

KIC 002582539

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})
002582539-01	OBS	No	0.599135	131.917150	42.8	6.110	7.5	6.5	3.04	7302	2.02	81635.35

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
002582539-01	OBS	FP	0.00	1	0	0	0	LPP_DV—CENT_FEW_DIFFS

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

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

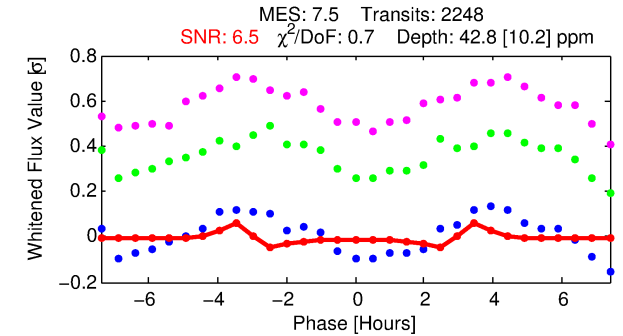
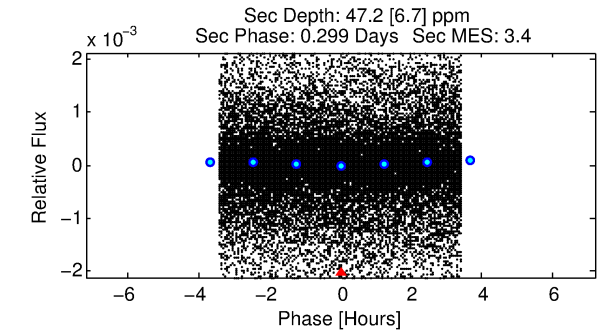
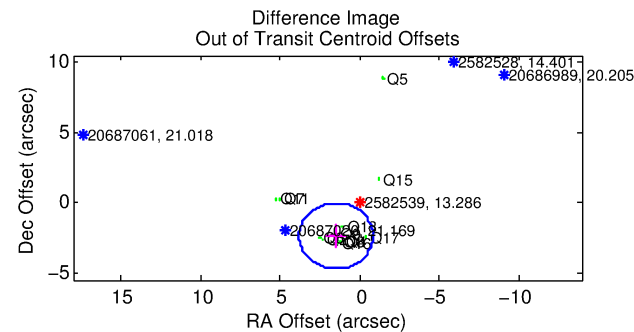
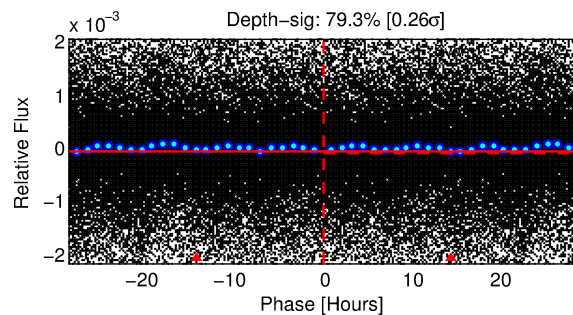
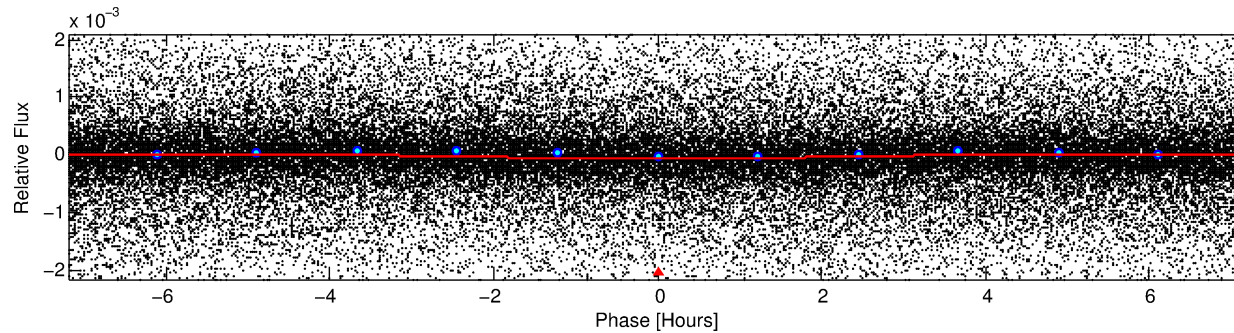
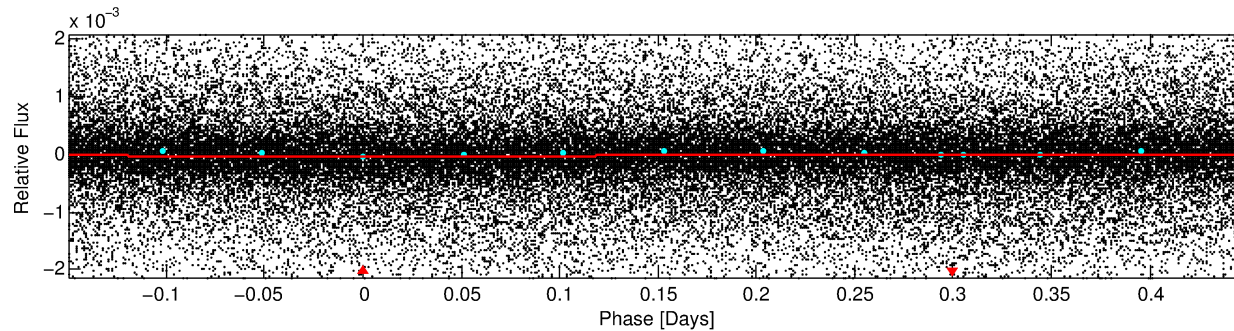
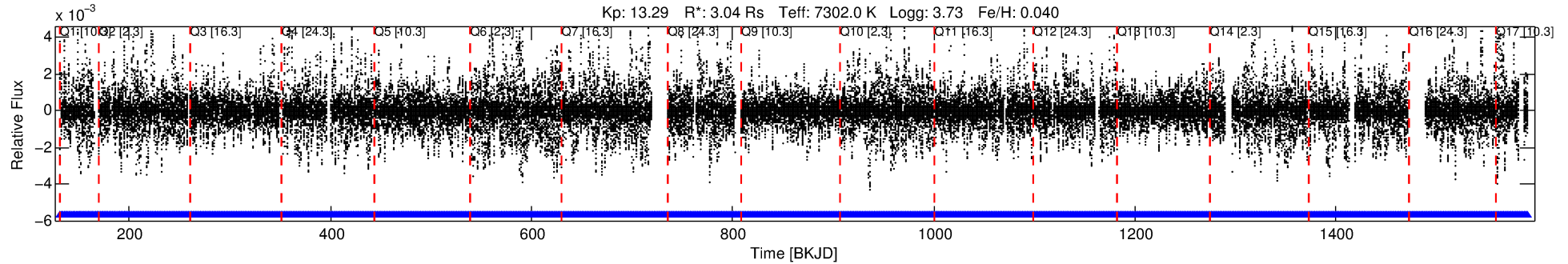
See http://exoplanetarchive.ipac.caltech.edu/docs/API_kepcandidate_columns.html#proj_disp_col for comment definitions.

Ephemeris Match Information For 002582539-01

No Significant Match Found

DV One-Page Summary

KIC: 2582539 Candidate: 1 of 1 Period: 0.599 d



DV Fit Results:

Period = 0.59913 [0.00001] d
Epoch = 131.9171 [0.0023] BKJD
Rp/R* = 0.0061 [0.0027]
a/R* = 1.03 [0.19]
b = 0.01 [488.11]
Seff = 81635.35 [56484.31]
Teq = 4310 [746] K
Rp = 2.01 [1.25] Re
a = 0.0170 [0.0071] AU
Ag = 1.85 [2.06] [0.41 σ]
Teffp = 7768 [1769] K [1.80 σ]

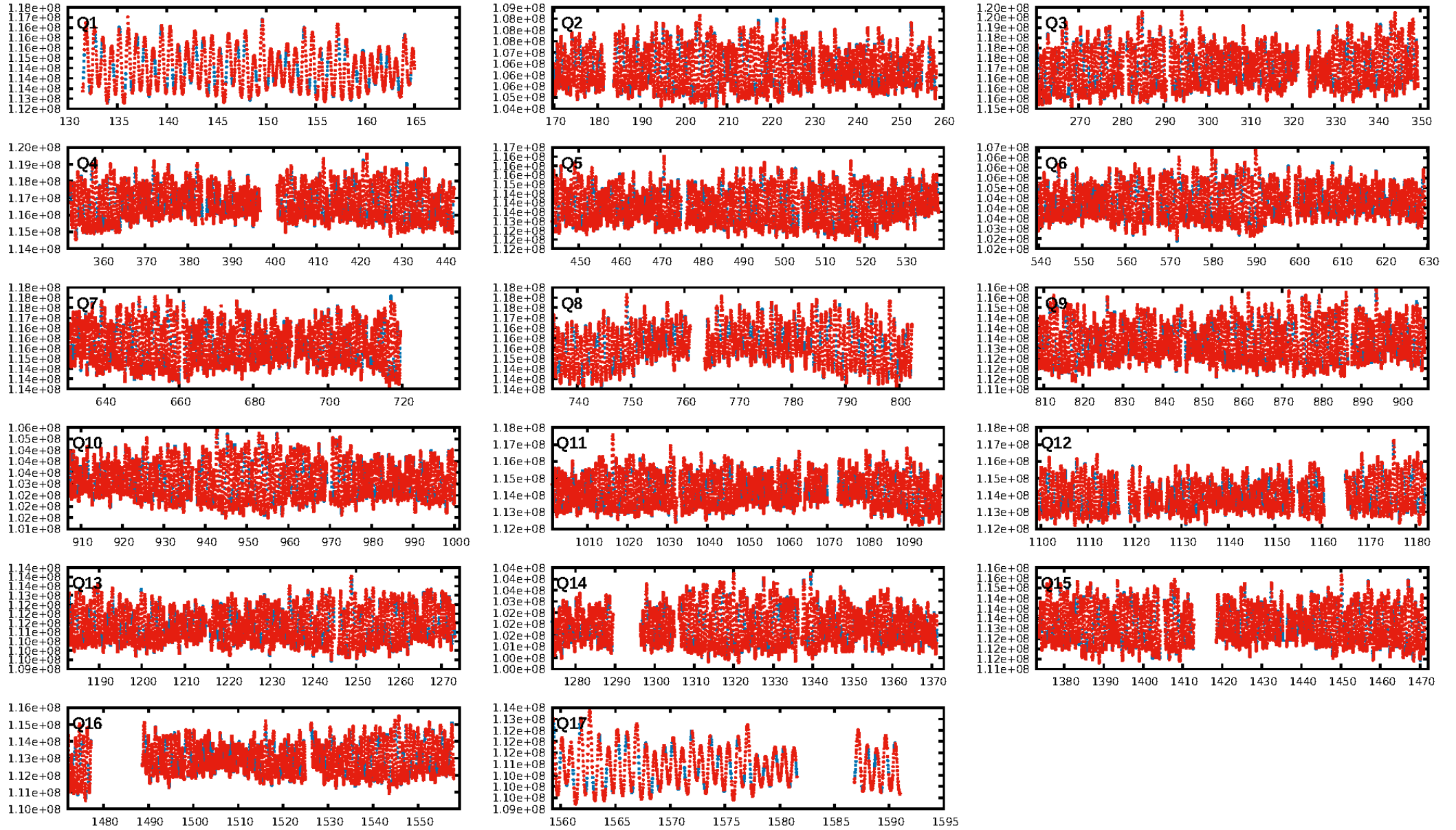
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: N/A
ModelChiSquareGof-sig: N/A
Bootstrap-pfa: N/A
RollingBand-fgt: 1.00 [2148/2148]
GhostDiagnostic-chr: -17.24
Centroid-sig: 0.0%
Centroid-so: 2.104 arcsec [3.91 σ]
OotOffset-rm: 2.788 arcsec [3.59 σ]
OotOffset-st: 2/3/3/4 [12]
KicOffset-rm: 2.781 arcsec [2.78 σ]
KicOffset-st: 2/3/3/4 [12]
DiffImageQuality-fgm: 0.17 [2/12]
DiffImageOverlap-fno: 1.00 [17/17]

