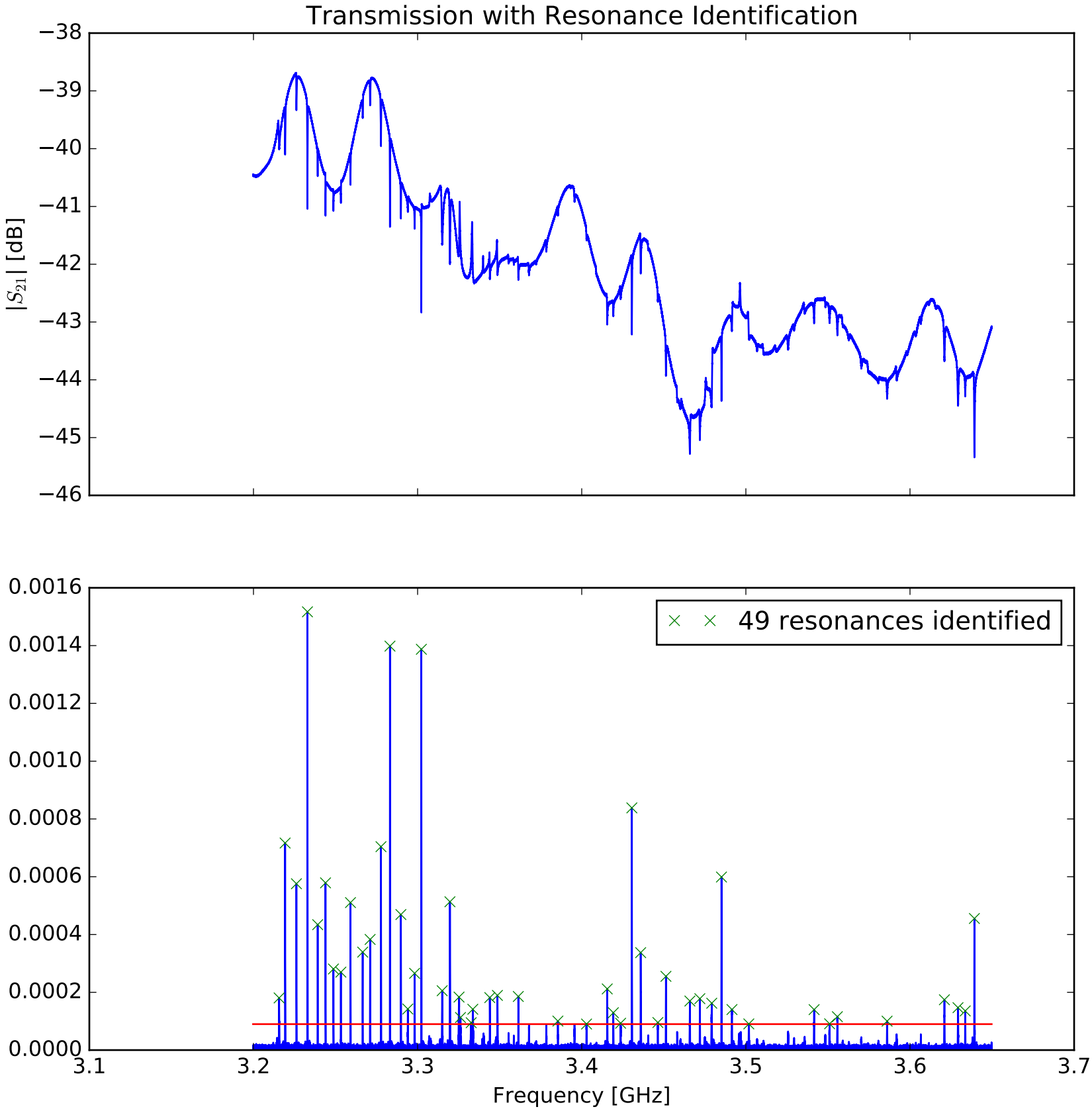
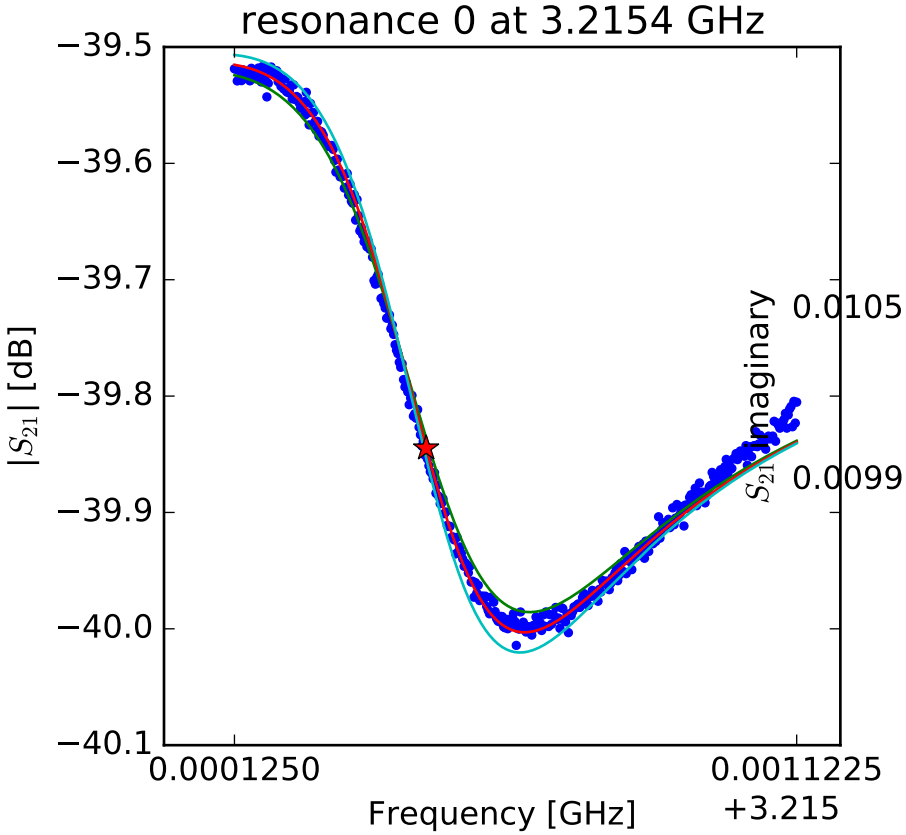
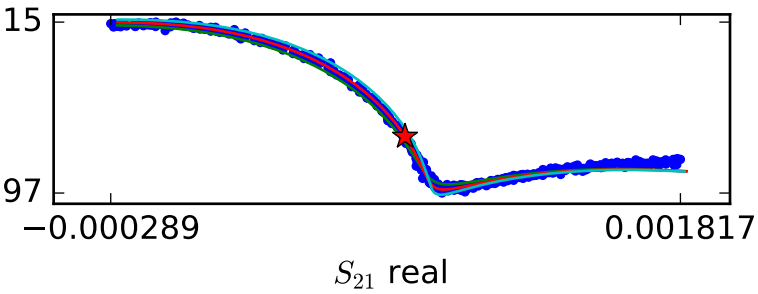
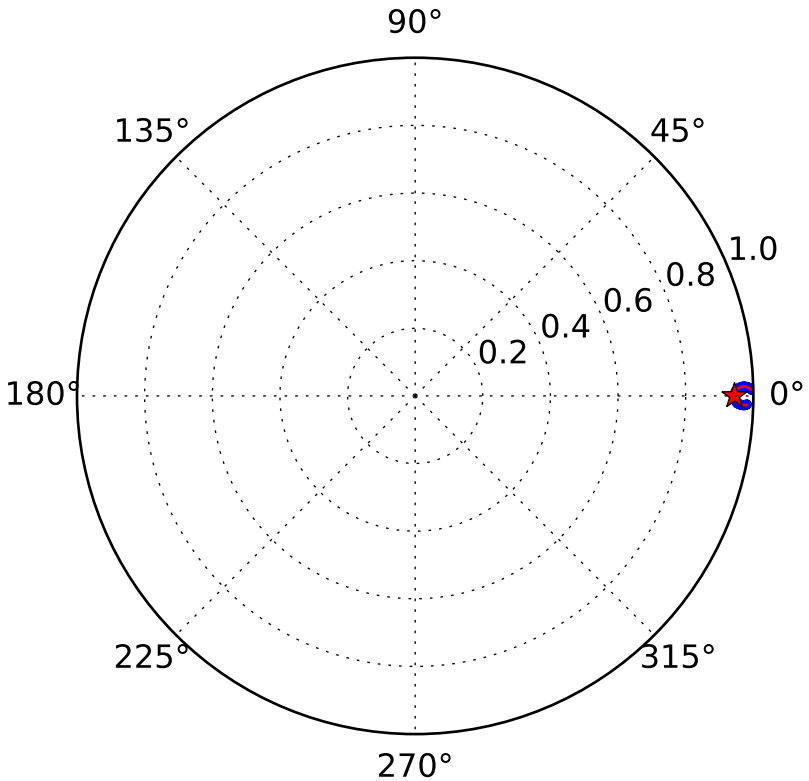
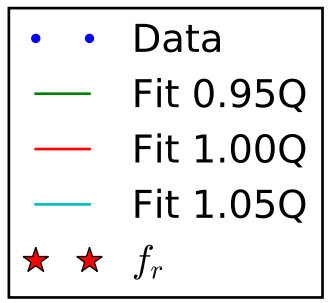

Transmission with Resonance Identification
$|S_{21}|$ [dB]
−38
−39
−40
−41
−42
−43
−44
−45
−46
0.0016
0.0014
0.0012
0.0010
0.0008
0.0006
0.0004
0.0002
0.0000
49 resonances identified
3.1
3.2
3.3
3.4
3.5
3.6
3.7
Frequency [GHz]



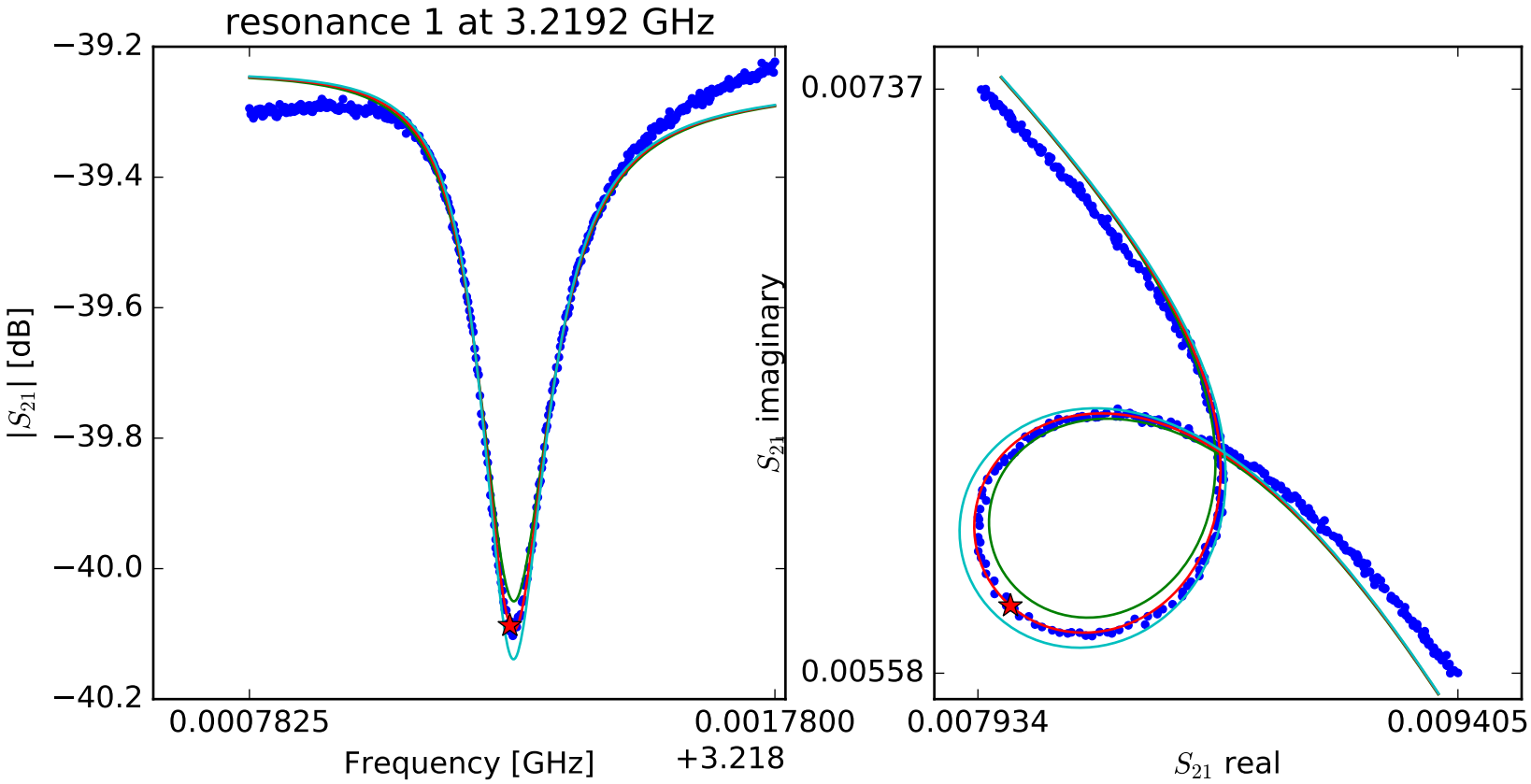


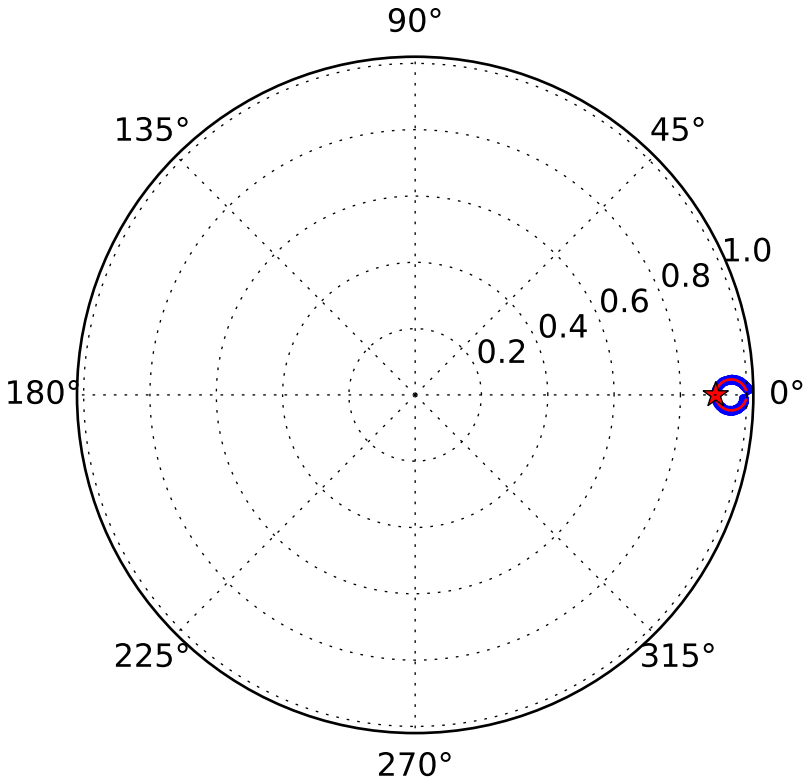


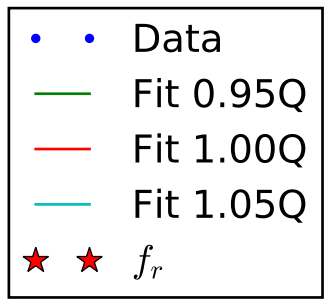


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.21546509947
Q_r = 6188.19801519
Q_c = 111053.822008
a = (-0.00623097925716+0.00832574699227j)
ϕ_0 = 1.15753800593
τ = 37.6637441481

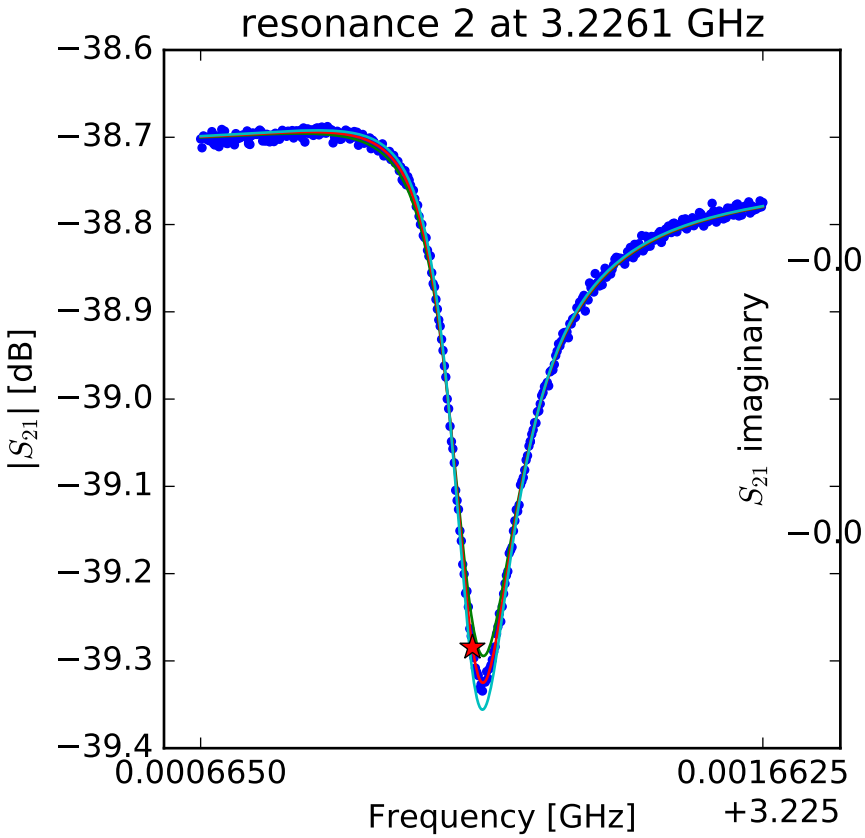


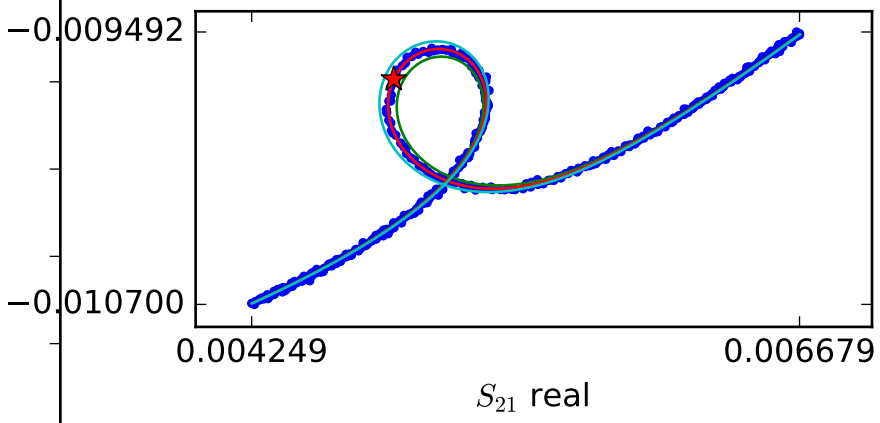


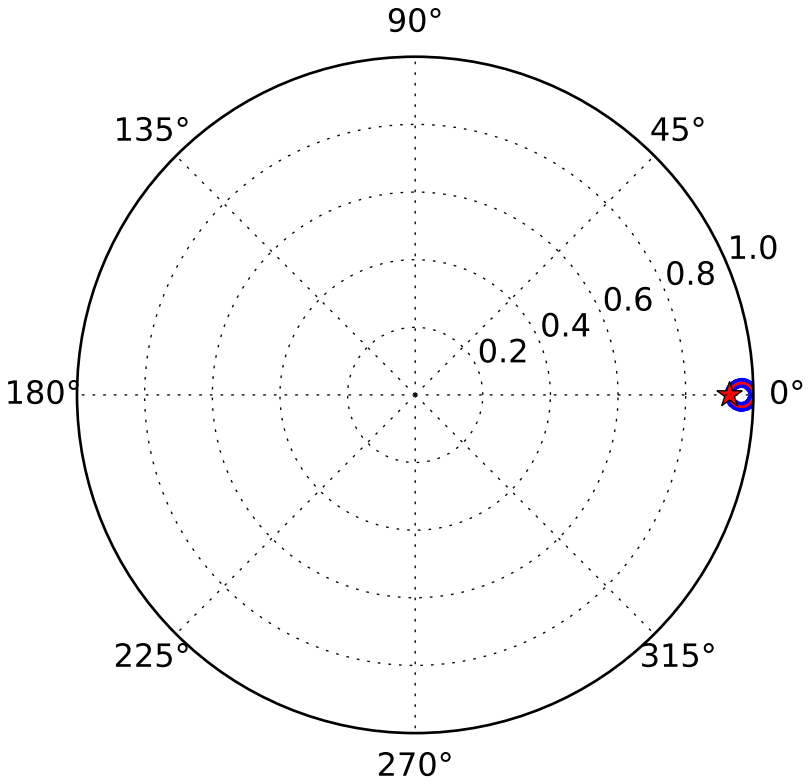


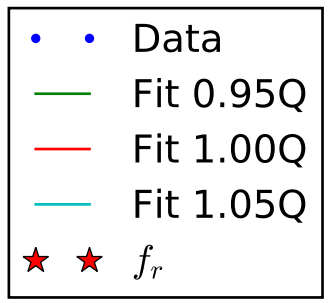
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.21927677137
Q_r = 19483.2794734
Q_c = 208286.375078
a = (0.0107716753847+0.00169454008071j)
ϕ_0 = 0.169030043732
τ = 38.8045954782



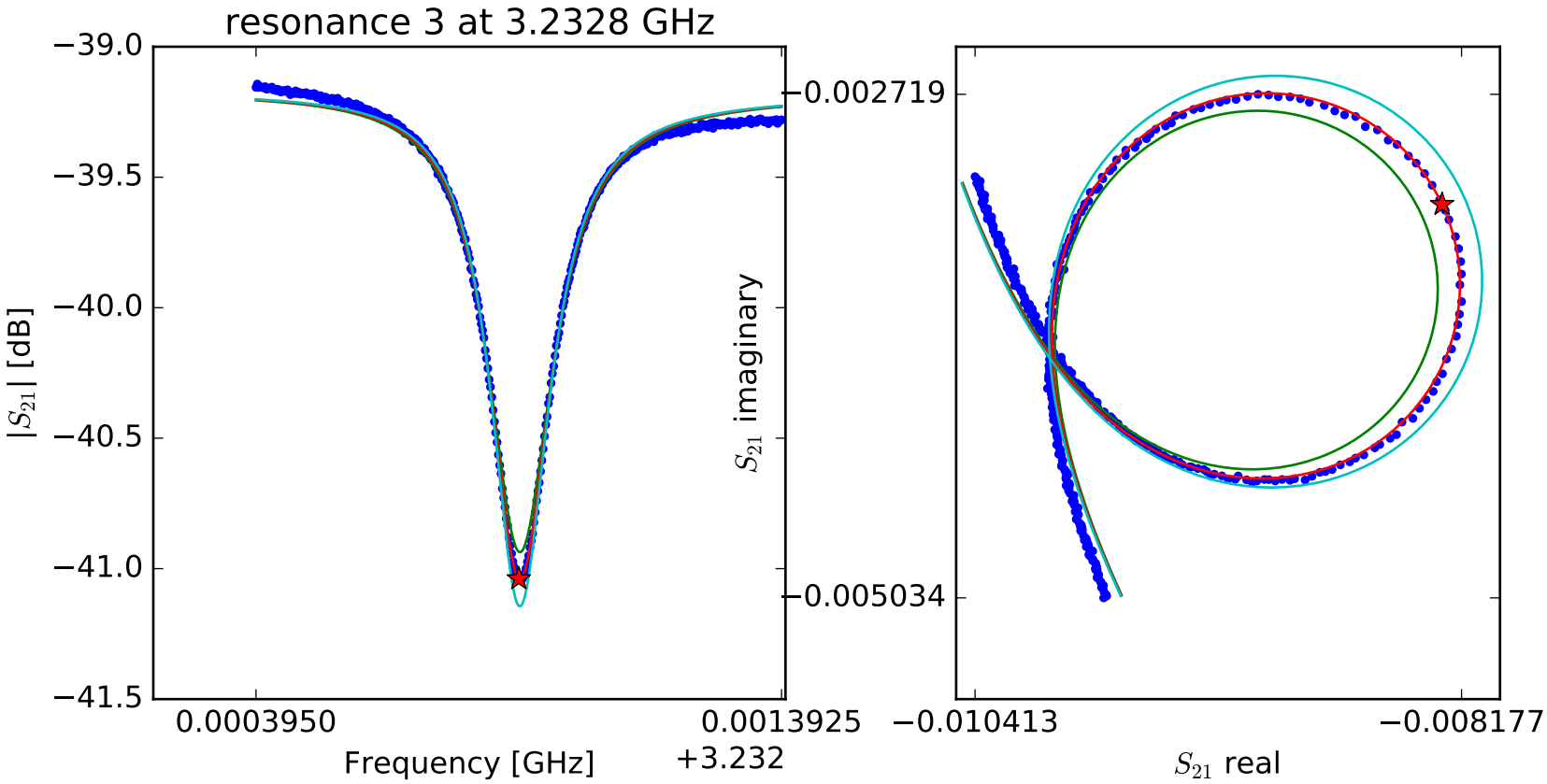


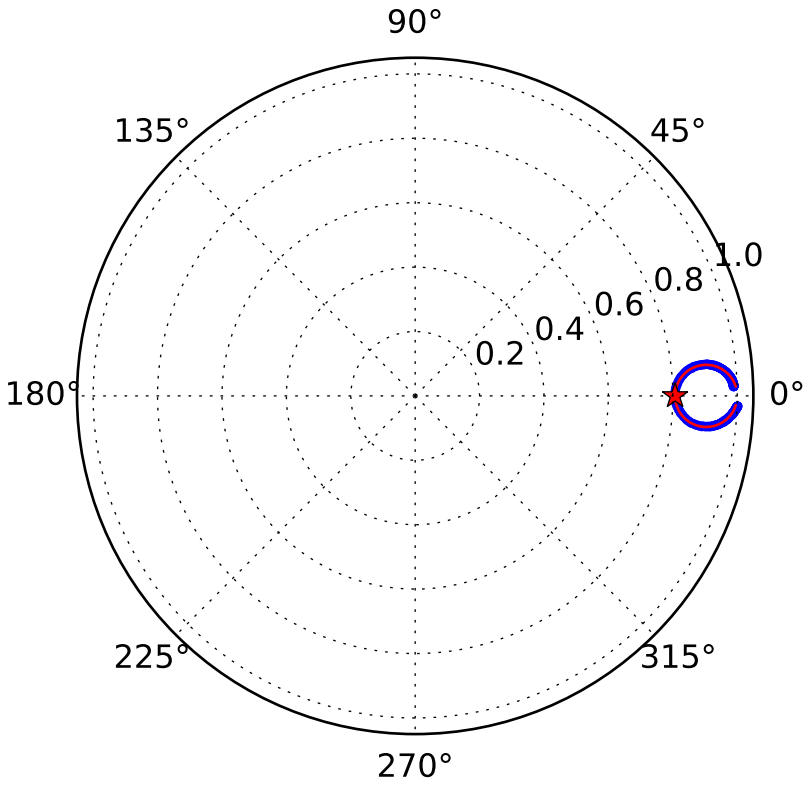


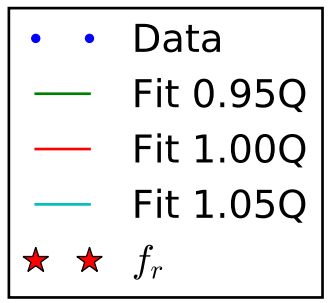


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.22614724678
Q_r = 21979.7148504
Q_c = 312267.969694
a = (0.00627839984846-0.00972459843468j)
ϕ_0 = 0.478929717988
τ = 40.299330827

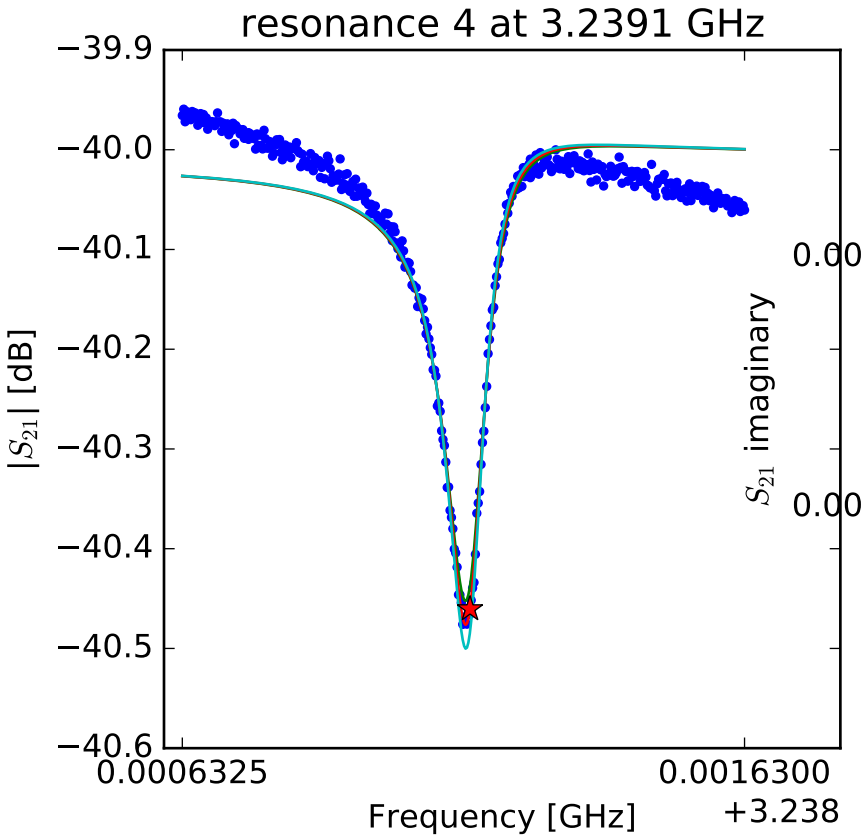


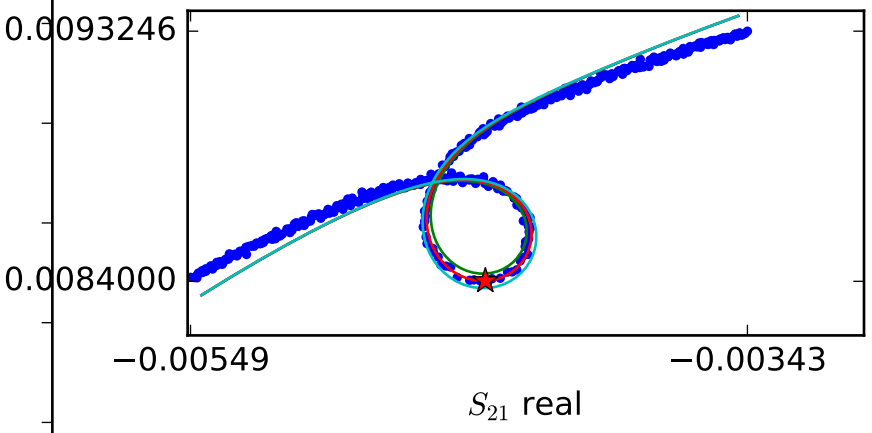


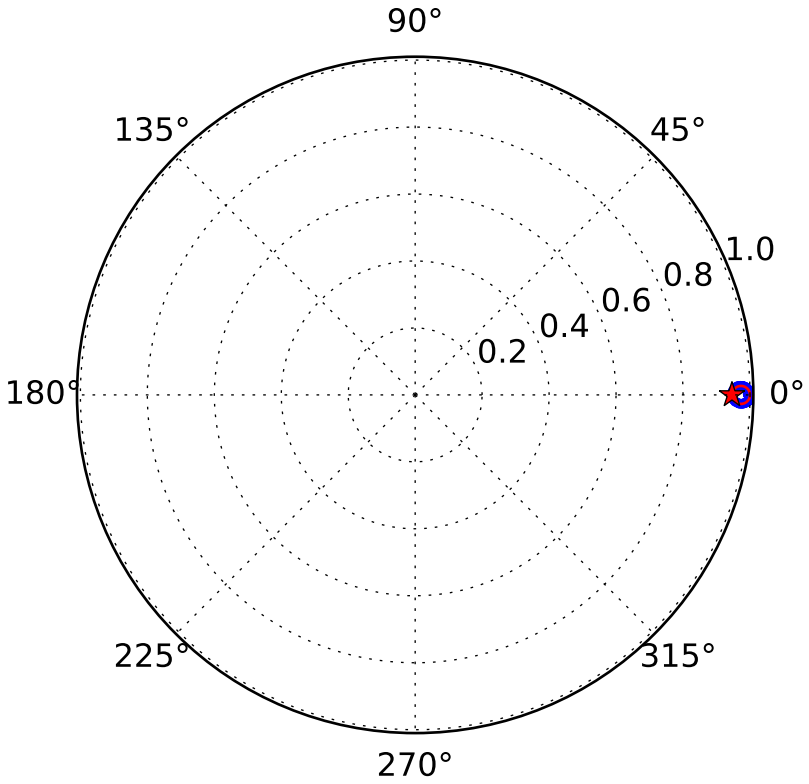


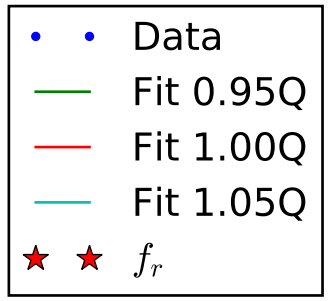
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.23289378232
Q_r = 20423.2174778
Q_c = 105783.643583
a = (-0.00333968370919+0.0104725427219j)
ϕ_0 = 0.0475778825783
τ = 39.2026857309



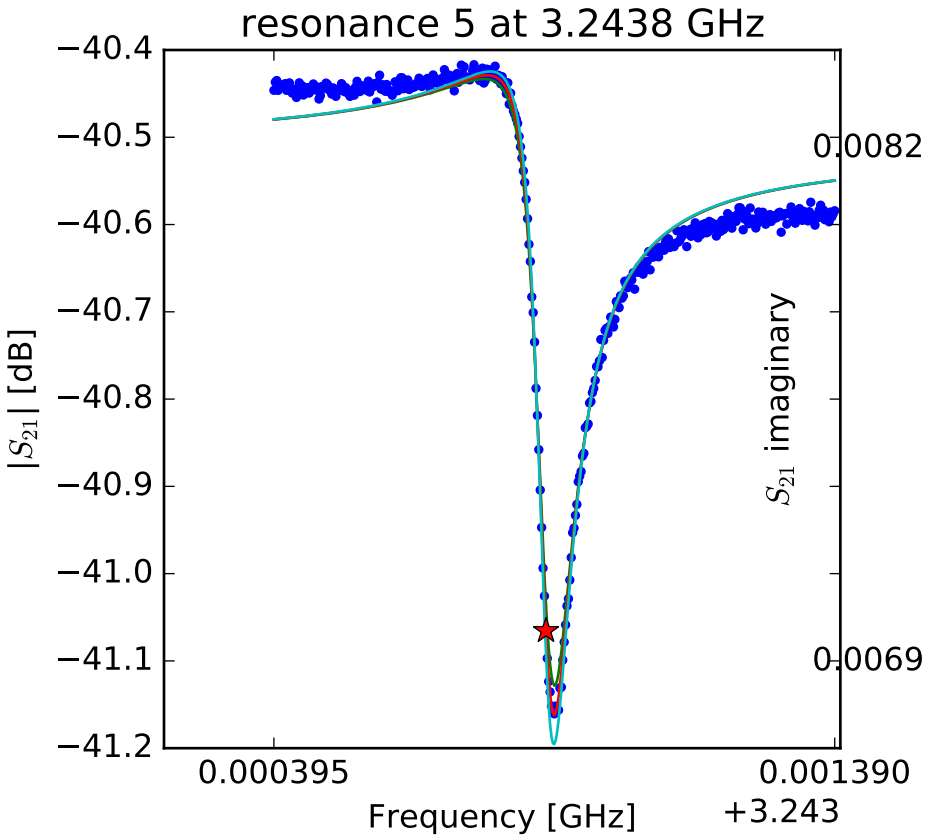


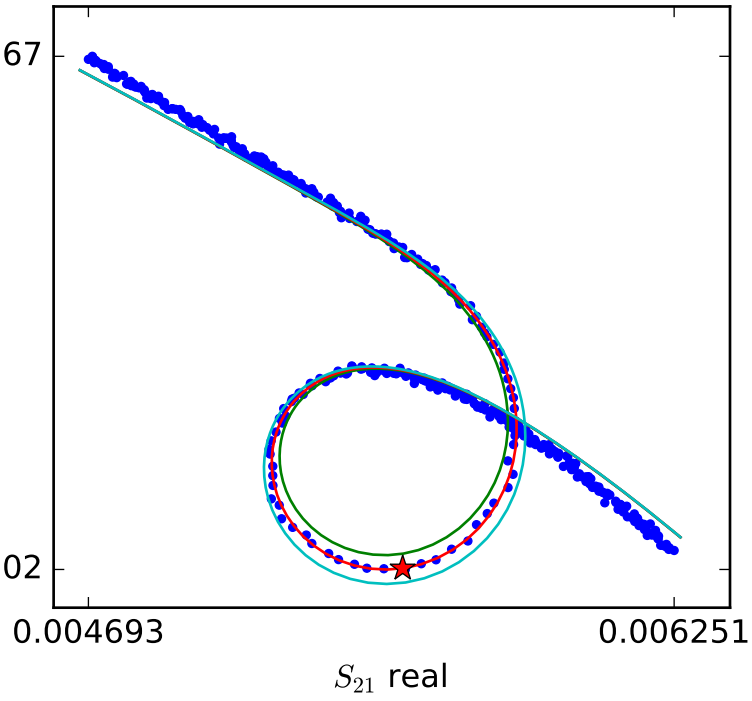


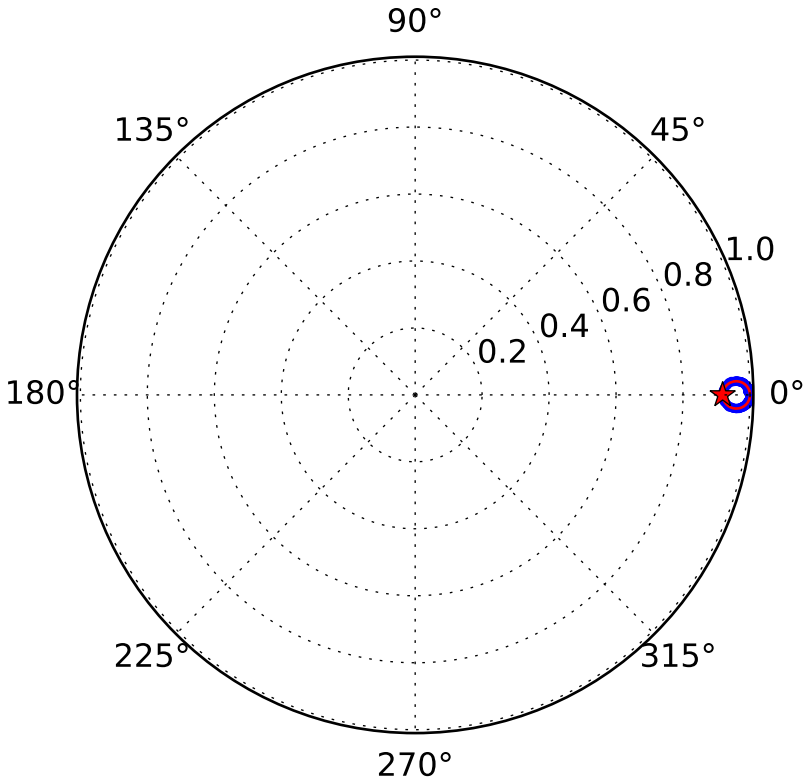


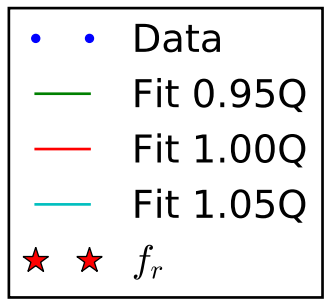
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.23914292603
Q_r = 37925.323553
Q_c = 703429.499739
a = (-0.00080208802014-0.00995612733614j)
ϕ_0 = -0.347011024077
τ = 37.1744950816



