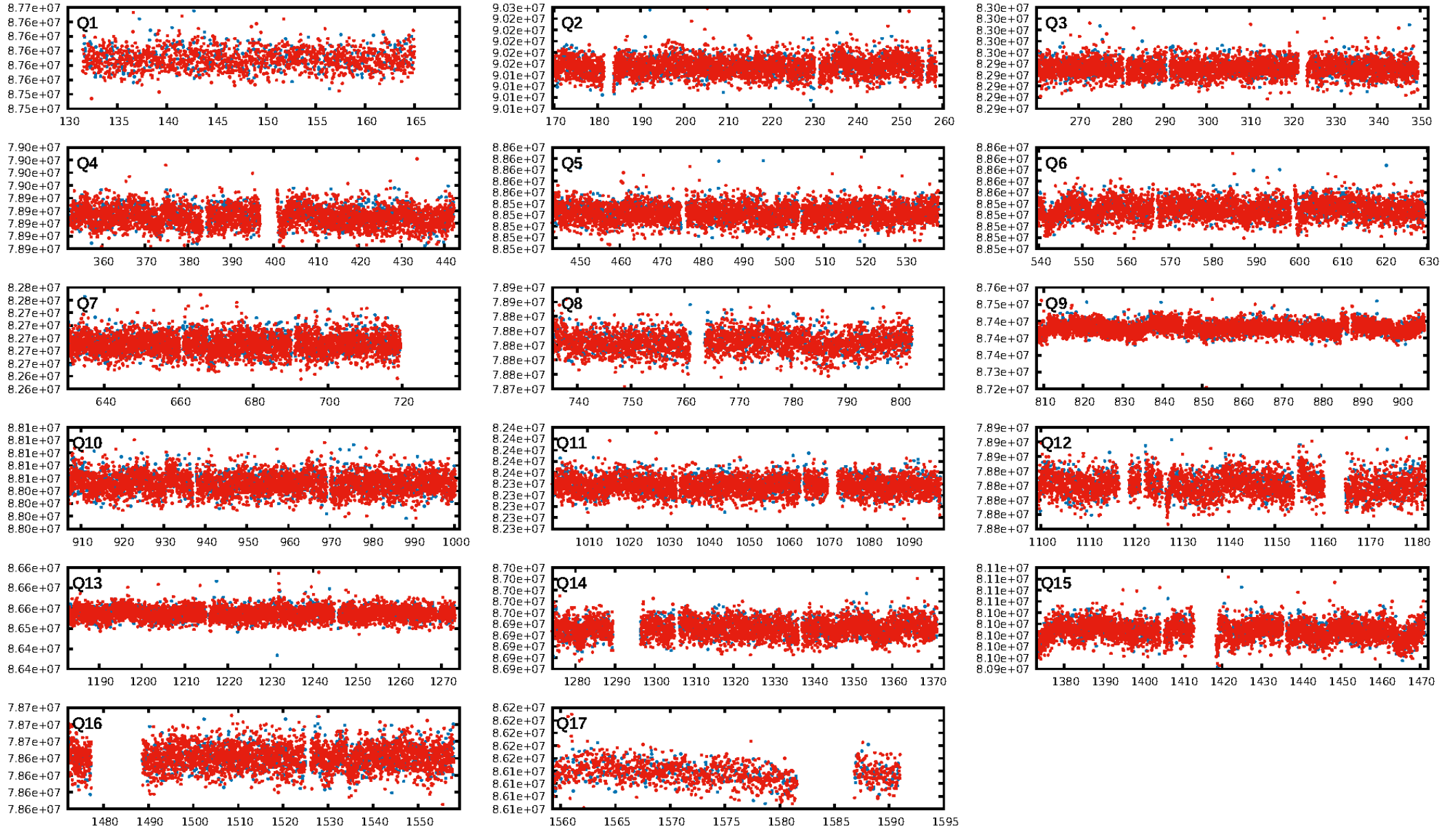
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2332/2339]
GhostDiagnostic-chr: -0.372
Centroid-sig: 0.0%
Centroid-so: 5.497 arcsec [2.31σ]
OotOffset-rm: 1.673 arcsec [2.49σ]
KicOffset-rm: 1.486 arcsec [2.13σ]
OotOffset-st: 0/4/0/3 [7]
KicOffset-st: 0/4/0/3 [7]
DiffImageQuality-fgm: 0.43 [3/7]
DiffImageOverlap-fno: 1.00 [17/17]

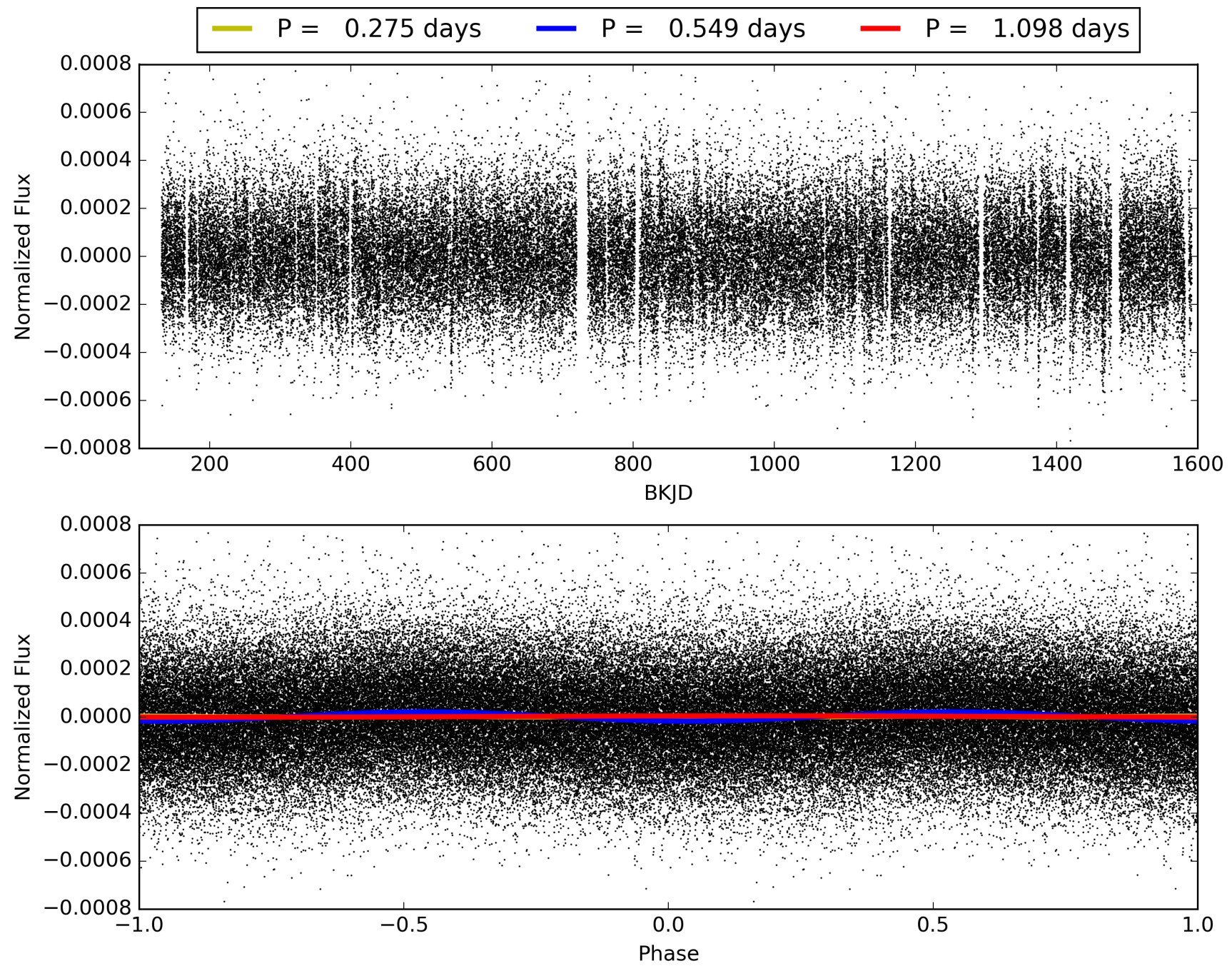
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 29-Jan-2016 00:25:31 Z