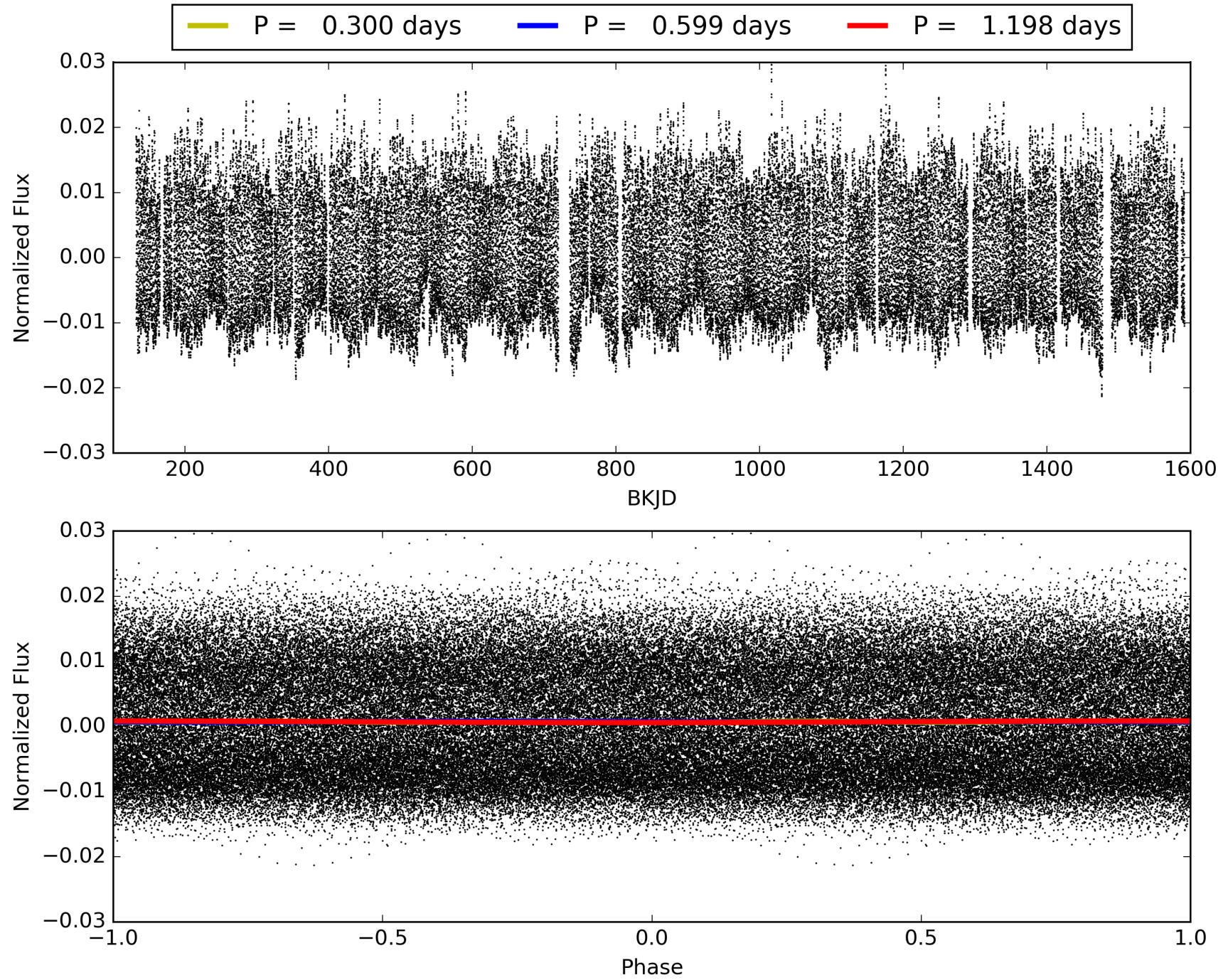
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 04:56:13 Z