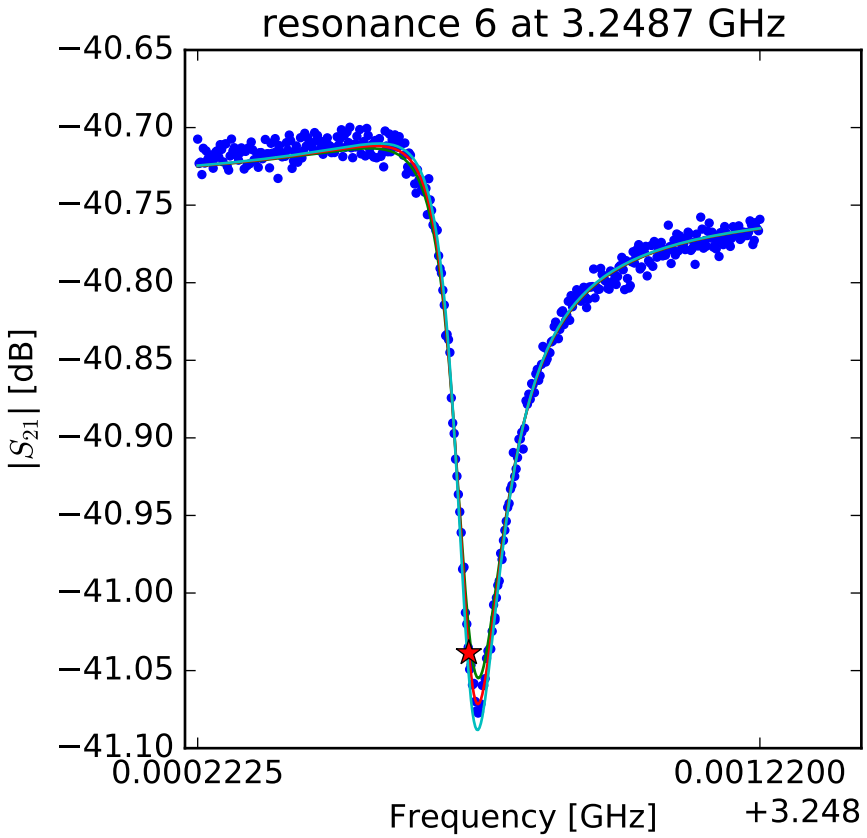


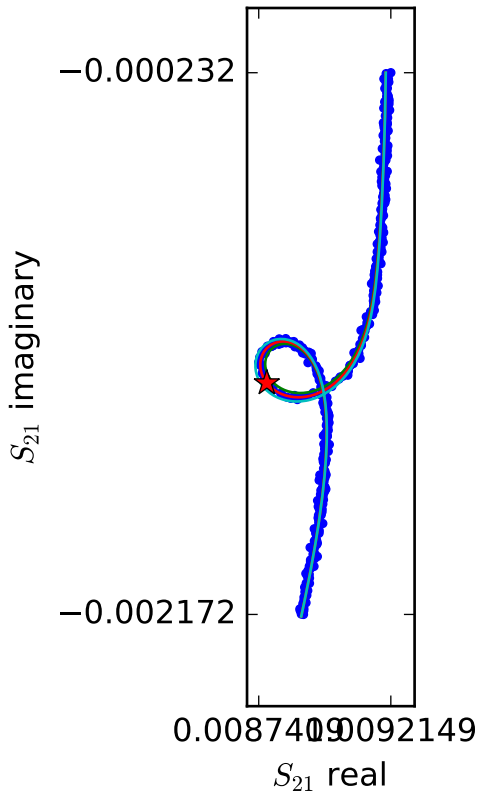


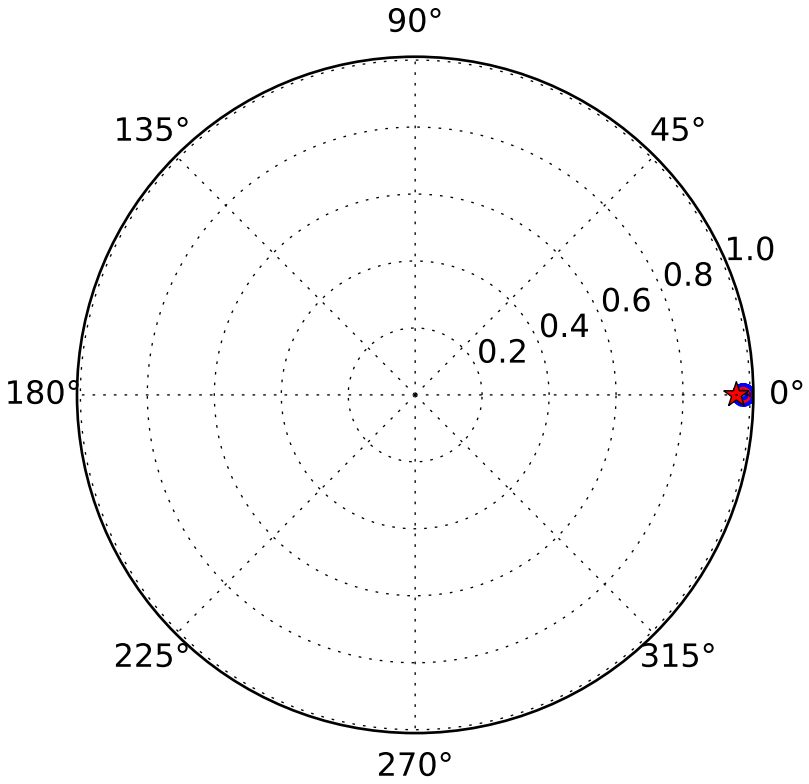


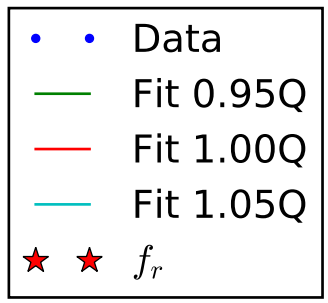
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.24387776145
Q_r = 41562.9013201
Q_c = 508548.902205
a = (0.0068726076843-0.00645304577831j)
ϕ_0 = 0.687911031733
τ = 35.9842977926



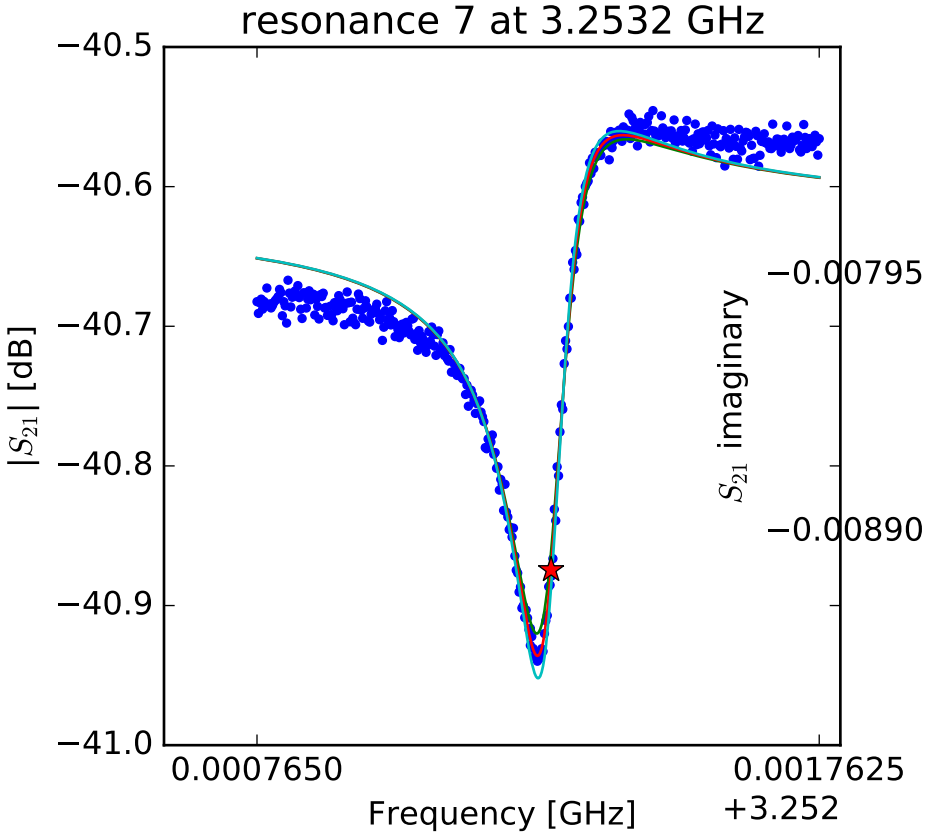


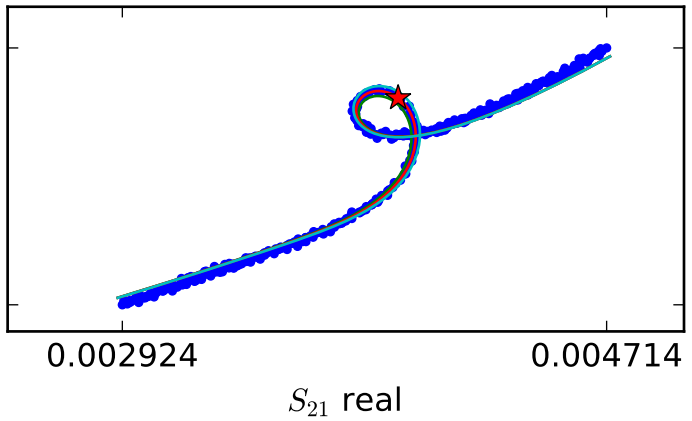


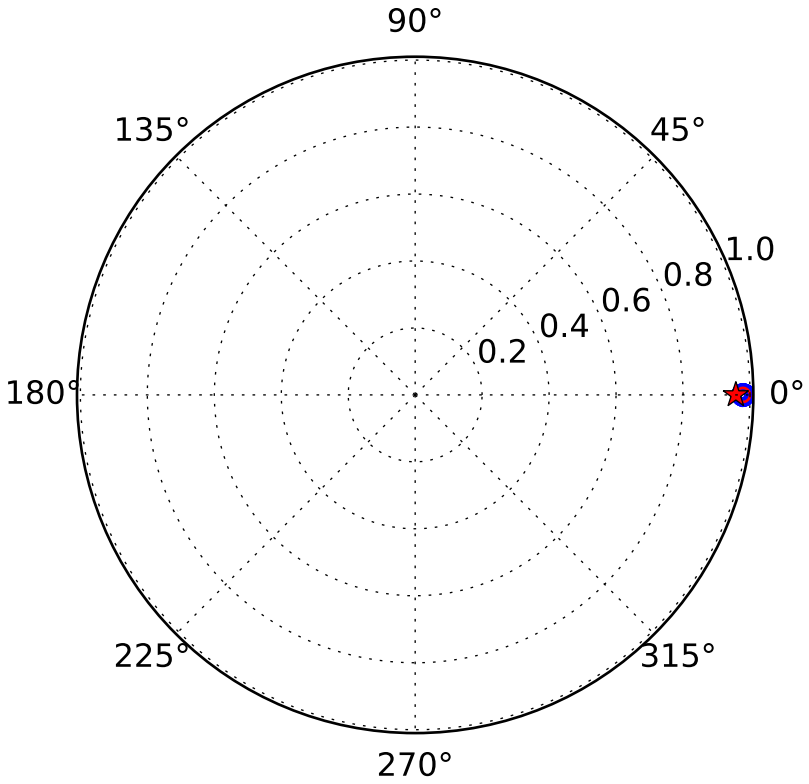


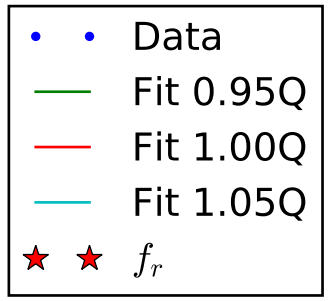
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.24870353603
Q_r = 31218.0725926
Q_c = 766629.849182
a = (0.00794647136037+0.0045977904887j)
ϕ_0 = 0.59206431175
τ = 35.43072386



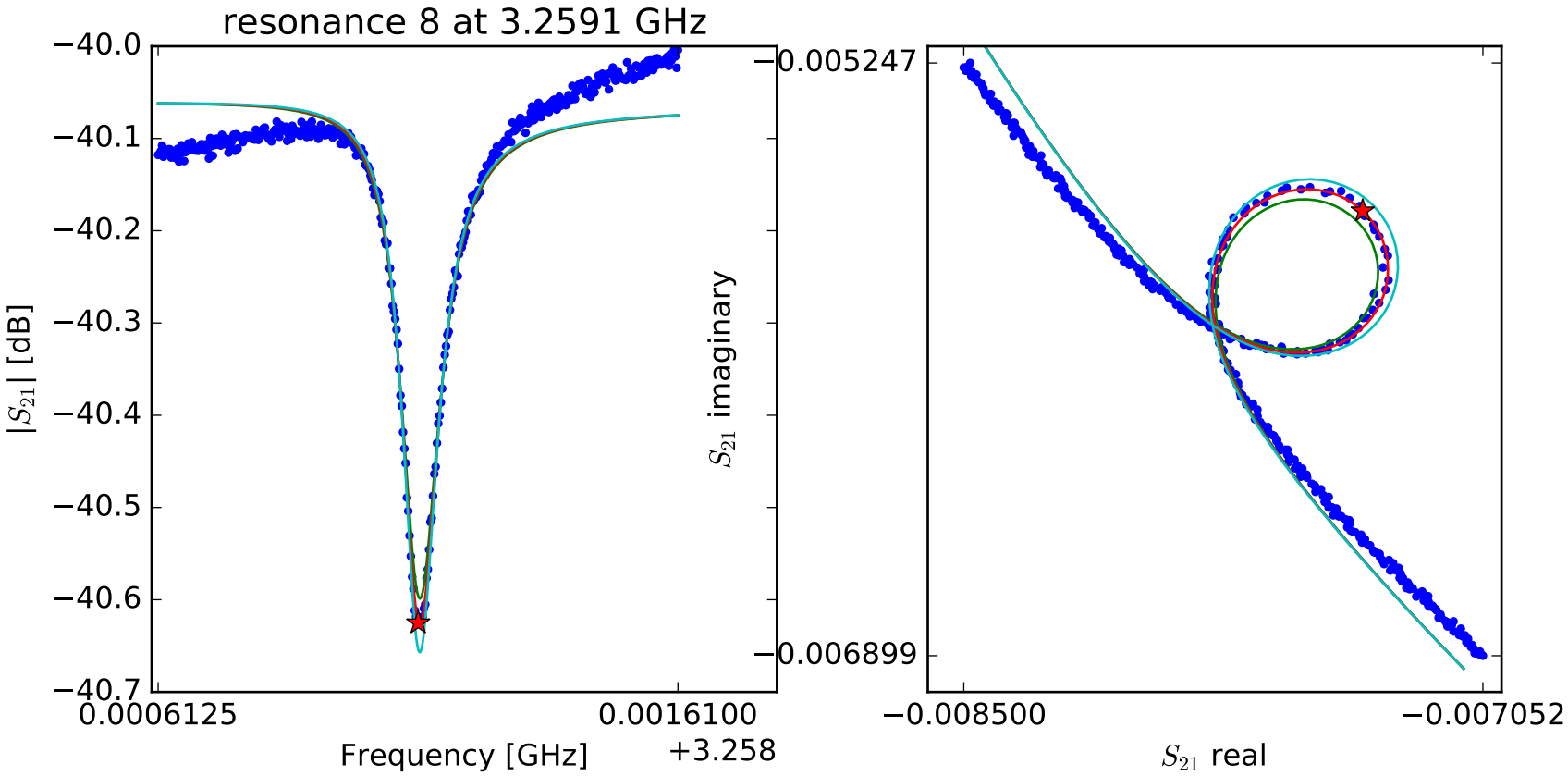


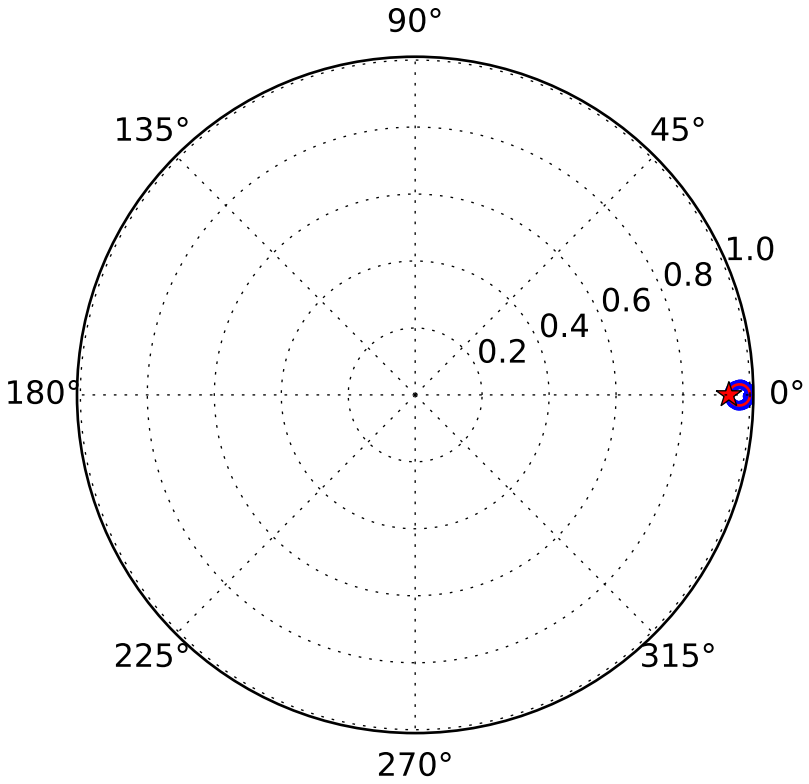


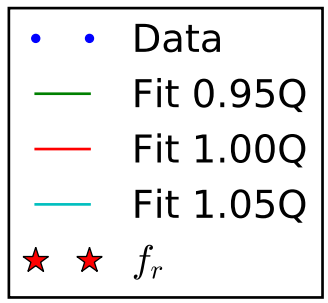


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.25328677023
Q_r = 29327.5898282
Q_c = 693131.002749
a = (-0.00592801778475+0.0071794531383j)
ϕ_0 = -0.806155936833
τ = 35.8231664185

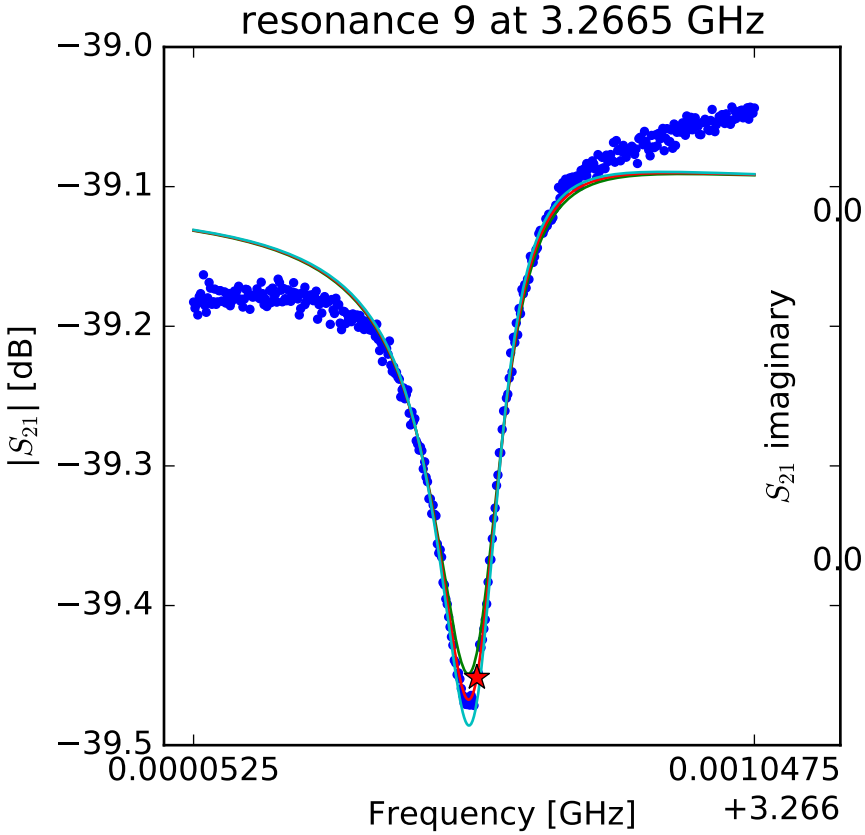


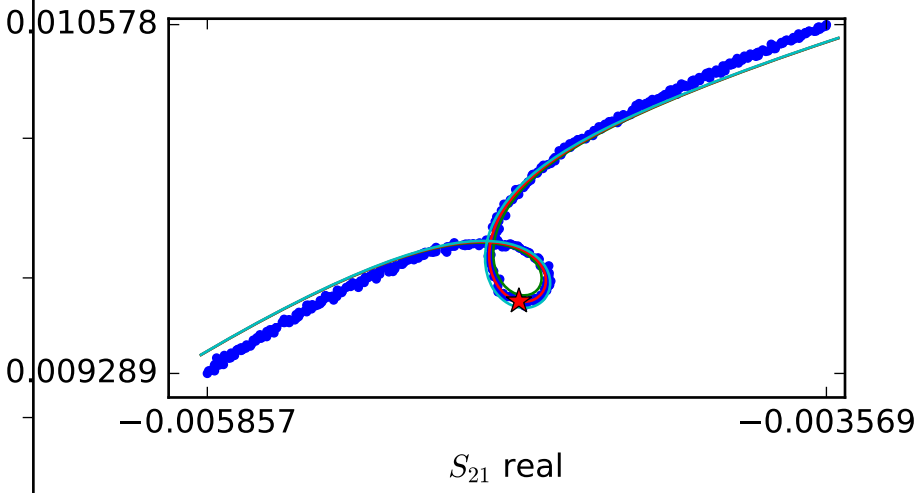


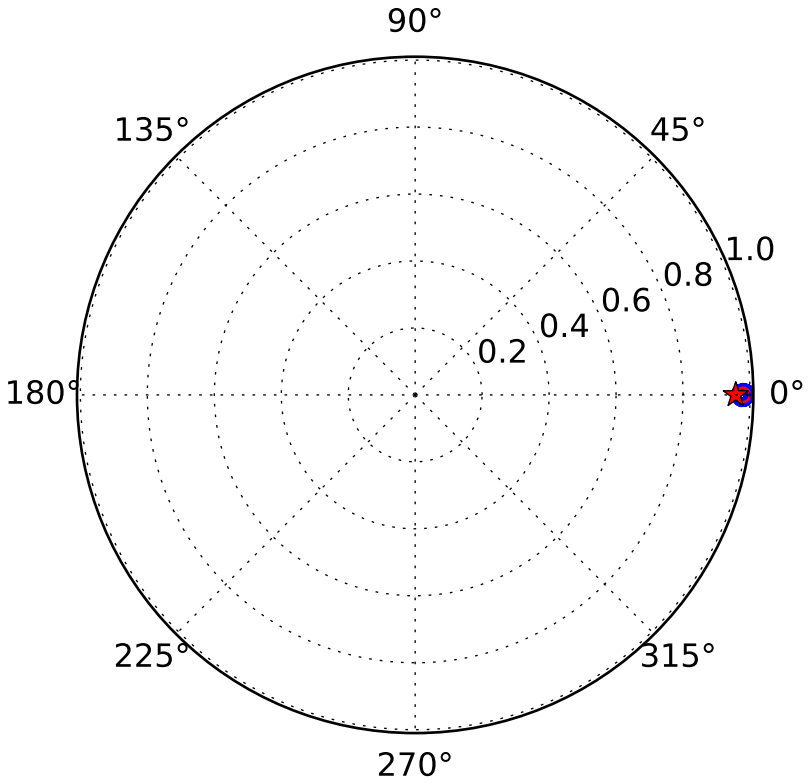


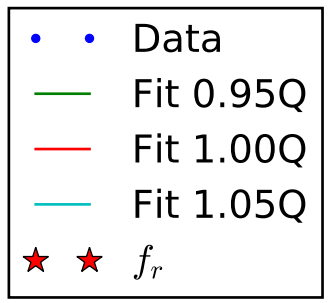
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.25911157689
Q_r = 36480.9990124
Q_c = 577851.547205
a = (-0.00429274144294+0.0089501132334j)
ϕ_0 = 0.134079149808
τ = 37.0394509696



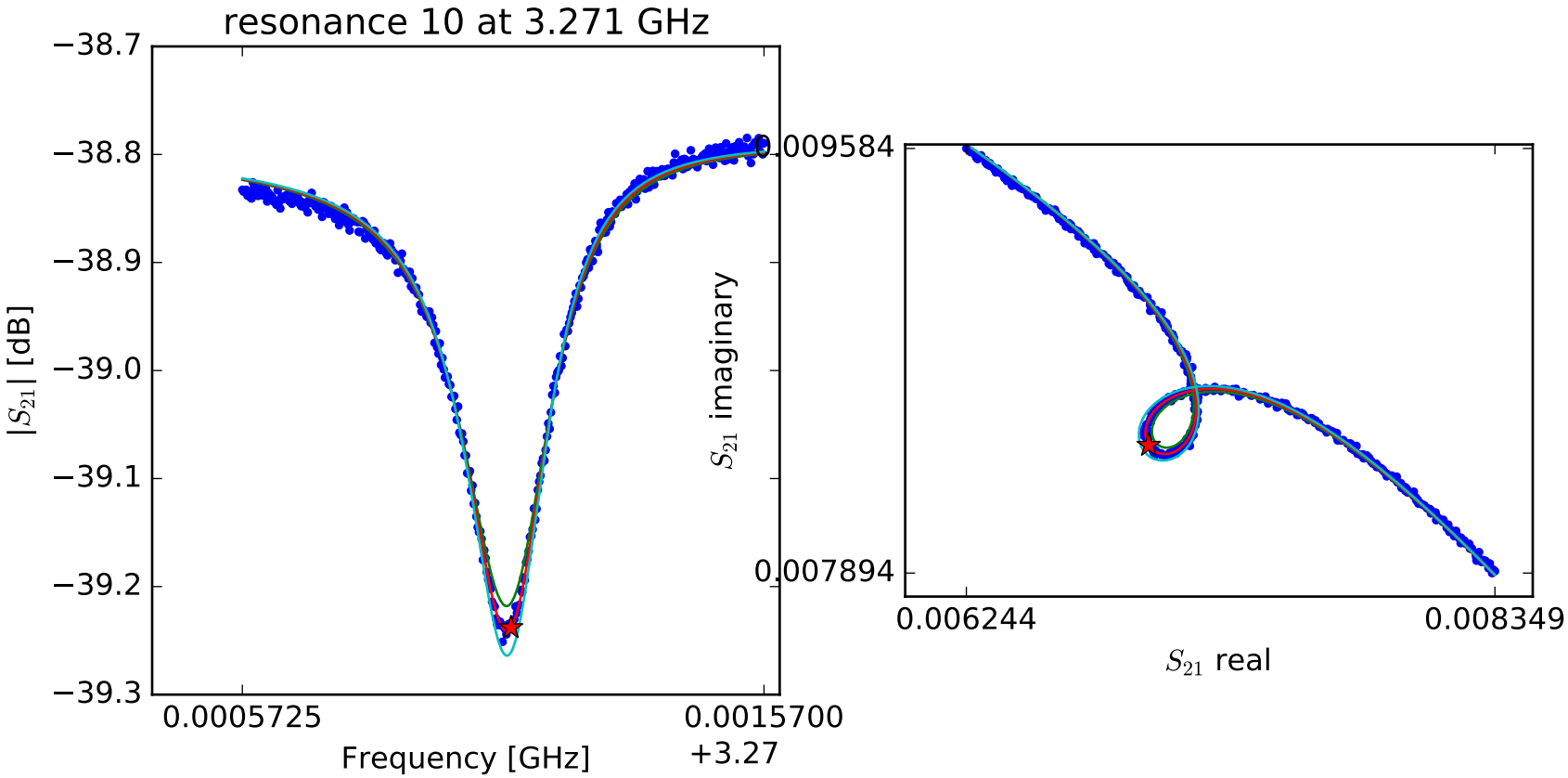


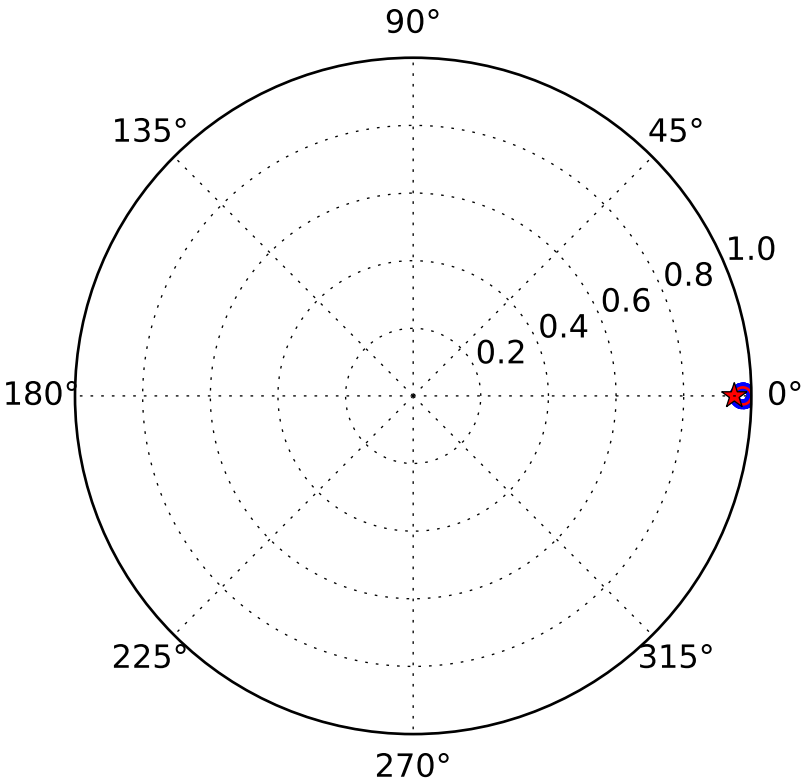


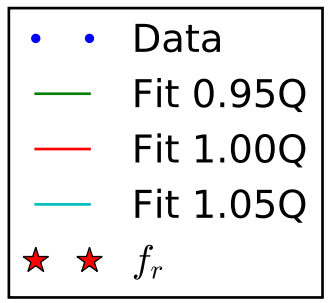


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.26655507963
Q_r = 22988.0887812
Q_c = 539889.018037
a = (-0.0100687869503+0.00463783885412j)
ϕ_0 = -0.396778563492
τ = 39.8313220464

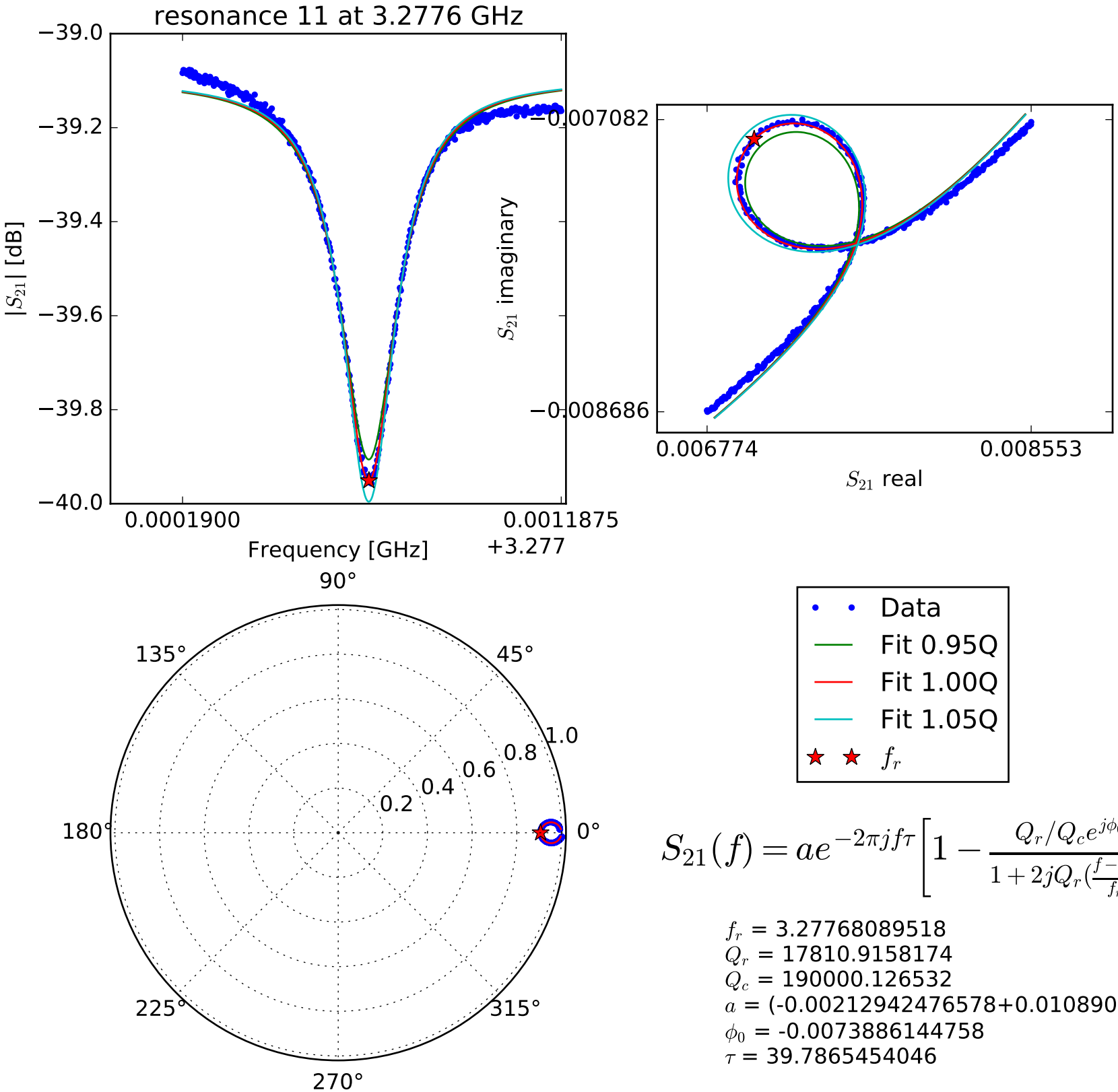






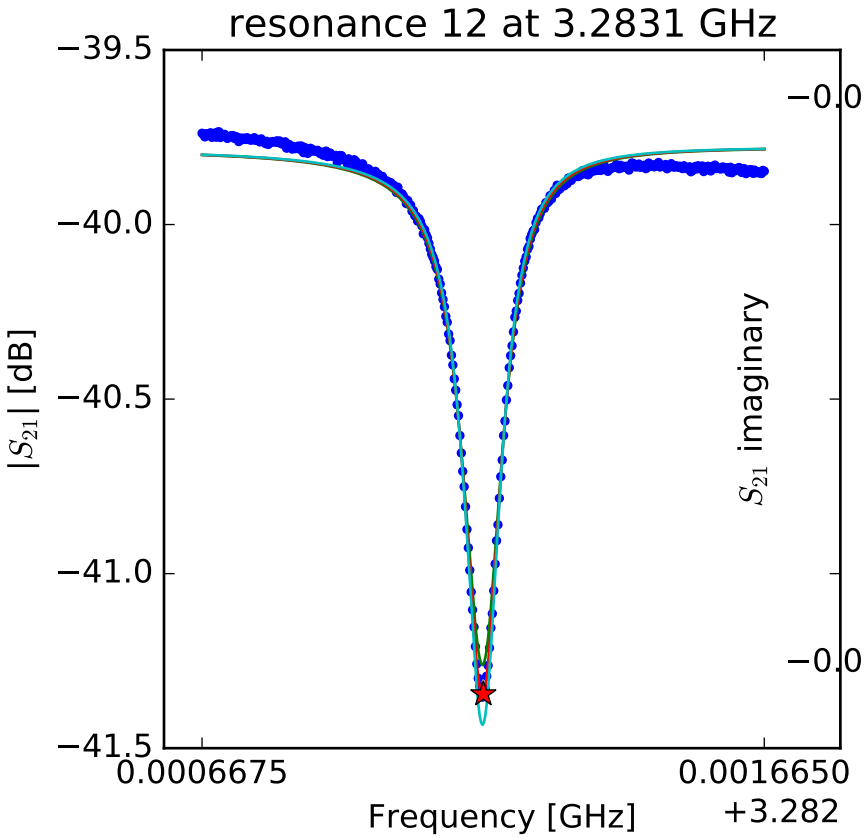
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