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

TCE 012066583-01, PDC Light Curves

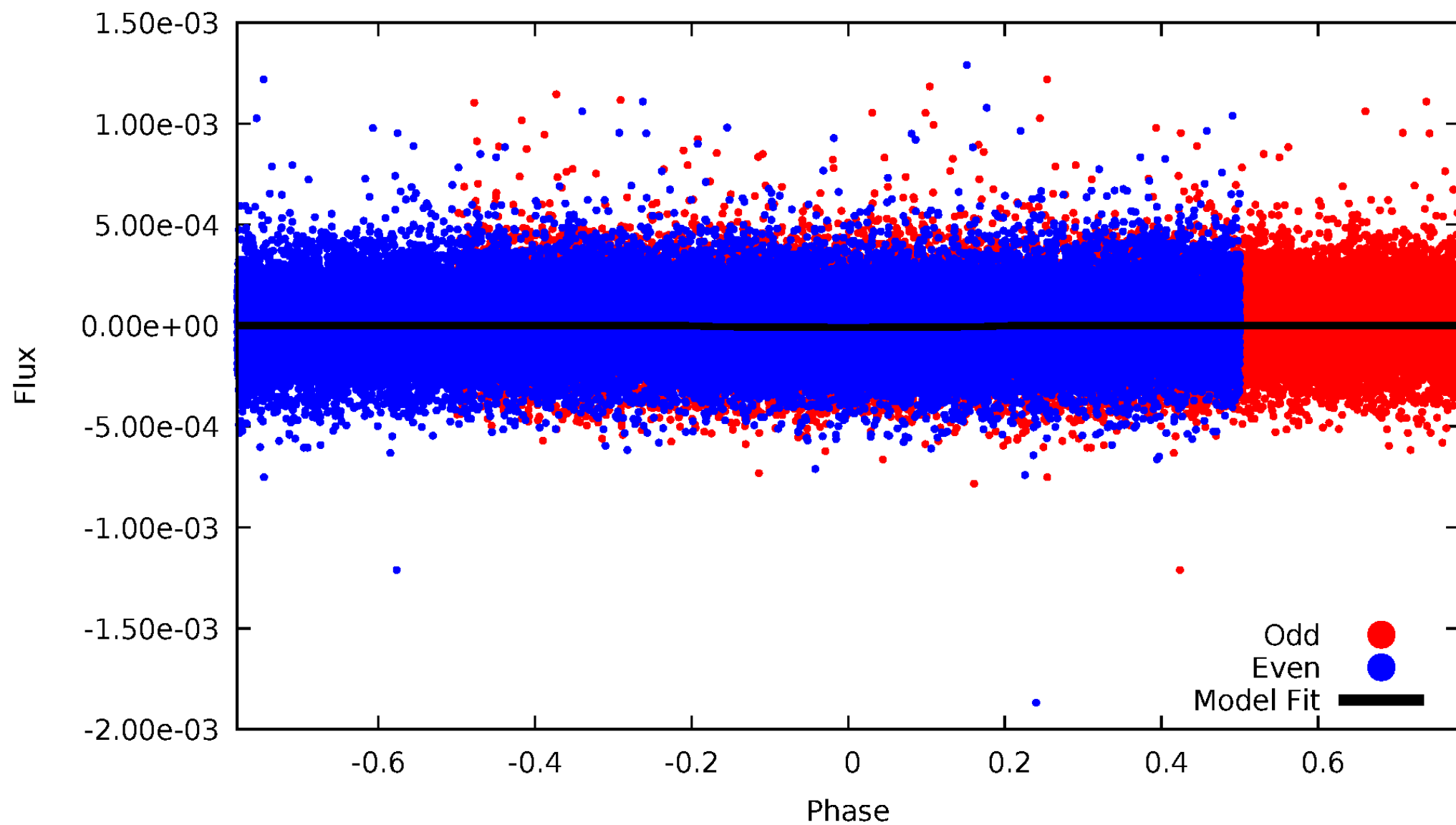


TCE 012066583-01



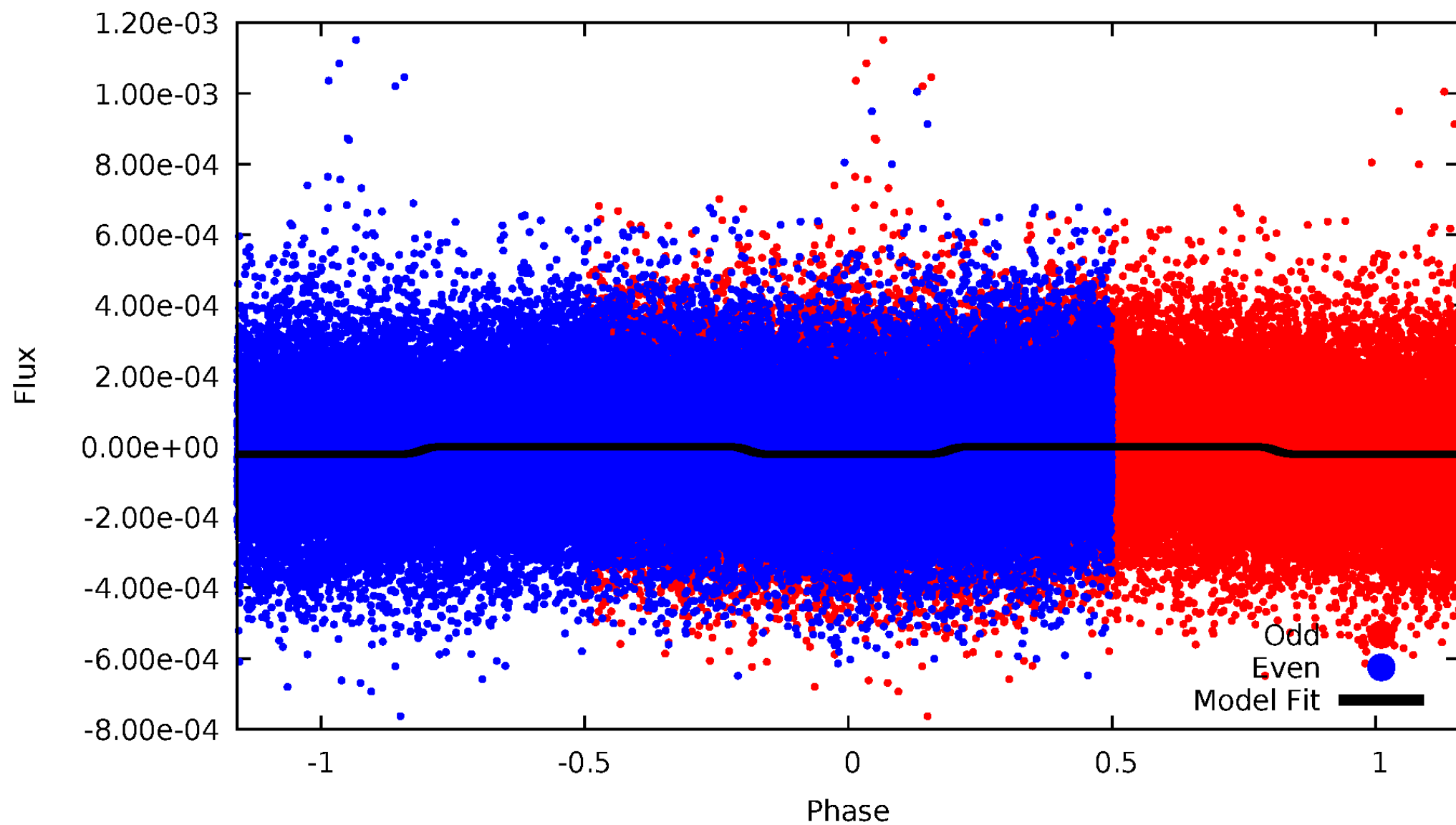
DV Odd/Even

TCE 012066583-01