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

TCE 002582539-01, PDC Light Curves

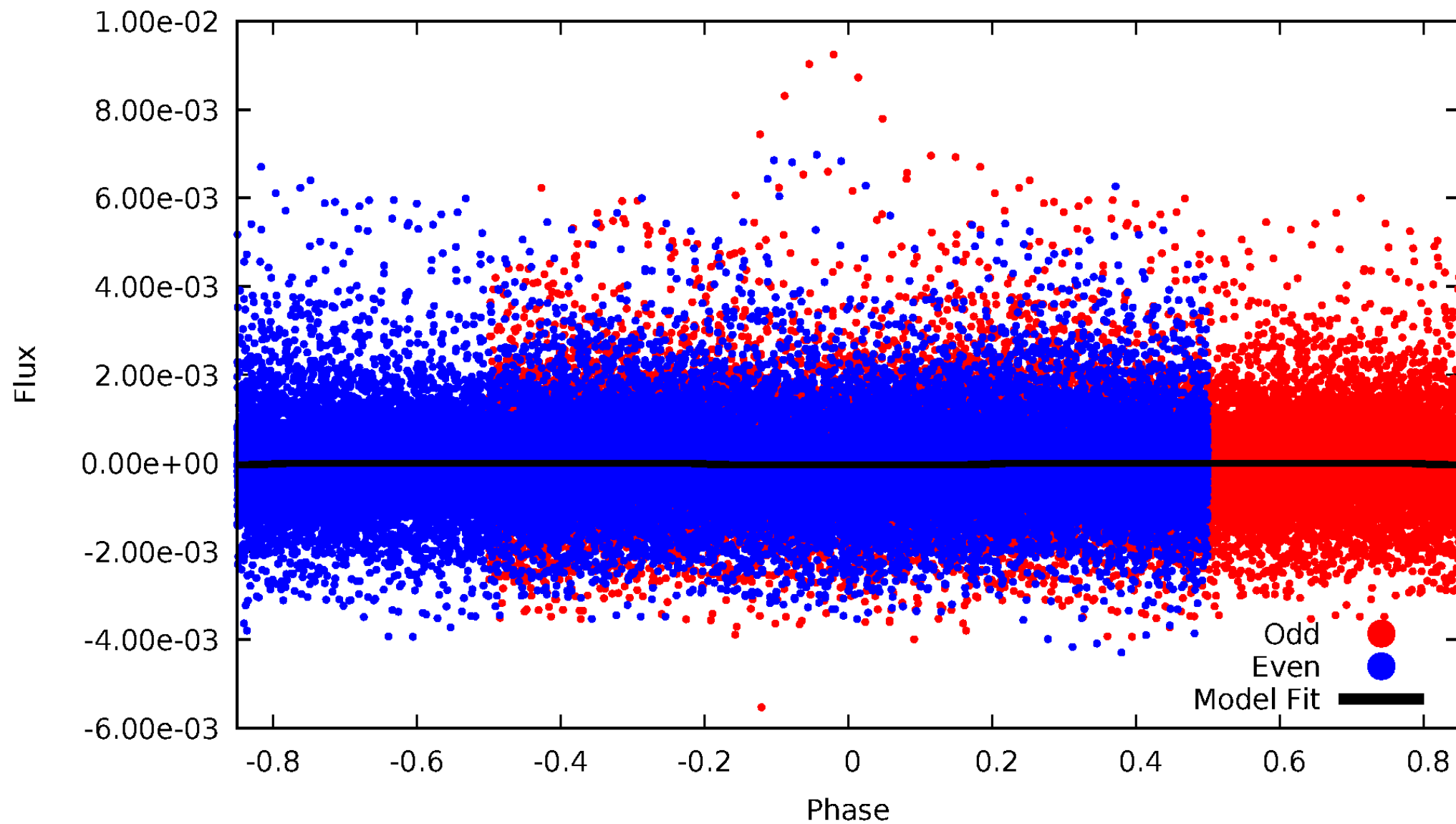


TCE 002582539-01



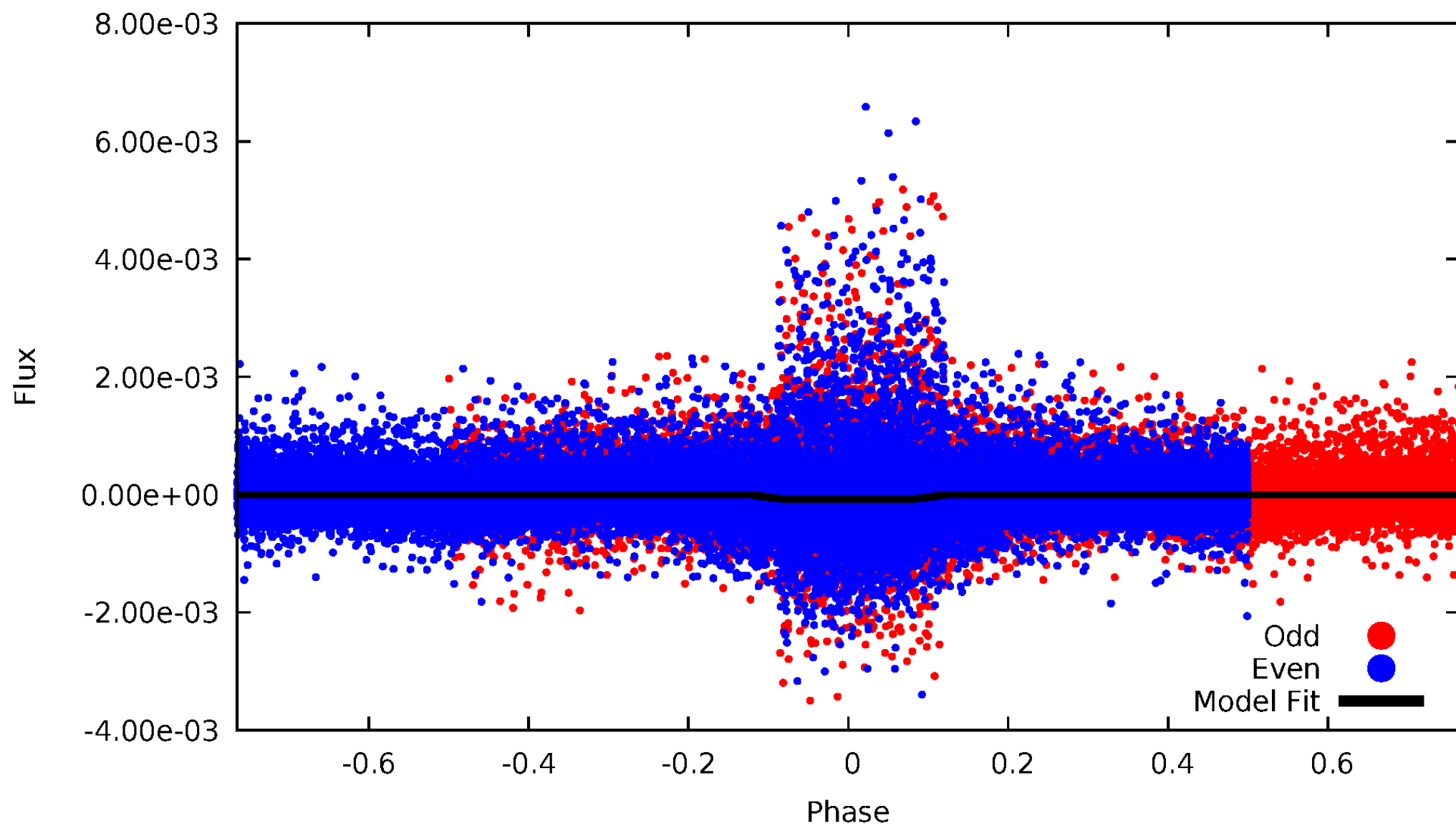
DV Odd/Even

TCE 002582539-01



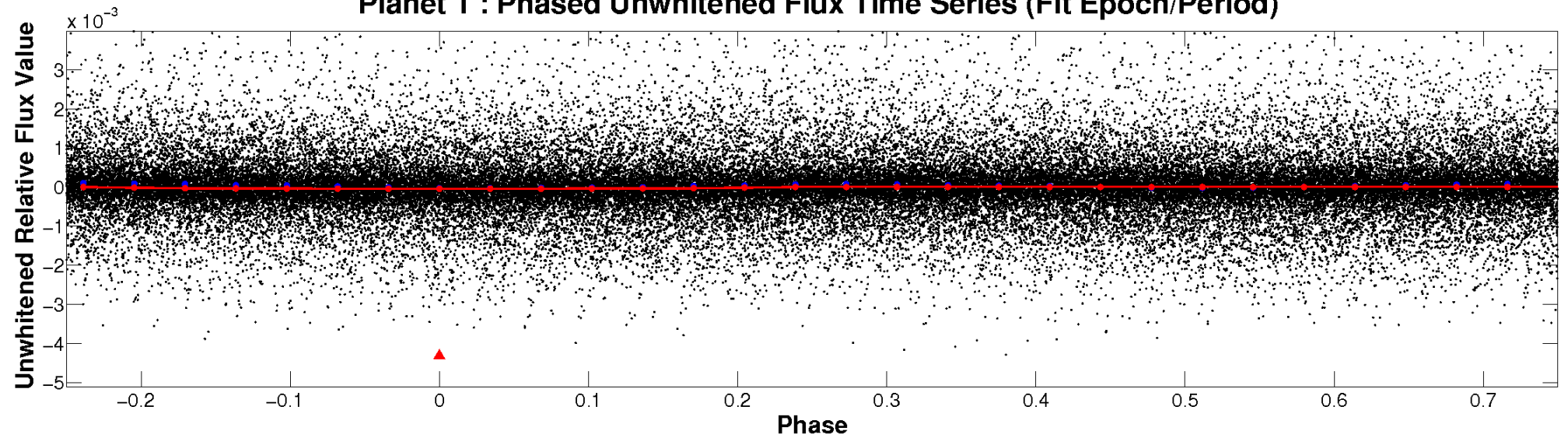
ALT Odd/Even

TCE 002582539-01

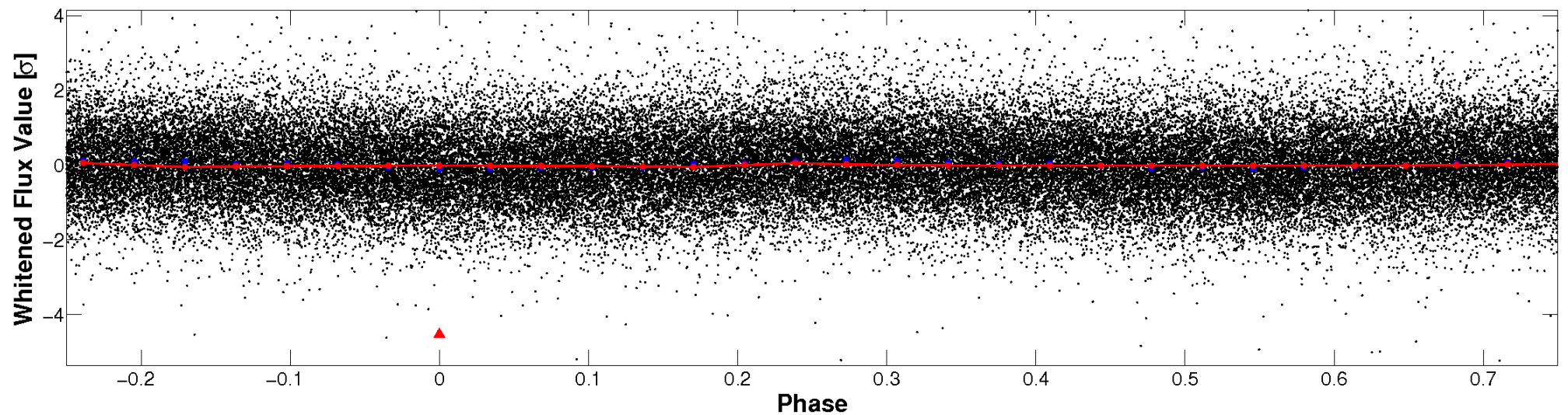


Non-Whitened Vs. Whitened Light Curve

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

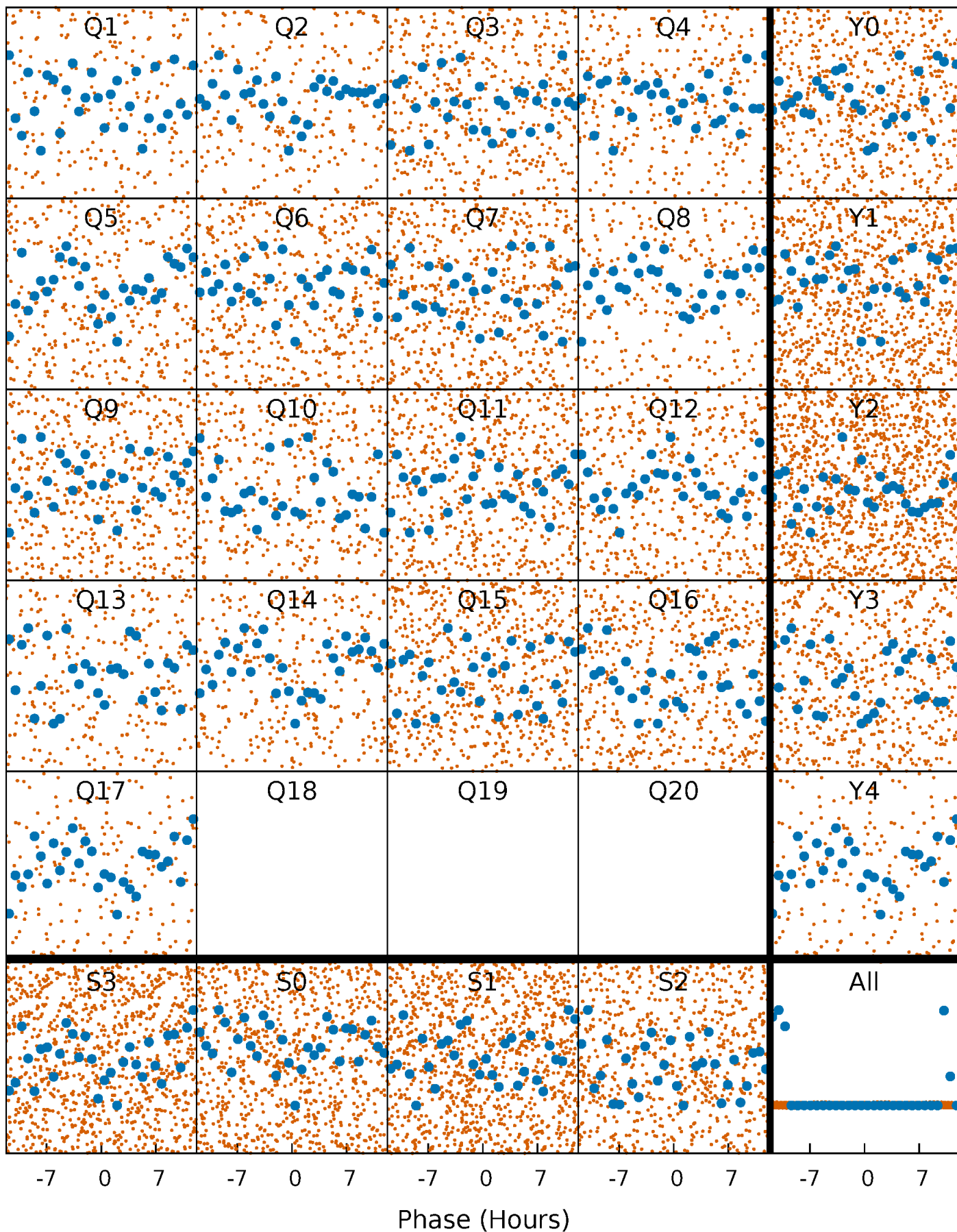


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



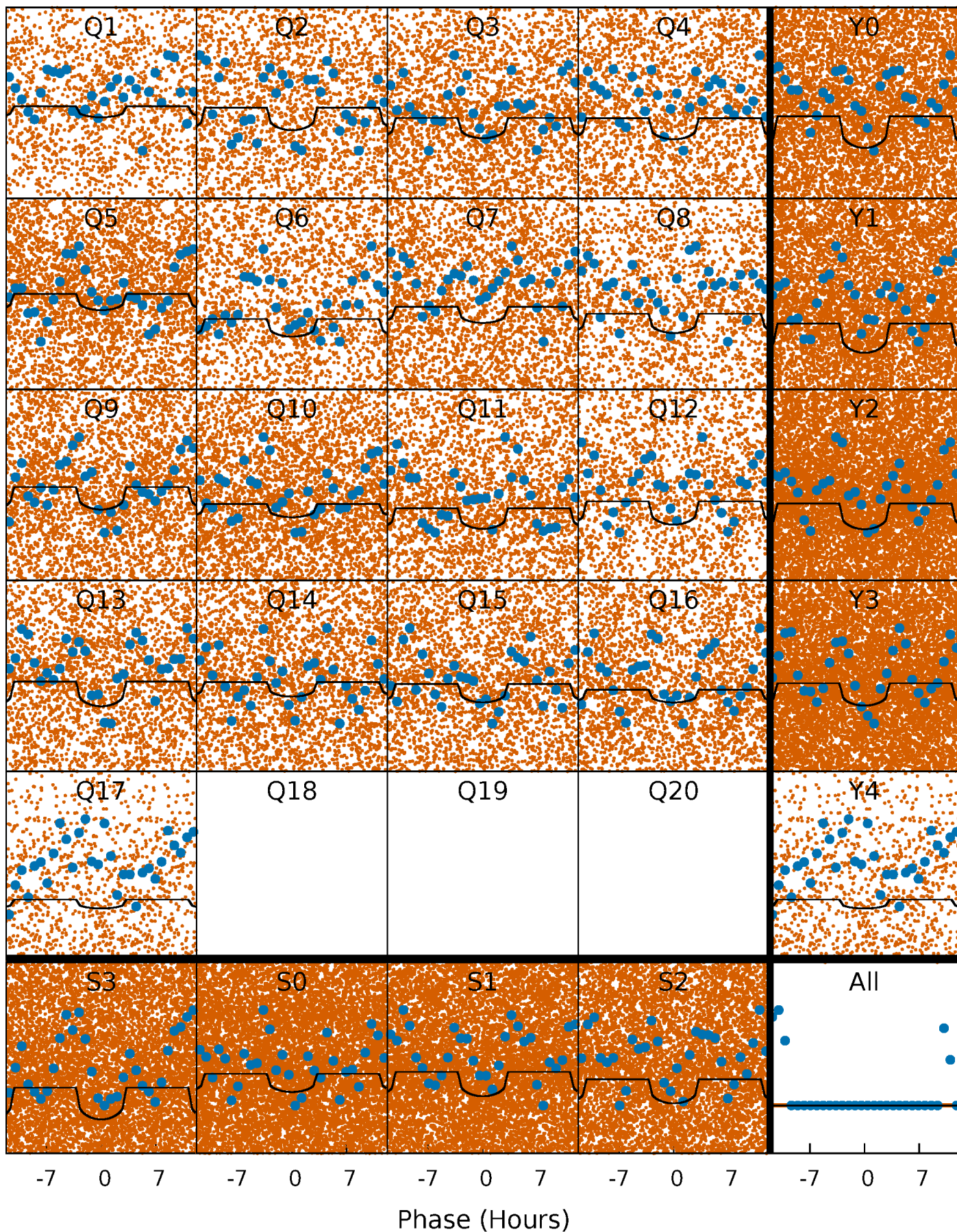
PDC Quarter-Phased Transit Curves

TCE 002582539-01 P= 0.599135 Days $T_0=131.917150$ (BKJD)



