

KIC 008443527

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})
008443527-01	OBS	3197.01	22.598442	152.915551	70.4	4.622	12.5	12.3	1.09	6335	1.00	68.64

Robovetter Results

TCE	Run Type	Disp	Score	N	S	C	E	Comments
008443527-01	OBS	PC	1.00	0	0	0	0	NO_COMMENT

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.

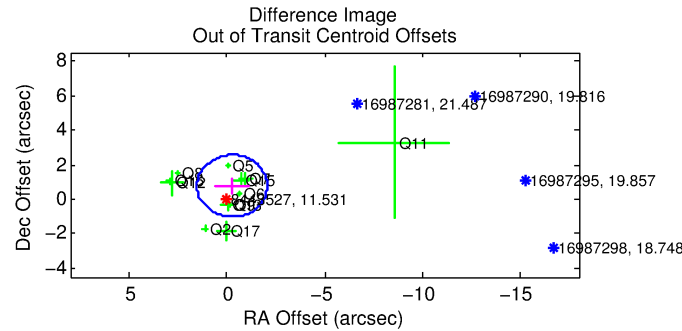
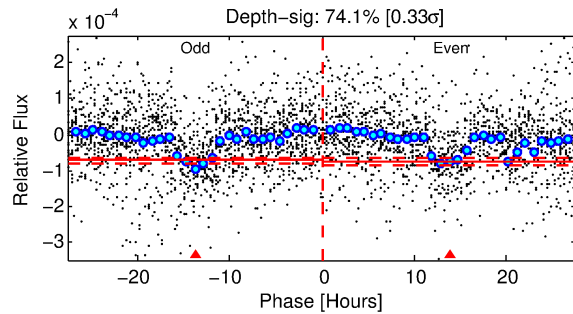
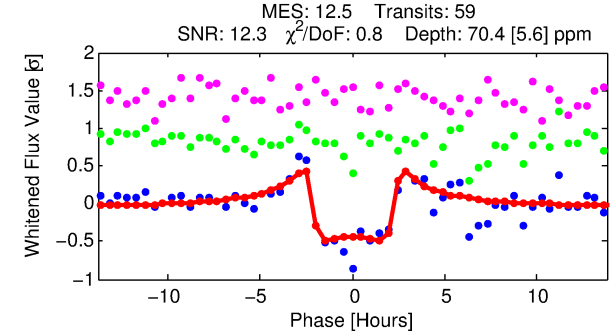
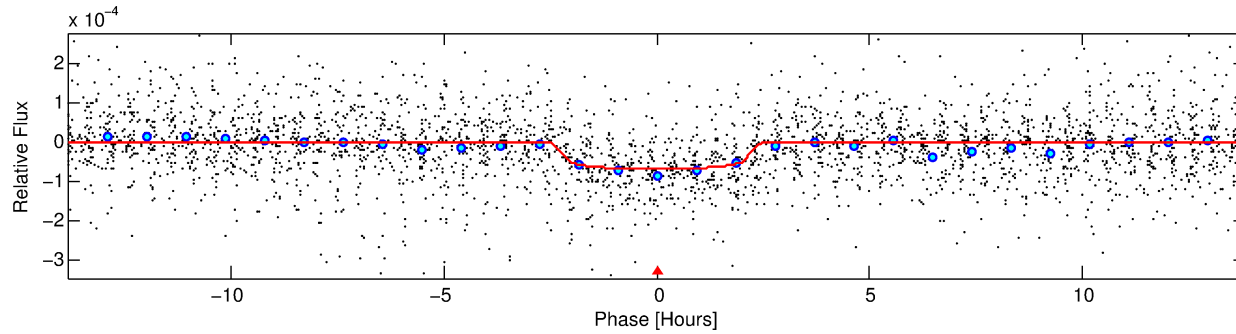
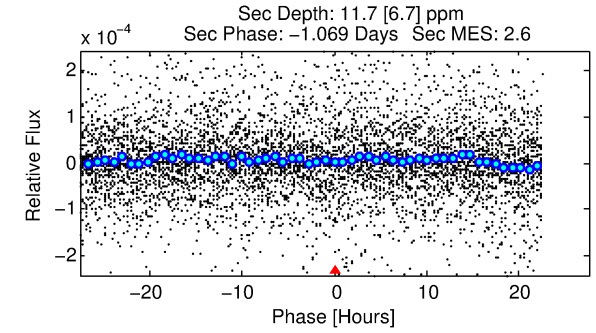
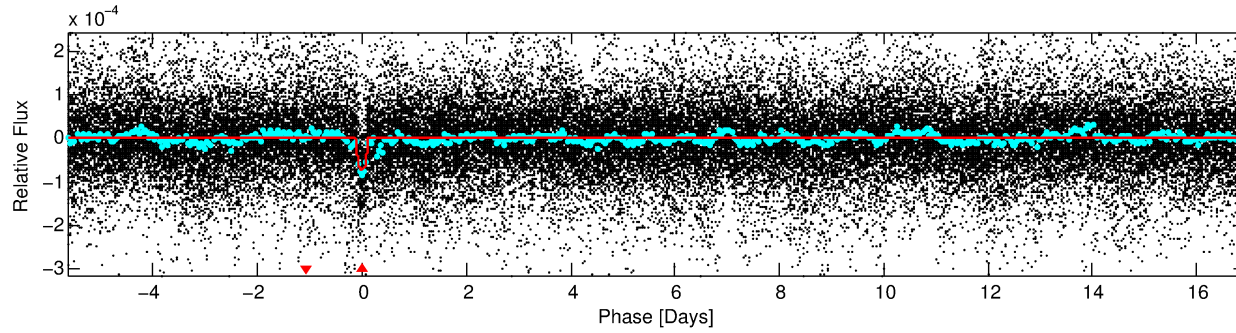
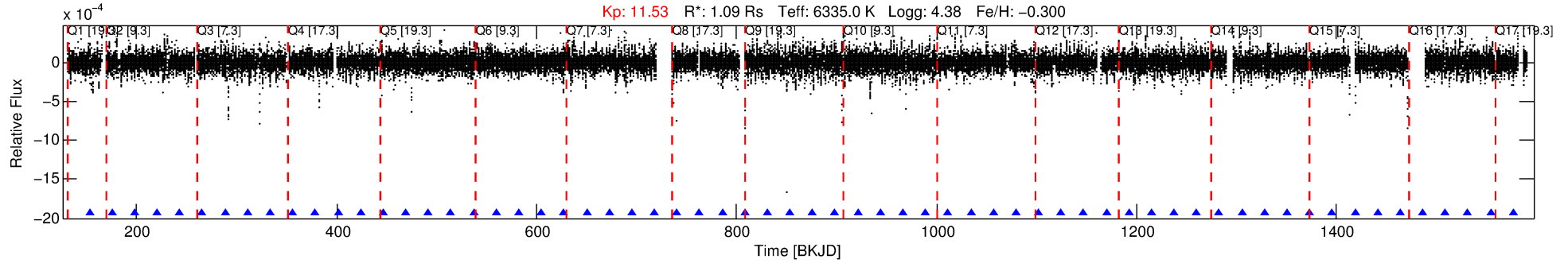
Ephemeris Match Information For 008443527-01

No Significant Match Found

DV One-Page Summary

KIC: 8443527 Candidate: 1 of 1 Period: 22.598 d

KOI: K03197 Corr: No Ephemeris Match



DV Fit Results:

Period = 22.59844 [0.00011] d
Epoch = 152.9156 [0.0040] BKJD
Rp/R* = 0.0085 [0.0018]
a/R* = 23.27 [26.89]
b = 0.79 [0.55]
Seff = 68.64 [19.49]
Teq = 734 [52] K
Rp = 1.01 [0.31] Re
a = 0.1576 [0.0285] AU
Ag = 157.87 [120.73] [1.30σ]
Teffp = 4022 [734] K [4.47σ]