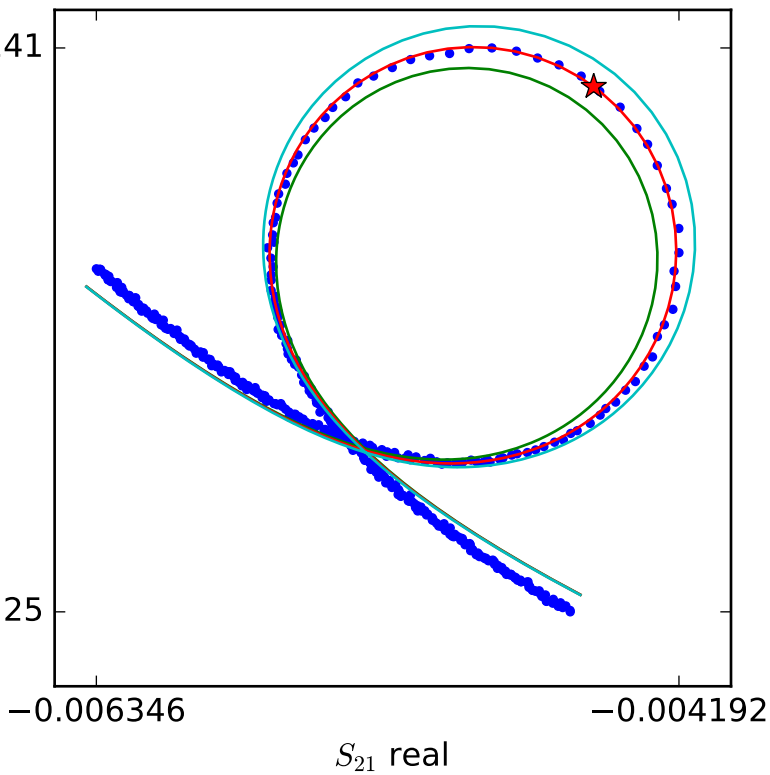
f_r = 3.27108623771
Q_r = 16114.3689226
Q_c = 319294.336849
a = (0.00954432890974+0.00639639714176j)
ϕ_0 = -0.154820166698
τ = 40.645669012

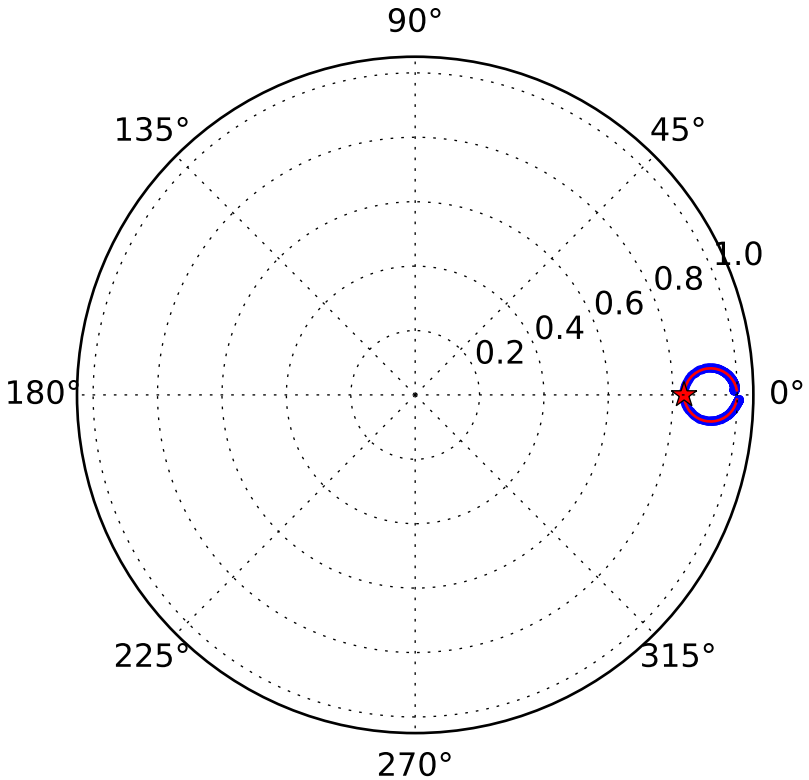


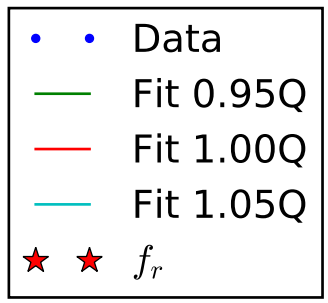
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.27768089518
Q_r = 17810.9158174
Q_c = 190000.126532
a = (-0.00212942476578+0.0108907487086j)
ϕ_0 = -0.0073886144758
τ = 39.7865454046



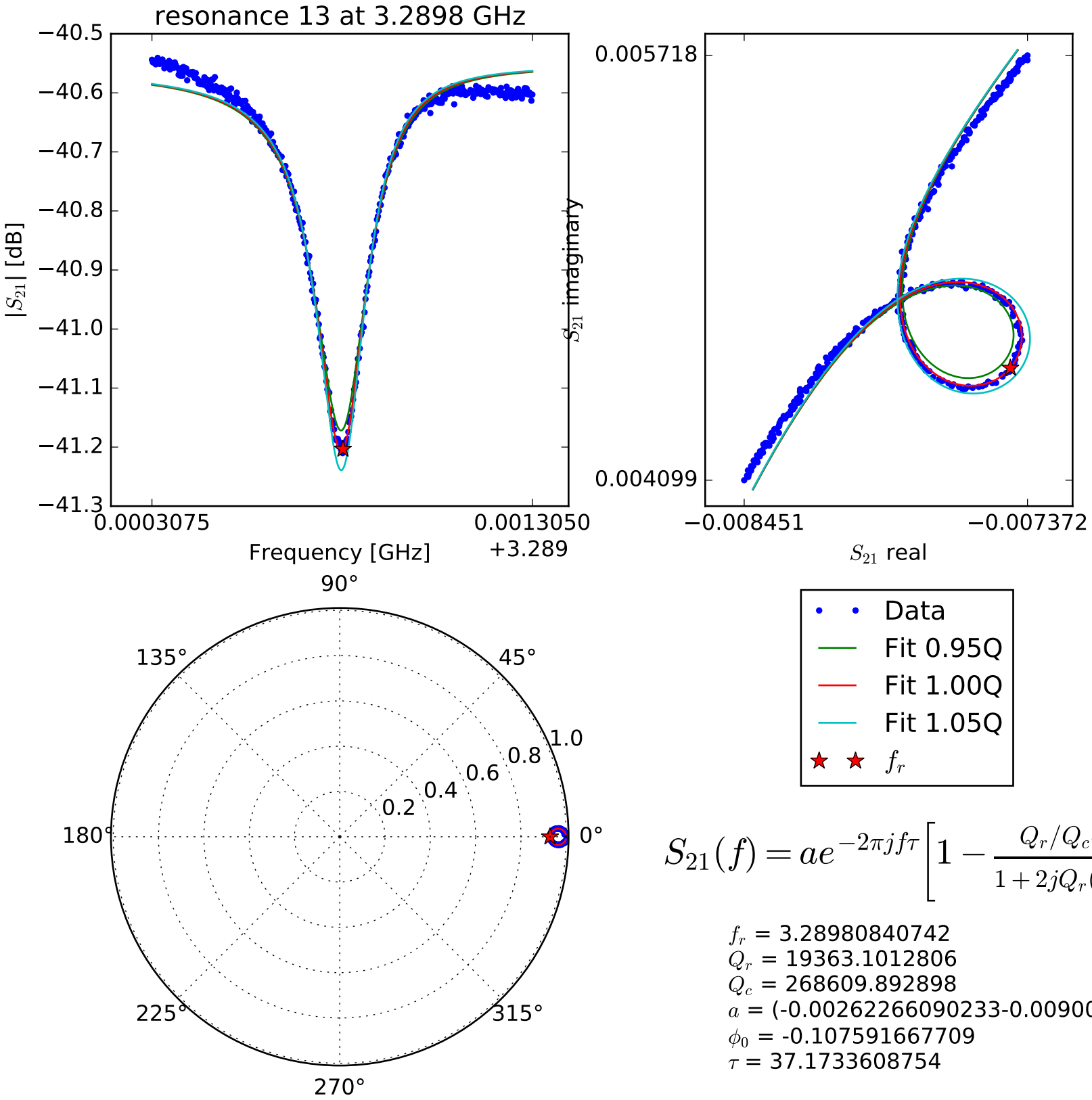






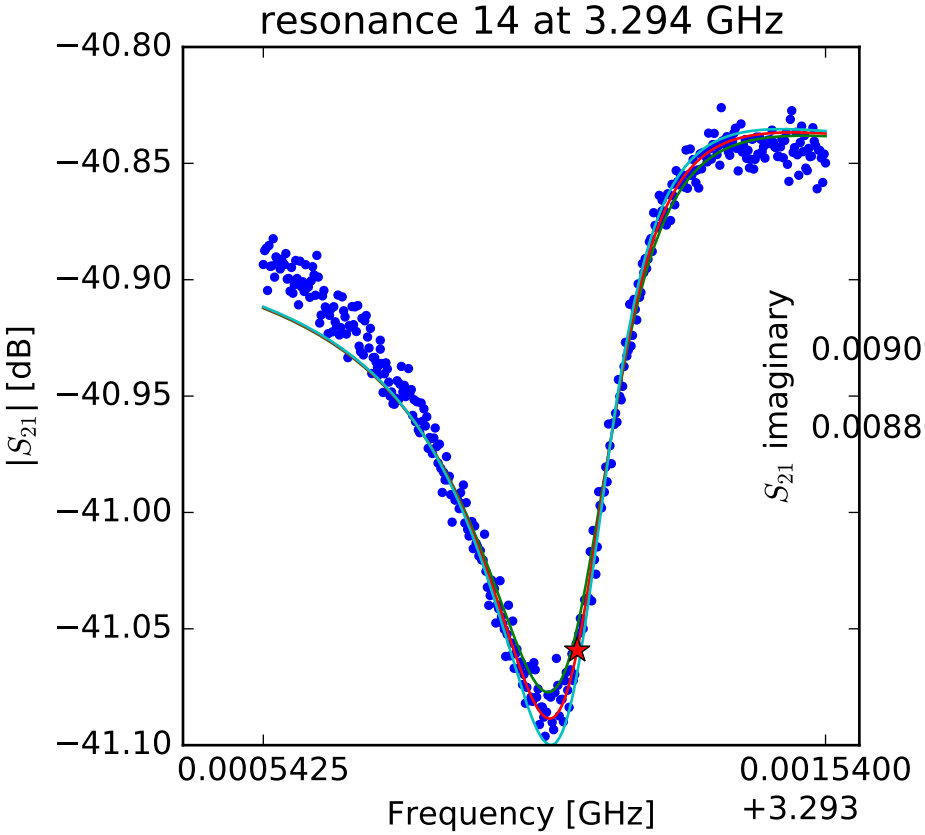
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

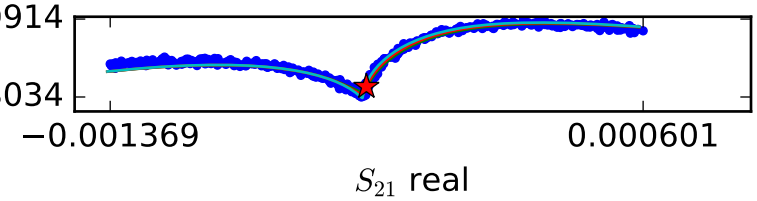
f_r = 3.28316662006
Q_r = 36705.5287514
Q_c = 222271.098134
a = (-0.00194755834086+0.0100681155075j)
ϕ_0 = -0.0646420328312
τ = 38.2620368024

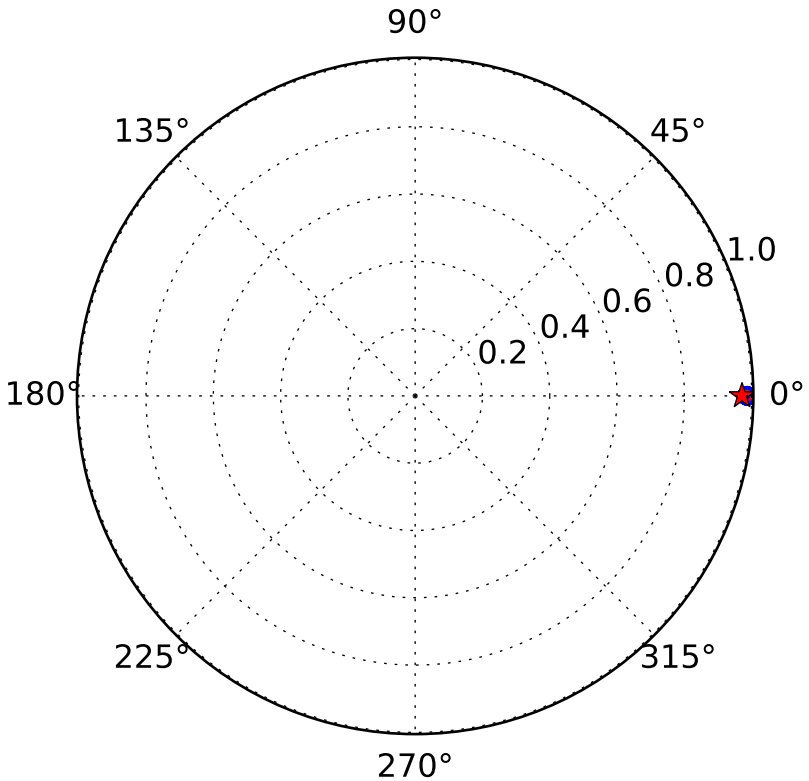


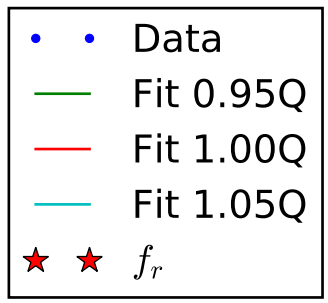
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.28980840742
Q_r = 19363.1012806
Q_c = 268609.892898
a = (-0.00262266090233-0.00900394373711j)
ϕ_0 = -0.107591667709
τ = 37.1733608754



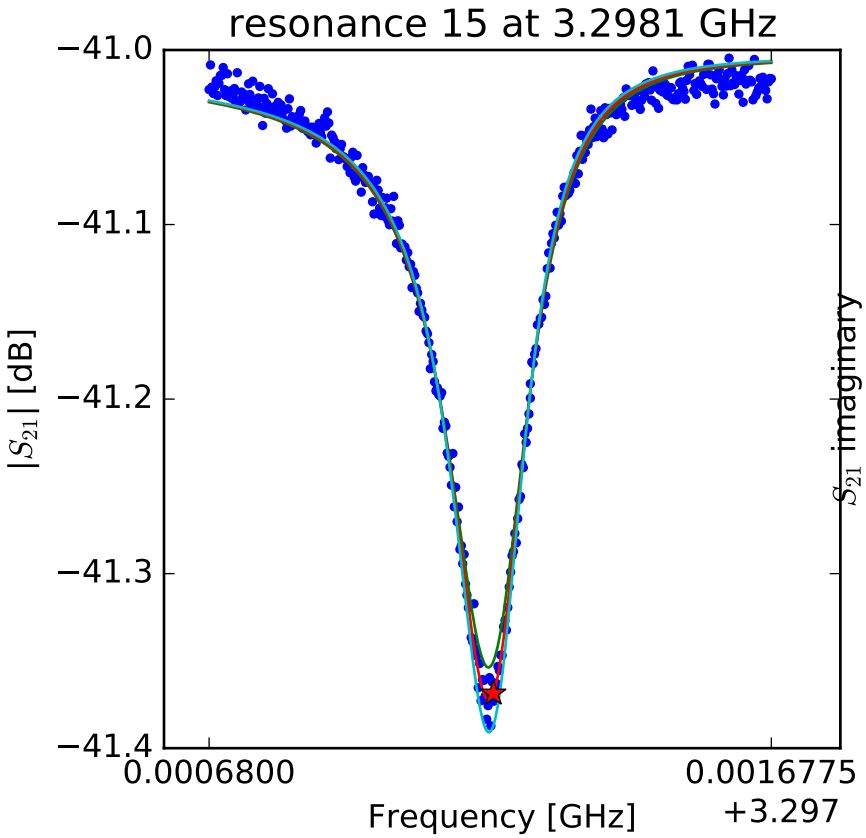


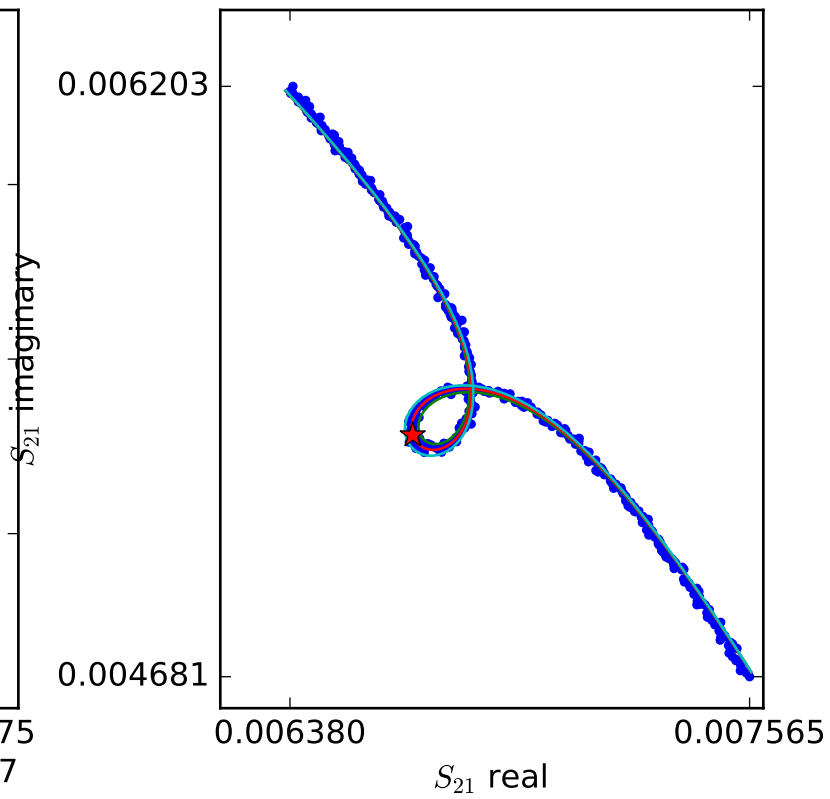


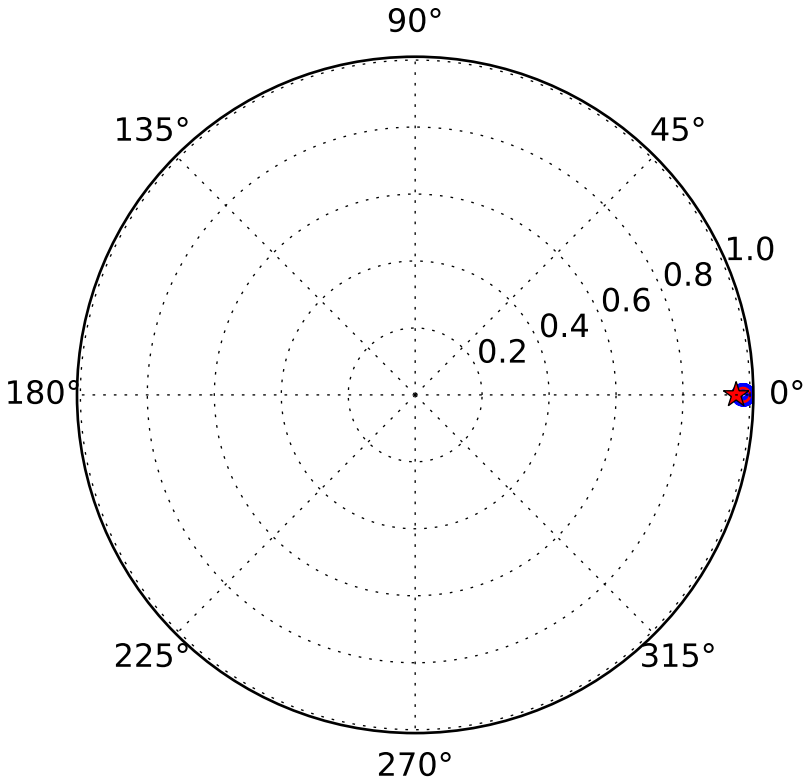


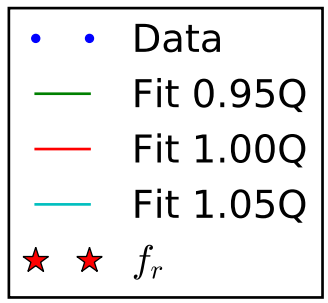
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.29409942564
Q_r = 12041.3267412
Q_c = 419899.657351
a = (-0.00762543704956+0.00487862494068j)
ϕ_0 = -0.678660695822
τ = 36.7793274369



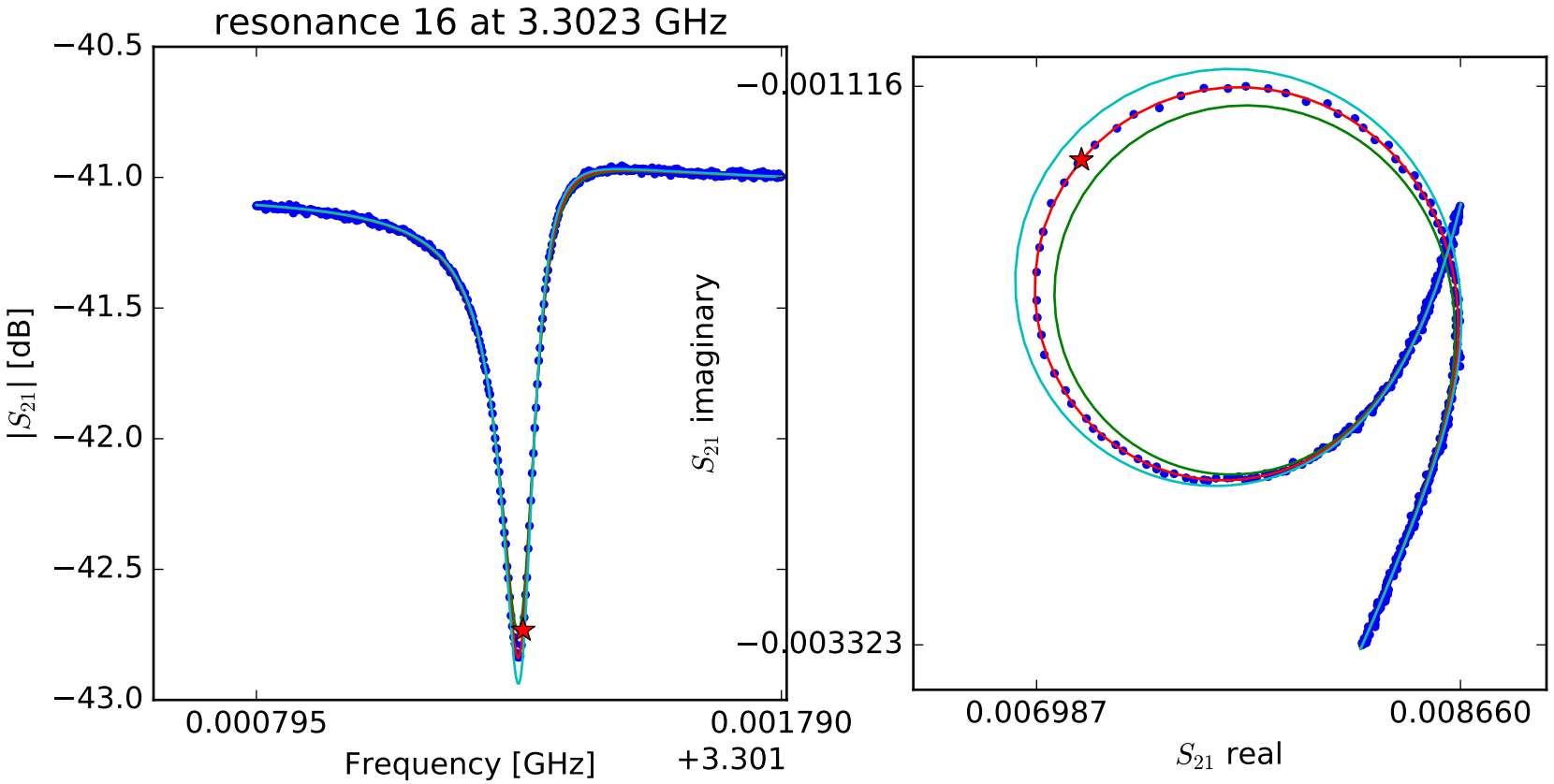


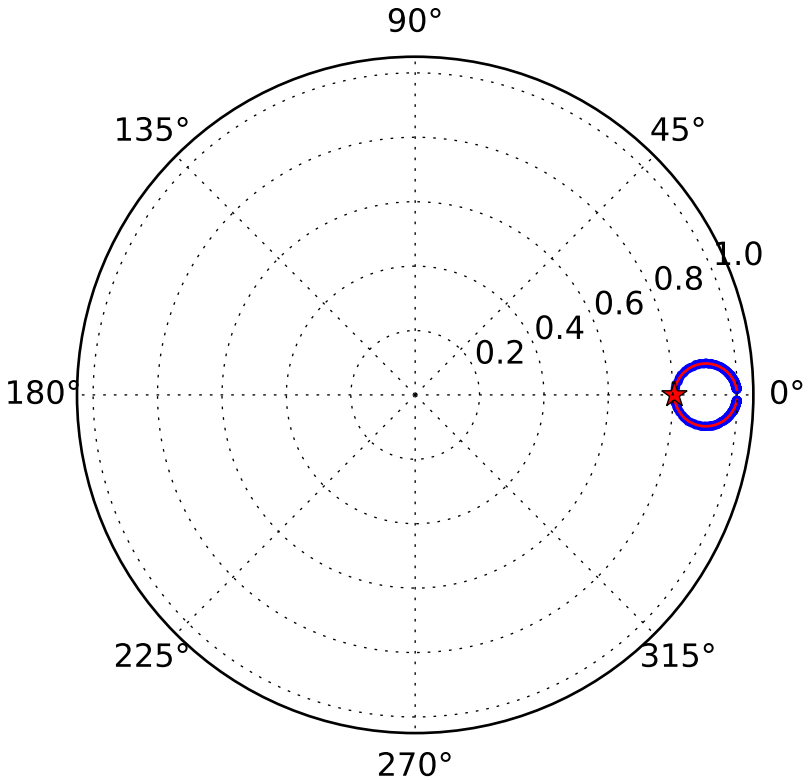


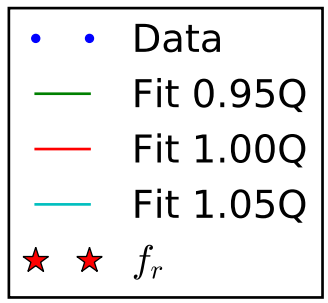


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.29818448132
Q_r = 19431.4538488
Q_c = 469083.996093
a = (0.0084376794125+0.00284310659609j)
ϕ_0 = -0.194483040936
τ = 36.6706091545

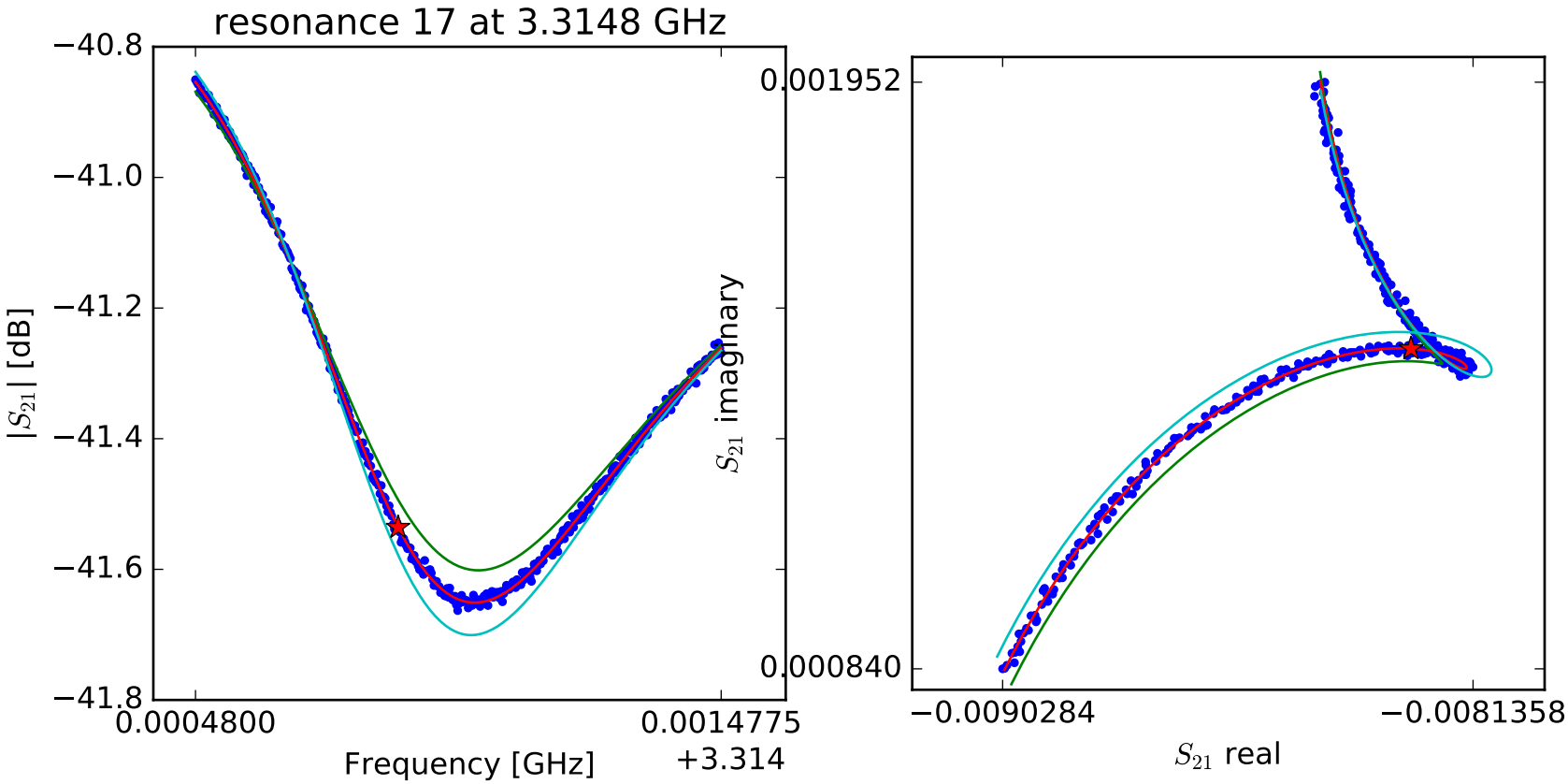


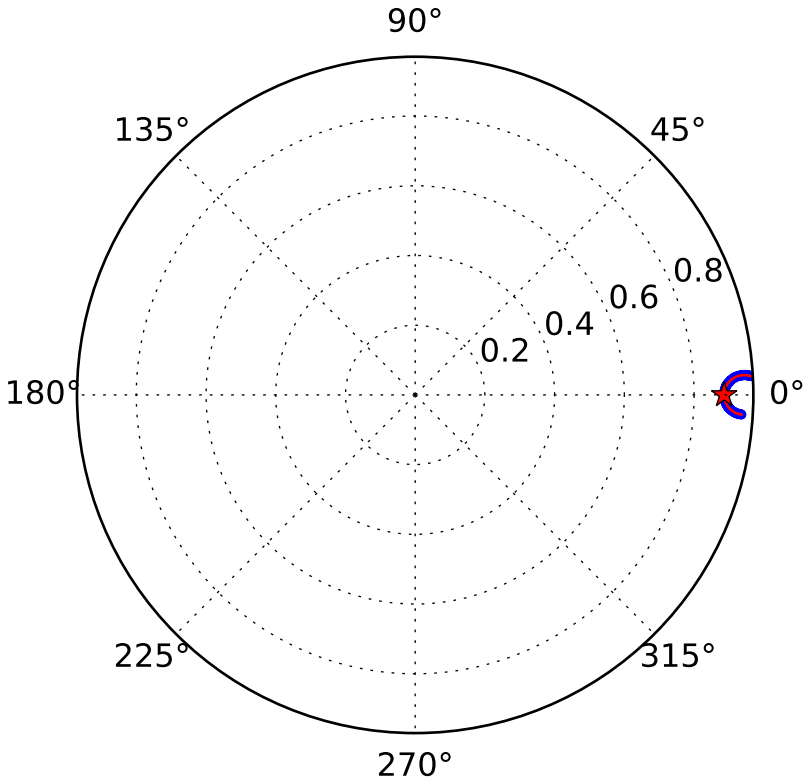


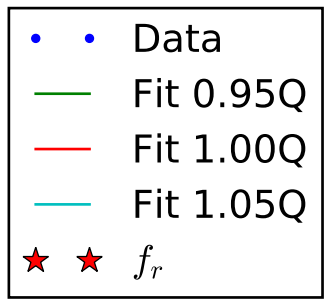


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.30230035922
Q_r = 39462.0253295
Q_c = 202328.464076
a = (-0.000455821174774+0.00885724687969
ϕ_0 = -0.392347349249
τ = 37.3386633726

