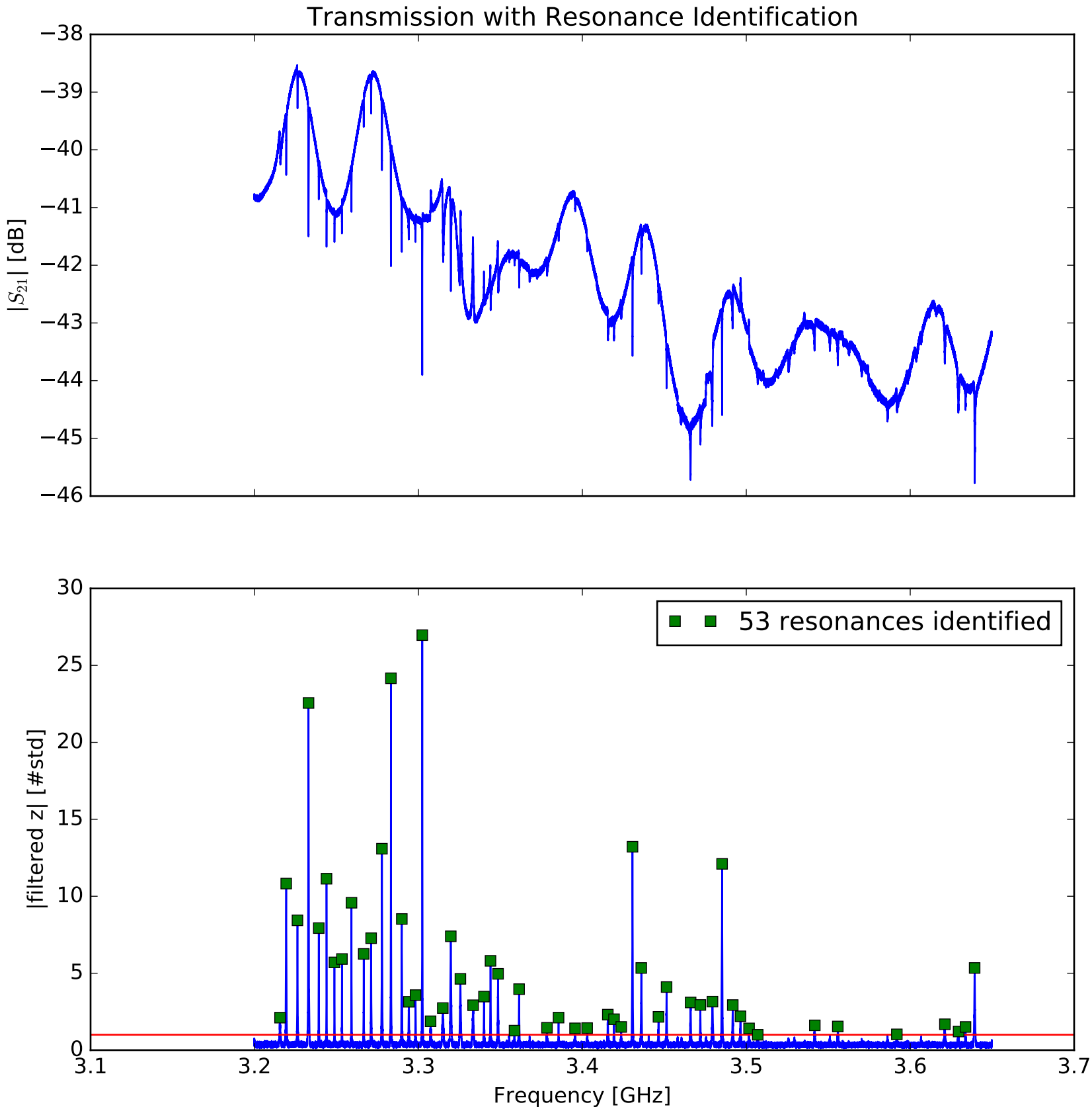
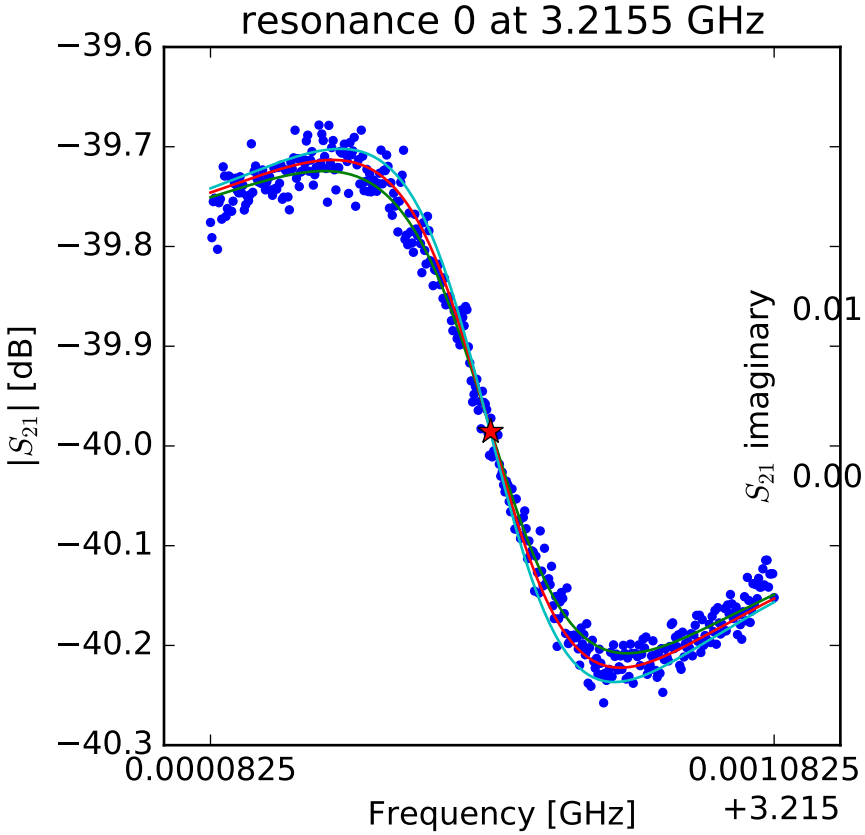
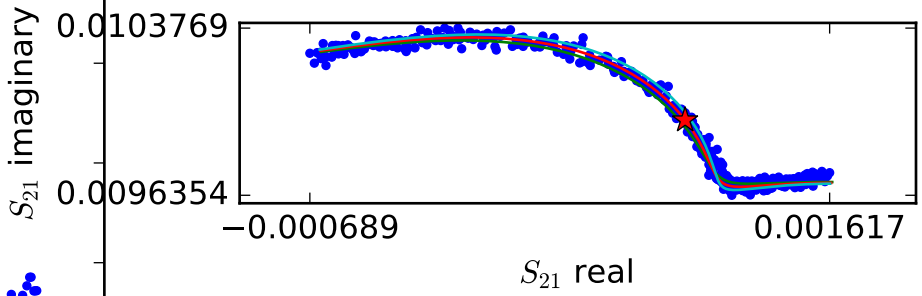
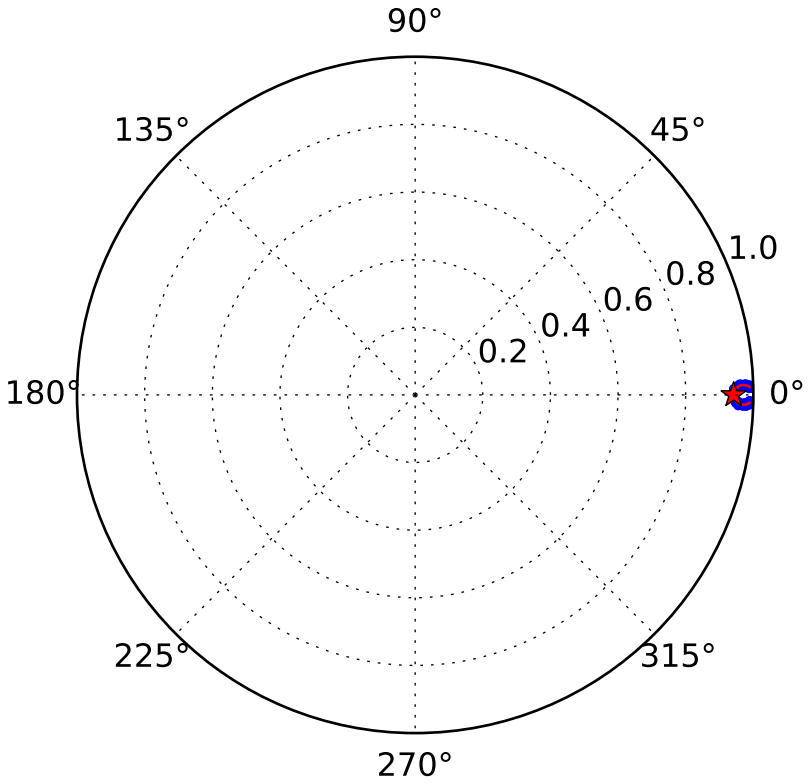
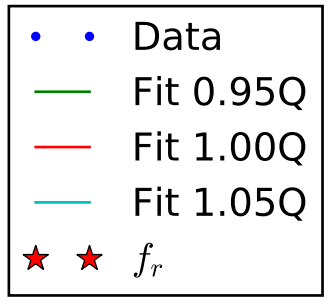

Transmission with Resonance Identification
$|S_{21}|$ [dB]
−38
−39
−40
−41
−42
−43
−44
−45
−46
|filtered z| [#std]
30
25
20
15
10
5
0
53 resonances identified
3.1
3.2
3.3
3.4
3.5
3.6
3.7
Frequency [GHz]



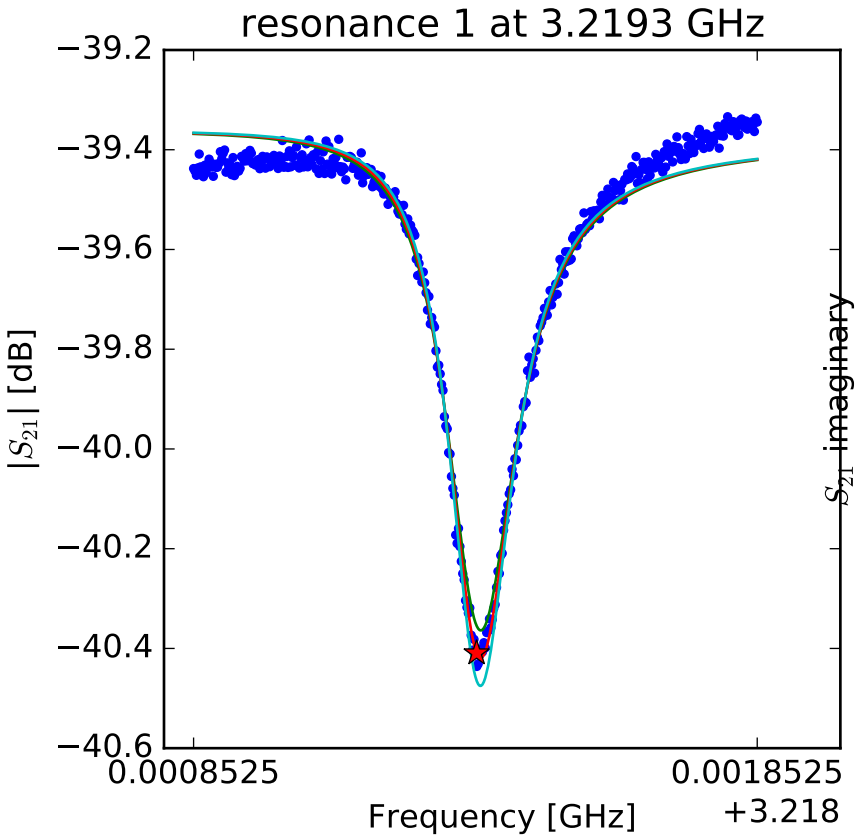


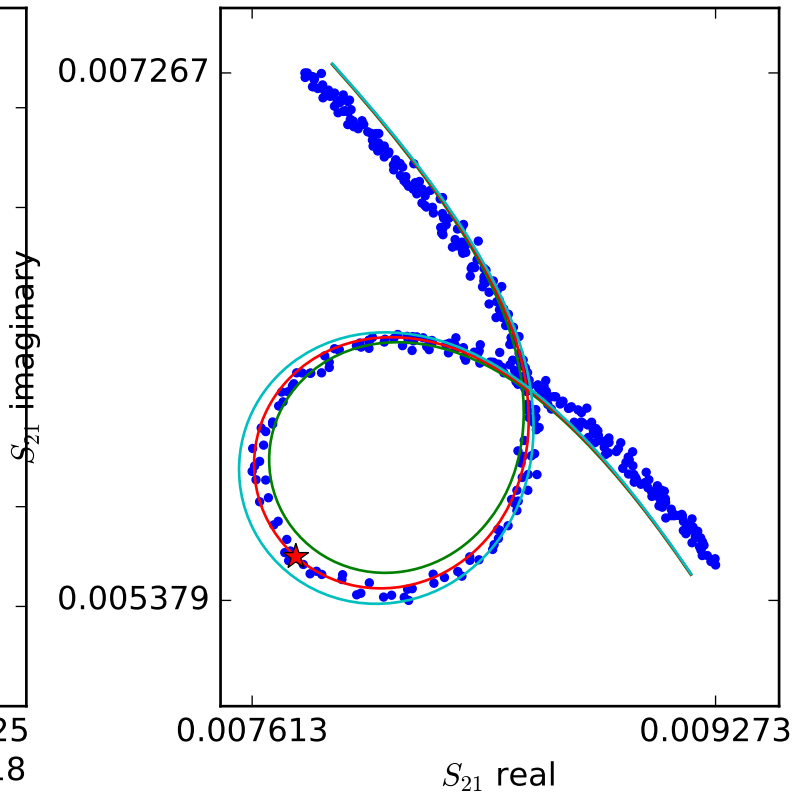


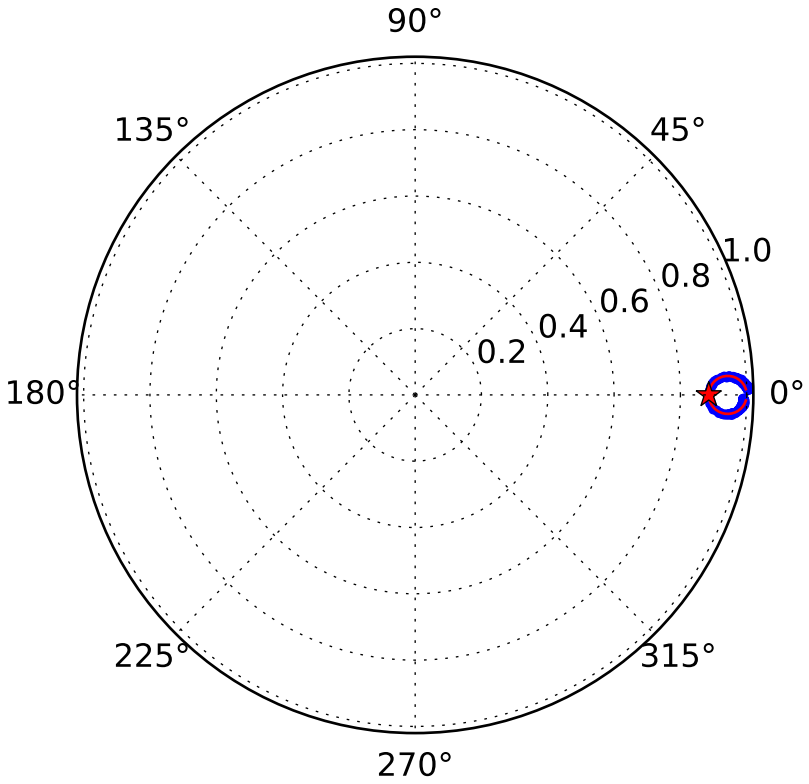


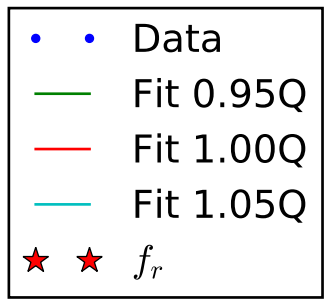
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.21557950101
Q_r = 6335.63353036
Q_c = 108485.884796
a = (0.00990866168078+0.00182278338353j)
ϕ_0 = 1.44235994456
τ = 37.251515414



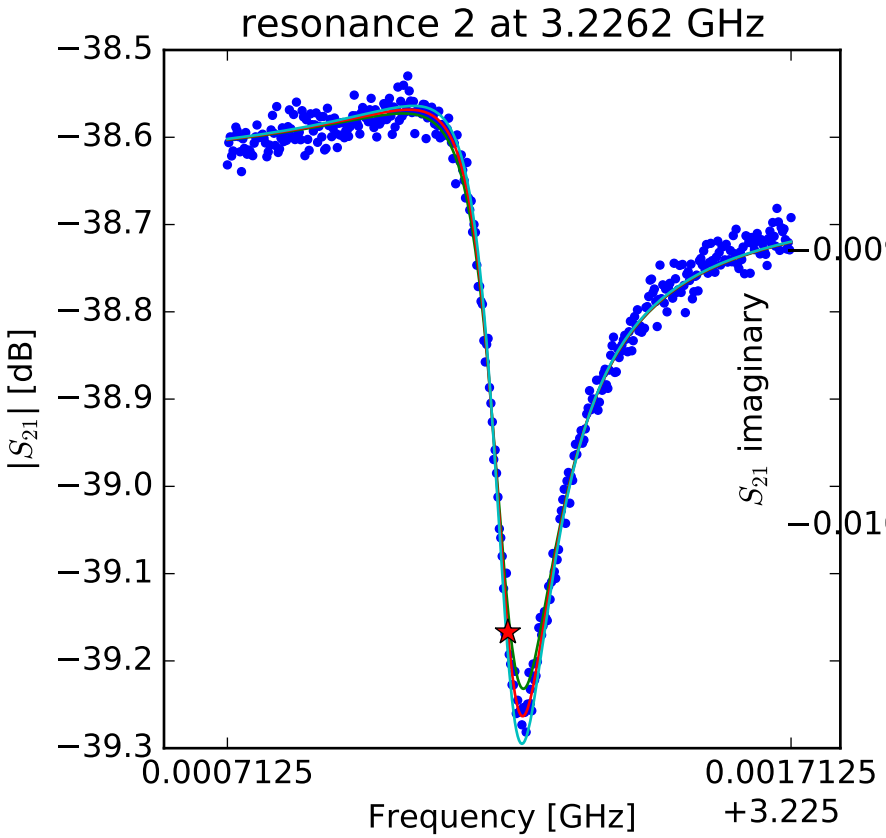


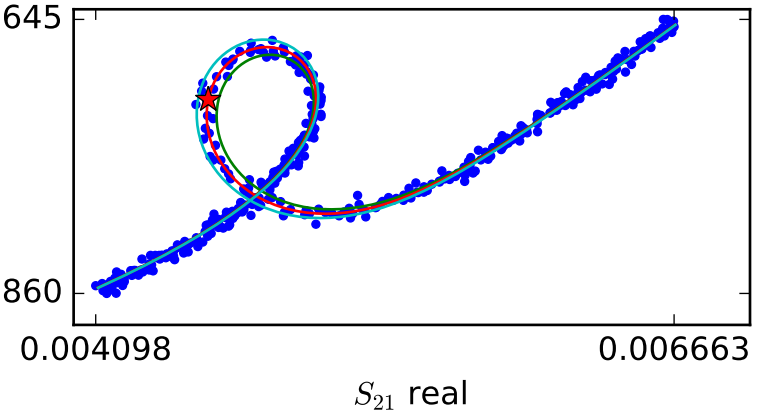


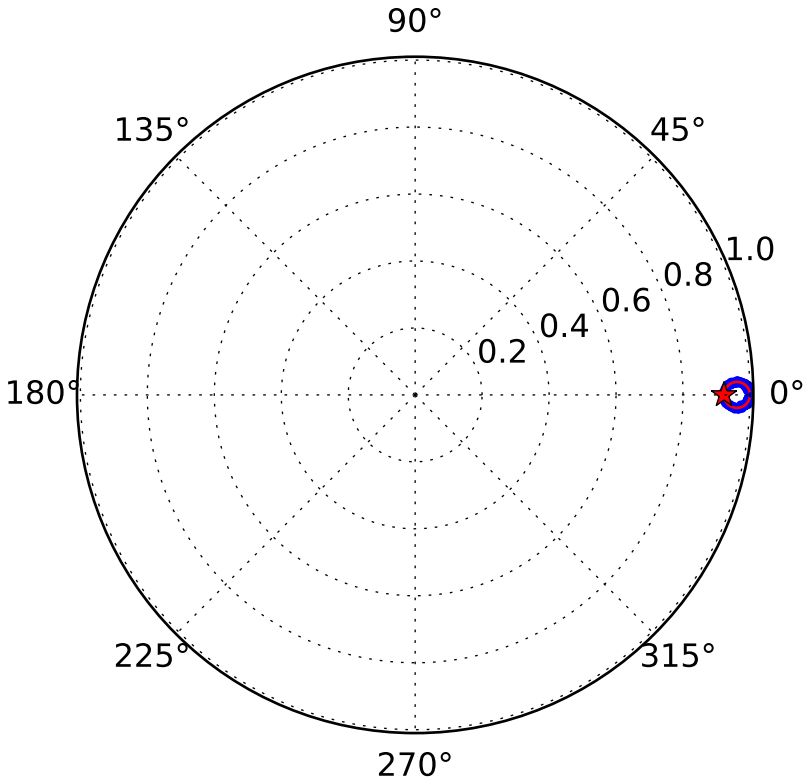


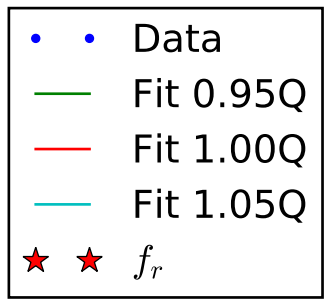
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.21935459936
Q_r = 20943.8137412
Q_c = 182811.462233
a = (-0.00805805237044+0.00711584380631j)
ϕ_0 = 0.174495625488
τ = 38.6048759452



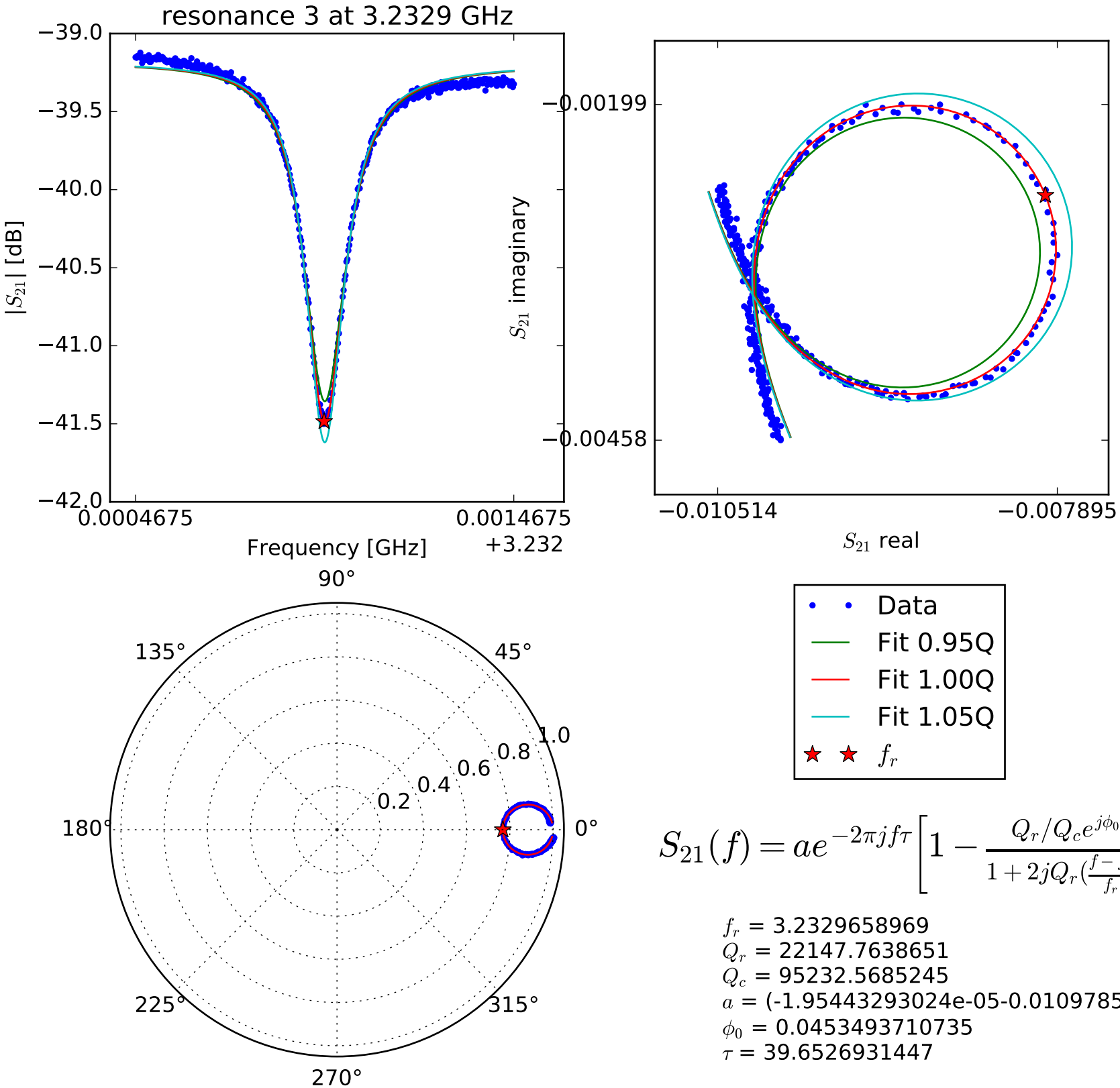






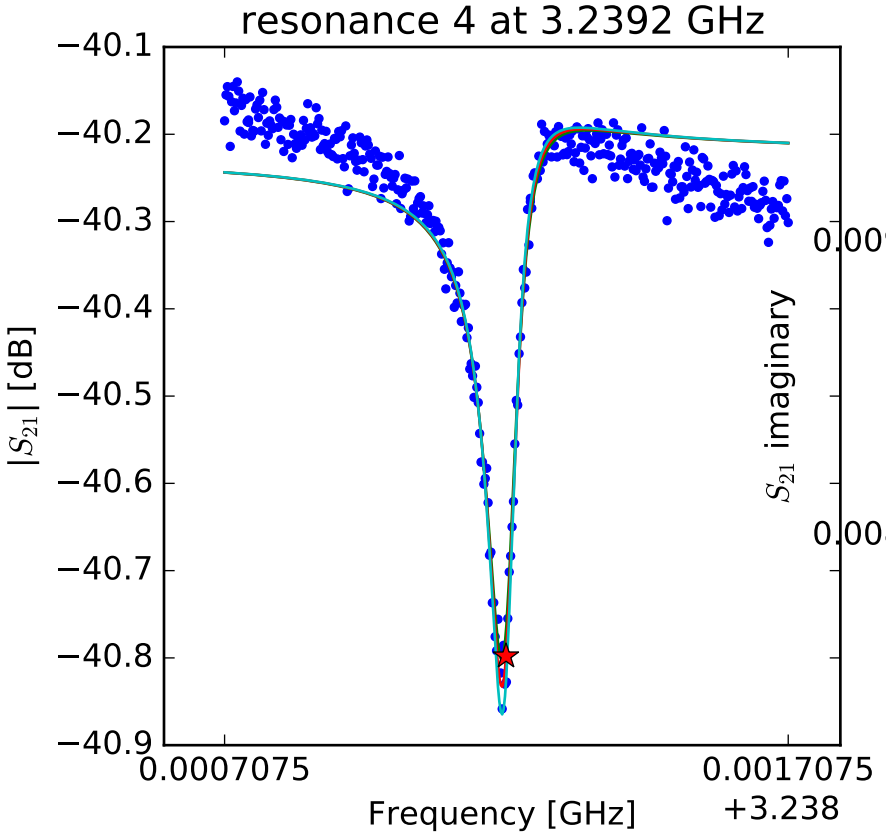
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

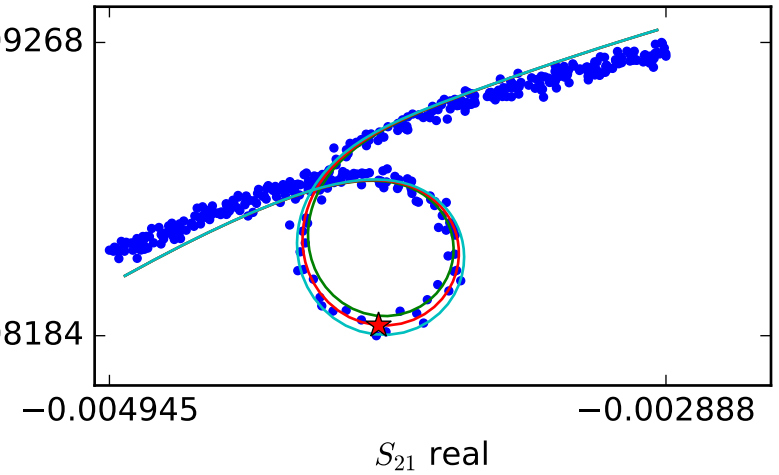
f_r = 3.22621008404
Q_r = 23719.9559784
Q_c = 305417.937303
a = (0.00832772314559-0.00818754486748j)
ϕ_0 = 0.709846635797
τ = 40.9301372877

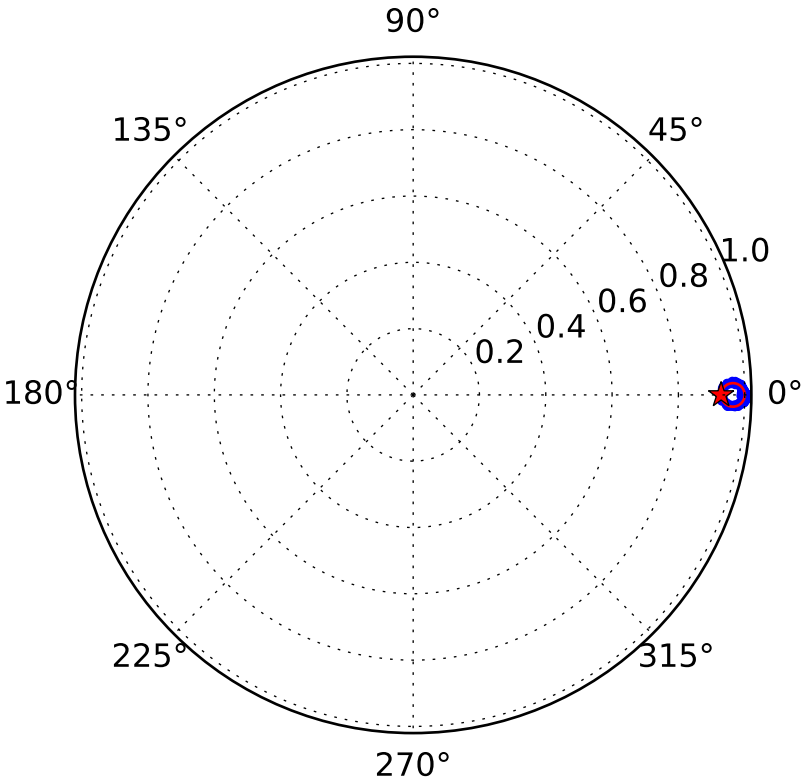


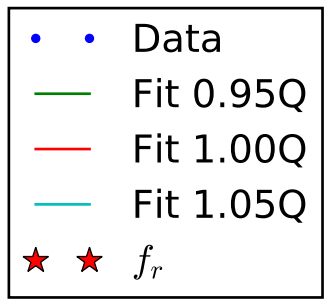
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.2329658969
Q_r = 22147.7638651
Q_c = 95232.5685245
a = (-1.95443293024e-05-0.0109785148716j)
ϕ_0 = 0.0453493710735
τ = 39.6526931447



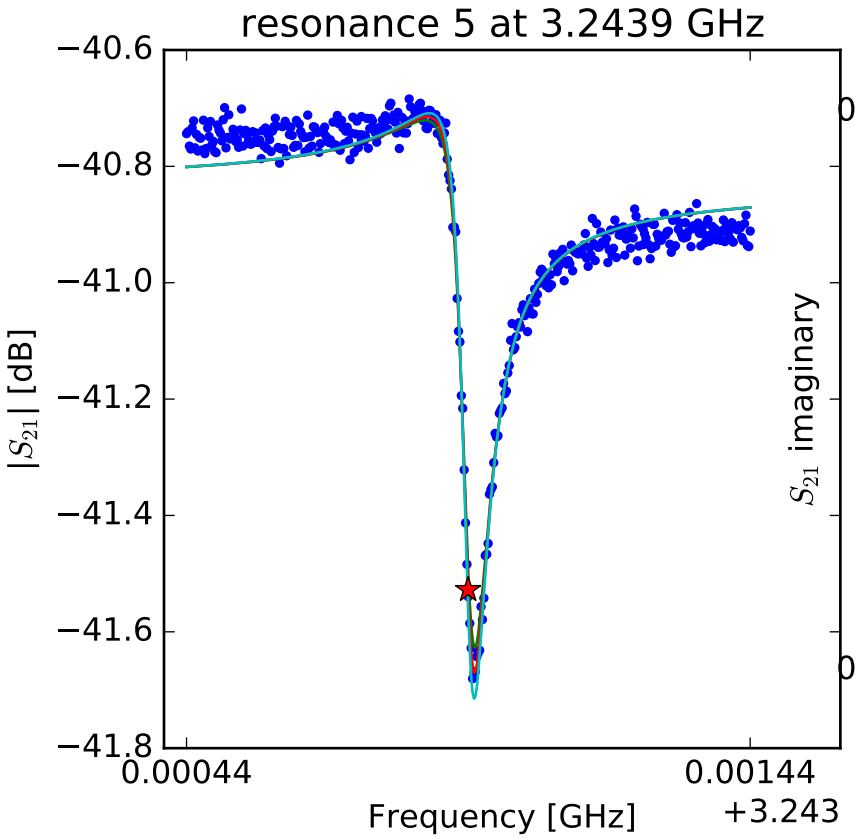


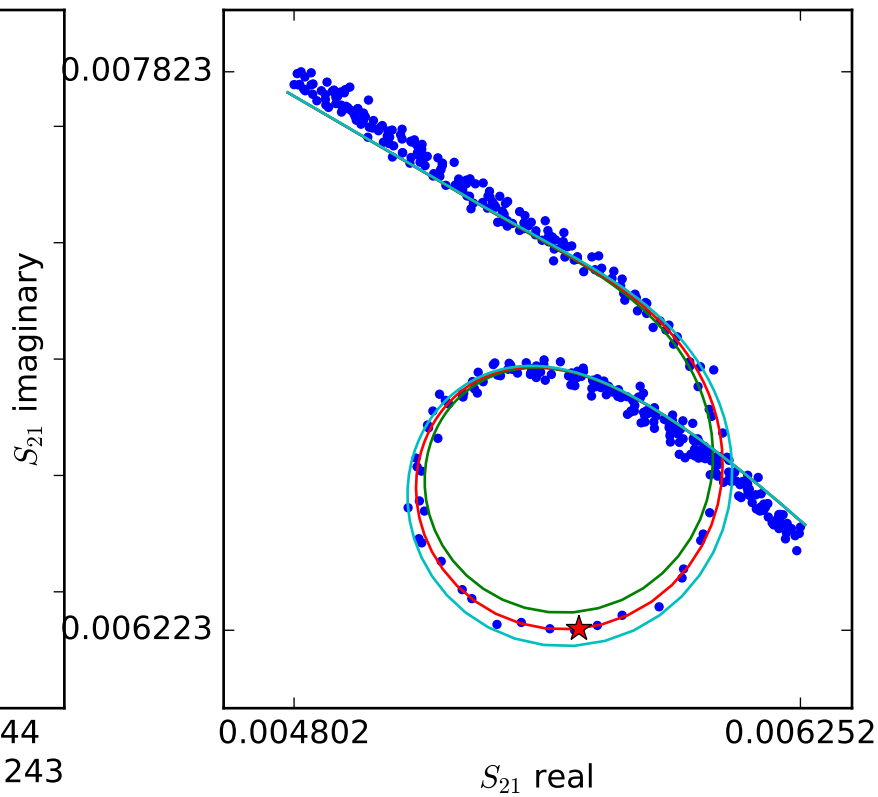


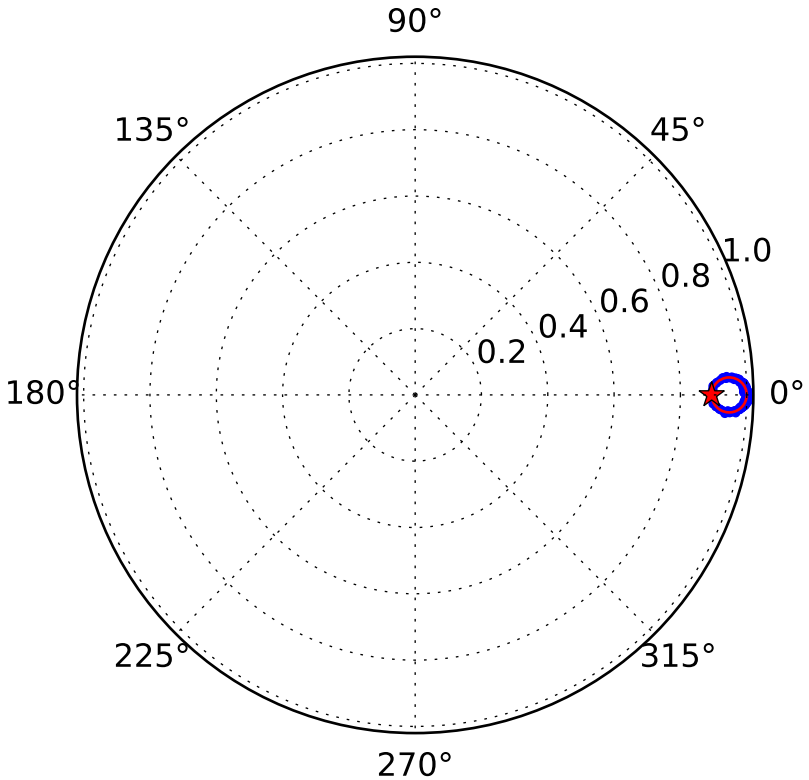


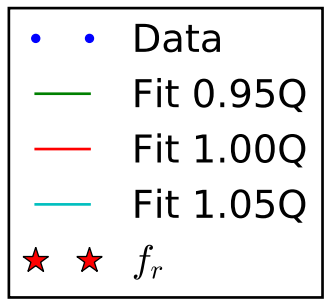
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.23920682337
Q_r = 50789.598876
Q_c = 713258.286942
a = (-0.00783502460752+0.00579404900603j)
ϕ_0 = -0.441820269209
τ = 36.7628736761