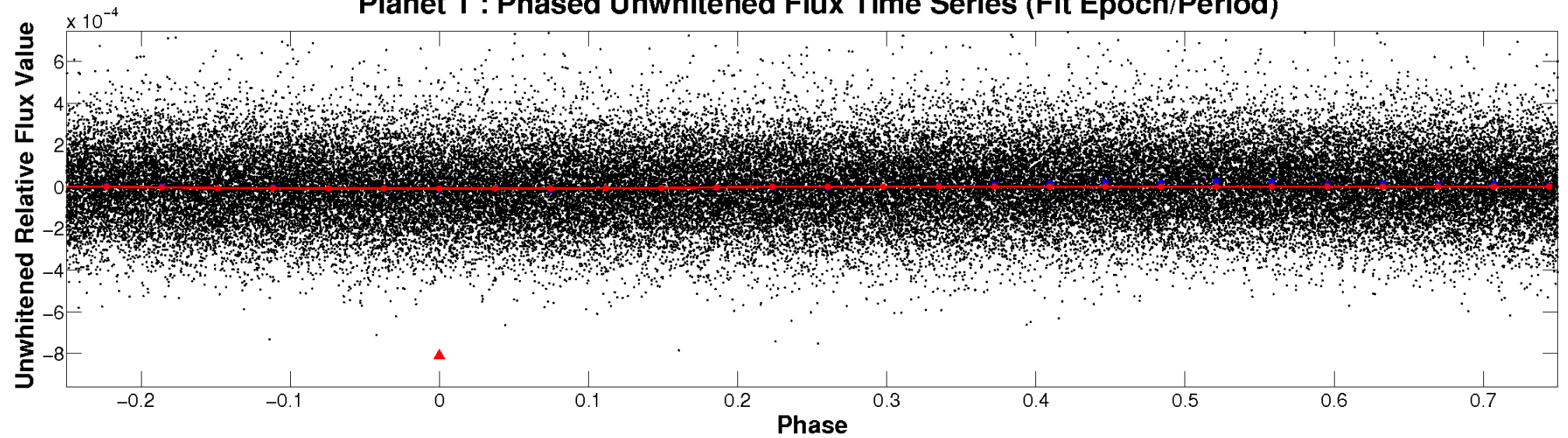
ALT Odd/Even

TCE 012066583-01

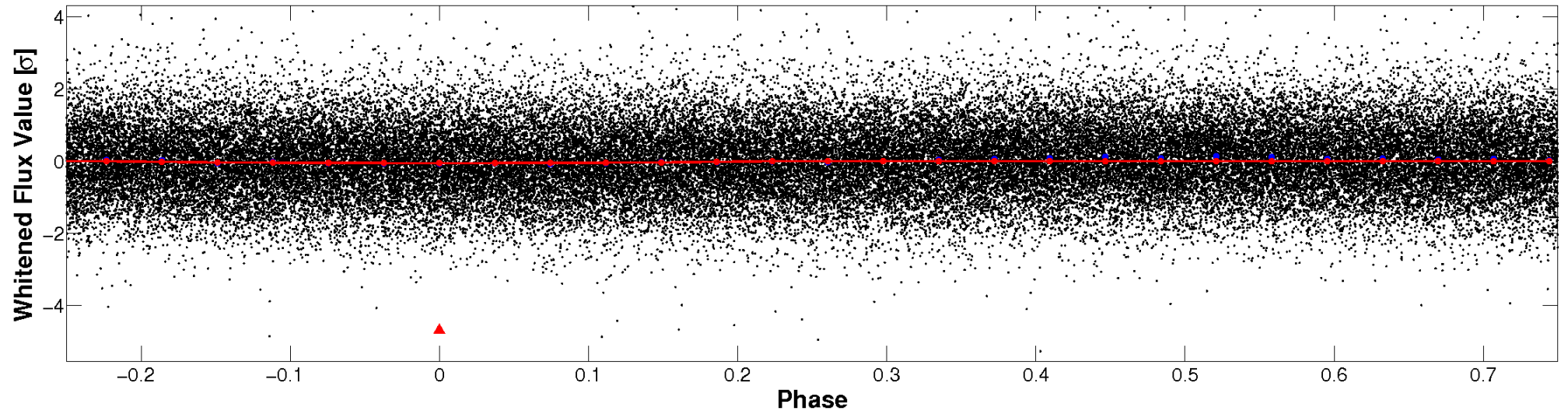


Non-Whitened Vs. Whitened Light Curve

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

