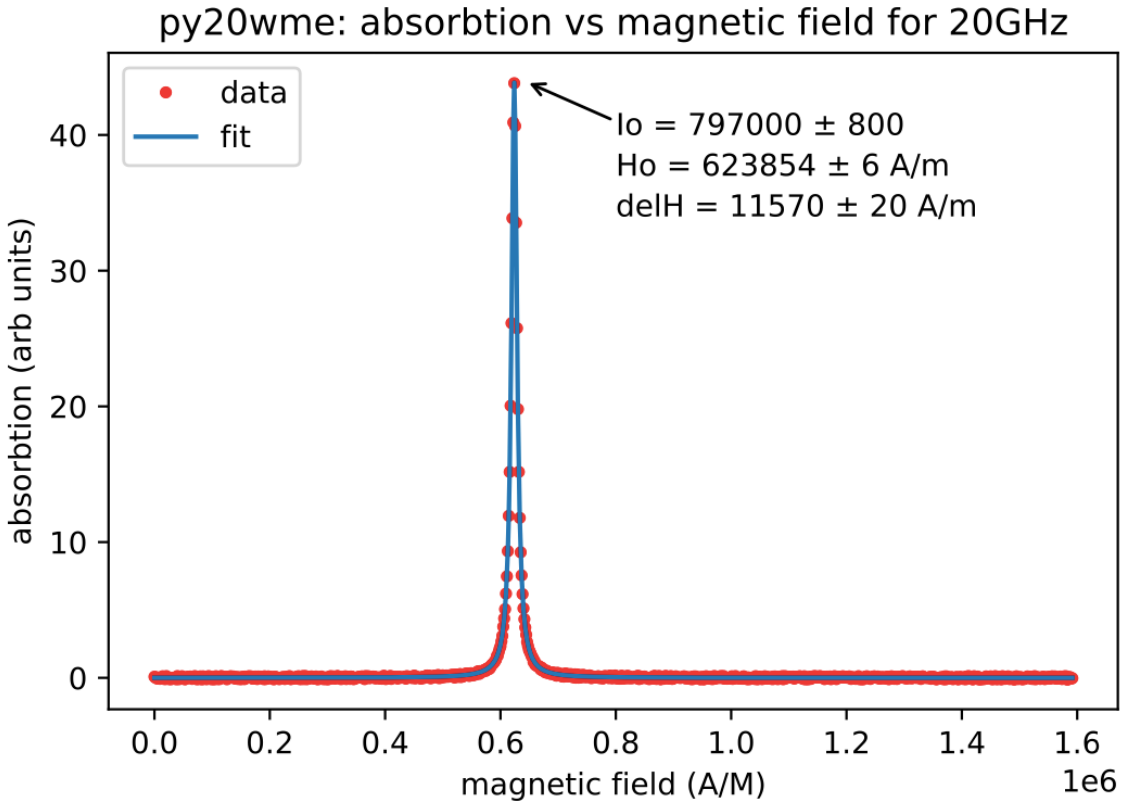
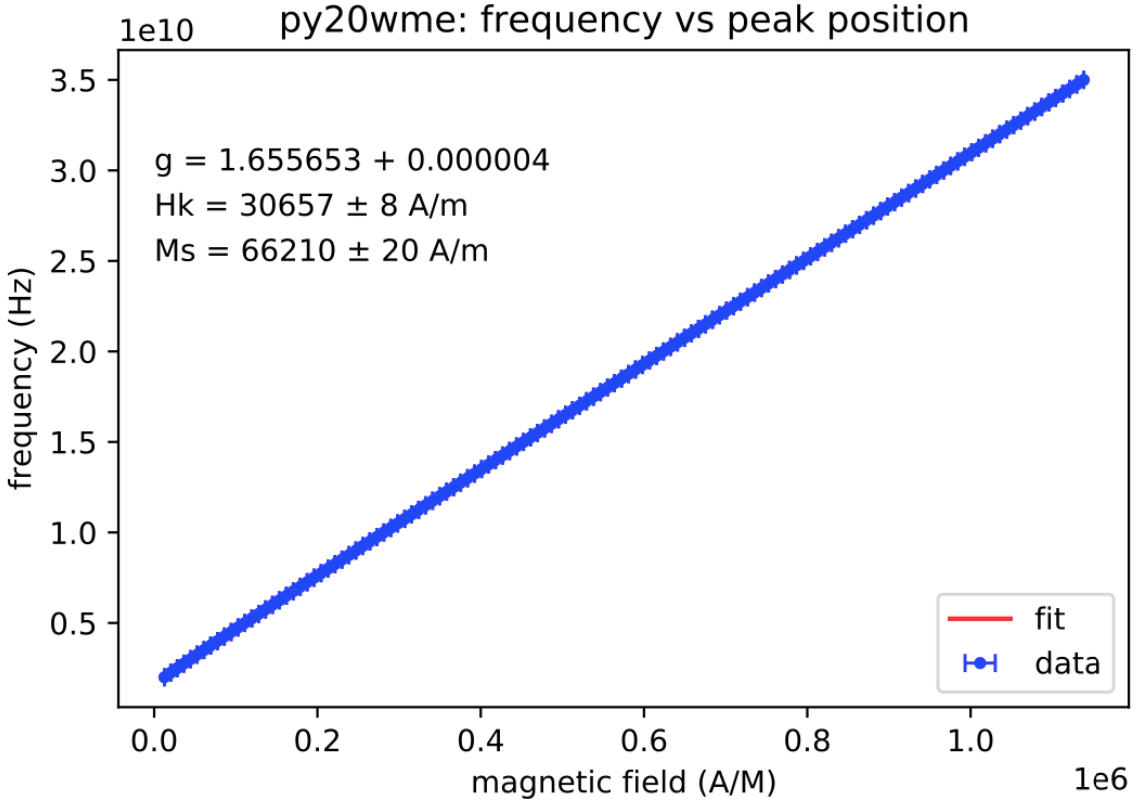
PHYS2320 Computing Report

Part 1:

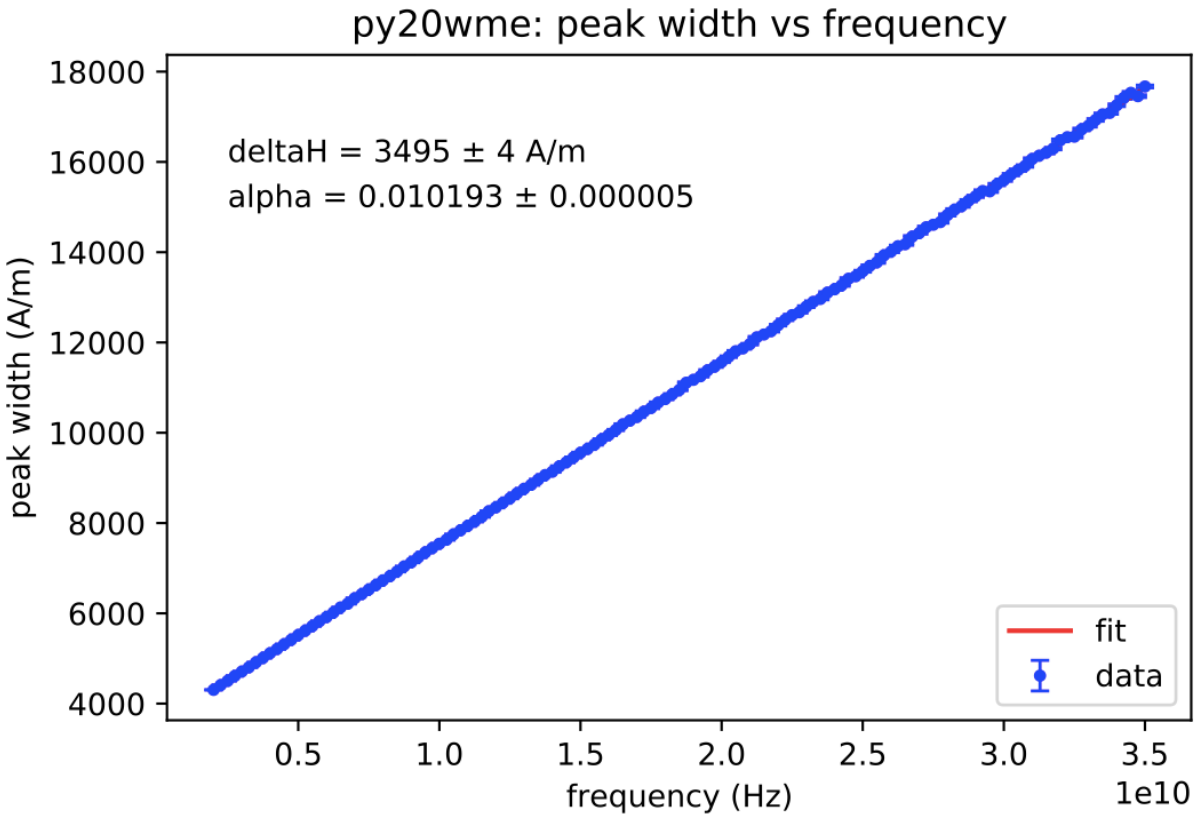