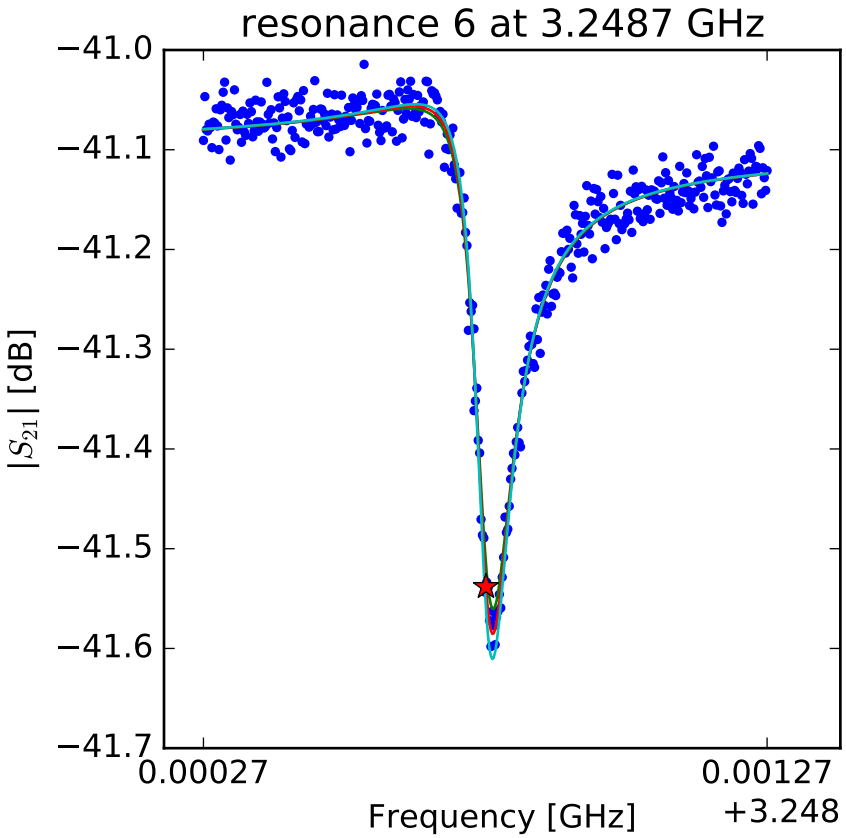


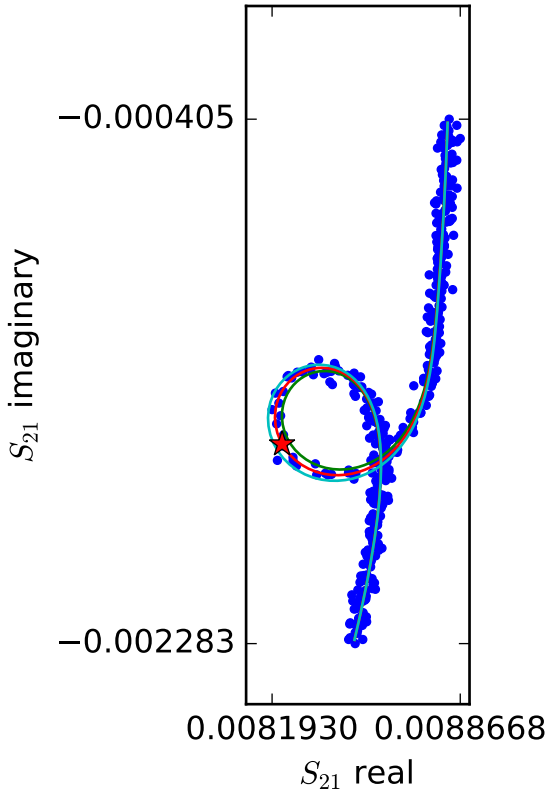


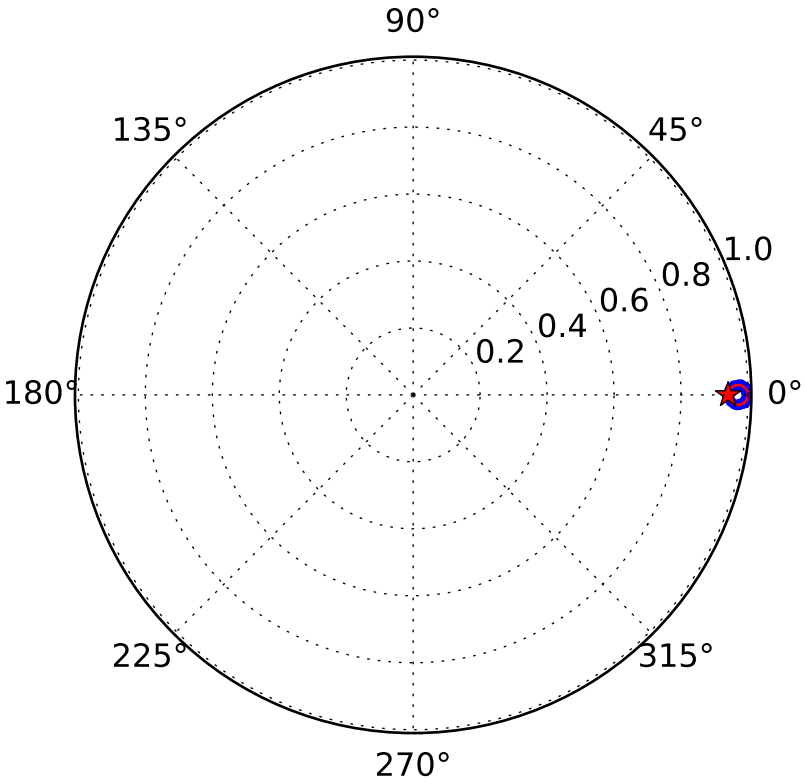


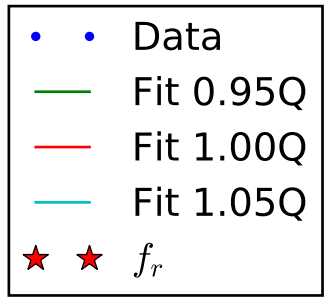
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.24393954706
Q_r = 56204.8919963
Q_c = 531679.439461
a = (0.000190263372822-0.00908292381494j)
ϕ_0 = 0.720530478068
τ = 35.3299149626



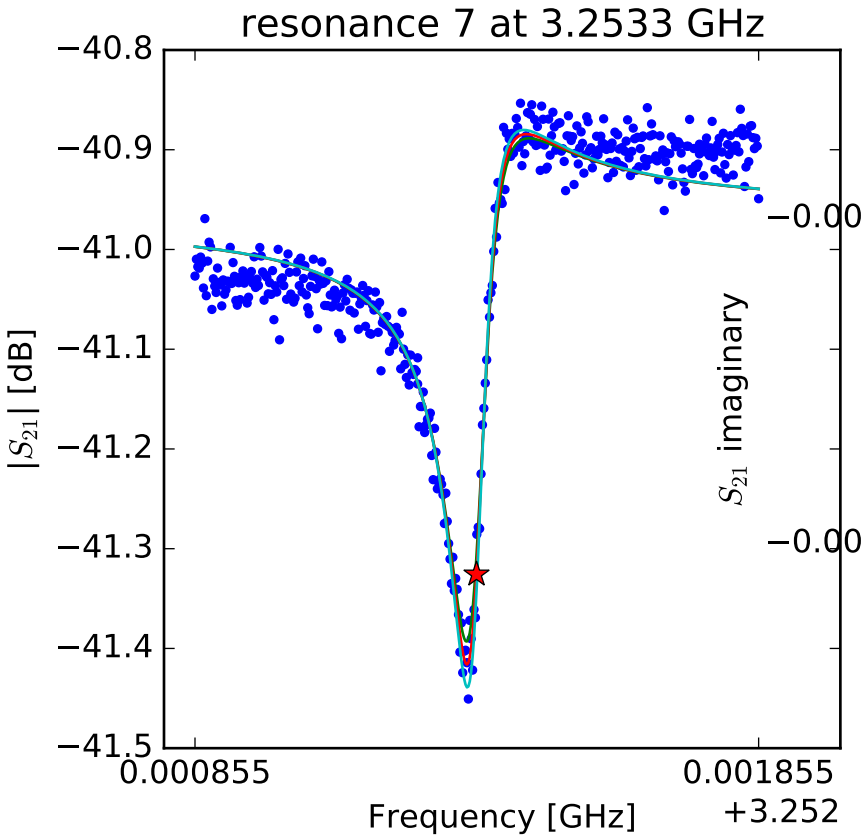


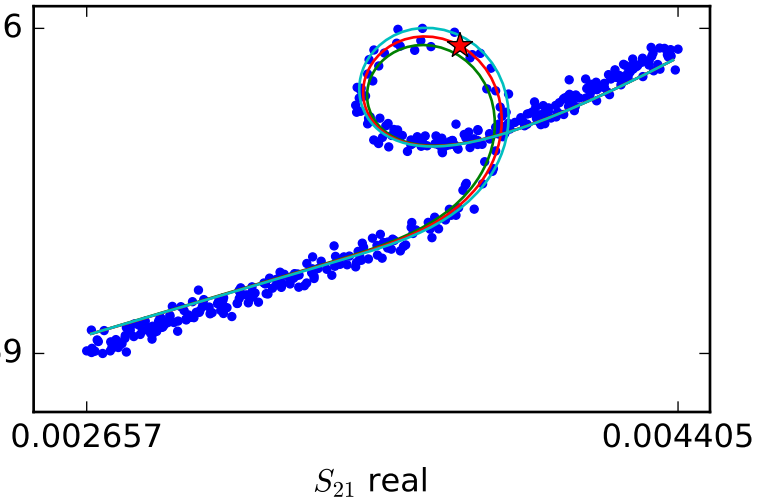


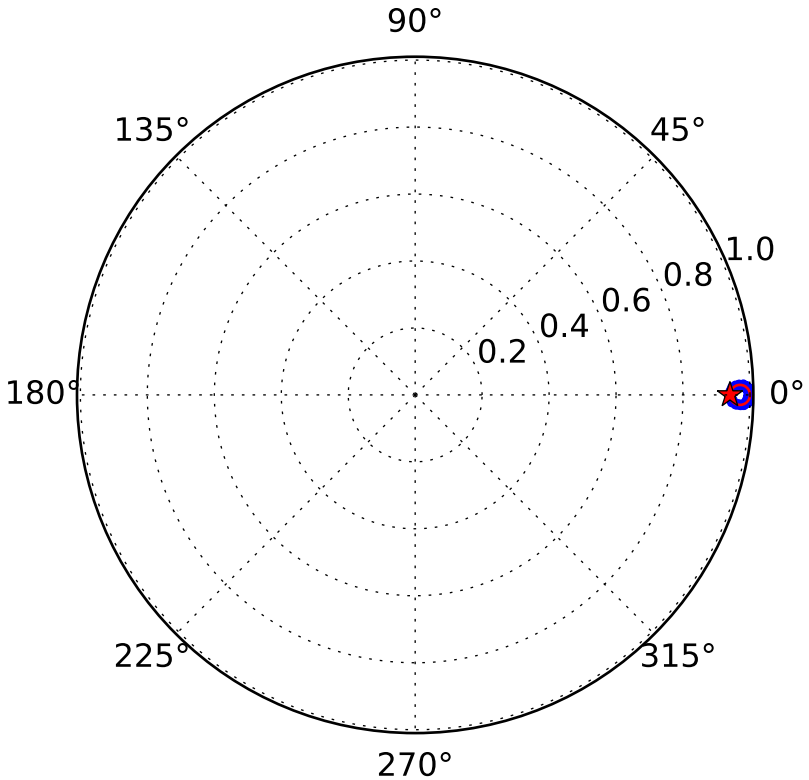


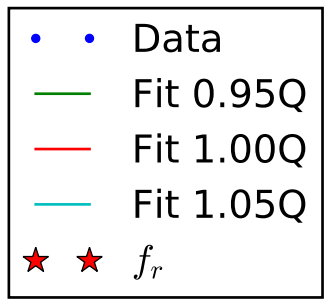
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.24877123863
Q_r = 40719.7635744
Q_c = 685682.417393
a = (-0.0048376611749-0.00736477411478j)
ϕ_0 = 0.574556387893
τ = 35.3001394983



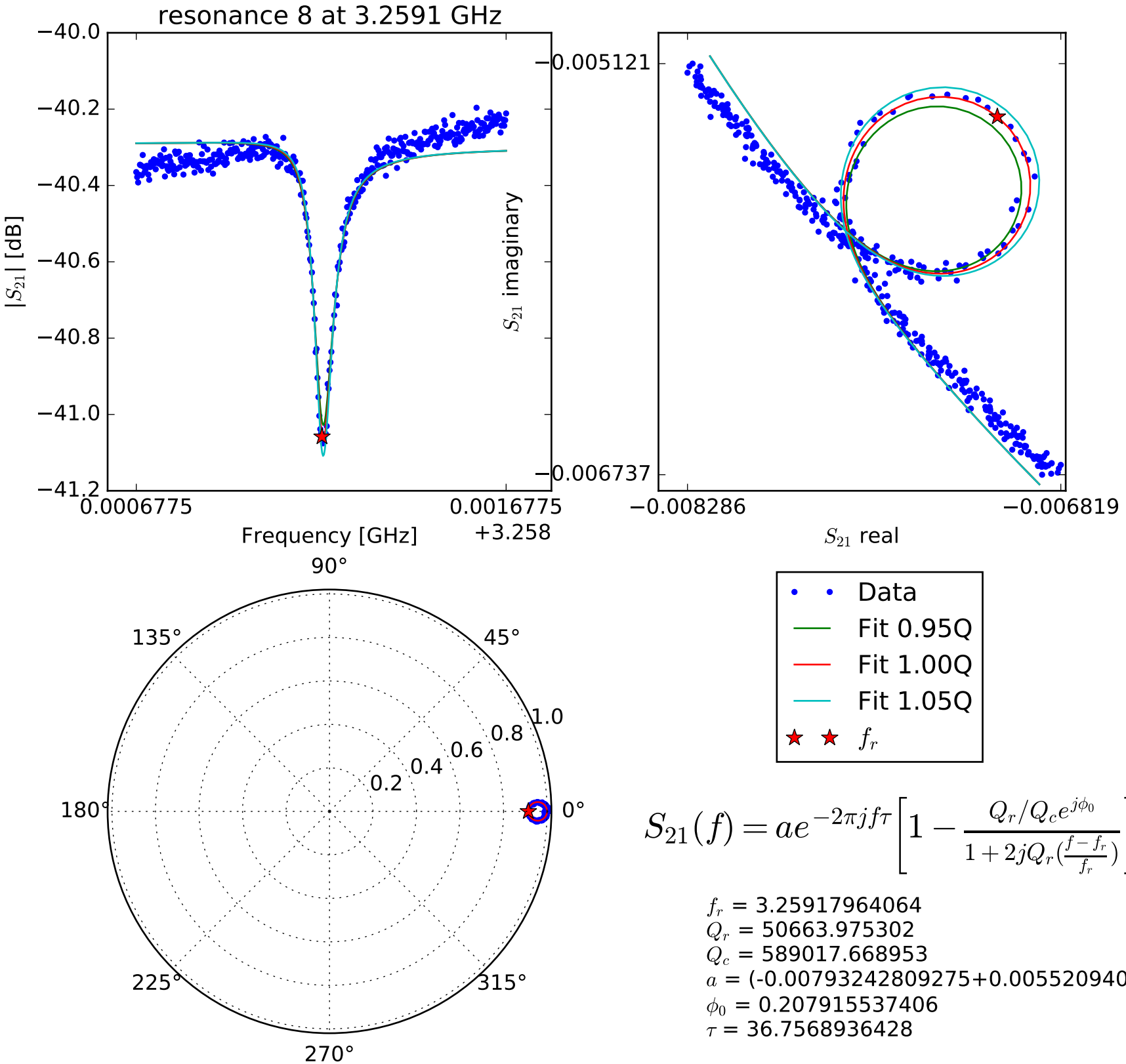






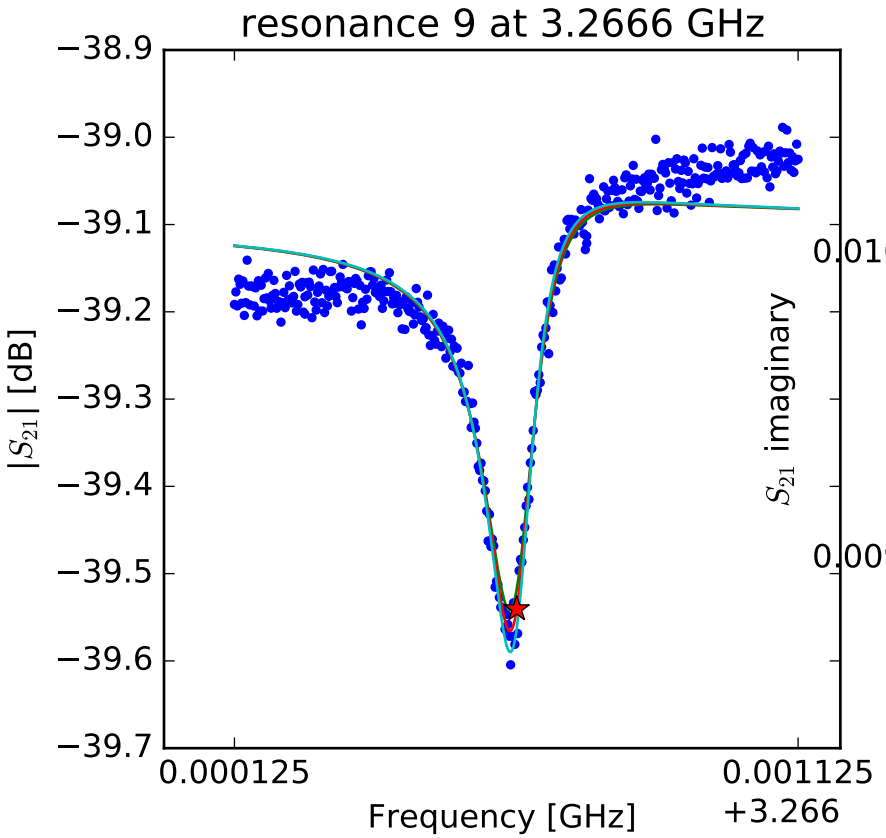
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

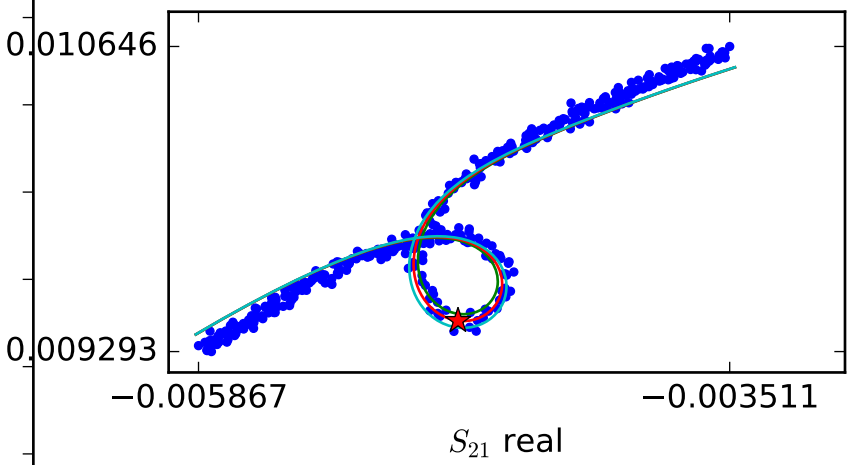
f_r = 3.25335444776
Q_r = 41948.6229318
Q_c = 699663.825736
a = (-0.00126829829949+0.00885710410005j)
ϕ_0 = -0.805471390242
τ = 34.8740491606

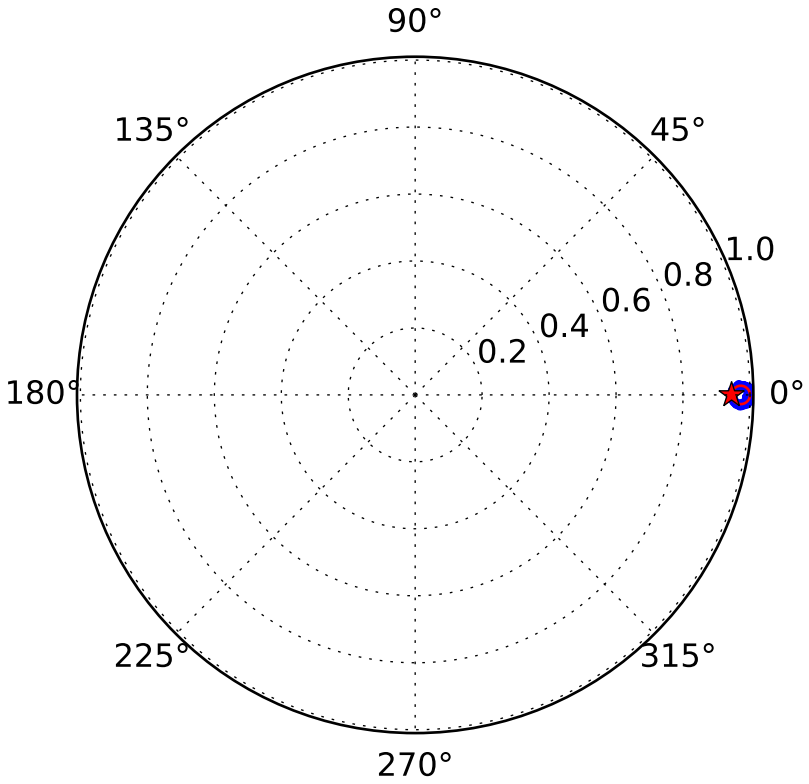


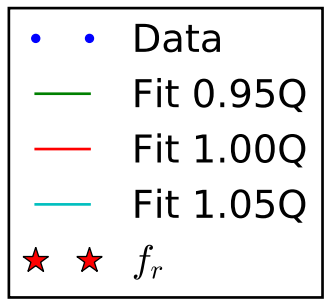
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.25917964064
Q_r = 50663.975302
Q_c = 589017.668953
a = (-0.00793242809275+0.00552094033316j)
ϕ_0 = 0.207915537406
τ = 36.7568936428



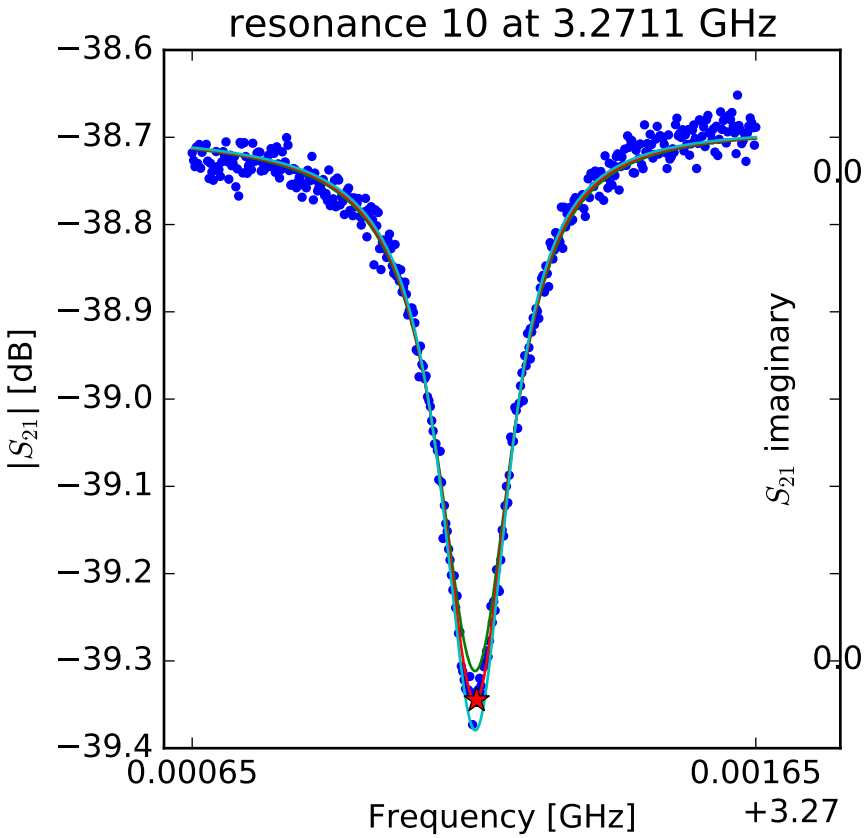


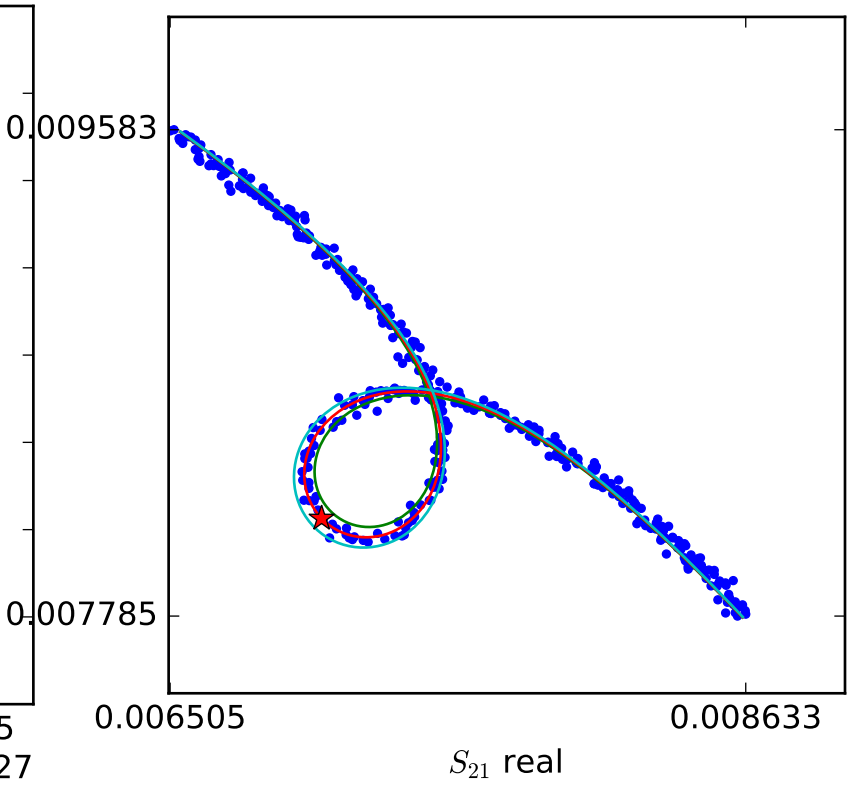


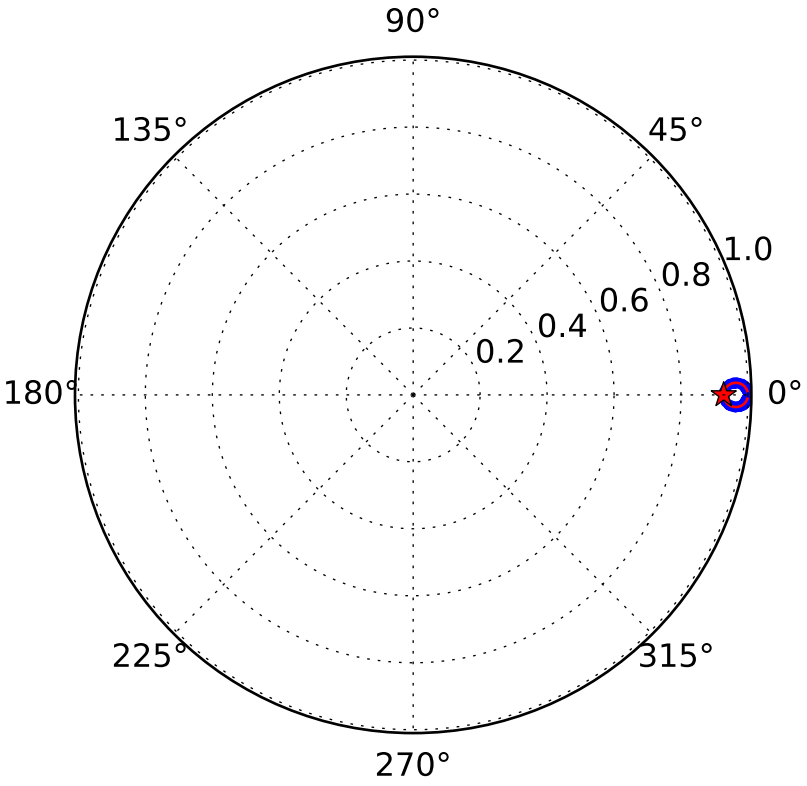


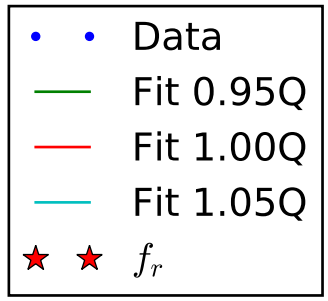
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.26662584162
Q_r = 30678.7681447
Q_c = 557354.370431
a = (0.00351445659011+0.0105224376134j)
ϕ_0 = -0.435172607328
τ = 40.0654296642



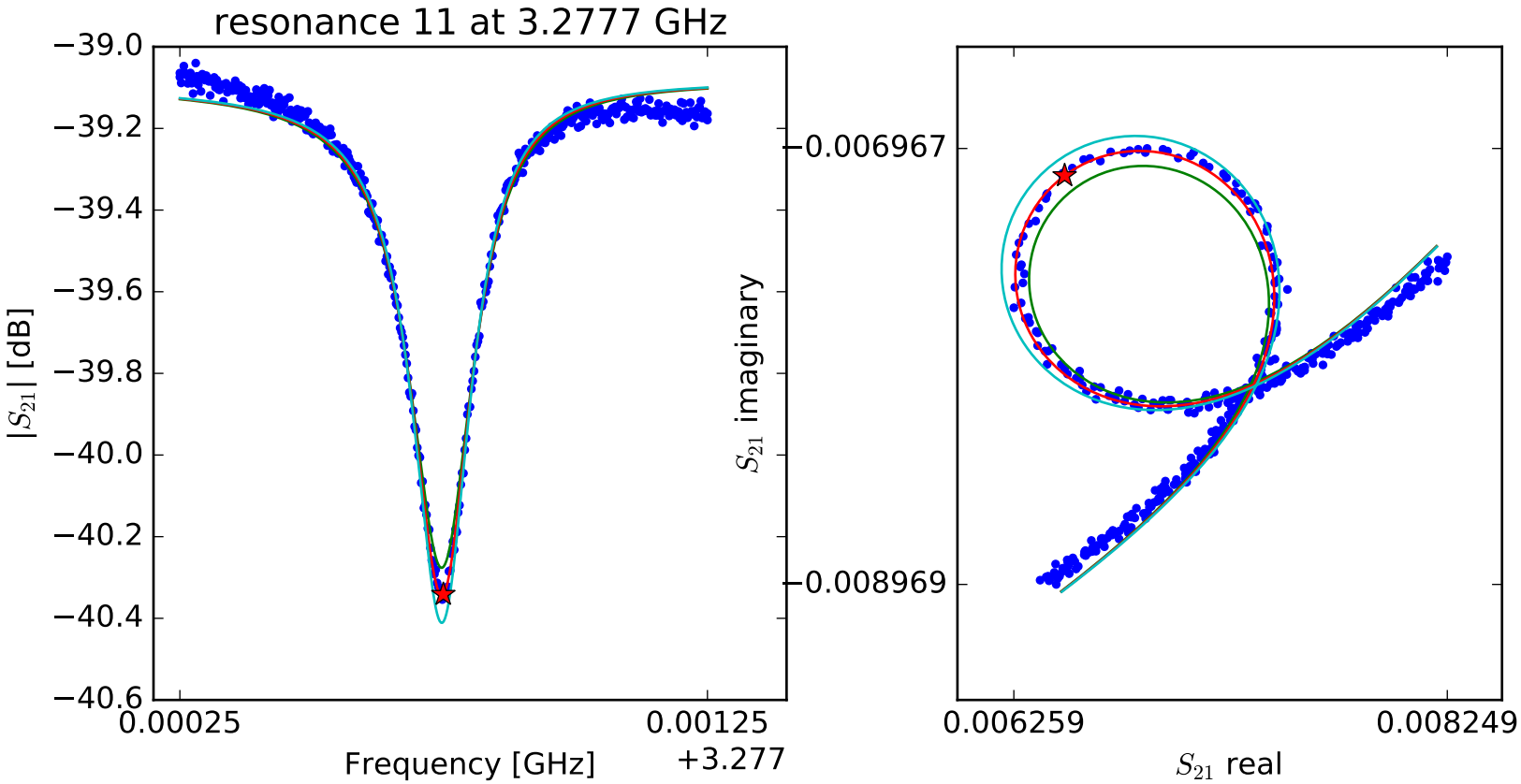


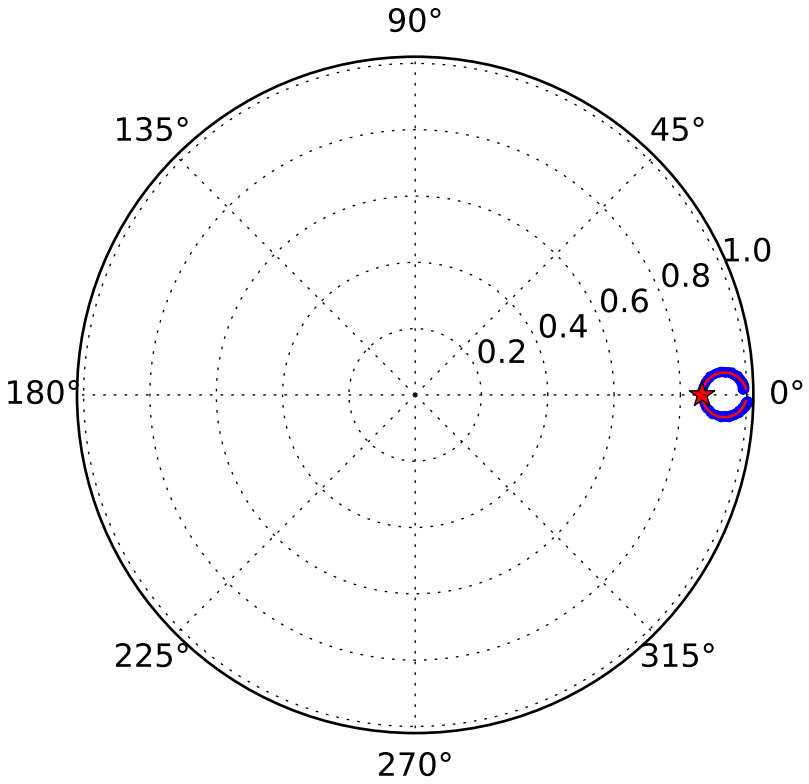


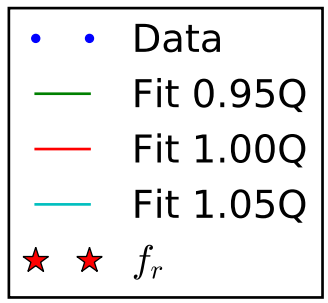


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.27115470794
Q_r = 20678.4074327
Q_c = 284875.809395
a = (0.000958693061992+0.0115858710128j)
ϕ_0 = -0.0642367197201
τ = 41.3008191271

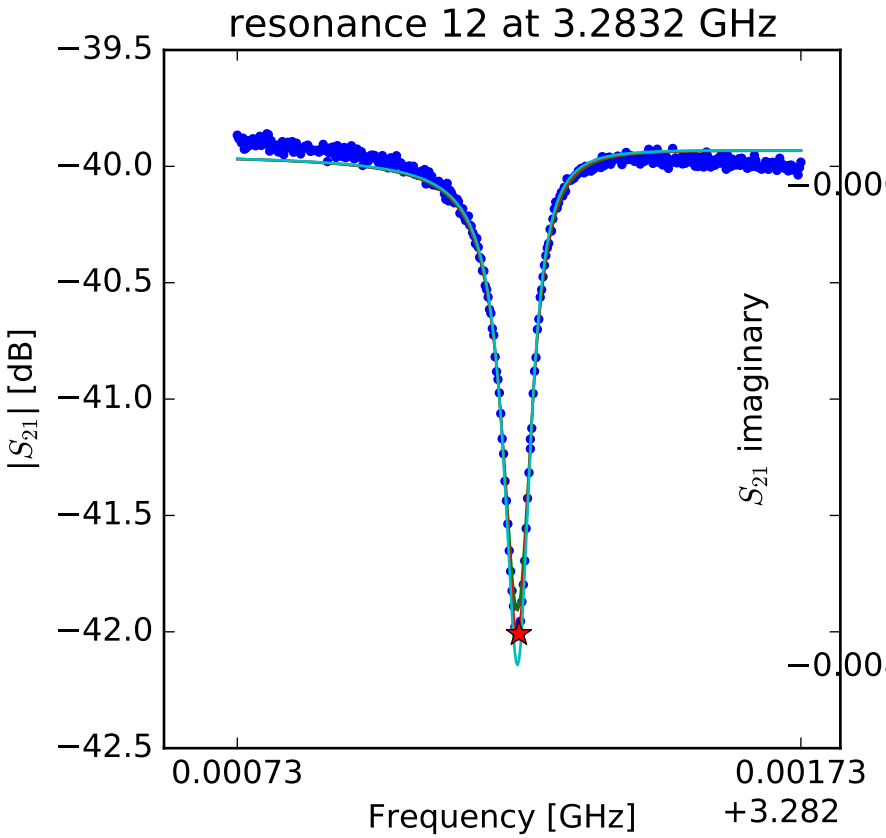


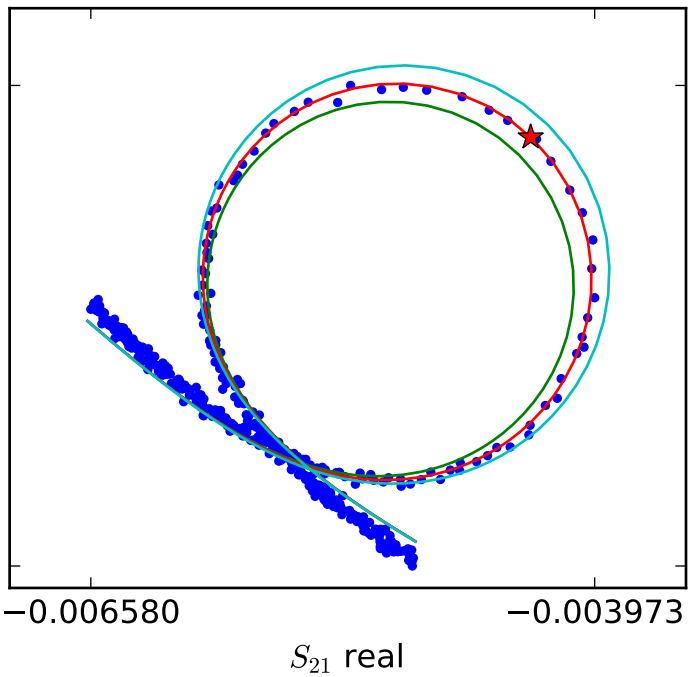


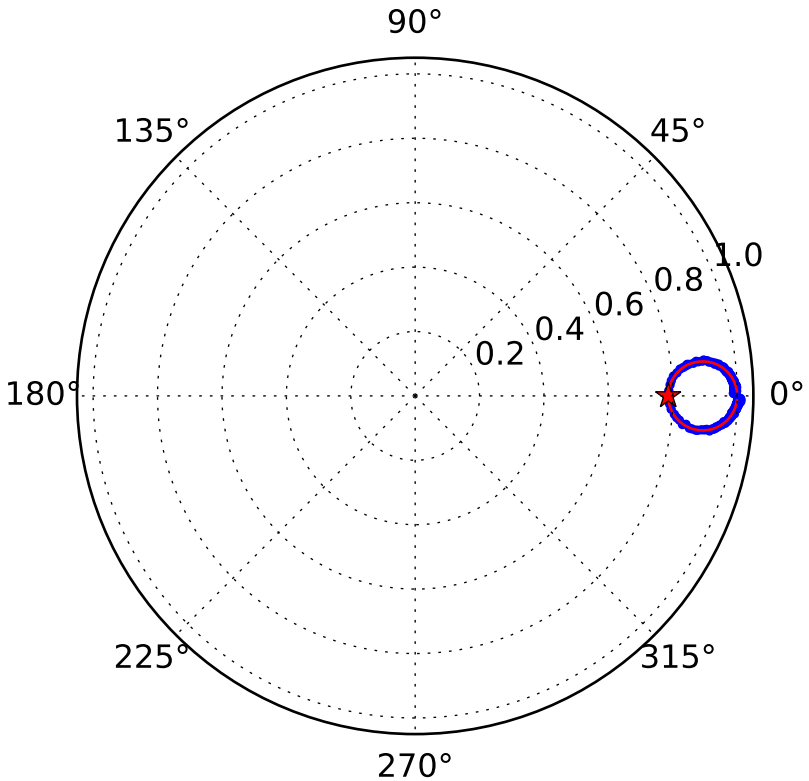


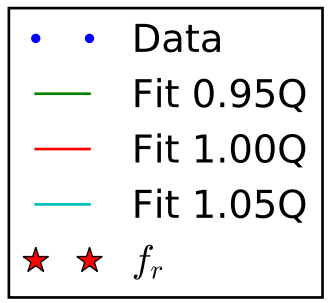
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.27774934569
Q_r = 21656.7099781
Q_c = 160849.2584
a = (0.00813115364189+0.00756343364824j)
ϕ_0 = -0.0750170191204
τ = 40.04367311