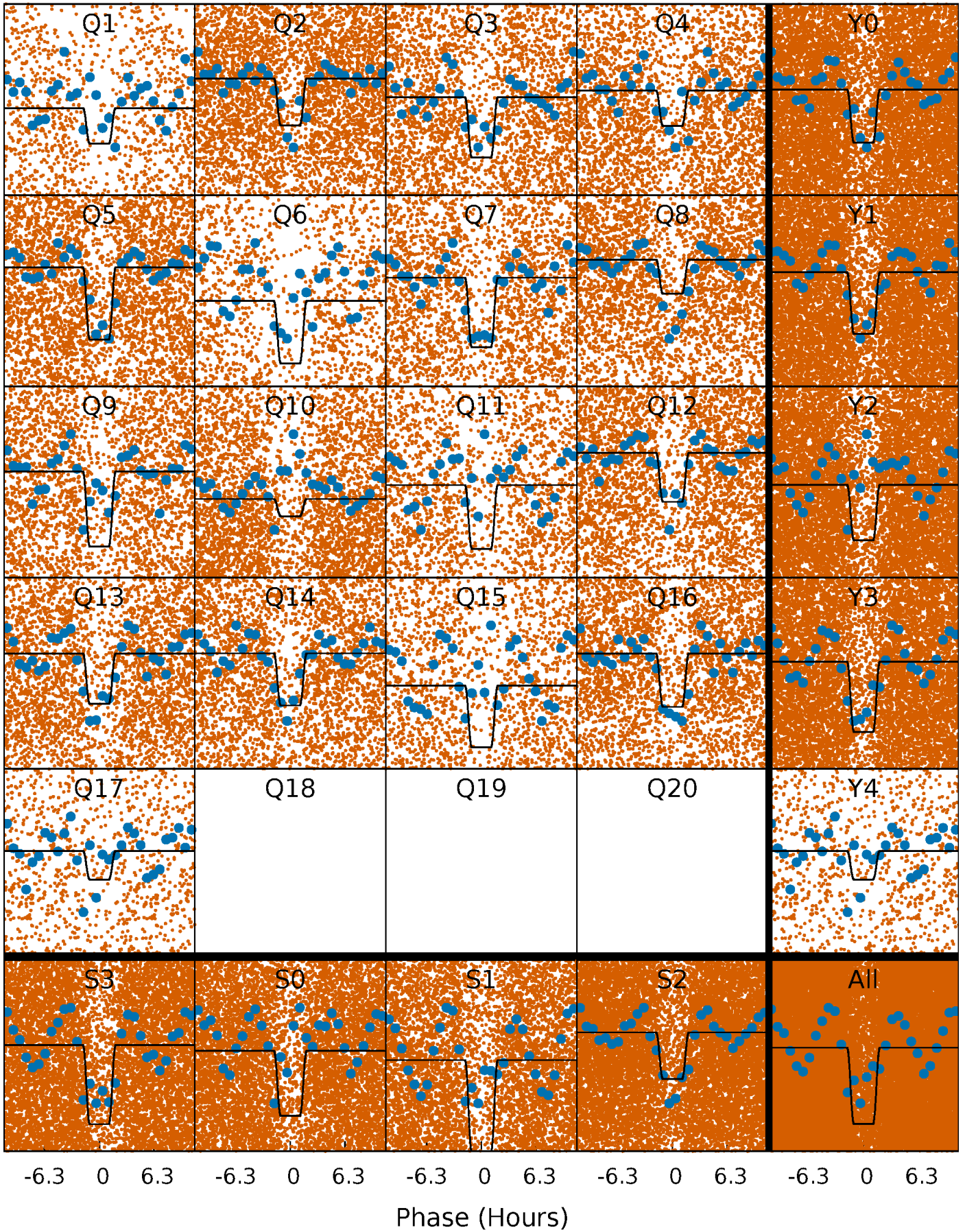
DV Quarter-Phased Transit Curves

TCE 002582539-01 P= 0.599135 Days $T_0=131.917150$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

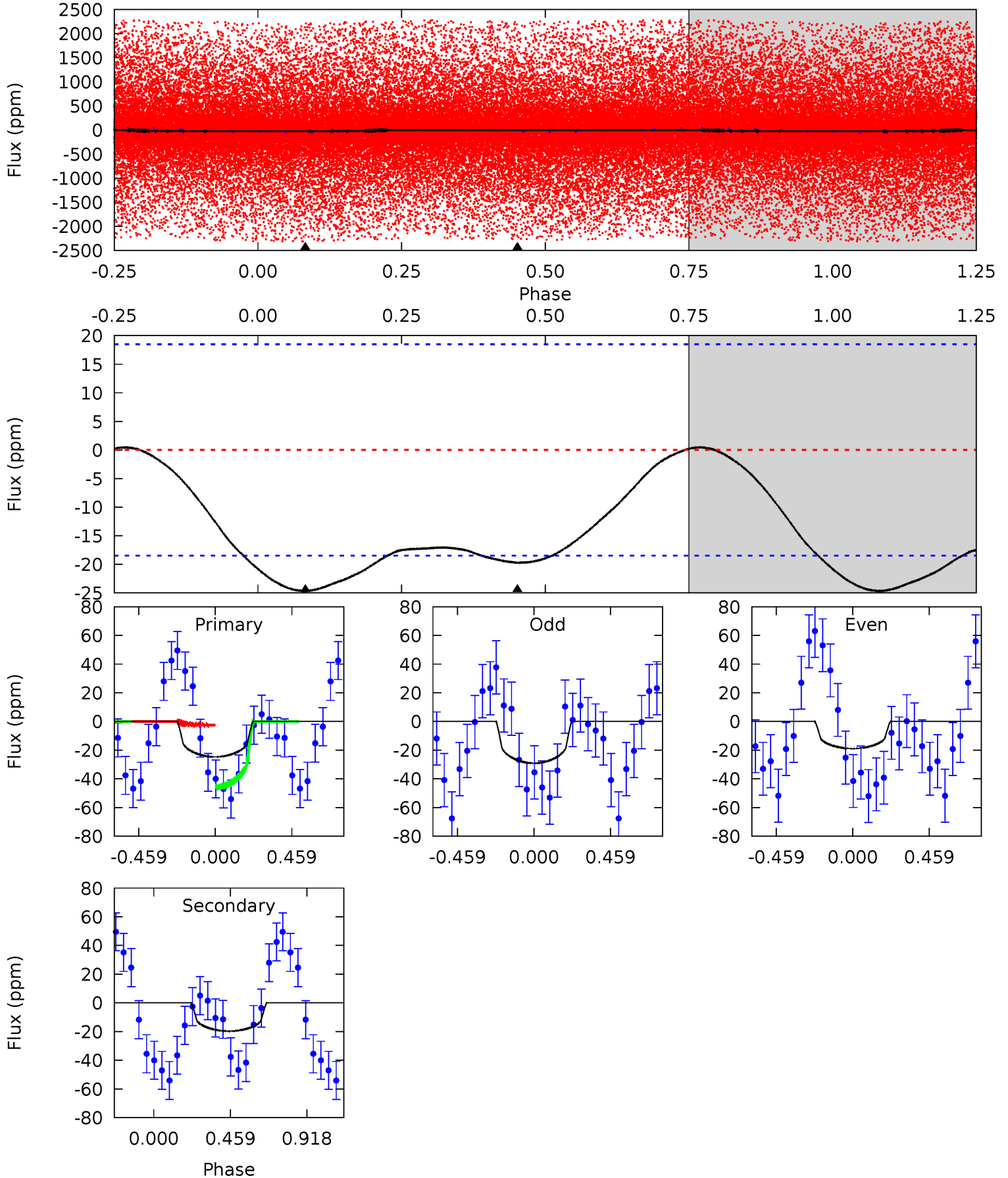
TCE 002582539-01 P= 0.599161 Days $T_0=131.911852$ (BKJD)



DV Model-Shift Uniqueness Test

002582539-01, P = 0.599135 Days, E = 131.318015 Days

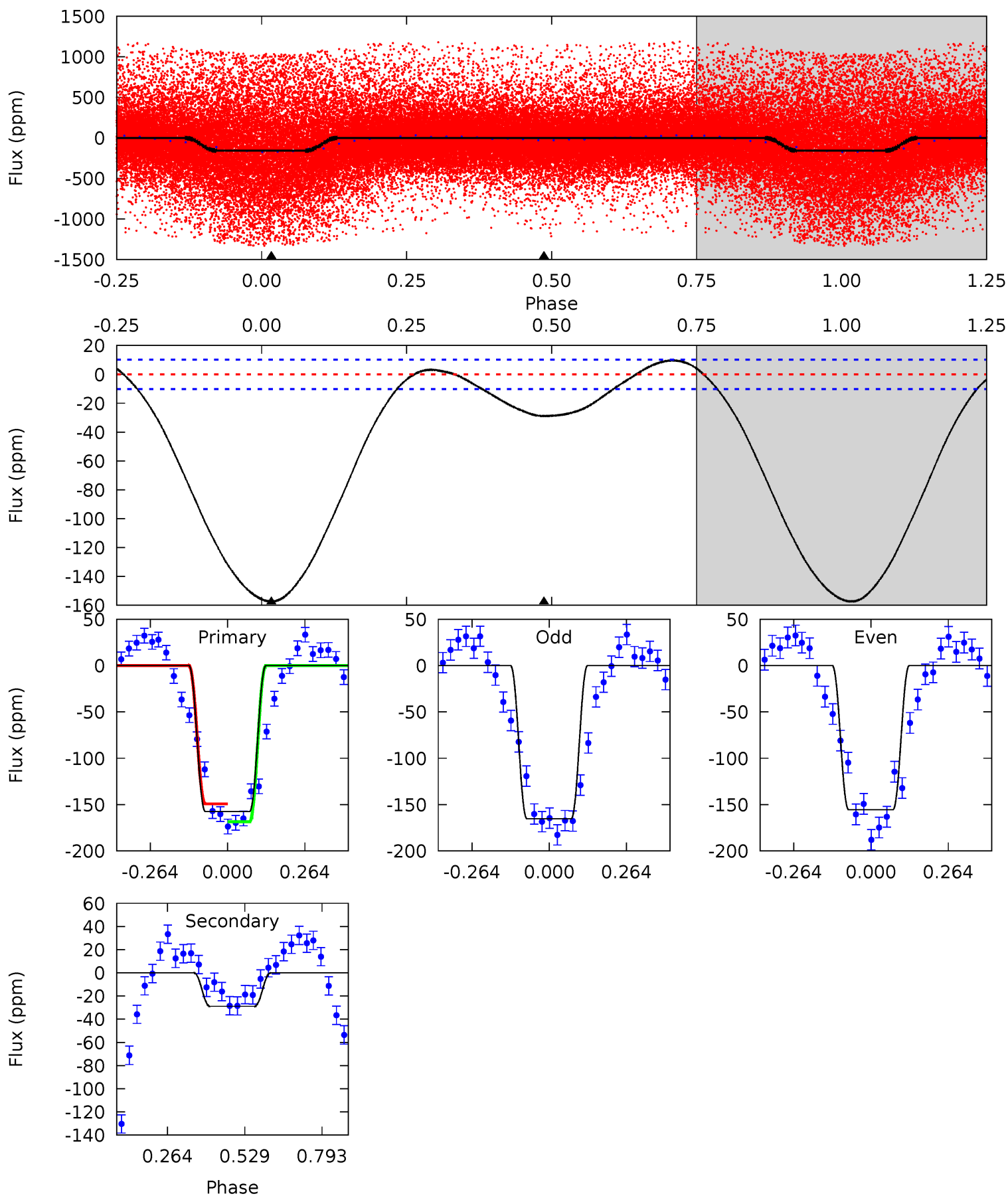
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
5.66	4.52	0	0	4.23	0.74	0.11	5.66	5.66	4.52	4.52	1.20	-0.49	0.02	5.17