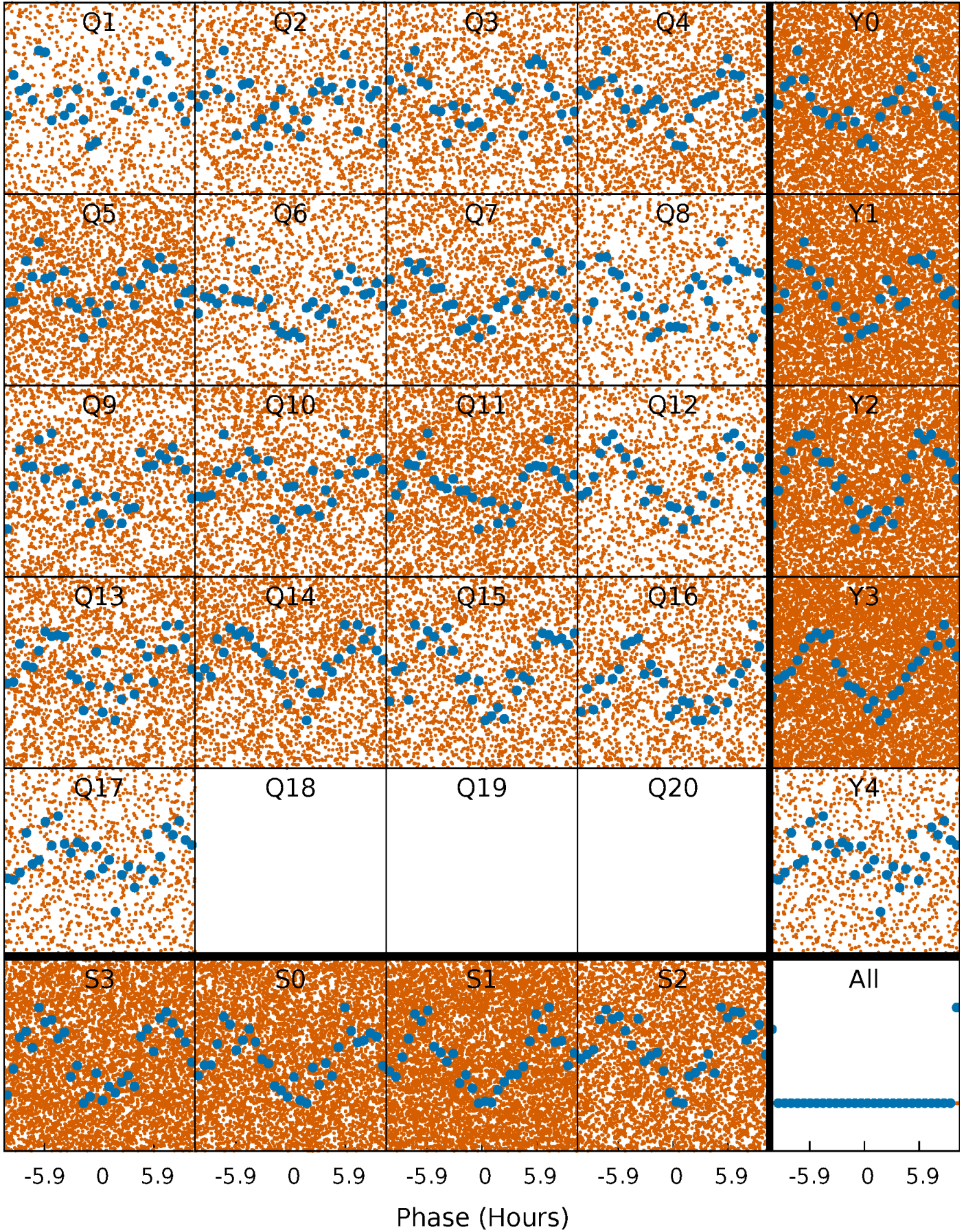


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



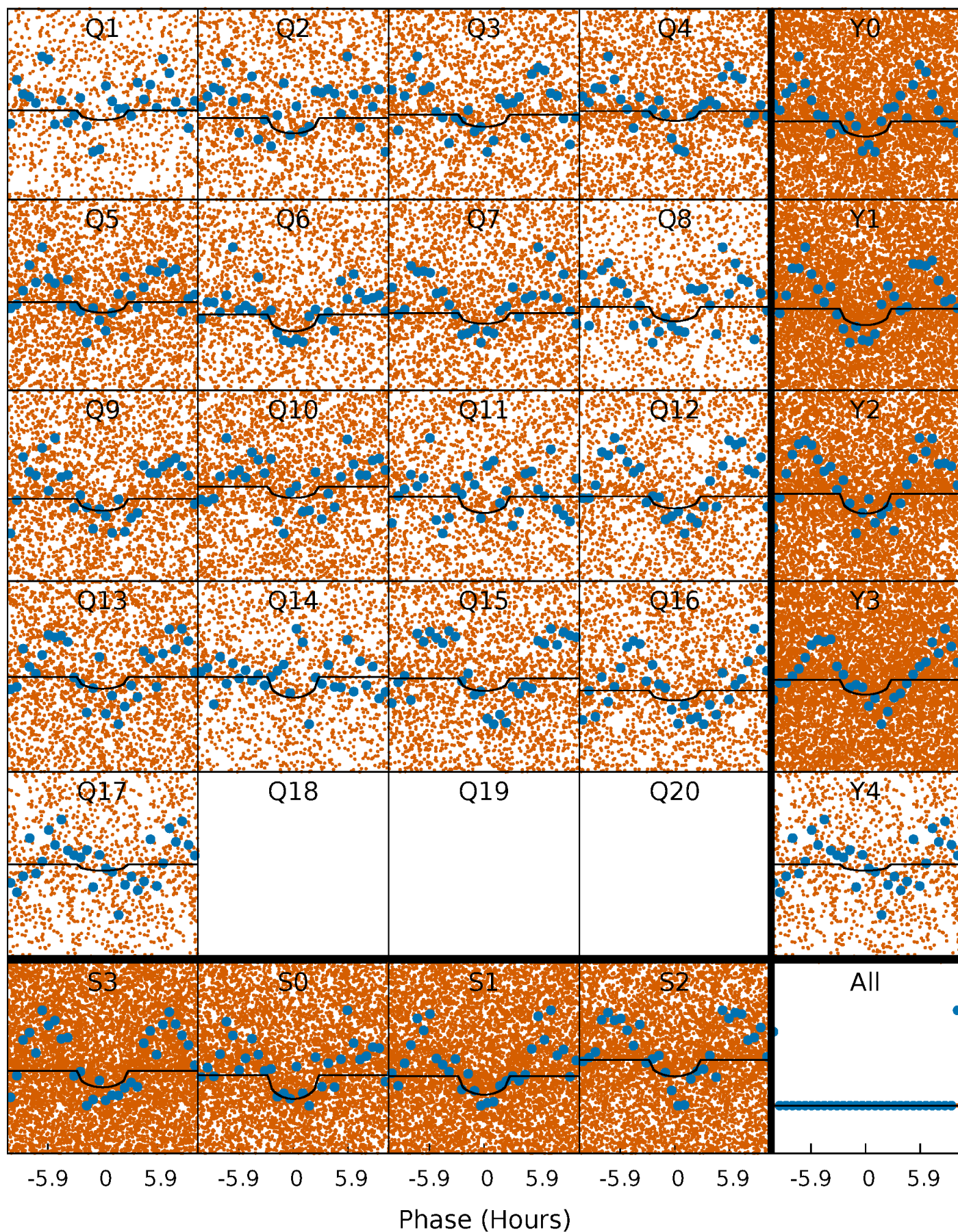
PDC Quarter-Phased Transit Curves

TCE 012066583-01 P= 0.549144 Days $T_0=131.996283$ (BKJD)