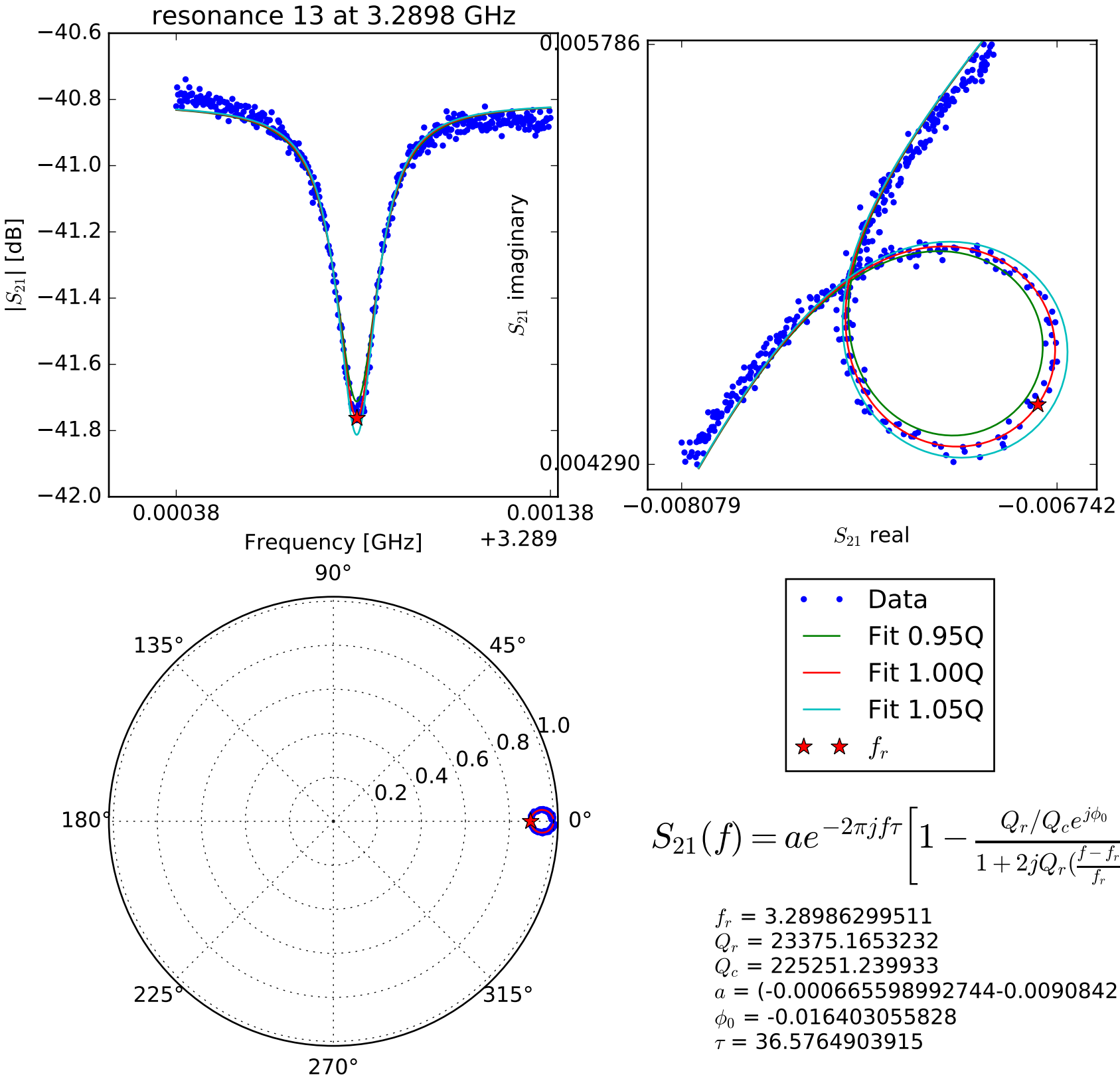






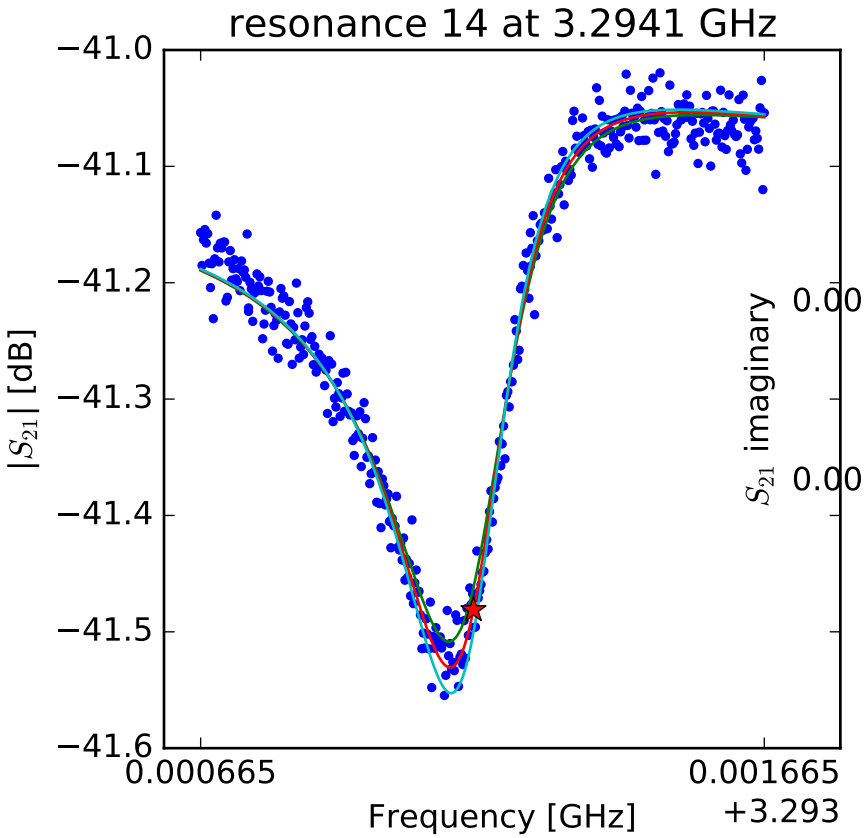
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

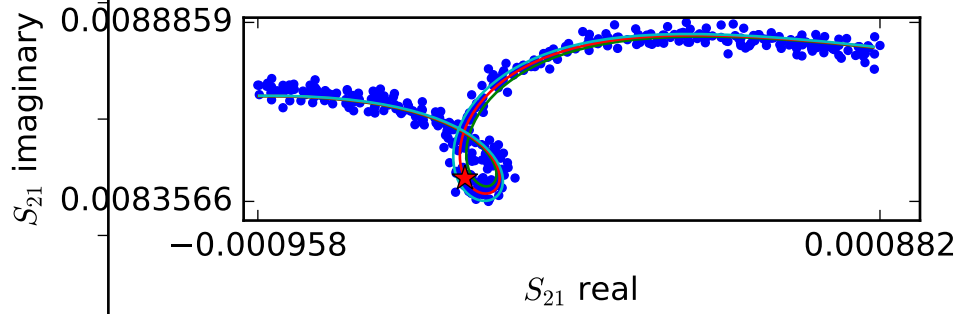
f_r = 3.28322964087
Q_r = 48612.3301619
Q_c = 226743.348493
a = (0.0097049657582-0.0026715303453j)
ϕ_0 = -0.142559659713
τ = 36.9467388485

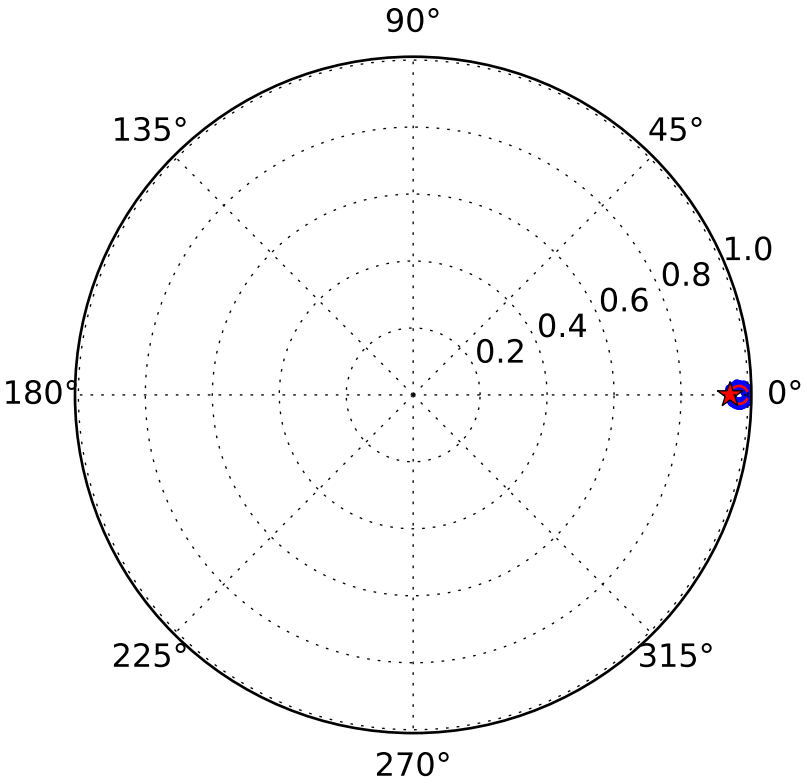


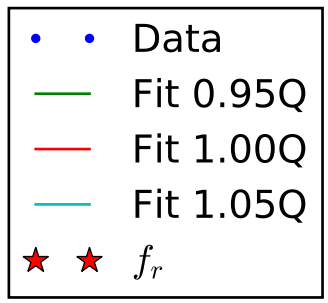
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.28986299511
Q_r = 23375.1653232
Q_c = 225251.239933
a = (-0.000665598992744-0.00908423353411j)
ϕ_0 = -0.016403055828
τ = 36.5764903915



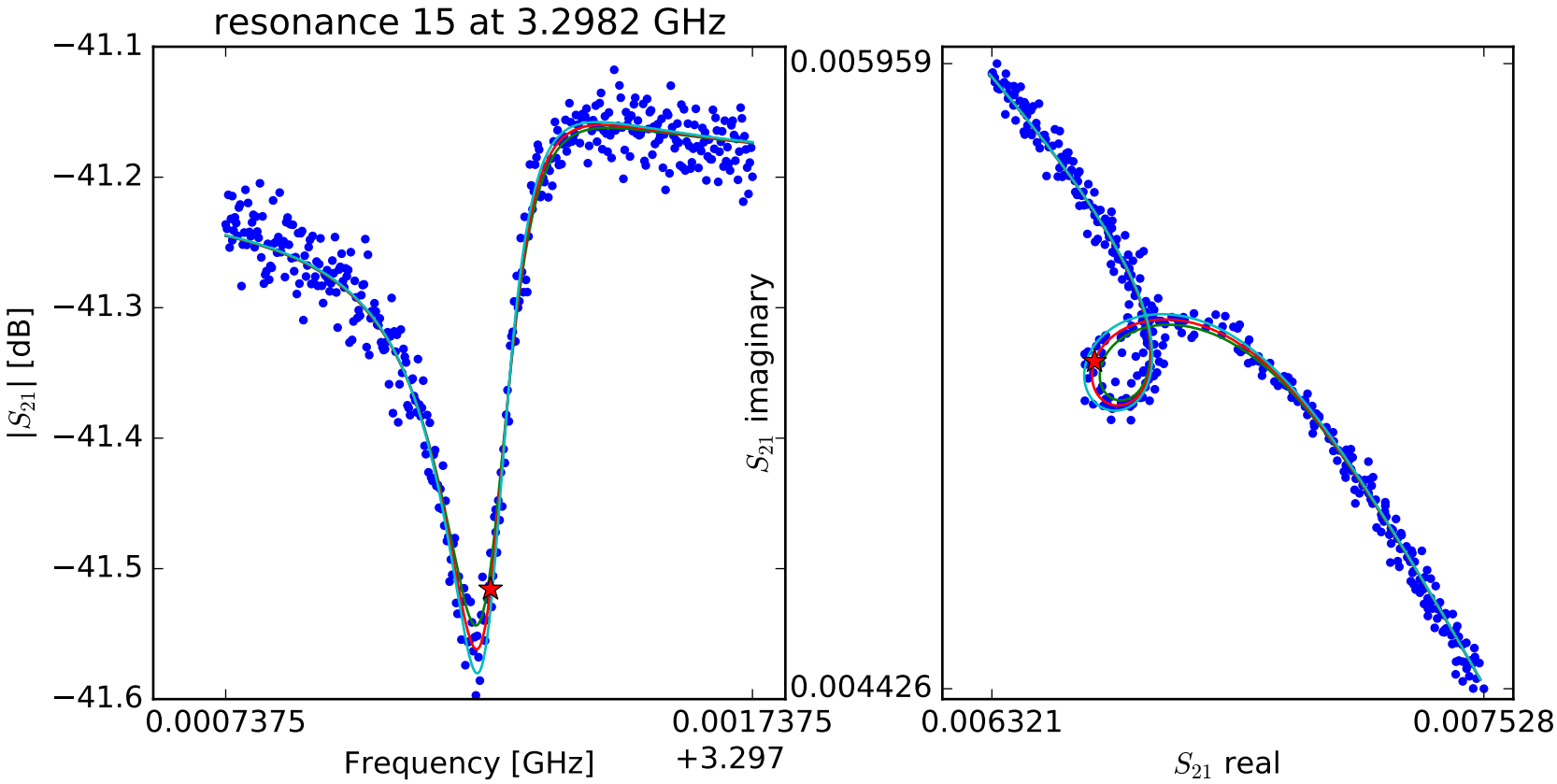


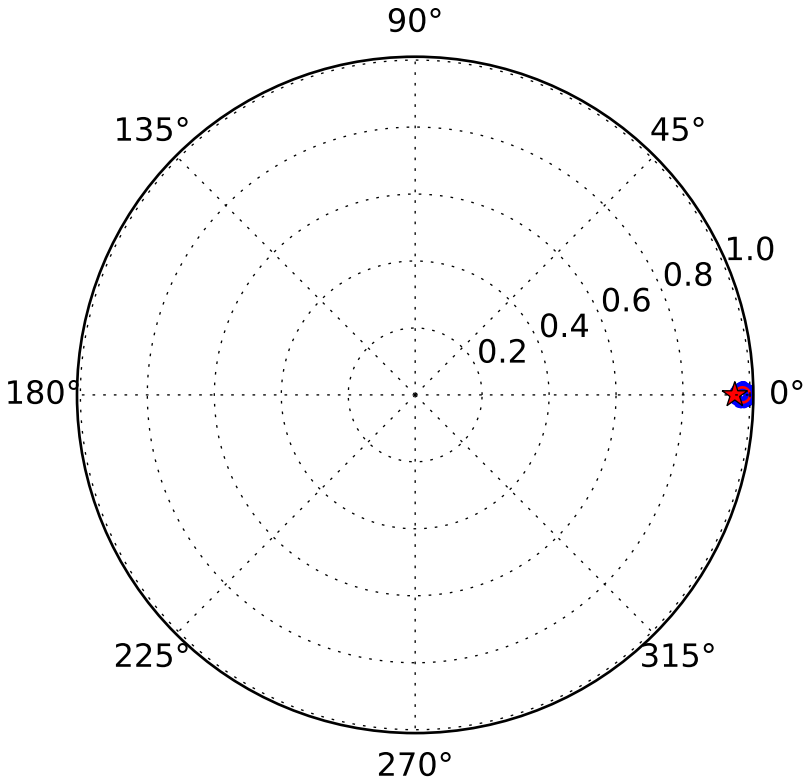


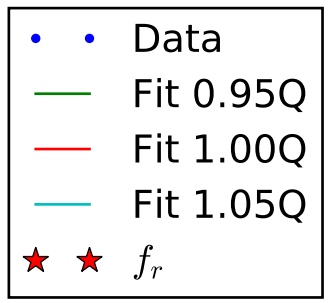


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.29414907668
Q_r = 13077.2489186
Q_c = 243437.226627
a = (-0.00680279943023-0.00560146969999j)
ϕ_0 = -0.622869615944
τ = 36.2334309807

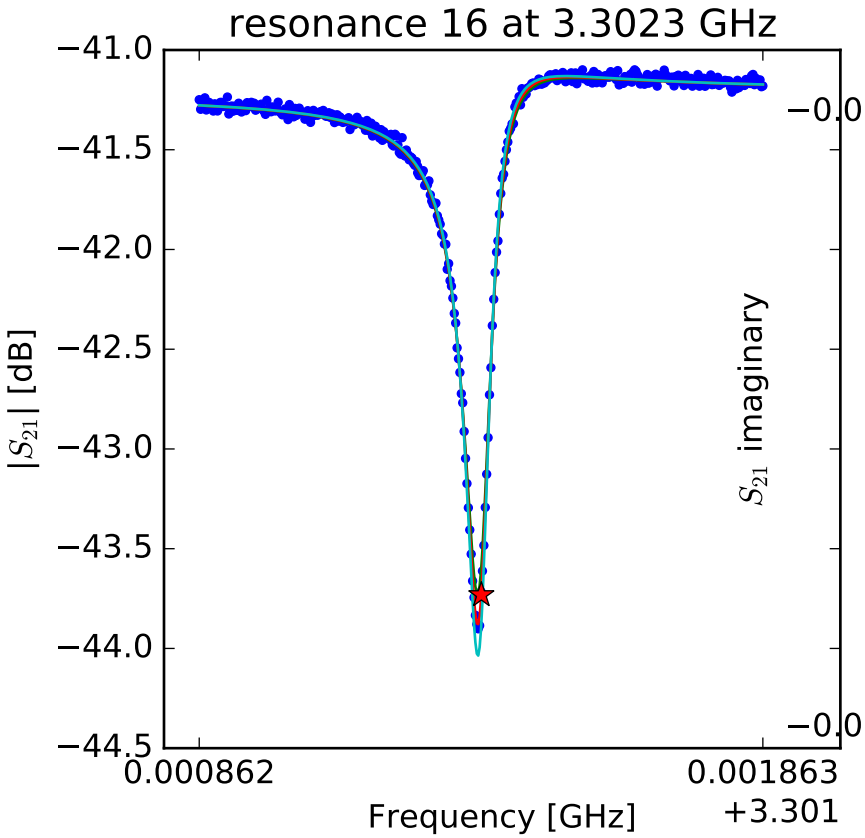


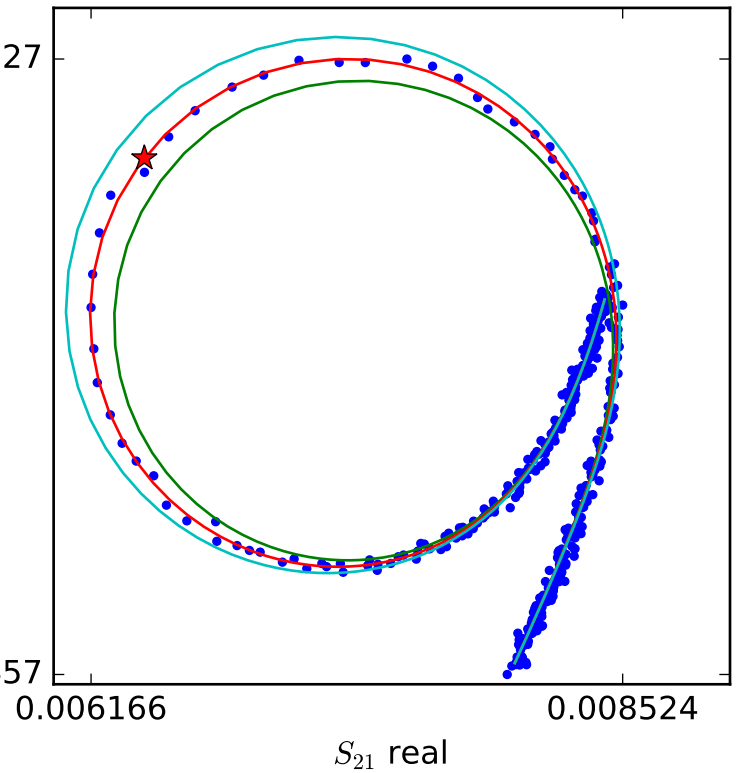


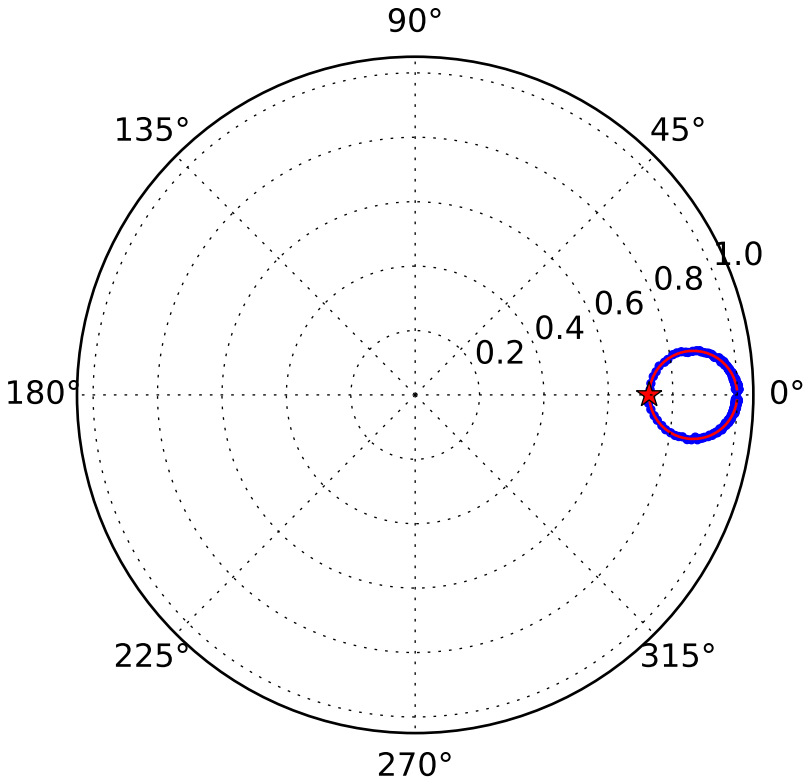


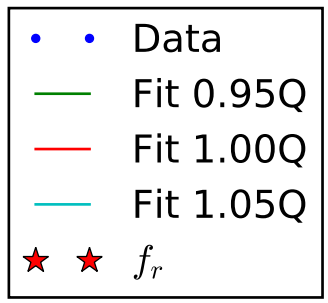
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.29824021982
Q_r = 22003.0076224
Q_c = 484098.898683
a = (0.00619028940114+0.00612327406935j)
ϕ_0 = -0.663222995492
τ = 36.6928424627



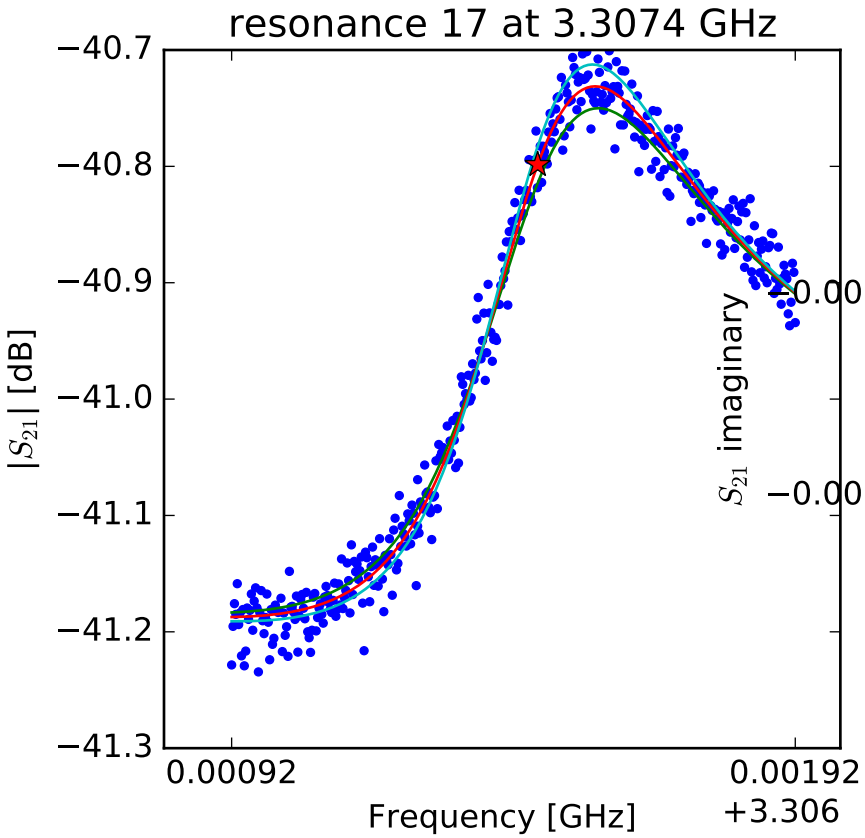


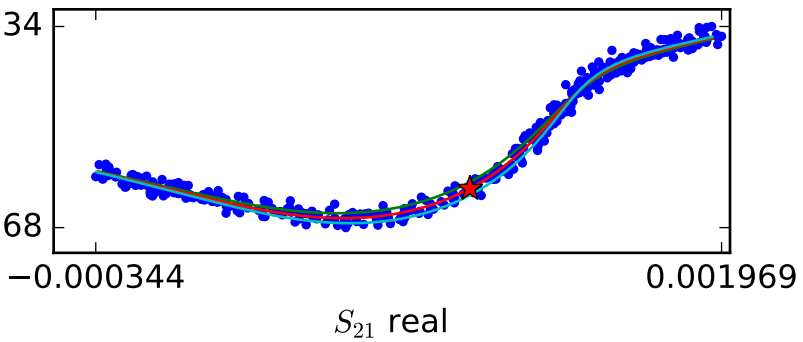


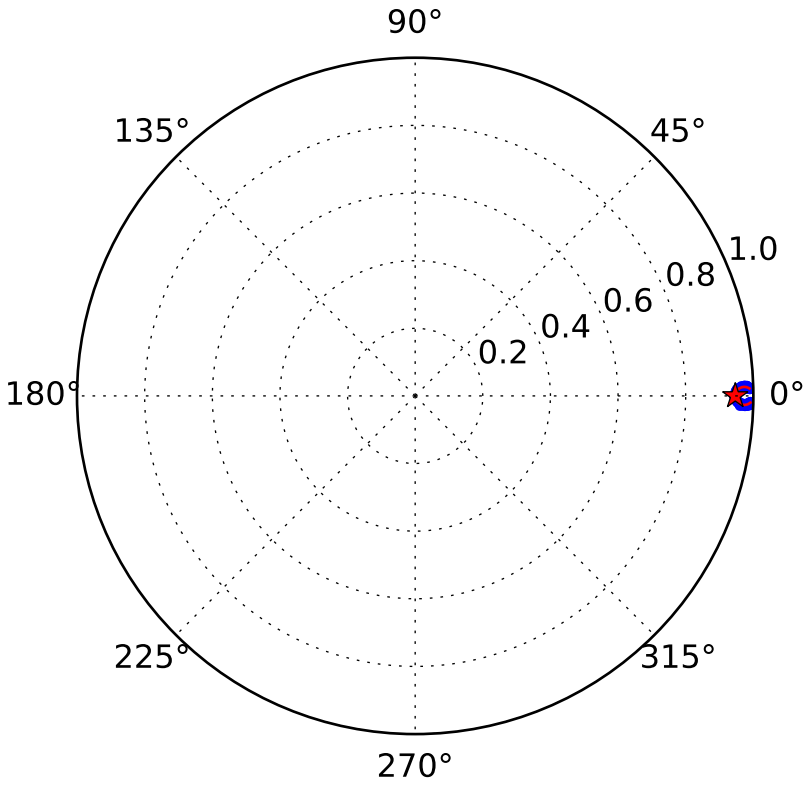


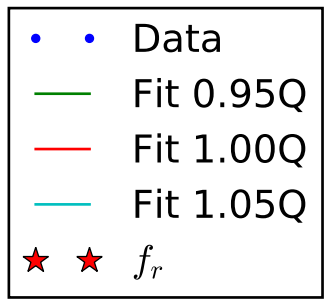
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.3023630702
Q_r = 51172.6965233
Q_c = 187010.221178
a = (0.00313599074334-0.00810678560849j)
ϕ_0 = -0.348528161447
τ = 35.6887891649



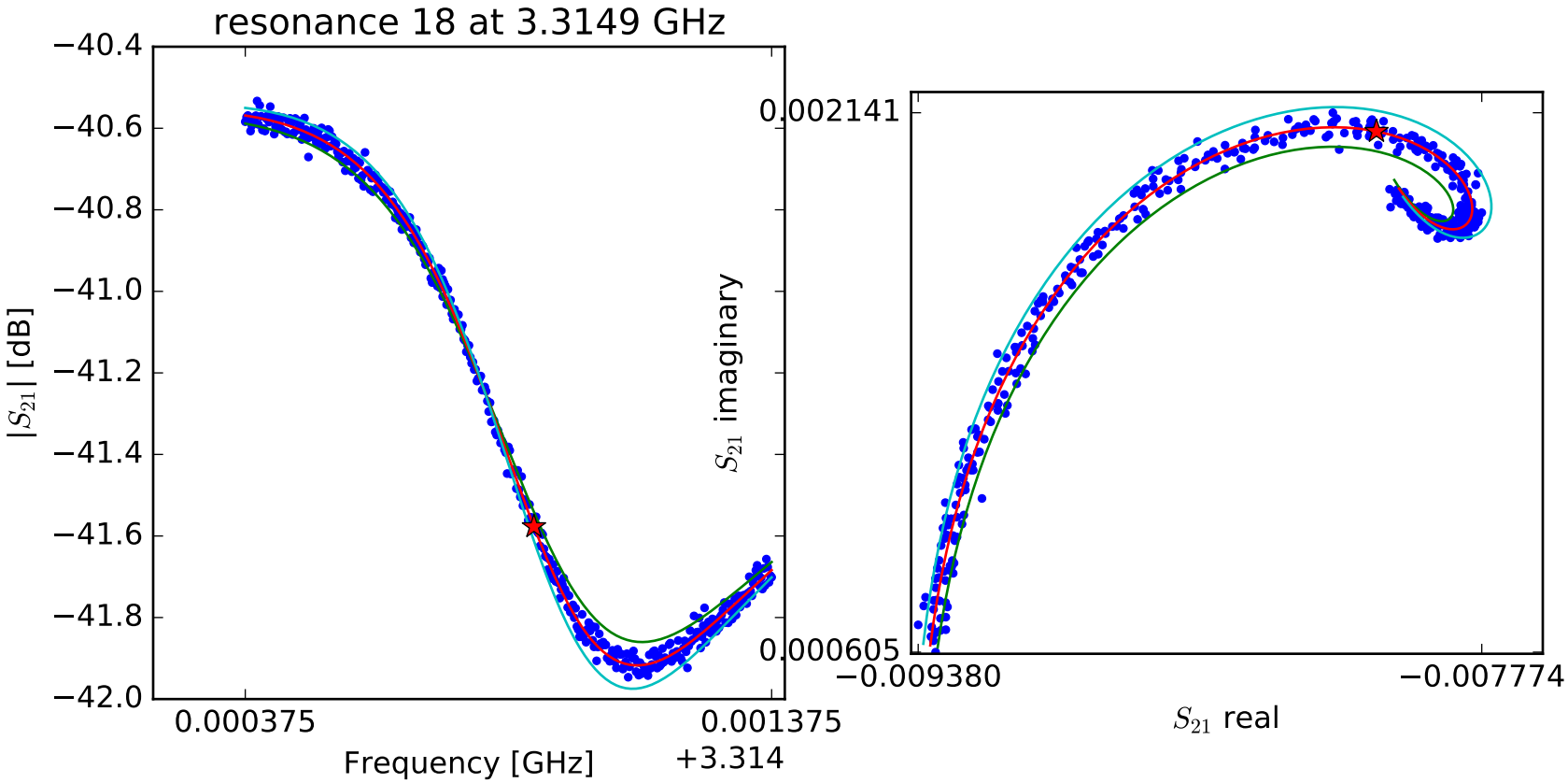


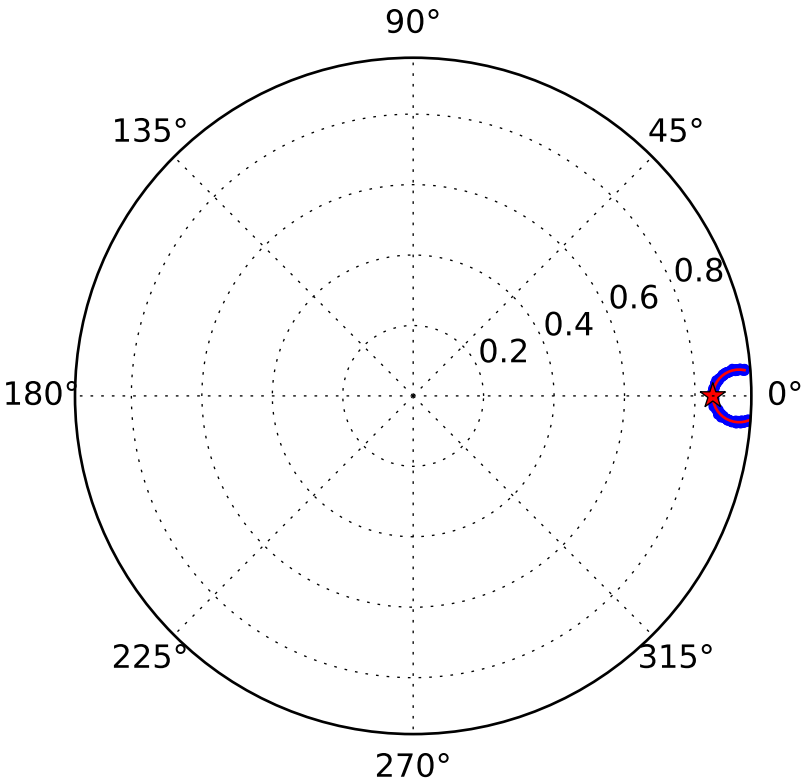


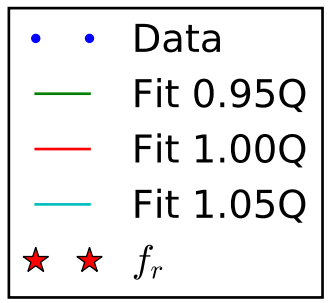


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.3074629679
Q_r = 6926.43631018
Q_c = 129555.736422
a = (-0.00815114622827-0.00330718396357j)
ϕ_0 = -2.31495756349
τ = 37.4302670868

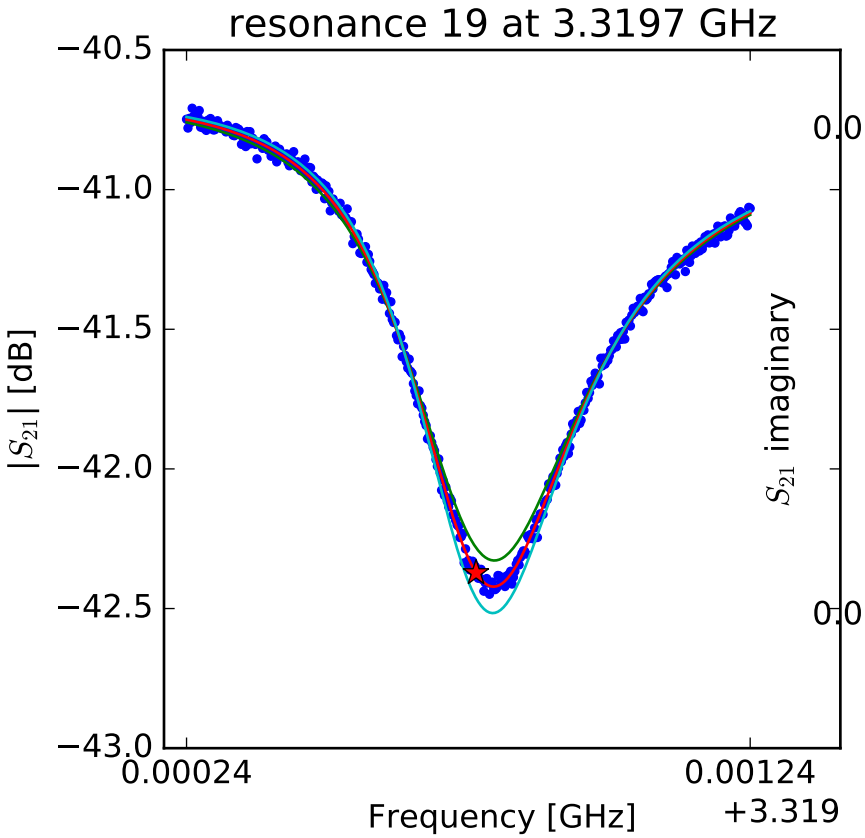


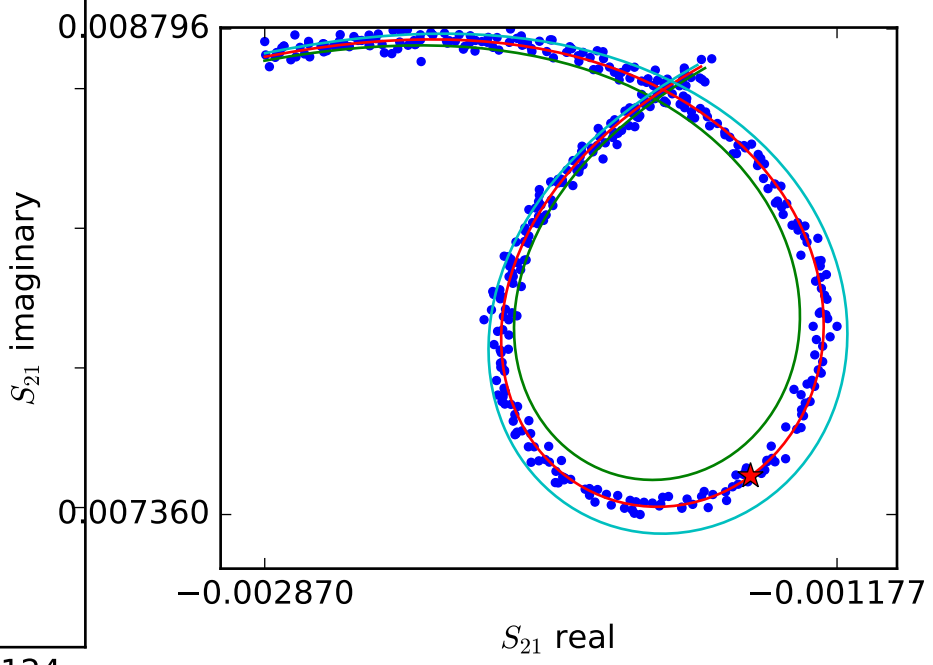


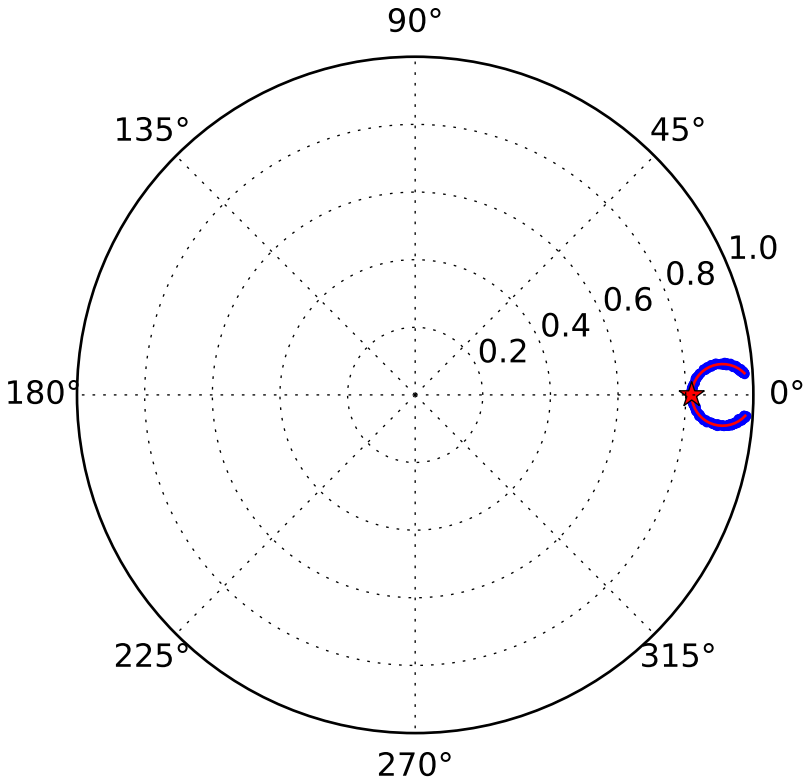


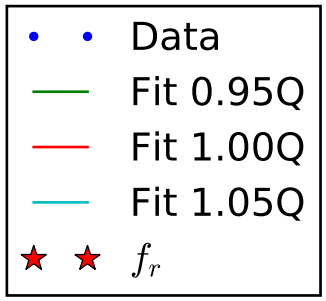
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.31492340599
Q_r = 4513.99664462
Q_c = 30197.6430887
a = (-0.00900052832502+0.00130805459117j)
ϕ_0 = 0.918088923354
τ = 38.6122452278