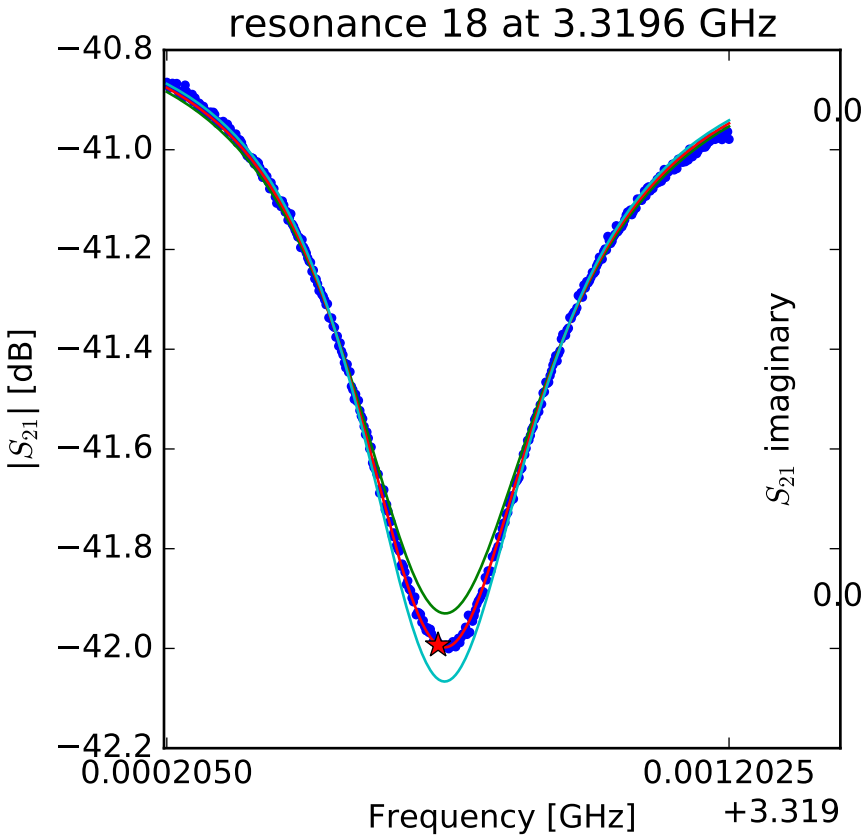


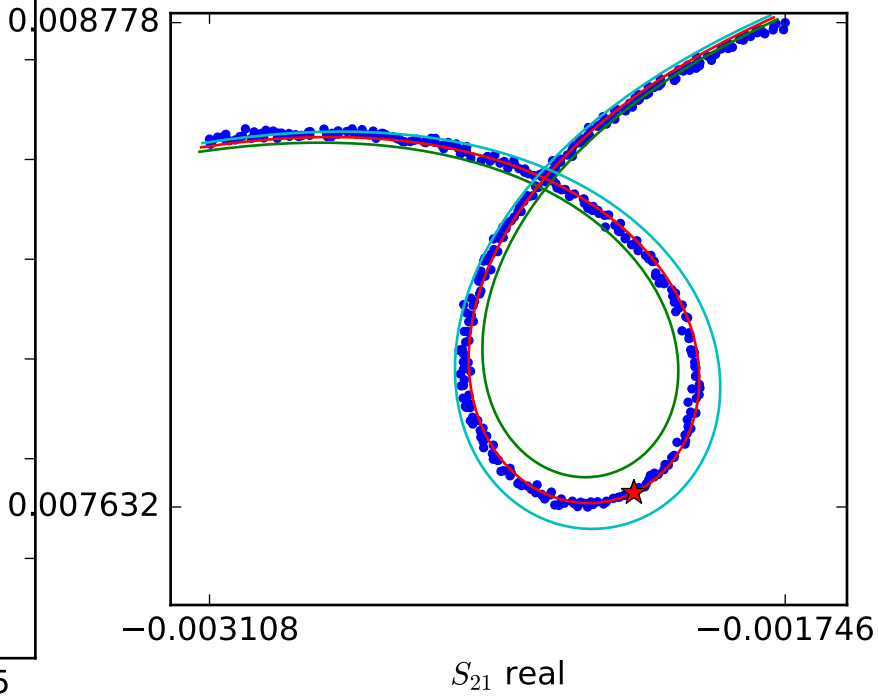


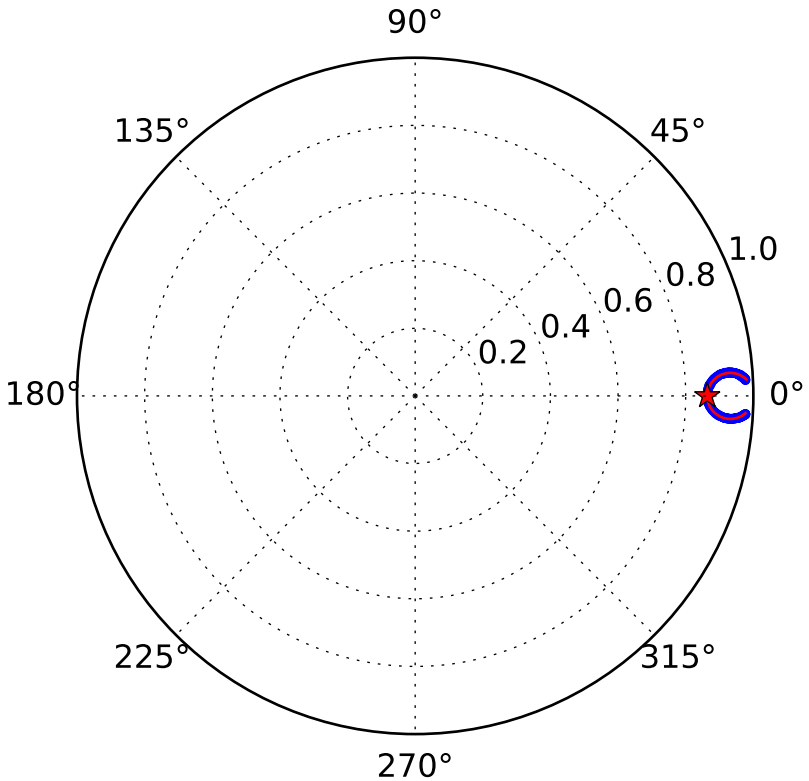


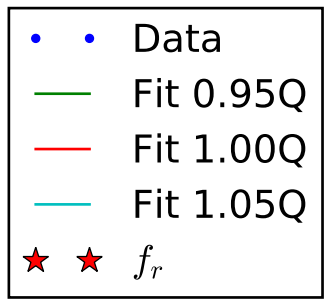
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.31486442981
Q_r = 3800.97755337
Q_c = 33416.2225065
a = (0.00343894939805+0.00855273811892j)
ϕ_0 = 0.608569490106
τ = 38.8267395171



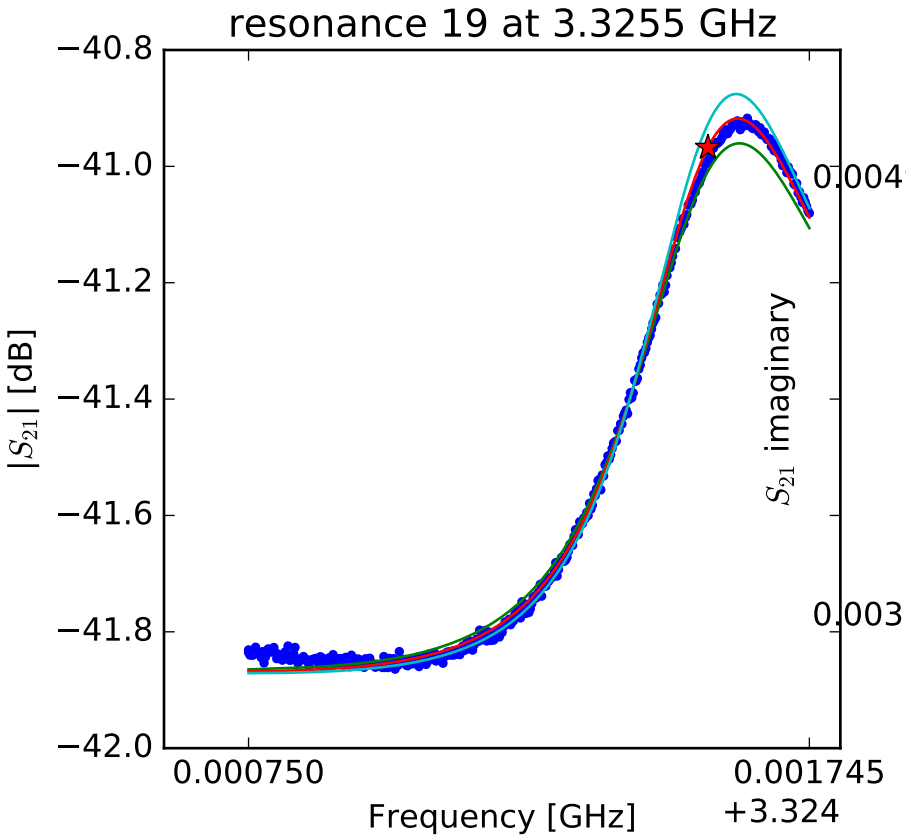


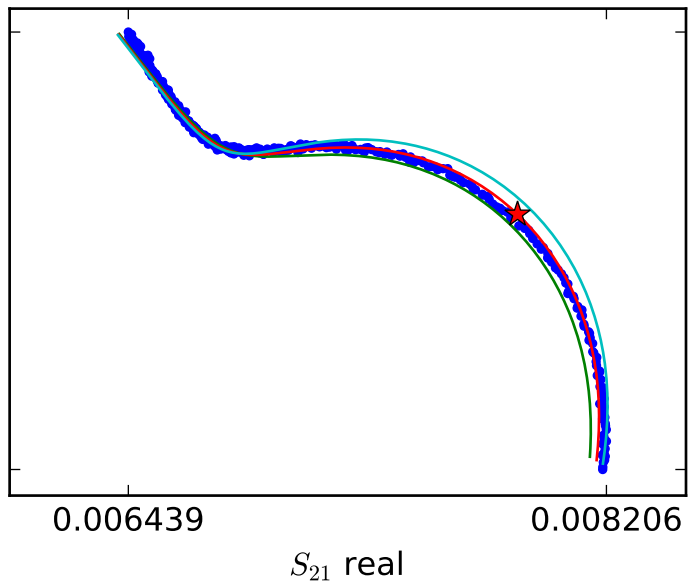


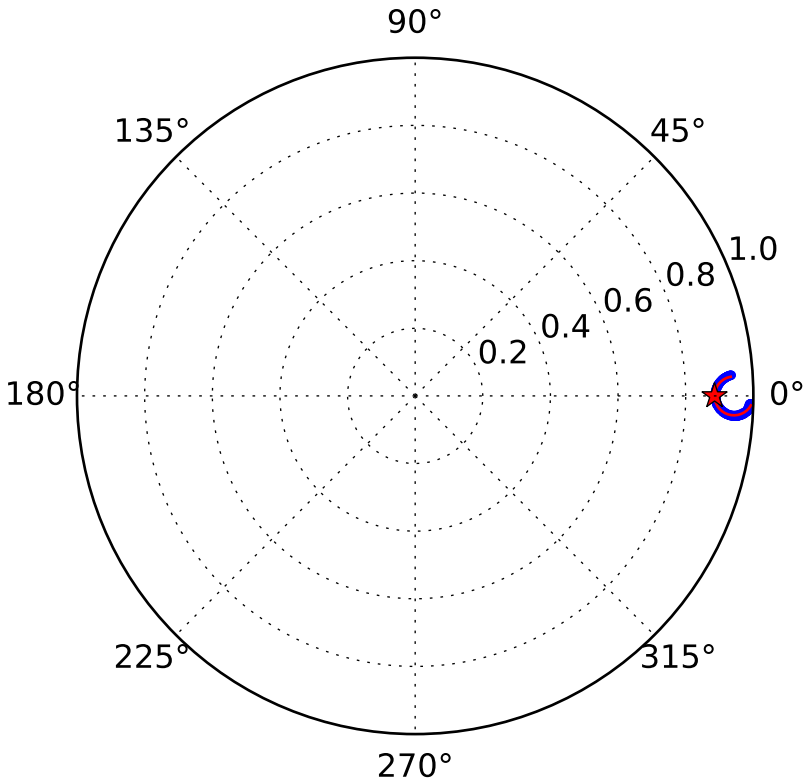


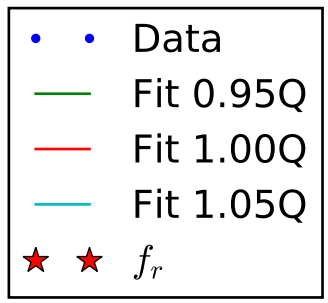
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.3196863073
Q_r = 7540.93386392
Q_c = 55338.5510356
a = (-0.00225698199394+0.00891338221336j)
ϕ_0 = 0.102250823214
τ = 40.9660013037



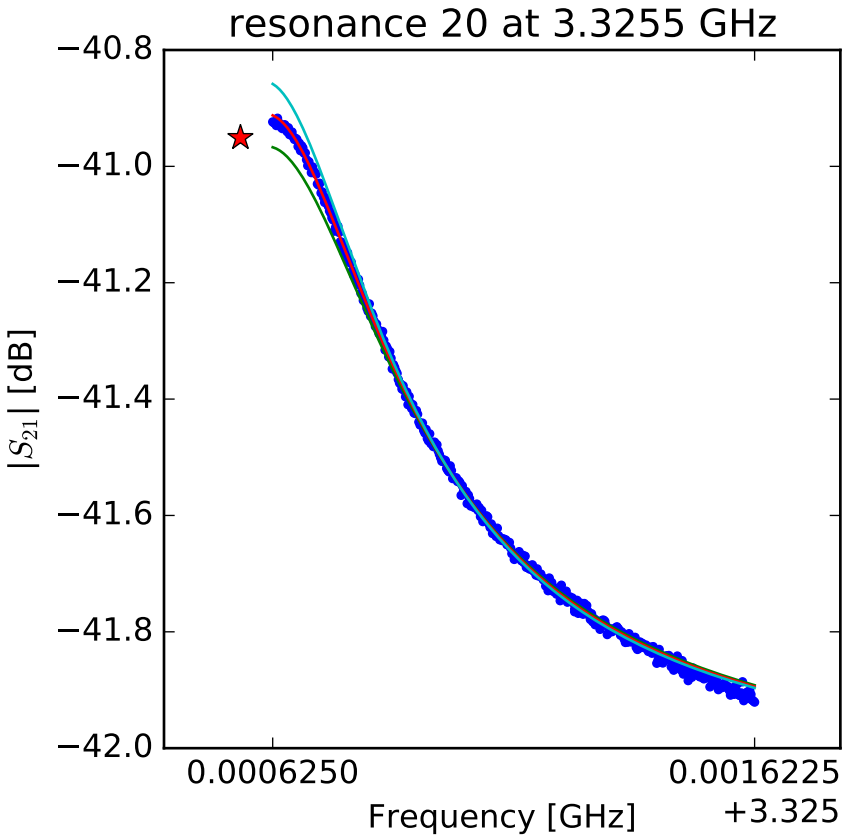


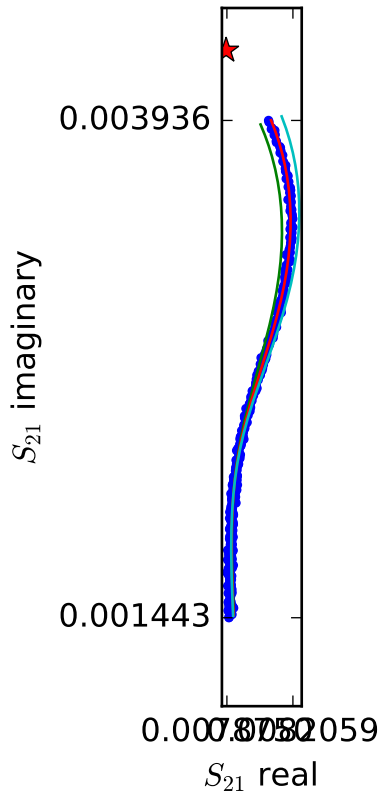


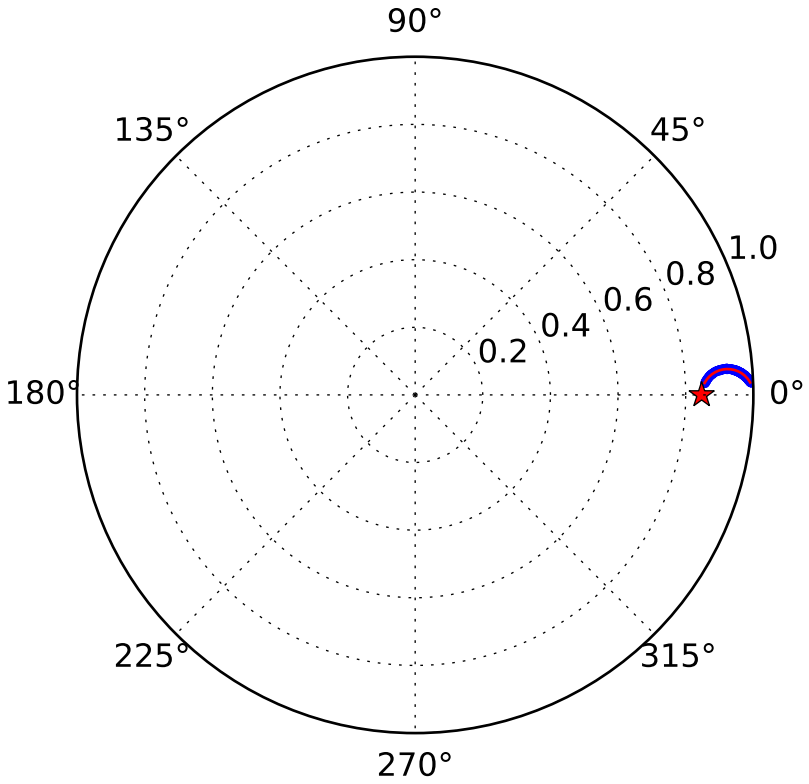


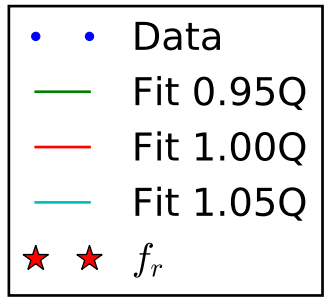
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.32556504474
Q_r = 7795.1430596
Q_c = 67903.3685684
a = (-0.00149841613415-0.00798222966871j)
ϕ_0 = -2.62895133973
τ = 35.6781544781



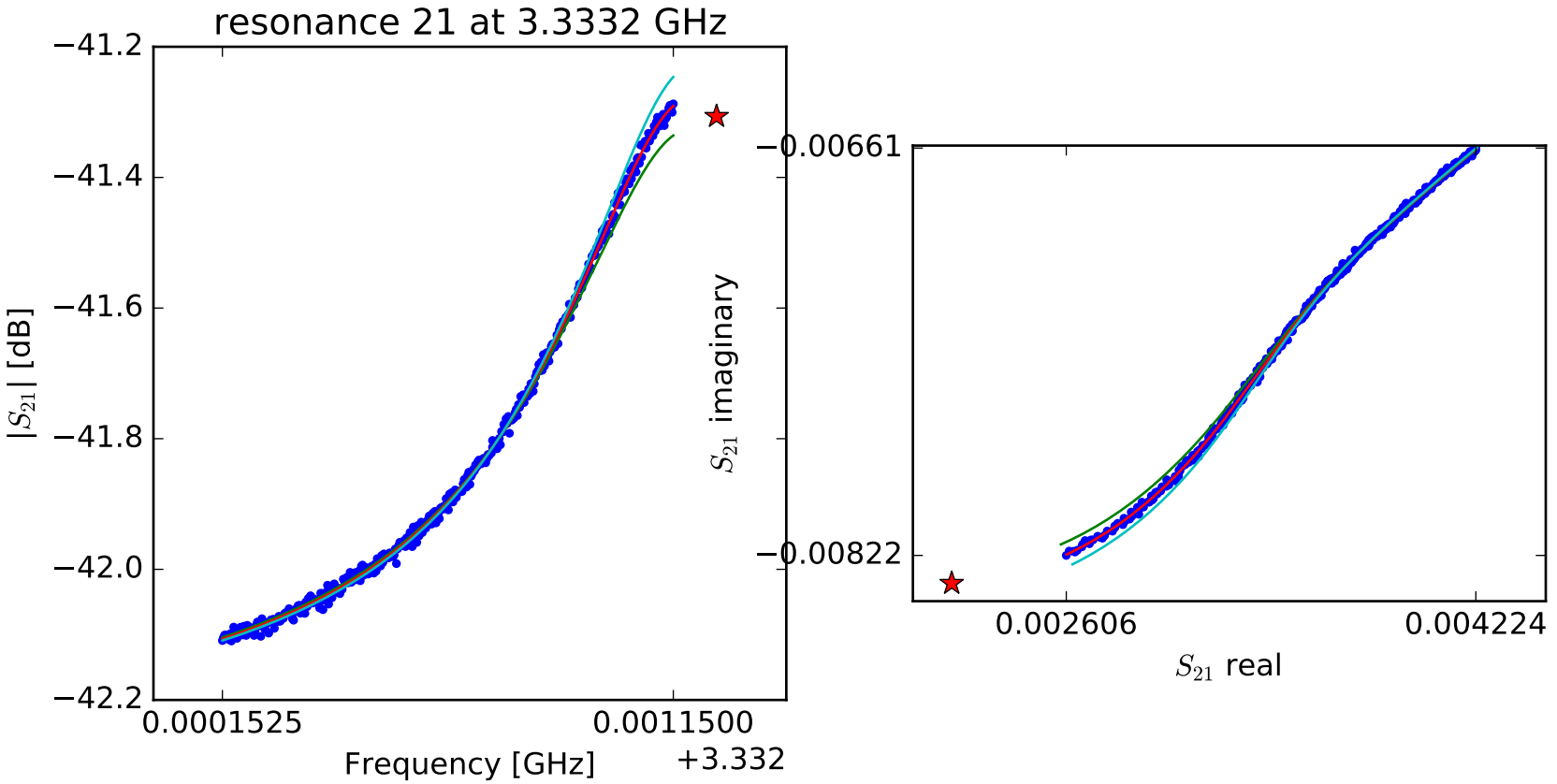


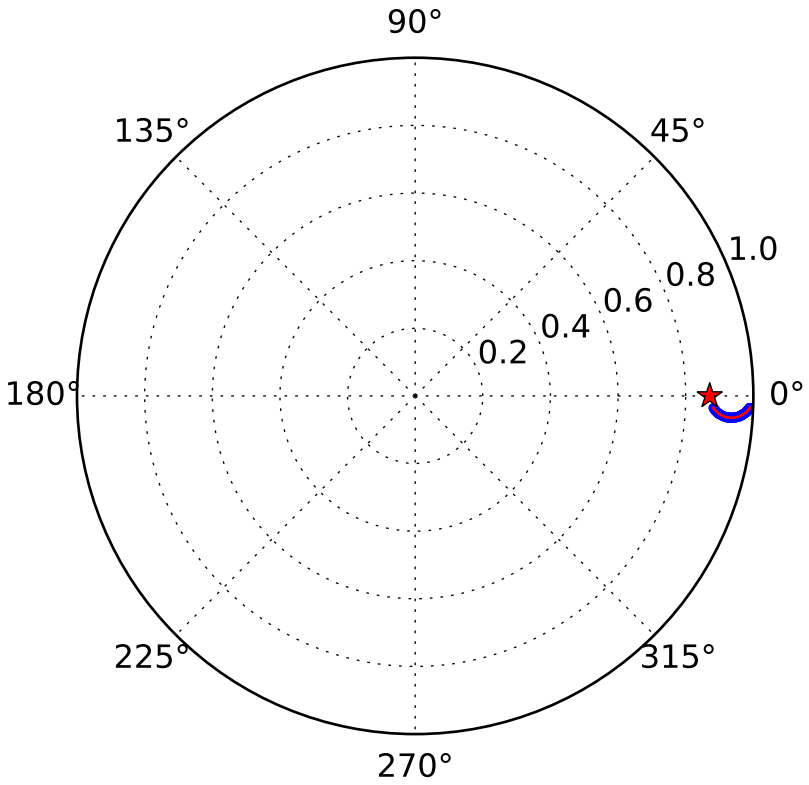


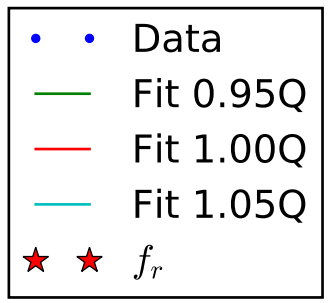


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.32555822525
Q_r = 6111.3176256
Q_c = 39968.3053503
a = (0.00753869257139+0.00219884781003j)
ϕ_0 = -2.72287704886
τ = 34.8736812514

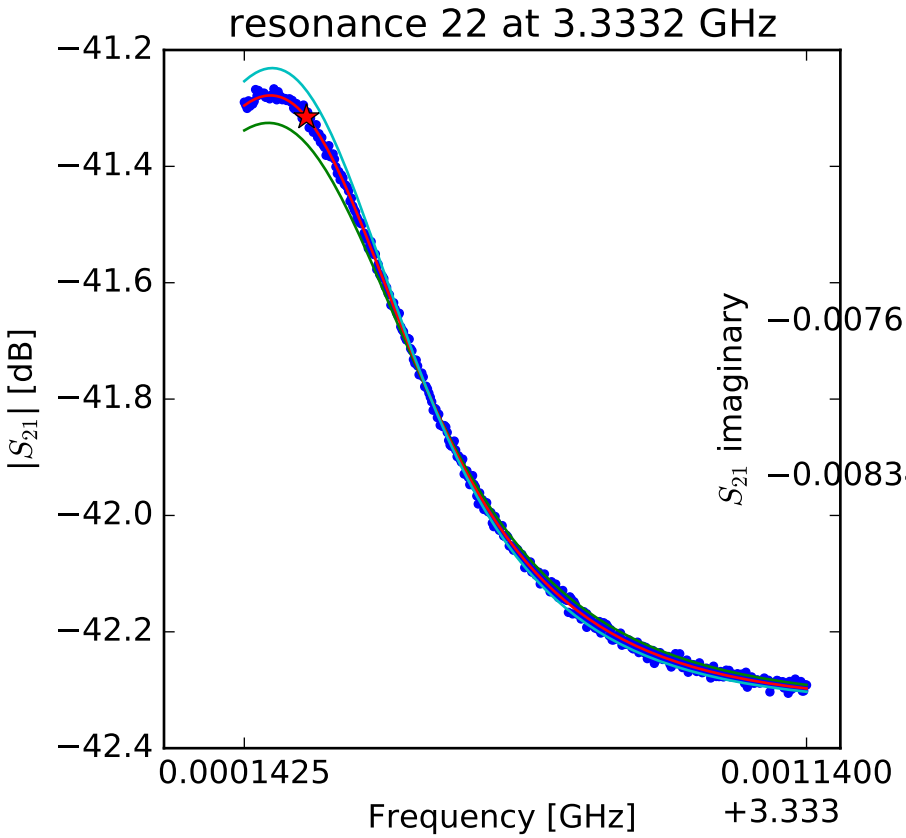


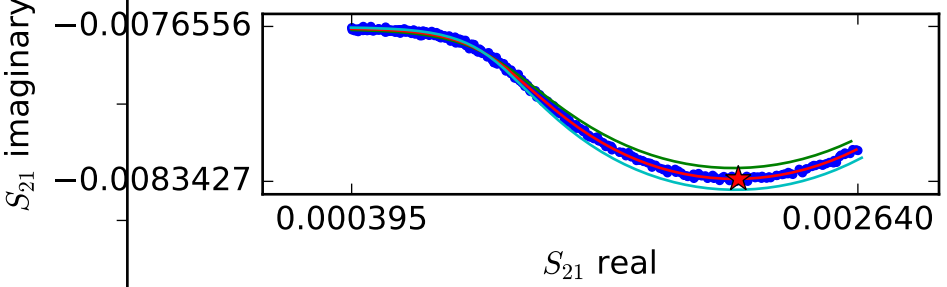


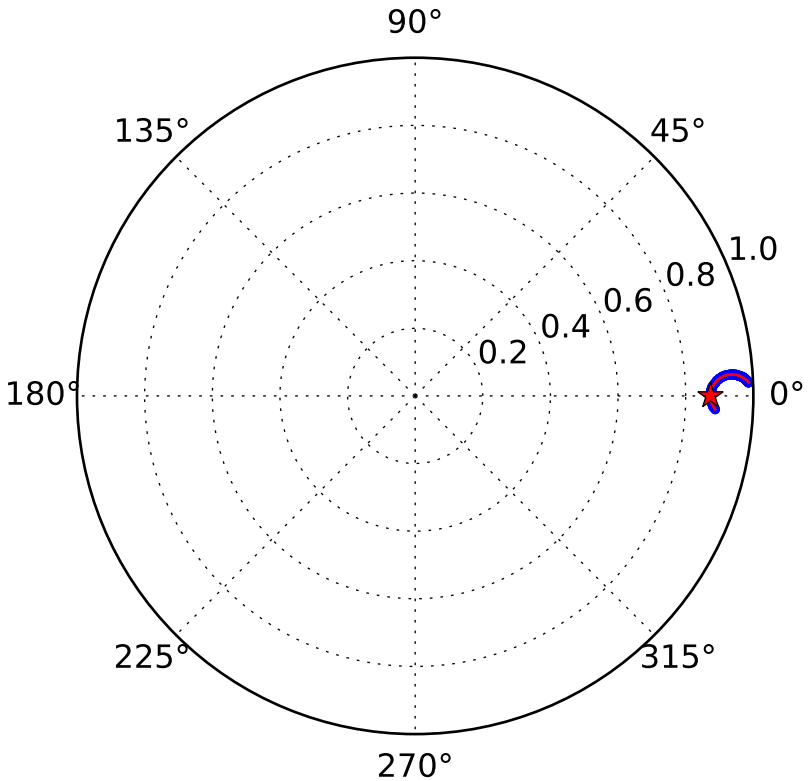


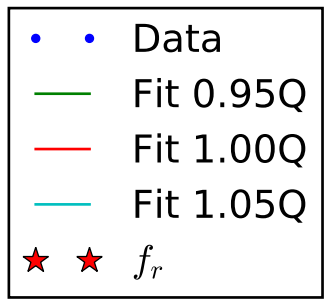
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.33324567286
Q_r = 5184.72649762
Q_c = 40154.9781924
a = (0.001358397797+0.00755139257626j)
ϕ_0 = 2.77072681452
τ = 35.8283719337



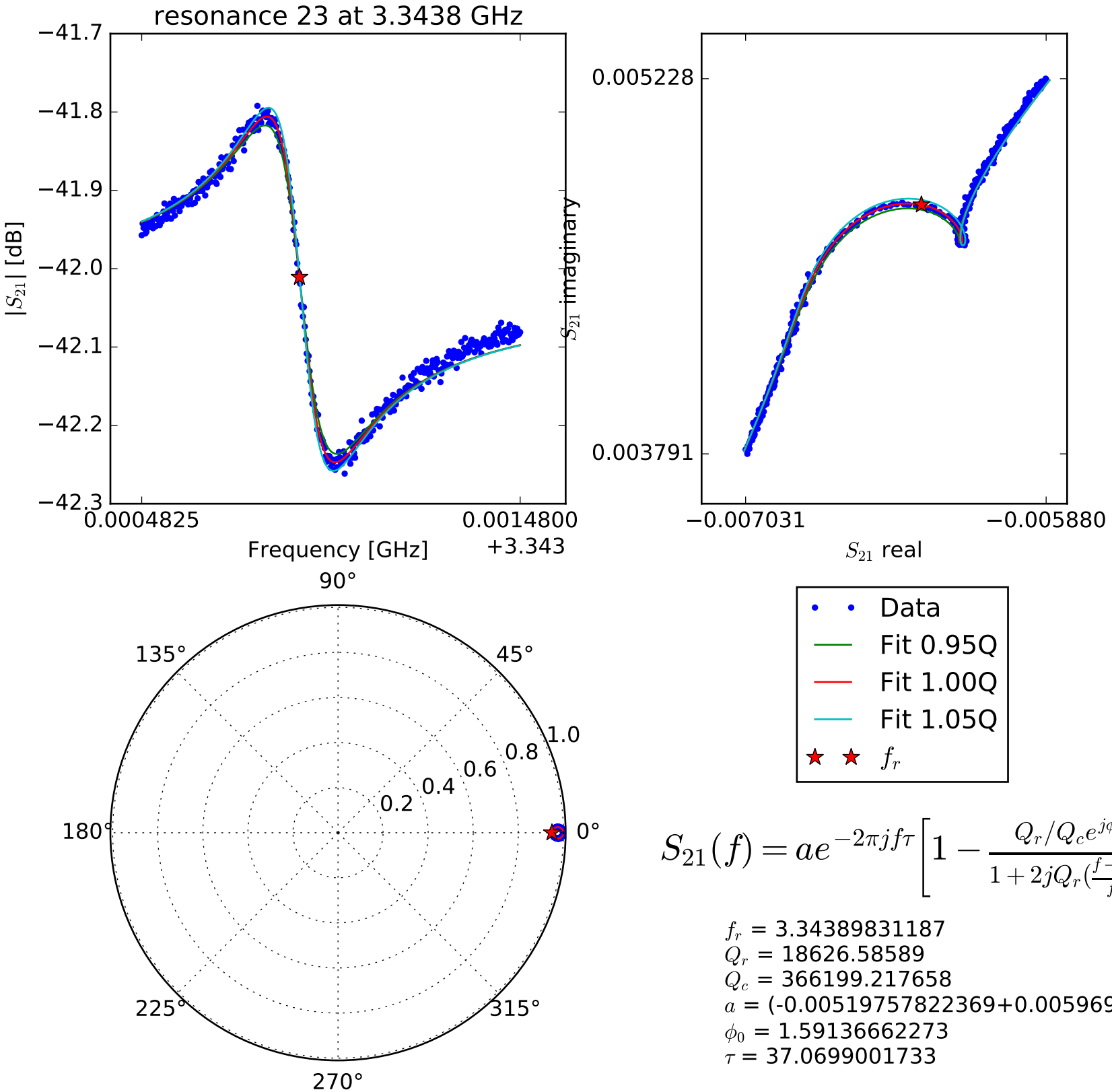






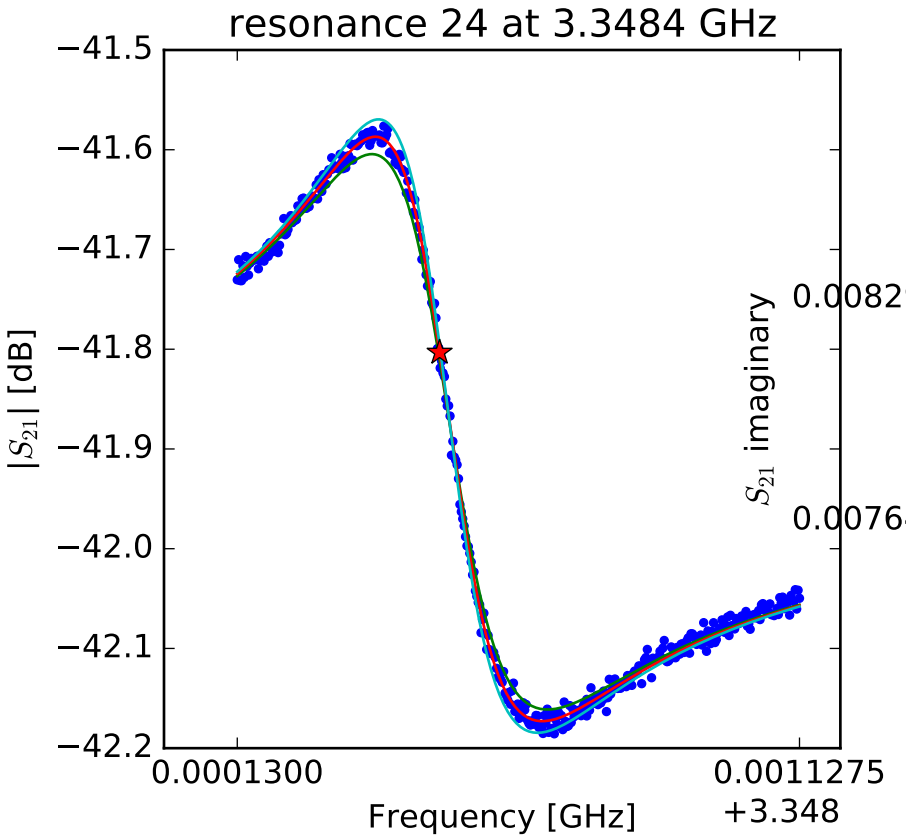
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

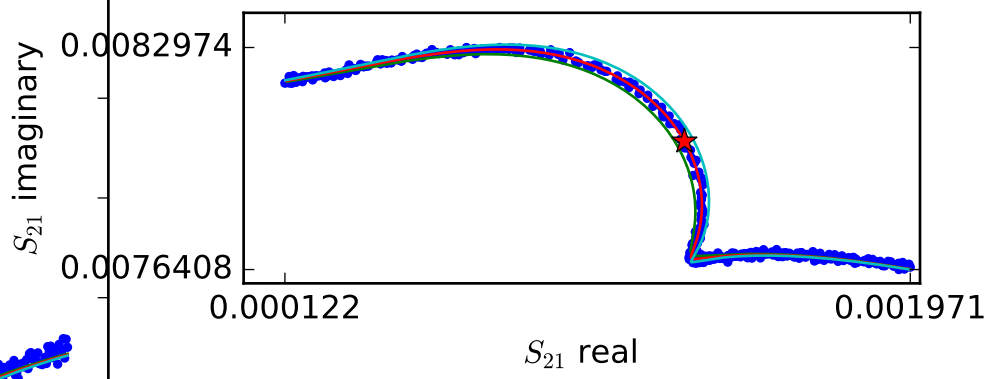
f_r = 3.33325273763
Q_r = 5322.6954862
Q_c = 42010.4919804
a = (-0.00666171820909+0.00385723463805j)
ϕ_0 = -3.56942324926
τ = 36.1867247997