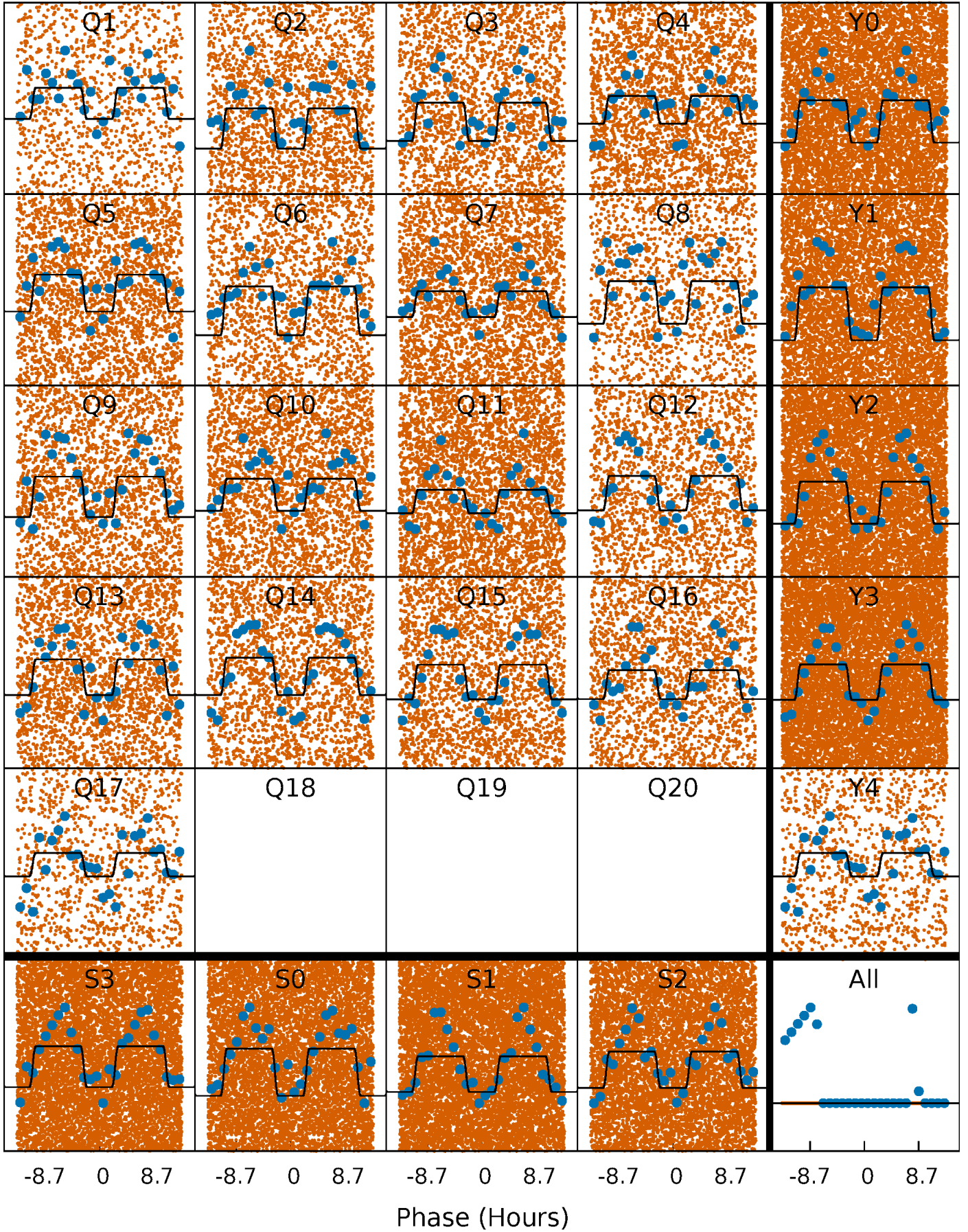
DV Quarter-Phased Transit Curves

TCE 012066583-01 P= 0.549144 Days $T_0=131.996283$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

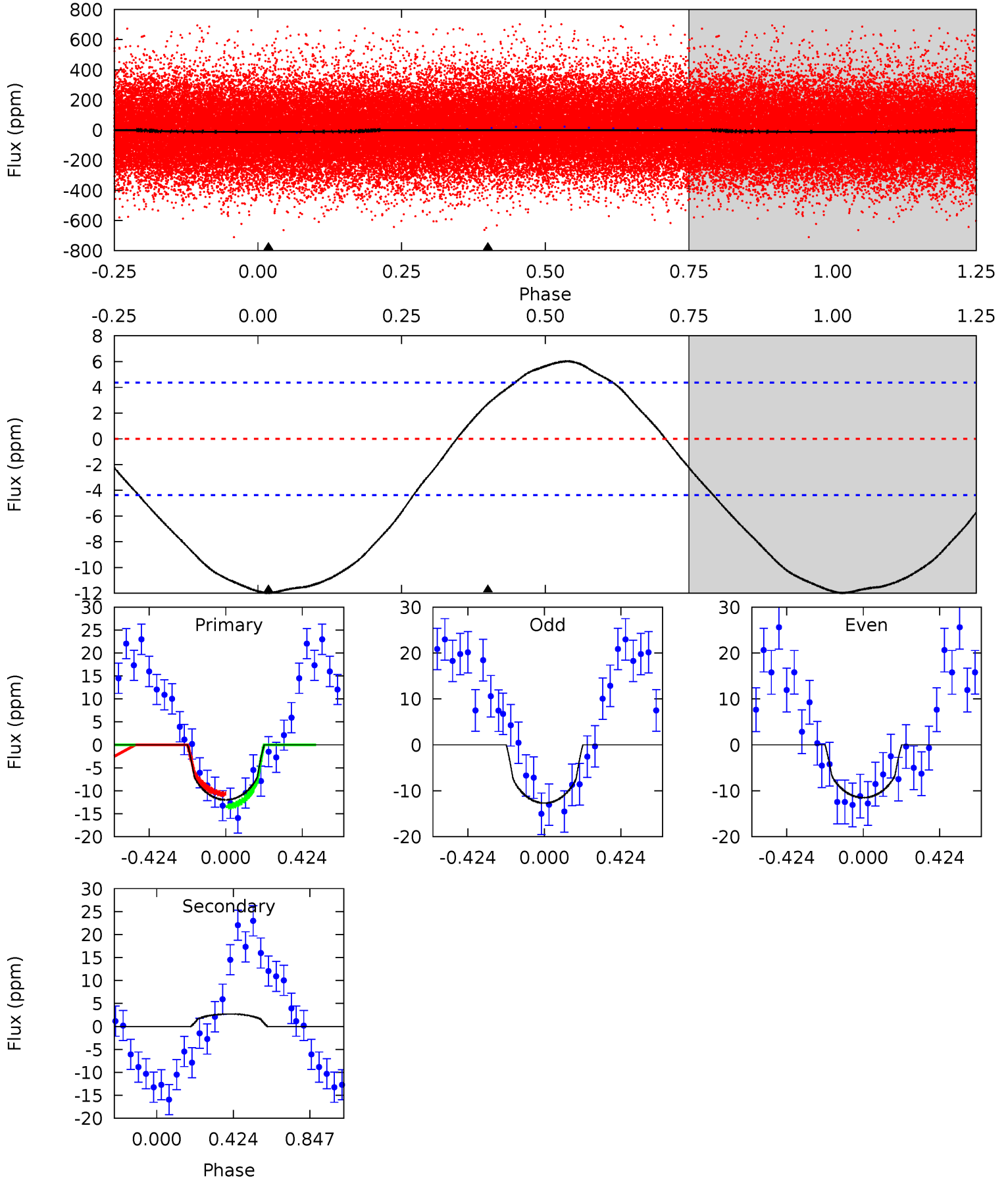
TCE 012066583-01 P= 0.549181 Days $T_0=131.956338$ (BKJD)