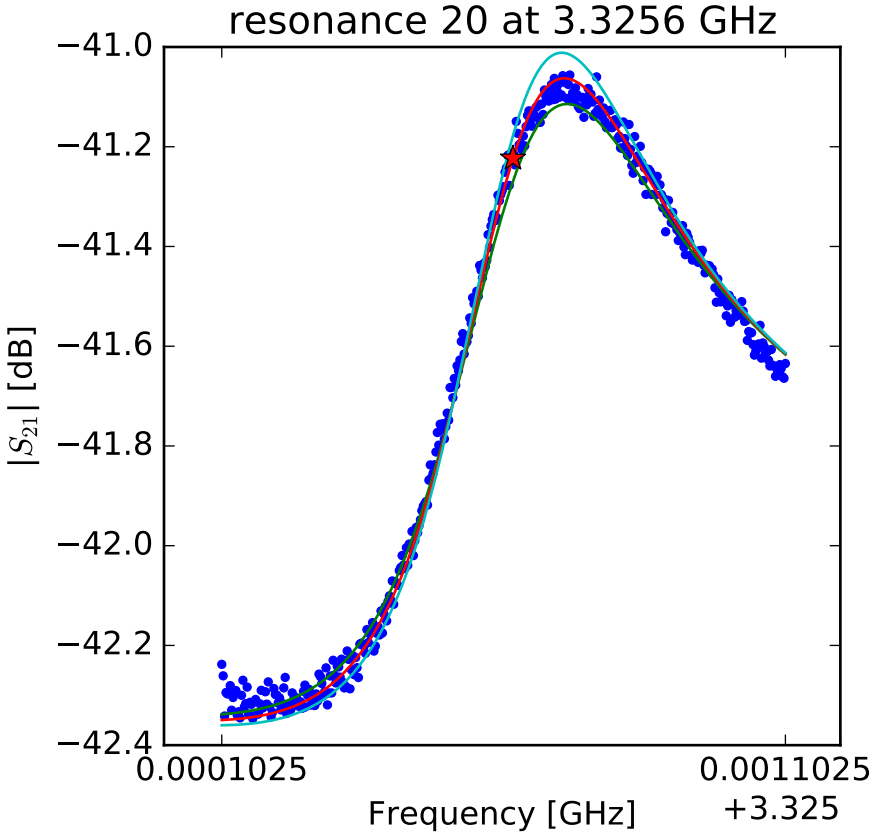


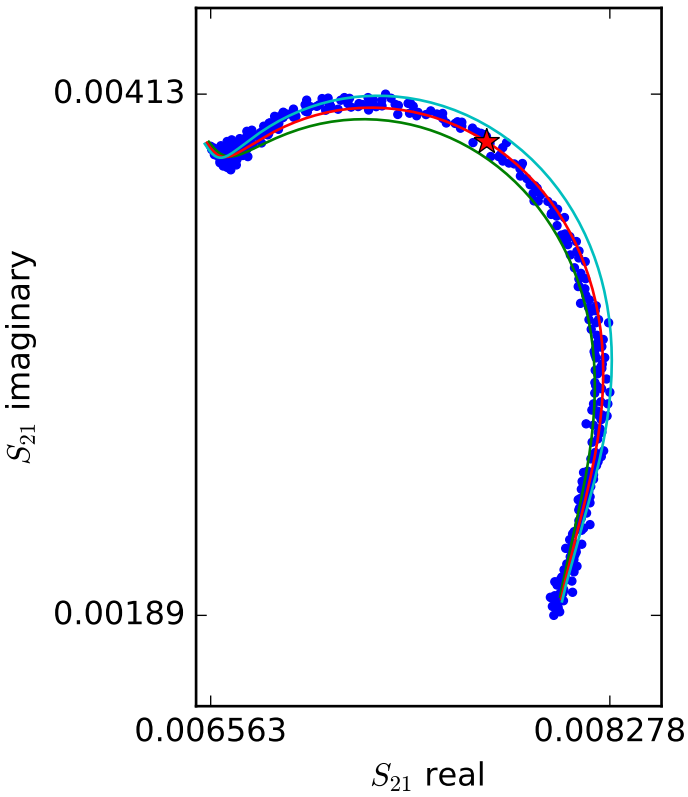


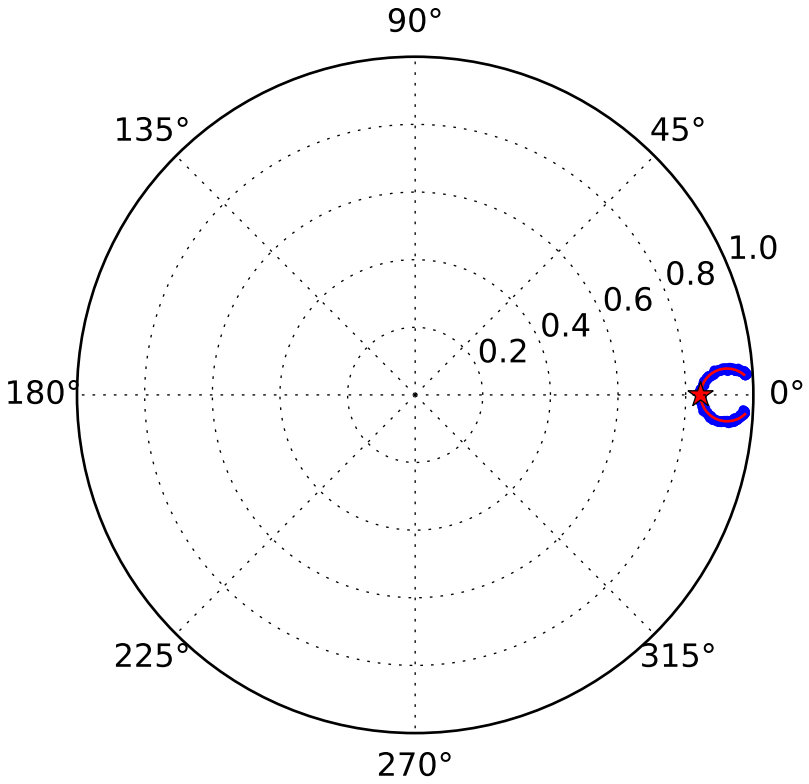


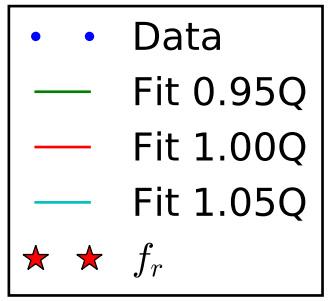
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.31975364164
Q_r = 8263.35327688
Q_c = 45311.2587408
a = (-0.00920443601862+0.000350459509801
ϕ_0 = 0.278535665915
τ = 41.6308376436



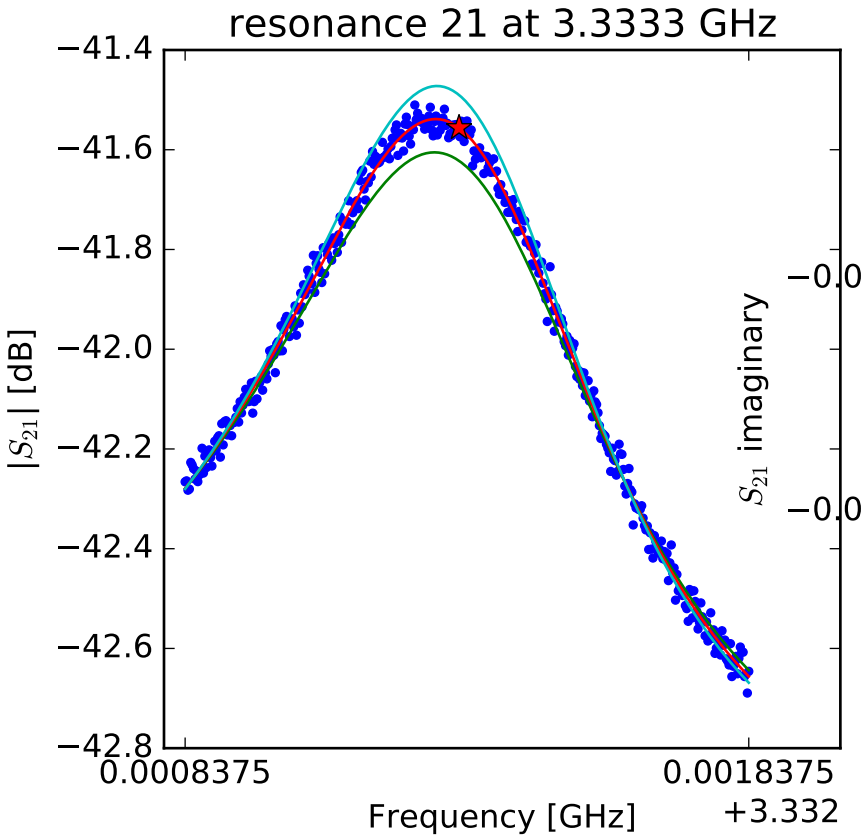


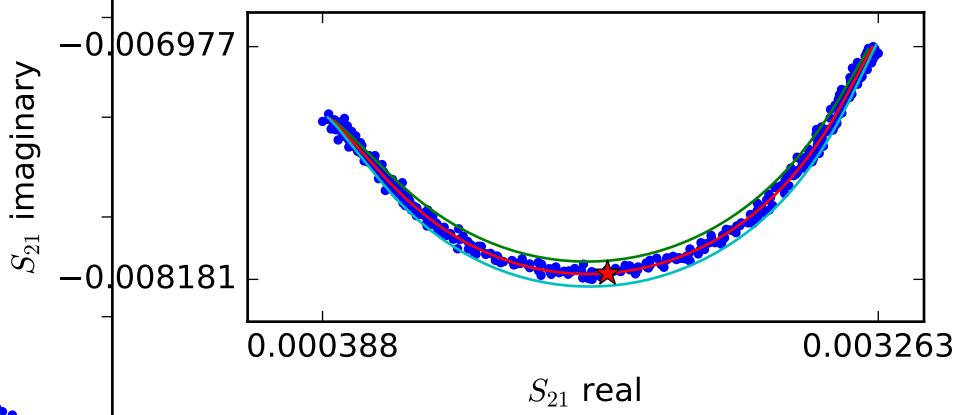


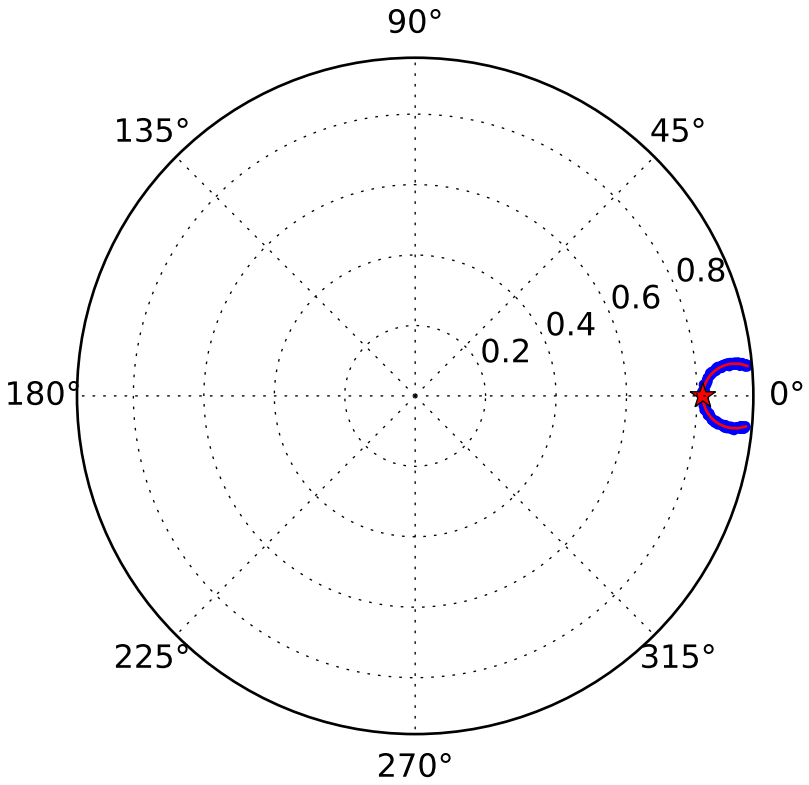


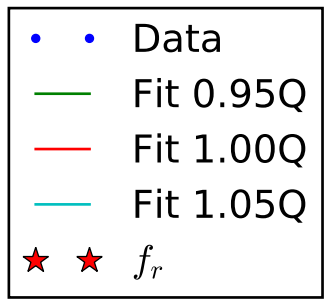
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.32561918469
Q_r = 7409.85959432
Q_c = 47484.9277218
a = (-0.00176736926519-0.00761060863813j)
ϕ_0 = -2.31619851034
τ = 35.6792209549



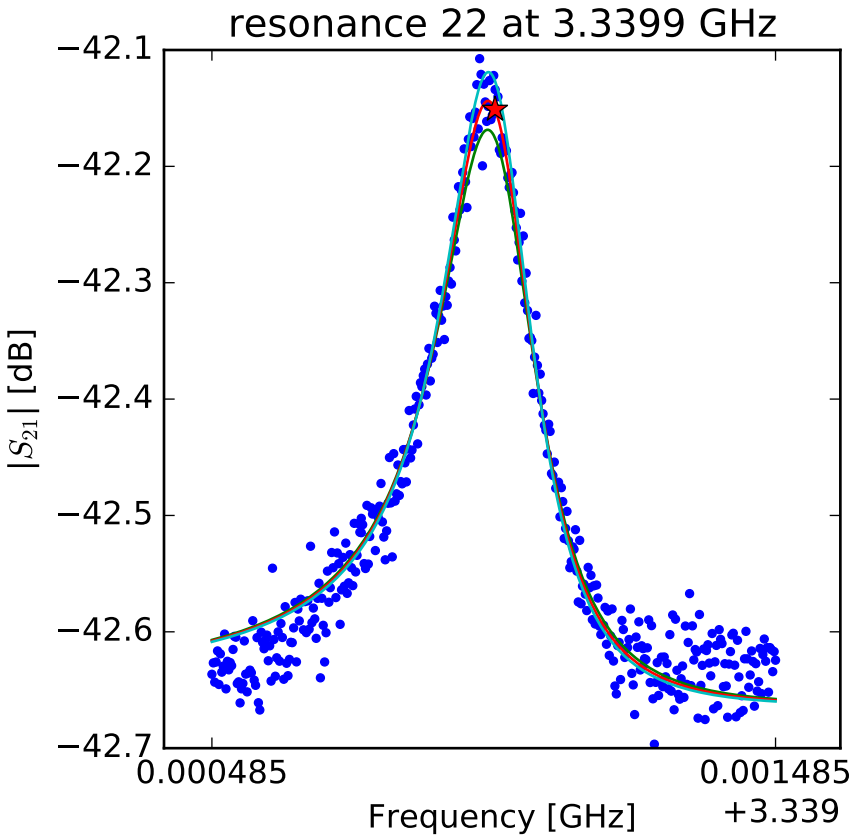


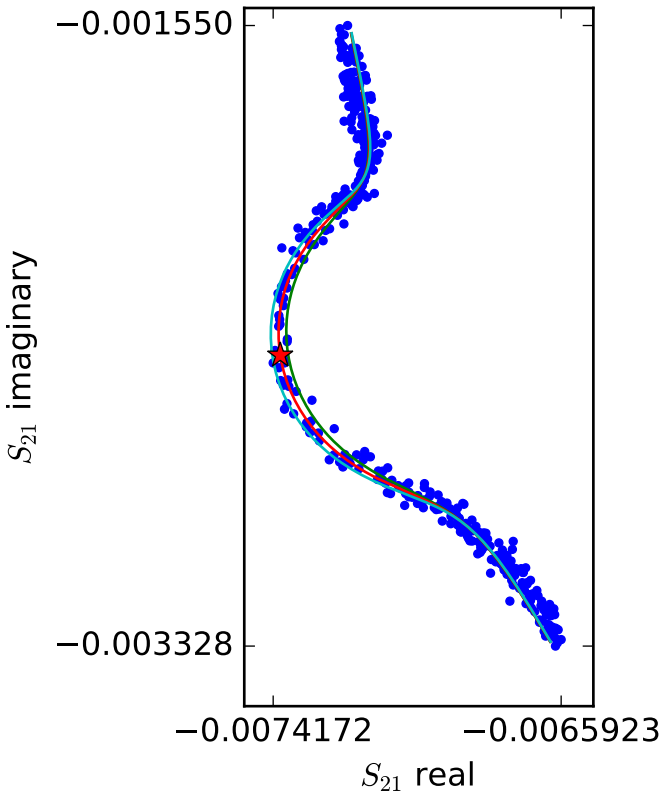


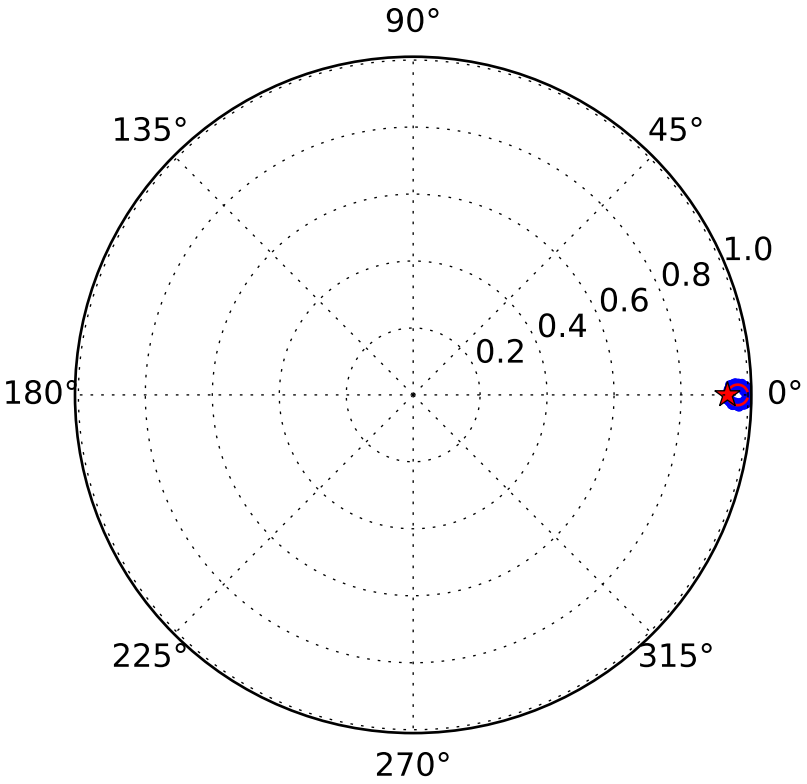


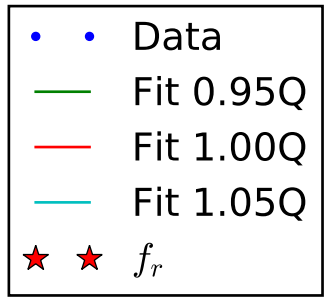
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.33332352634
Q_r = 4812.6255181
Q_c = 26236.9663387
a = (0.00467357118587-0.0053386561042j)
ϕ_0 = 2.88183717876
τ = 34.821800024



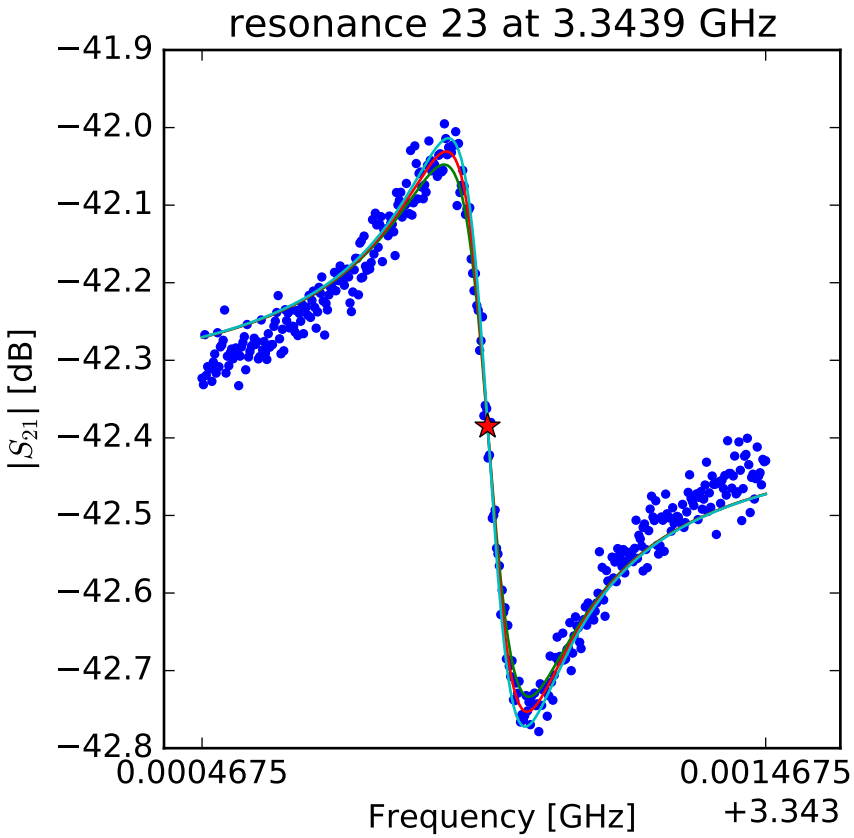


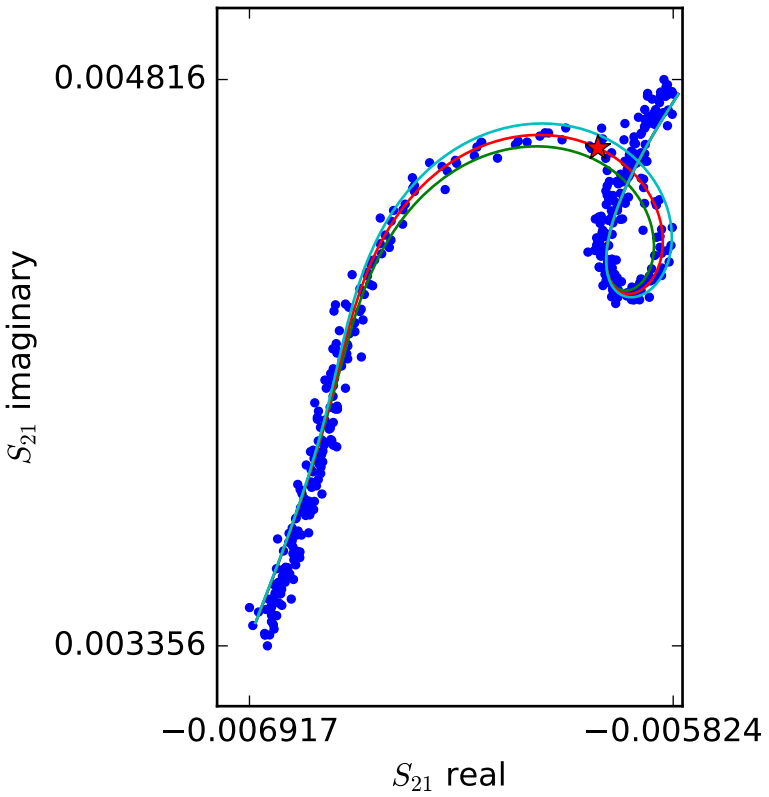


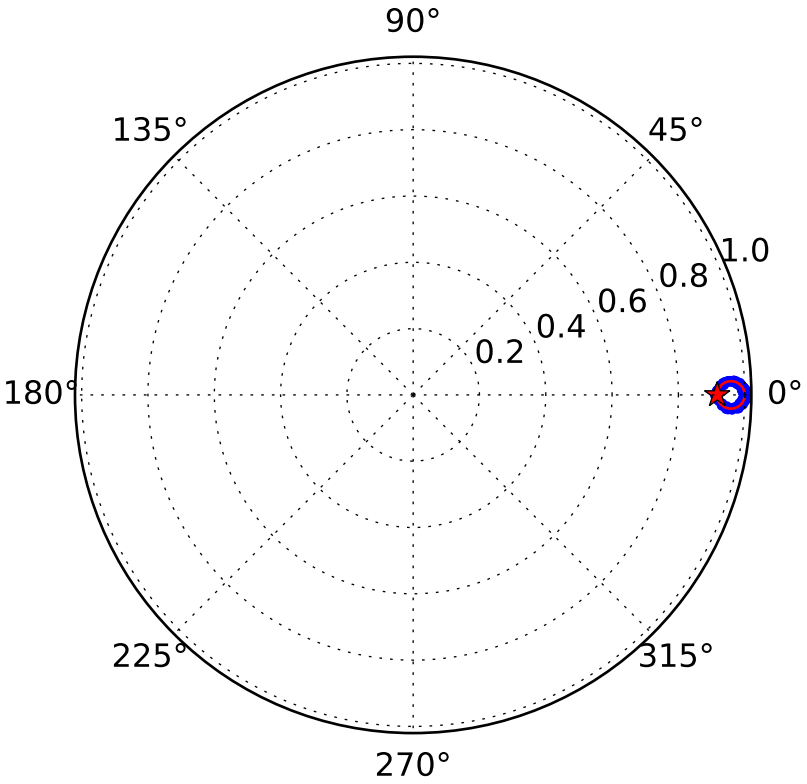


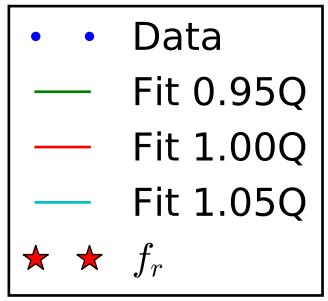
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.33998732972
Q_r = 16611.6238167
Q_c = 270397.814293
a = (-0.00503166138856-0.00538142487192j)
ϕ_0 = 2.88849699814
τ = 35.9511123376



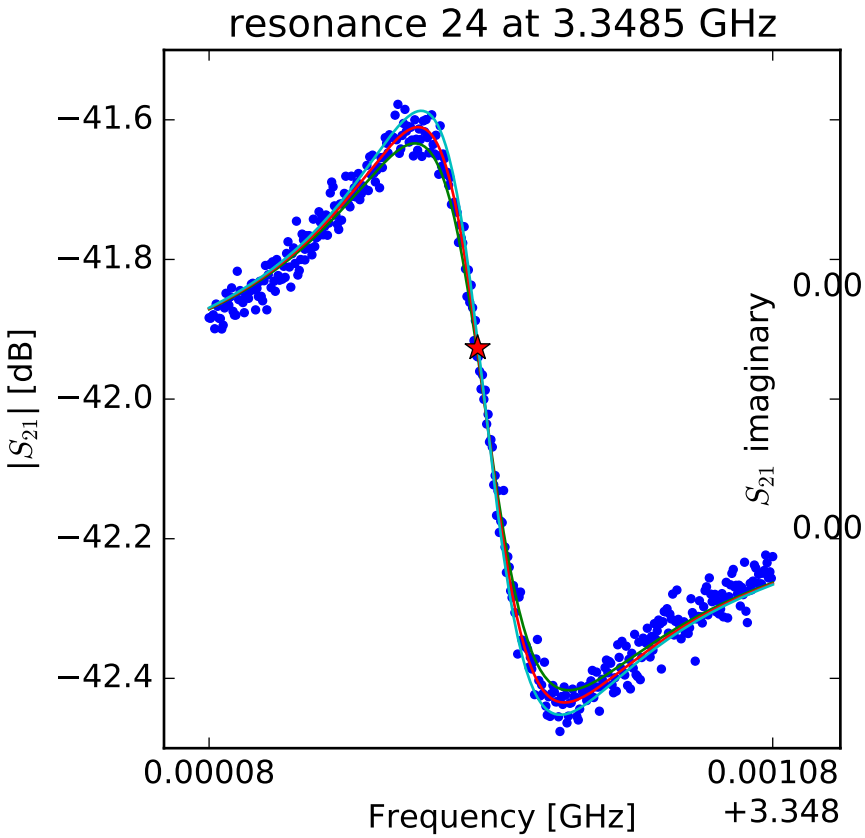


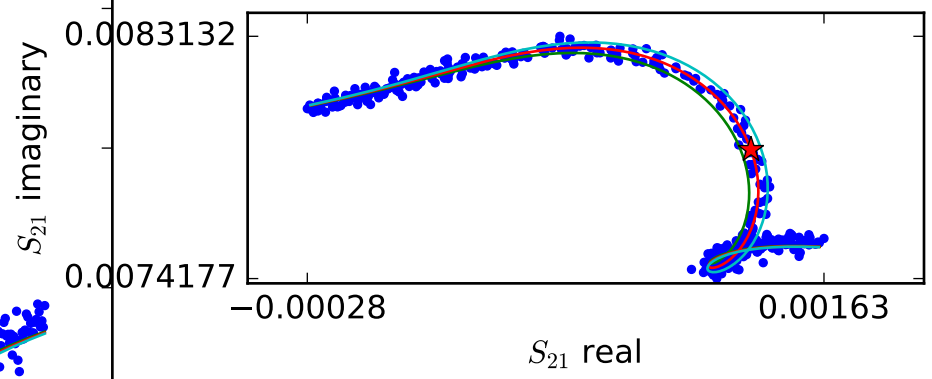


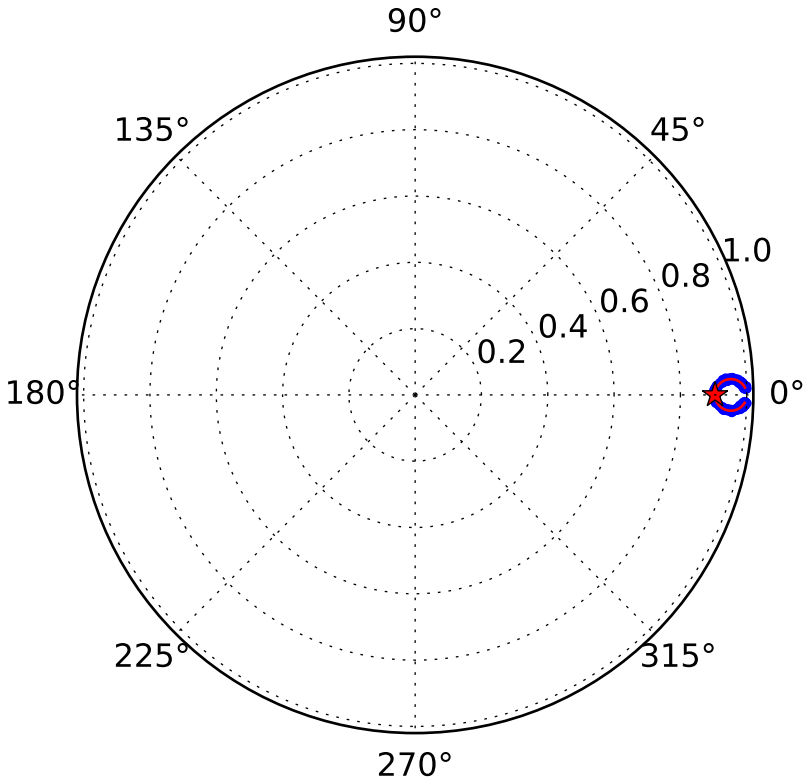


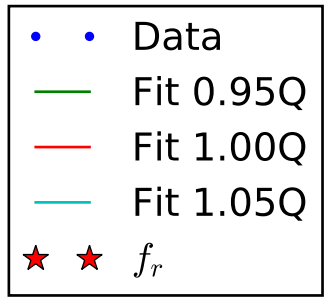
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.34397408741
Q_r = 23347.3224569
Q_c = 281452.836093
a = (0.00102058520297-0.00754447306252j)
ϕ_0 = 1.50656217963
τ = 36.5920030516



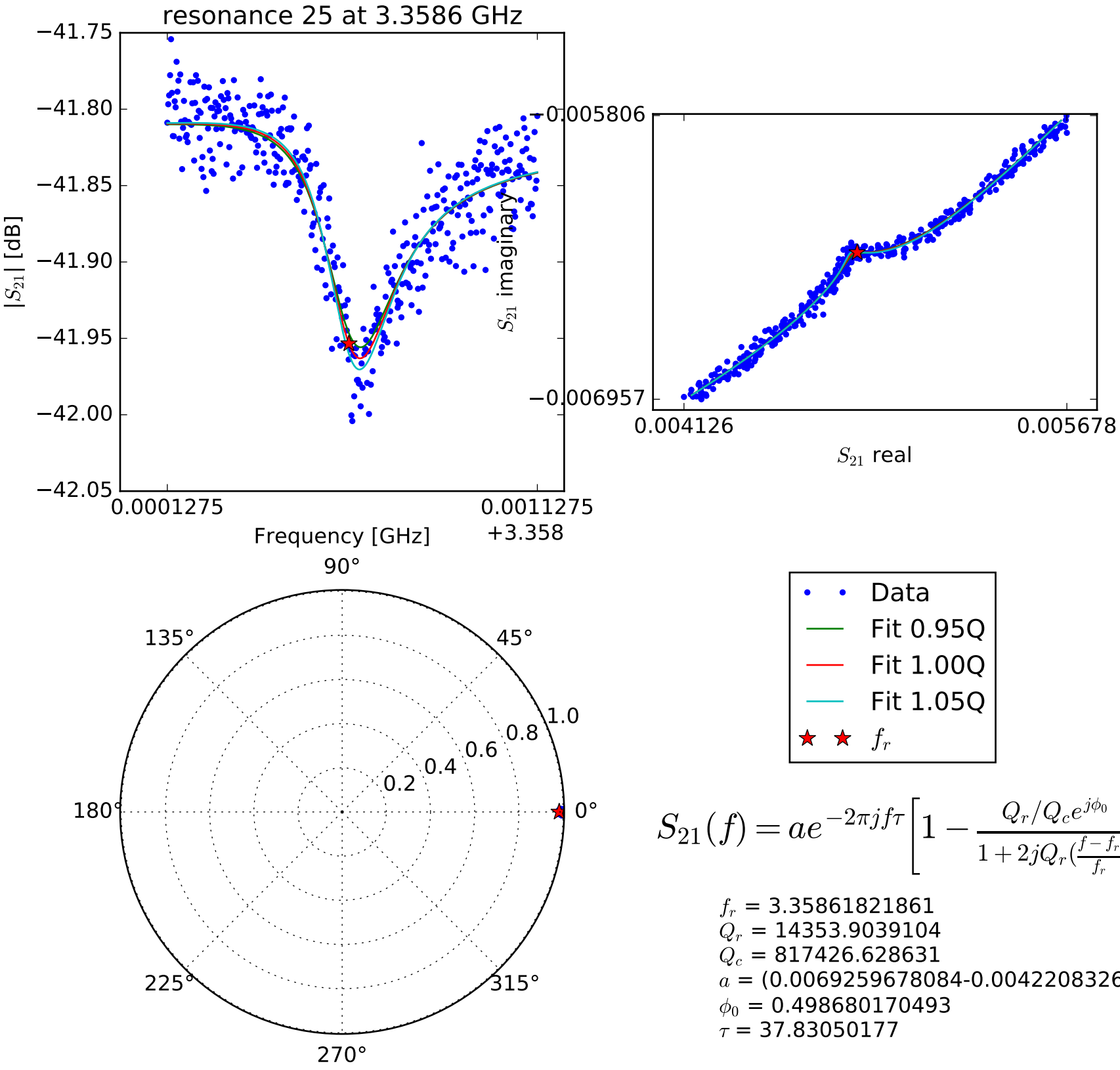






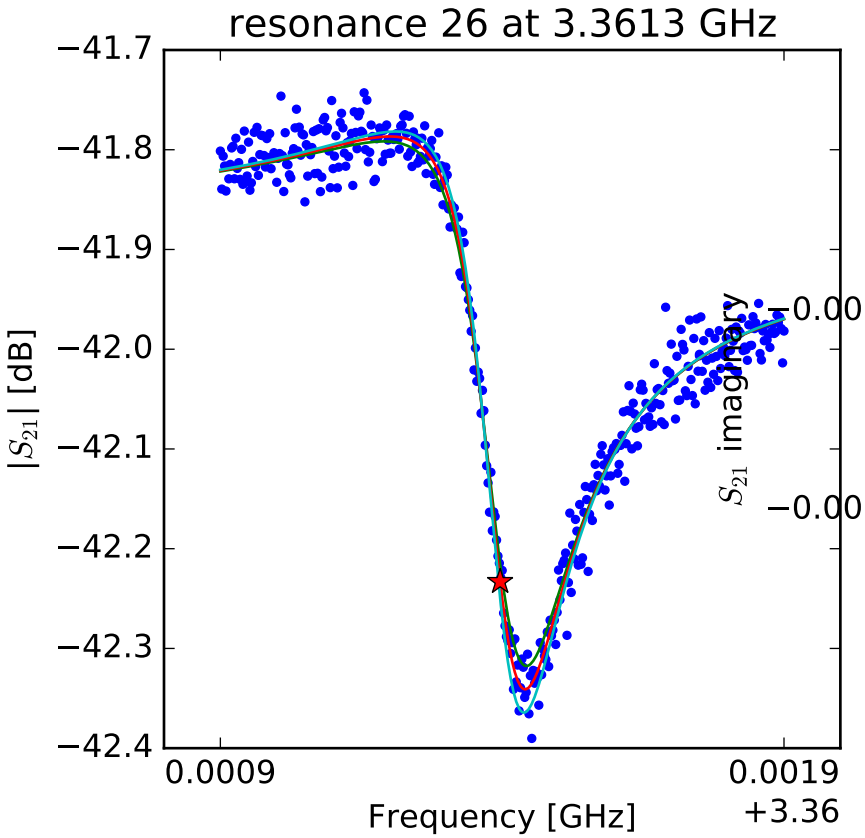
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

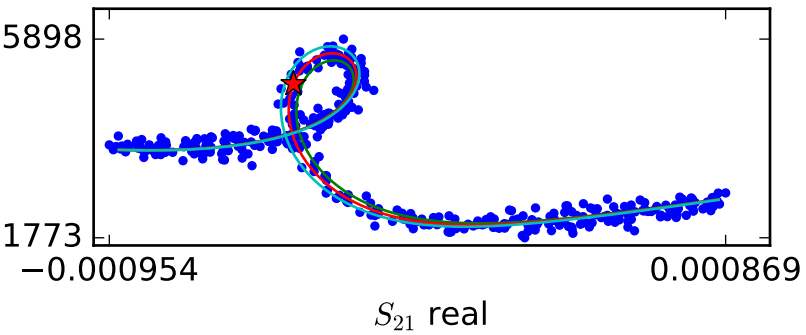
f_r = 3.34855640111
Q_r = 13142.7642663
Q_c = 137521.524639
a = (0.00422159561813+0.00664185777456j)
ϕ_0 = 1.71206794654
τ = 37.9035676713