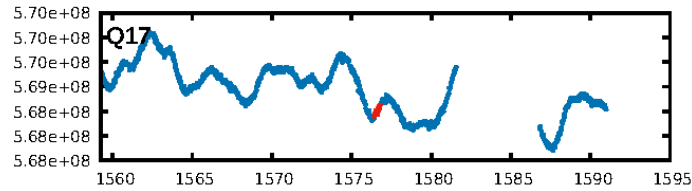
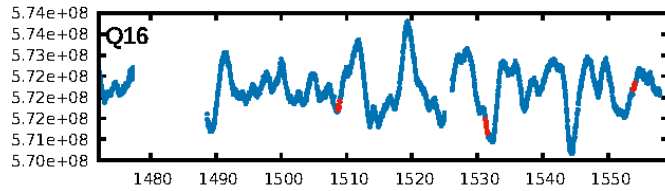
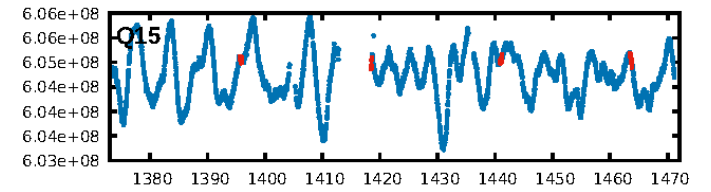
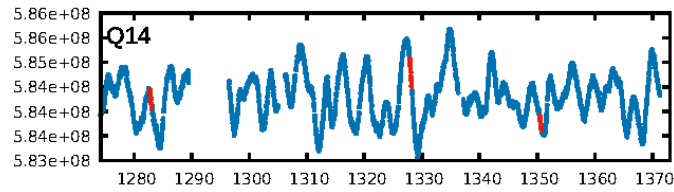
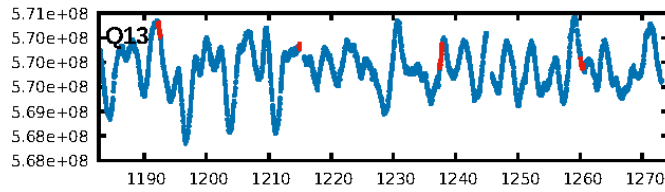
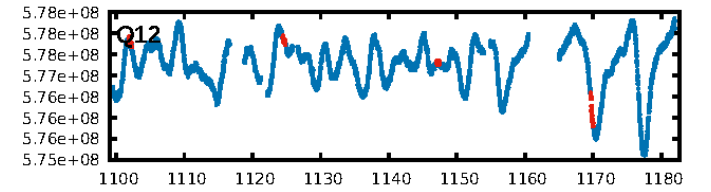
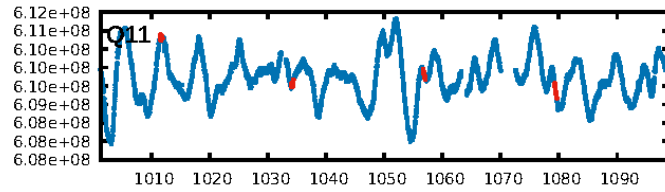
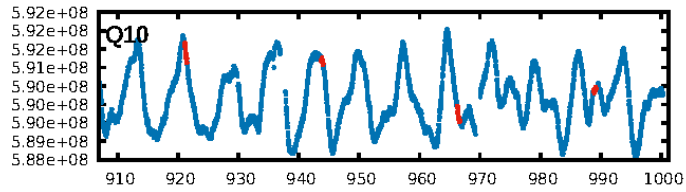
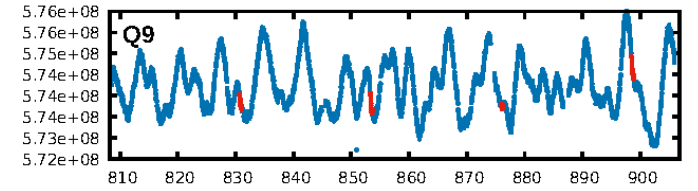
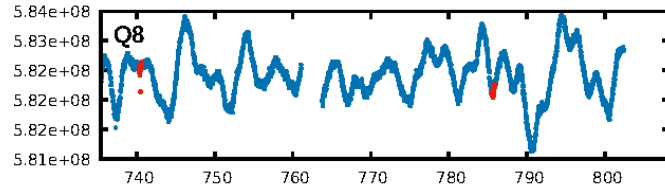
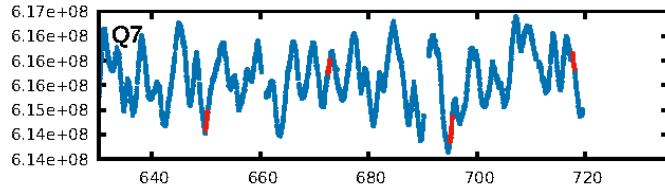
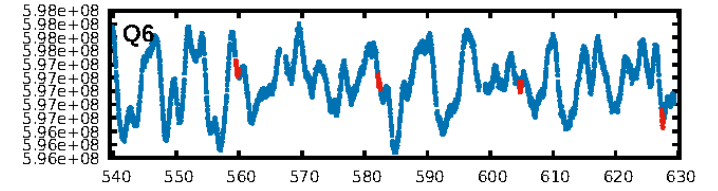
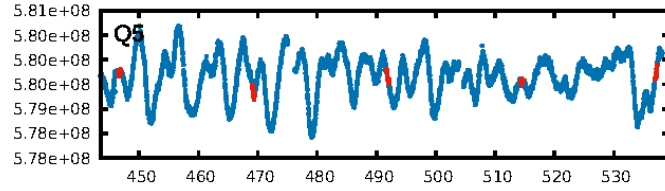
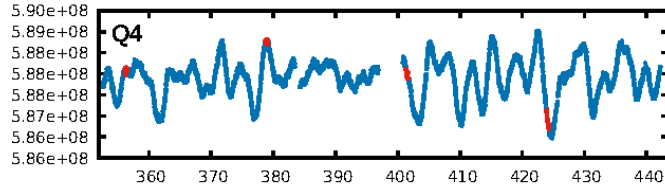
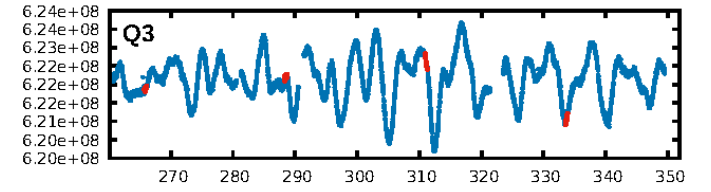
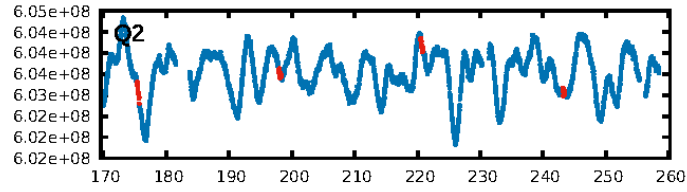
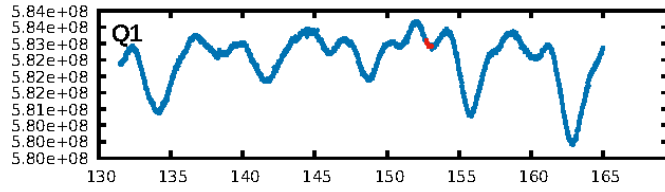
DV Diagnostic Results:

ShortPeriod-sig: N/A
LongPeriod-sig: N/A
ModelChiSquare2-sig: 99.2%
ModelChiSquareGof-sig: 100.0%
Bootstrap-pfa: 3.44e-28
RollingBand-fgt: 1.00 [57/57]
GhostDiagnostic-chr: 2.805
Centroid-sig: 59.7%
Centroid-so: 0.622 arcsec [1.28σ]
OotOffset-rm: 0.811 arcsec [1.36σ]
KicOffset-rm: 0.793 arcsec [2.02σ]
OotOffset-st: 2/3/3/4 [12]
KicOffset-st: 2/3/3/4 [12]
DiffImageQuality-fgm: 0.83 [10/12]
DiffImageOverlap-fno: 1.00 [17/17]

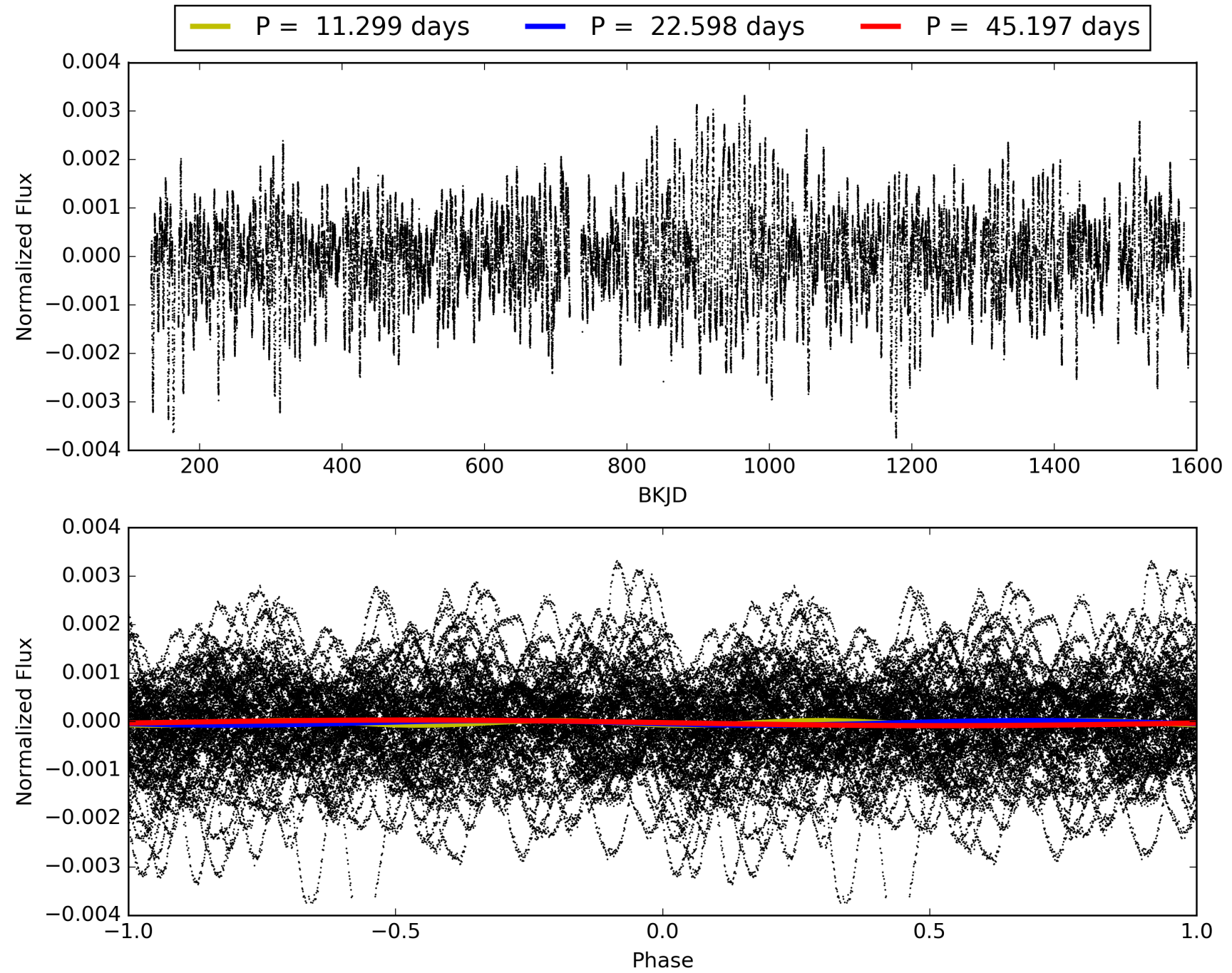
Software Revision: svn+ssh://murzim/repo/soc/tags/release/9.3.42@60958 -- Date Generated: 30-Jan-2016 15:24:19 Z