Alt Model-Shift Uniqueness Test

002582539-01, P = 0.599161 Days, E = 131.312691 Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
67.2	12.3	0	0	4.36	1.12	2.80	67.2	67.2	12.3	12.3	2.10	0.17	0.06	3.51



Stellar Parameters For KIC 002582539

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	R (R_{\odot})	$M(M_{\odot})$	p_{\star} ($\text{g}\cdot\text{cm}^{-3}$)
	7302^{+201}_{-327}	$3.732^{+0.392}_{-0.098}$	$0.040^{+0.200}_{-0.350}$	$3.040^{+0.442}_{-1.326}$	$1.815^{+0.196}_{-0.364}$	$0.091^{+0.312}_{-0.029}$
	+3%/-4%	+11%/-3%	+500%/-875%	+15%/-44%	+11%/-20%	+343%/-31%
Source	KIC0	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 002582539-01 / KOI

Detrend	Depth (ppm)	R_p (R_{\oplus})	T_{max} (K)	T_{obs} (K)	A_{obs}
DV	-20 ± 4	$1.85^{+1.00}_{-0.90}$	5895^{+399}_{-666}	5588^{+2746}_{-1802}	$0.932^{+2.417}_{-0.552}$
Alt.	-29 ± 2	$2.59^{+1.09}_{-0.88}$	5871^{+408}_{-657}	4923^{+1471}_{-1443}	$0.672^{+0.875}_{-0.331}$

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

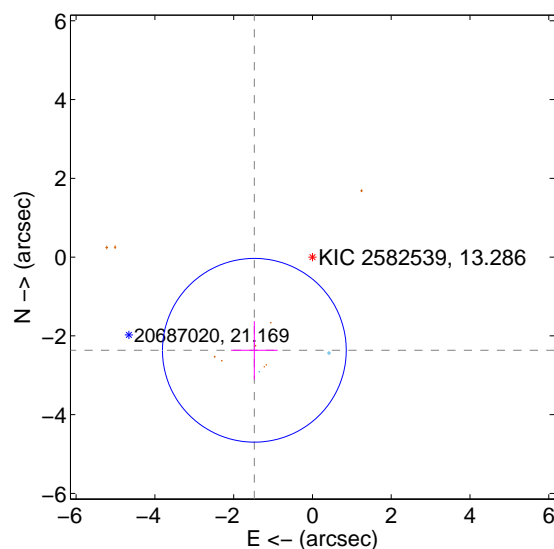
Supplemental centroid analysis for 002582539-01. Kepler magnitude: 13.29. Transit SNR 6.51

There are 2 quarters with good PRF difference image offsets

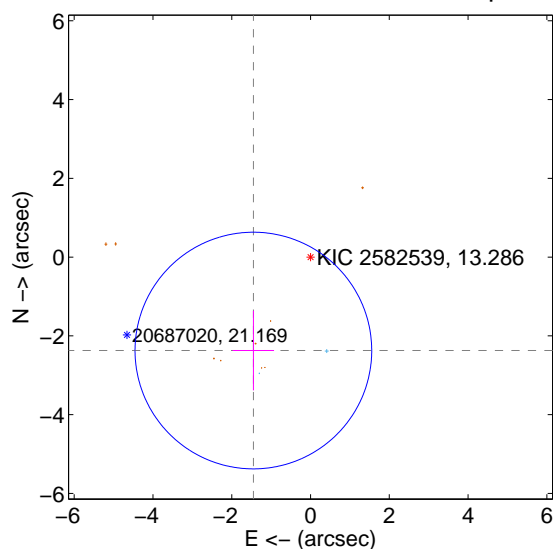
The direct PRF centroid is offset from the target star catalog position by about 0.05 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	2.788 ± 0.777	3.59	1.474 ± 0.591	-2.366 ± 0.738
PRF-fit source offset from KIC position	2.781 ± 1.001	2.78	1.451 ± 0.525	-2.372 ± 1.011
photometric centroid source offset	2.10 ± 0.54	3.91	-1.73 ± 0.48	1.20 ± 0.63

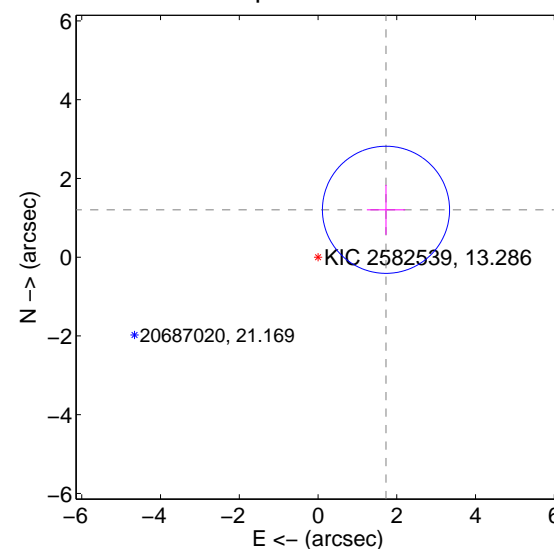
offset from difference PRF-fit to OOT PRF-fit



offset from difference PRF-fit to KIC position

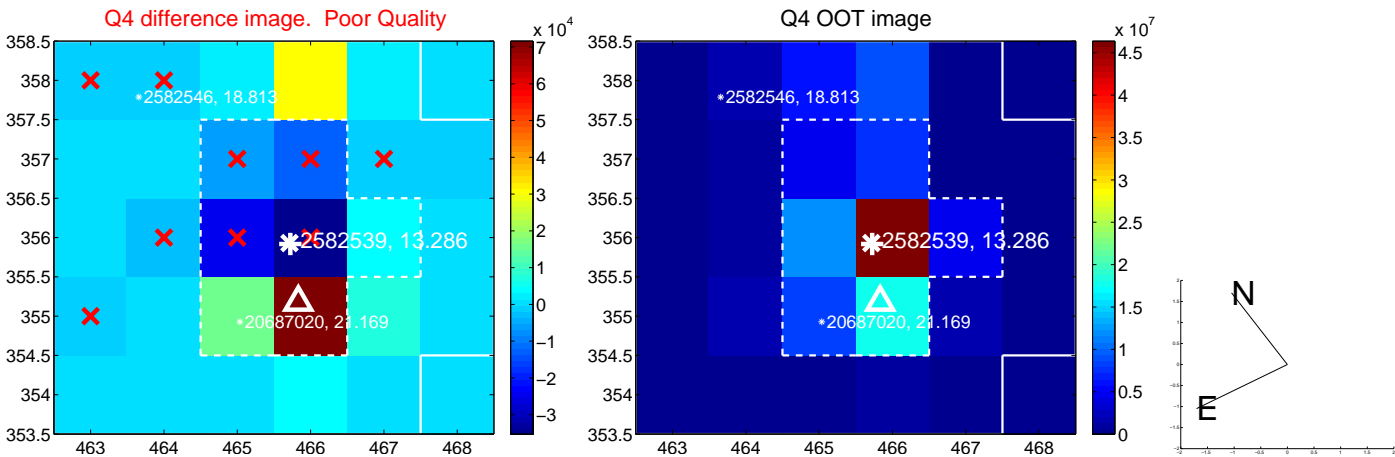
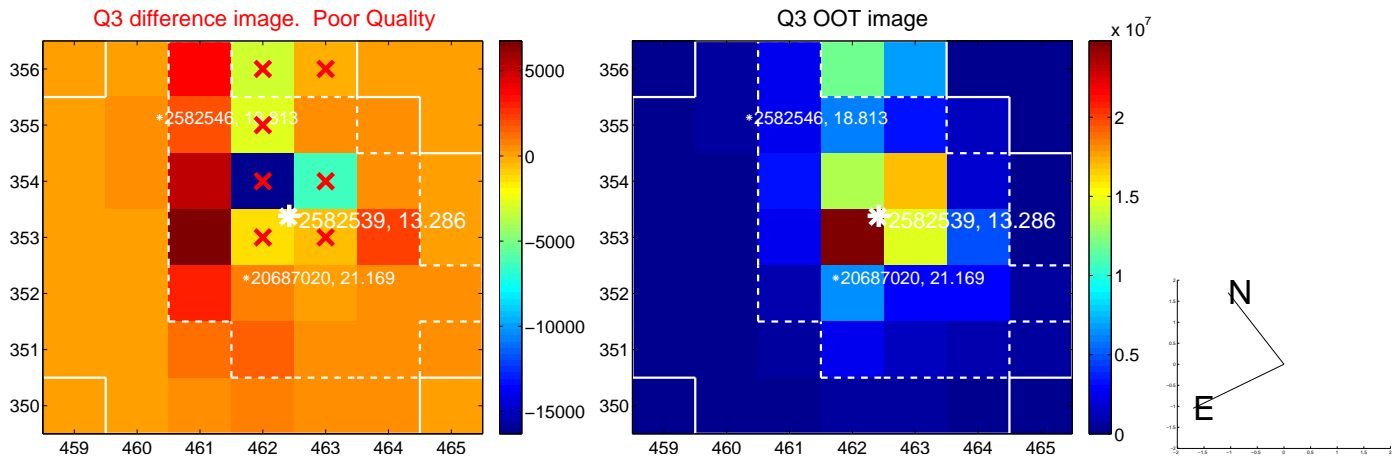
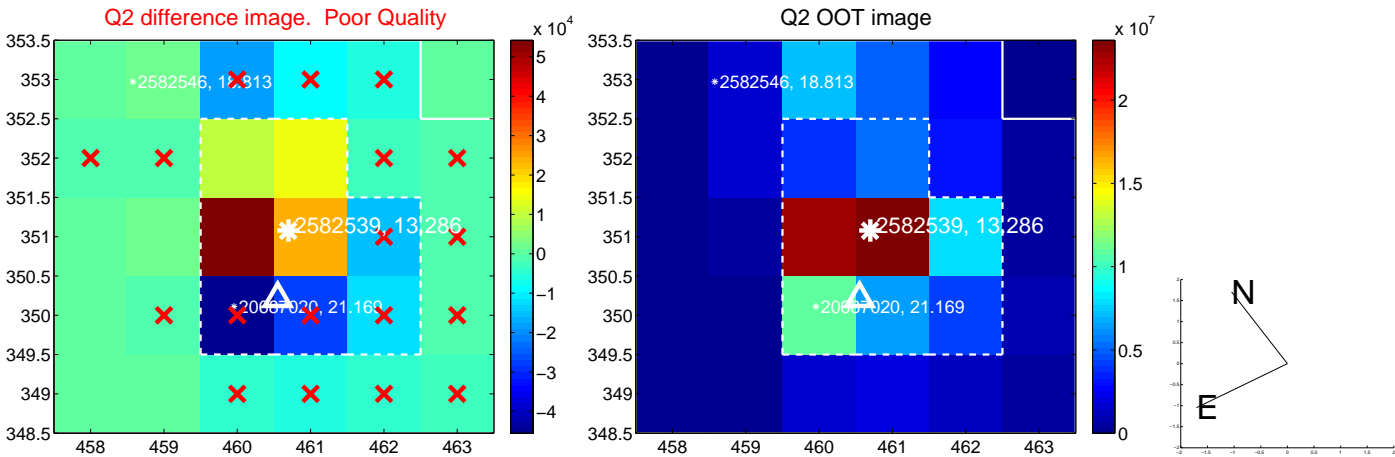
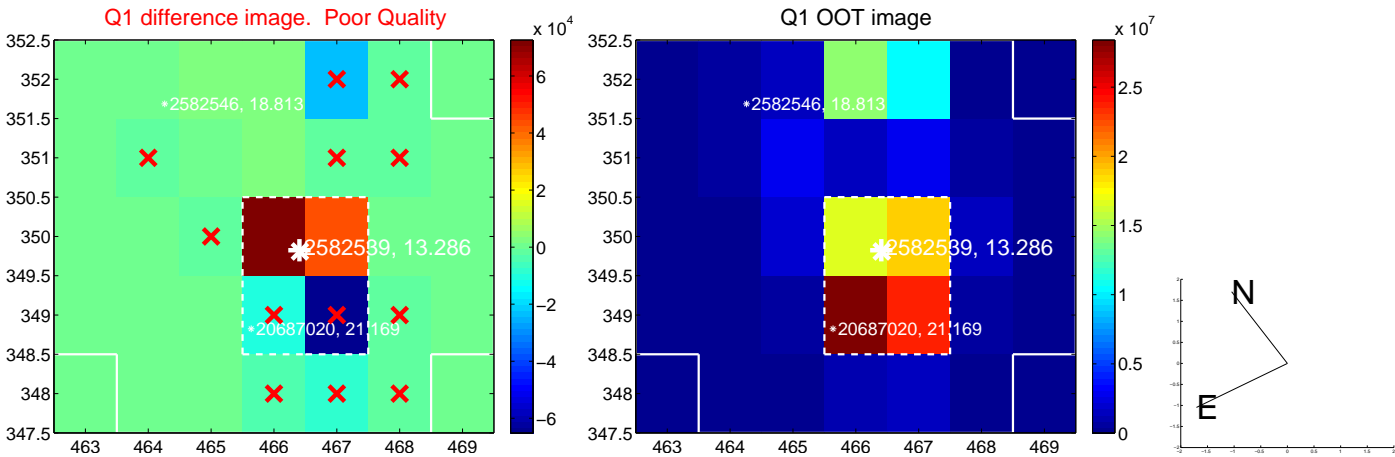