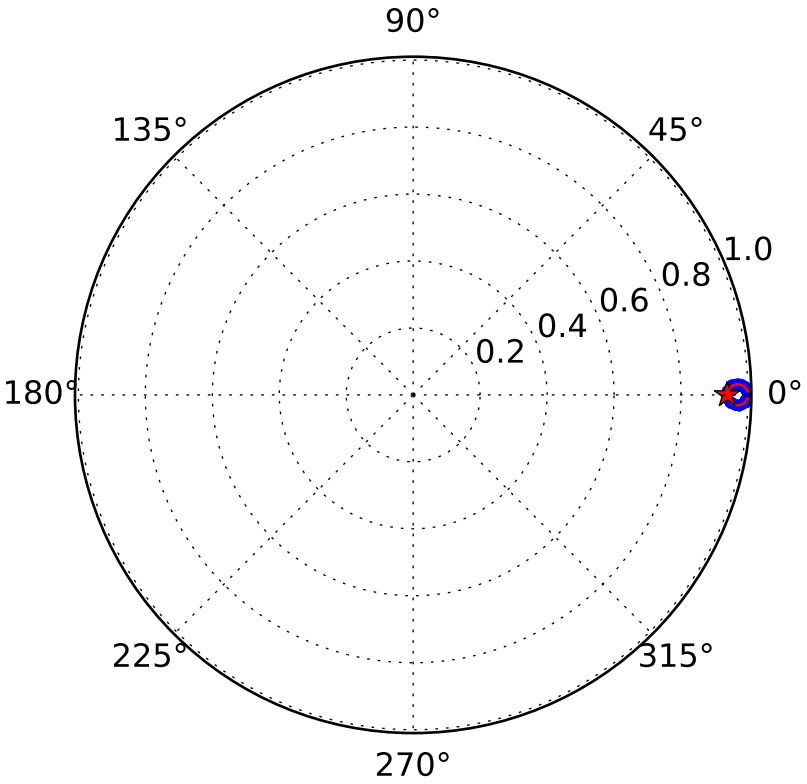


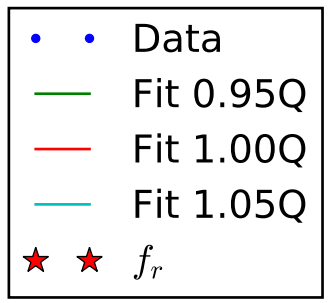
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.35861821861
Q_r = 14353.9039104
Q_c = 817426.628631
a = (0.0069259678084-0.00422083268659j)
ϕ_0 = 0.498680170493
τ = 37.83050177



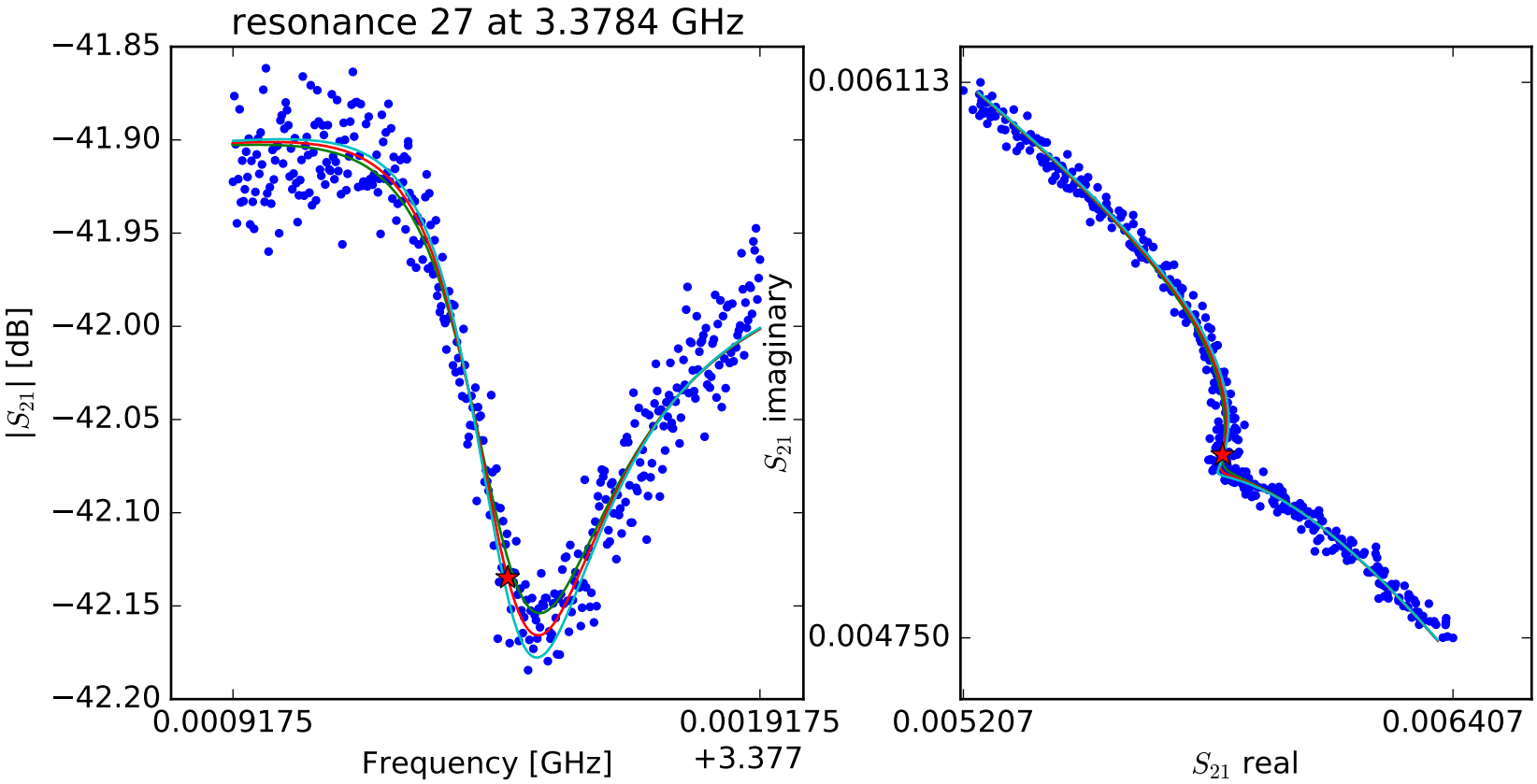


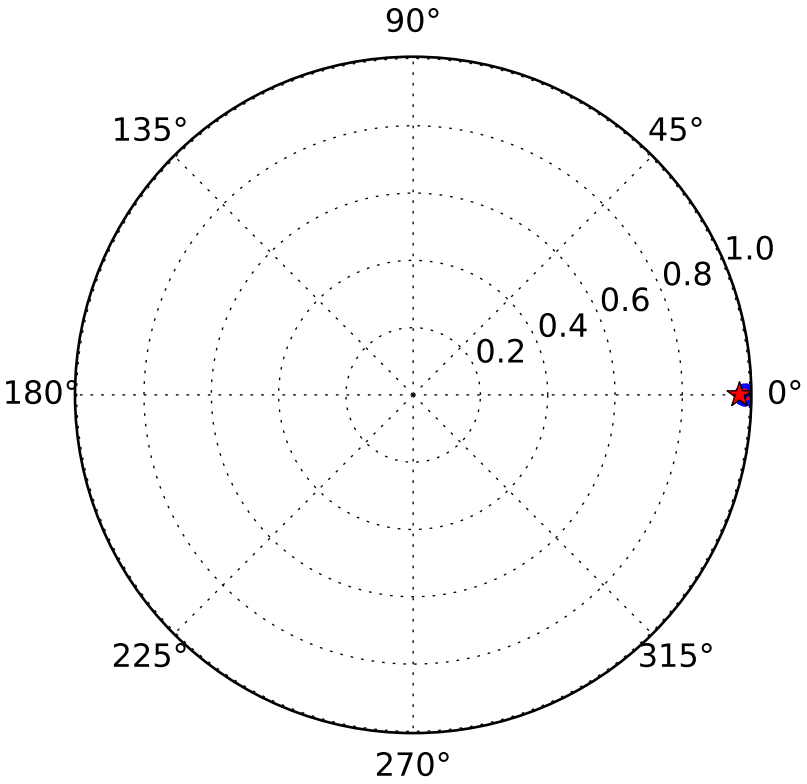


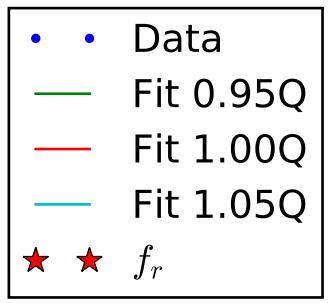


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.3613963932
Q_r = 18062.4922555
Q_c = 288904.193391
a = (0.00623431661148-0.00509303134668j)
ϕ_0 = 0.864320682305
τ = 37.5265233594

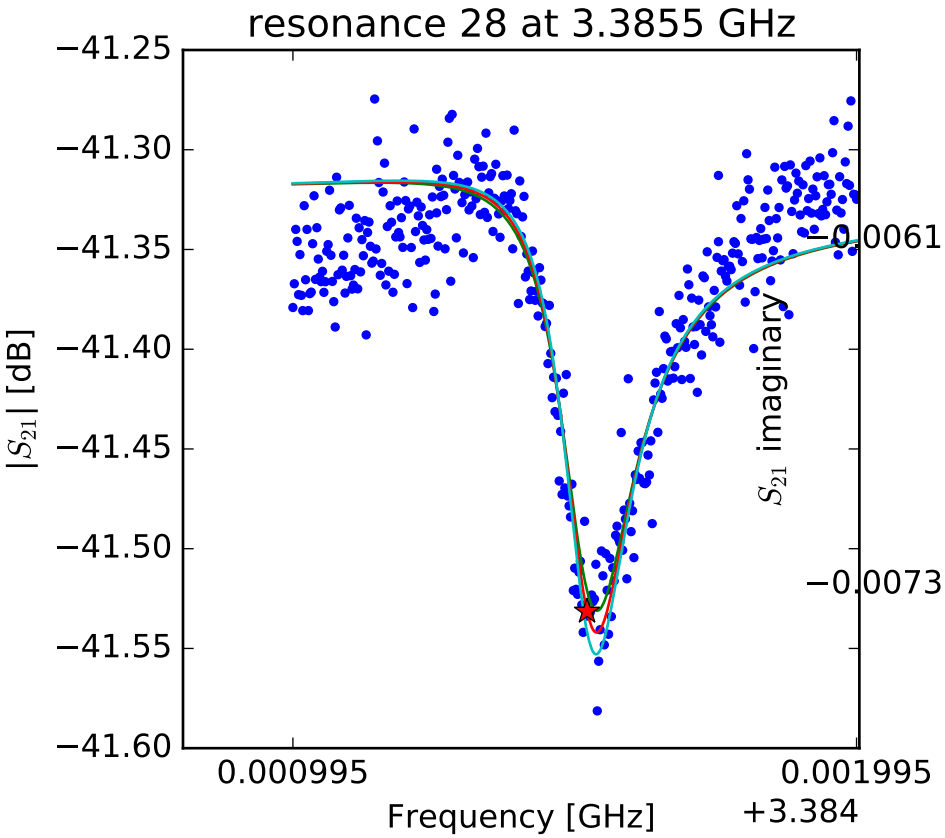


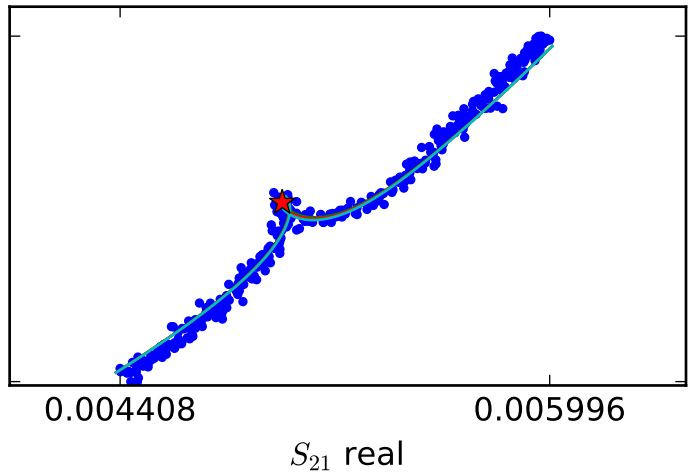


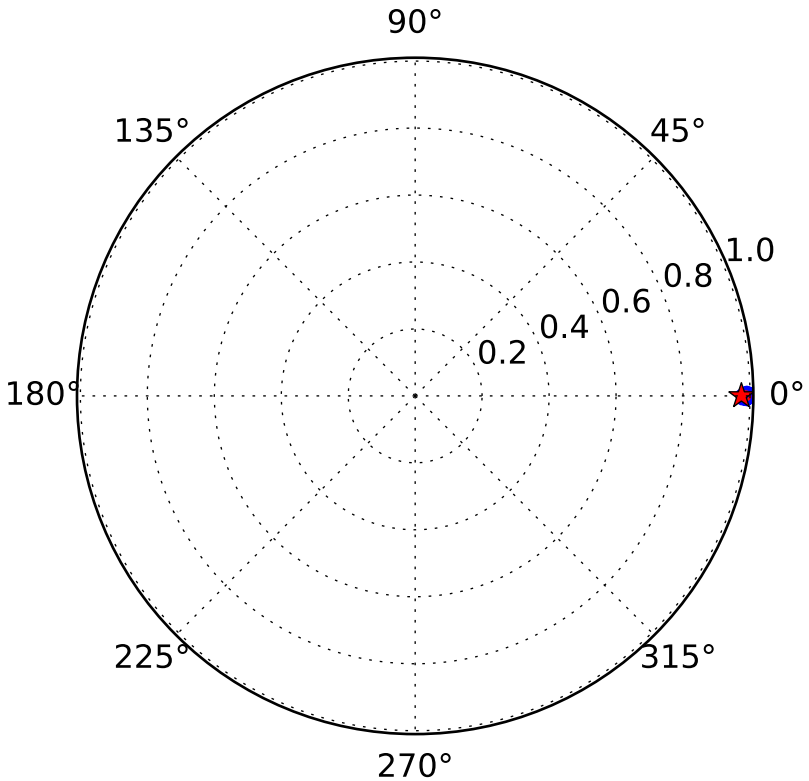


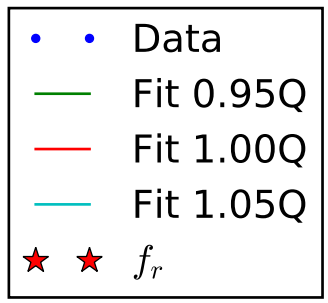
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.37843878158
Q_r = 10461.9982189
Q_c = 347351.982494
a = (-0.0074968133731+0.00281287959805j)
ϕ_0 = 0.678813362282
τ = 37.095255909



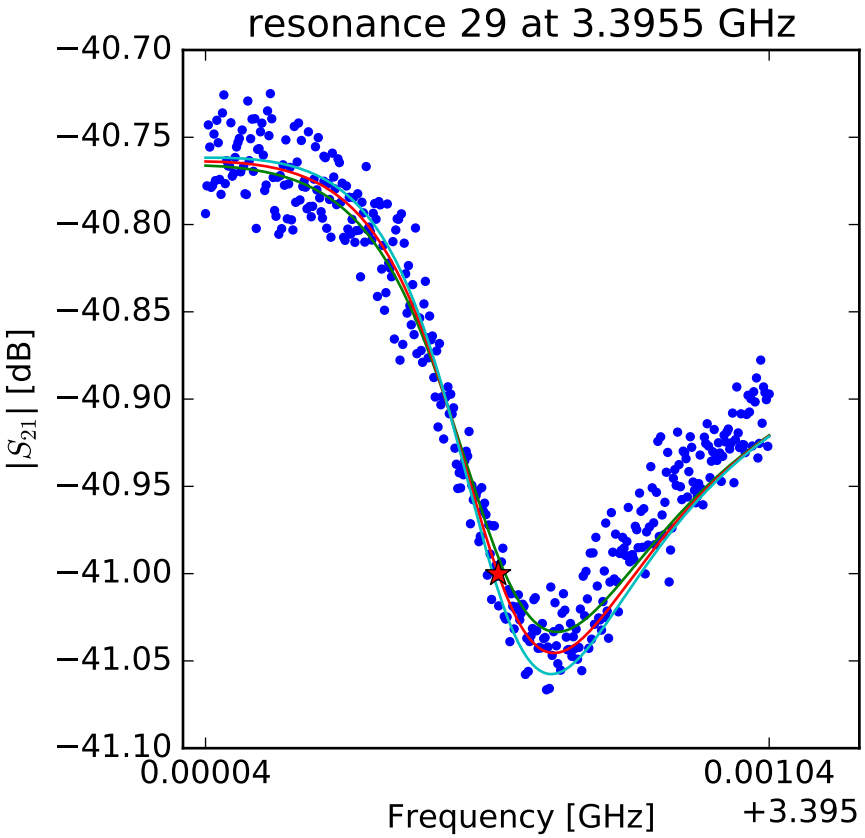


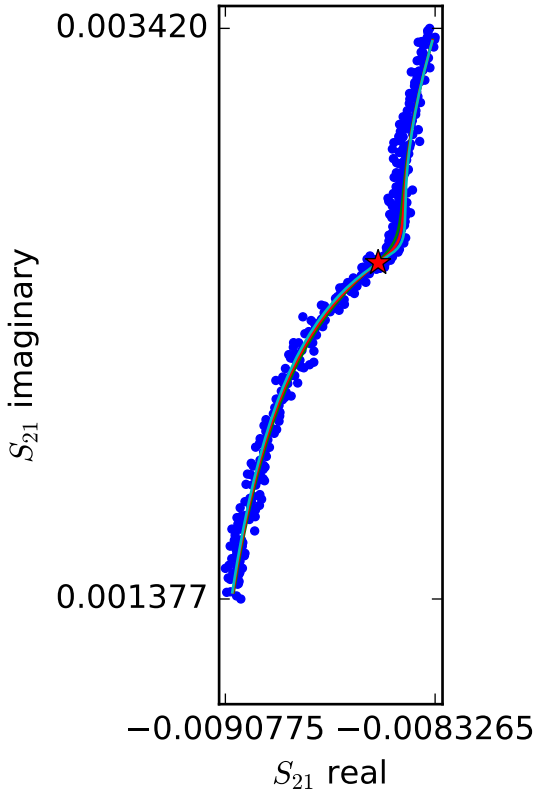


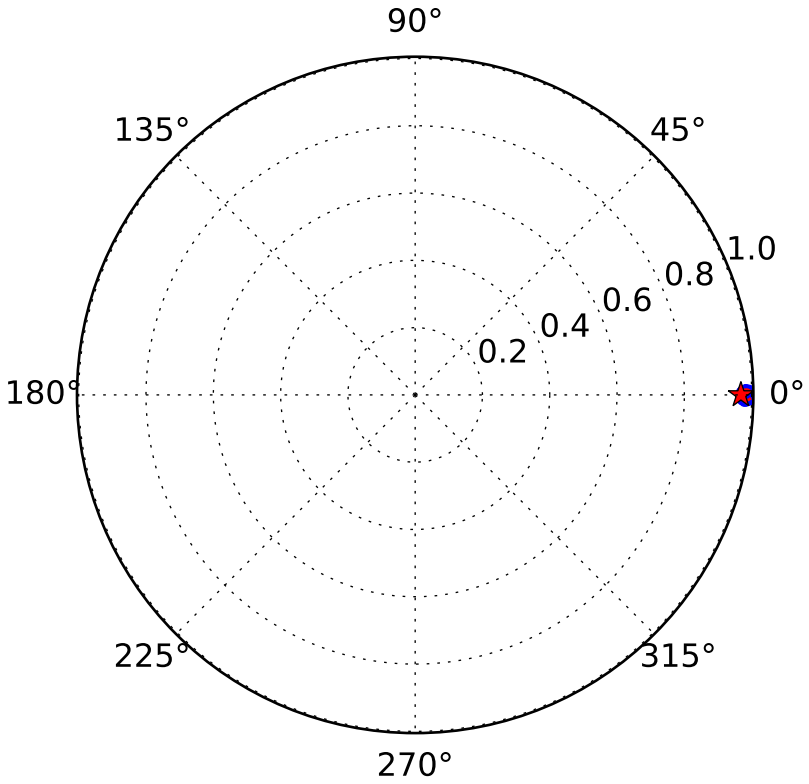


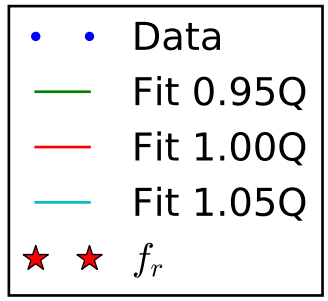
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.38551686391
Q_r = 21973.4752467
Q_c = 854443.704325
a = (-0.00663067291869+0.00545169833587j)
ϕ_0 = 0.425955656811
τ = 38.5574413356



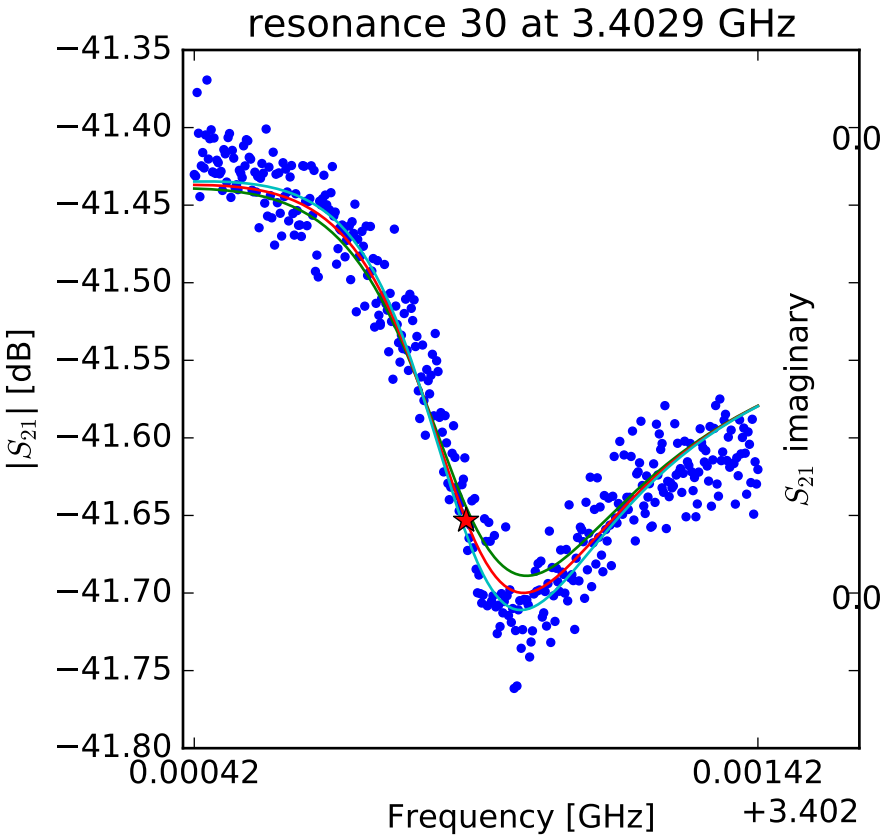


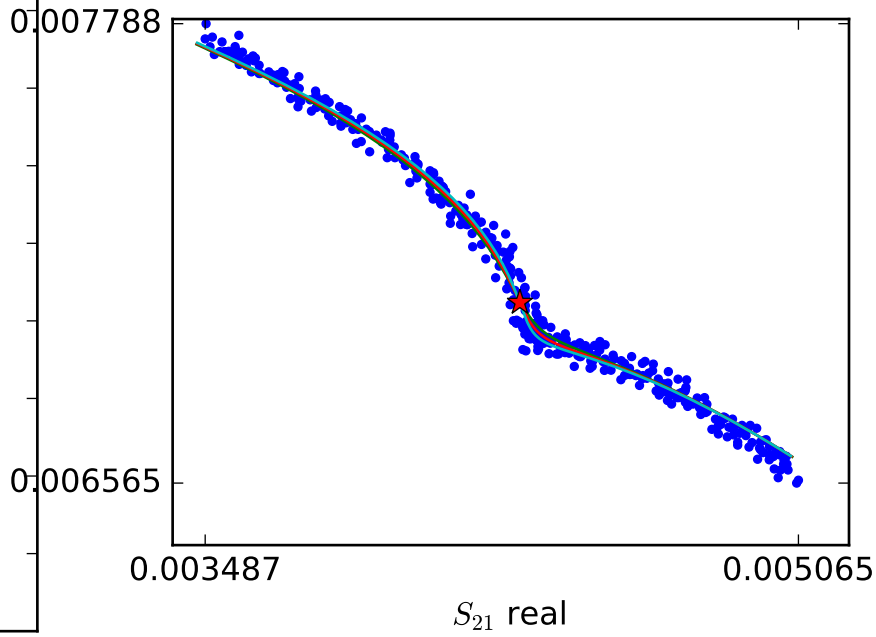


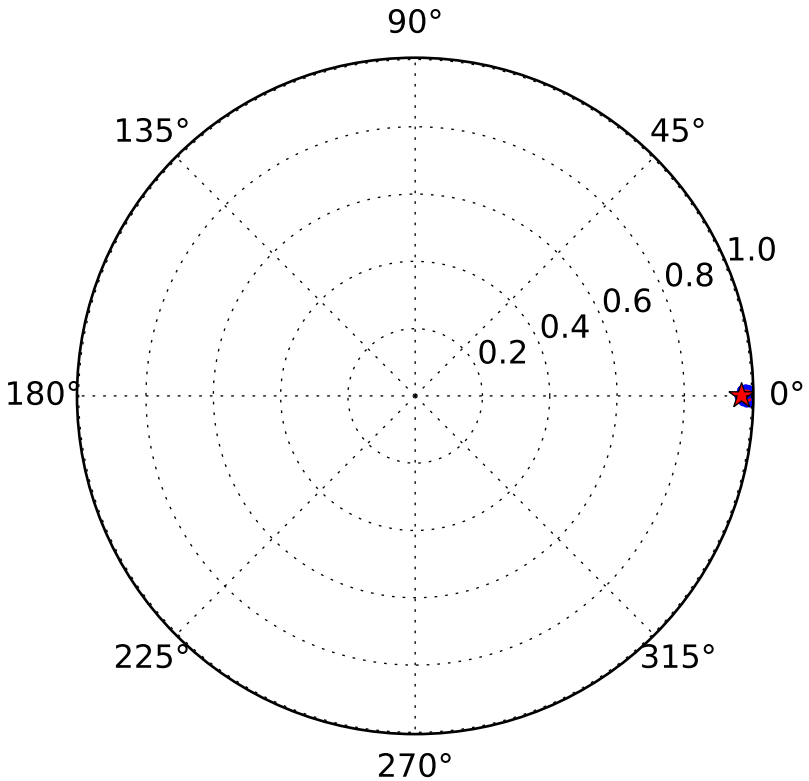


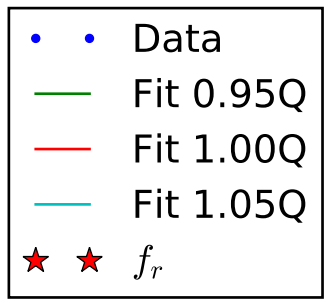
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.39555921679
Q_r = 7401.85394828
Q_c = 230849.721209
a = (-0.00357326742841+0.00838323398897j)
ϕ_0 = 0.802128566402
τ = 39.4212323816



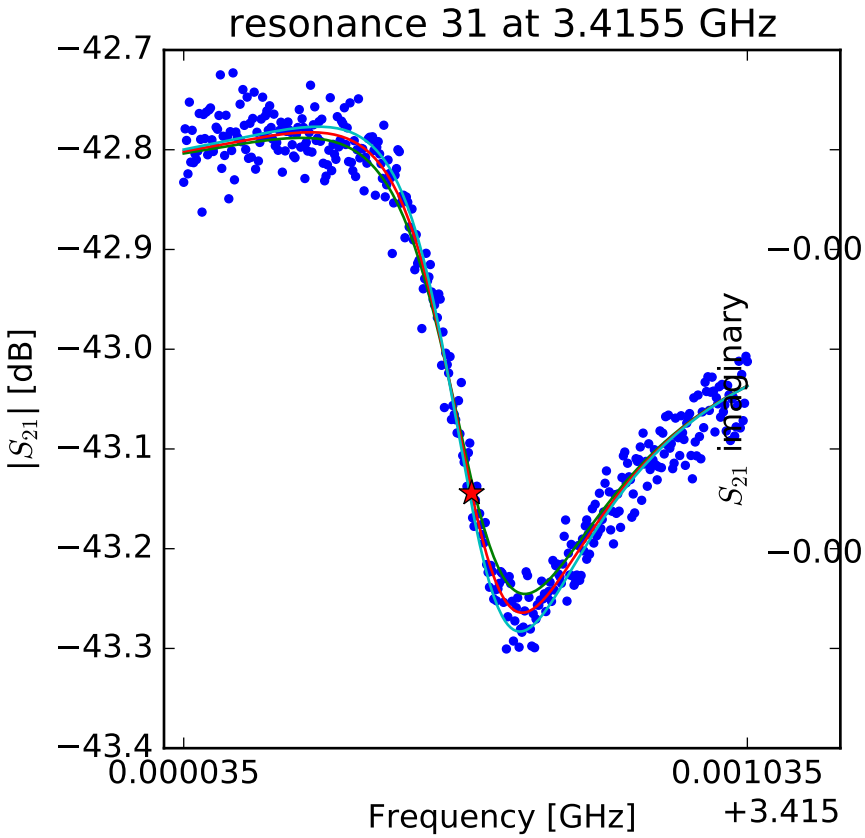


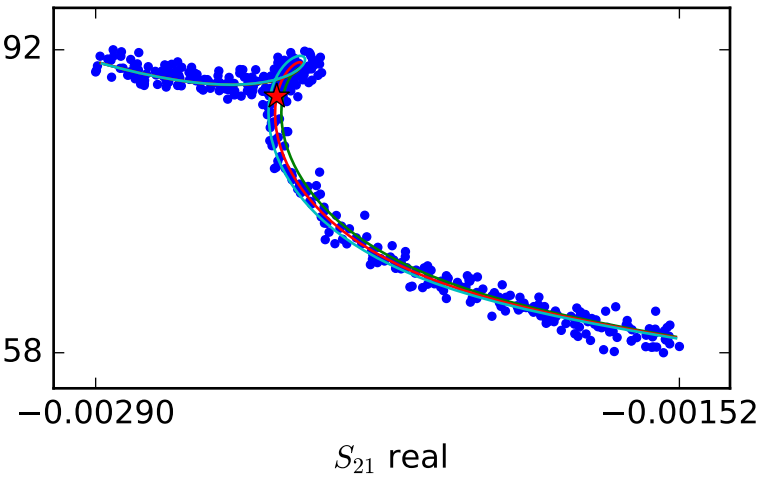


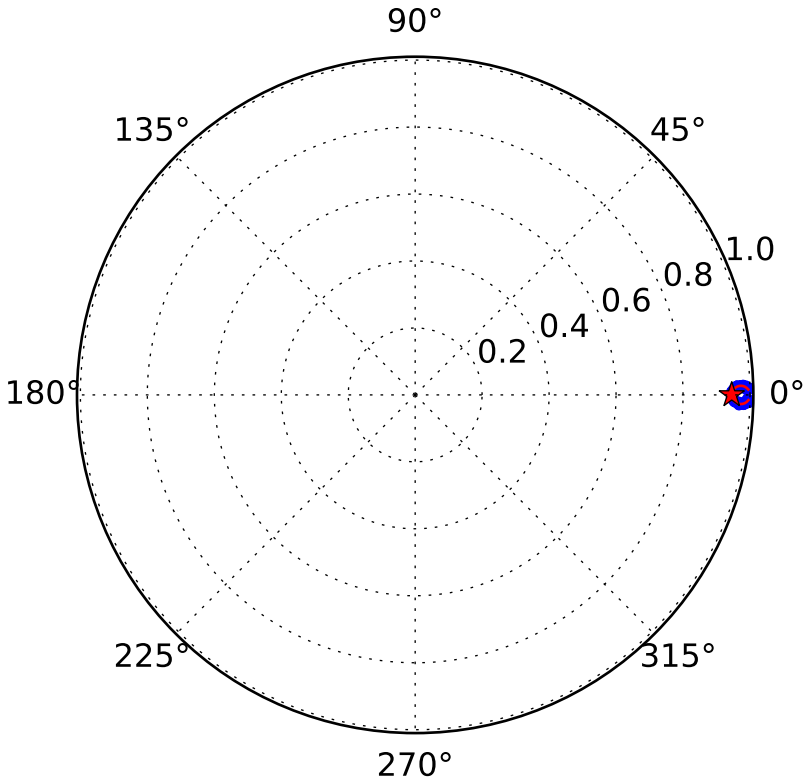


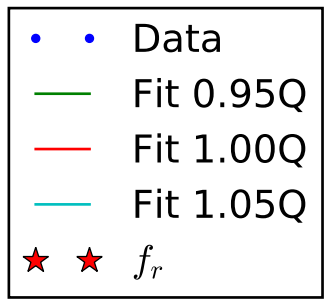
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.40290233683
Q_r = 7653.09152186
Q_c = 255298.368389
a = (-0.00810367099629+0.00233003382085j)
ϕ_0 = 0.847301195445
τ = 38.8754614904



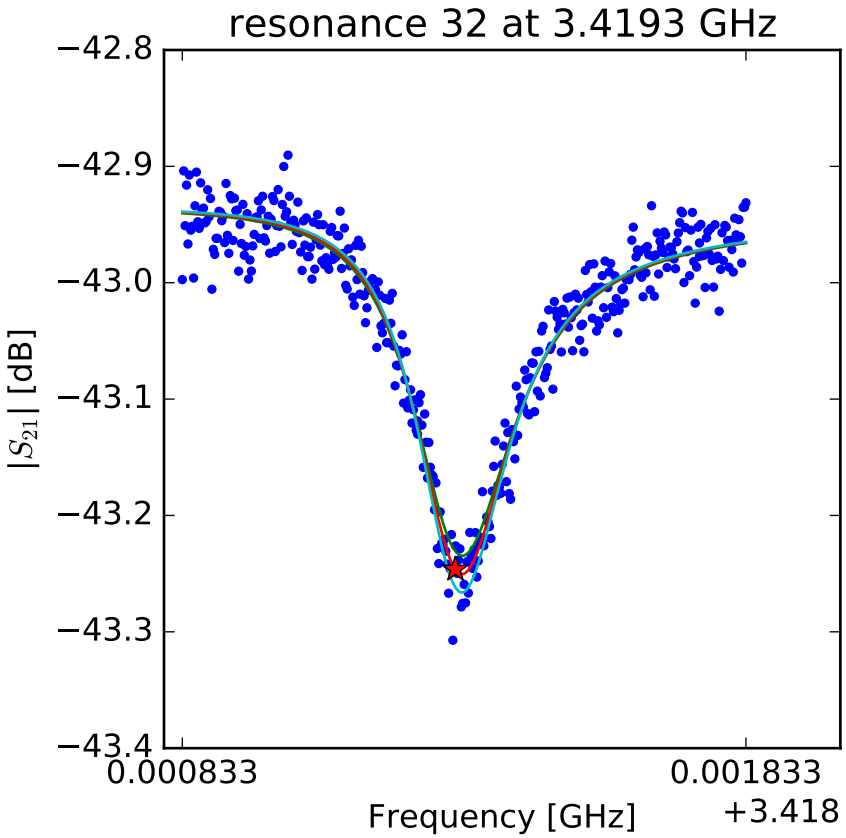


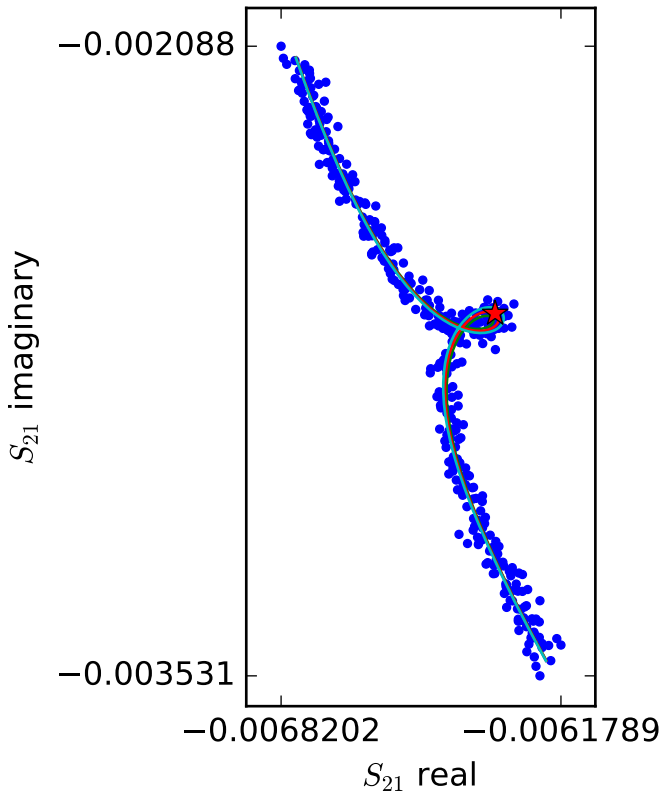


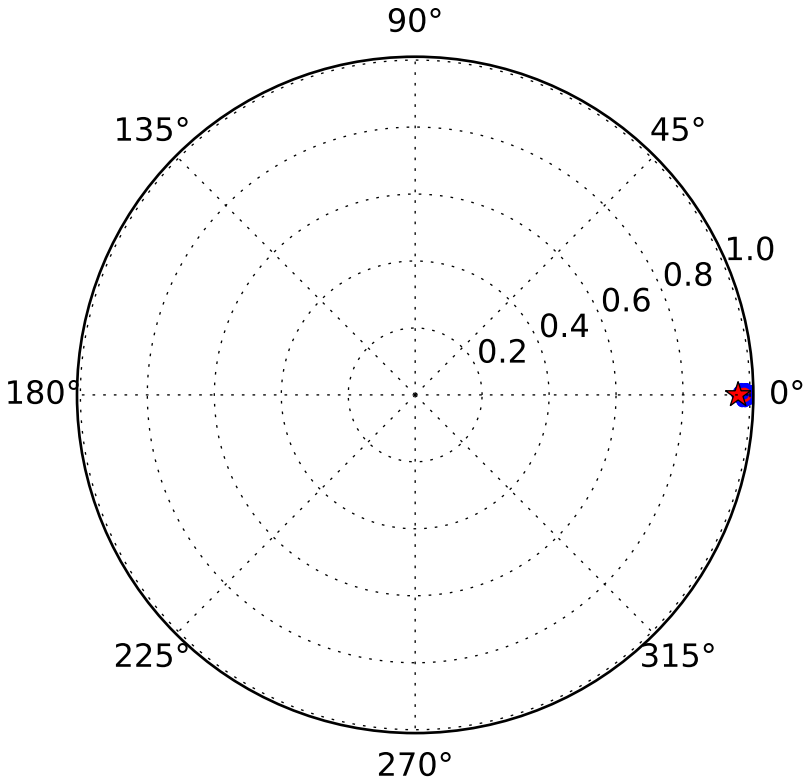


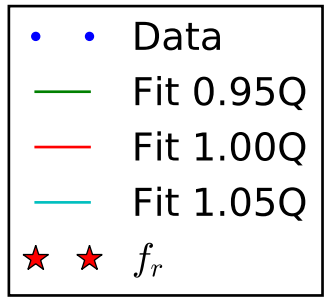
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.41554581428
Q_r = 10648.0548913
Q_c = 194868.370021
a = (-0.00232716576616-0.00677909642295j)
ϕ_0 = 0.997803529831
τ = 36.0111155778