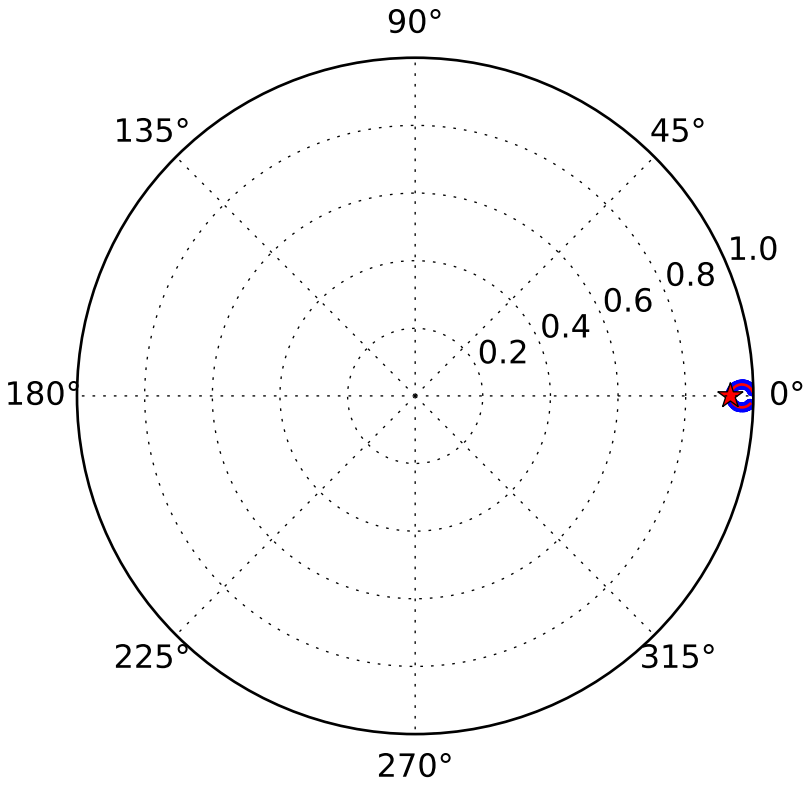


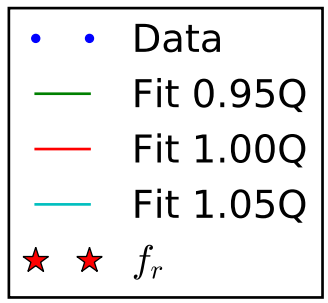
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.34389831187
Q_r = 18626.58589
Q_c = 366199.217658
a = (-0.00519757822369+0.00596917929129j)
ϕ_0 = 1.59136662273
τ = 37.0699001733



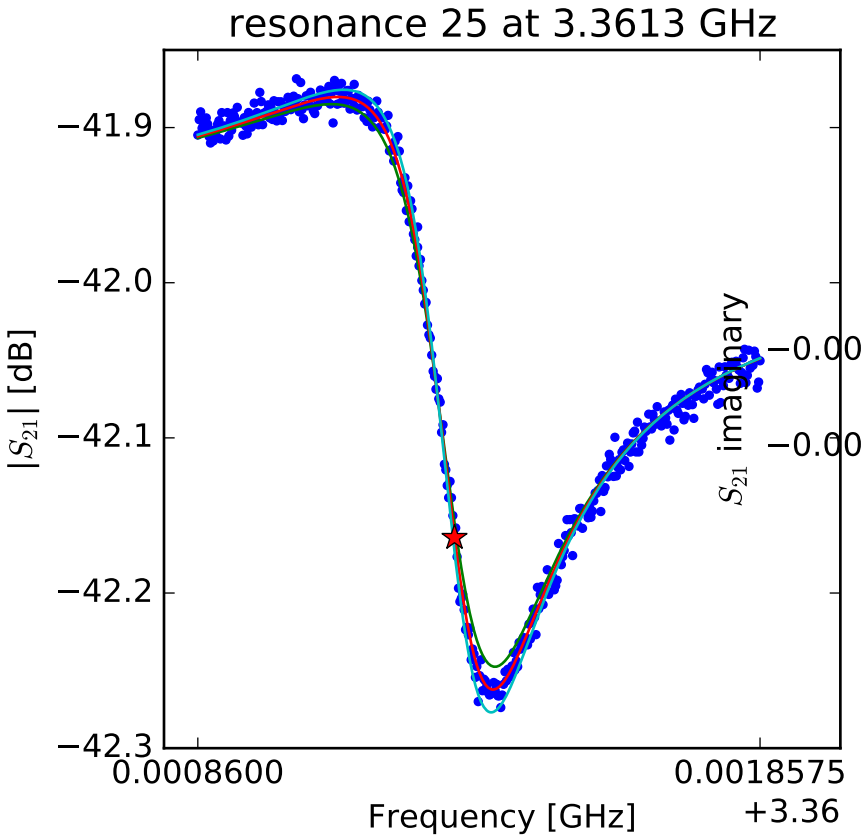


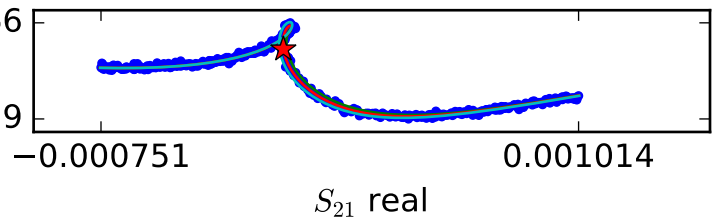


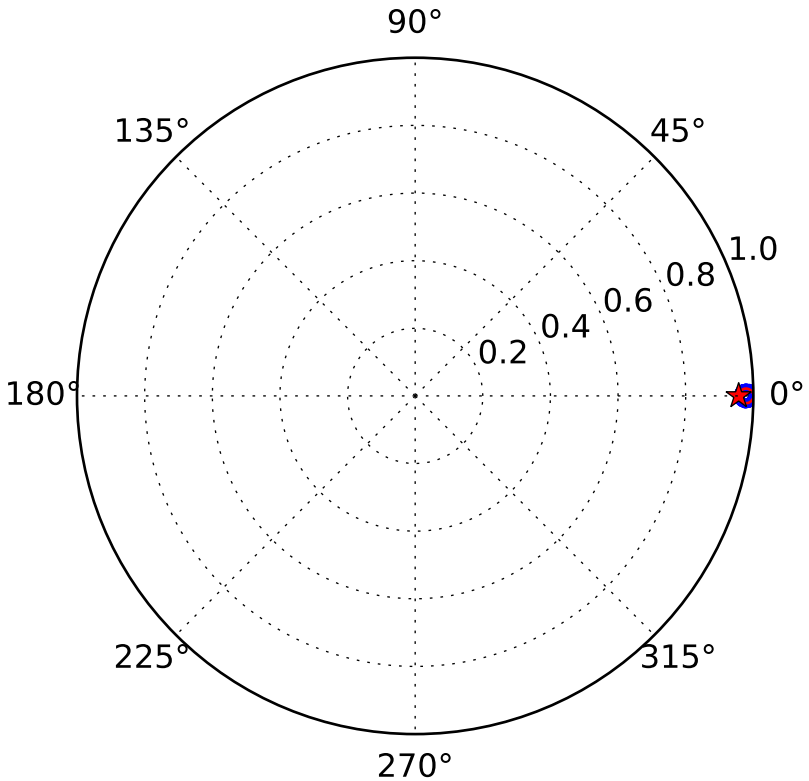


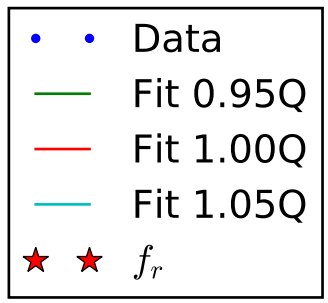
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.34848894177
Q_r = 11616.8956155
Q_c = 171015.619592
a = (0.00434534638191-0.00671727529346j)
ϕ_0 = 1.77005843575
τ = 37.5114229988



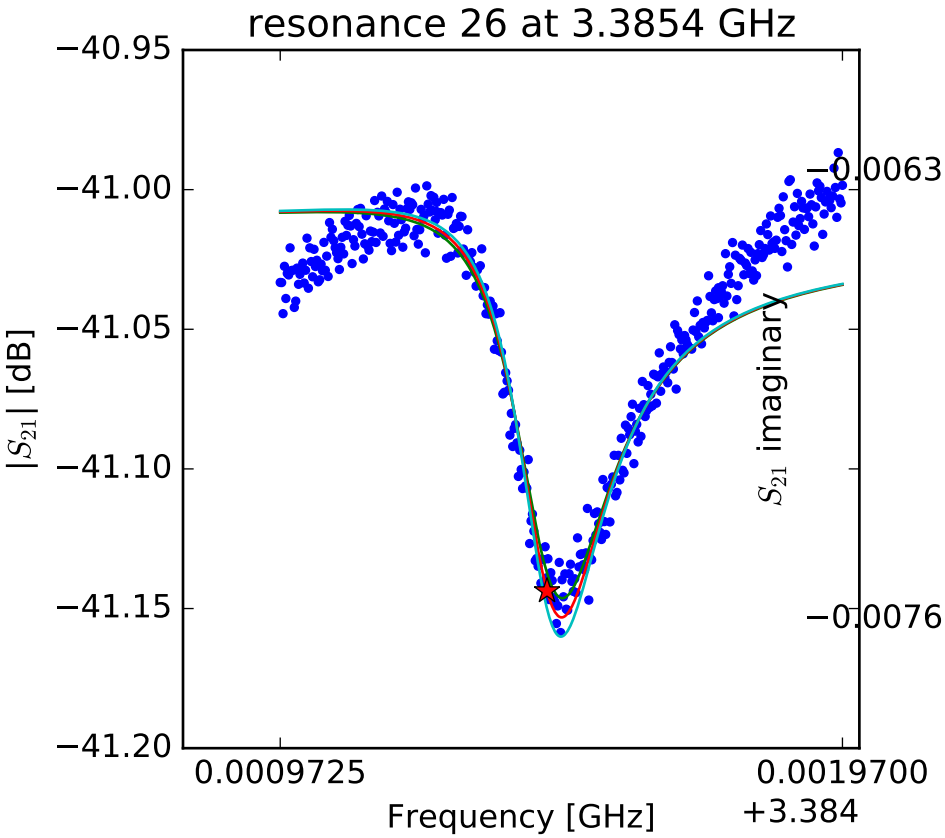


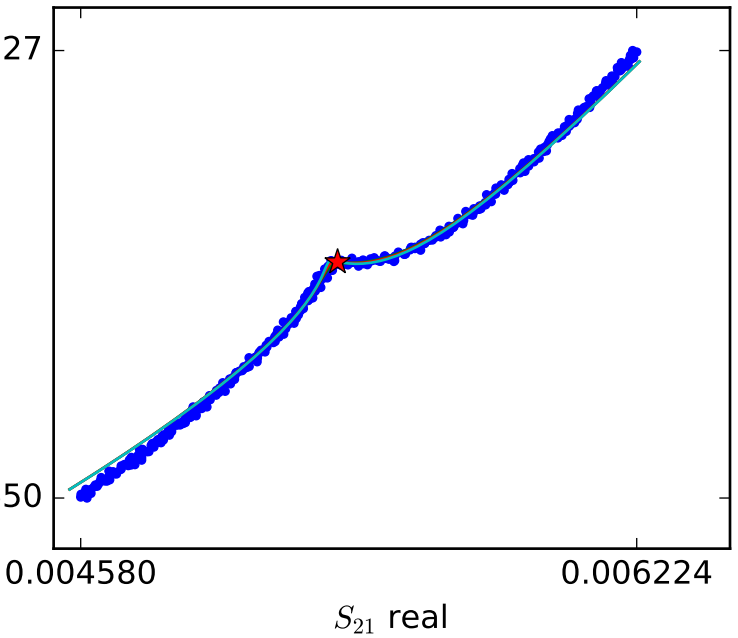


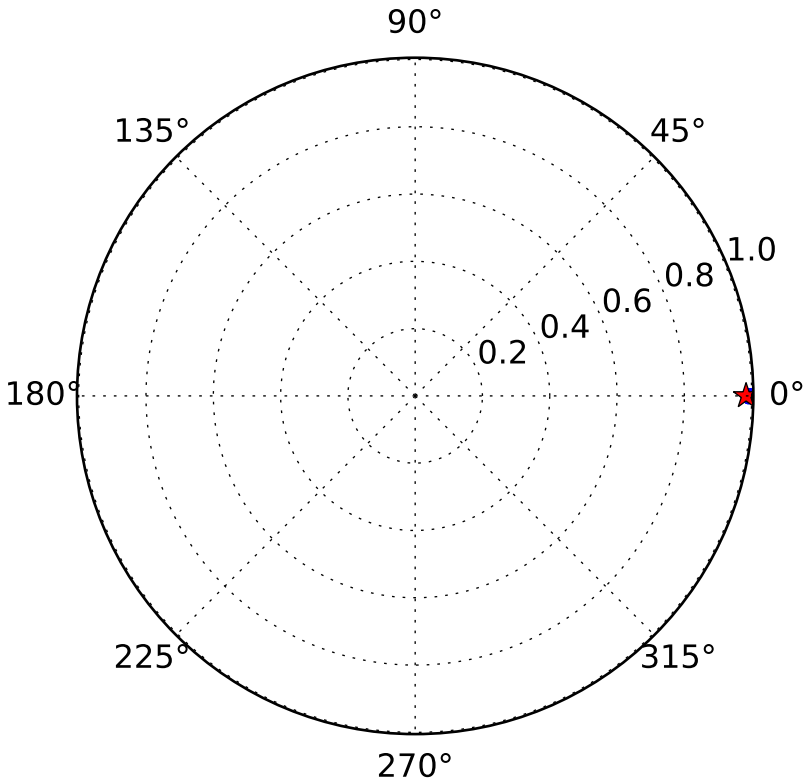


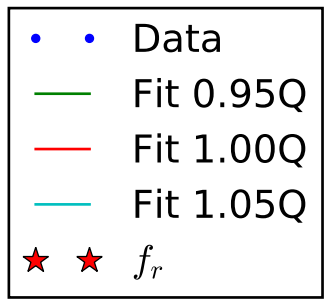
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.36131542702
Q_r = 14137.7425121
Q_c = 325151.07945
a = (0.00728704292518-0.00322550084056j)
ϕ_0 = 1.02400238659
τ = 37.2411356823



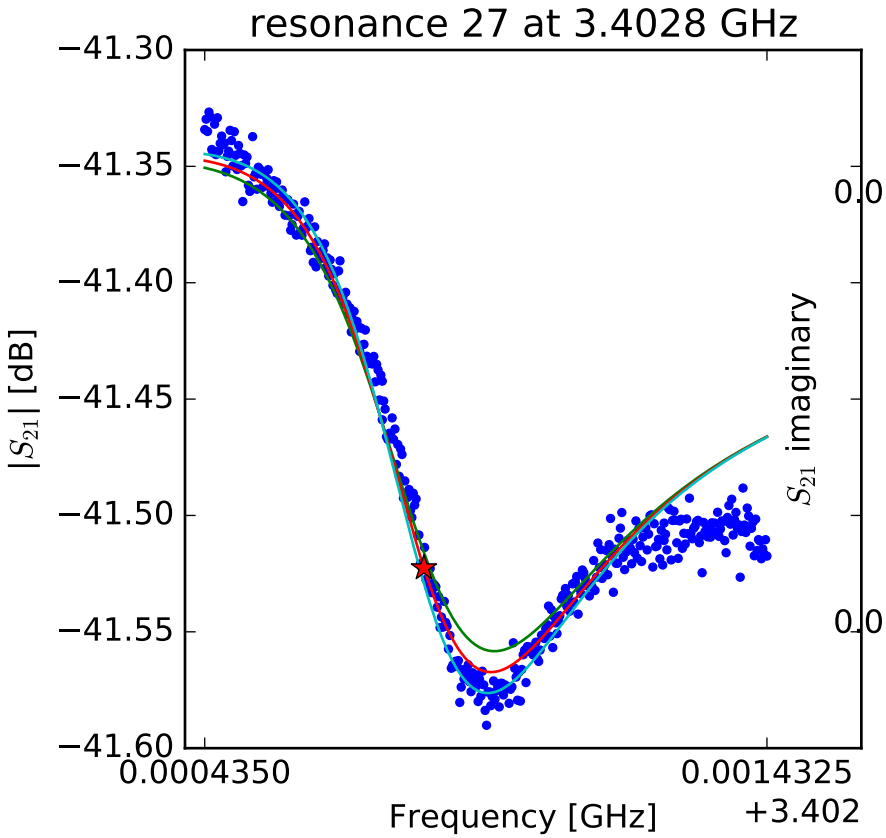


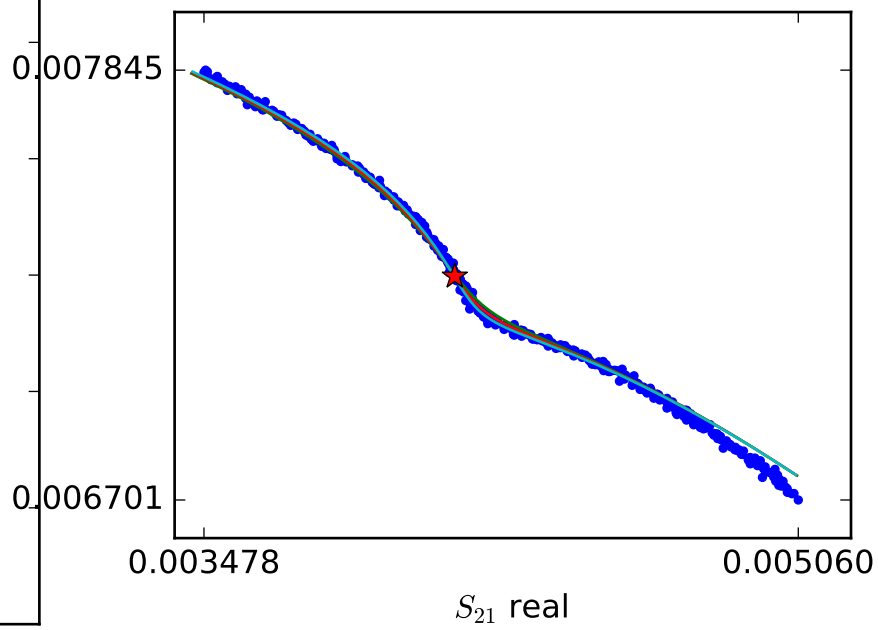


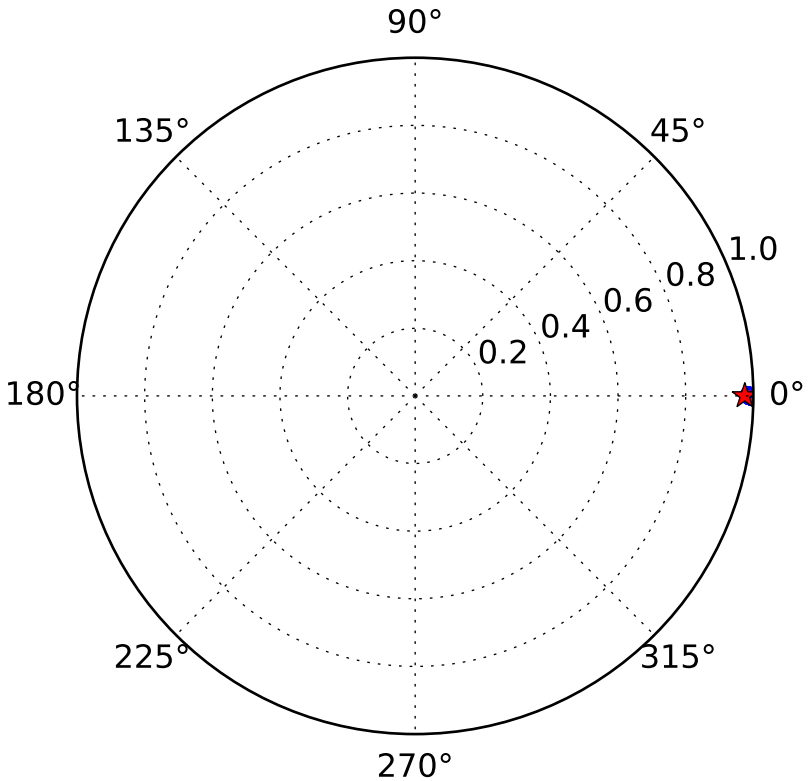


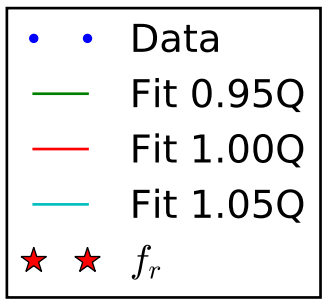
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.3854458463
Q_r = 17086.7159122
Q_c = 1026755.71113
a = (0.0025604931966+0.00851885255172j)
ϕ_0 = -5.77563659292
τ = 38.7978404018



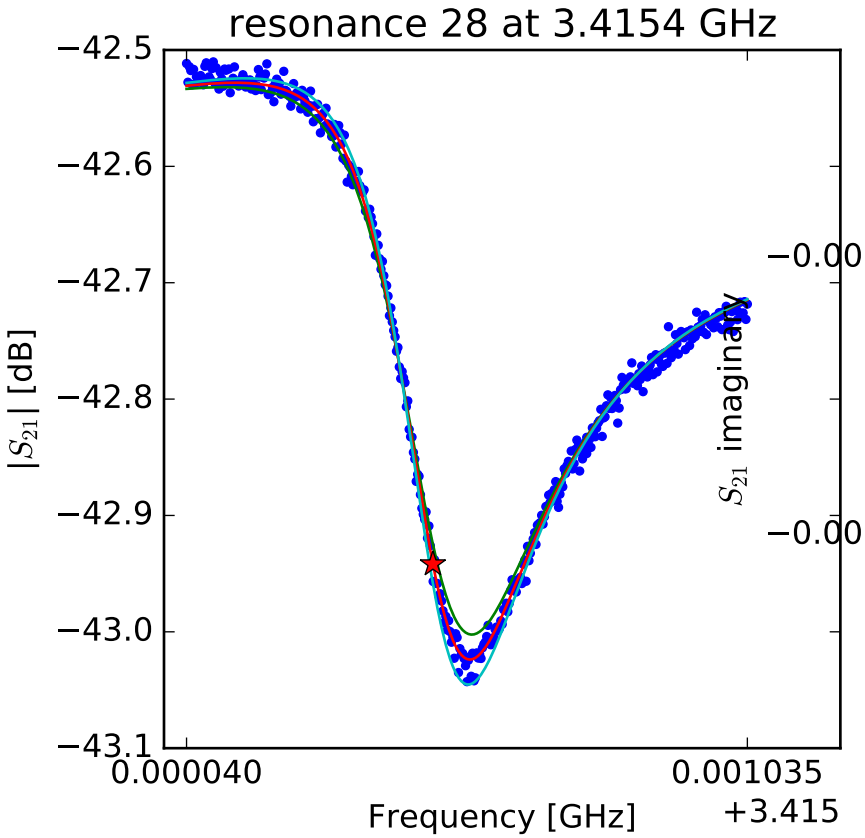


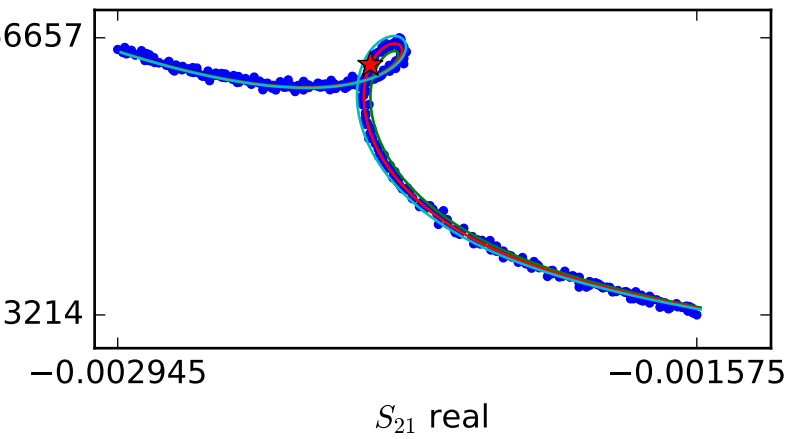


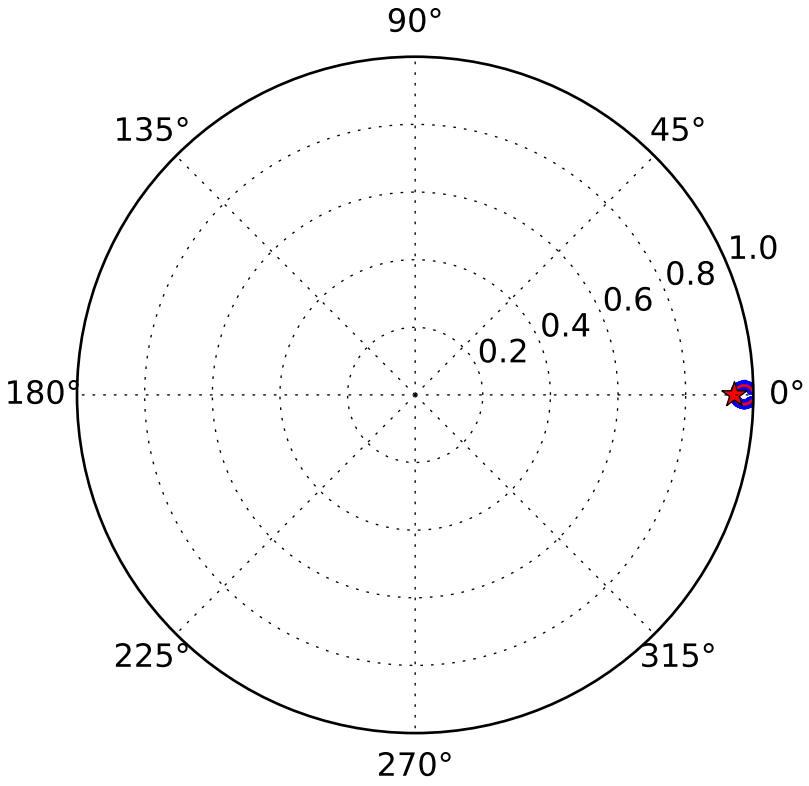


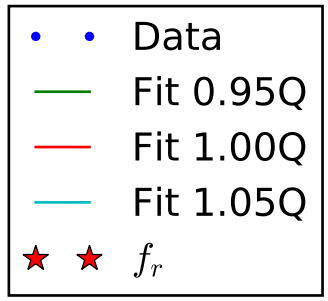
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.40282389653
Q_r = 7113.2513009
Q_c = 281083.948485
a = (-0.000646064469282-0.00849788089282j)
ϕ_0 = -5.37122344116
τ = 38.6640396856



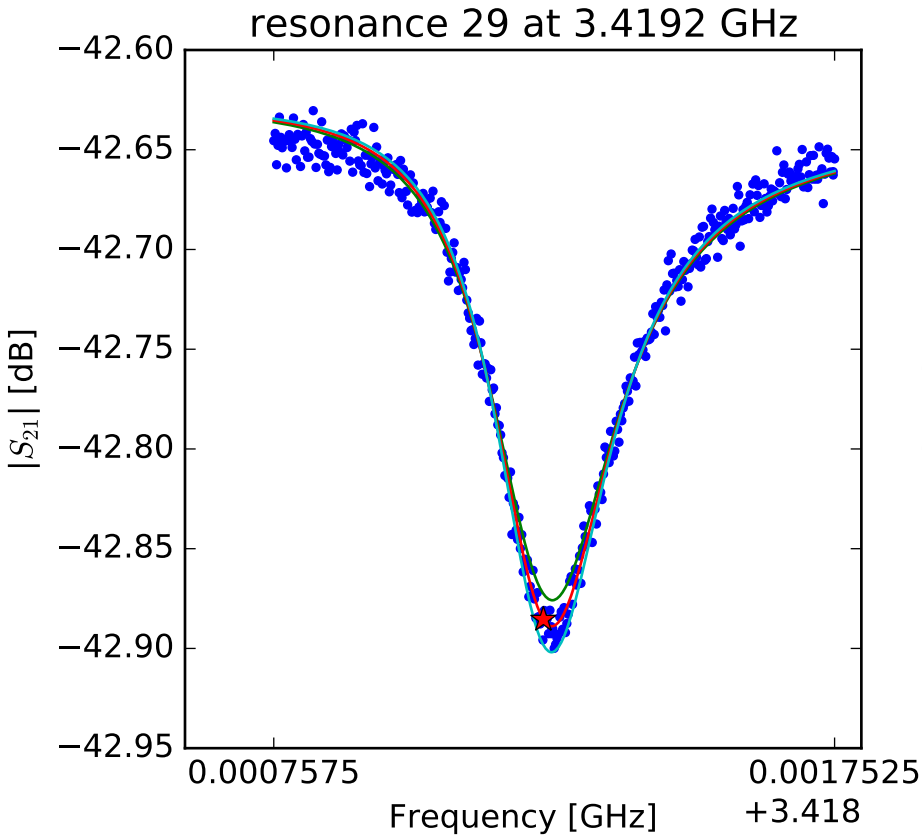


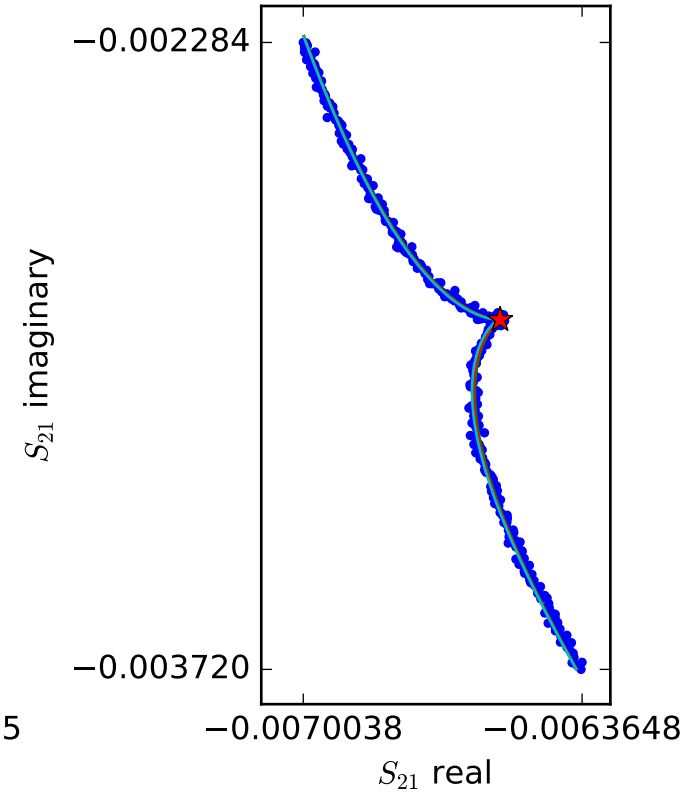


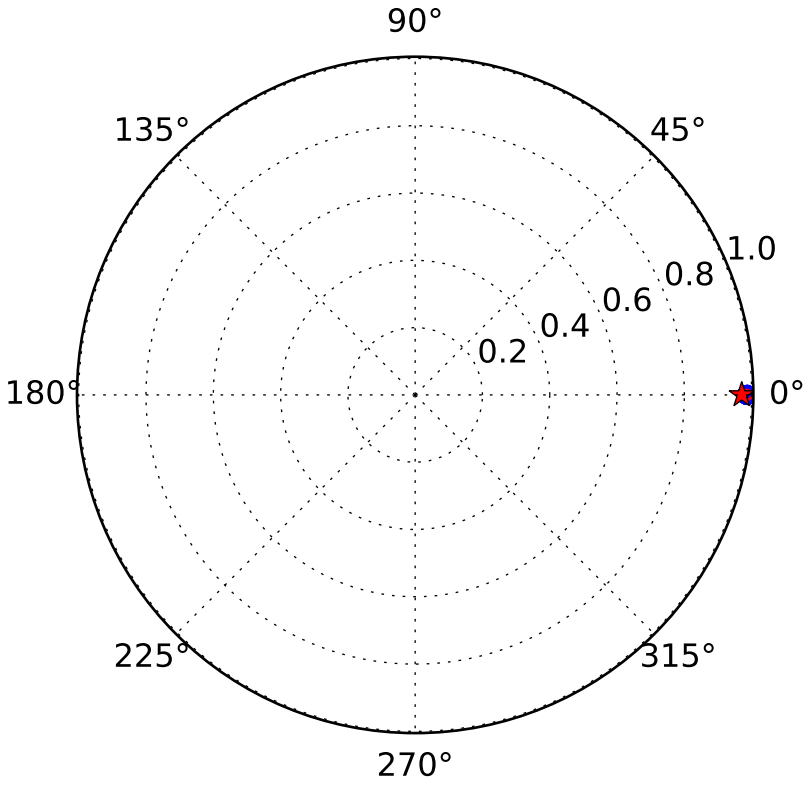


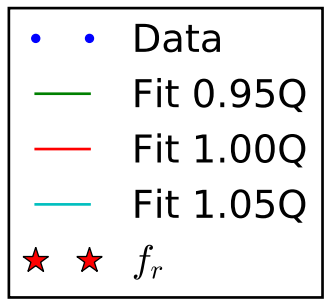
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.41547707228
Q_r = 11256.2073476
Q_c = 201167.352296
a = (0.00690361395348-0.00269440406214j)
ϕ_0 = 0.796788638835
τ = 36.0820982201



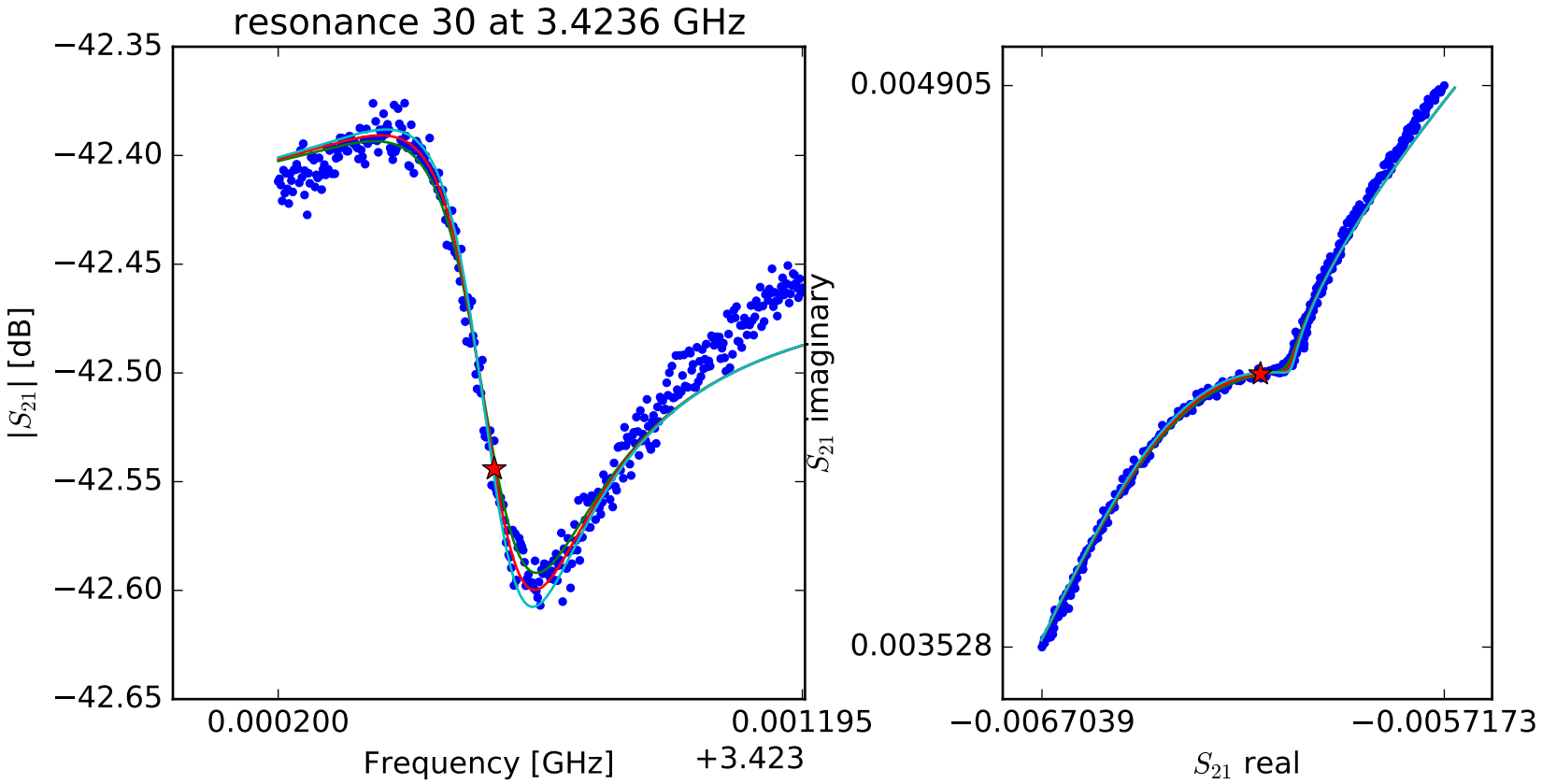


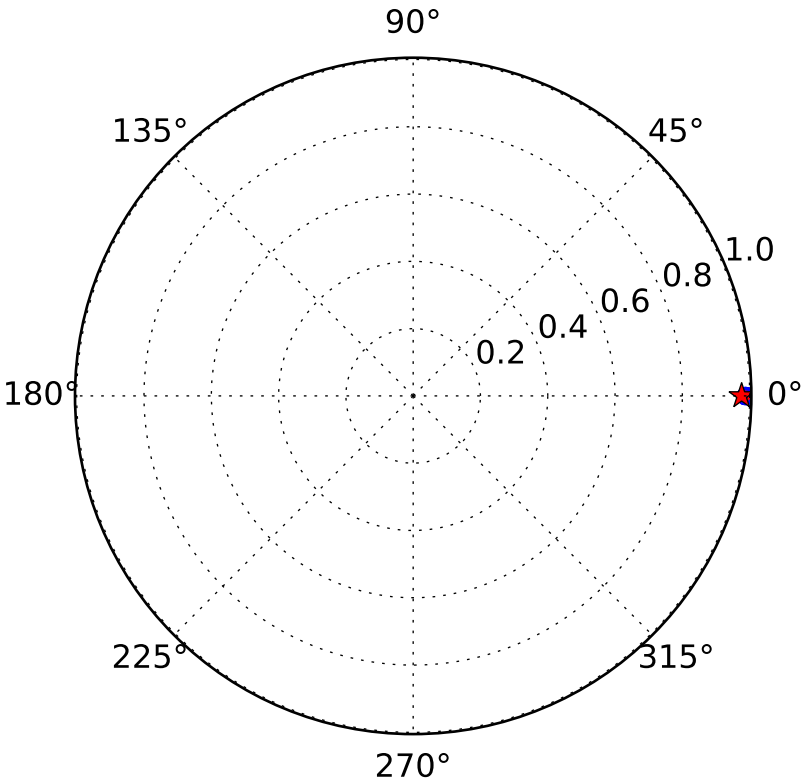


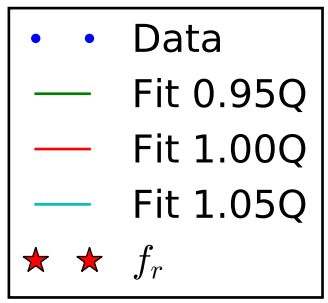


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.4192358455
Q_r = 12855.4413408
Q_c = 435997.526303
a = (0.0030878154807-0.00670919266774j)
ϕ_0 = 0.222746703558
τ = 36.6312502724