1.1 20GHz Data



1.2 Kittel Fit



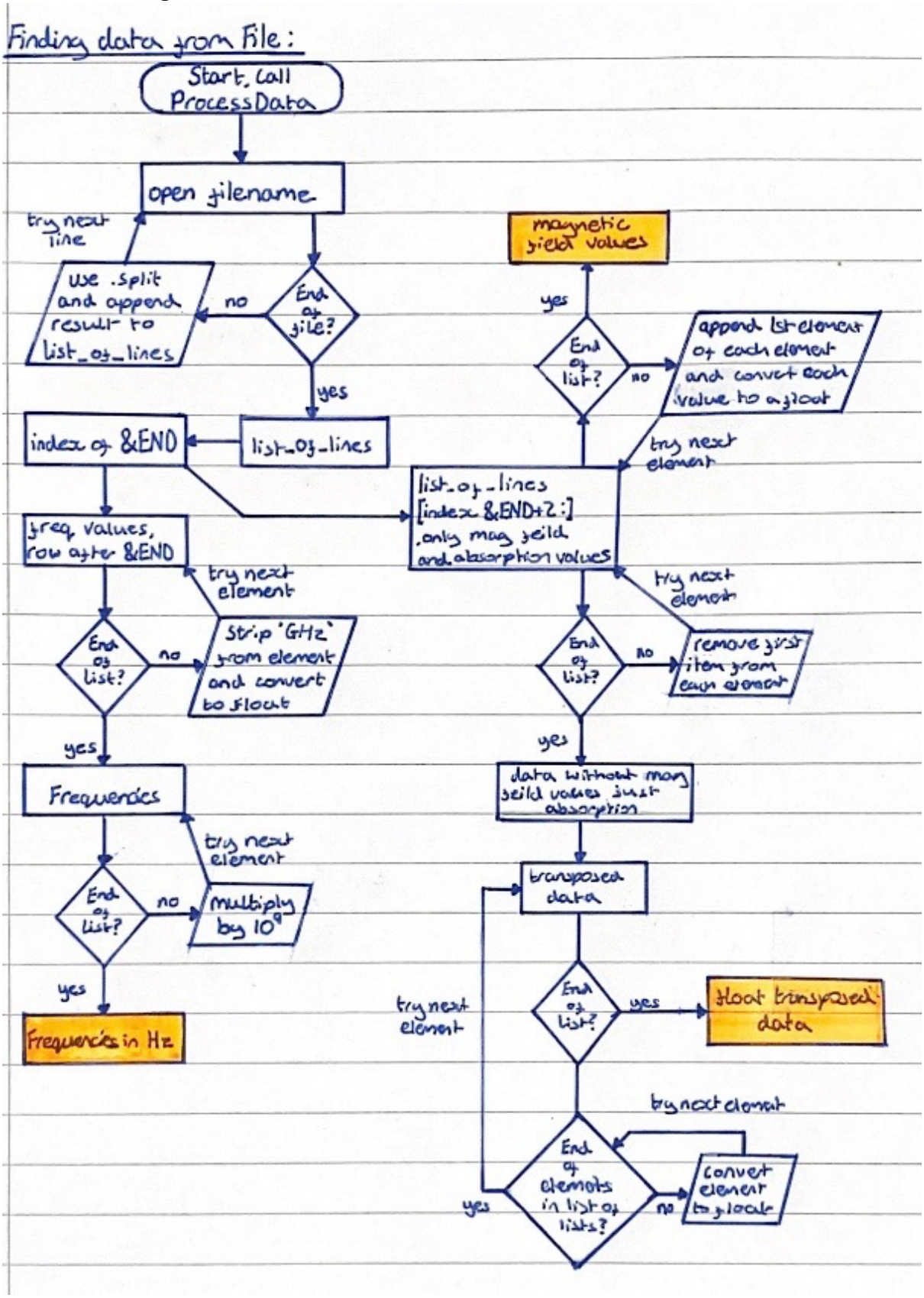
1.3 Peak Width



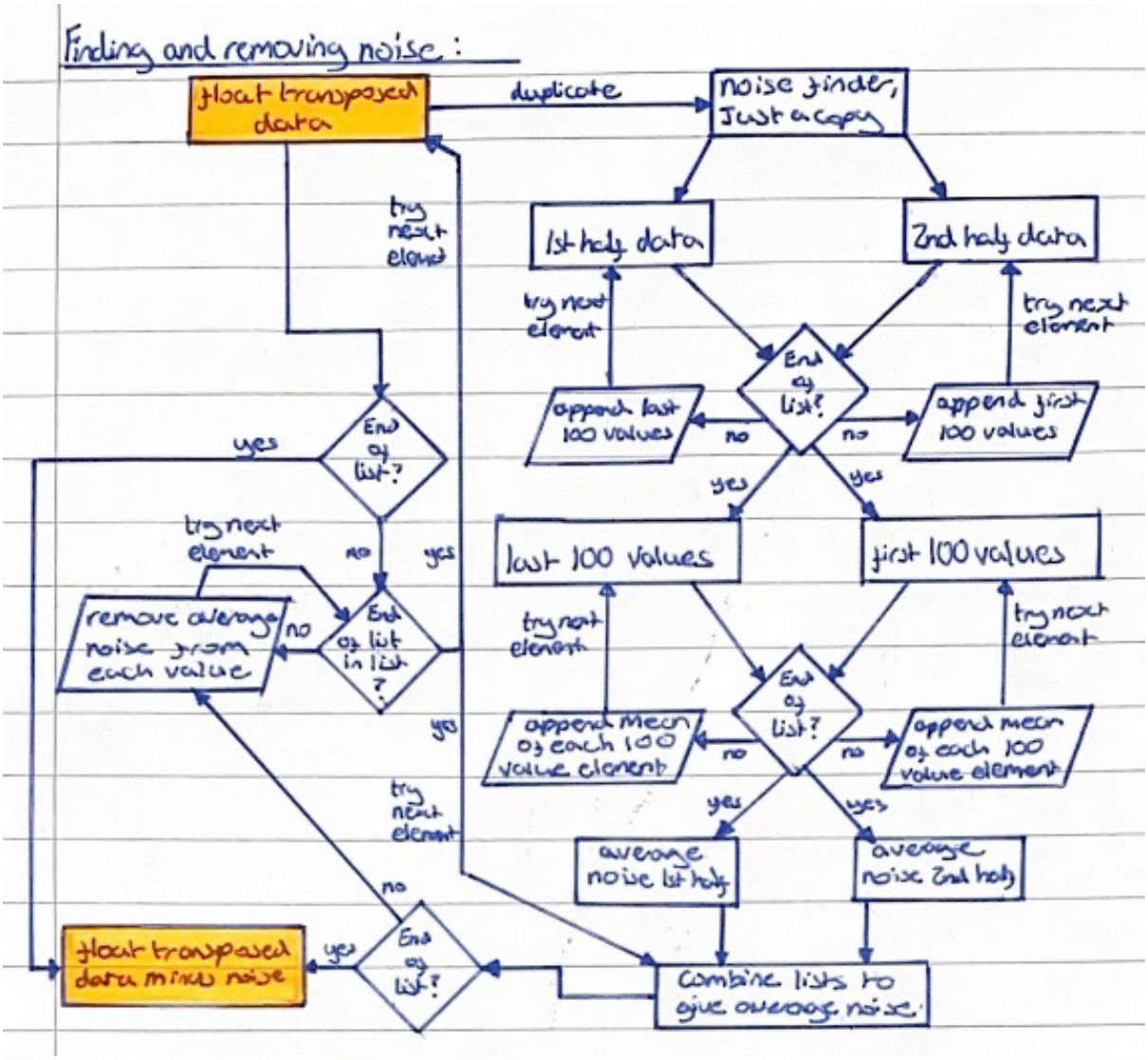