offset from photometric centroids

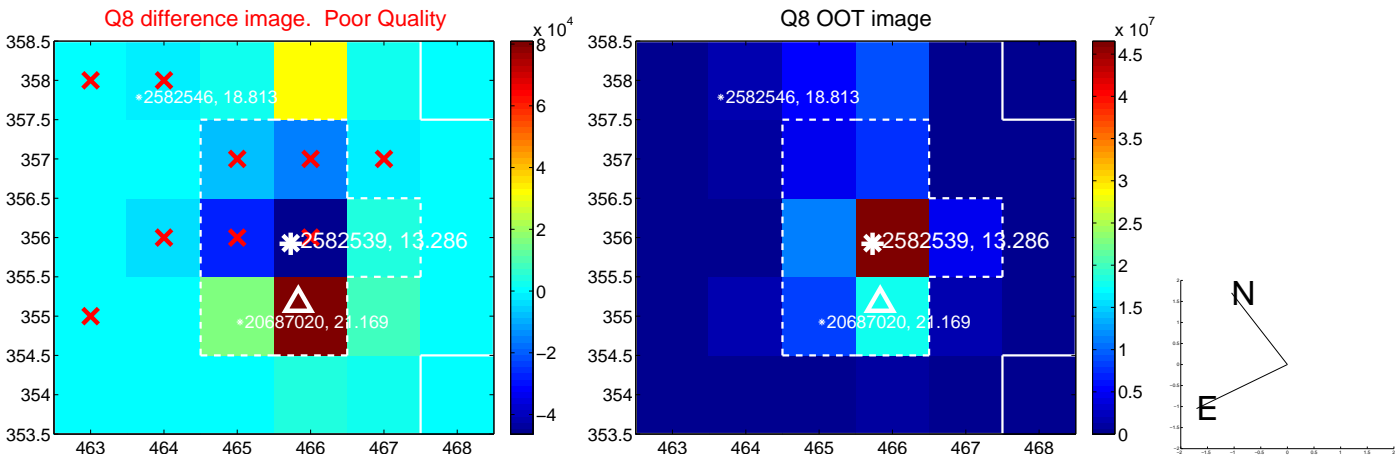
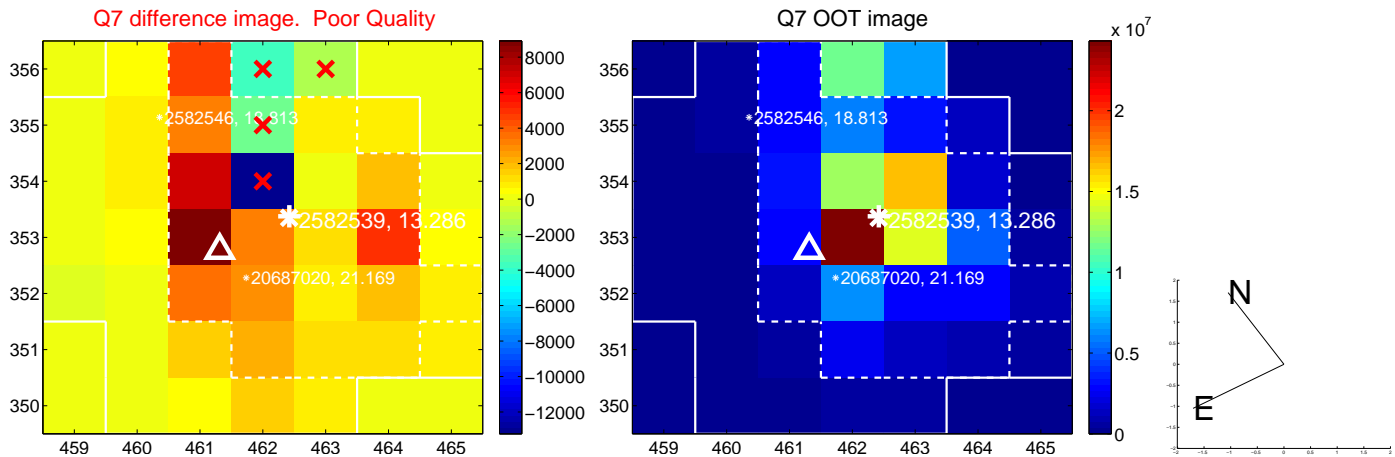
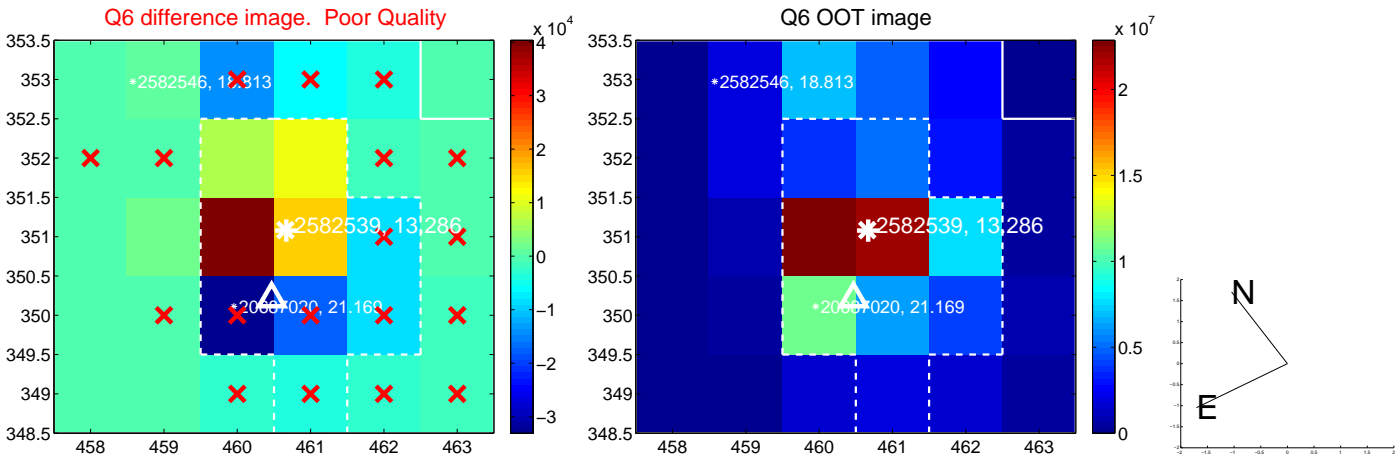
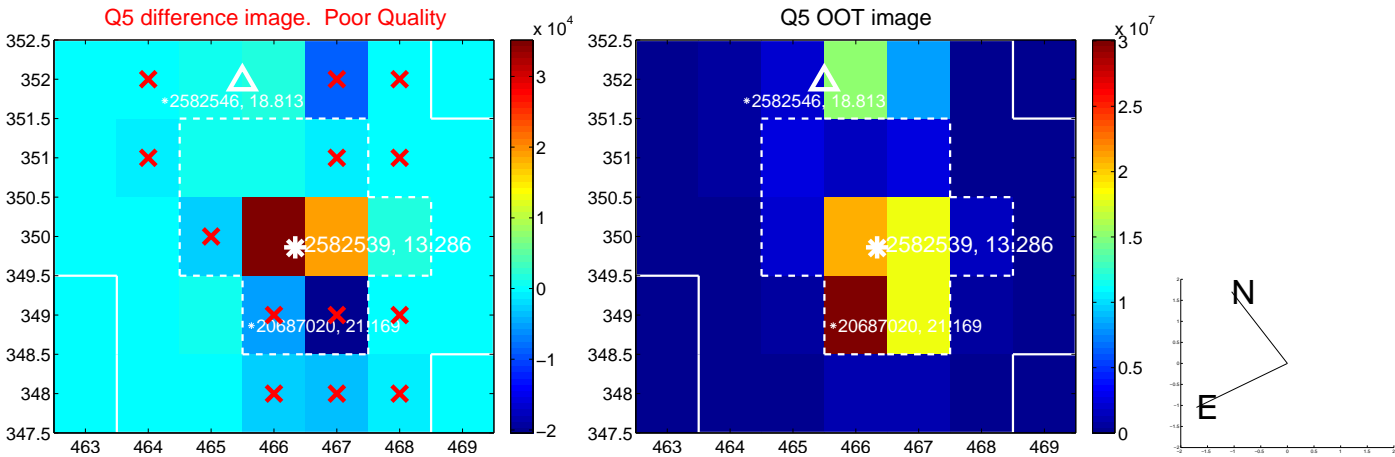