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

TCE 008443527-01, PDC Light Curves

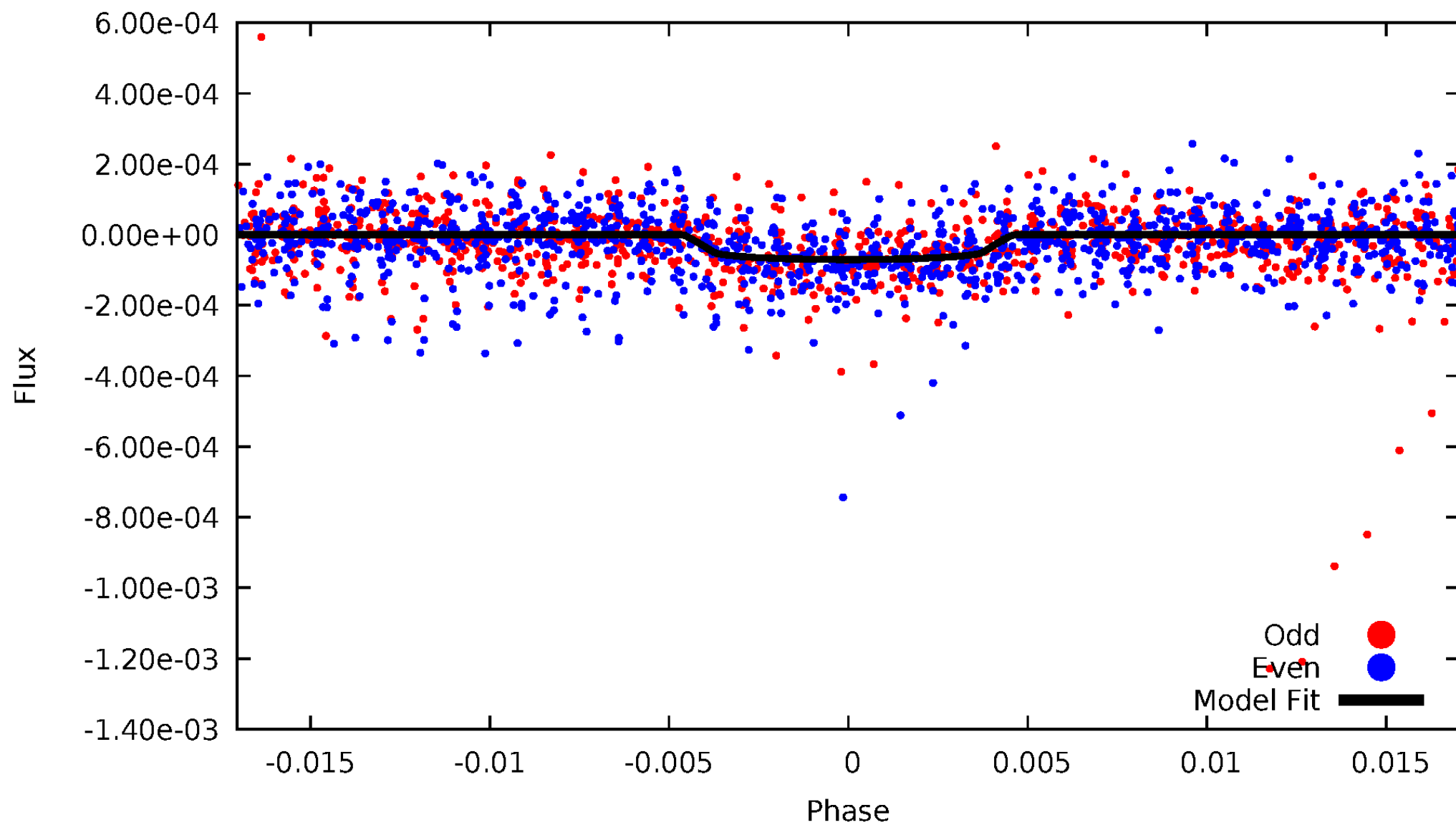


TCE 008443527-01



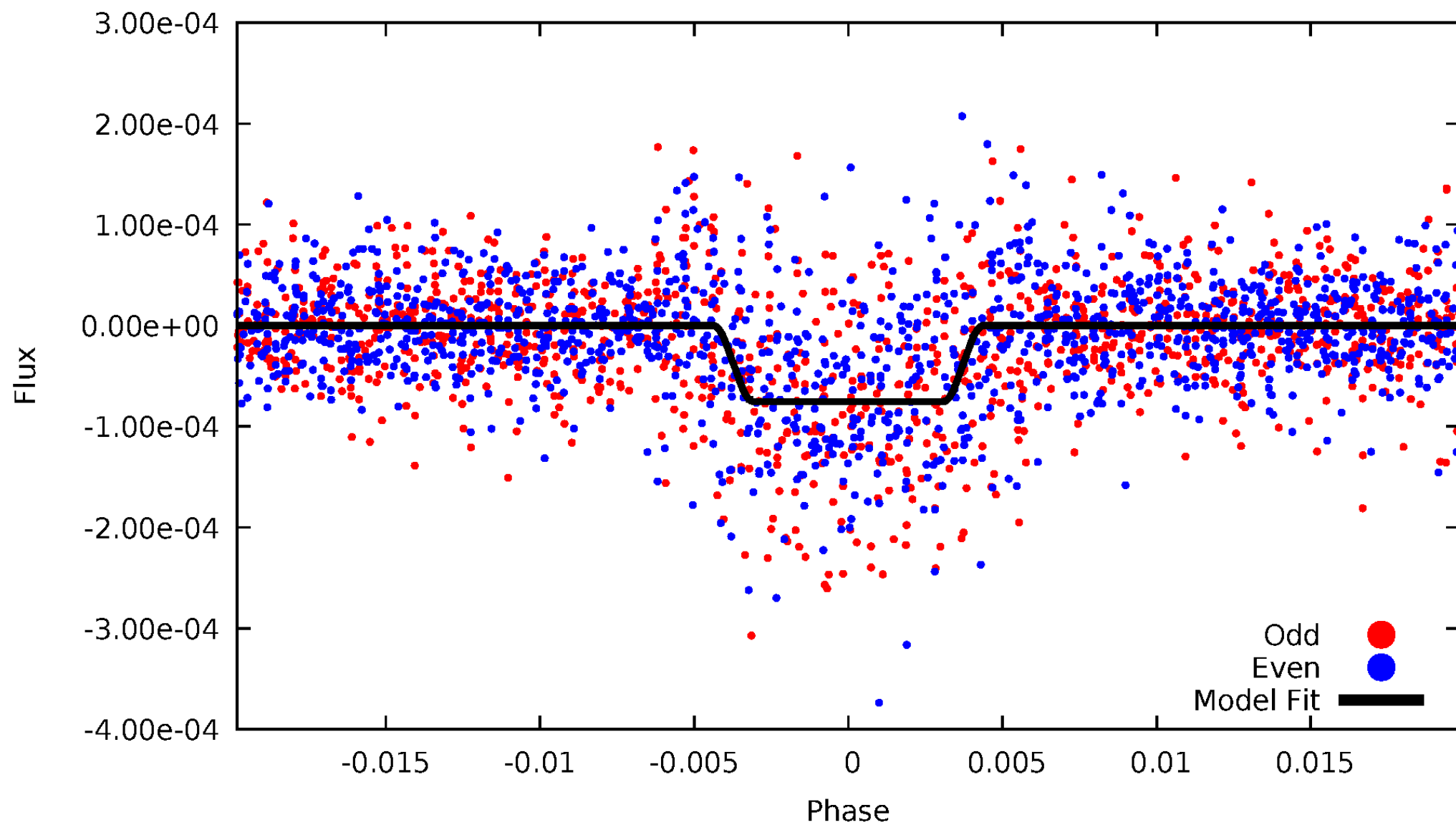
DV Odd/Even

TCE 008443527-01



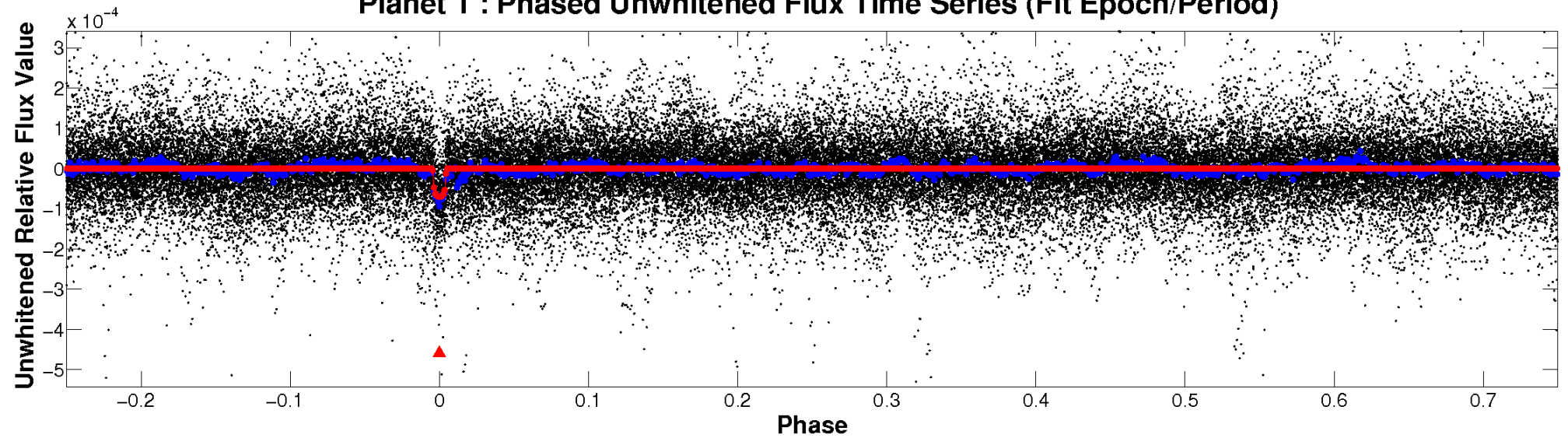
ALT Odd/Even

TCE 008443527-01

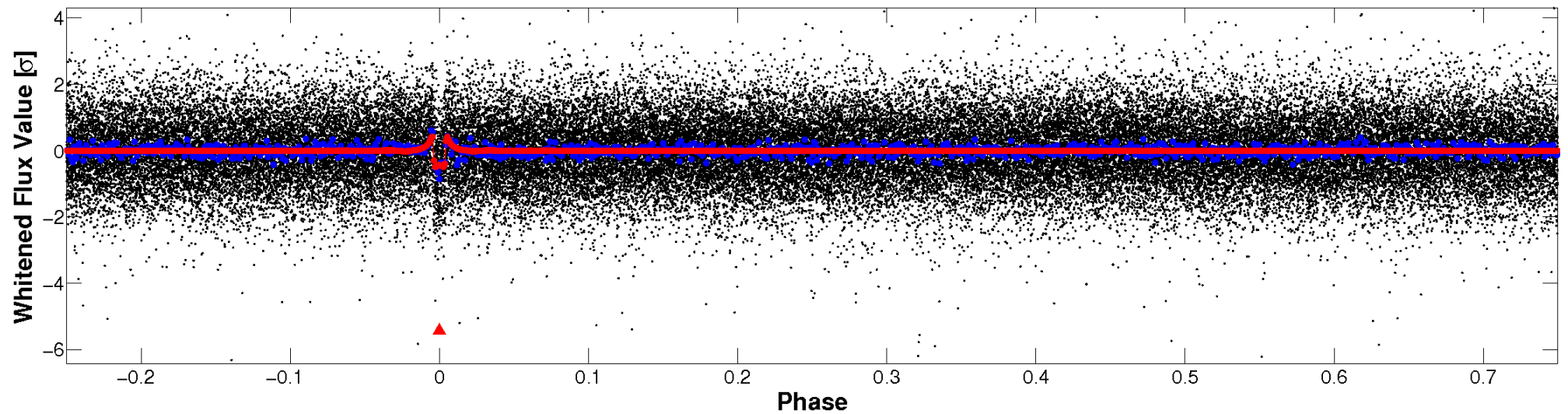


Non-Whitened Vs. Whitened Light Curve

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