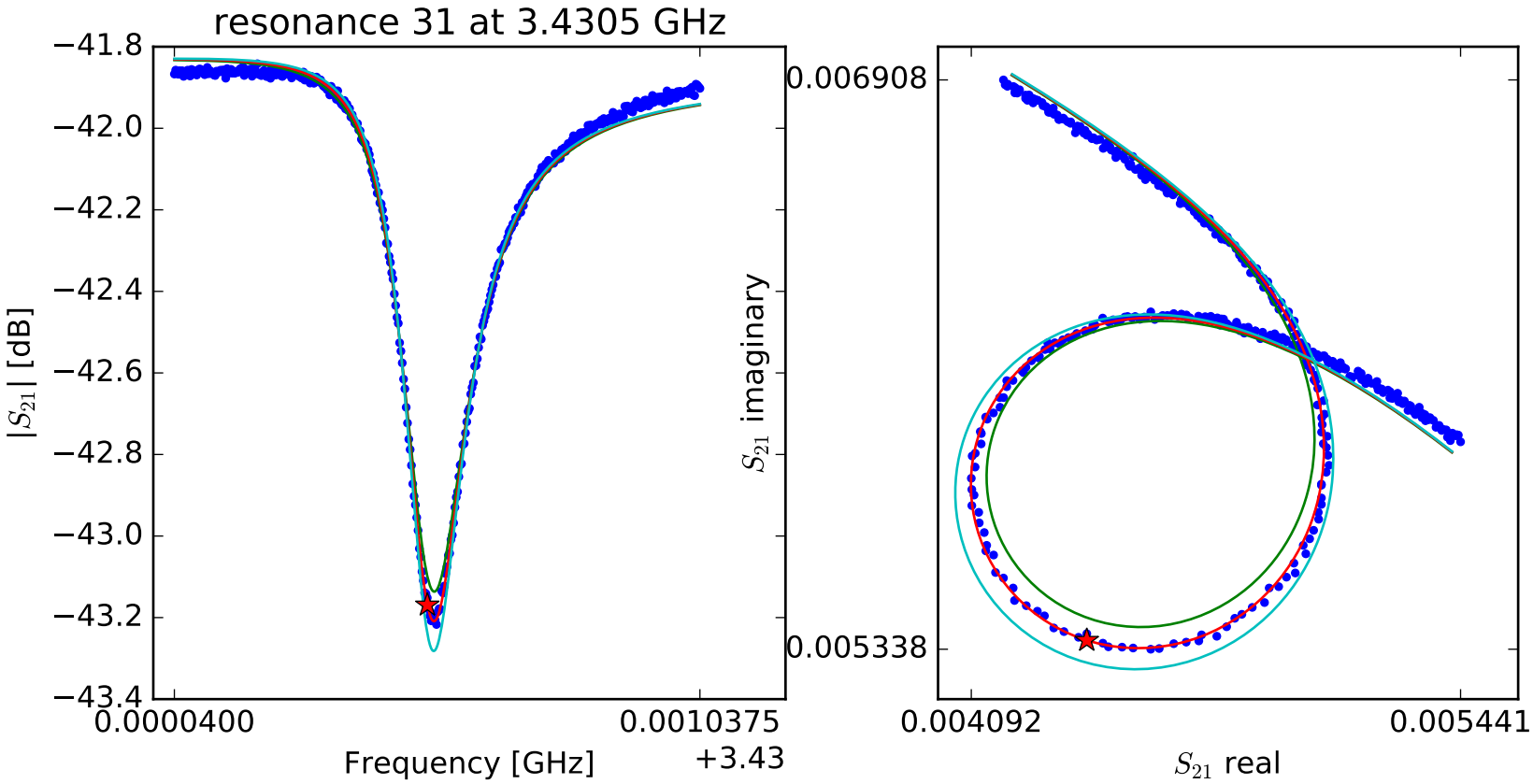


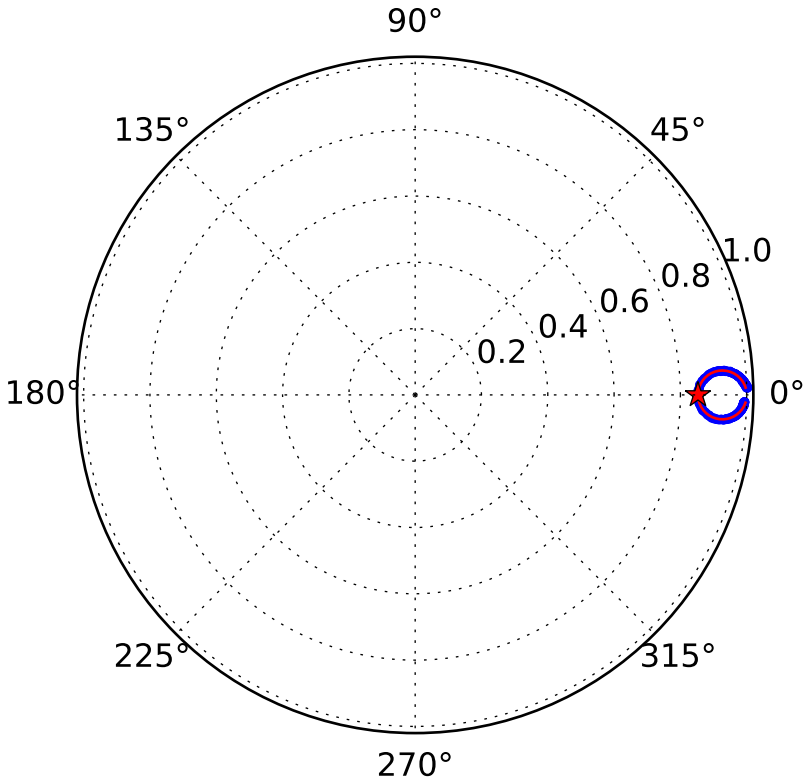


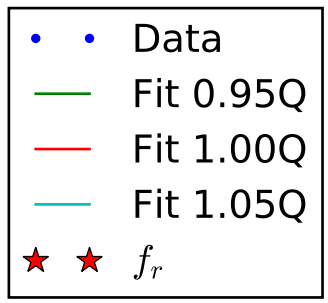


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.42361022423
Q_r = 13317.0703342
Q_c = 556653.316361
a = (0.00599031053223-0.00459060249903j)
ϕ_0 = -5.2197107193
τ = 36.9456967885

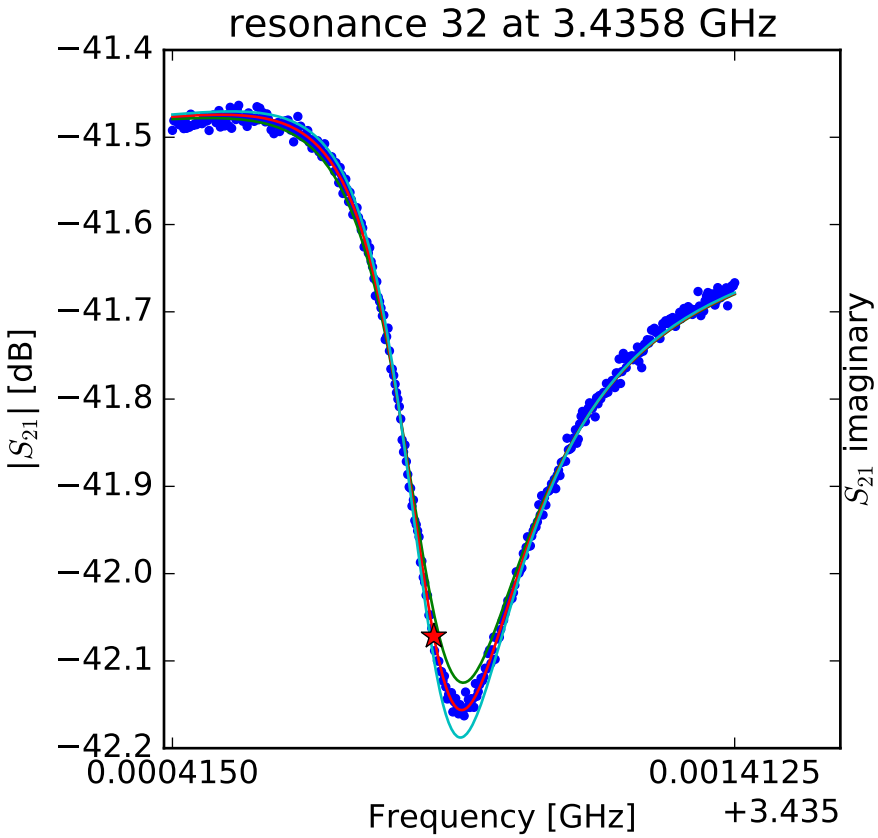


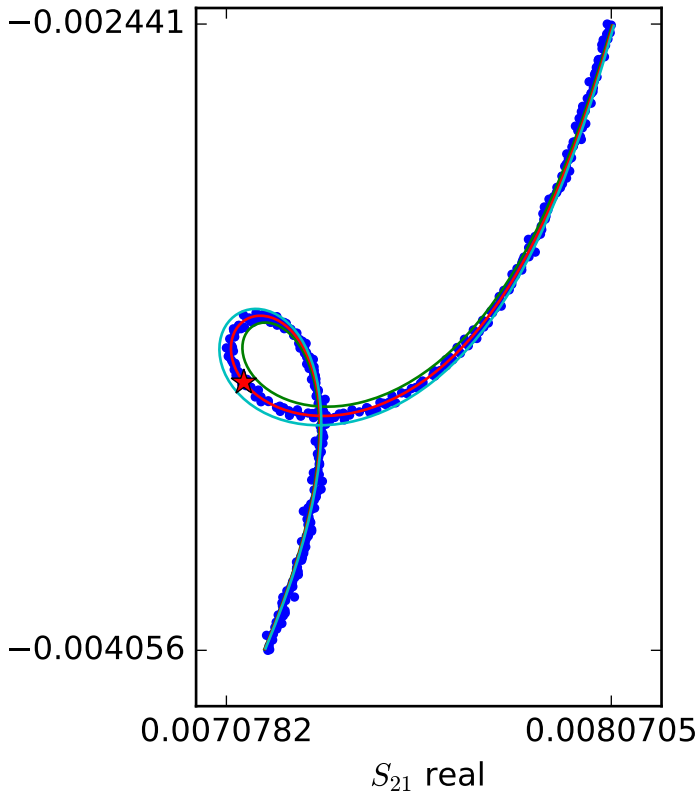


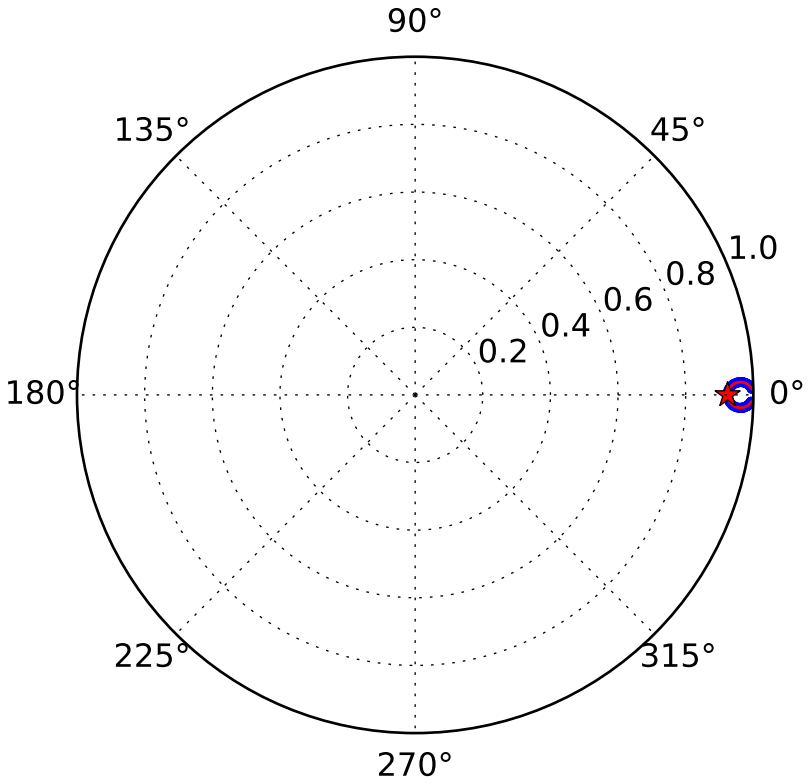


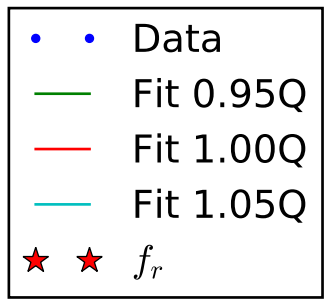
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.43052019941
Q_r = 21748.5322739
Q_c = 147737.281468
a = (0.00420042155701-0.00689312658476j)
ϕ_0 = 0.292890520506
τ = 38.6789090172



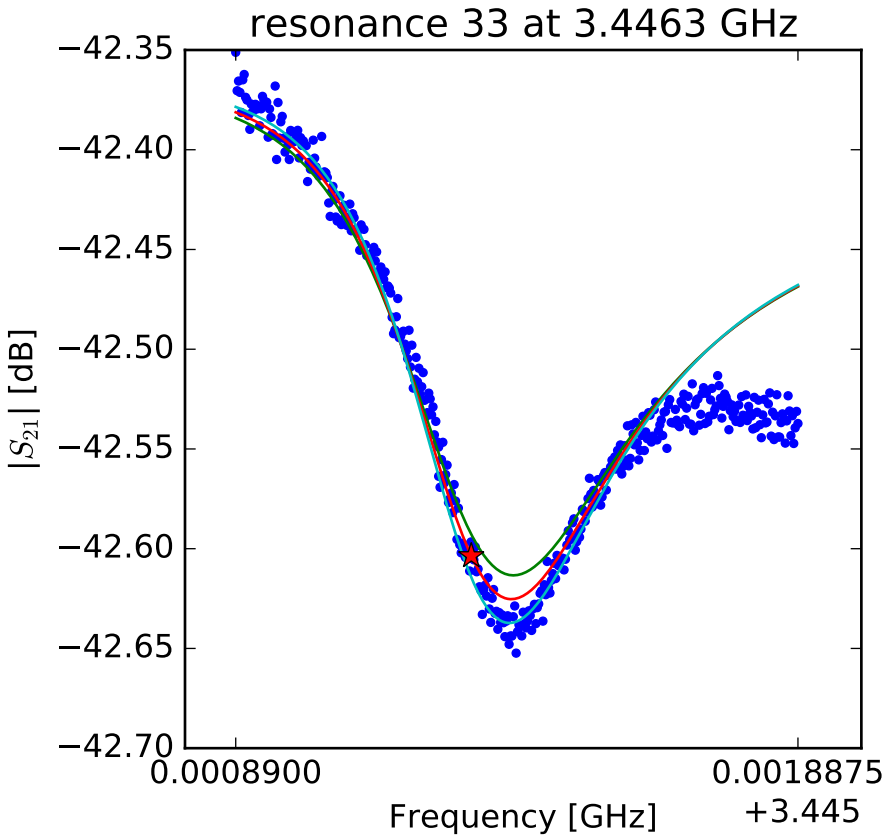


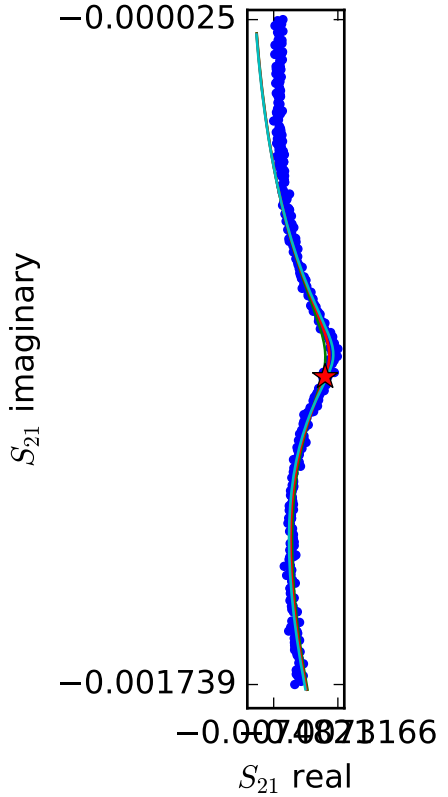


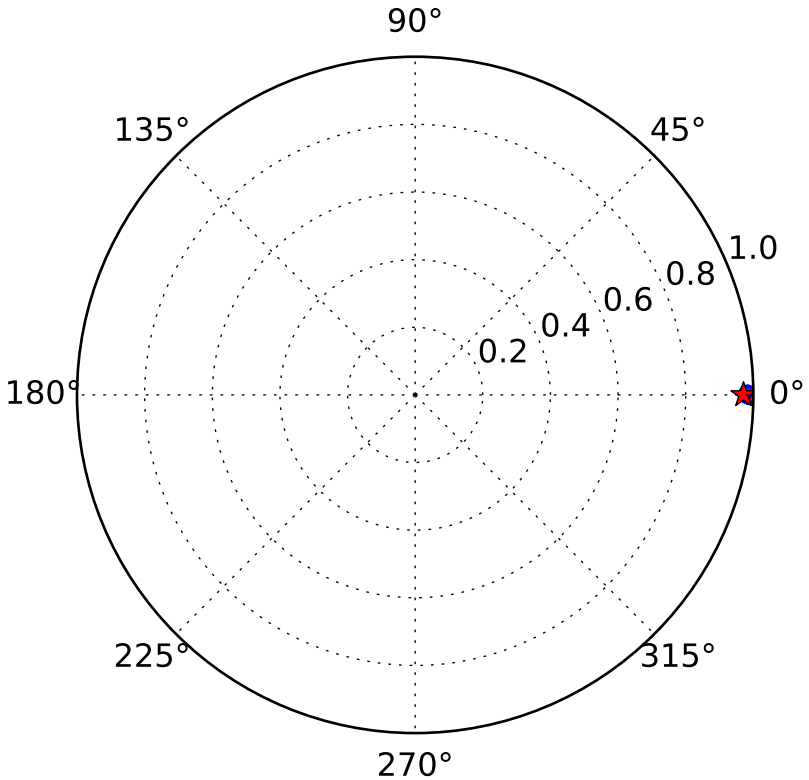


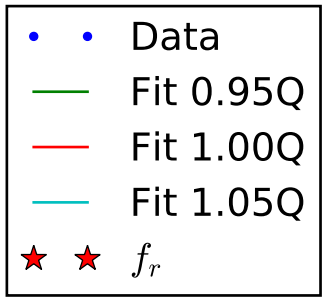
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.4358787434
Q_r = 12555.8686809
Q_c = 164818.785473
a = (-0.00250441374976-0.00798425083324j)
ϕ_0 = 0.669460731761
τ = 40.0956727967



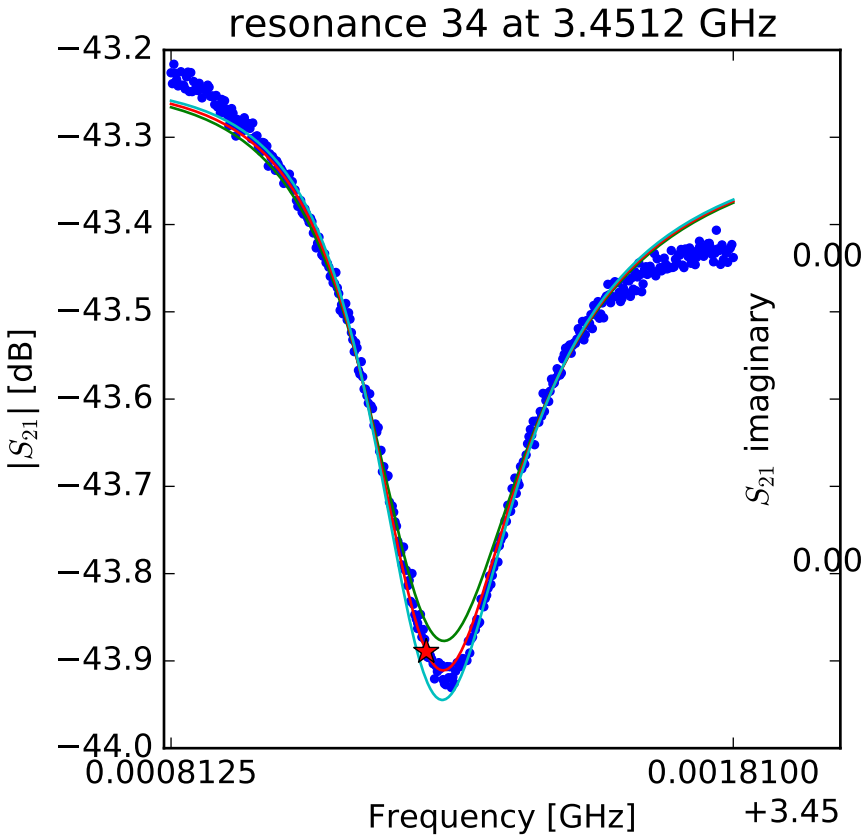


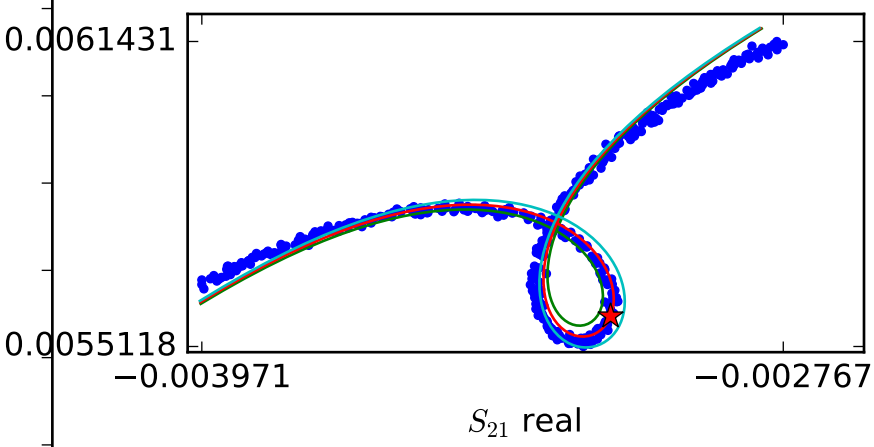


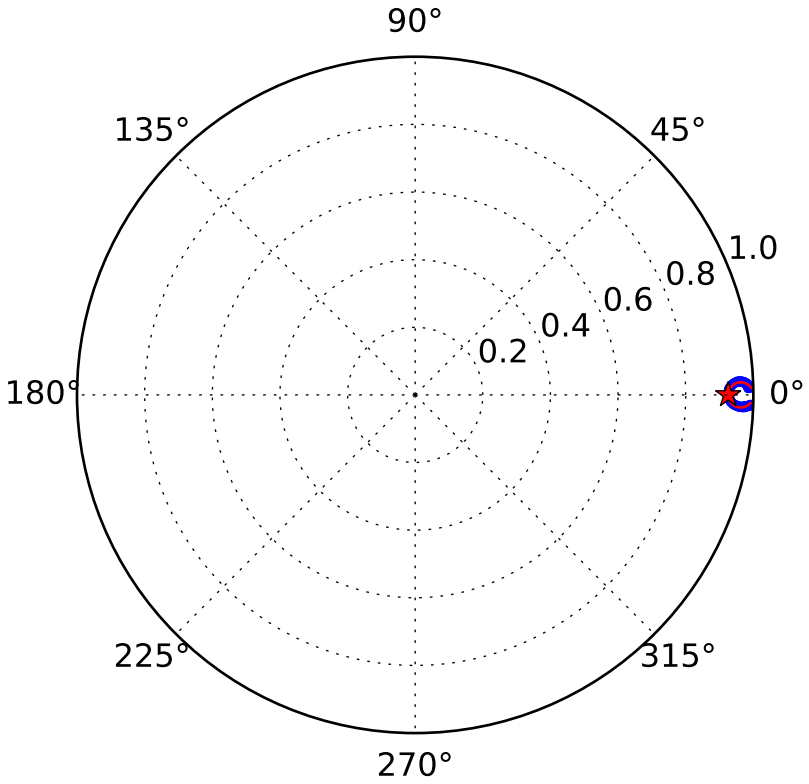


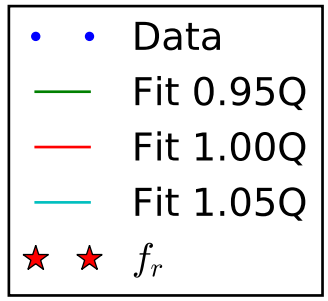
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.44630790914
Q_r = 7273.51517784
Q_c = 249413.13136
a = (0.000801674771199+0.00755260685644j)
ϕ_0 = -5.70909826459
τ = 39.0882714329



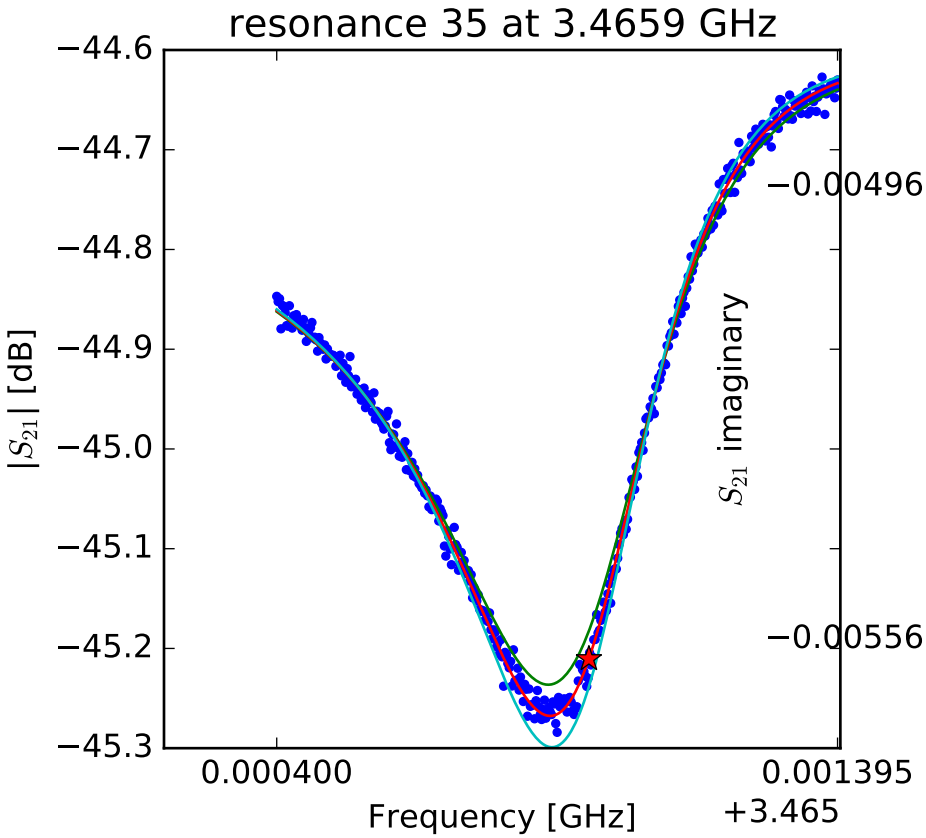


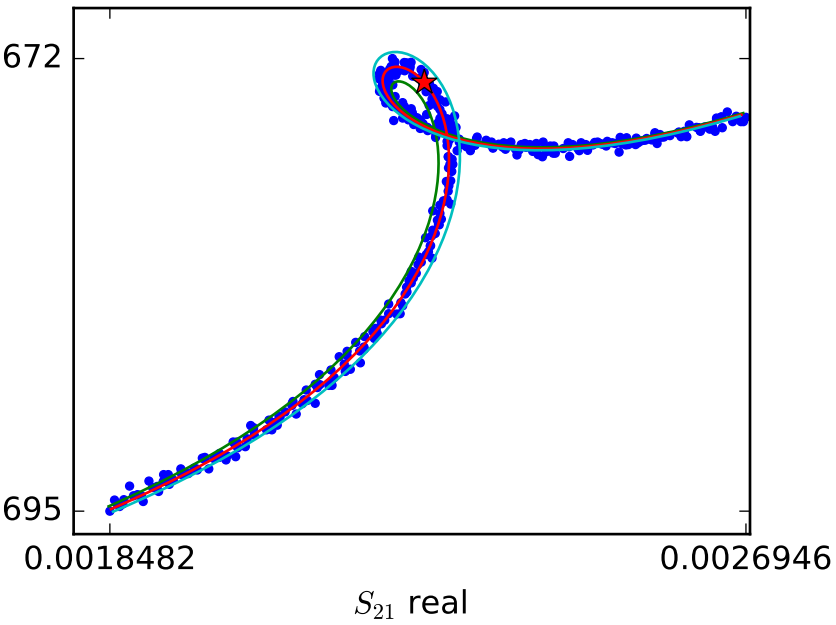


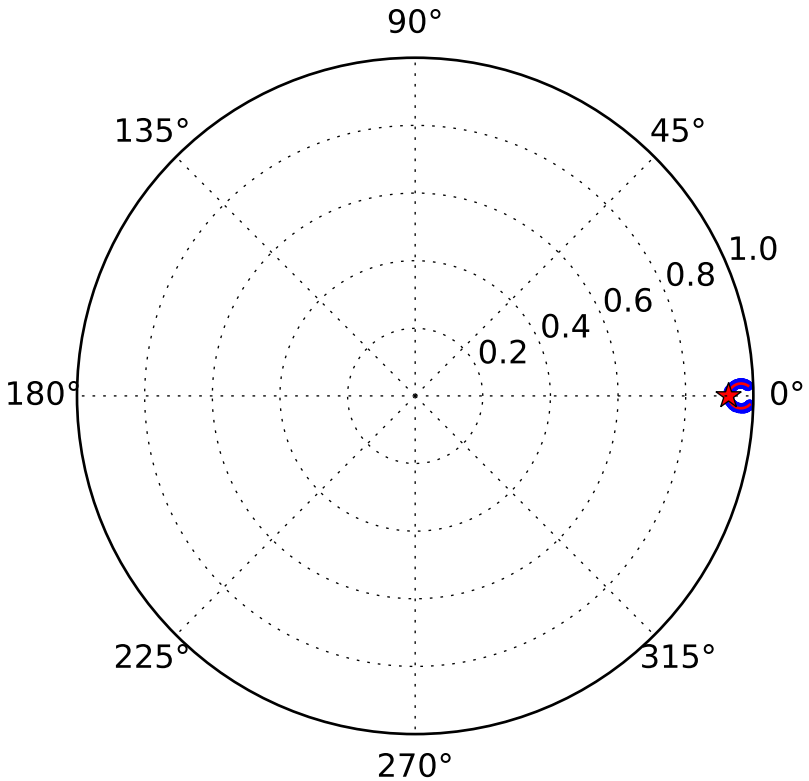


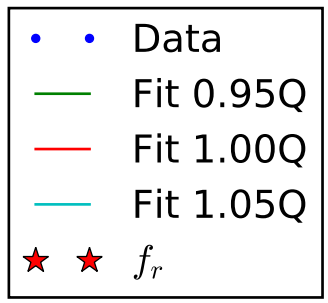
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.45126532563
Q_r = 10147.9333416
Q_c = 136334.795757
a = (3.9851574175e-06-0.00687134986979j)
ϕ_0 = 0.334804718547
τ = 37.2079764755



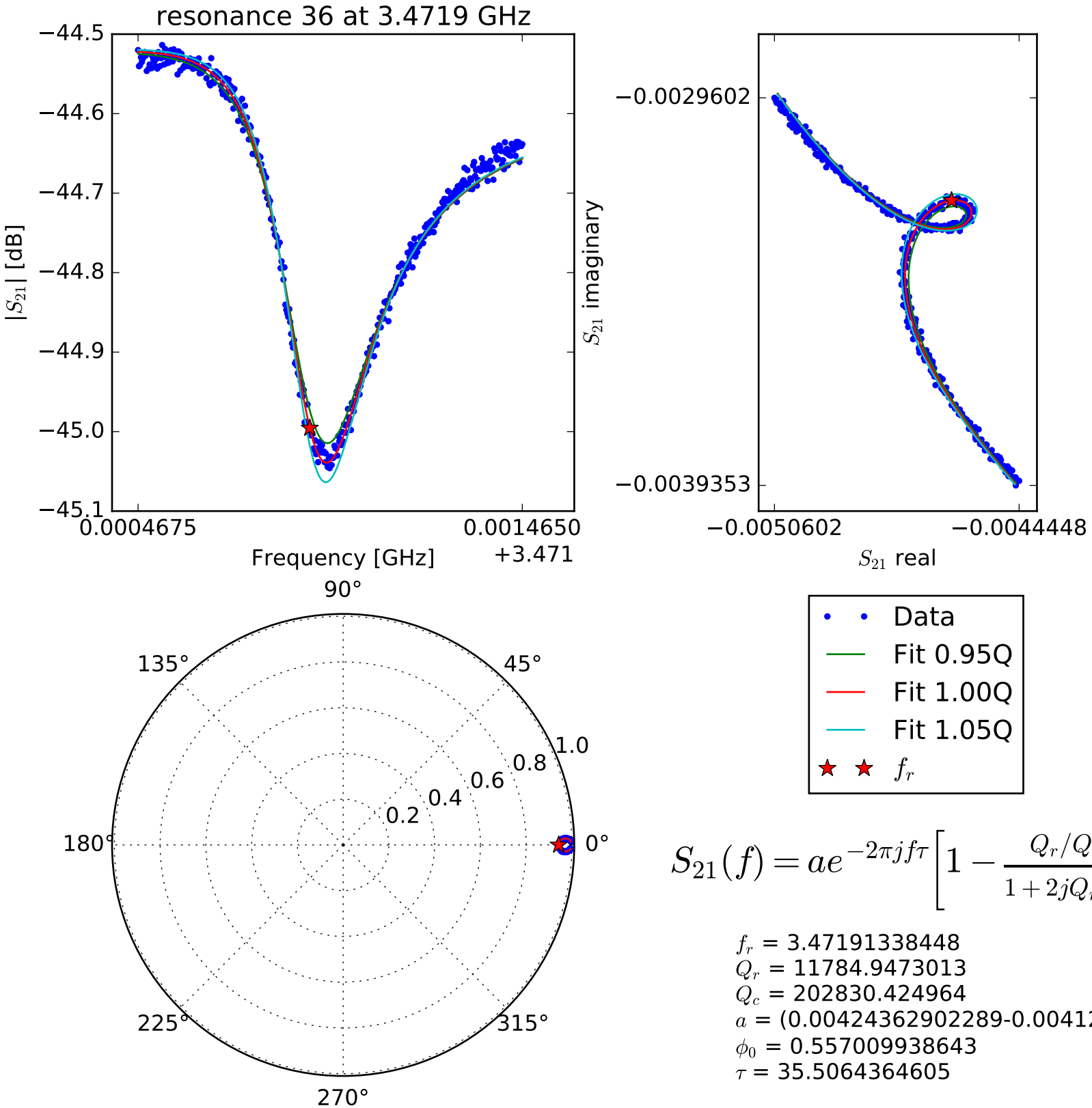






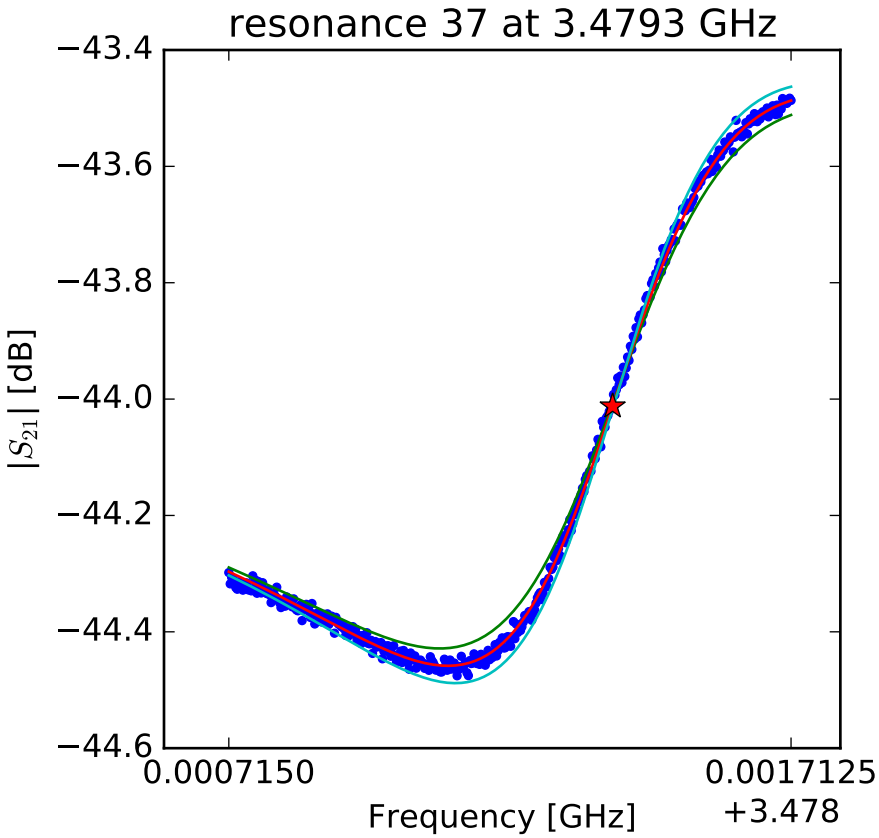
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