DV Model-Shift Uniqueness Test

012066583-01, P = 0.549144 Days, E = 131.447139 Days

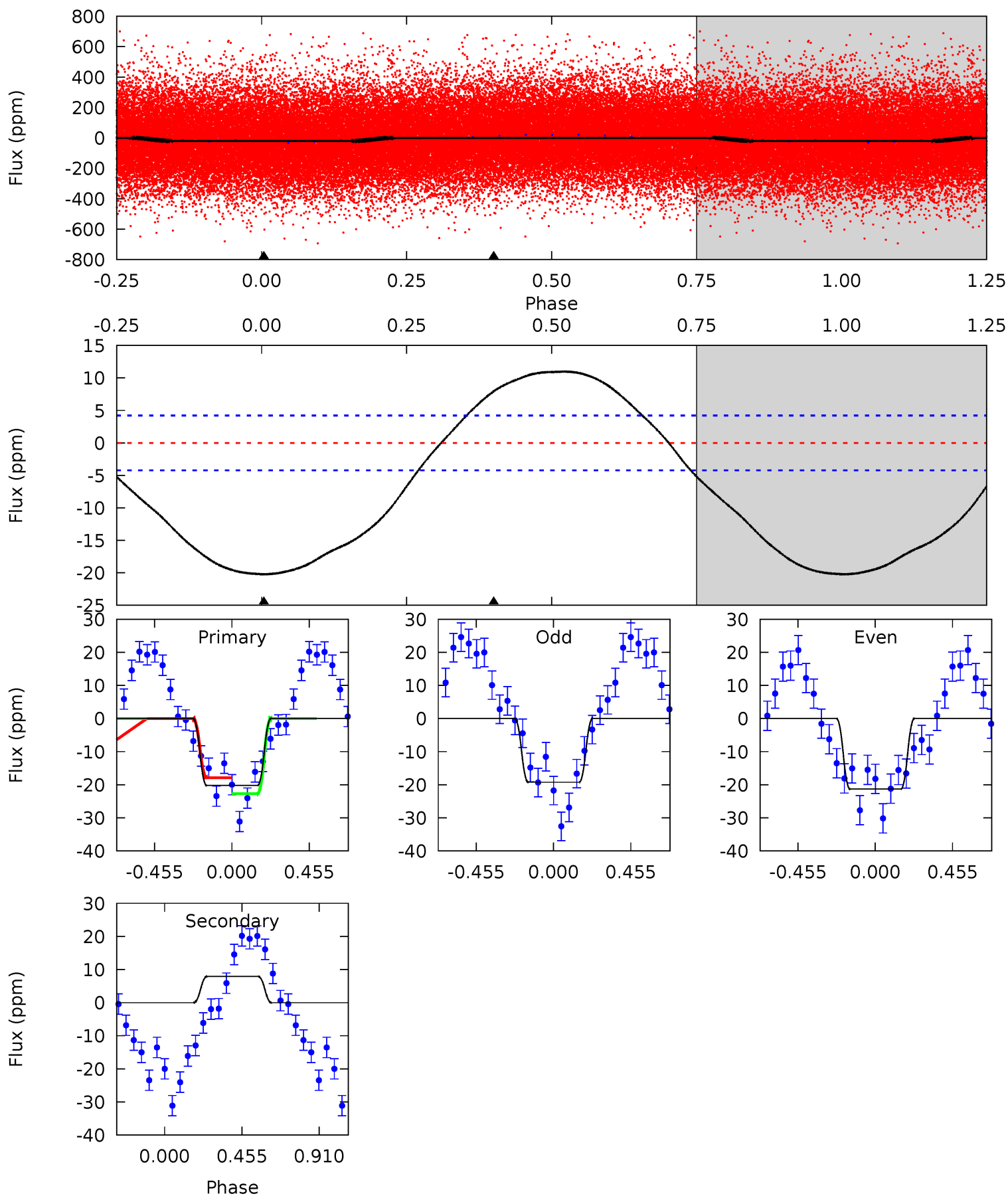
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
11.7	-2.65	0	0	4.25	0.80	1.52	11.7	11.7	-2.65	-2.65	0.59	1.00	0.33	1.33



Alt Model-Shift Uniqueness Test

012066583-01, P = 0.549181 Days, E = 131.407157 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
20.3	-7.98	0	0	4.24	0.75	3.07	20.3	20.3	-7.98	-7.98	1.02	0.99	0.35	2.43



Stellar Parameters For KIC 012066583

	$T_{\text{eff}}(K)$	$\log(g)$	$[\text{Fe}/\text{H}]$	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	5582^{+166}_{-150}	$4.169^{+0.299}_{-0.161}$	$0.140^{+0.250}_{-0.250}$	$1.340^{+0.337}_{-0.412}$	$0.967^{+0.104}_{-0.094}$	$0.566^{+1.041}_{-0.239}$
	+3%/-3%	+7%/-4%	+179%/-179%	+25%/-31%	+11%/-10%	+184%/-42%
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 012066583-01 / KOI

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	3 ± 1	$0.64^{+0.59}_{-0.40}$	3463^{+246}_{-297}	-4013^{+443}_{-1744}	$-0.574^{+0.437}_{-4.255}$
Alt.	8 ± 1	$0.79^{+0.68}_{-0.52}$	3458^{+268}_{-312}	-4390^{+580}_{-2164}	$-1.130^{+0.792}_{-9.040}$

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 $A_{obs} \gg 1.0$

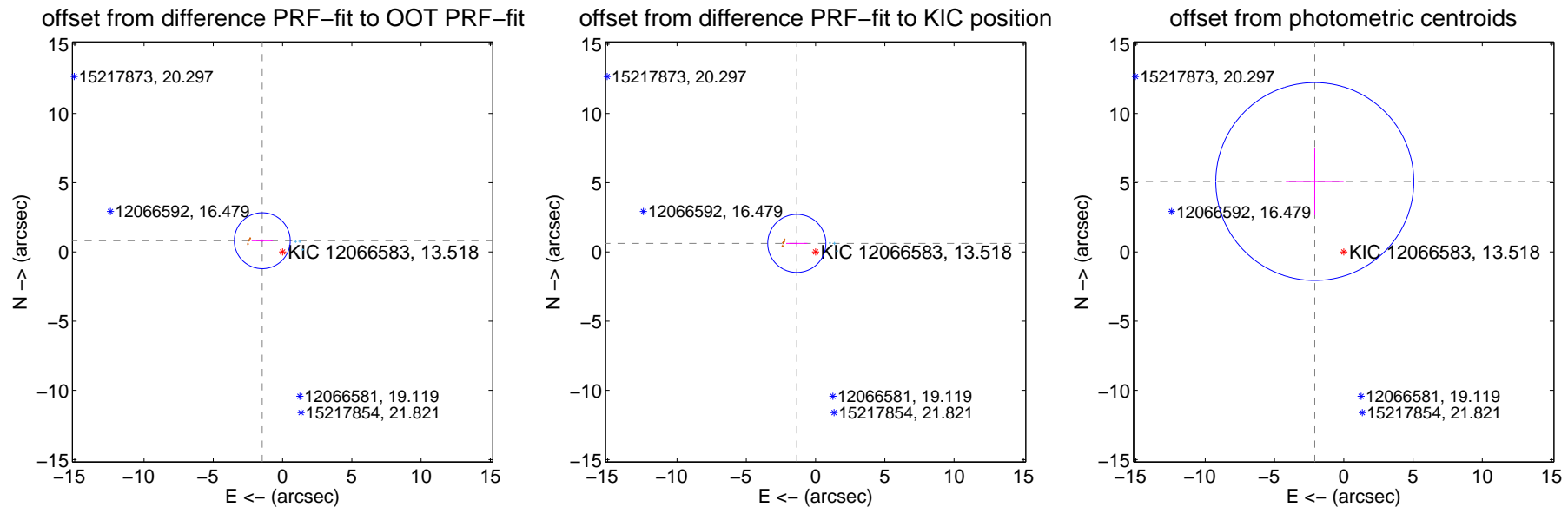
DV Centroid Data

Supplemental centroid analysis for 012066583-01. Kepler magnitude: 13.52. Transit SNR 6.32