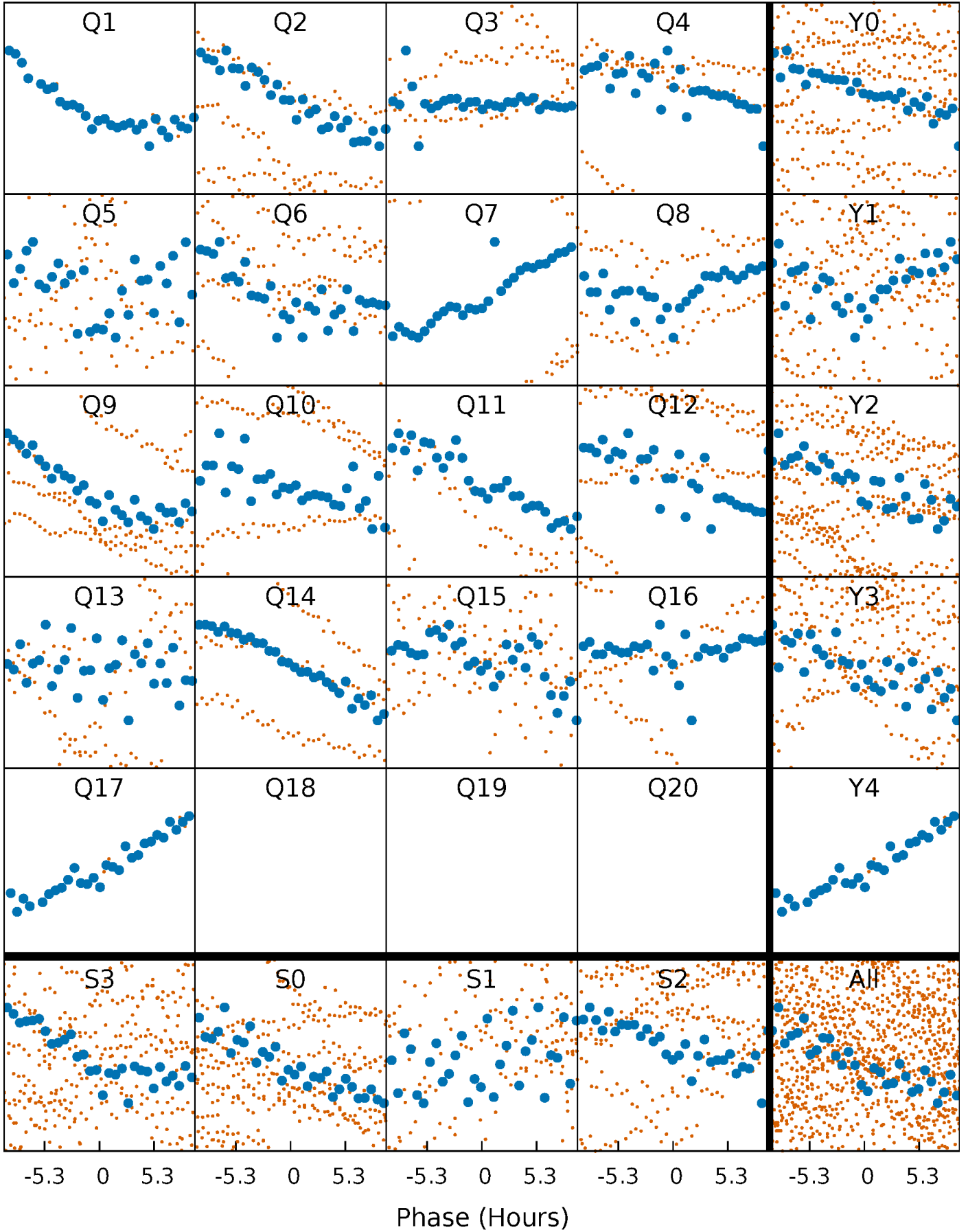


Planet 1 : Phased Whitened Flux Time Series (Fit Epoch/Period)



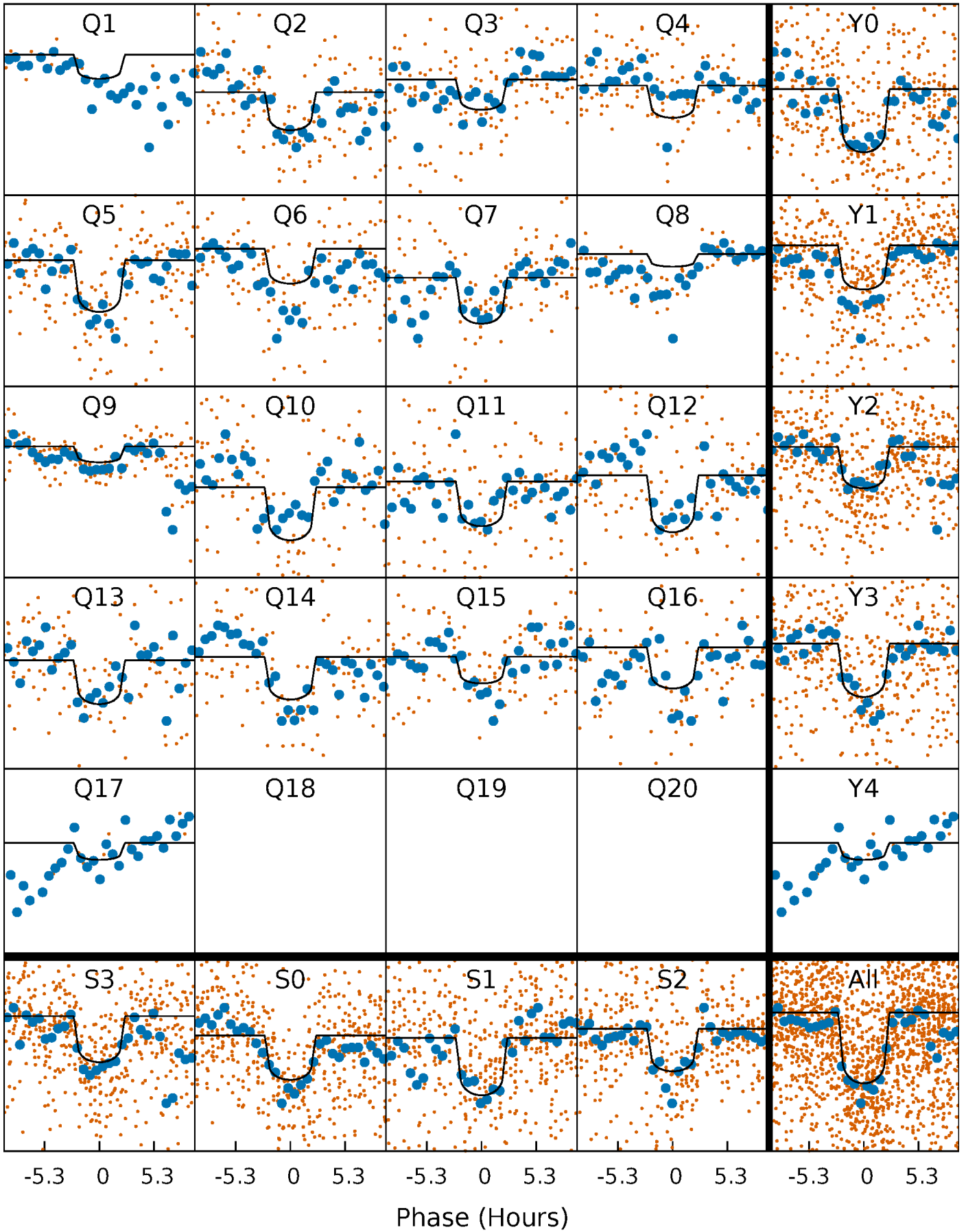
PDC Quarter-Phased Transit Curves

TCE 008443527-01 P= 22.598442 Days $T_0=152.915551$ (BKJD)



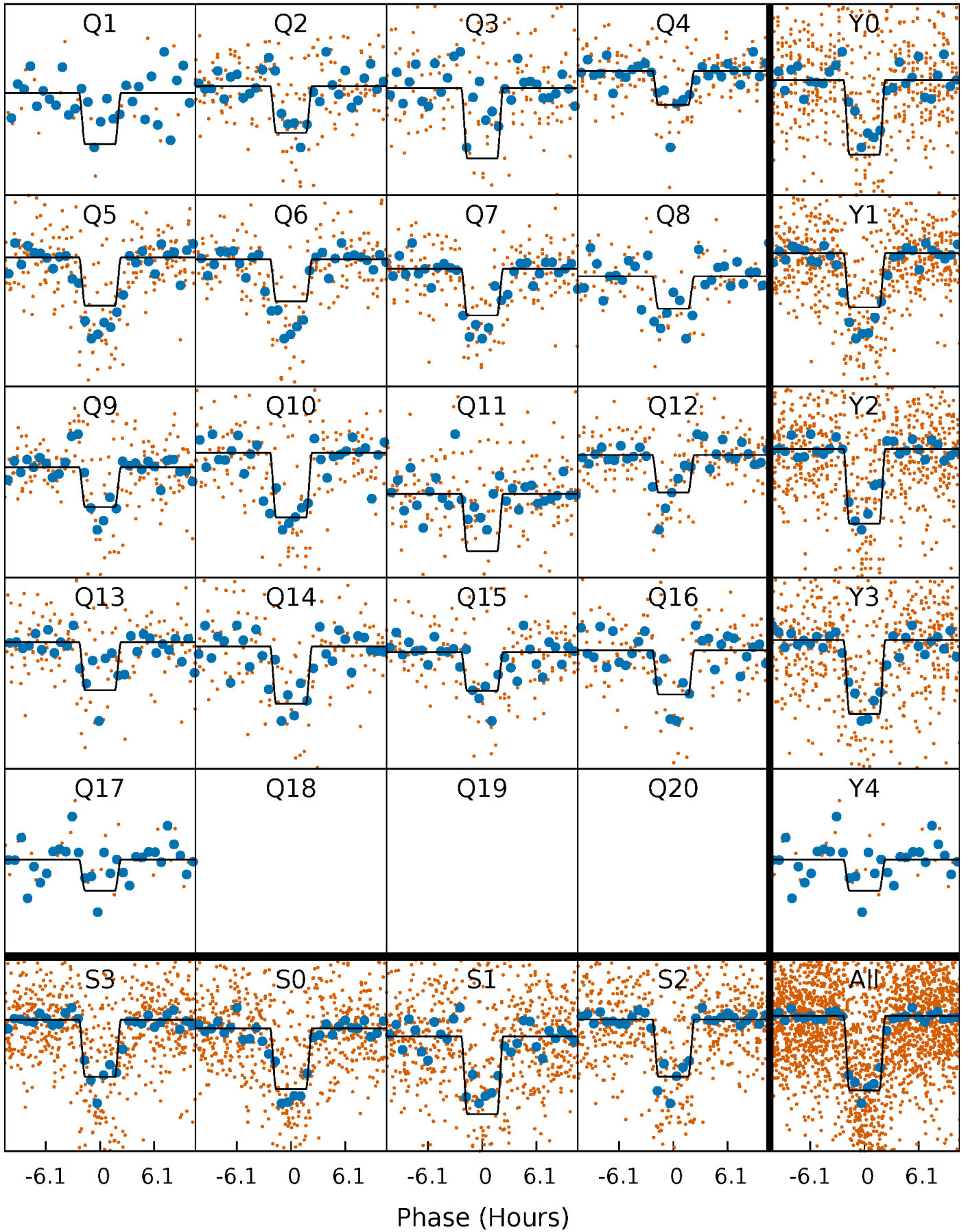
DV Quarter-Phased Transit Curves

TCE 008443527-01 P= 22.598442 Days $T_0=152.915551$ (BKJD)