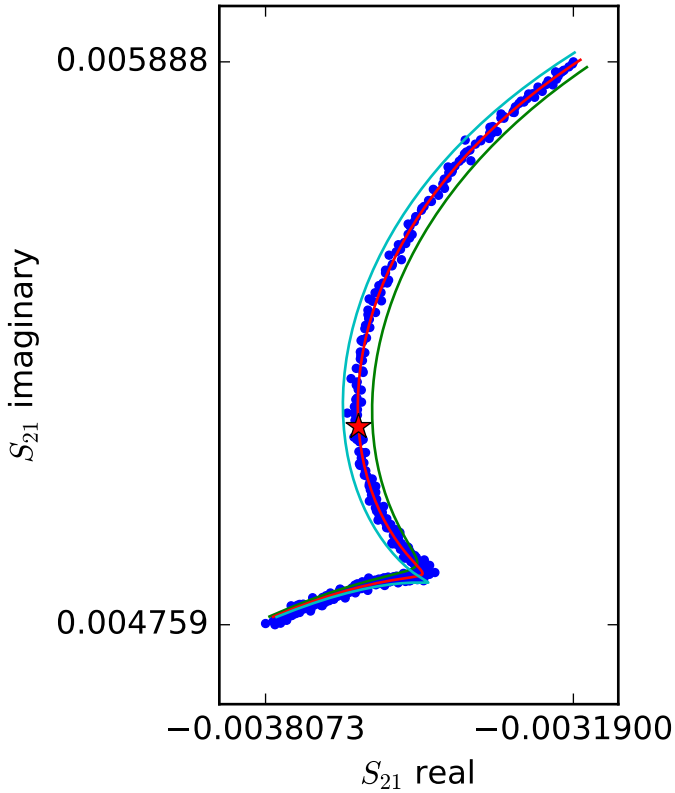
f_r = 3.46595385197
Q_r = 7502.29236206
Q_c = 102387.140323
a = (-0.00557750182238-0.00175672503167j)
ϕ_0 = -0.557857841458
τ = 35.1237765294

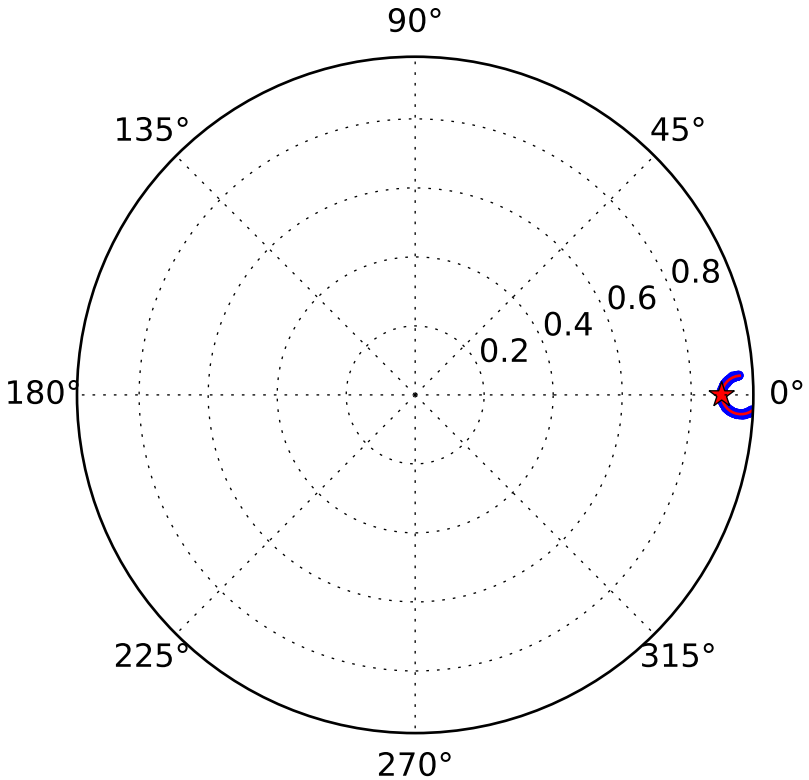


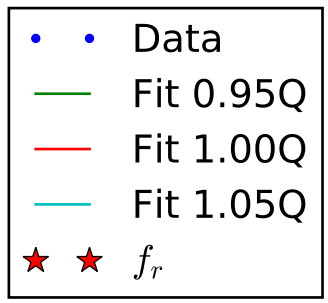
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.47191338448
Q_r = 11784.9473013
Q_c = 202830.424964
a = (0.00424362902289-0.00412067268772j)
ϕ_0 = 0.557009938643
τ = 35.5064364605



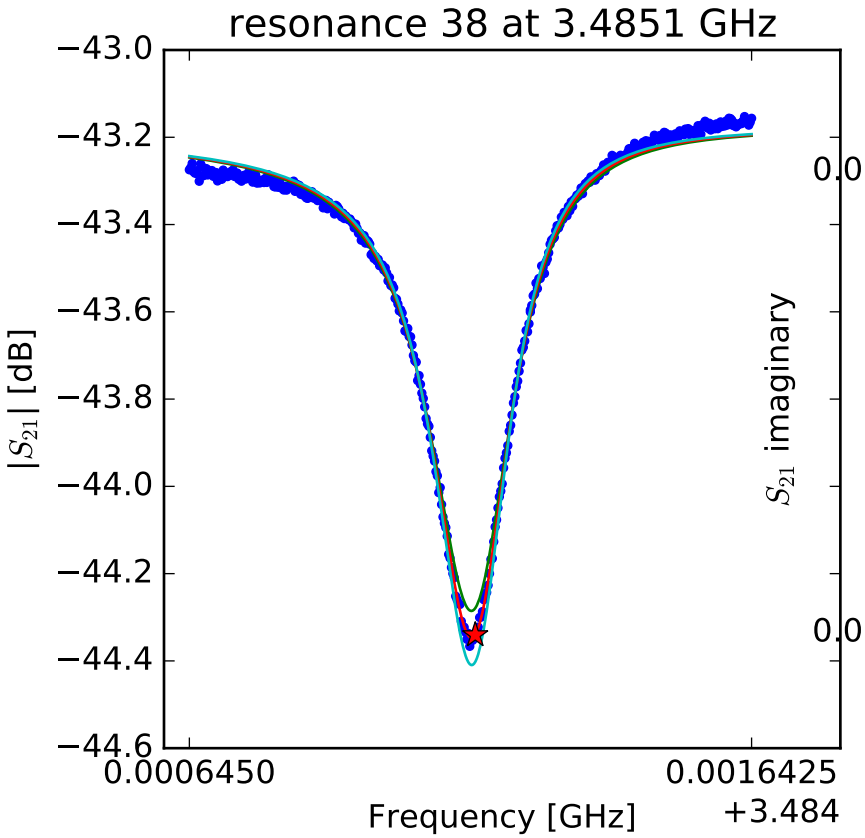


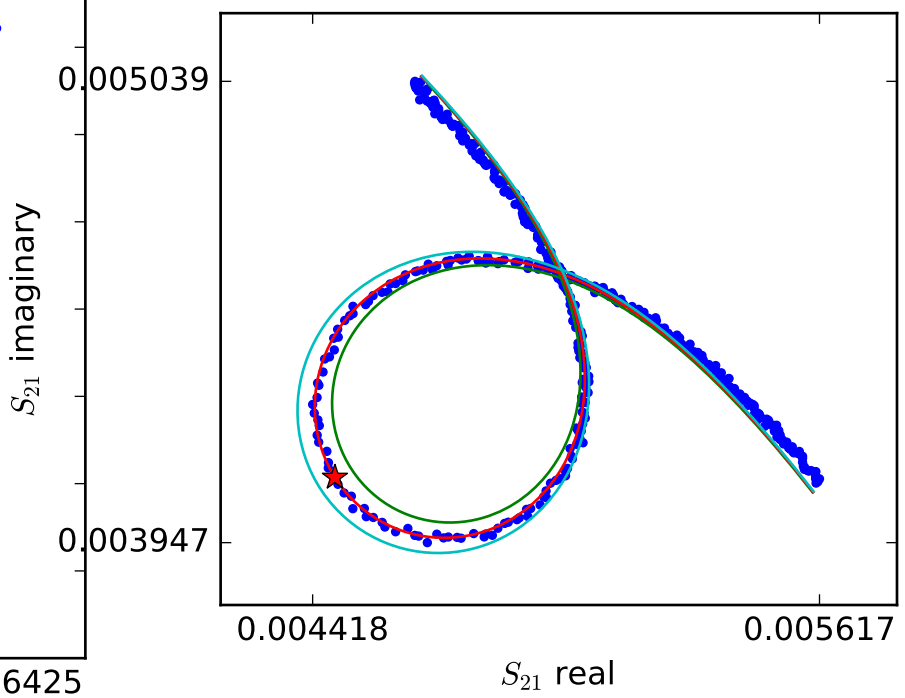


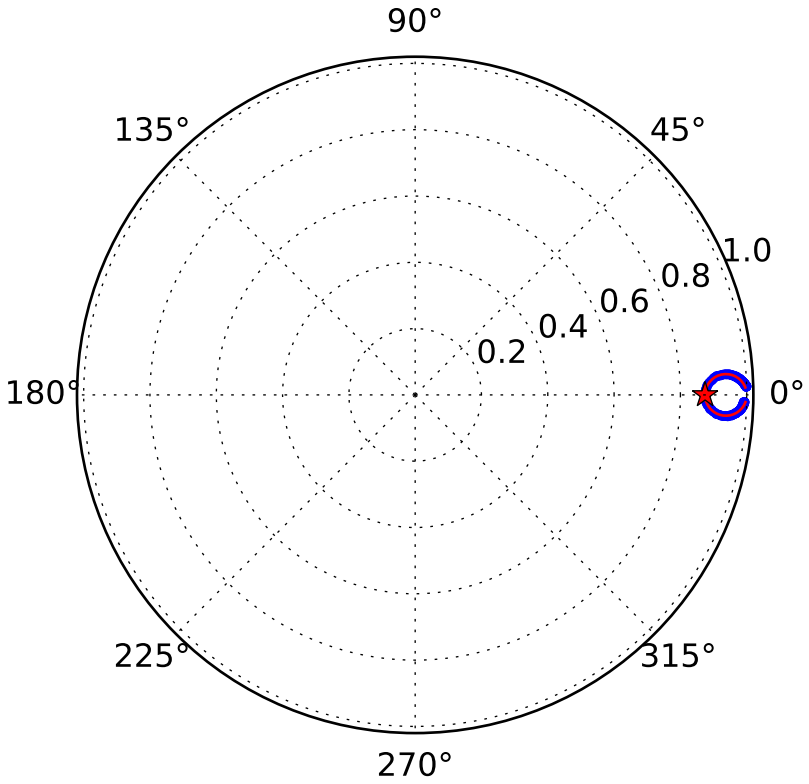


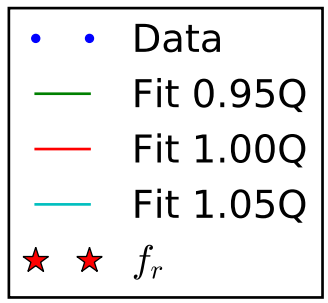
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.47939597063
Q_r = 5133.37753058
Q_c = 45917.1030107
a = (0.00588999588+0.00251775248134j)
ϕ_0 = -1.36831538332
τ = 36.7117199761



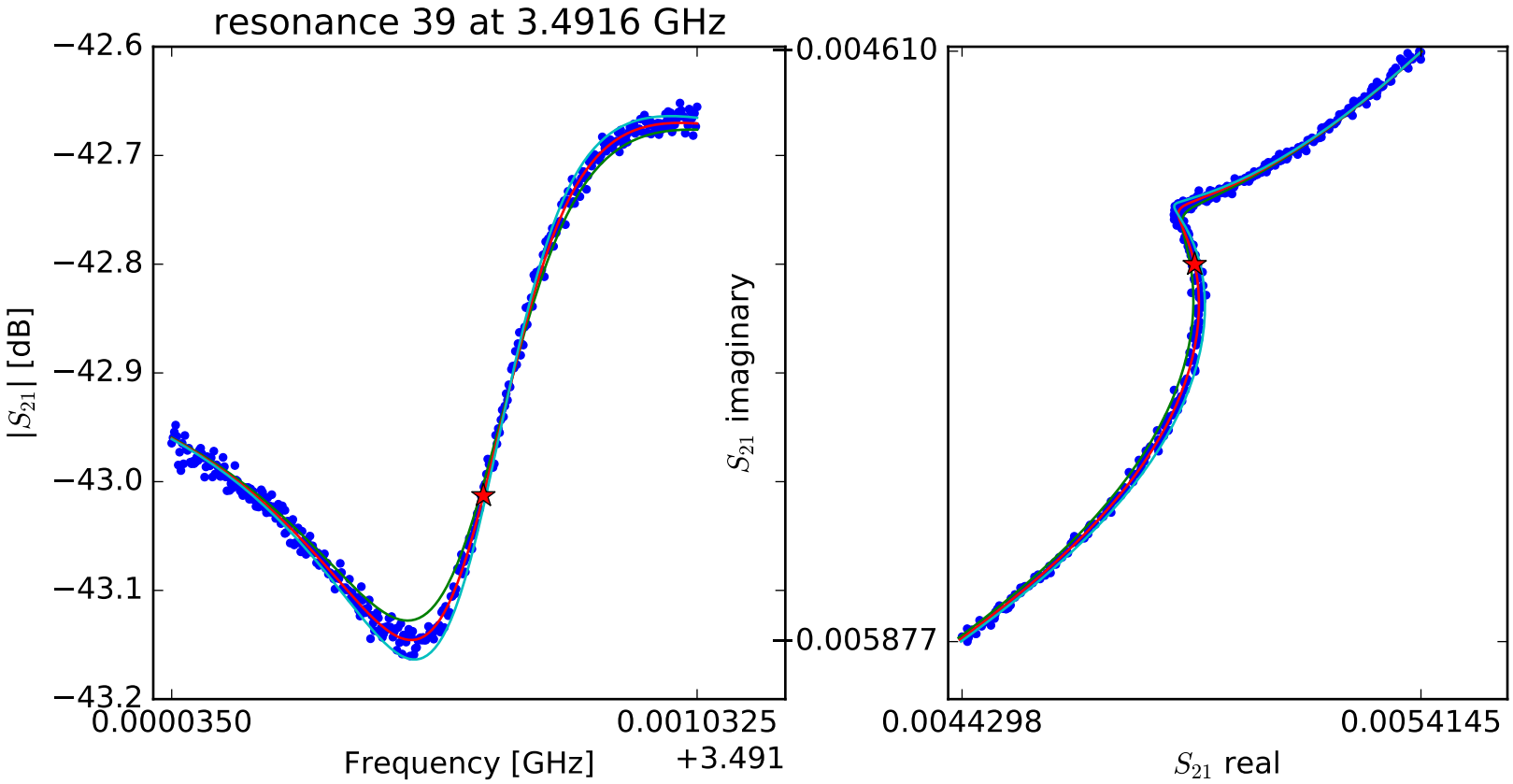


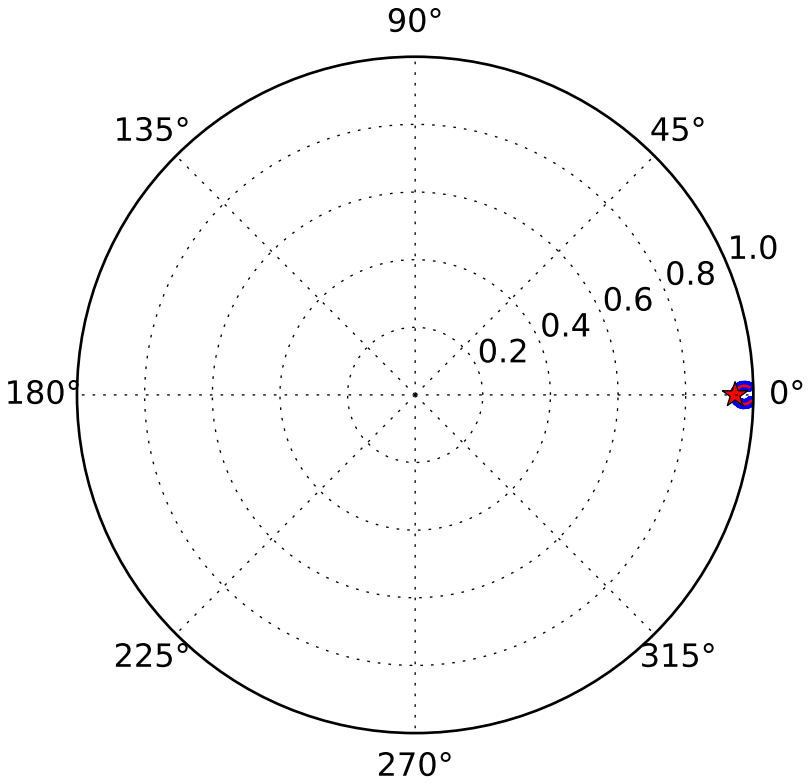


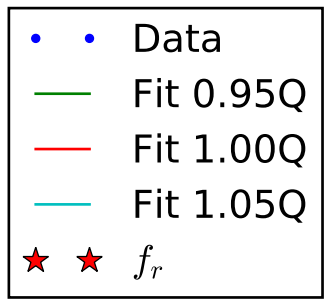


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.48515222308
Q_r = 19149.1298023
Q_c = 152403.575727
a = (-0.00528006926642-0.00448612424882j)
ϕ_0 = -0.134938476803
τ = 38.3044962343

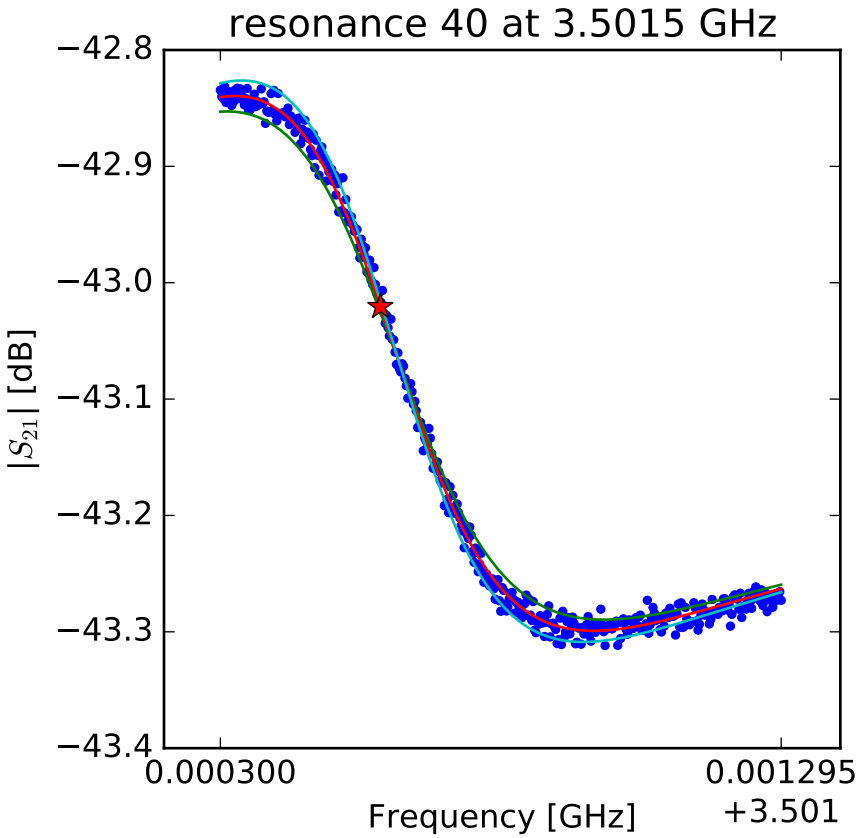


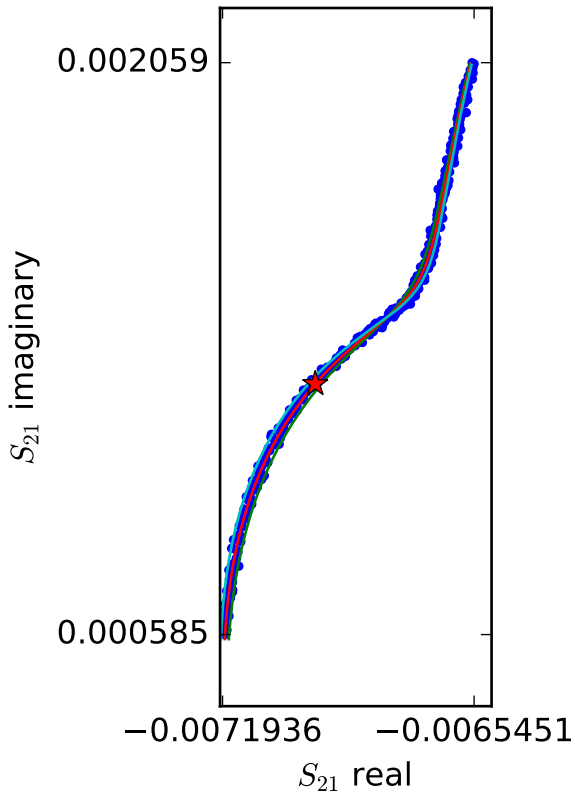


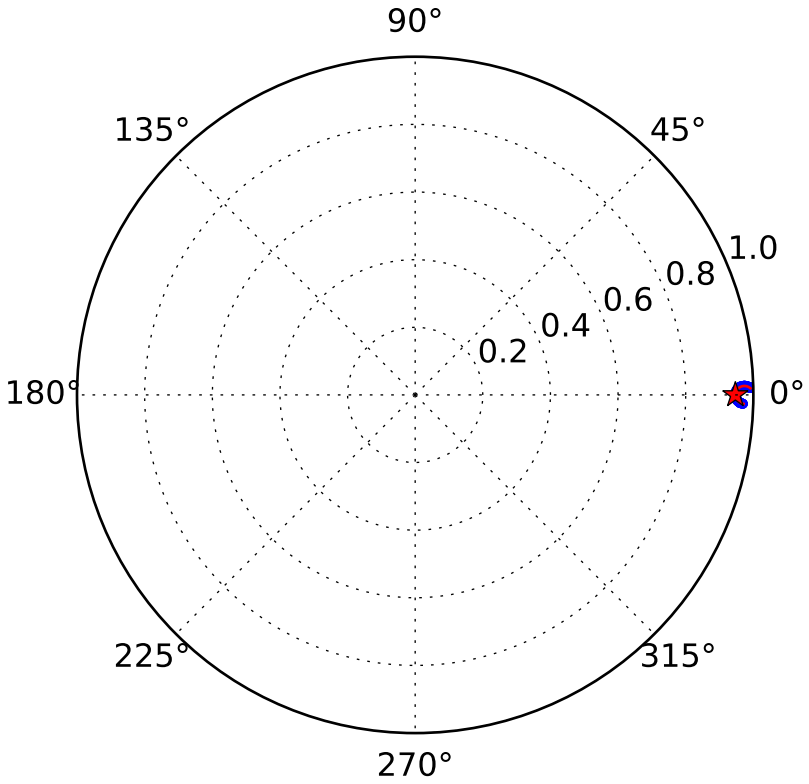


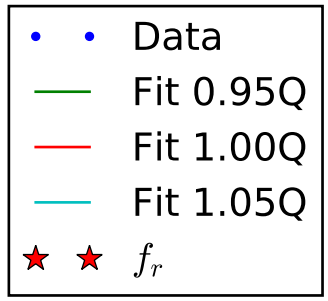
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.49162681391
Q_r = 7712.74110137
Q_c = 142707.620376
a = (0.00724619201459-0.000251127871772j)
ϕ_0 = -1.06498041058
τ = 38.9873872485



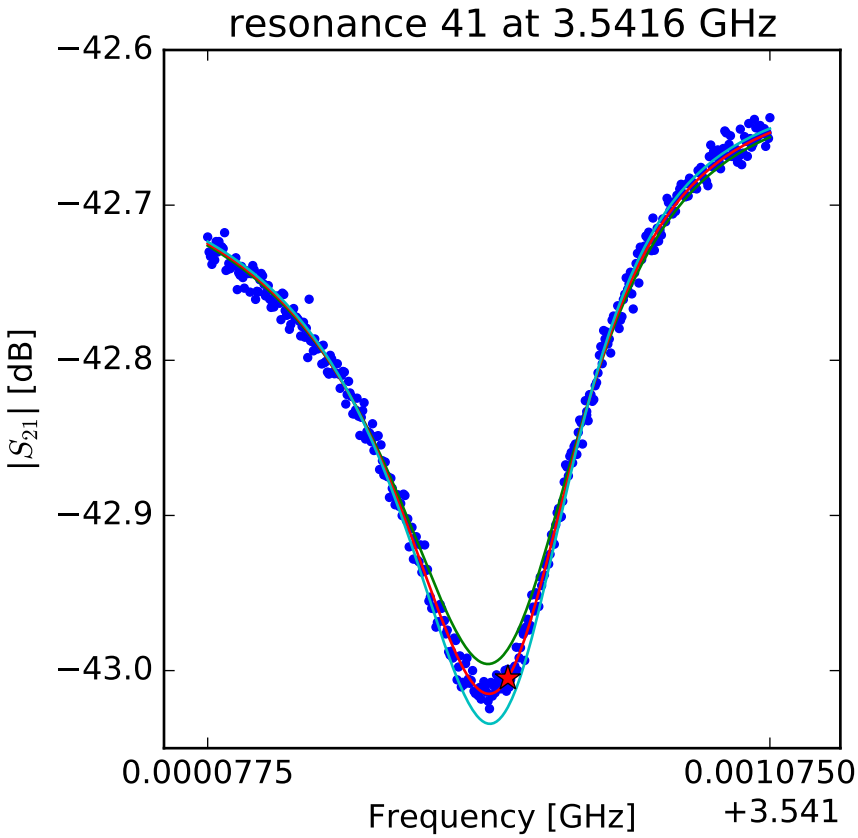


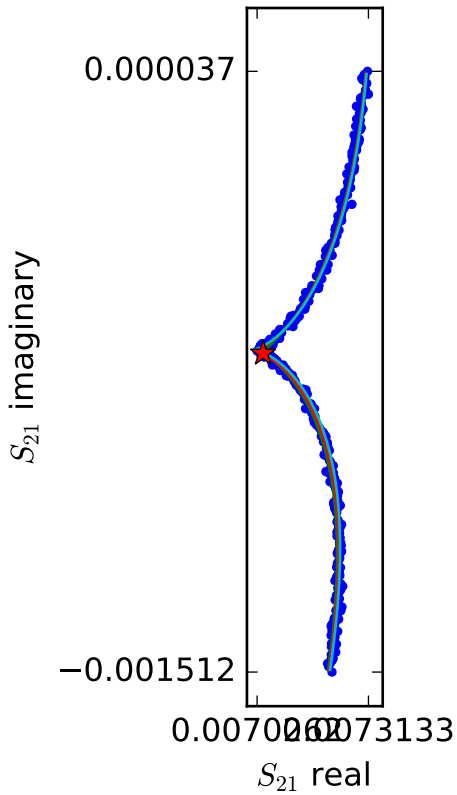


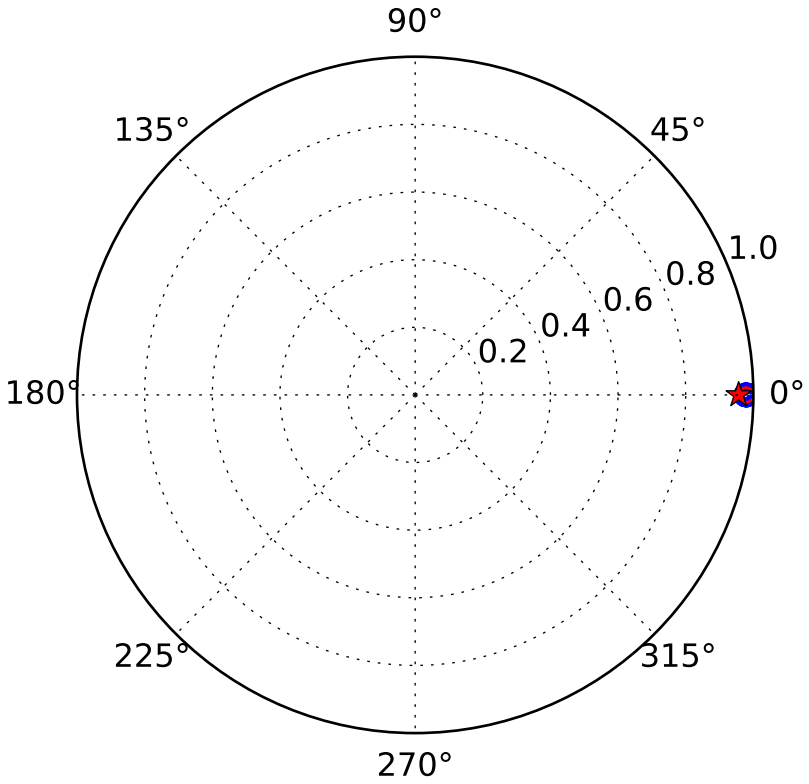


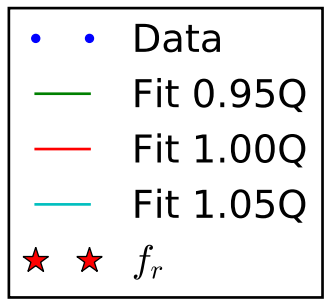
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.50158386946
Q_r = 5605.68485955
Q_c = 105460.896315
a = (0.00101696309423-0.00691898556979j)
ϕ_0 = -4.55070662515
τ = 37.7808565357



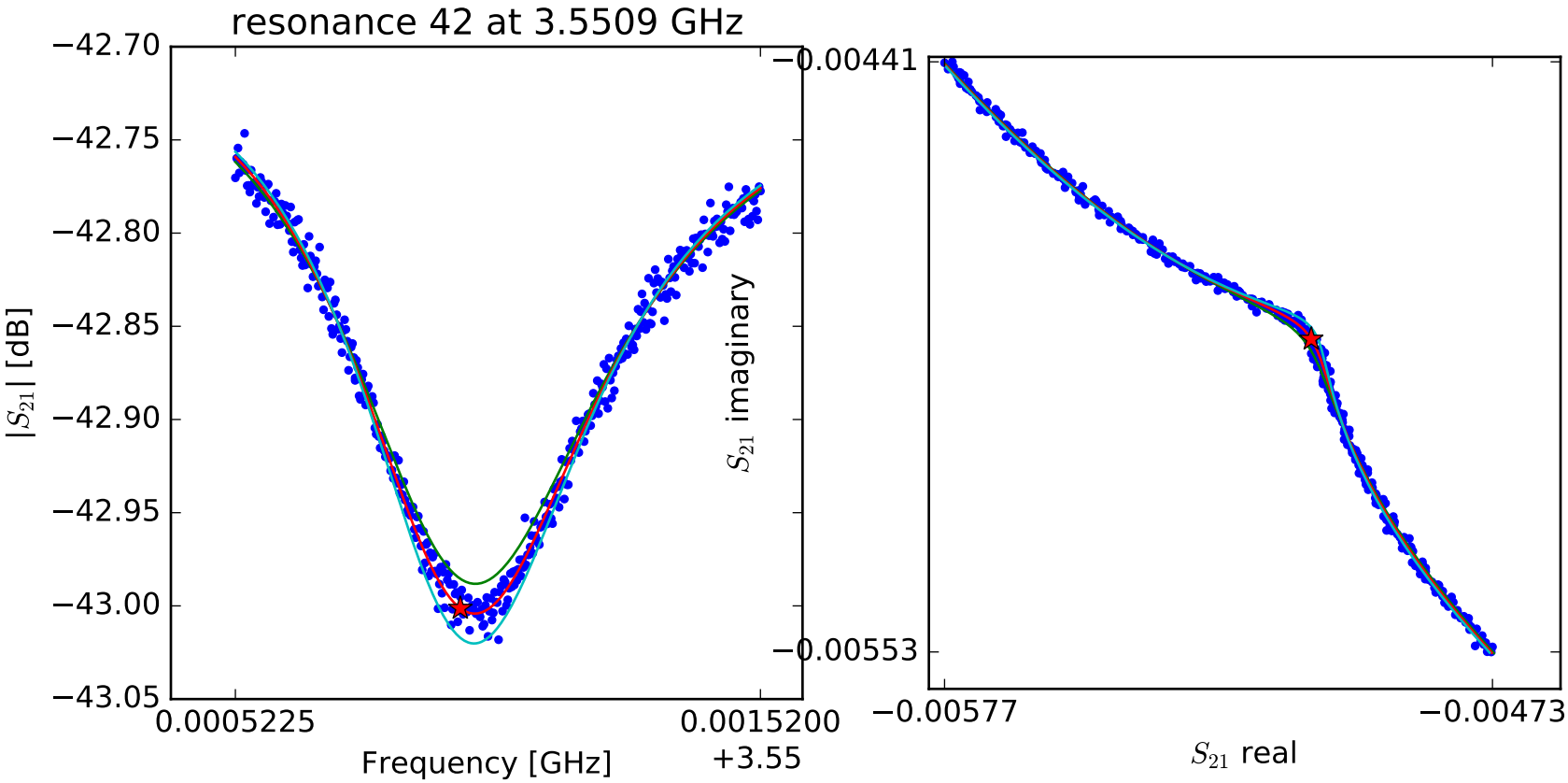


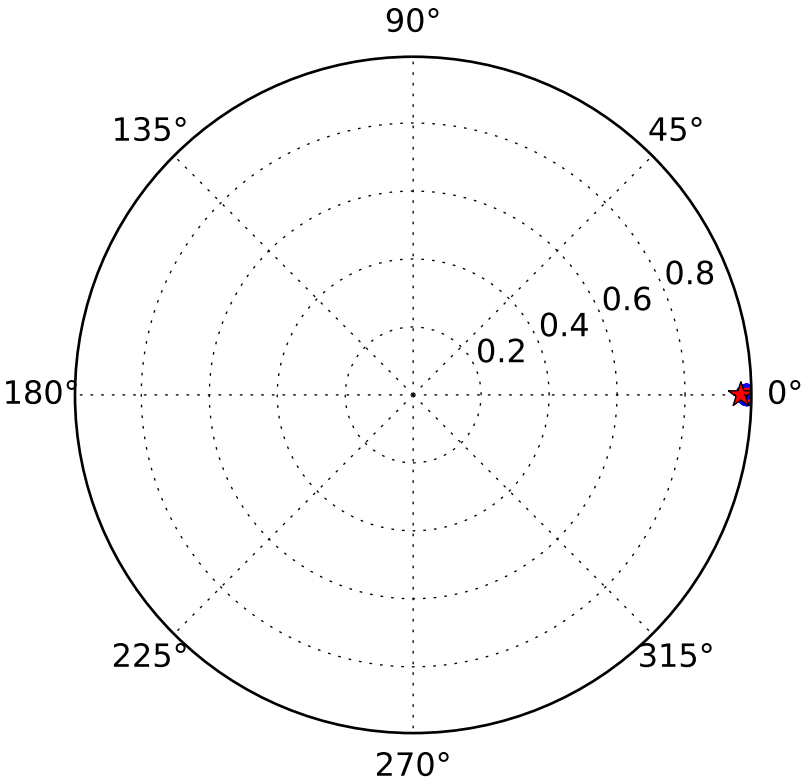


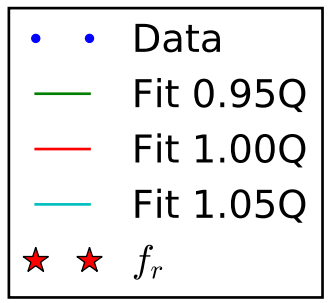


$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.5416101153
Q_r = 8492.29511668
Q_c = 194851.035465
a = (0.000884761696707-0.00732777191928j)
ϕ_0 = -0.311799217764
τ = 38.3404418619