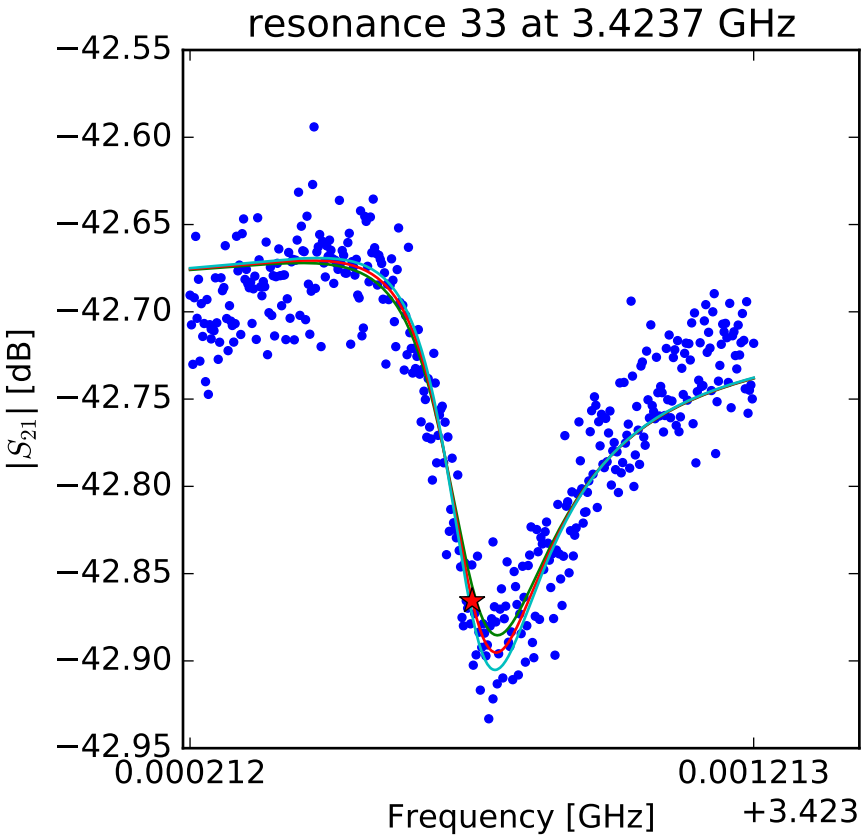


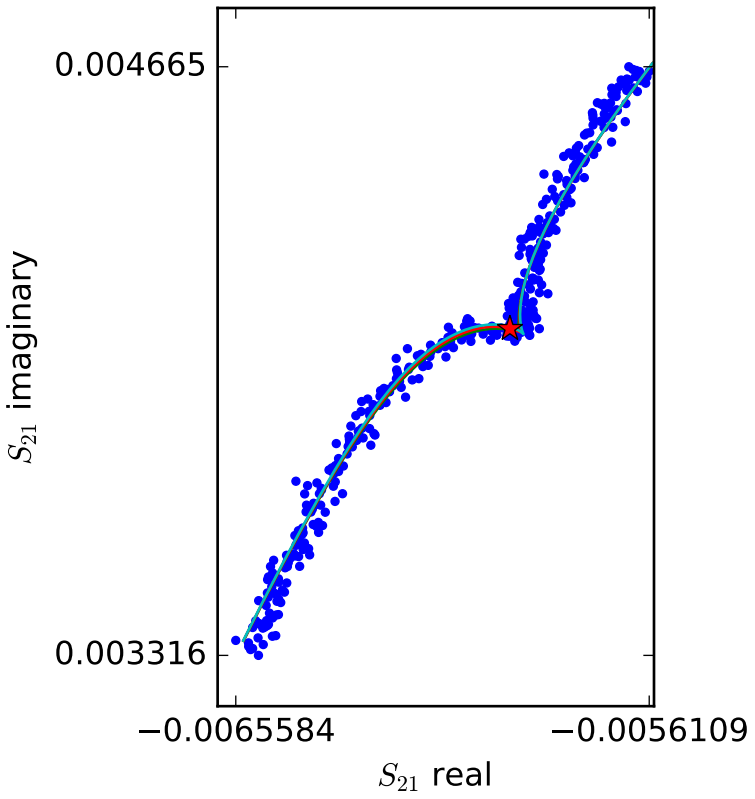


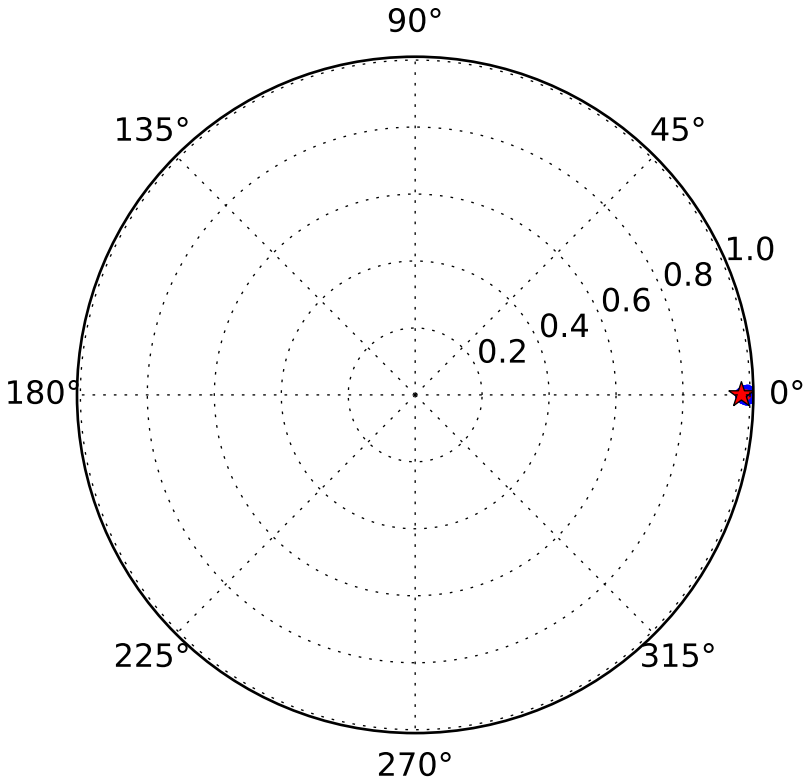


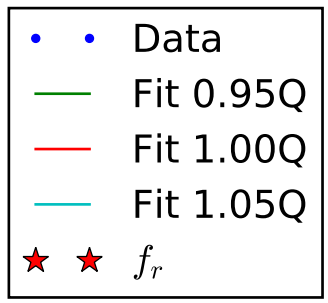
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.41931695813
Q_r = 16213.9812802
Q_c = 456475.874016
a = (0.00231960800074-0.00674039531358j)
ϕ_0 = 0.220489206269
τ = 35.7490407542



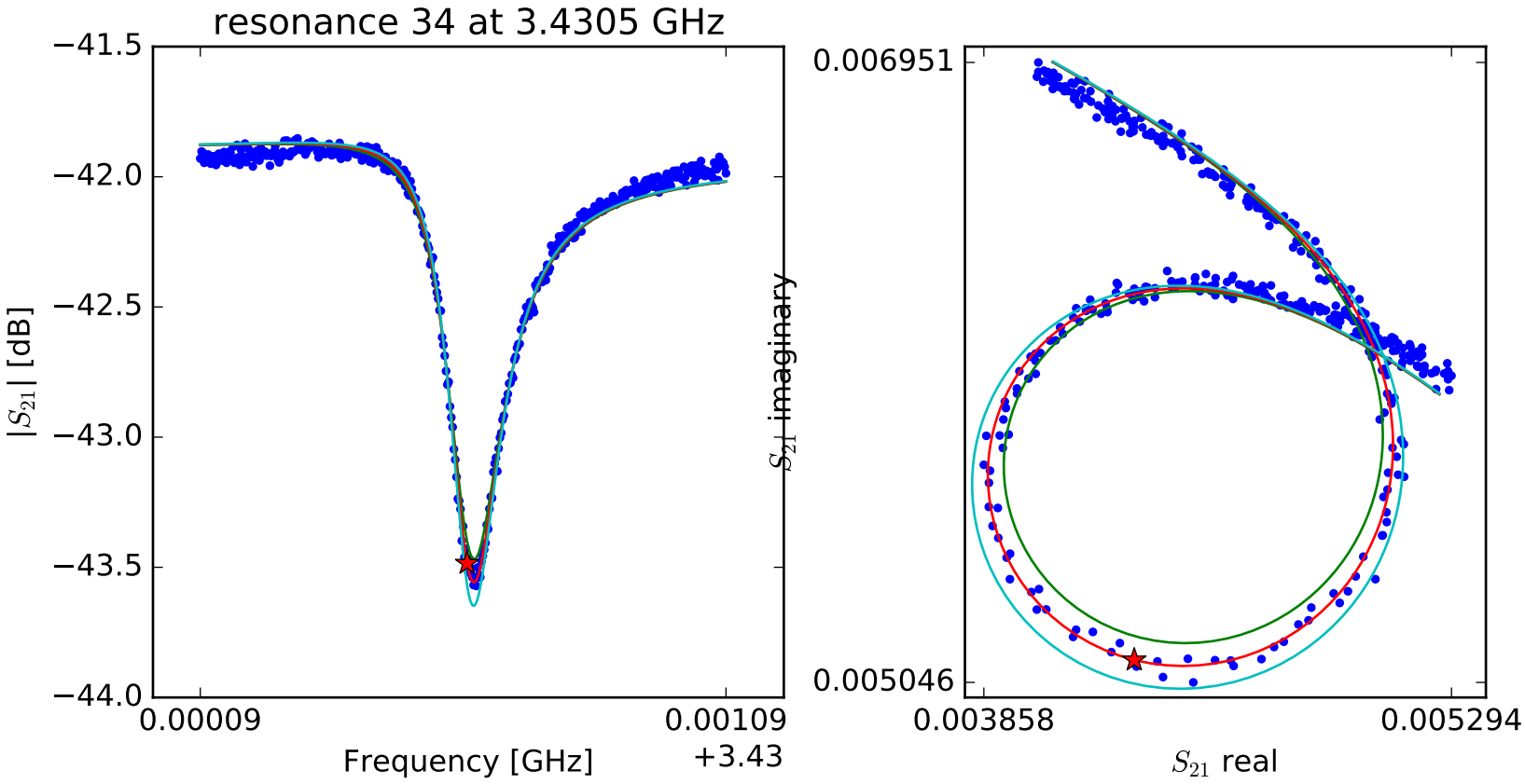


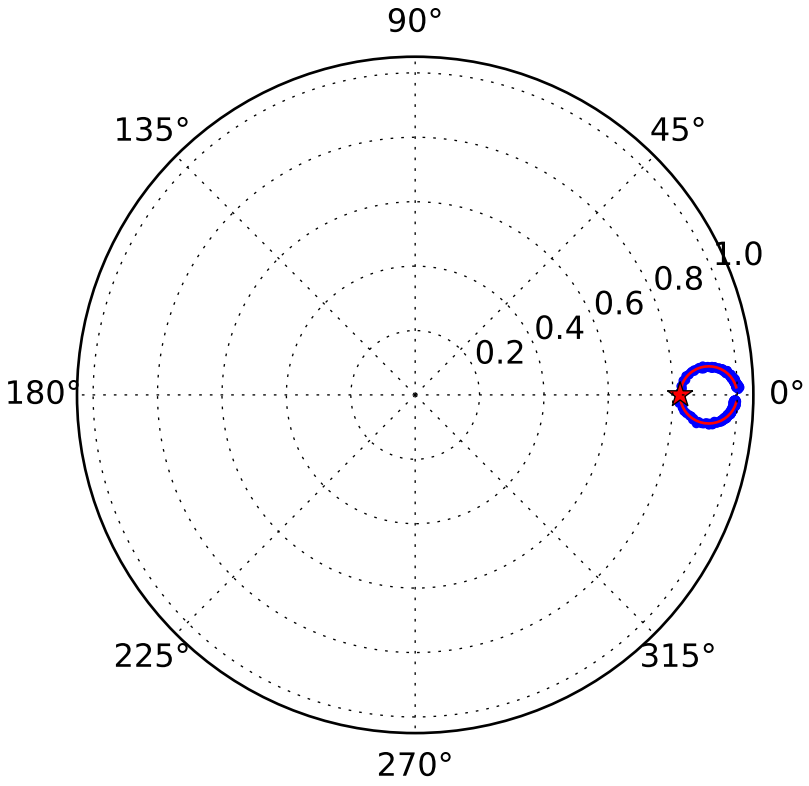


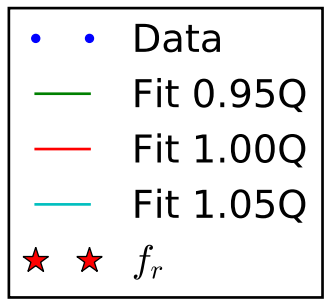


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.42371304983
Q_r = 15461.9784152
Q_c = 603632.621097
a = (-0.00394168697878-0.00617897488023j)
ϕ_0 = 0.725801297814
τ = 36.5838220168

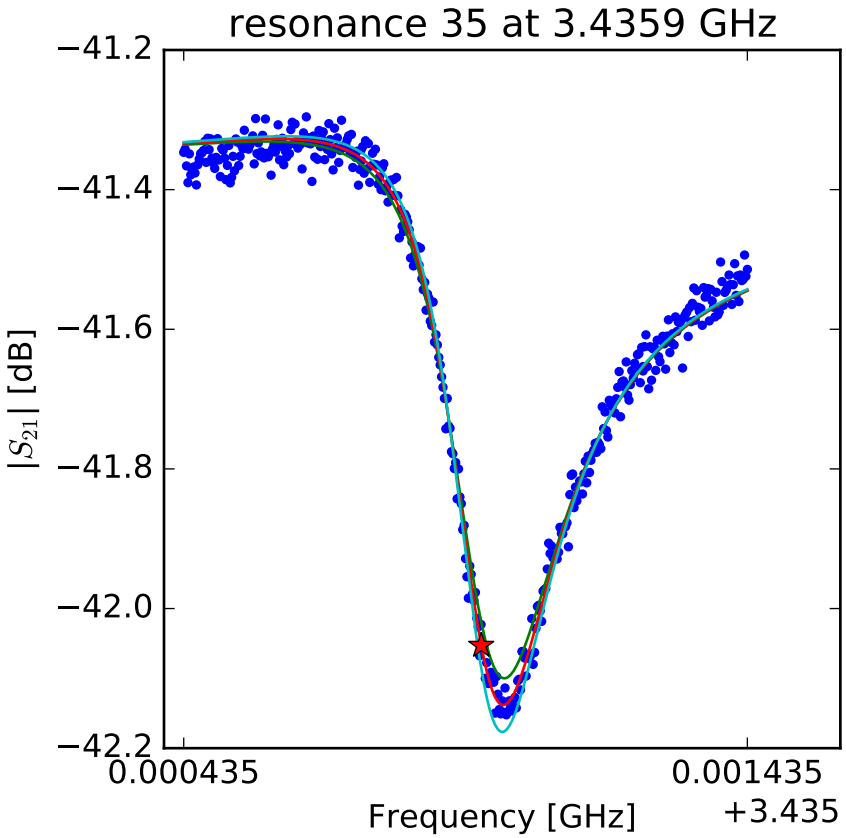


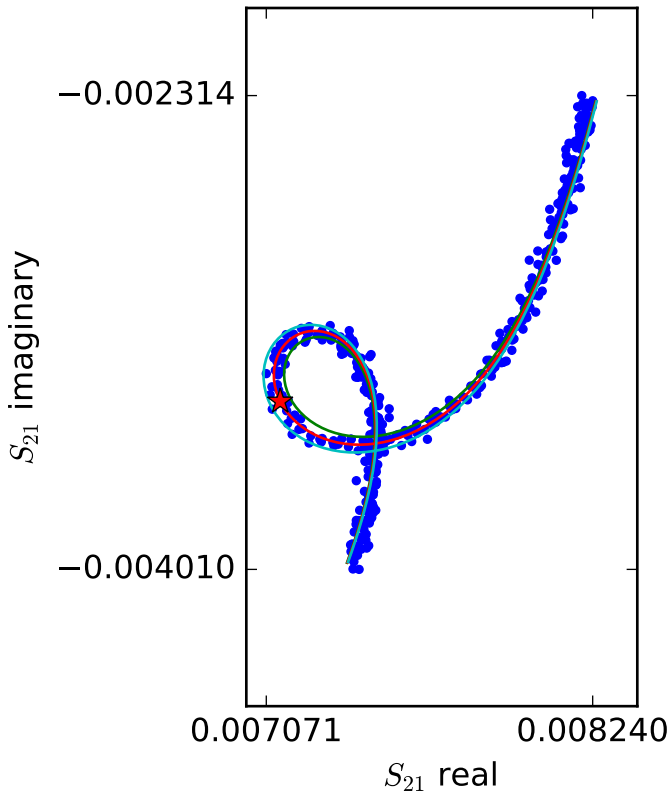


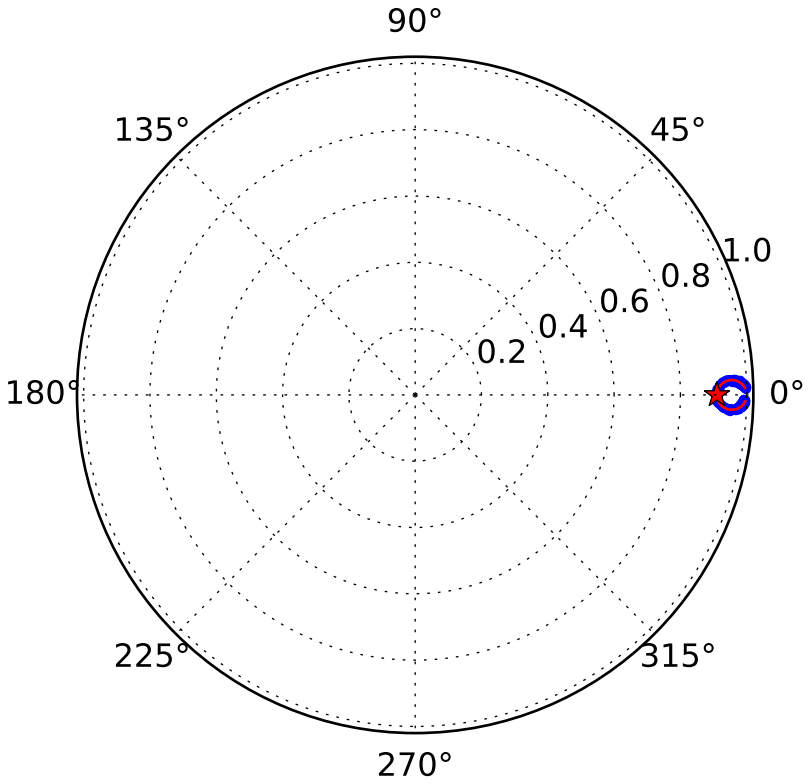


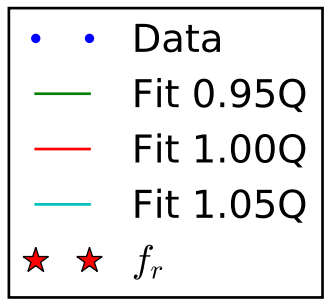
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.43059756557
Q_r = 25620.8017317
Q_c = 144331.03563
a = (0.00721487979225-0.0034897568755j)
ϕ_0 = 0.349037462012
τ = 38.1211543137



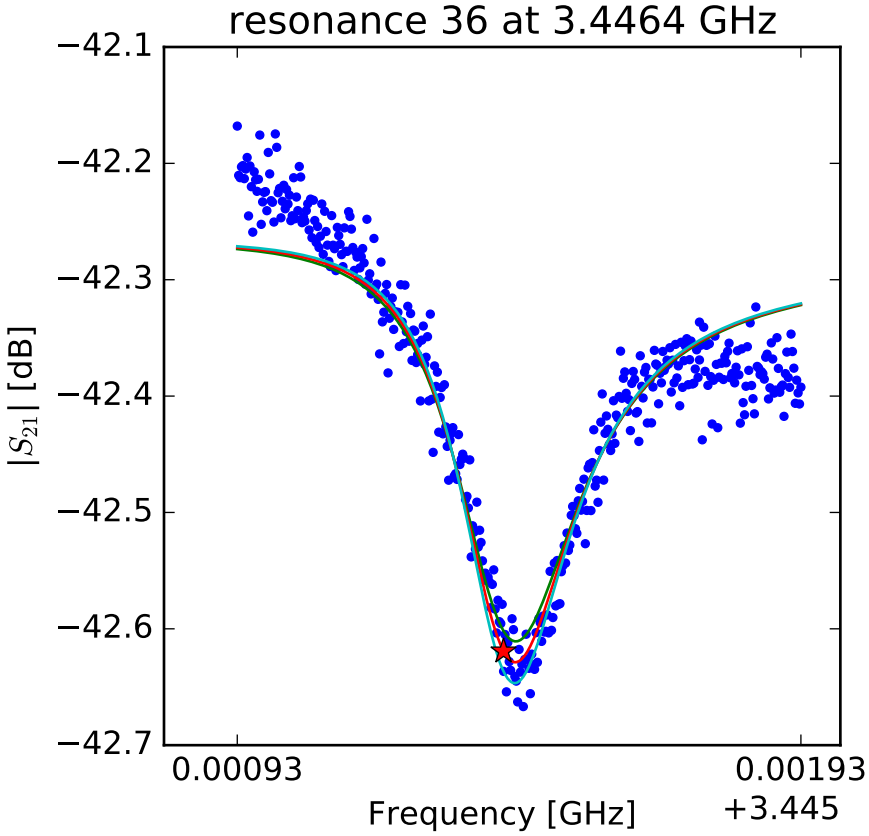


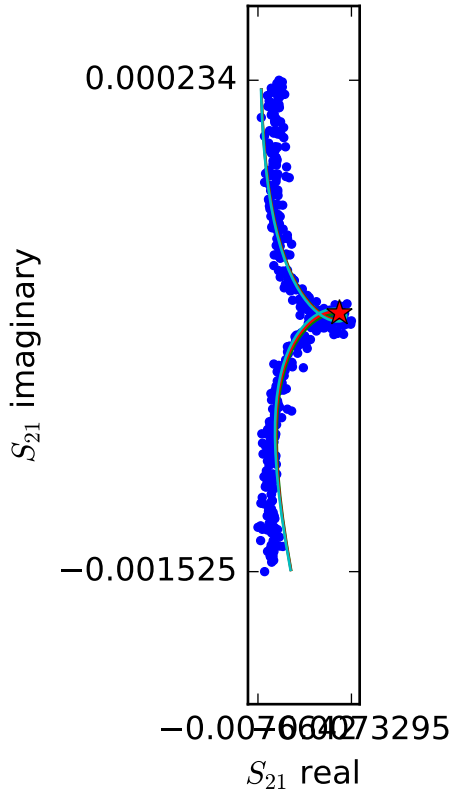


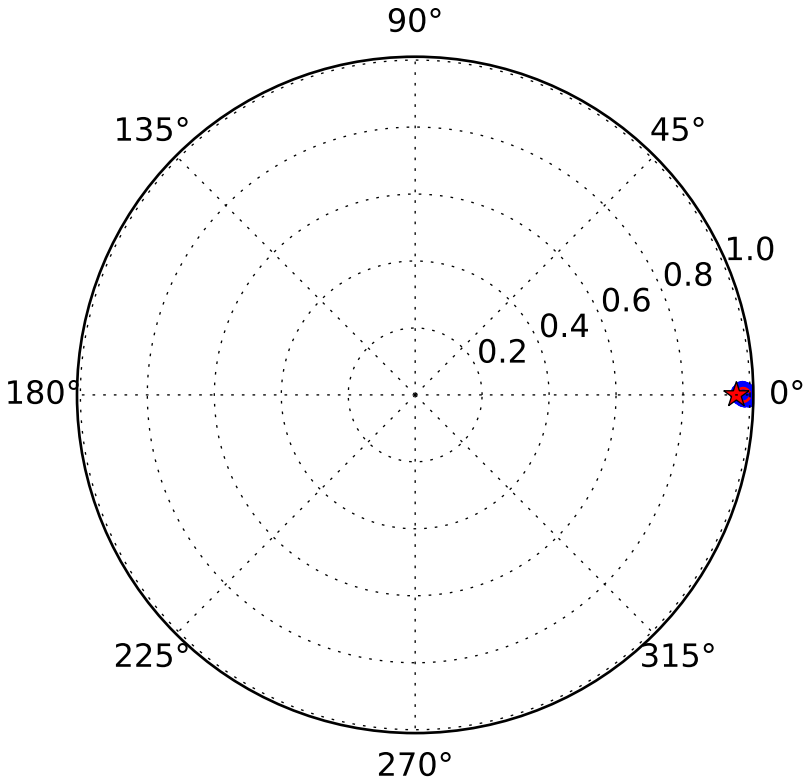


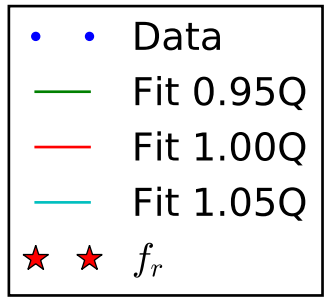
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.43596290012
Q_r = 14393.7249394
Q_c = 160138.952419
a = (-0.00831099314685-0.00183904230019j)
ϕ_0 = 0.60554429923
τ = 40.3371413499



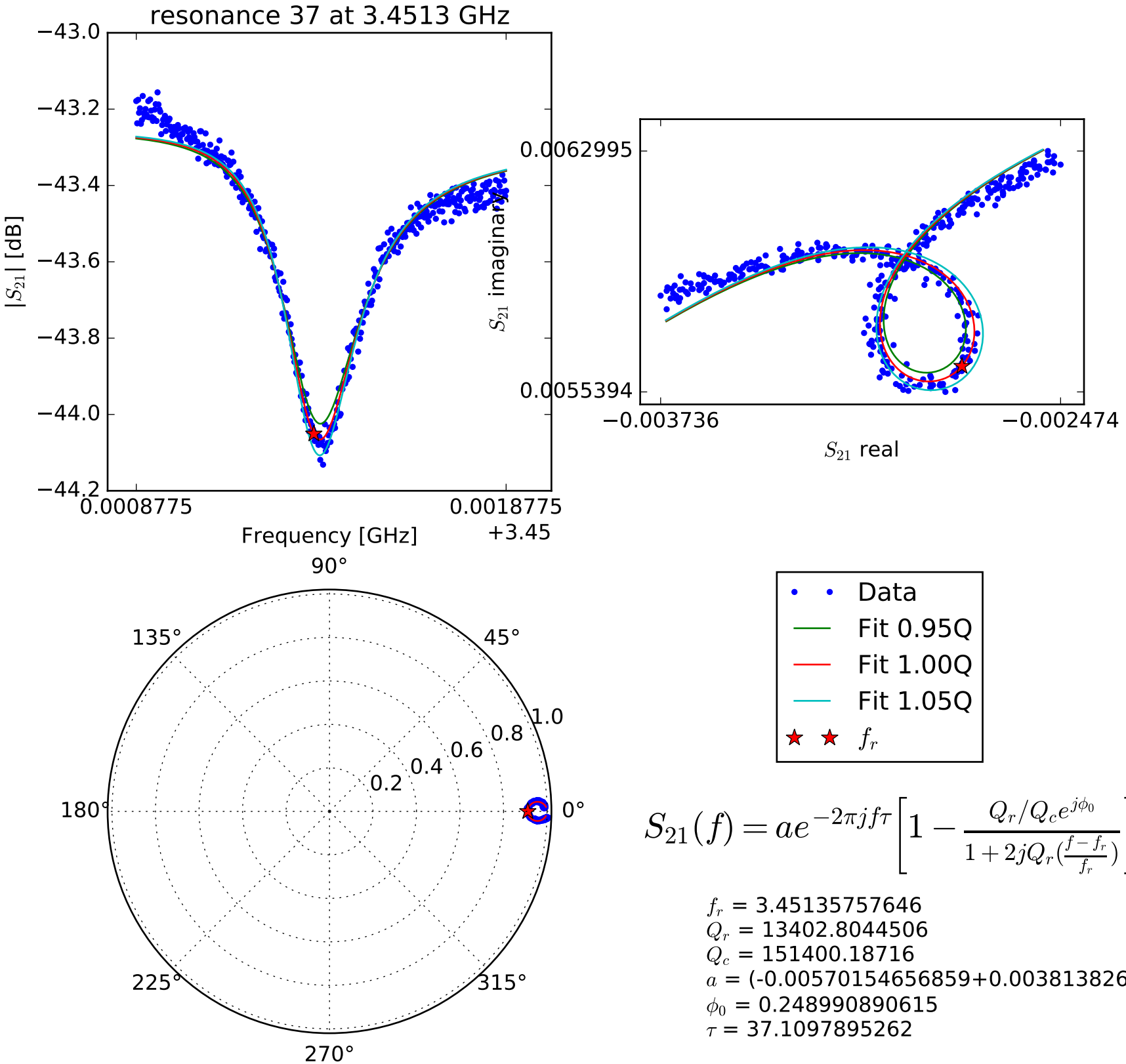






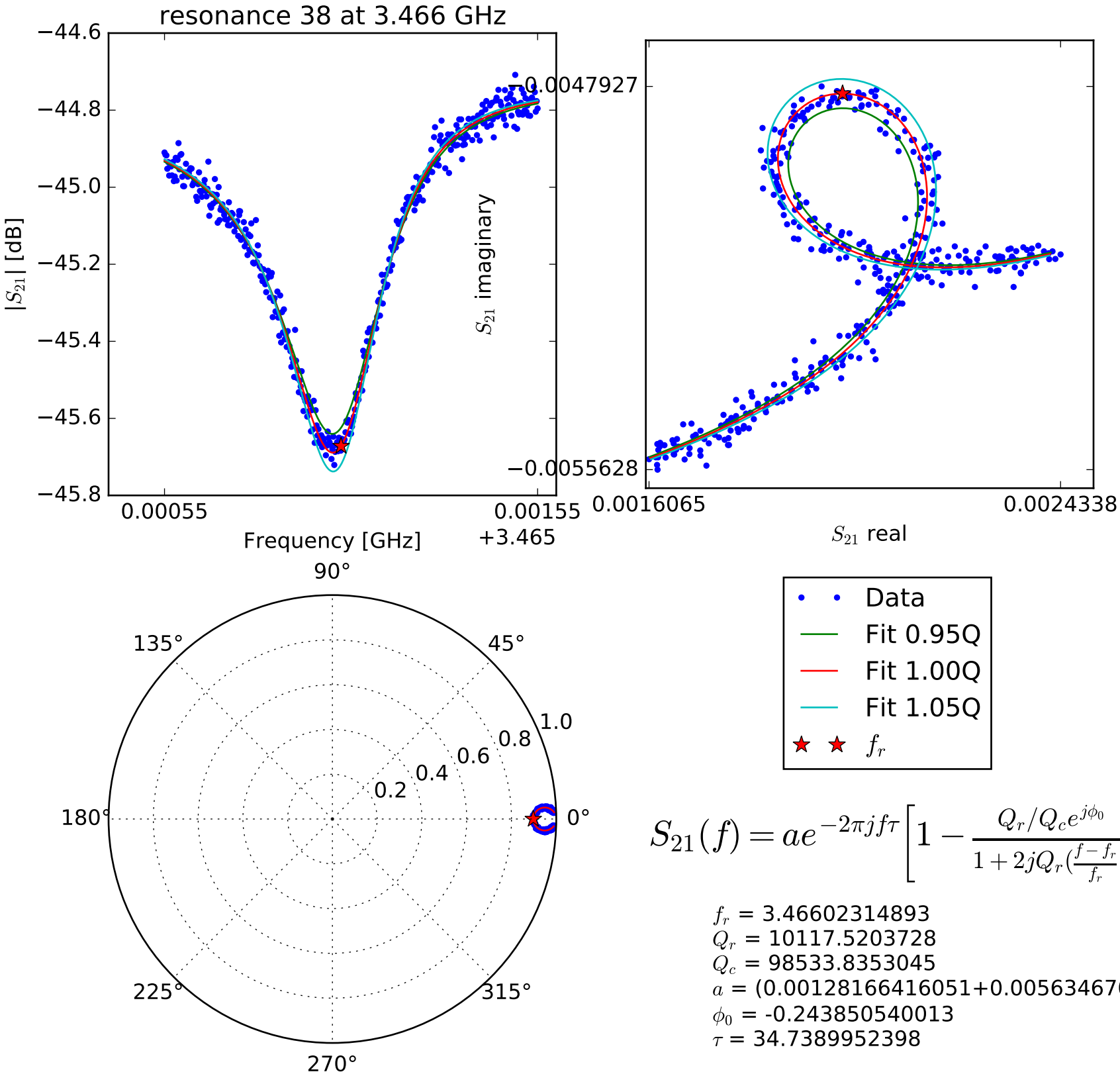
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.4464024075
Q_r = 13361.7095248
Q_c = 328535.247736
a = (8.2410897237e-05+0.00769332716418j)
ϕ_0 = 0.31290304167
τ = 38.8037427551



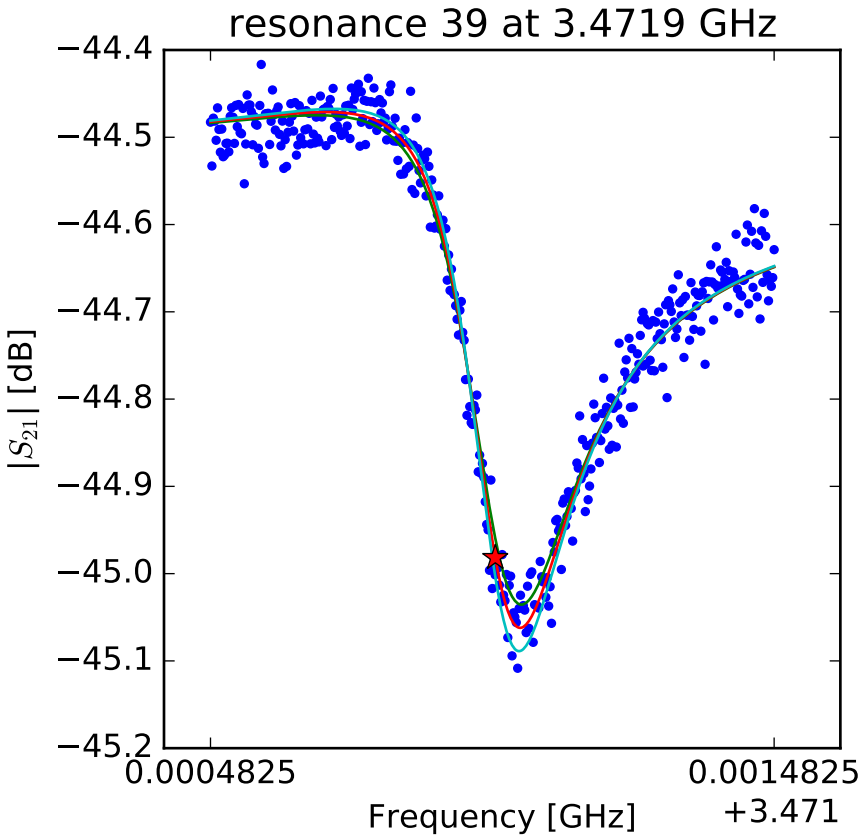
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

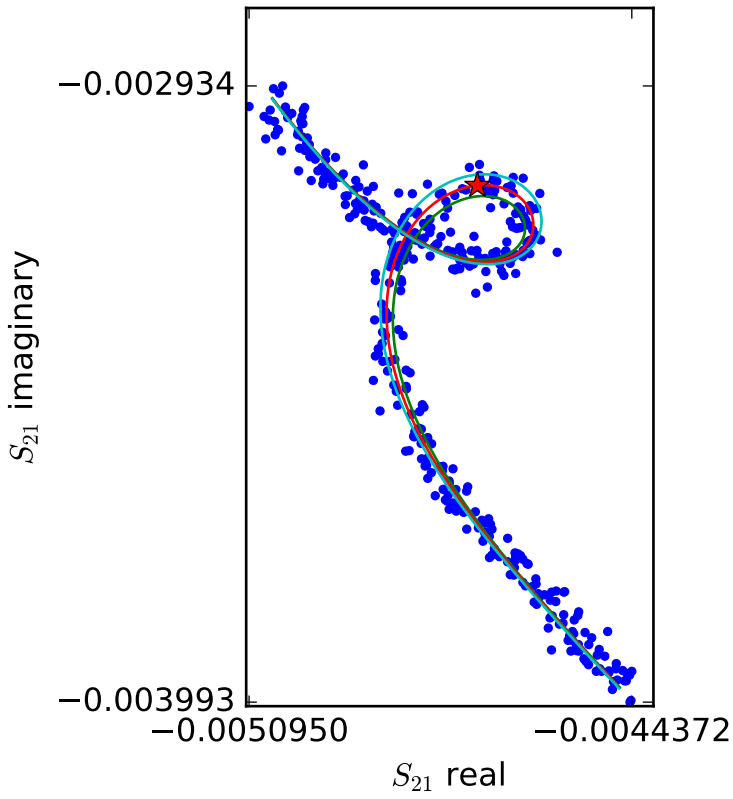
f_r = 3.45135757646
Q_r = 13402.8044506
Q_c = 151400.18716
a = (-0.00570154656859+0.00381382662485j)
ϕ_0 = 0.248990890615
τ = 37.1097895262

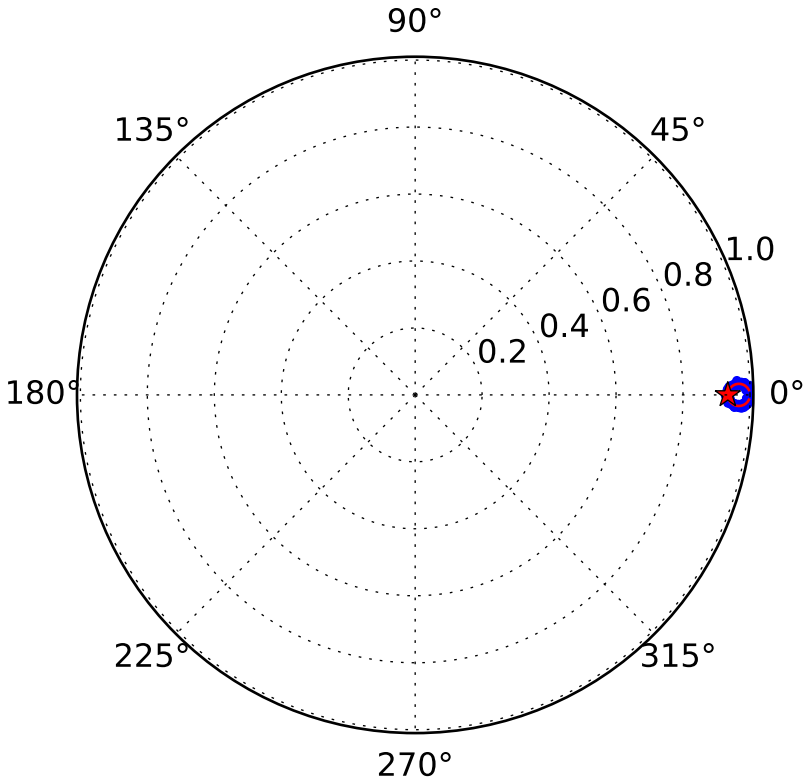


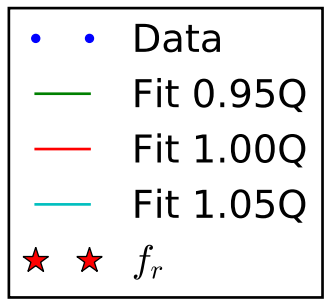
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.46602314893
Q_r = 10117.5203728
Q_c = 98533.8353045
a = (0.00128166416051+0.00563467042462j)
ϕ_0 = -0.243850540013
τ = 34.7389952398