Alt. Detrend Quarter-Phased Transit Curves

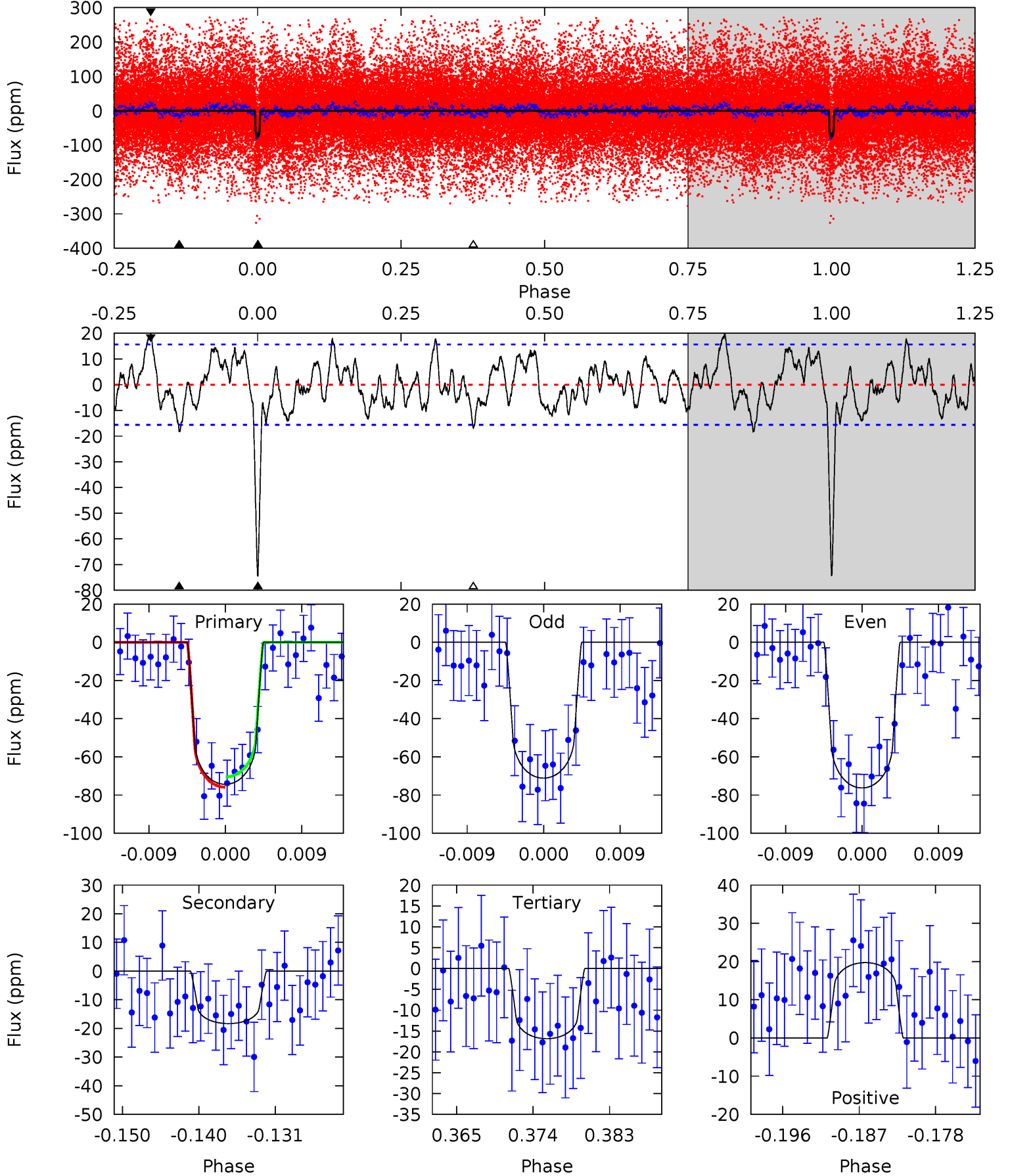
TCE 008443527-01 P= 22.598762 Days $T_0=152.908075$ (BKJD)



DV Model-Shift Uniqueness Test

008443527-01, P = 22.598442 Days, E = 130.317109 Days

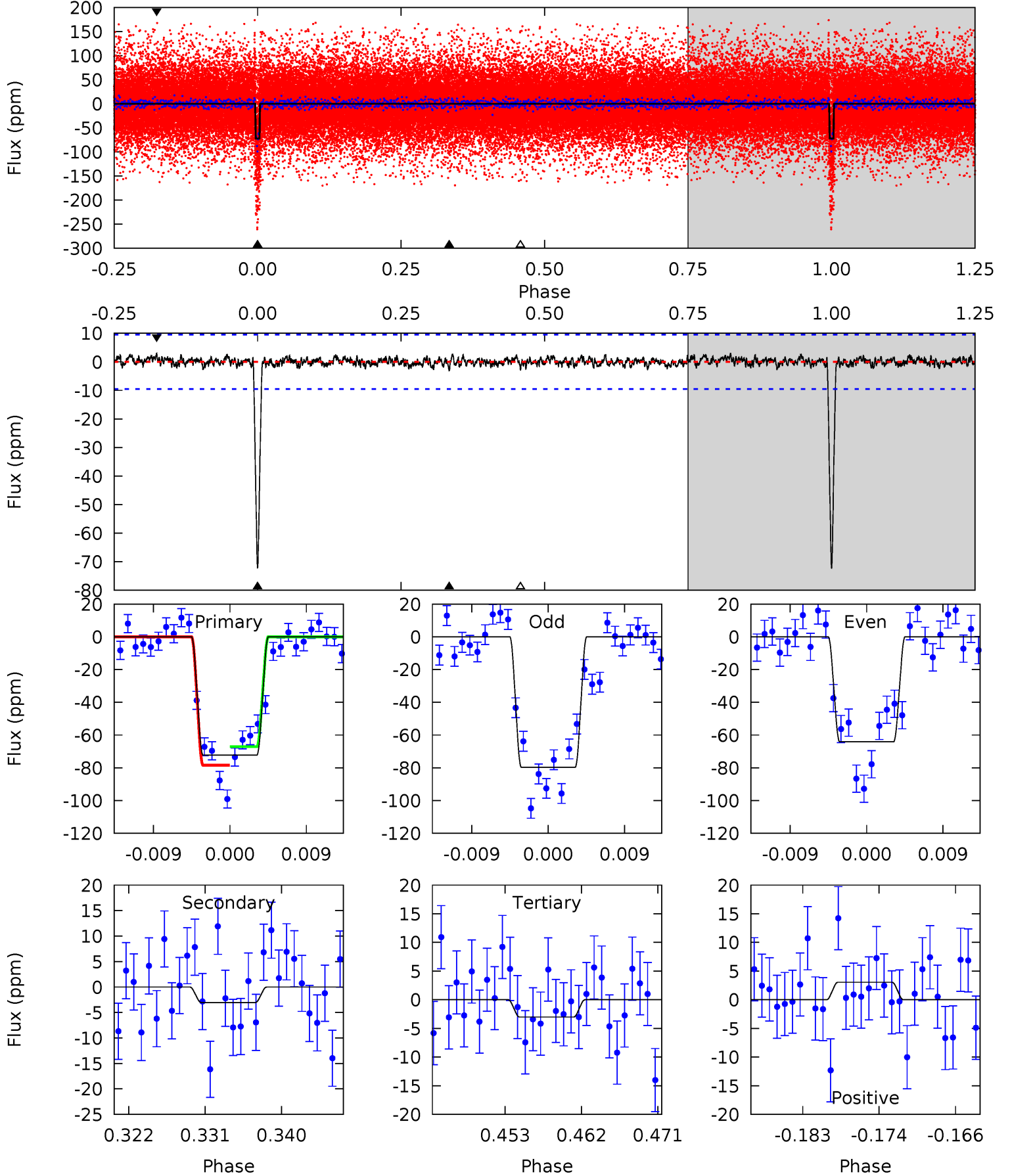
Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
24.0	5.91	5.43	6.36	5.04	2.60	2.30	18.6	17.6	0.47	-0.45	0.83	1.02	0.21	0.86



Alt Model-Shift Uniqueness Test

008443527-01, $P = 22.598762$ Days, $E = 130.309313$ Days

Pri	Sec	Ter	Pos	FA ₁	FA ₂	F _{Red}	Pri-Ter	Pri-Pos	Sec-Ter	Sec-Pos	Odd-Evn	DMM	Shape	TAT
38.3	1.62	1.60	1.62	5.05	2.62	0.52	36.7	36.7	0.02	-0.01	4.07	1.09	0.04	2.98



Stellar Parameters For KIC 008443527

	$T_{\text{eff}}(K)$	$\log(g)$	[Fe/H]	$R (R_{\odot})$	$M(M_{\odot})$	$p_{\star} (\text{g}\cdot\text{cm}^{-3})$
	6335^{+157}_{-189}	$4.375^{+0.092}_{-0.138}$	$-0.300^{+0.250}_{-0.300}$	$1.087^{+0.239}_{-0.147}$	$1.017^{+0.135}_{-0.110}$	$1.117^{+0.455}_{-0.448}$
	+2%/-3%	+2%/-3%	+83%/-100%	+22%/-14%	+13%/-11%	+41%/-40%
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 008443527-01 / KOI 3197.01

Detrend	Depth (ppm)	$R_p (R_{\oplus})$	$T_{max} (K)$	$T_{obs} (K)$	A_{obs}
DV	-18 ± 3	$1.01^{+0.25}_{-0.21}$	1031^{+60}_{-48}	4643^{+523}_{-378}	240^{+156}_{-86}
Alt.	-3 ± 2	$1.04^{+0.22}_{-0.24}$	1028^{+63}_{-49}	3376^{+376}_{-500}	38^{+38}_{-25}

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 $A_{obs} \gg 1.0$

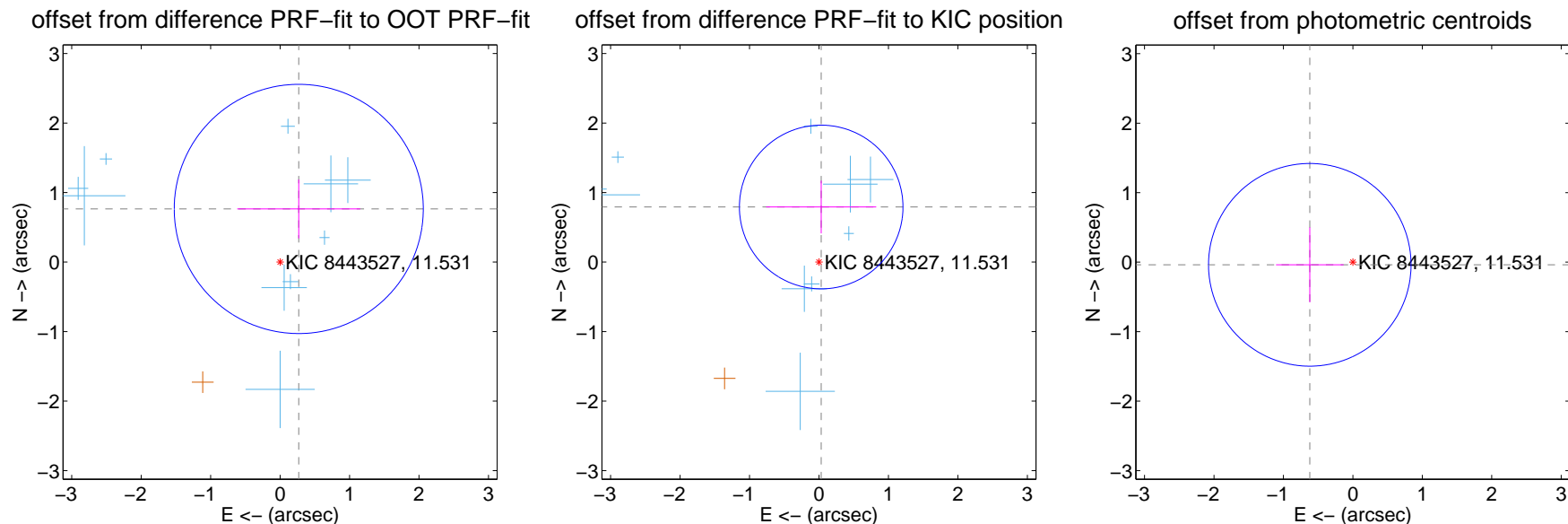
DV Centroid Data

Supplemental centroid analysis for 008443527-01. **Kepler magnitude: 11.53.** Transit SNR 12.33