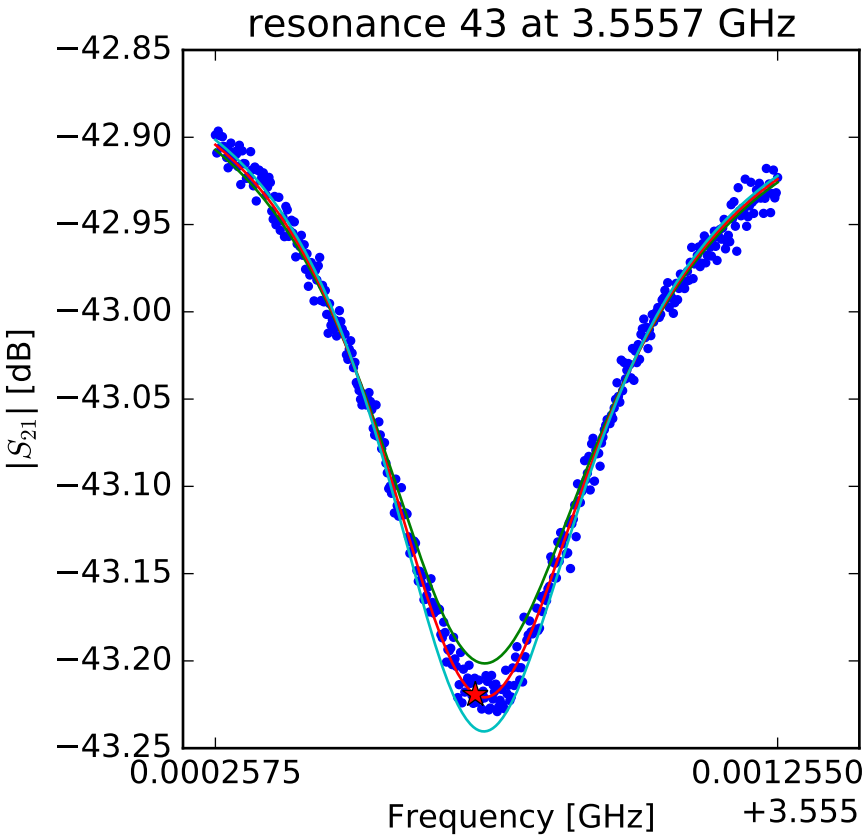


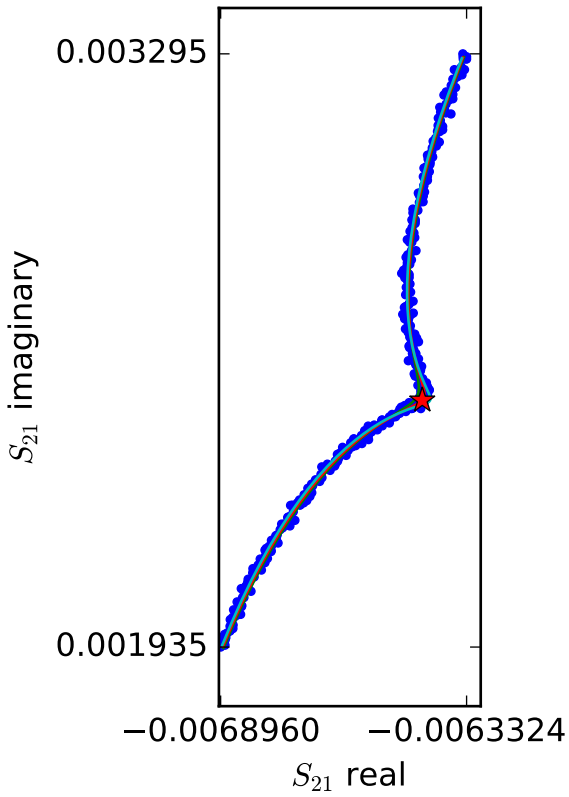


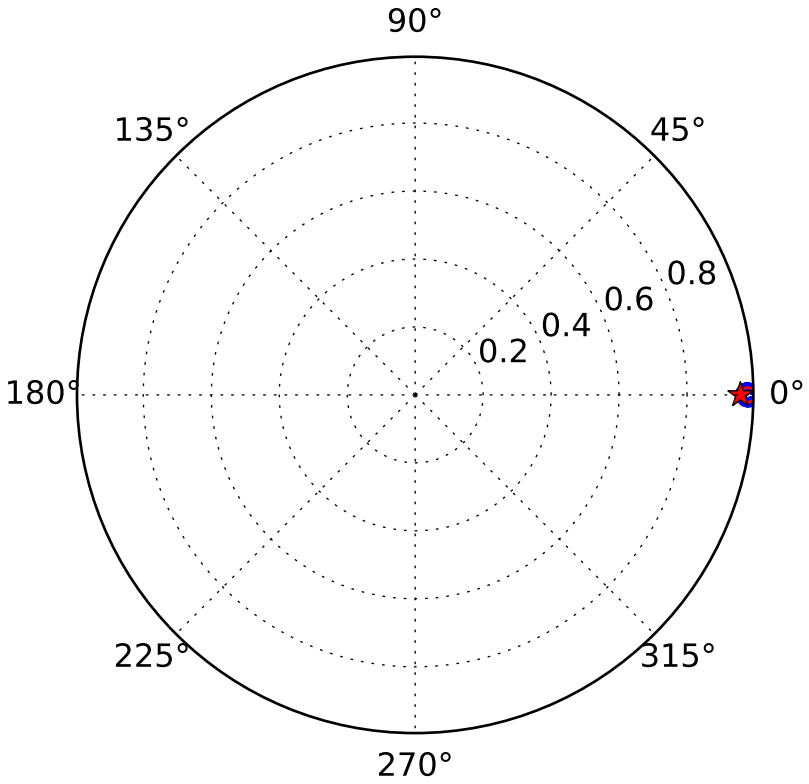


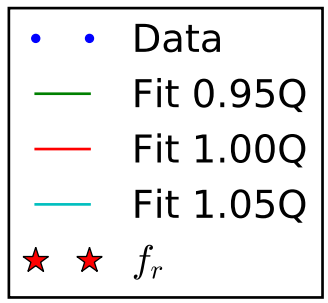
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.55094980578
Q_r = 6104.87933291
Q_c = 170317.857986
a = (-0.00651881987951+0.00336651906901j)
ϕ_0 = 0.183822190576
τ = 38.5249708728



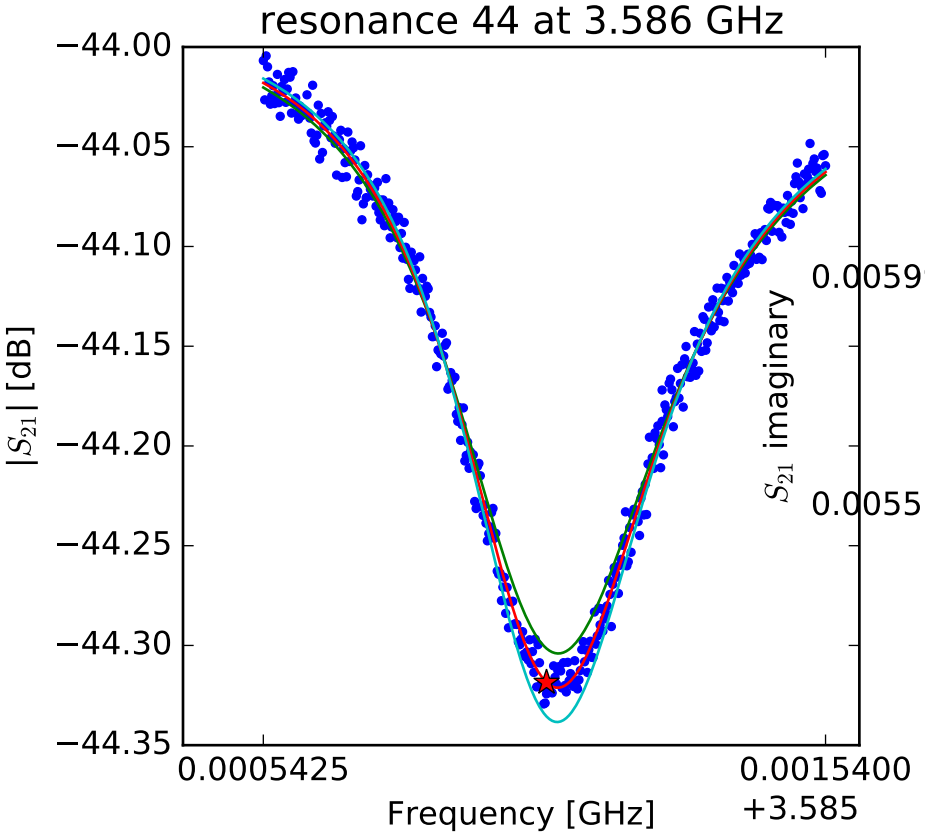


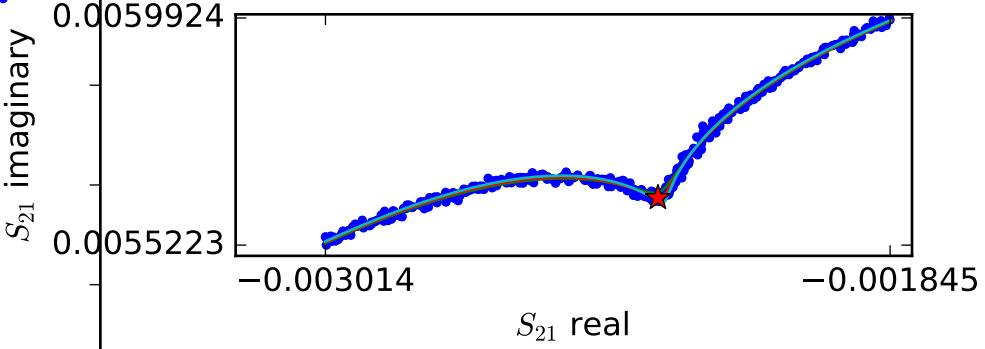


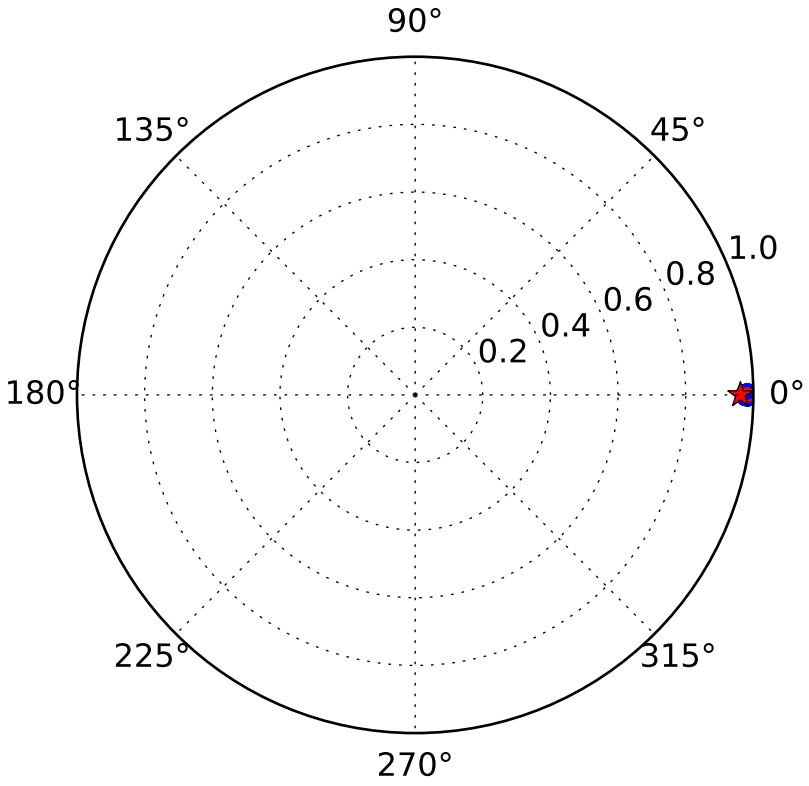


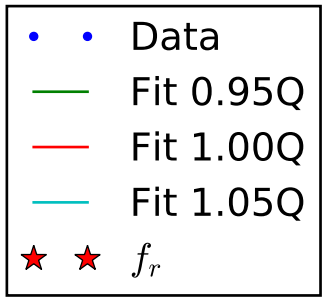
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.55571864375
Q_r = 7057.02822726
Q_c = 163693.671162
a = (0.00551159910113+0.00465036334455j)
ϕ_0 = 0.123460872757
τ = 38.1553438517



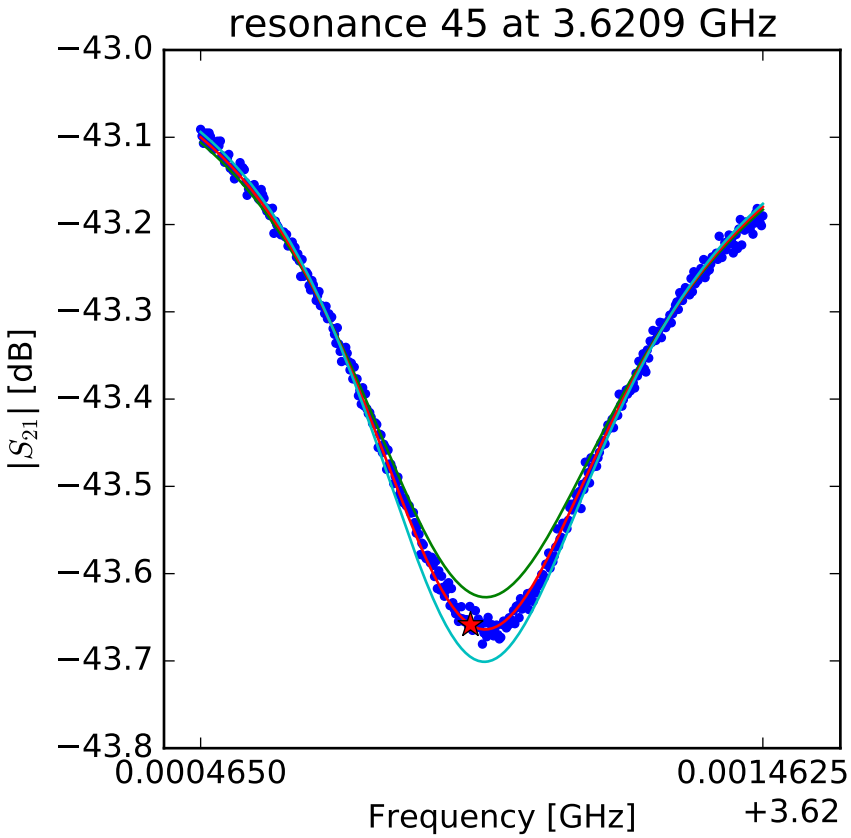


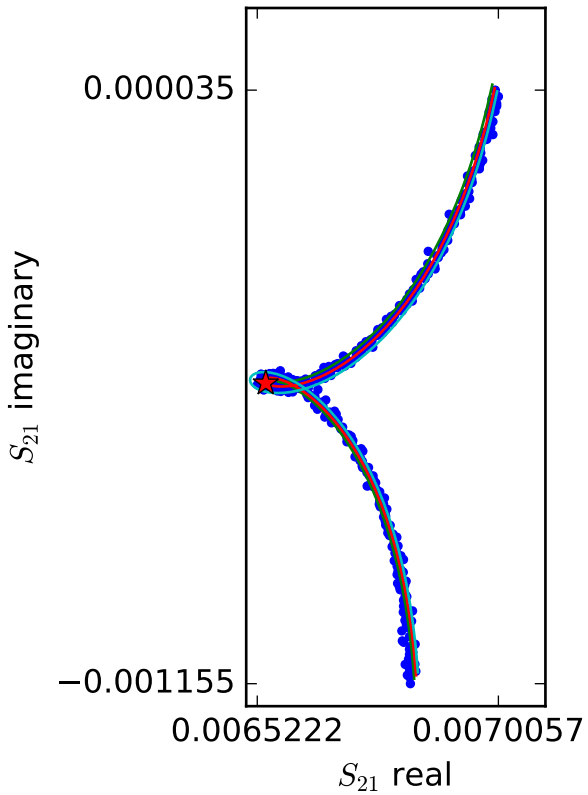


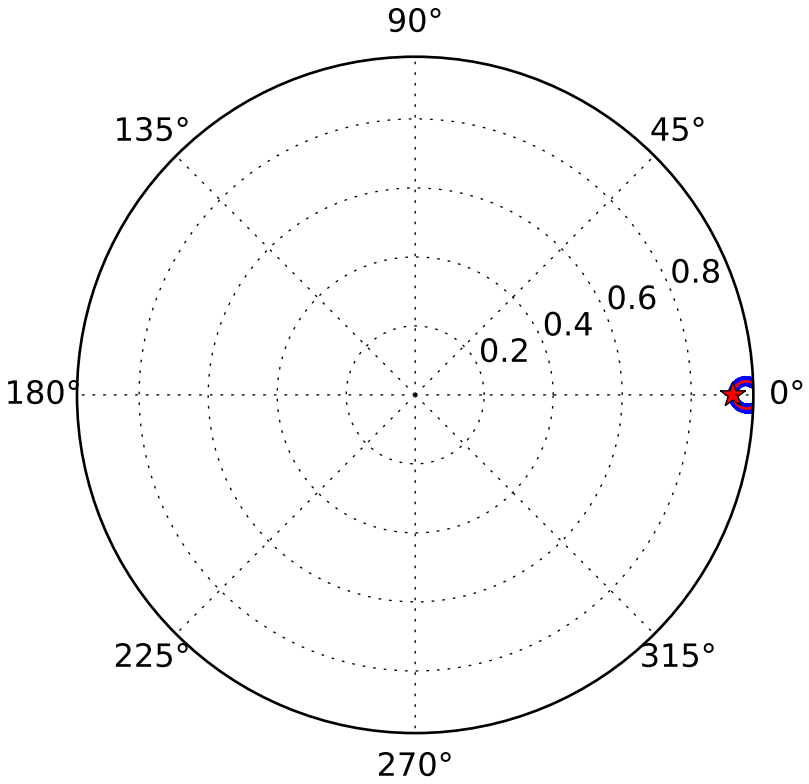


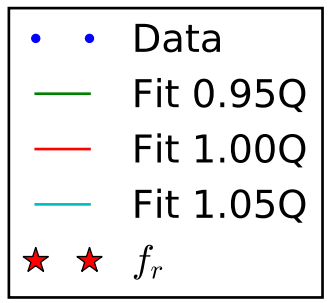
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.58604494042
Q_r = 7858.33172221
Q_c = 204906.070596
a = (-0.0061007406937-0.00165463215206j)
ϕ_0 = 0.170248744657
τ = 36.5942501495



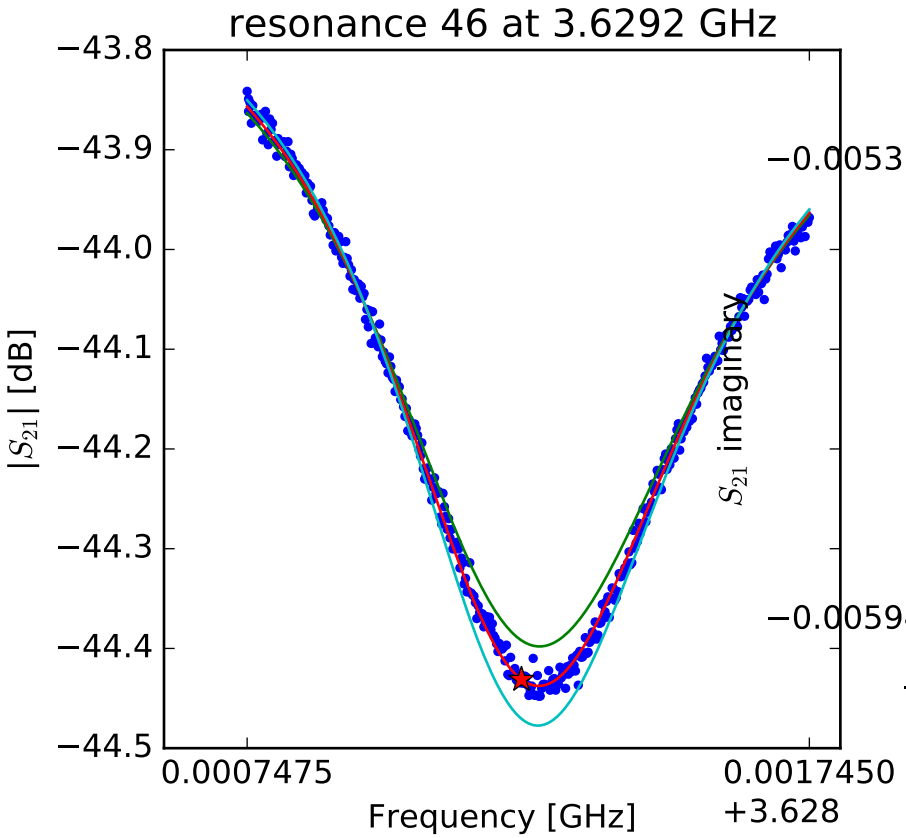


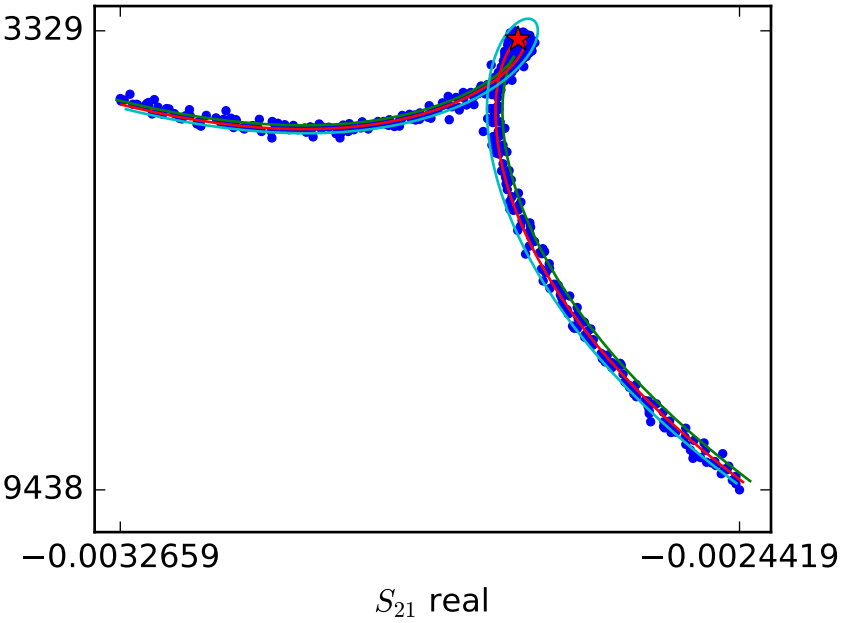


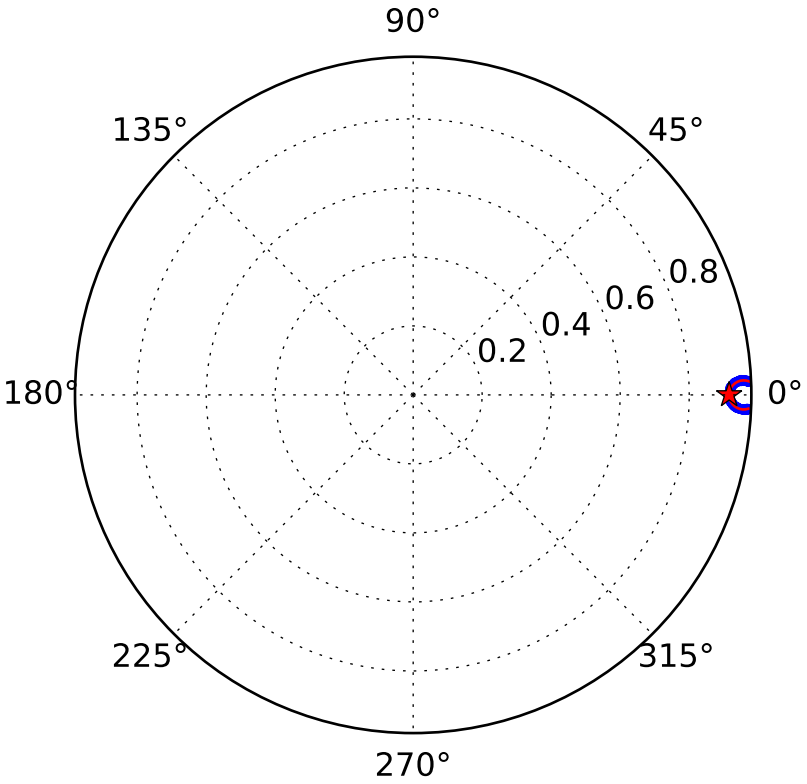


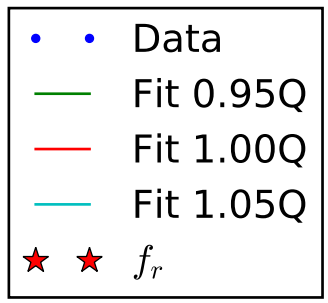
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.62094374206
Q_r = 5818.68264765
Q_c = 73640.0535545
a = (0.00685883383901+0.001900022193j)
ϕ_0 = 0.158734655619
τ = 38.6789403633



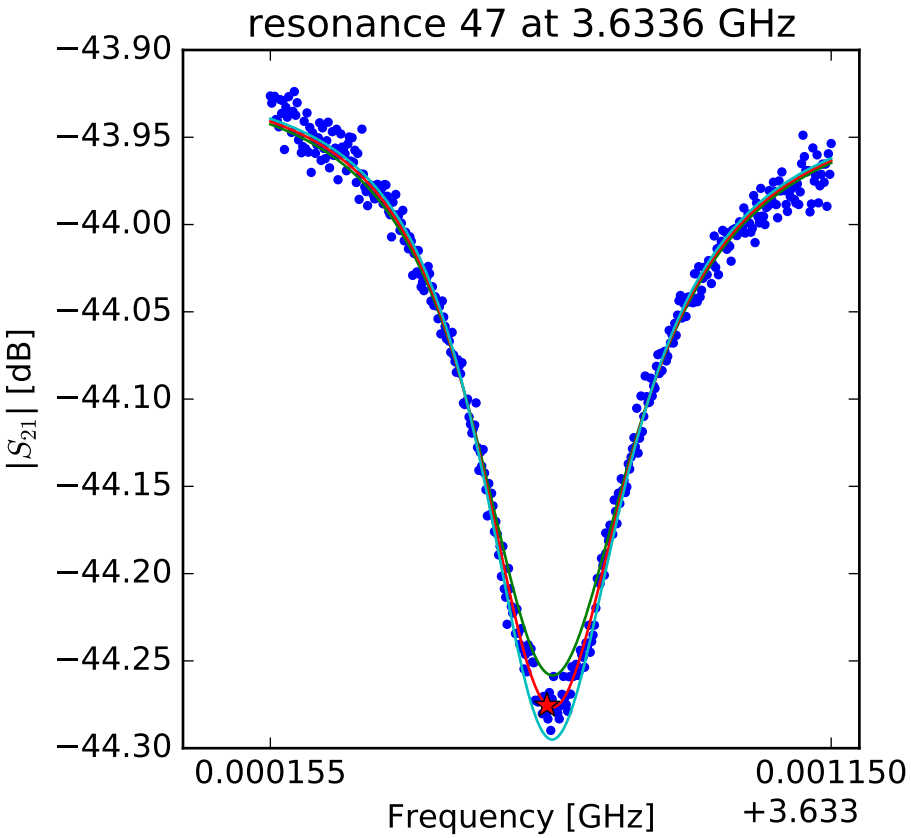


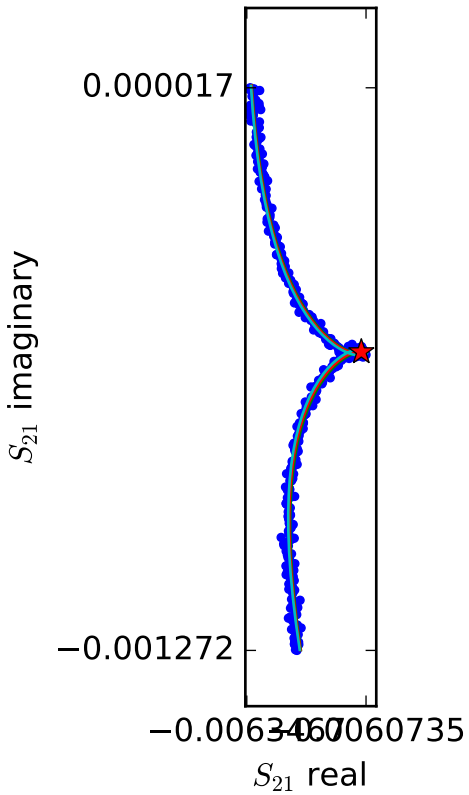


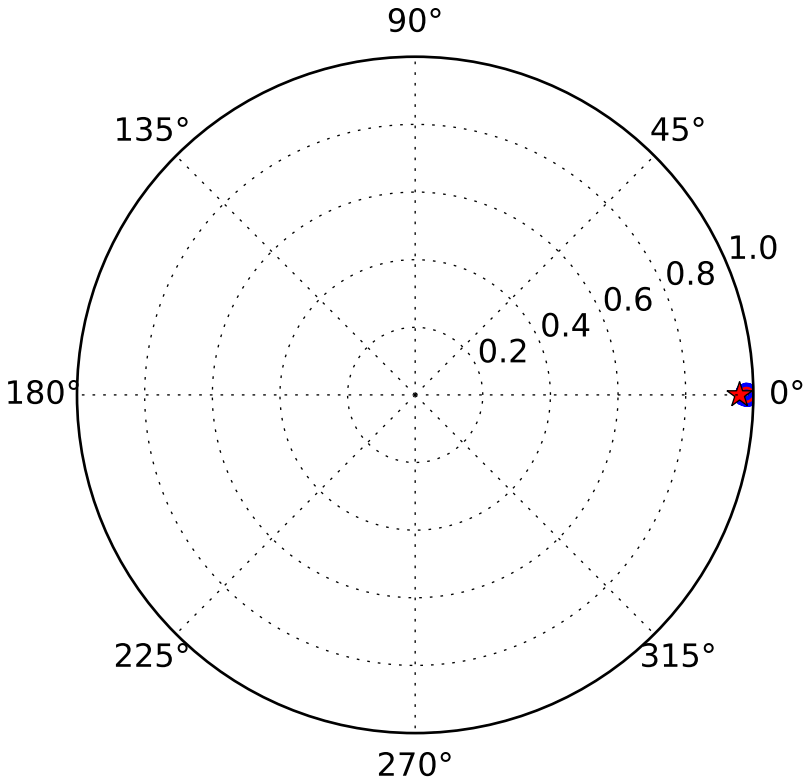


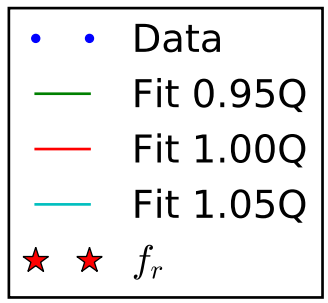
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.62923420092
Q_r = 5223.49938954
Q_c = 61909.2931589
a = (0.00524994657471-0.00391327487441j)
ϕ_0 = 0.168378512711
τ = 36.9832621564



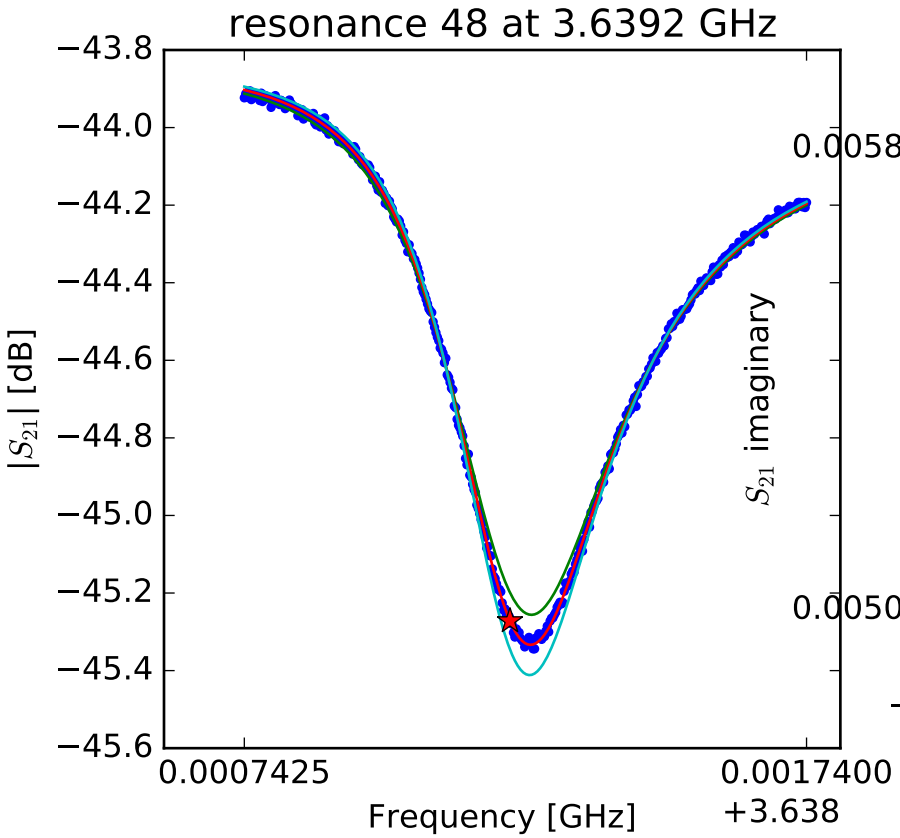


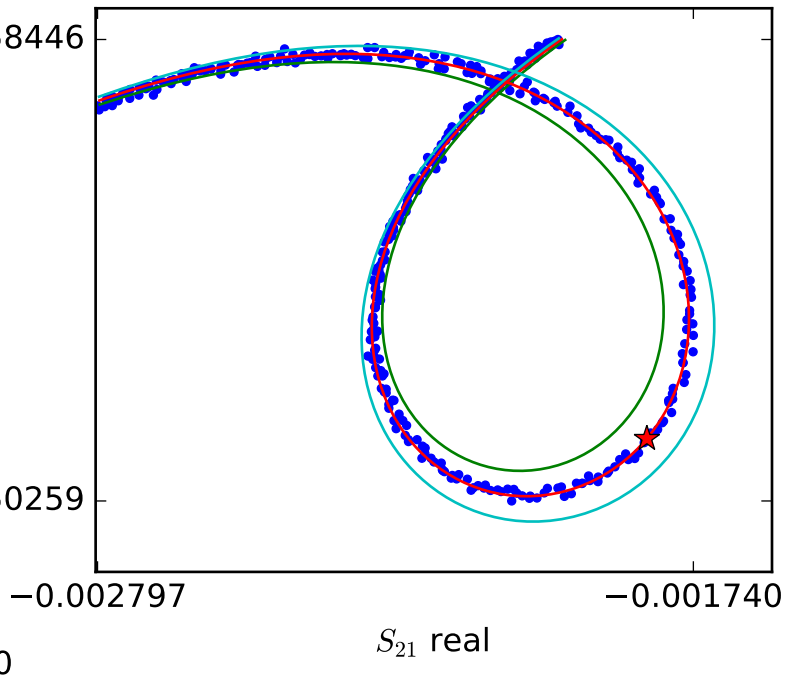


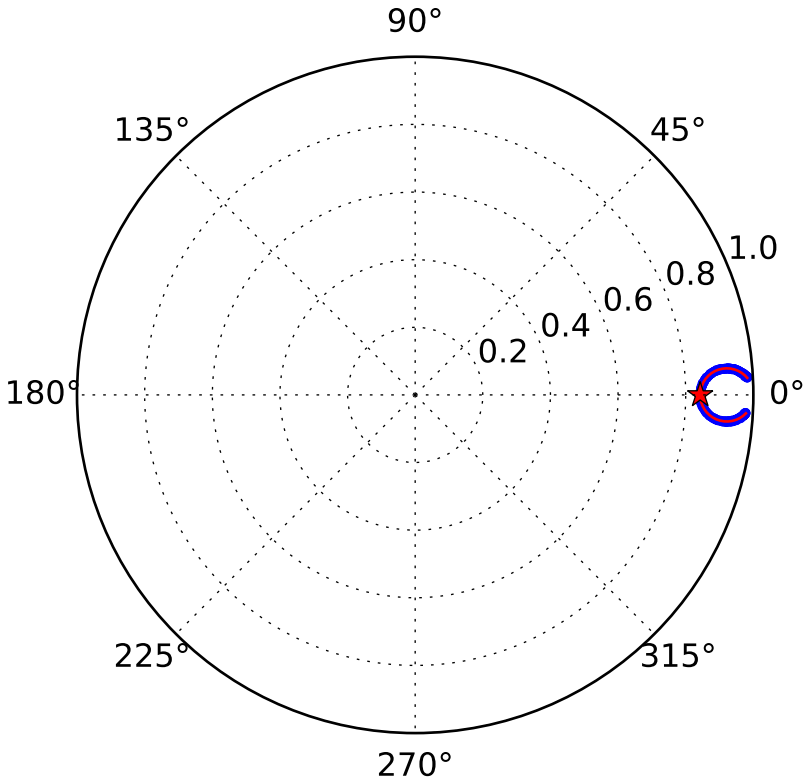


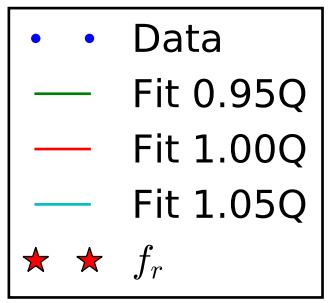
$$S_{21}(f) = ae^{-2\pi jf\tau}\left[1 - \frac{Q_r/Q_c e^{j\phi_0}}{1 + 2jQ_r(\frac{f-f_r}{f_r})}\right]$$

f_r = 3.6336457472
Q_r = 10828.2579741
Q_c = 266013.136125
a = (0.00553410068304-0.00315489141879j)
ϕ_0 = 0.112043479491
τ = 36.7128367671









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

f_r = 3.63921383119
Q_r = 9554.48598274
Q_c = 60757.2334341
a = (-0.00246786213343+0.00588614966297j)
ϕ_0 = 0.348686878678
τ = 36.5460561108