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets; magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three- σ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

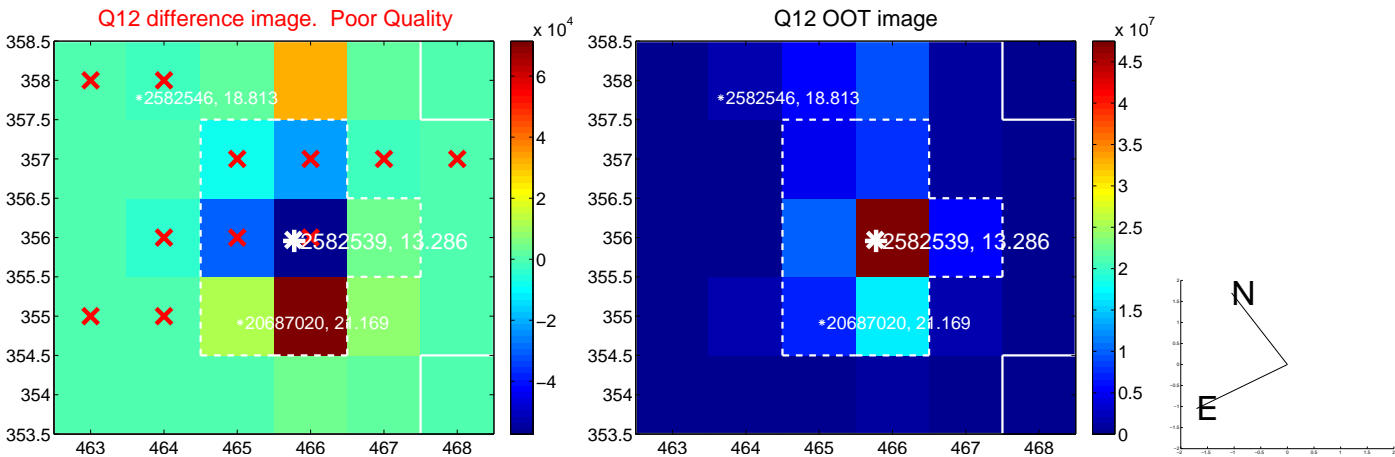
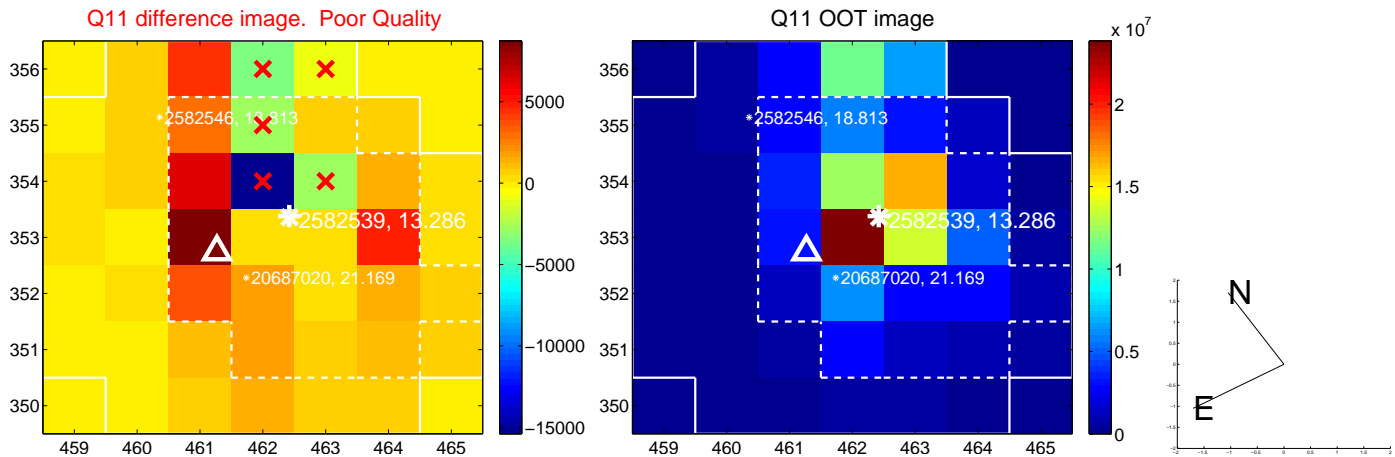
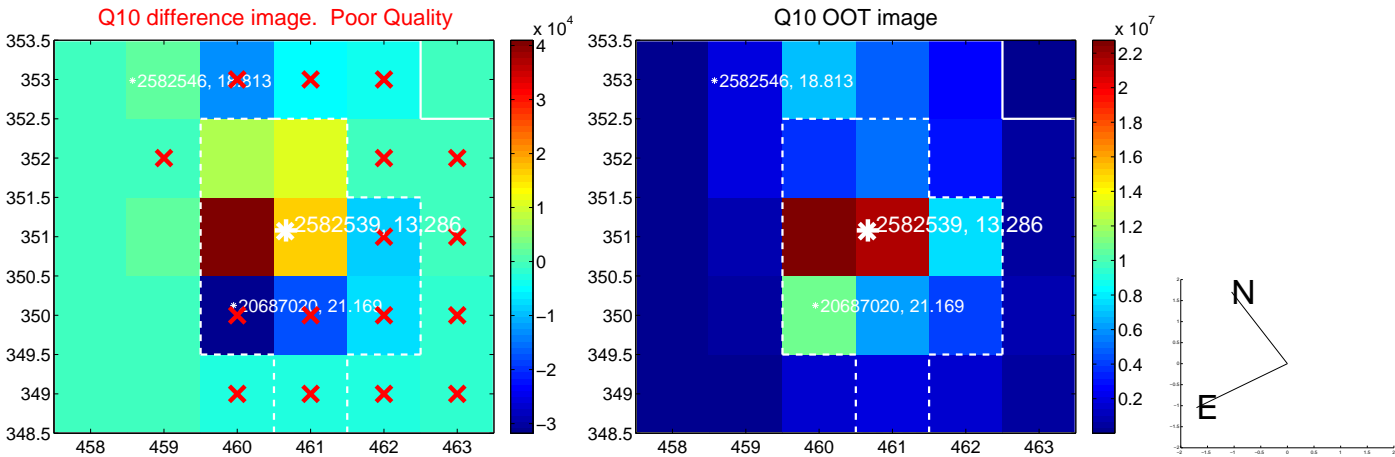
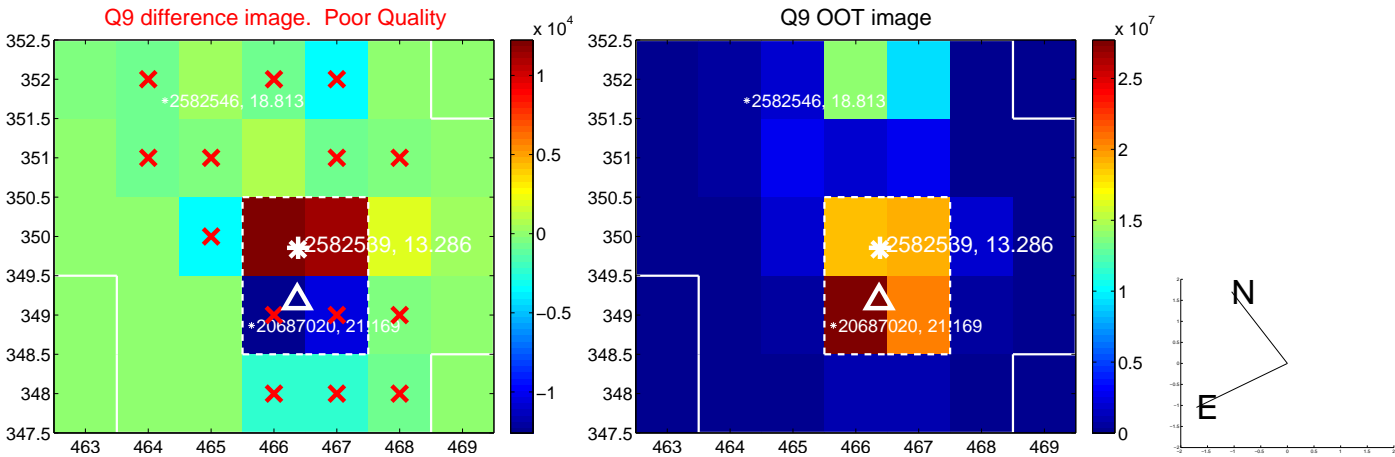
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