There are 10 quarters with good PRF difference image offsets

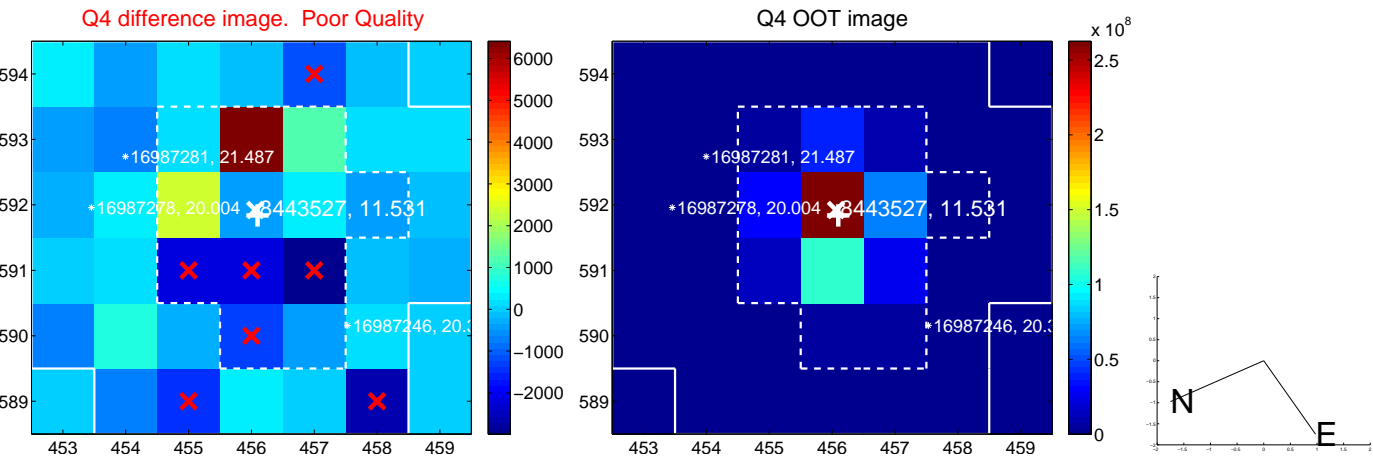
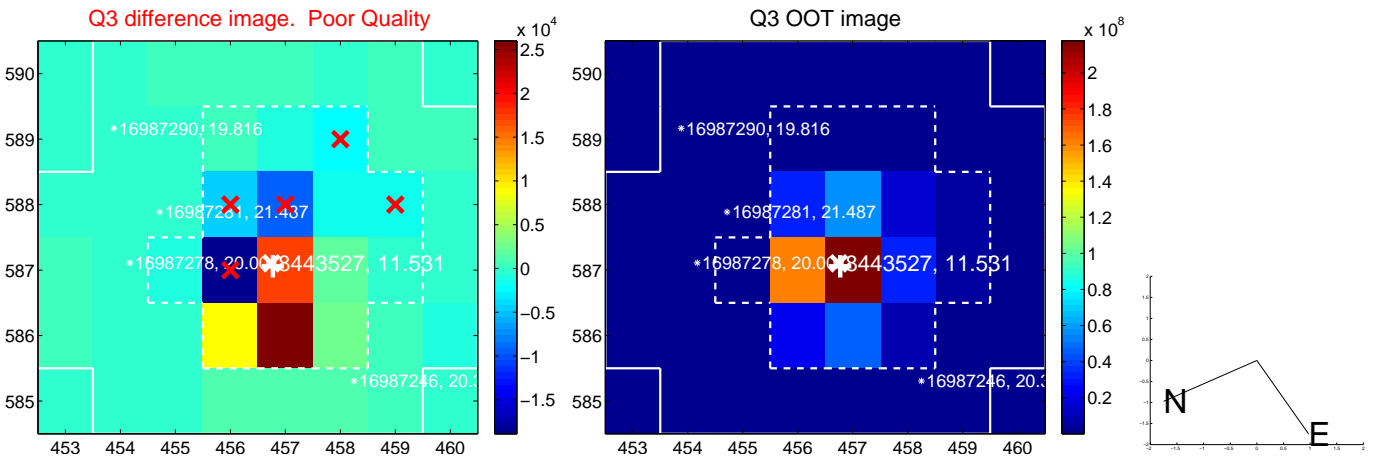
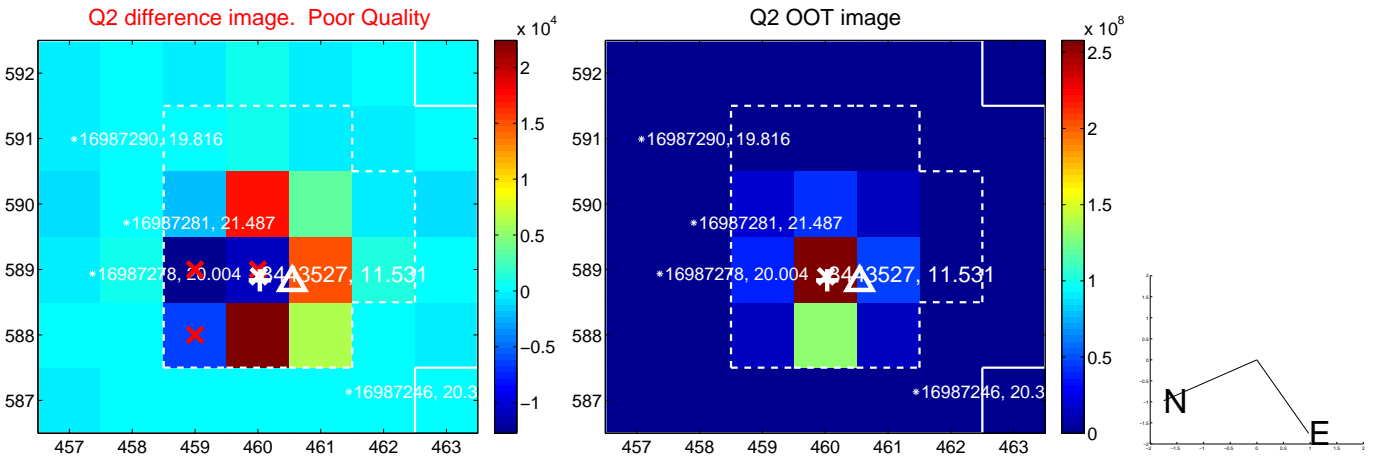
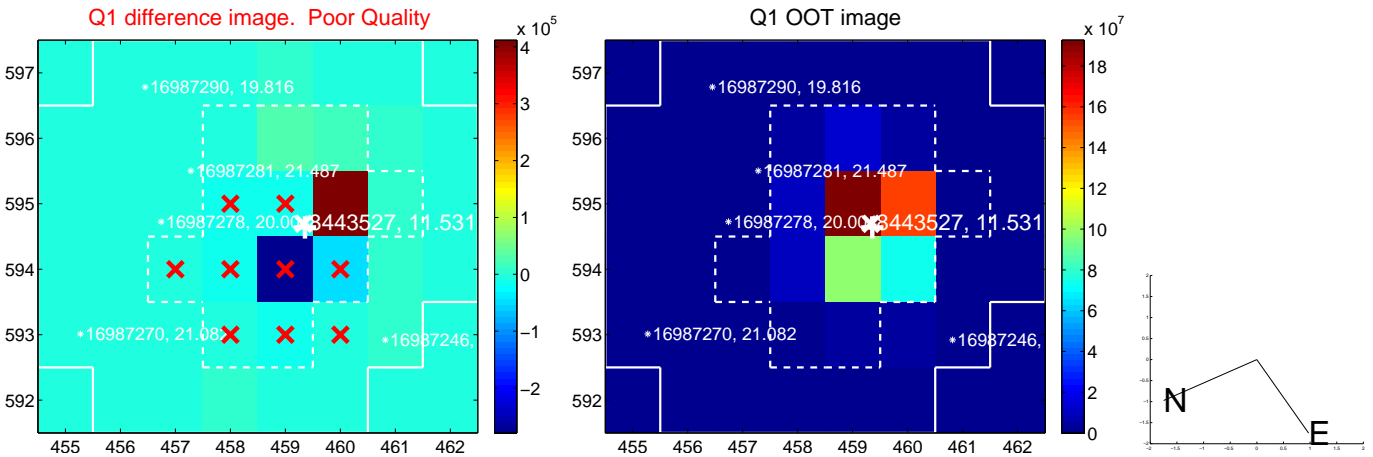
The direct PRF centroid is offset from the target star catalog position by about 0.27 arcsec

	Distance in arcsec	Distance / σ	Δ RA	Δ Dec
PRF-fit source offset from OOT	0.811 ± 0.598	1.36	-0.269 ± 0.886	0.765 ± 0.424
PRF-fit source offset from KIC position	0.793 ± 0.393	2.02	-0.032 ± 0.793	0.793 ± 0.379
photometric centroid source offset	0.62 ± 0.49	1.28	0.62 ± 0.49	-0.04 ± 0.54