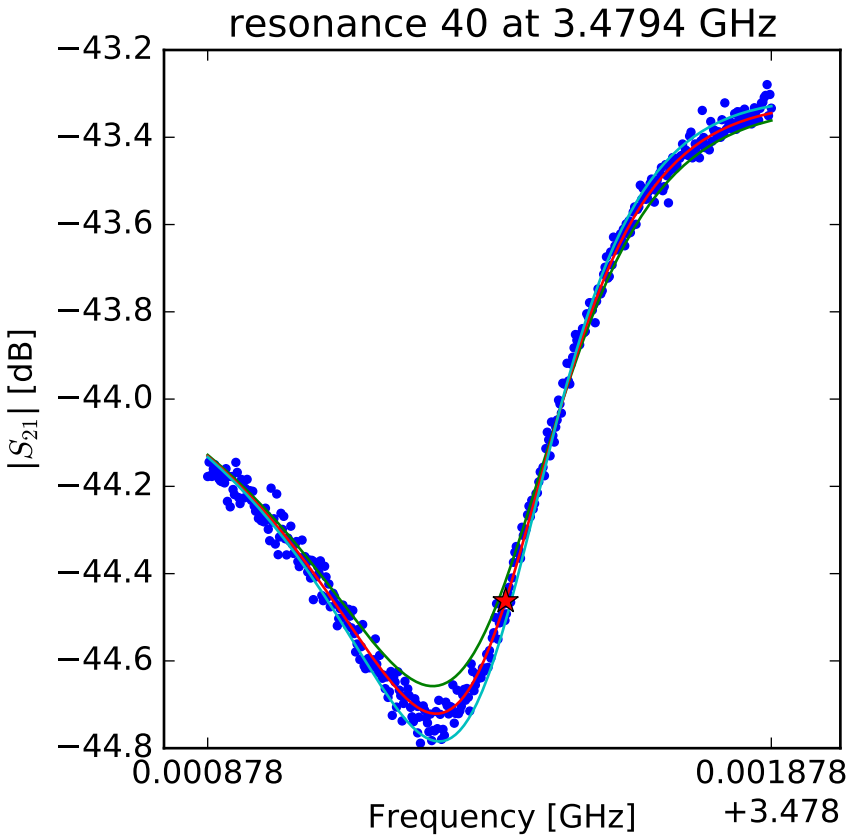


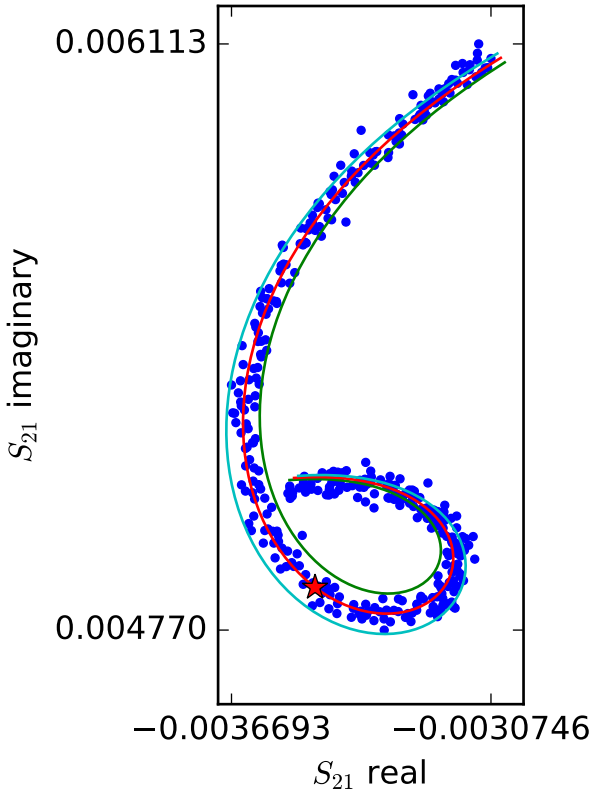


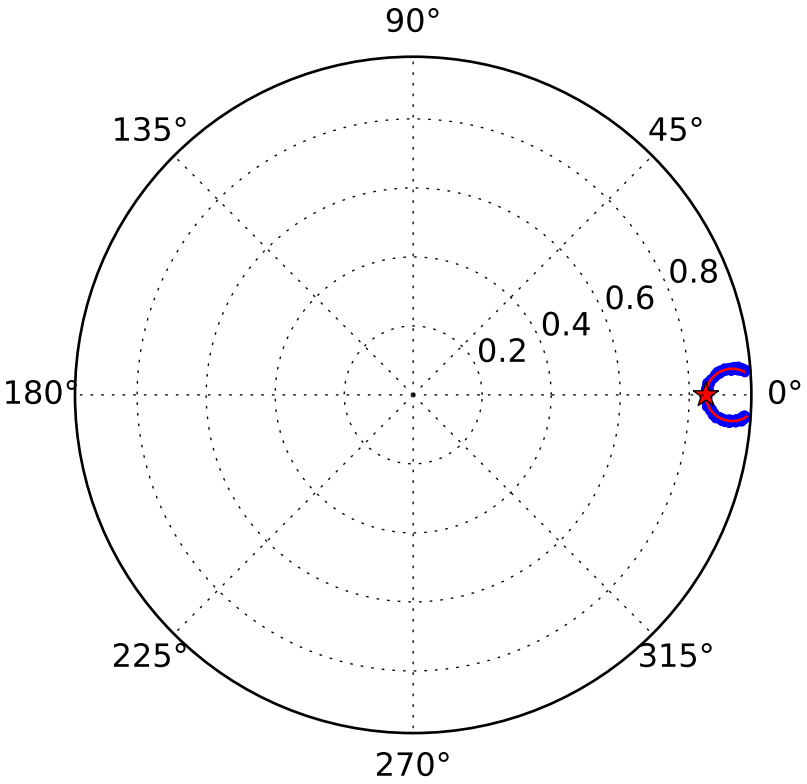


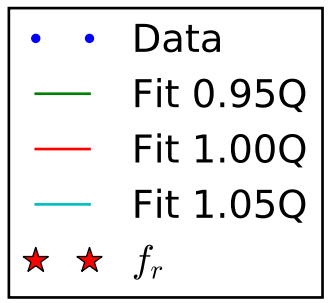
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.4719877656
Q_r = 15071.4104597
Q_c = 227239.014309
a = (0.00193670772771+0.00560221896836j)
ϕ_0 = 0.710079180152
τ = 35.0222740269



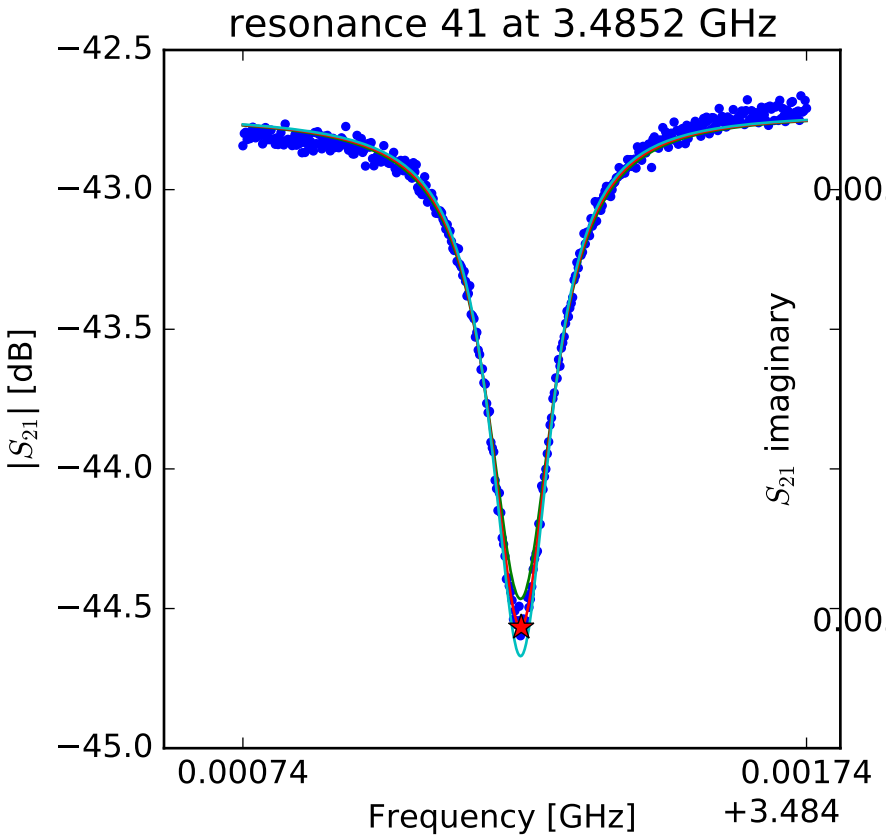


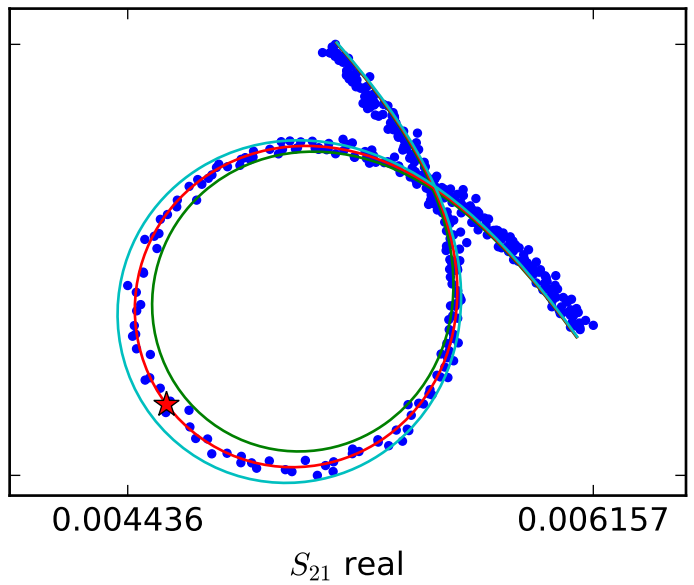


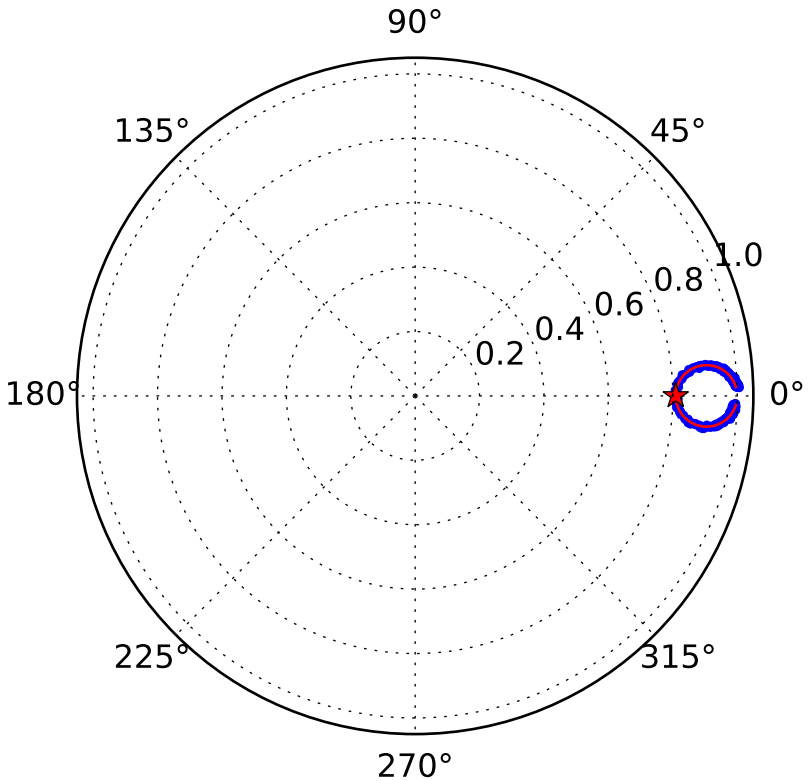


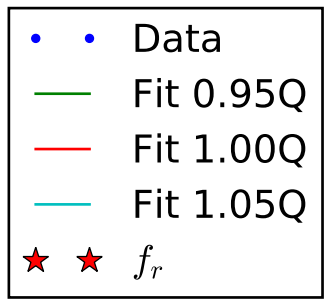
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.47940613824
Q_r = 6204.43917637
Q_c = 40898.2452291
a = (-0.0051640326508-0.00421313457893j)
ϕ_0 = -0.772501155025
τ = 37.4428831289



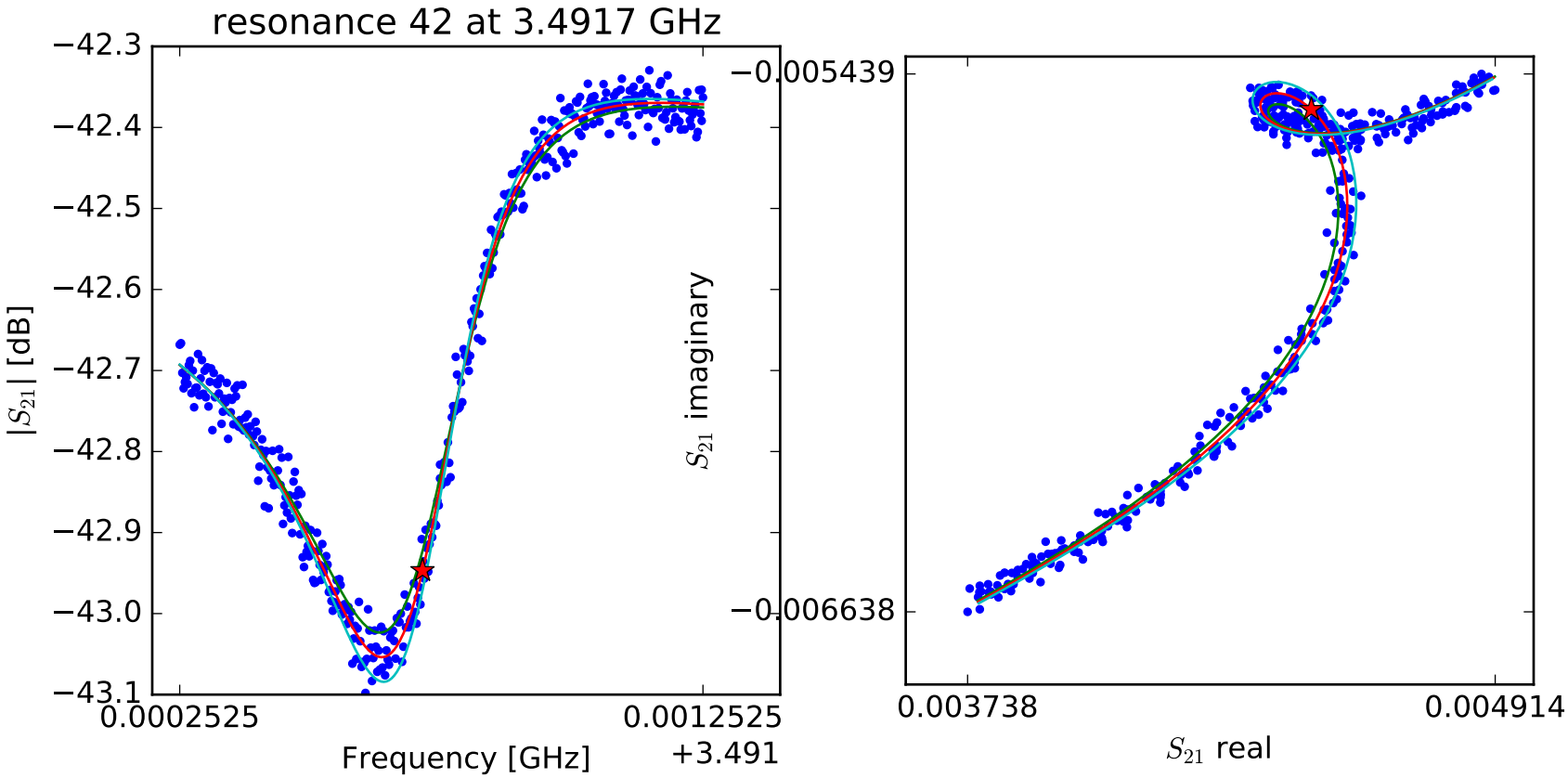


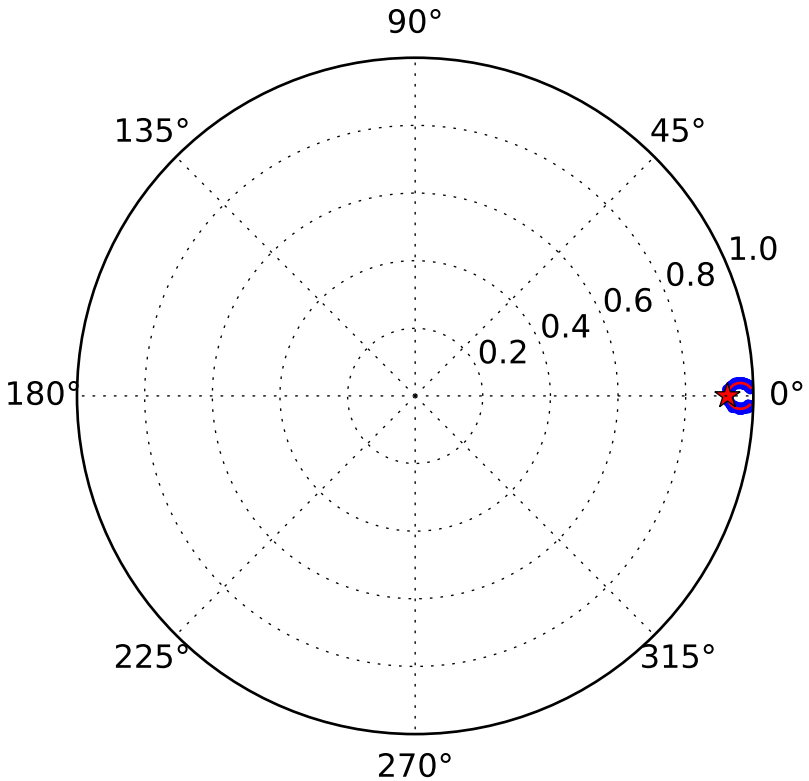


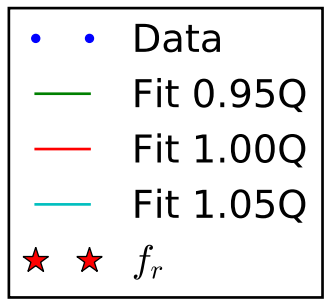


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.48523384574
Q_r = 23259.359062
Q_c = 121762.938946
a = (-0.00688873310036+0.00243222959925j)
ϕ_0 = -0.0290503970229
τ = 39.6926465272

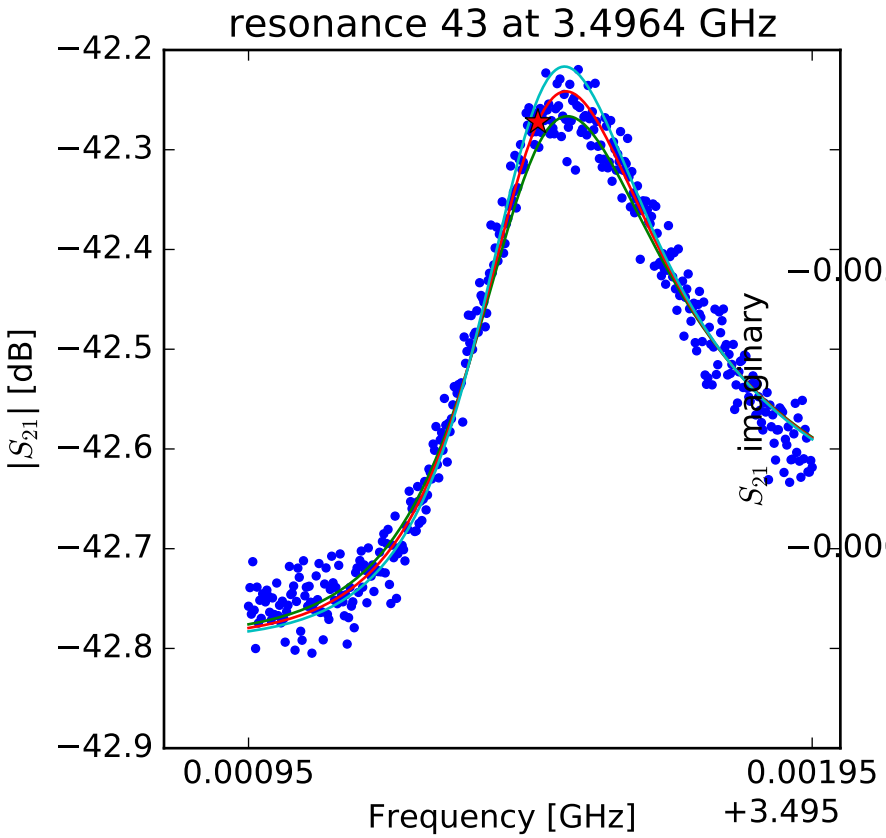


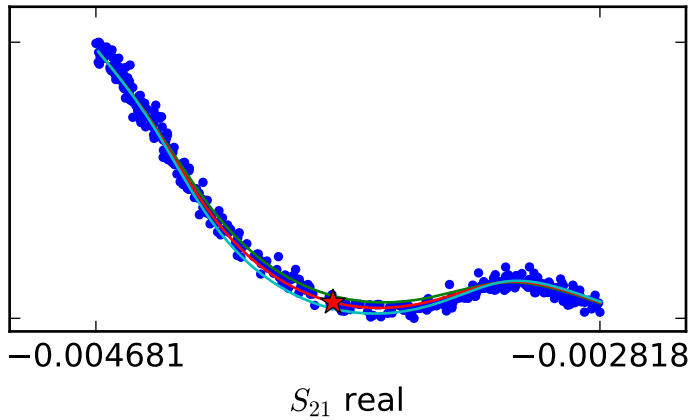


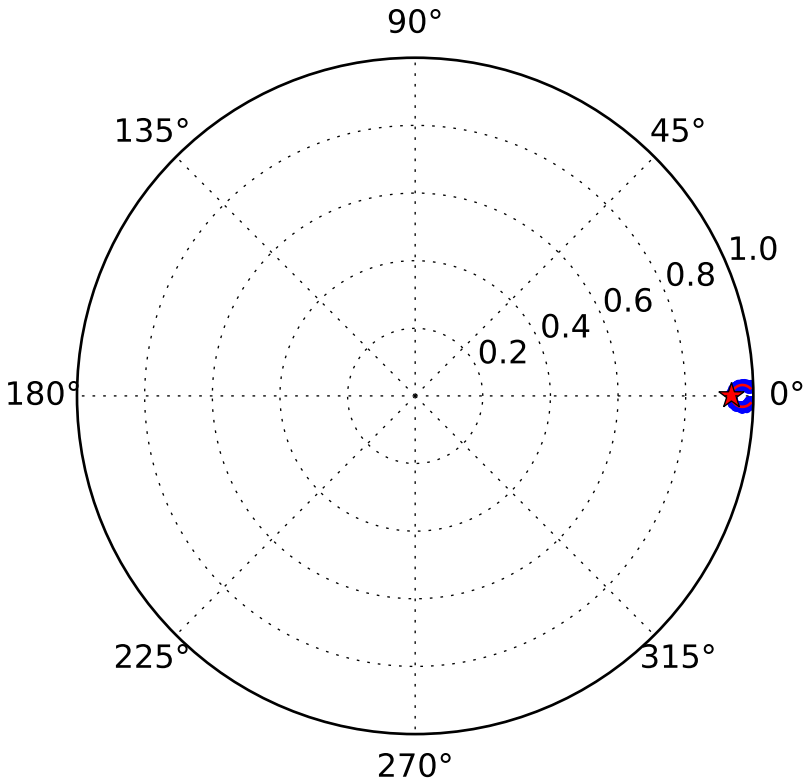


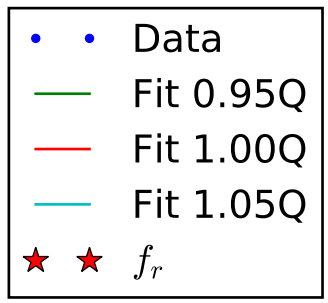
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.49171659543
Q_r = 9270.23244575
Q_c = 121073.130369
a = (0.00261354326898-0.00706278096797j)
ϕ_0 = -0.757427990355
τ = 40.0823777232



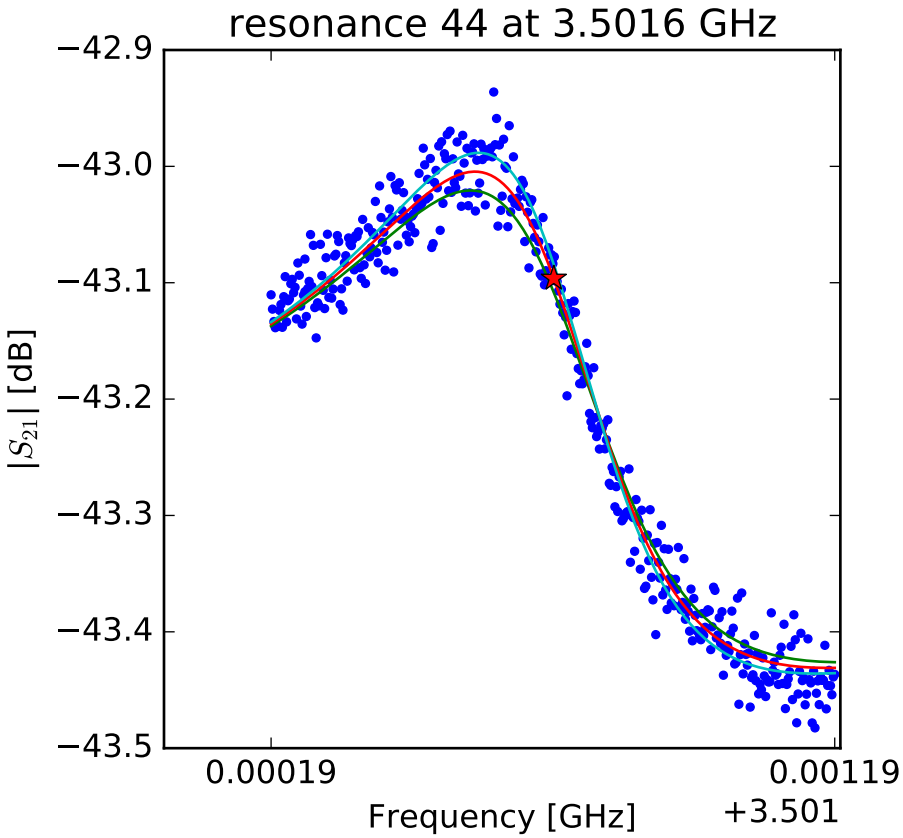


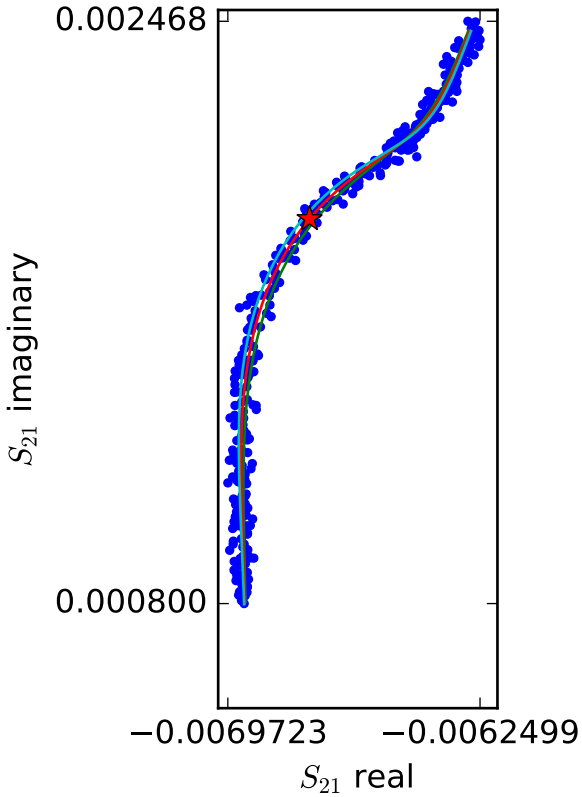


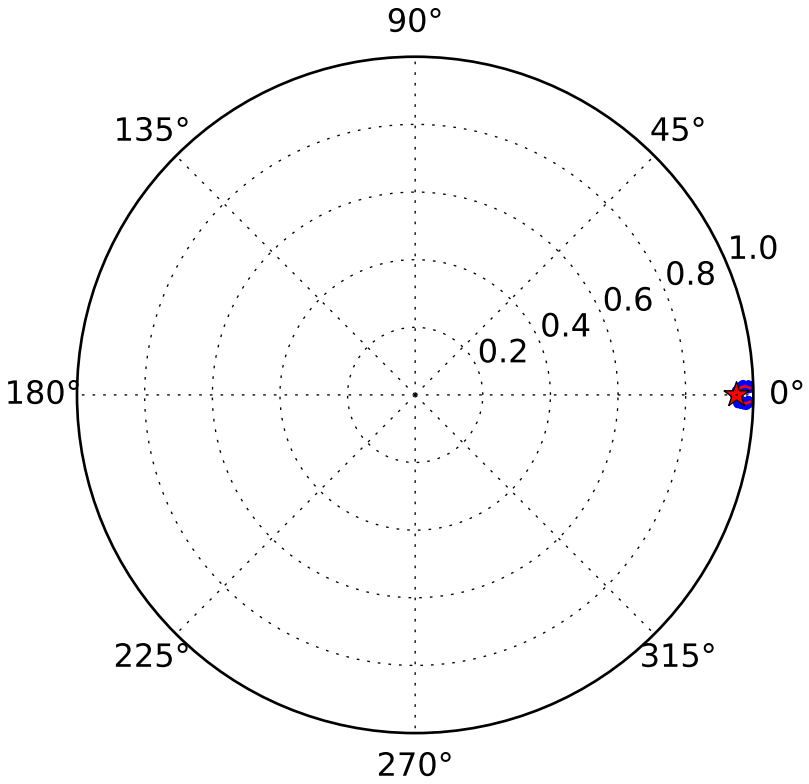


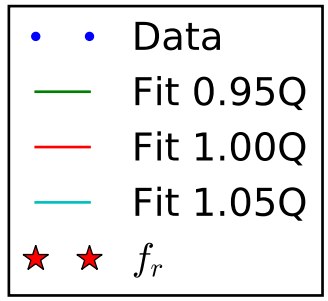
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.49646331468
Q_r = 8852.0696496
Q_c = 136860.01434
a = (-0.00129518458114-0.00716725847814j)
ϕ_0 = -2.63322947944
τ = 38.9131975551



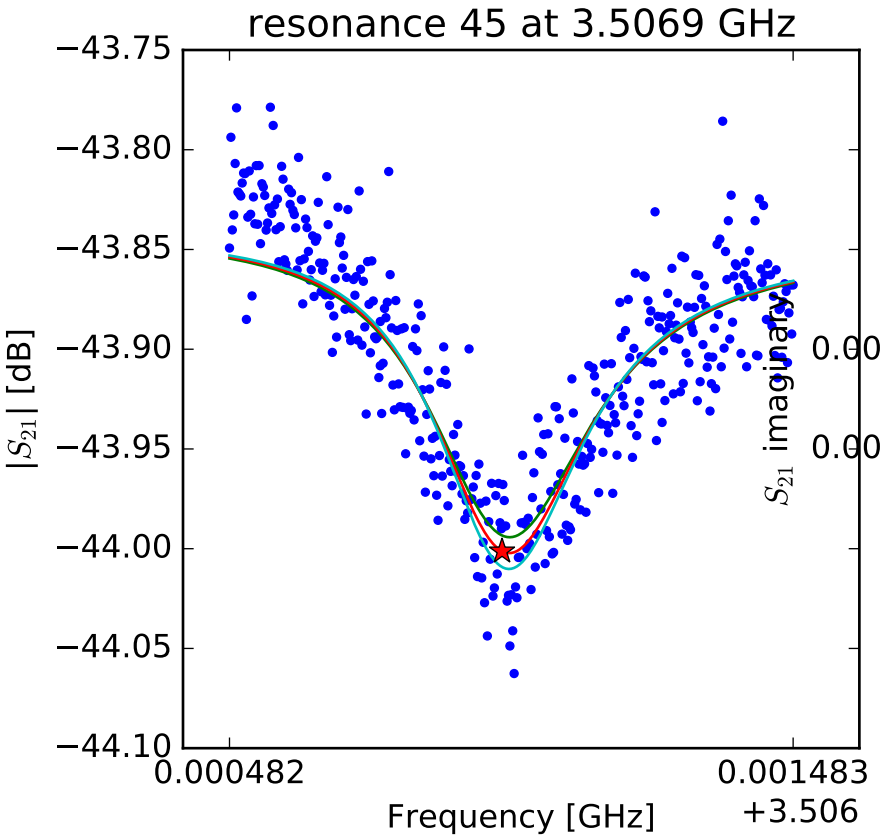


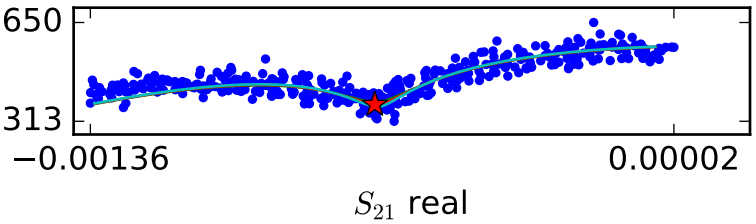


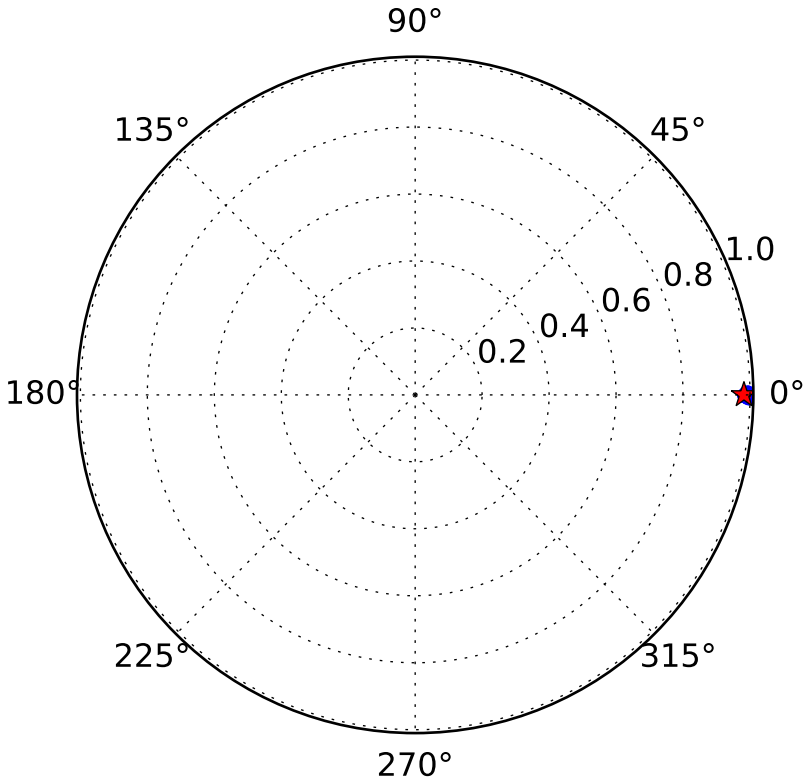


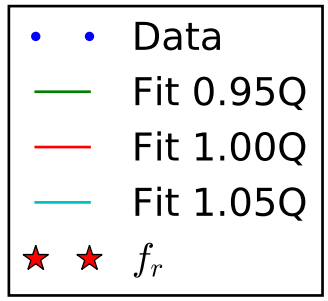
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.50169157548
Q_r = 6705.98192625
Q_c = 134764.058424
a = (-0.00620275293817-0.00282058761467j)
ϕ_0 = 2.13611023749
τ = 37.1549551041



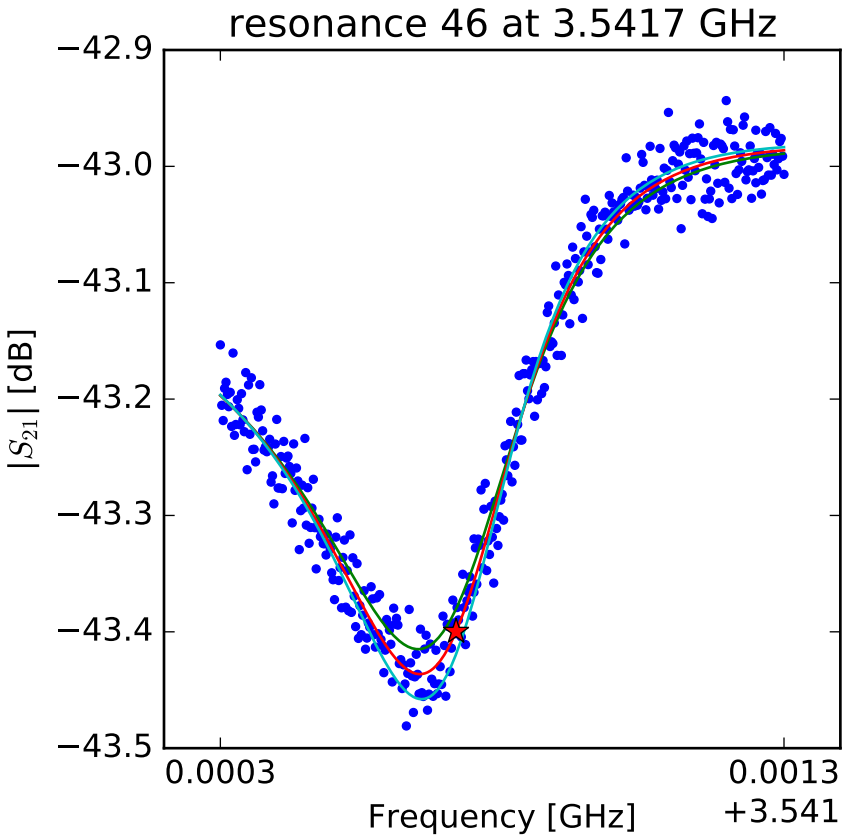


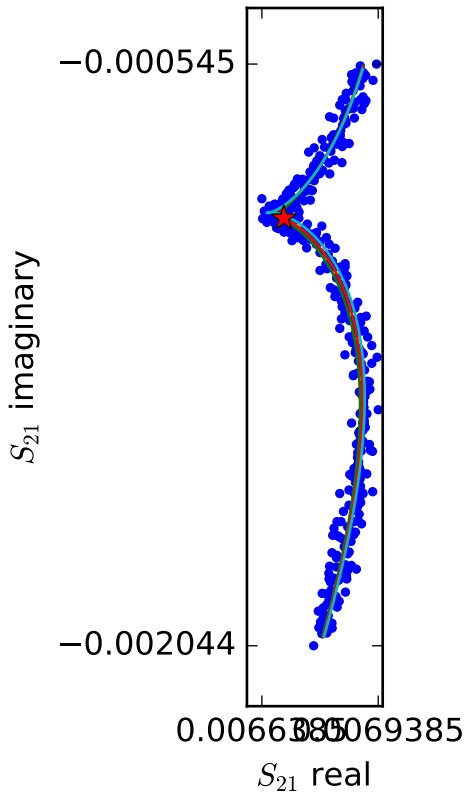


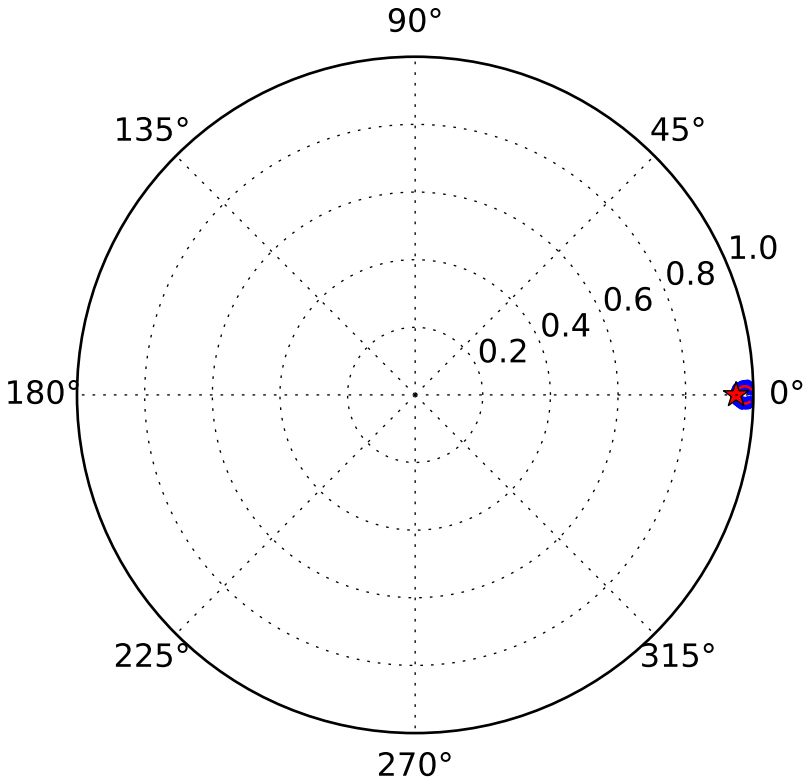


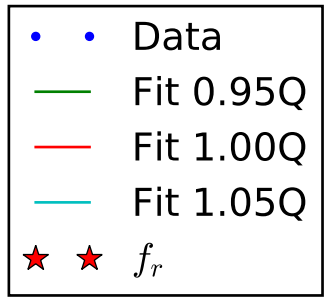
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.50696605836
Q_r = 10413.6226671
Q_c = 575111.628574
a = (-0.00296353985351-0.00569914616002j)
ϕ_0 = 0.150784299909
τ = 34.9036352493