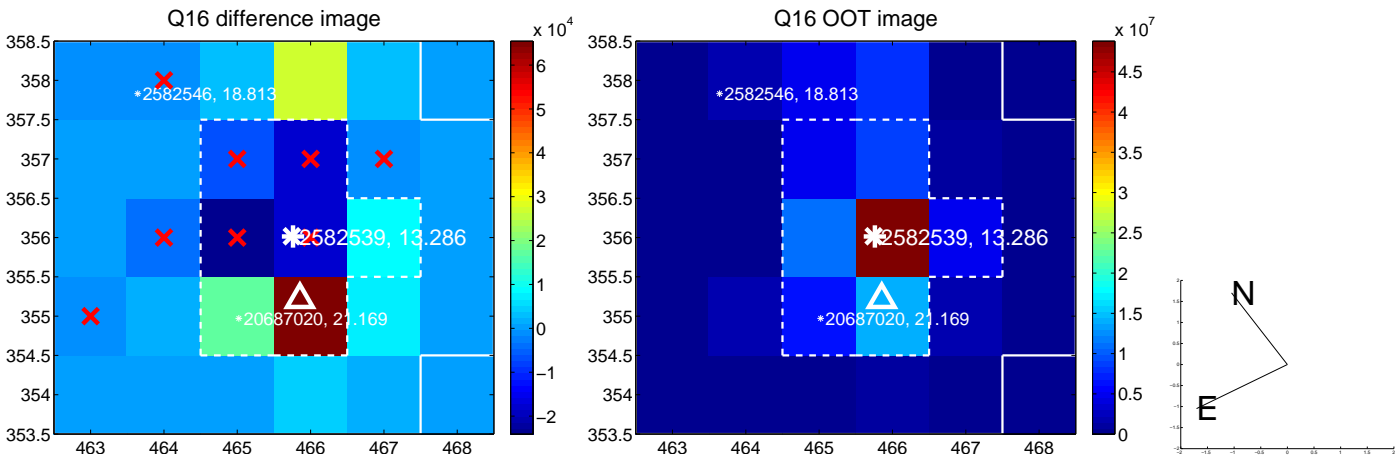
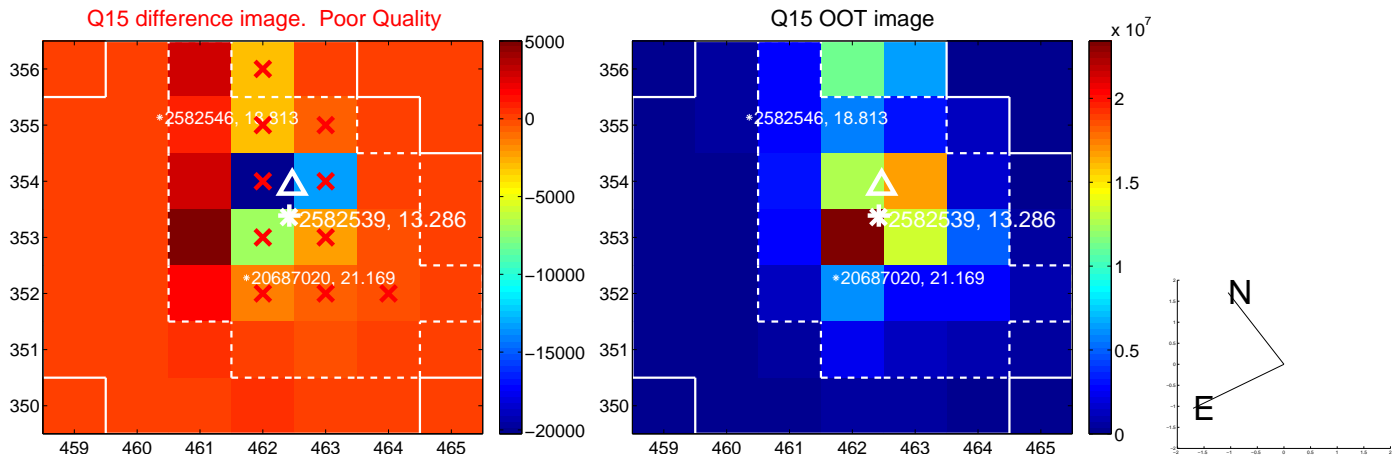
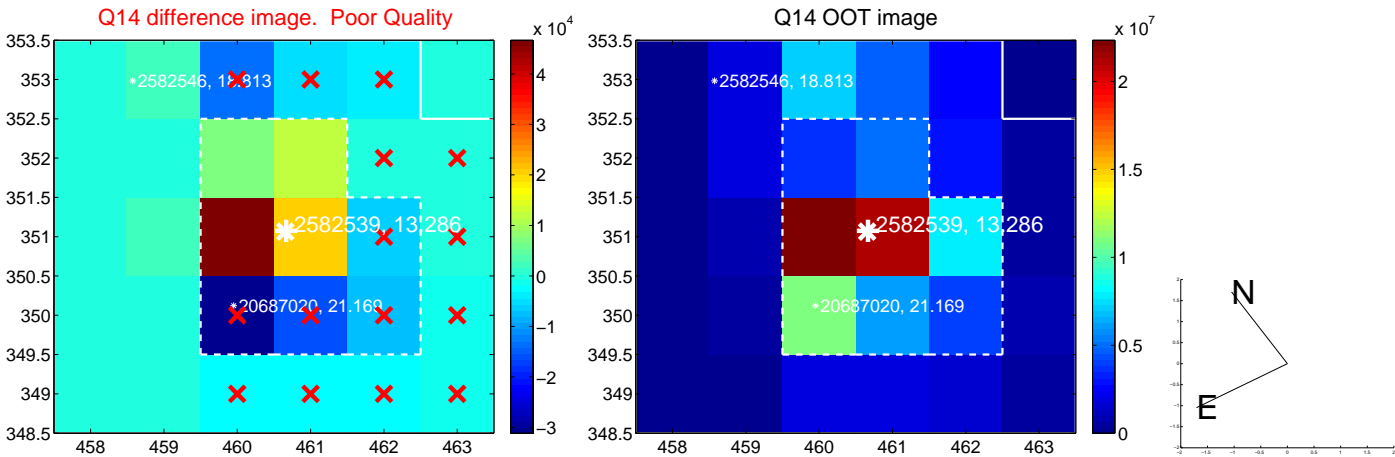
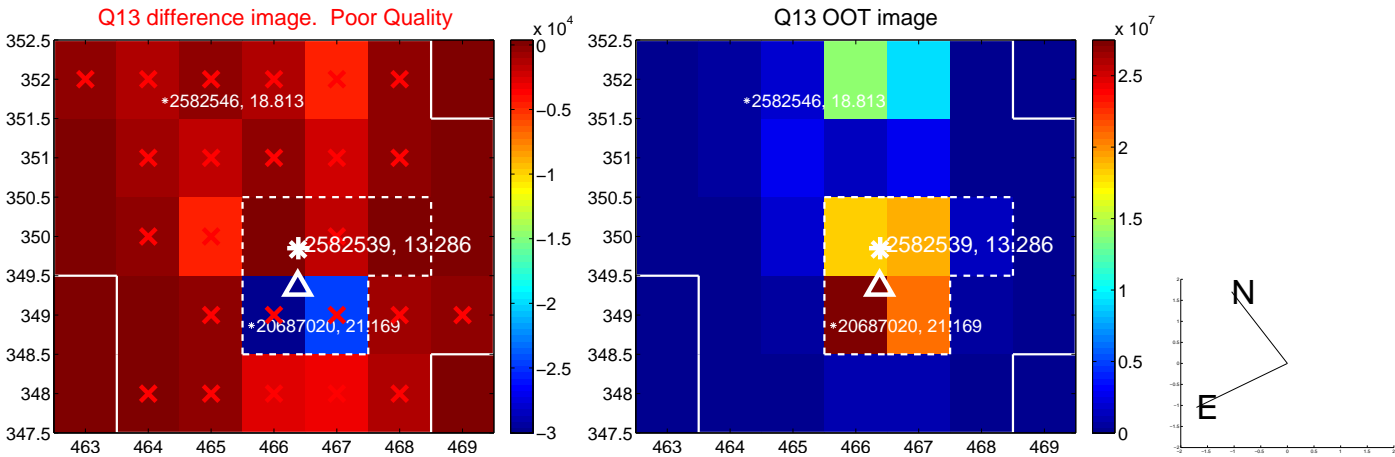
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



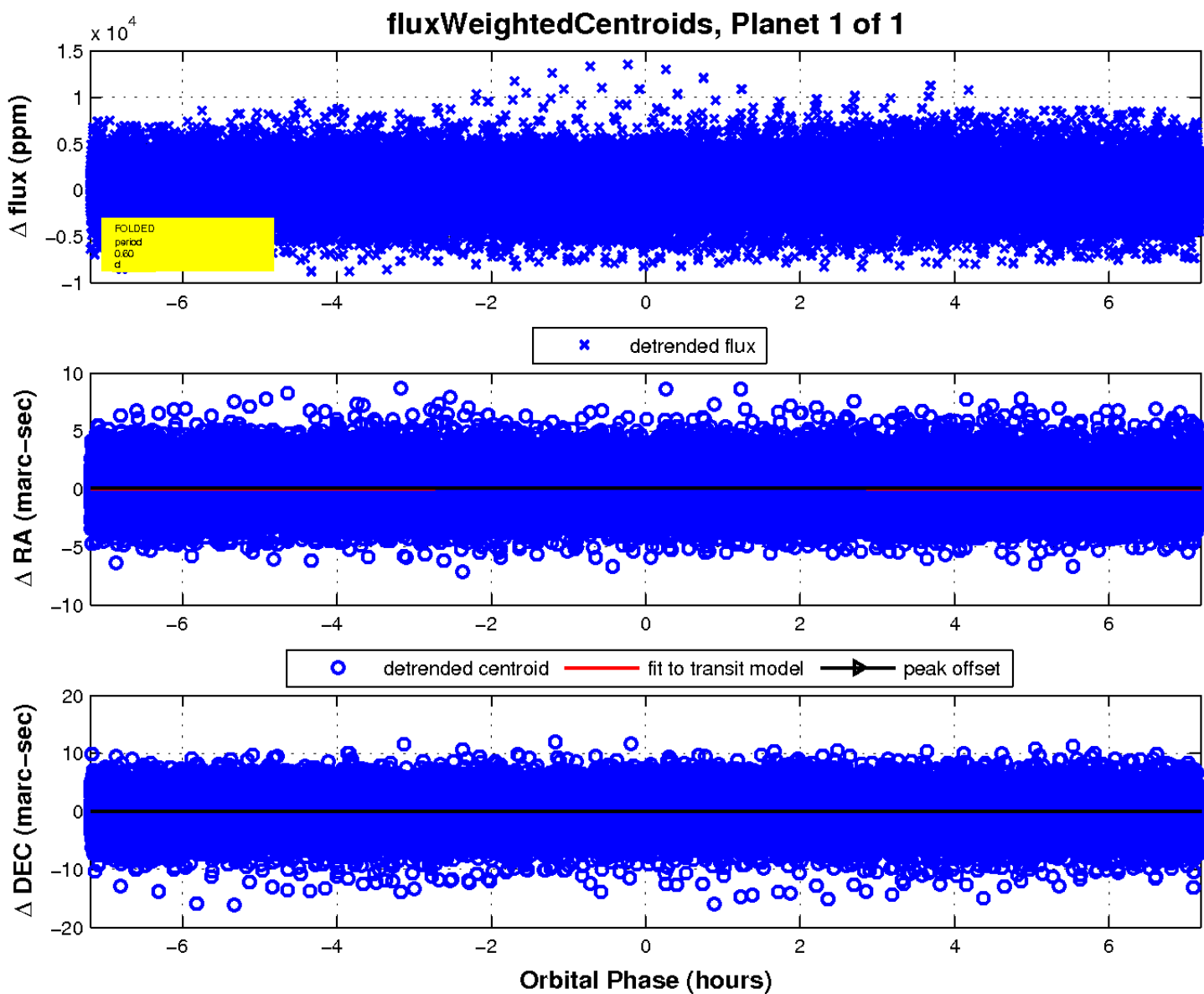
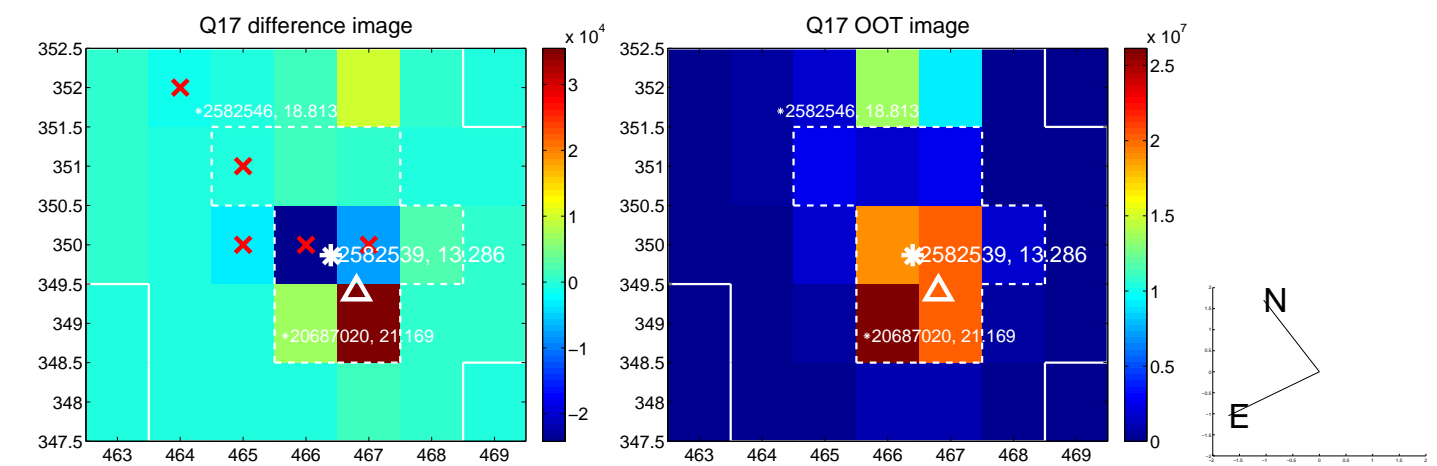
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



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



UKIRT Image

Declination