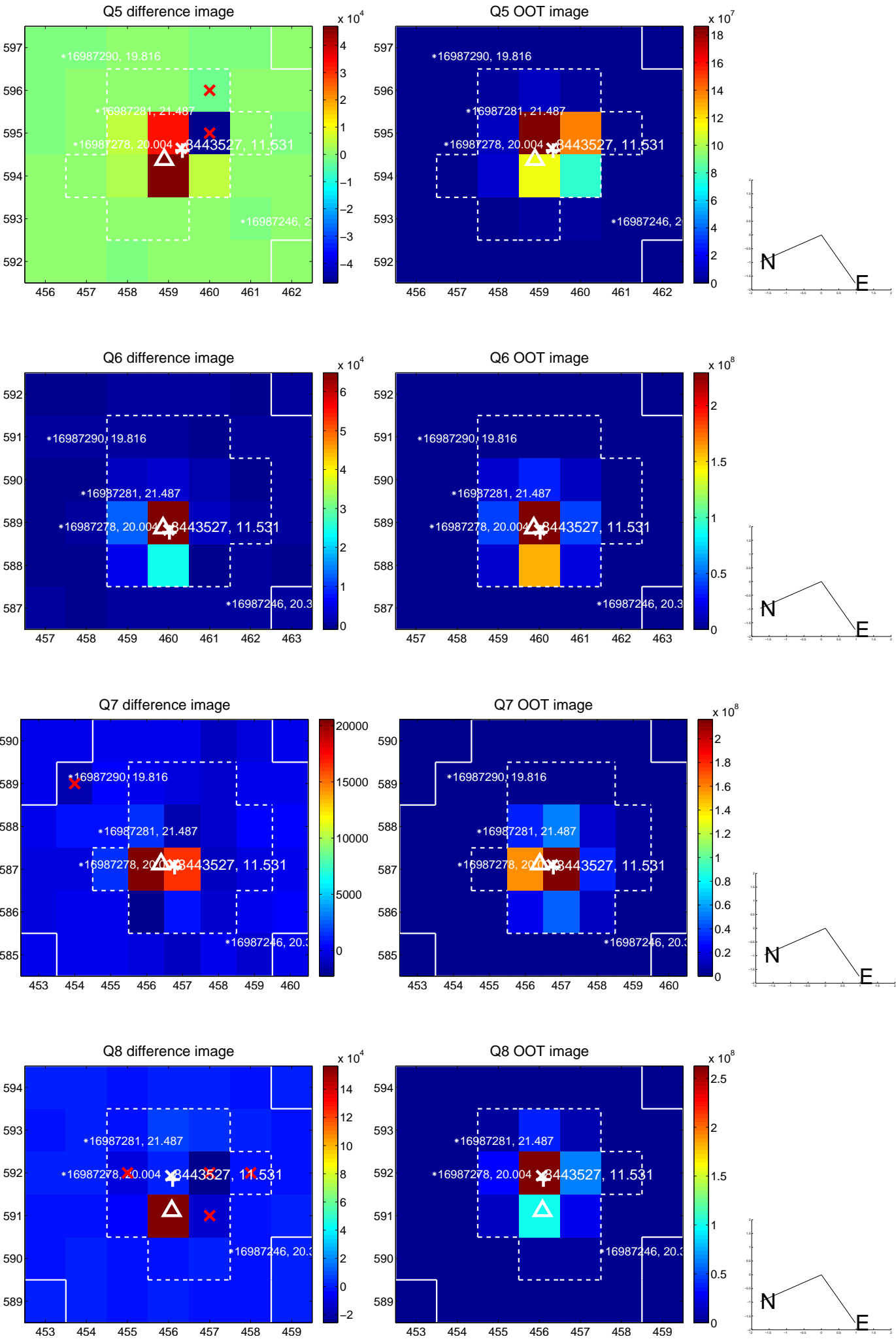


Centroid source offsets from the target star reconstructed from PRF and photometric centroids. **Sky blue crosses: good quarterly centroid offsets; Vermillion crosses: bad quarterly centroid offsets;** magenta cross: average over quarters. Length of the crosses: one- σ uncertainty. Blue circle: three-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

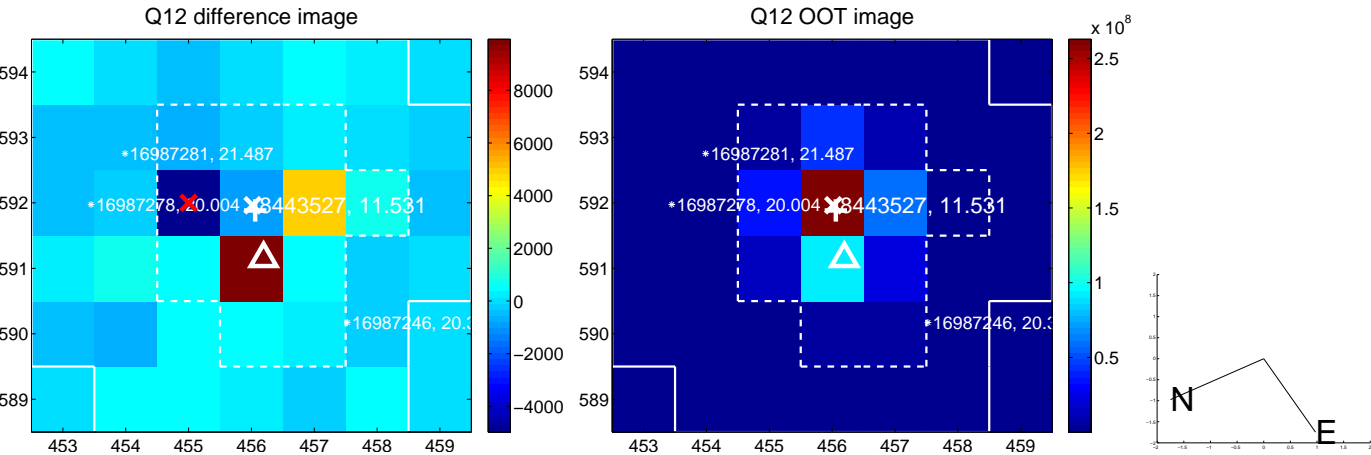
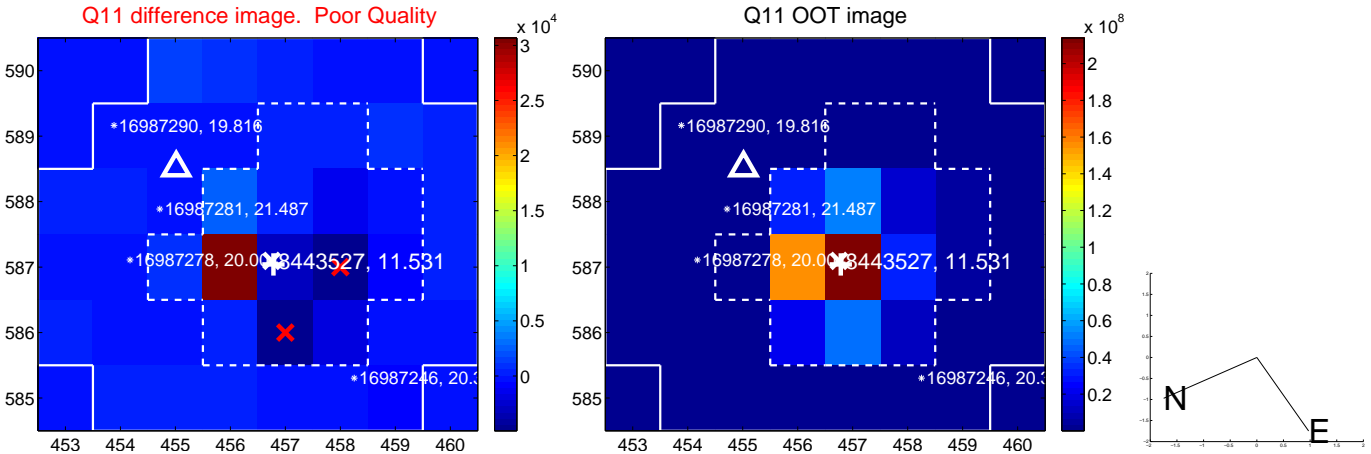
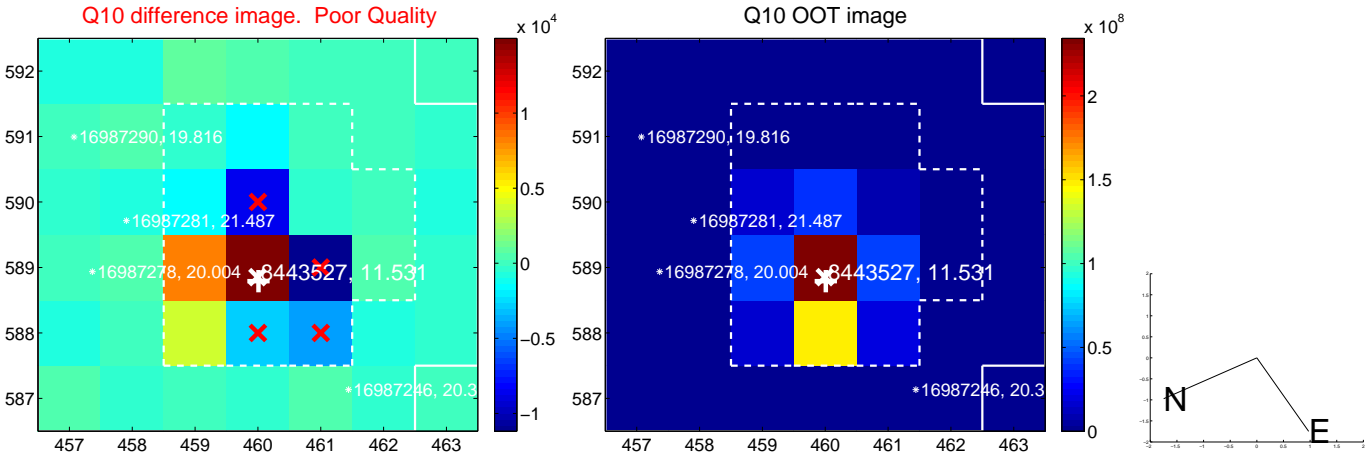
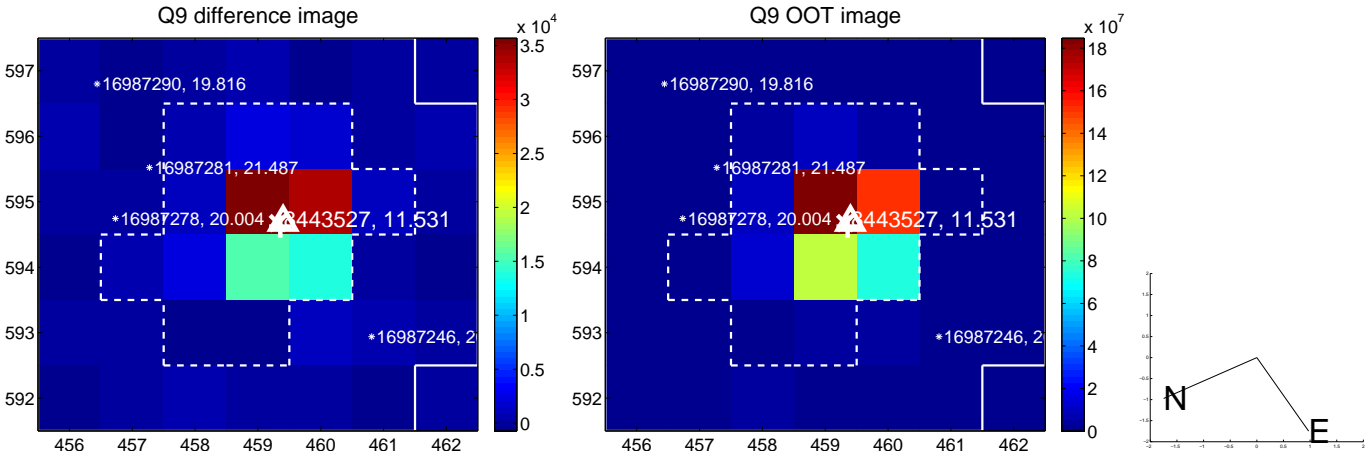
white \times : KIC target position; +: OOT centroid; \triangle : difference centroid. red \times : large negative pixel value.