There are 3 quarters with good PRF difference image offsets

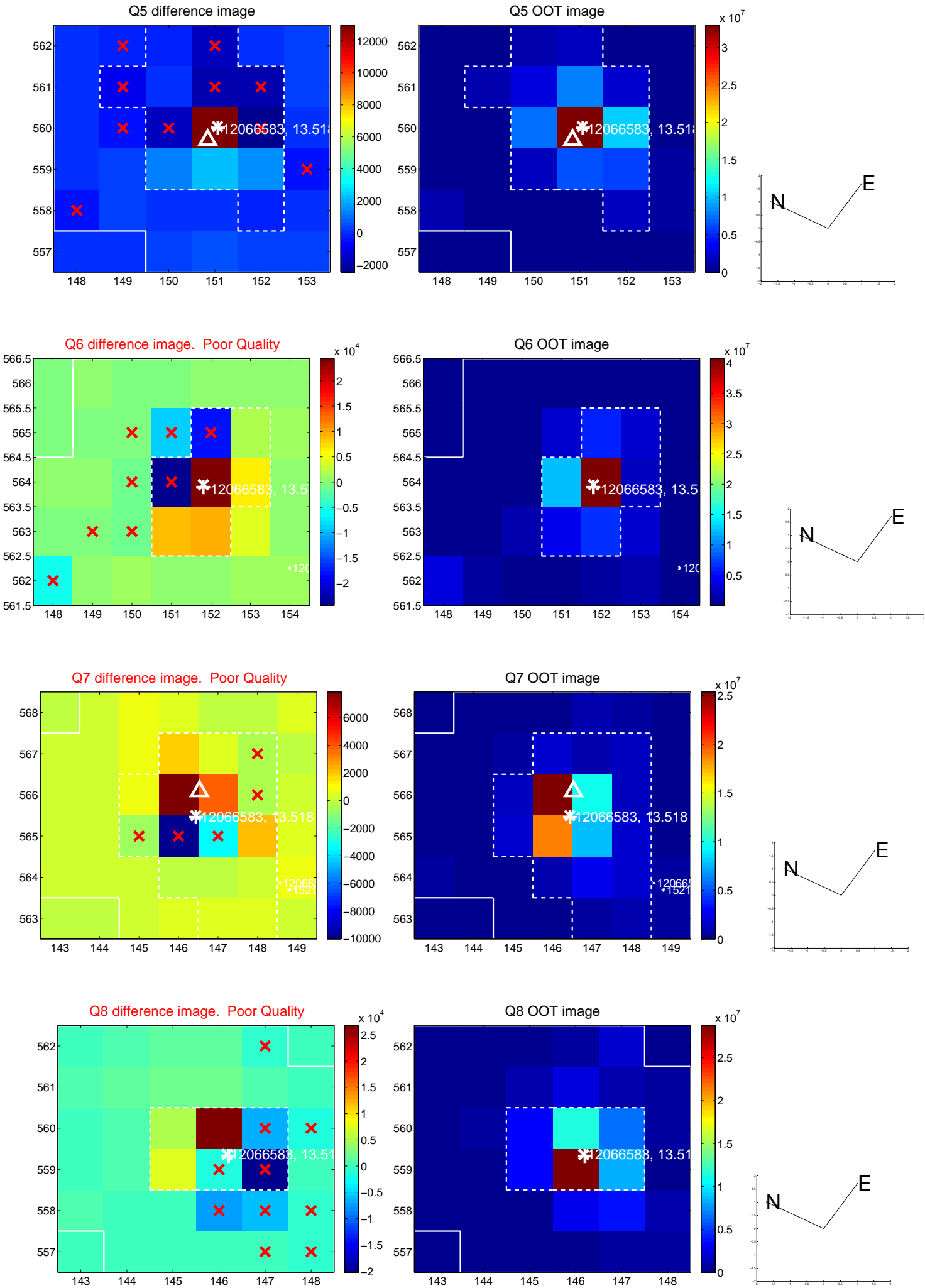
The direct PRF centroid is offset from the target star catalog position by about 0.19 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	1.673 ± 0.673	2.49	1.465 ± 0.767	0.808 ± 0.097
PRF-fit source offset from KIC position	1.486 ± 0.699	2.13	1.353 ± 0.766	0.614 ± 0.123
photometric centroid source offset	5.50 ± 2.38	2.31	2.09 ± 2.08	5.08 ± 2.43

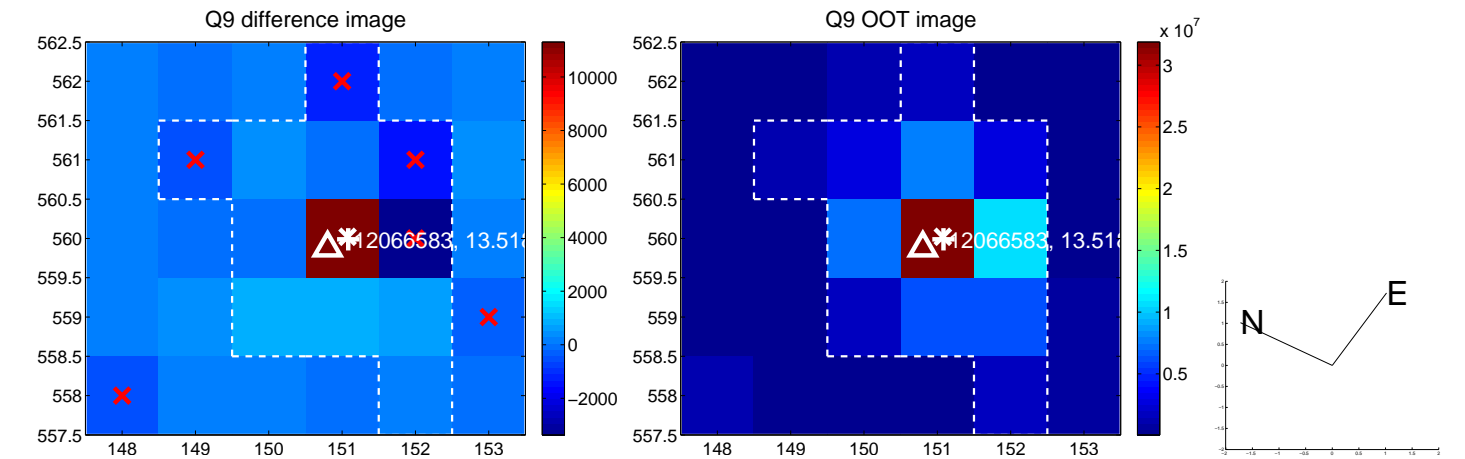


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

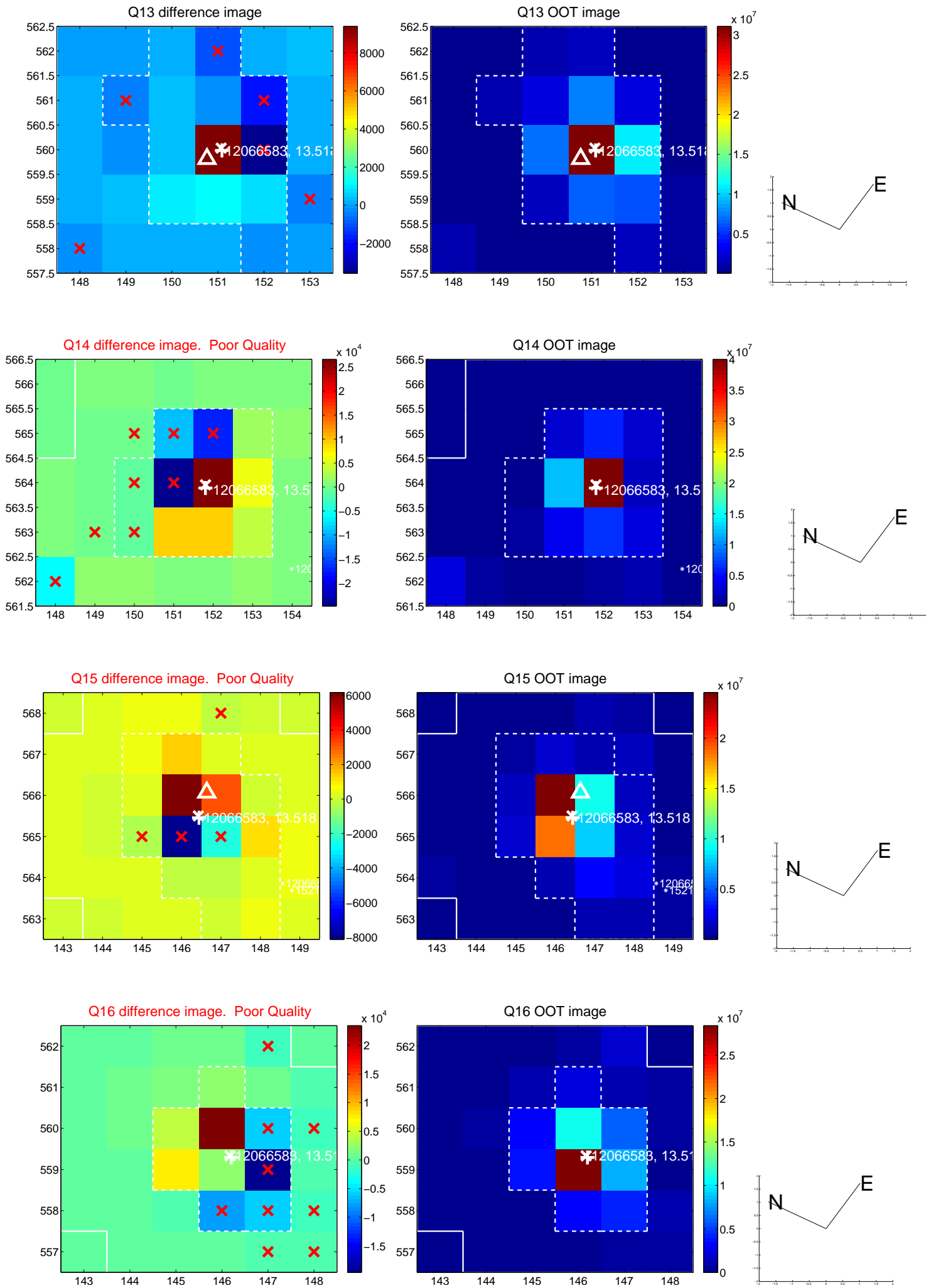
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