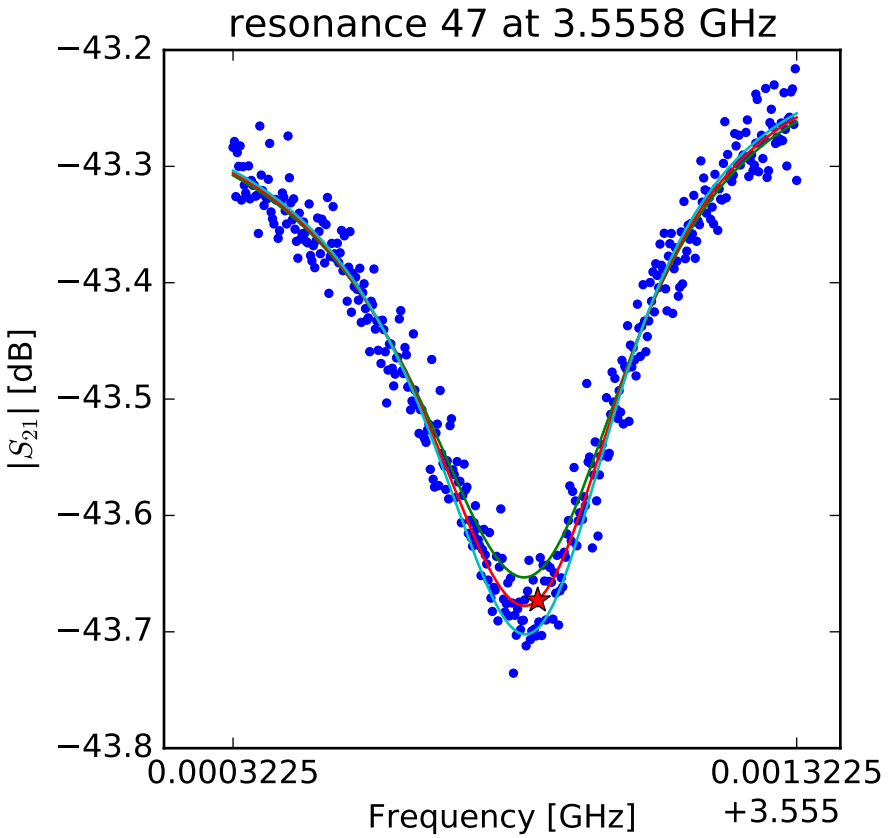


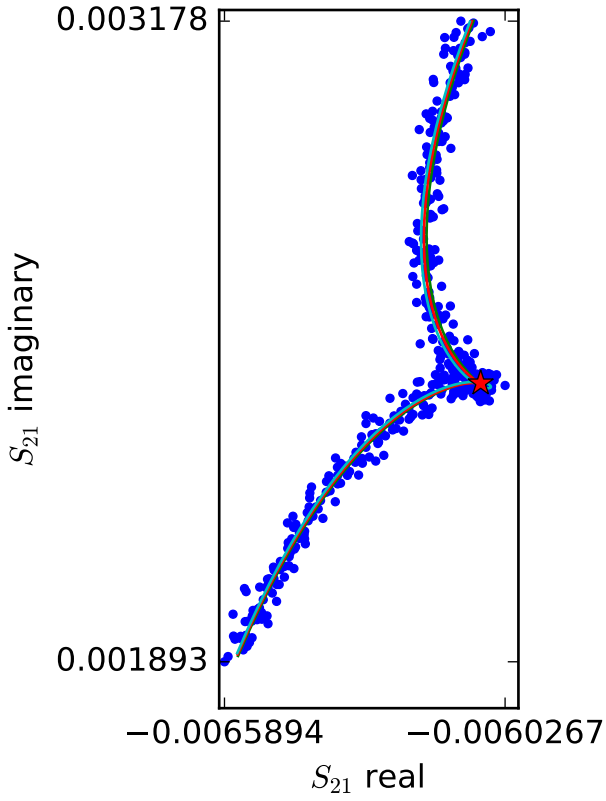


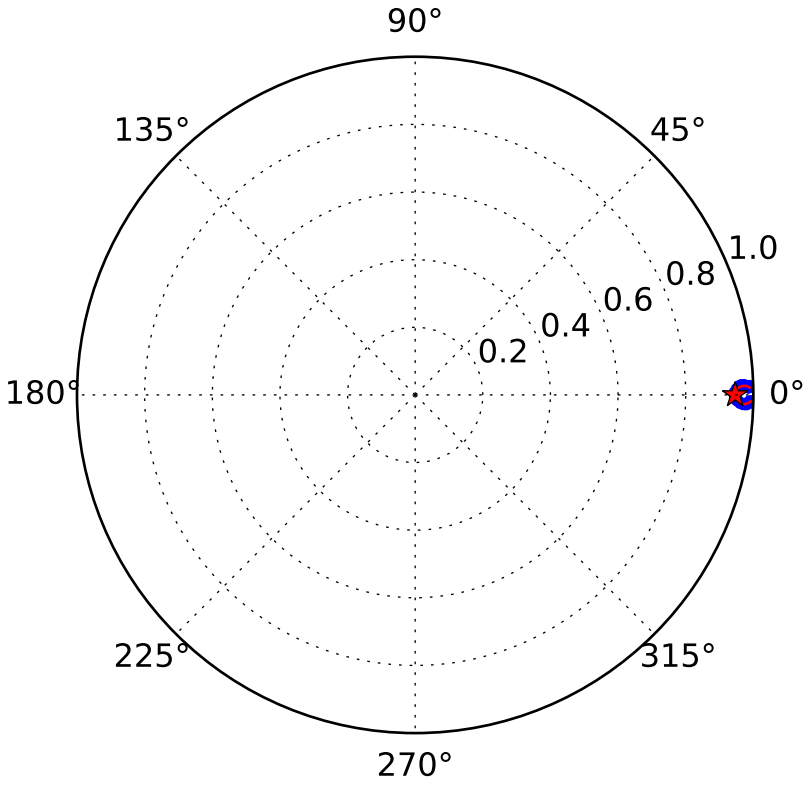


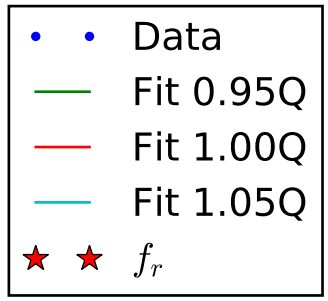
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.54171826971
Q_r = 7967.48153645
Q_c = 156113.346425
a = (-2.64721073471e-05-0.00706601118247j)
ϕ_0 = -0.548996898241
τ = 38.0538685071



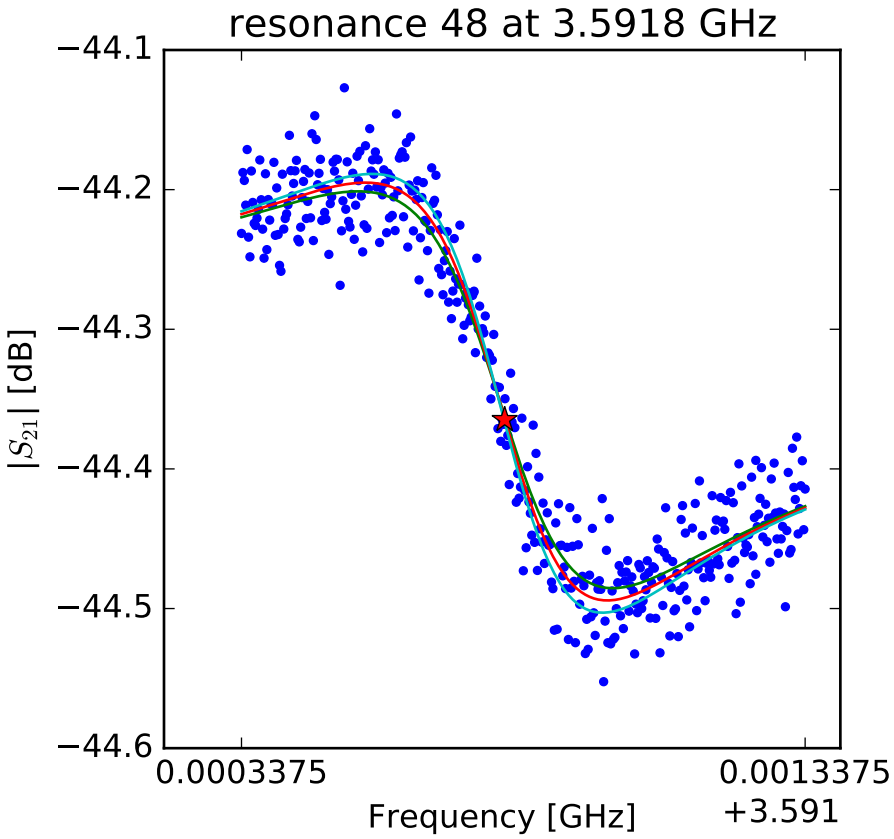


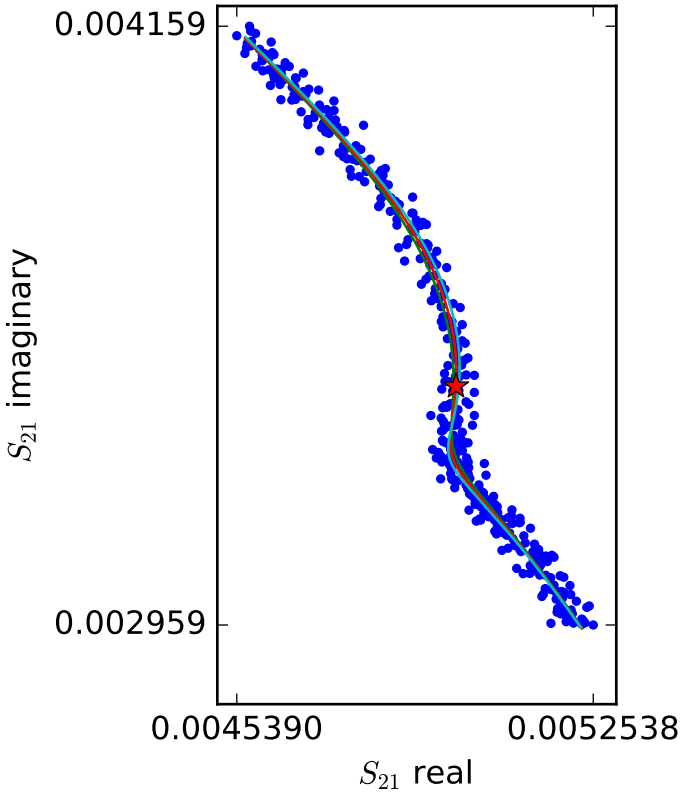


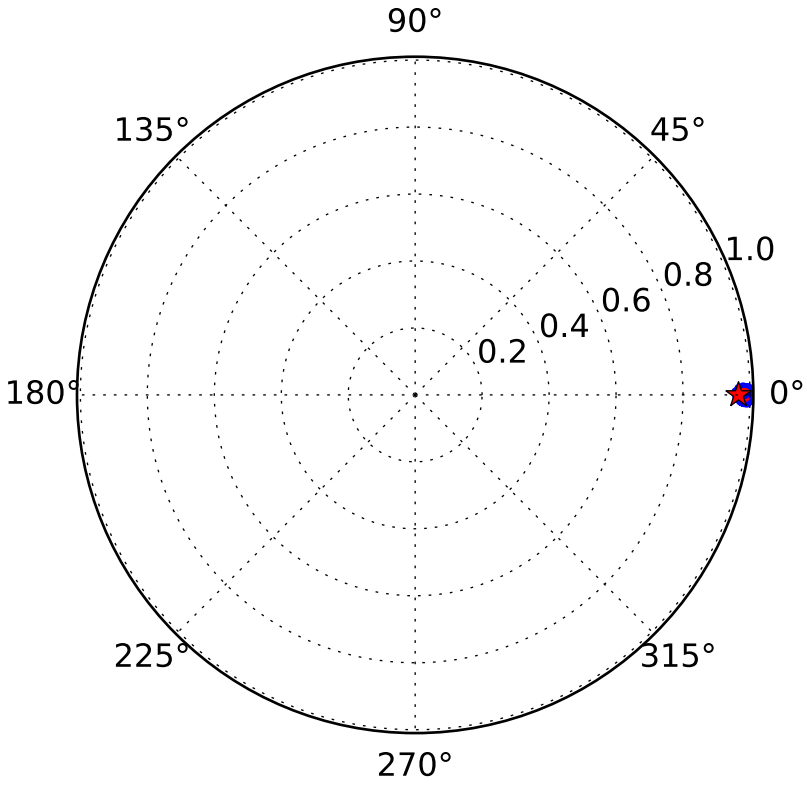


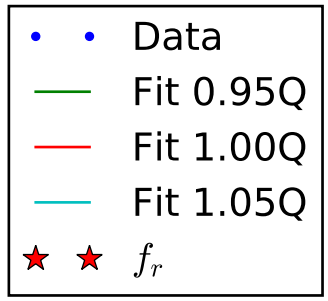
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.55586300823
Q_r = 7598.09611301
Q_c = 141111.021834
a = (0.00400452247567-0.00564000366756j)
ϕ_0 = -0.190968327007
τ = 38.0810581373



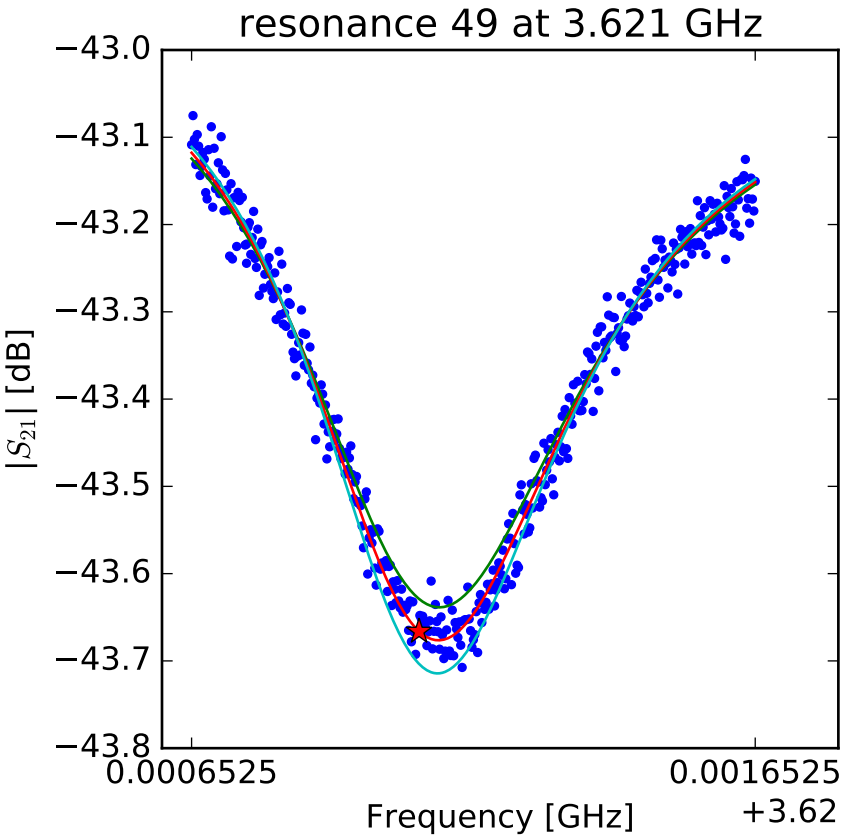


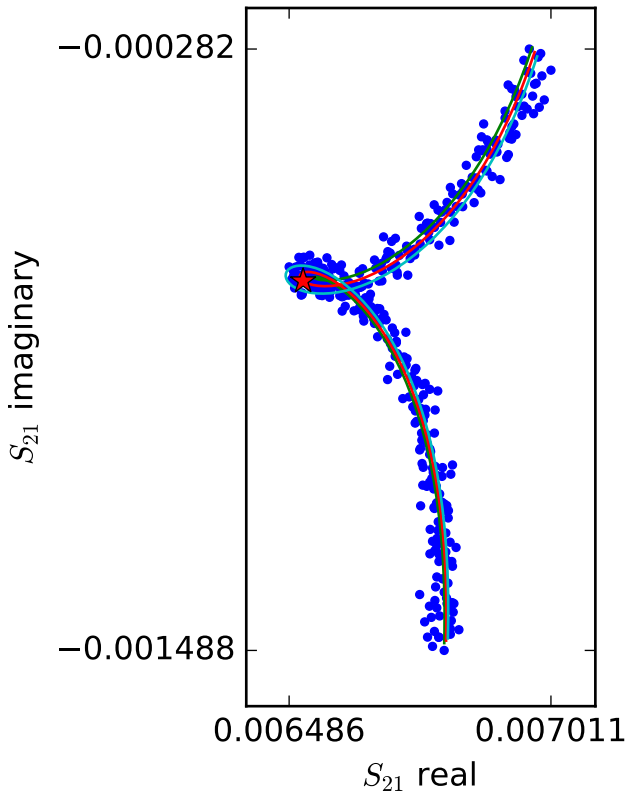


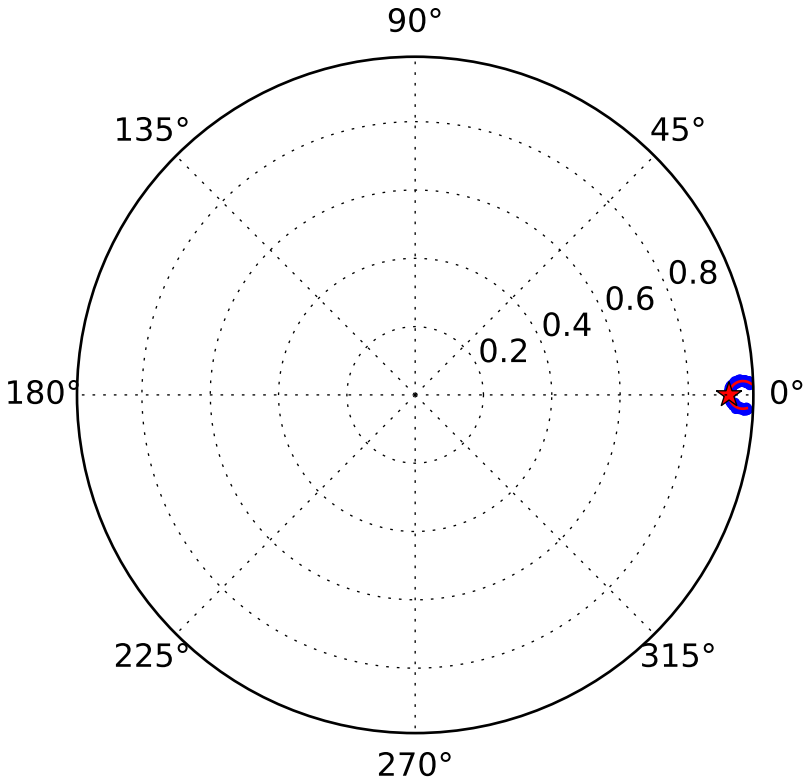


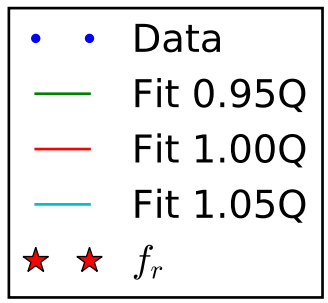
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.5918043999
Q_r = 8464.65317092
Q_c = 246392.543714
a = (-0.00429826788263-0.00430265152684j)
ϕ_0 = 1.40165247554
τ = 36.3392508642



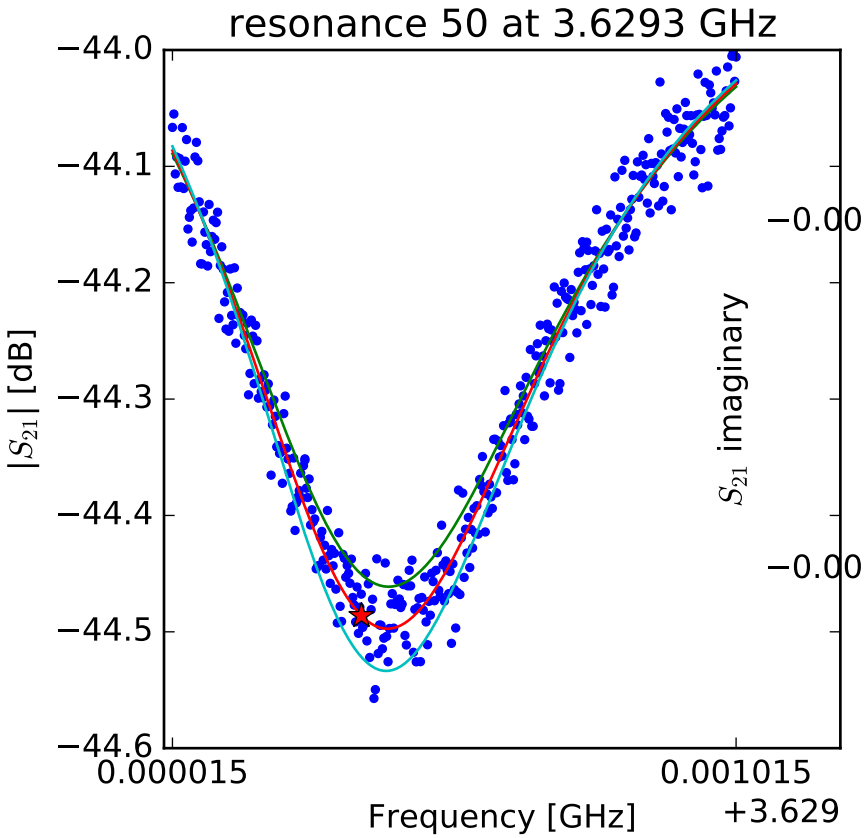


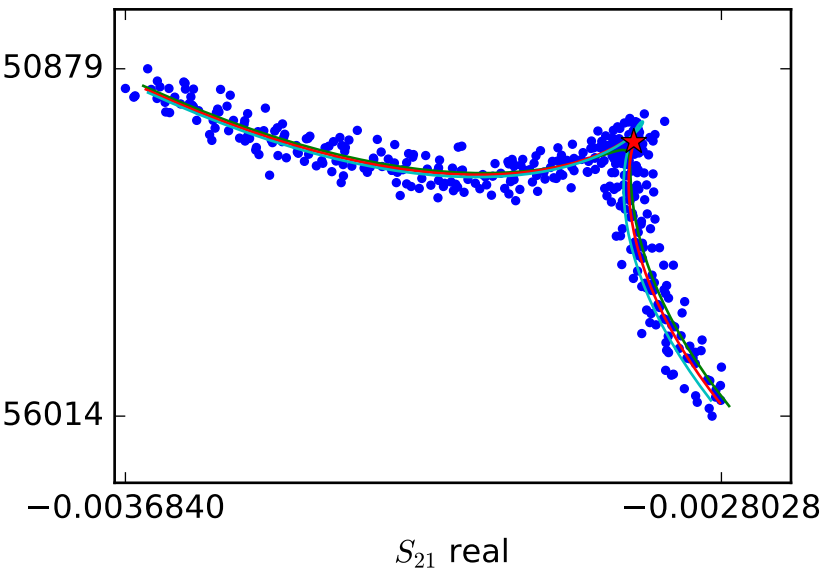


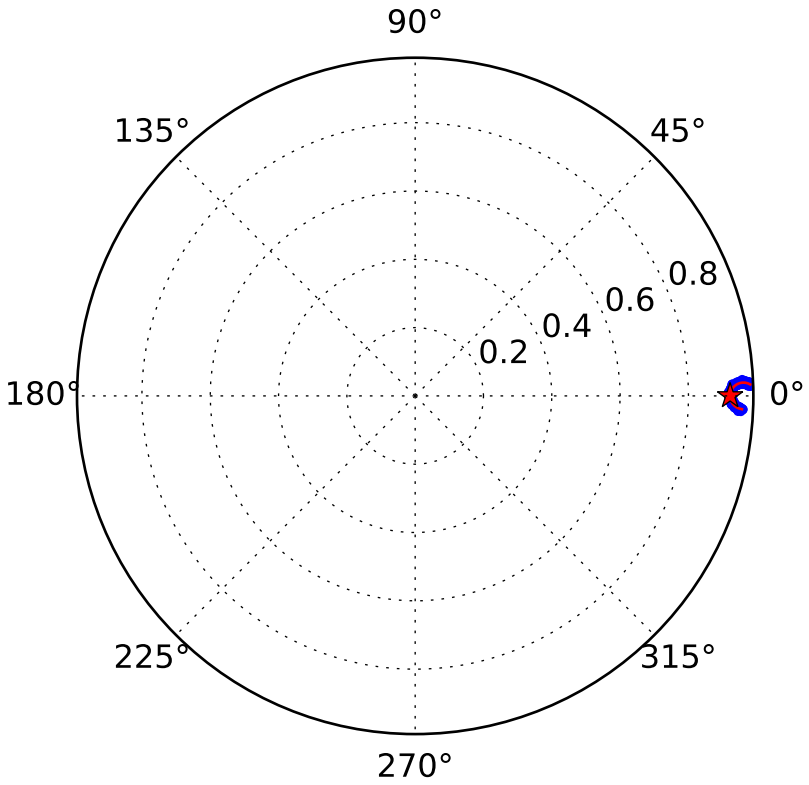


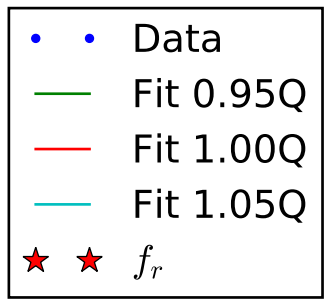
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.62105615342
Q_r = 5988.97194507
Q_c = 73764.7041871
a = (-0.00689895509393-0.00176071263008j)
ϕ_0 = 0.217127673504
τ = 39.0921667846



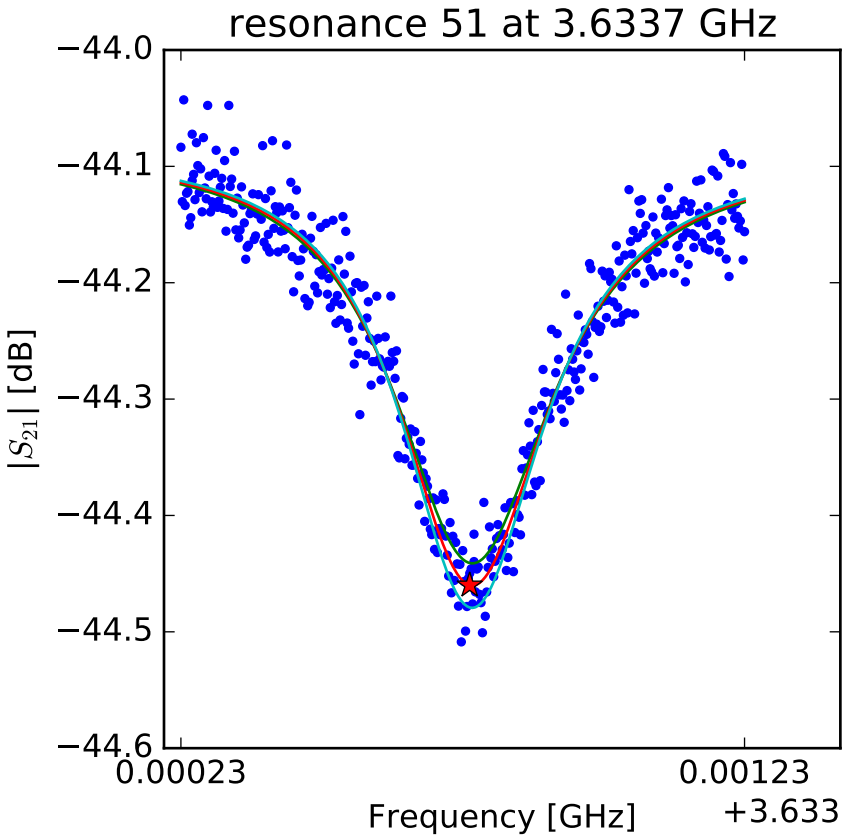


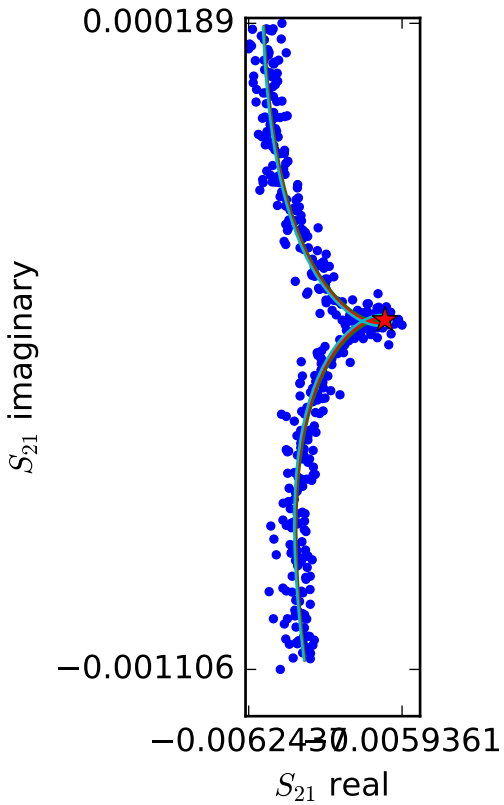


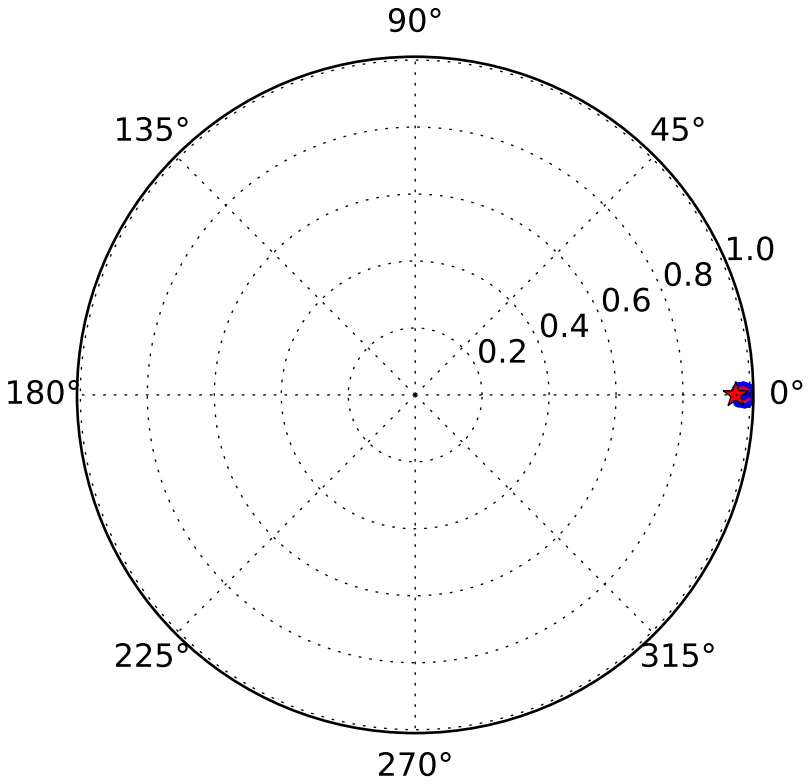


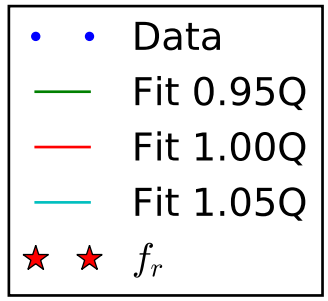
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.62935032959
Q_r = 4814.34928745
Q_c = 61664.7085103
a = (0.00597400487136+0.00244584315952j)
ϕ_0 = 0.233369887357
τ = 37.0288078608



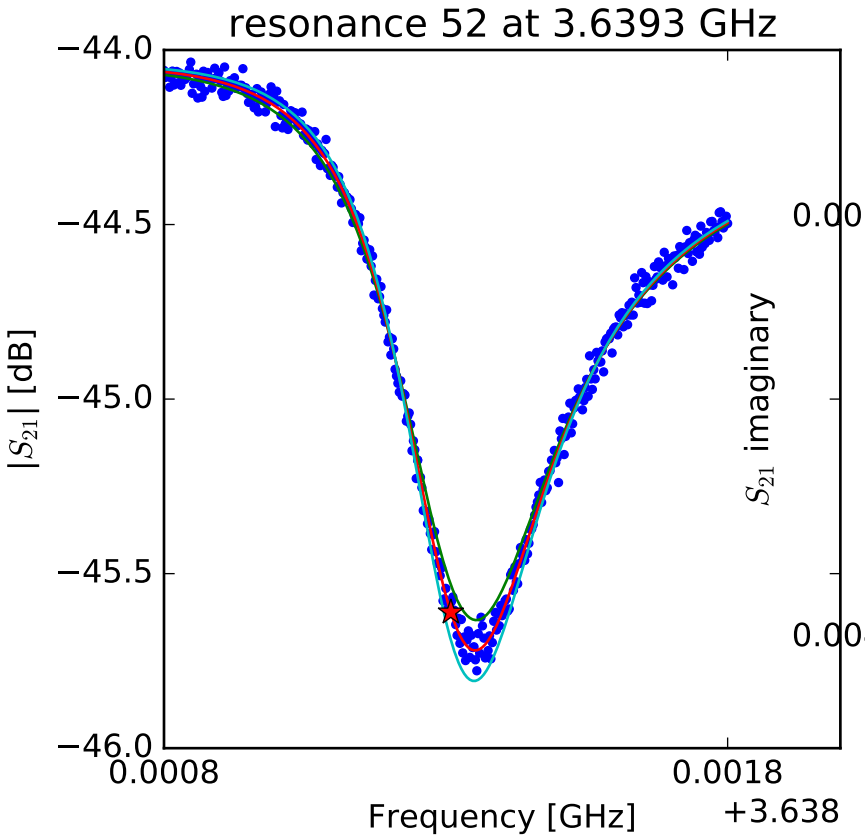


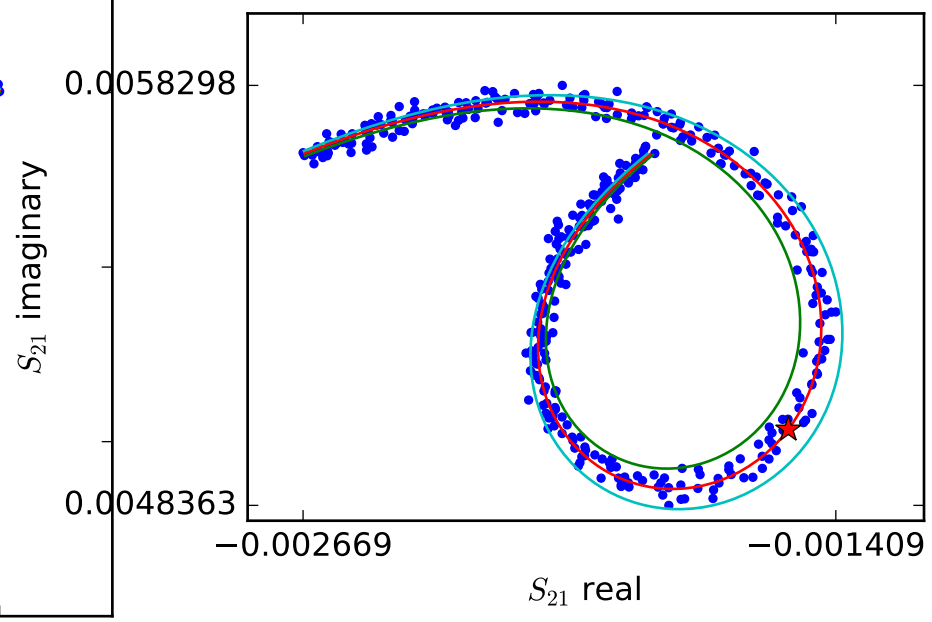


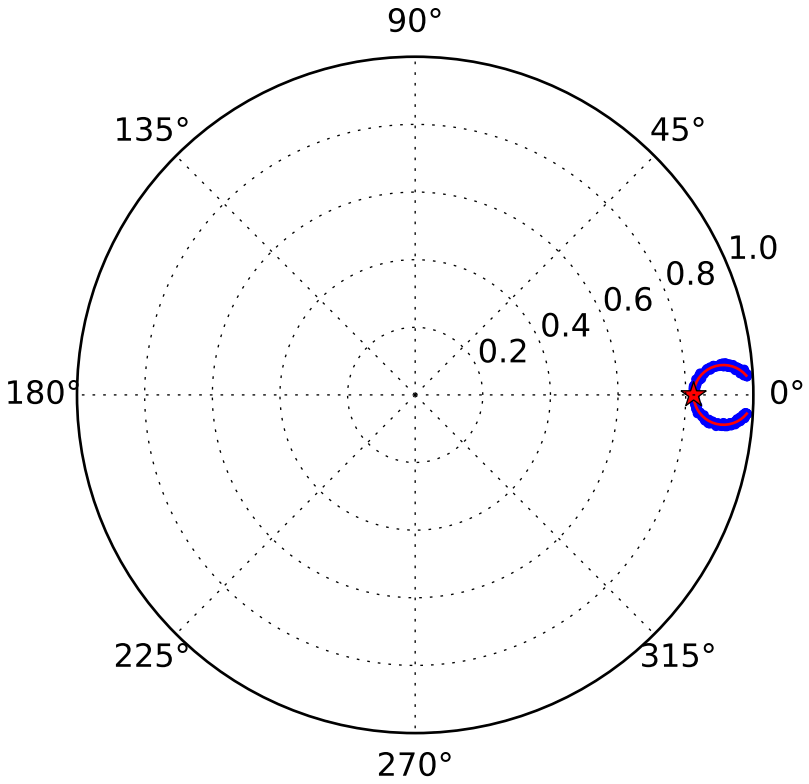


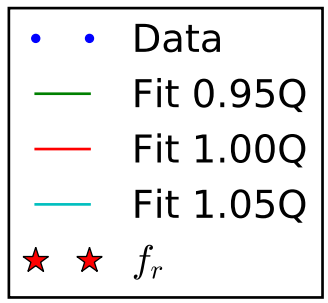
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.63374232108
Q_r = 10982.8930386
Q_c = 260121.188879
a = (-0.00609293743889-0.00138101544481j)
ϕ_0 = 0.0553291031767
τ = 36.60807016









$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.63930887417
Q_r = 10117.2182371
Q_c = 57251.683814
a = (0.00473720494631+0.00403179264219j)
ϕ_0 = 0.43029803042
τ = 36.2160608573