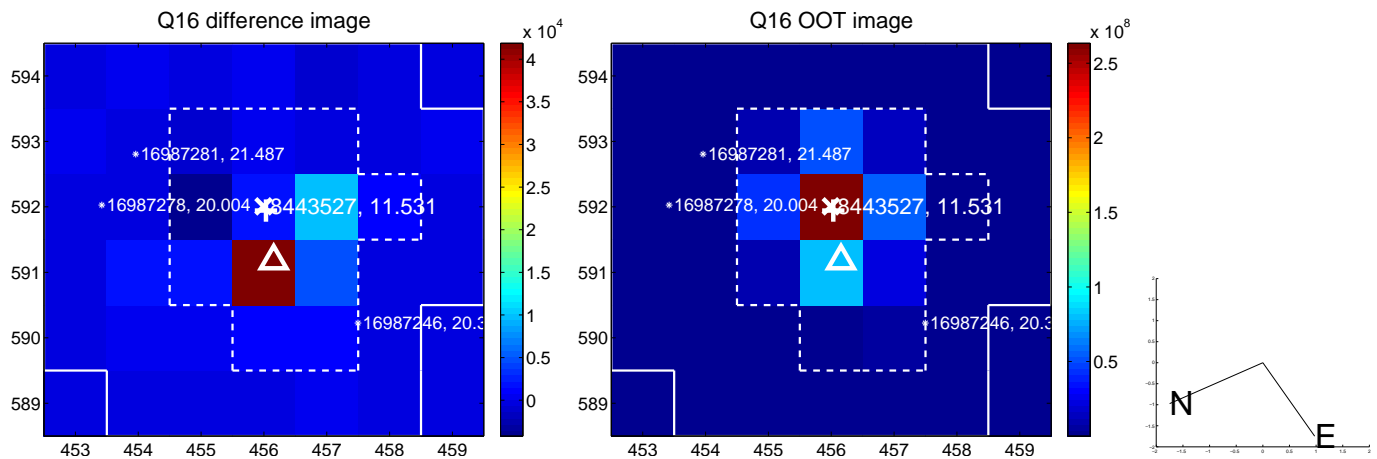
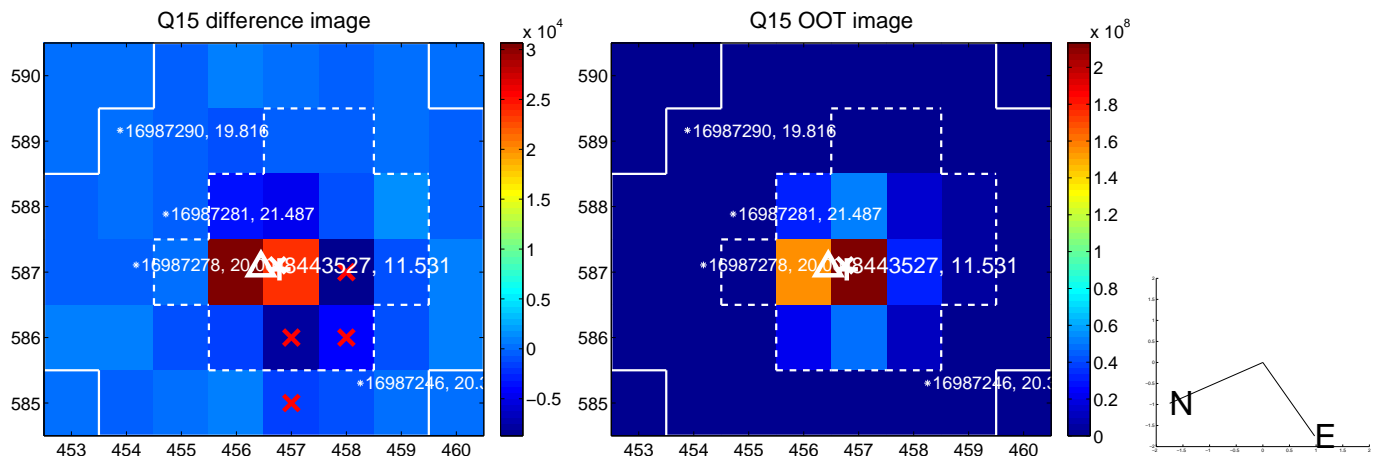
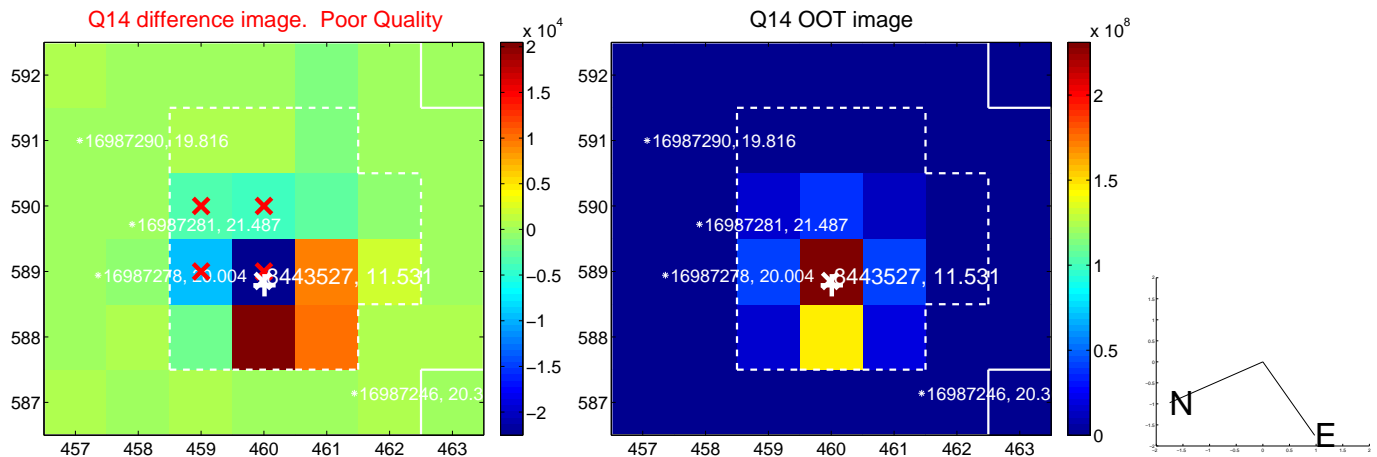
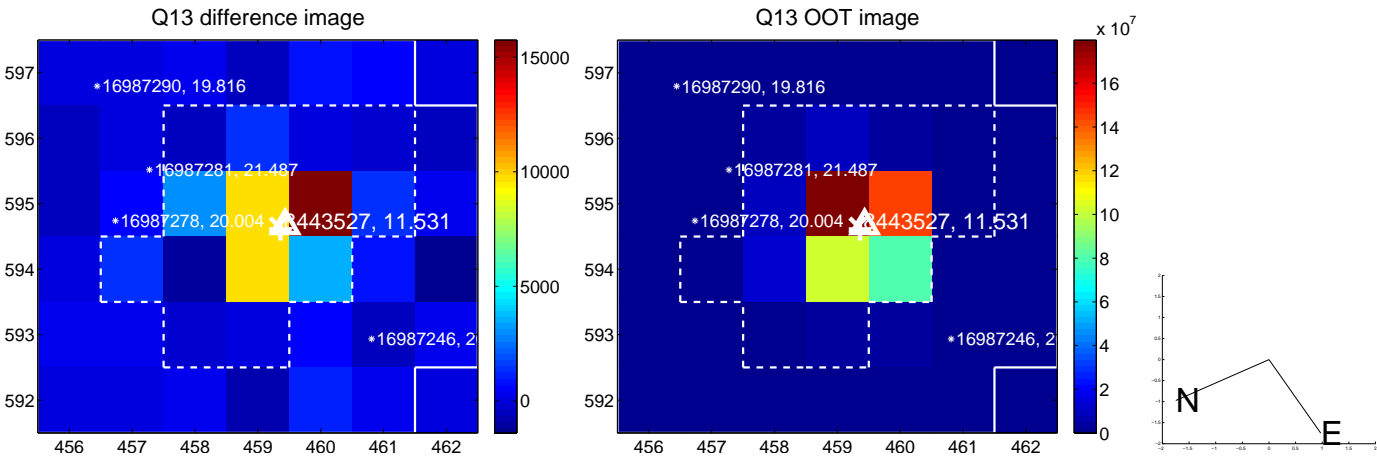
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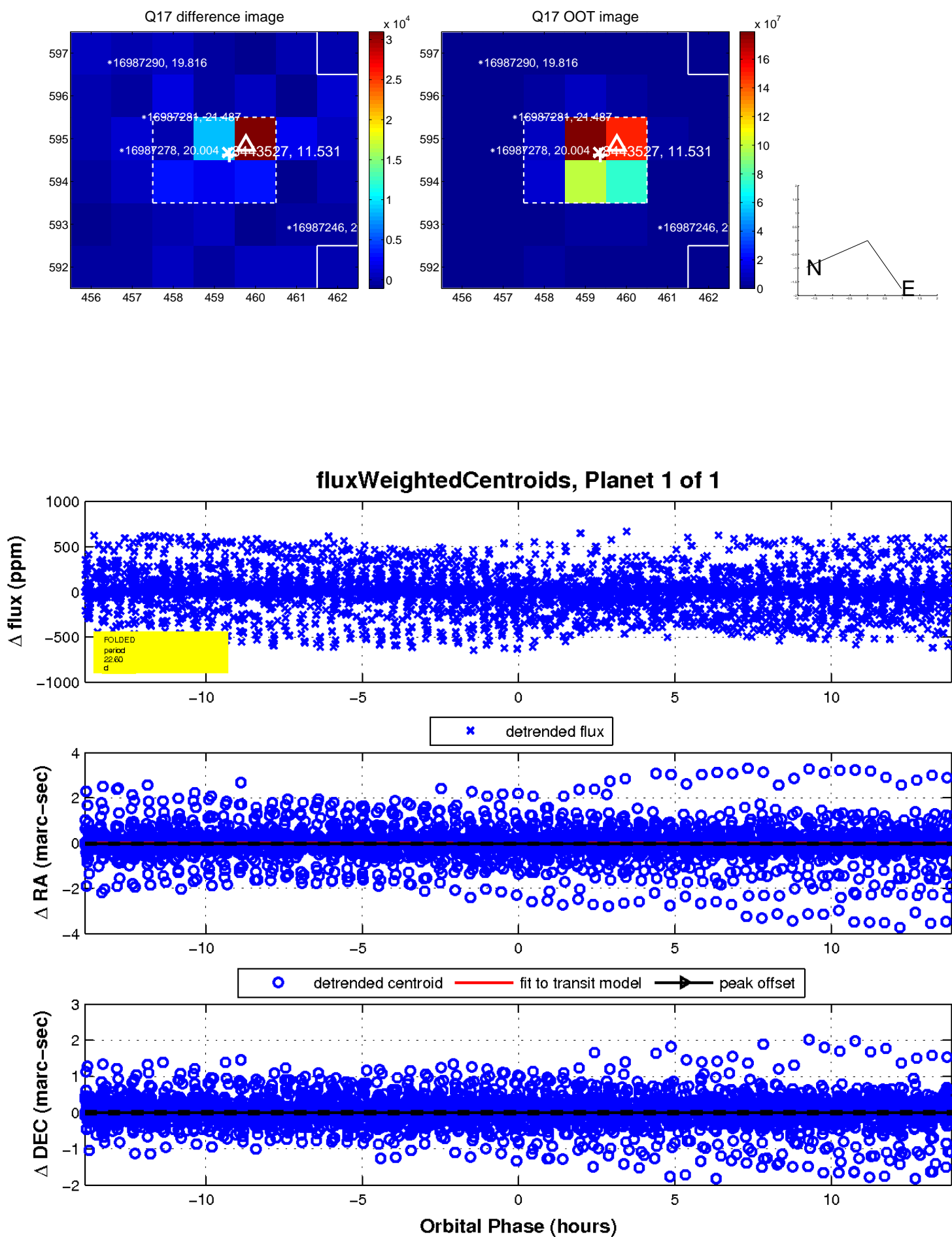
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UKIRT Image

Declination