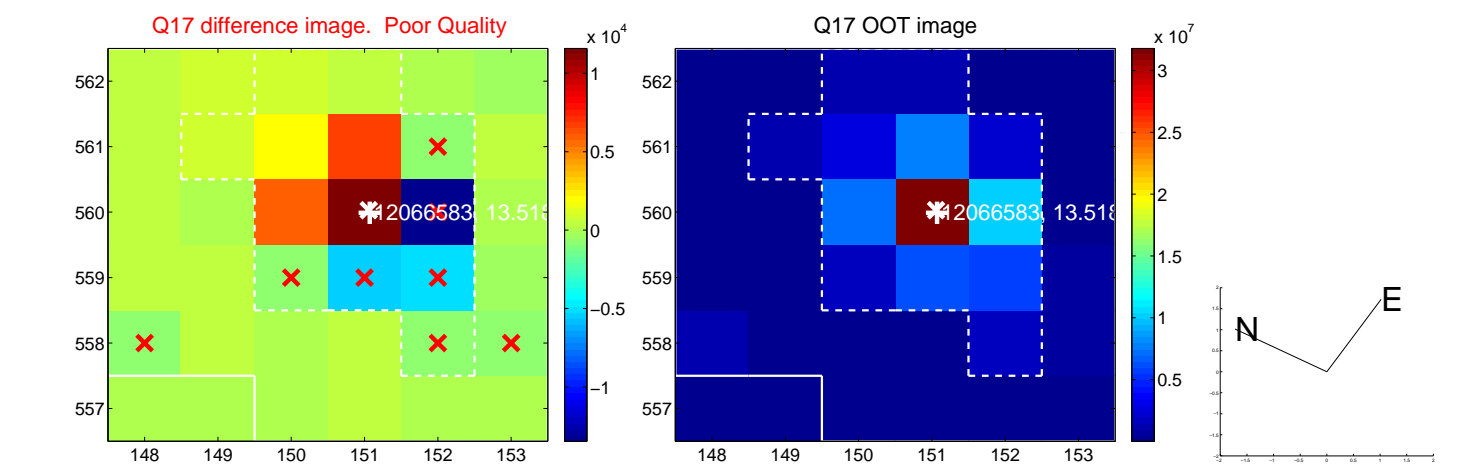
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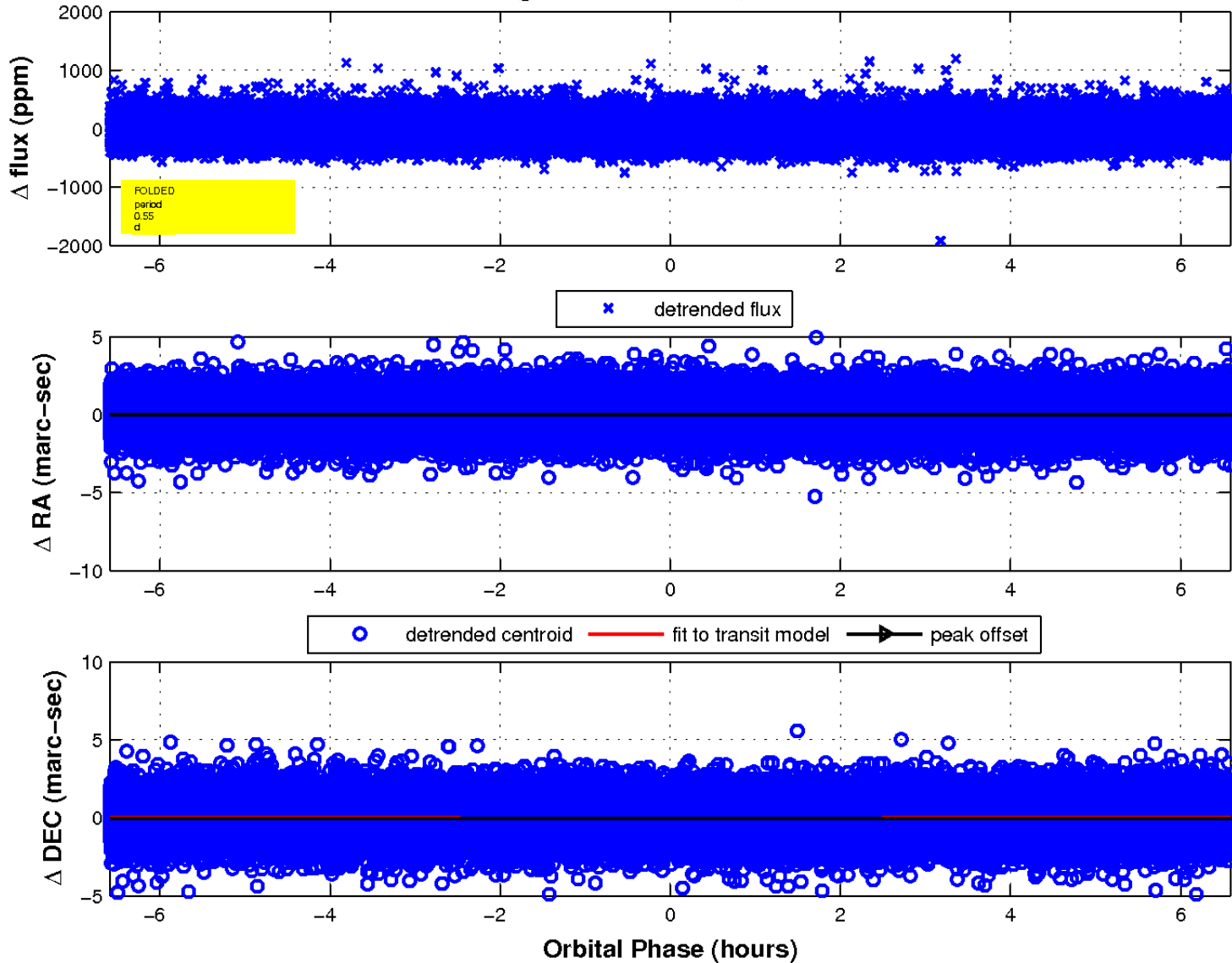
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



fluxWeightedCentroids, Planet 1 of 1



UKIRT Image

Declination