1.4 Table of Results

Quantity	Value	Uncertainty	Units
20GHz peak	623854	6	Am^{-1}
20GHz width	11570	20	Am^{-1}
Gamma, γ	145599700000	400000	$rads^{-1}T^{-1}$
Lande g factor, g	1.655653	0.000004	N/A
Anisotropy field, H_k	30657	8	Am^{-1}
Saturation magnetisation, M_s	66210	20	Am^{-1}
Intrinsic line width, ΔH	3495	4	Am^{-1}
Gilbert damping parameter, α	0.010193	0.000005	N/A

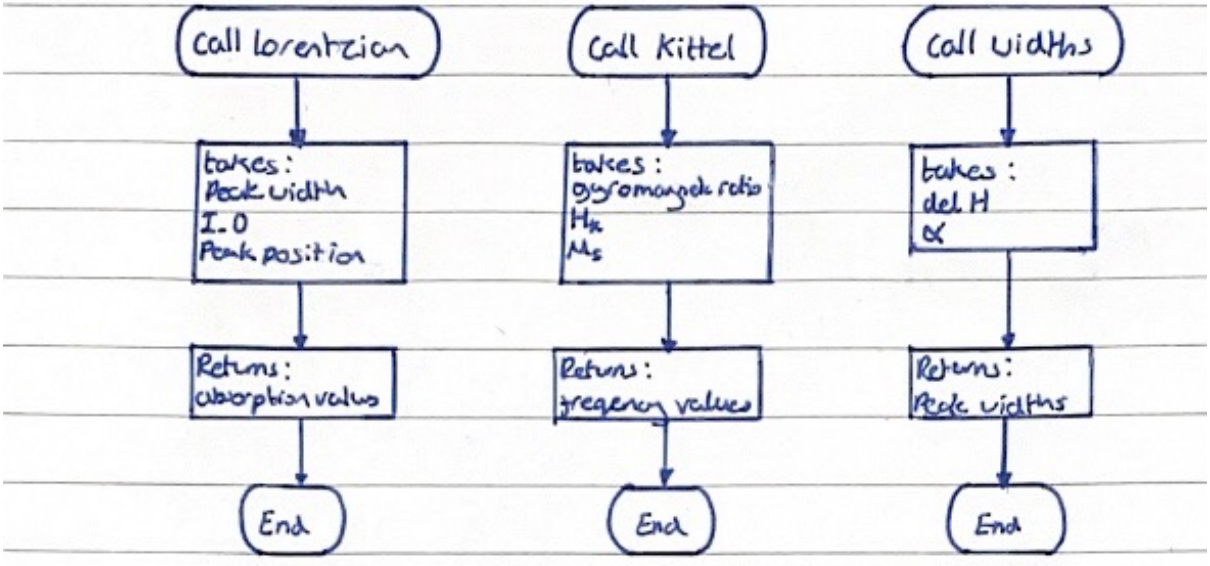
Part 2: Flow diagram



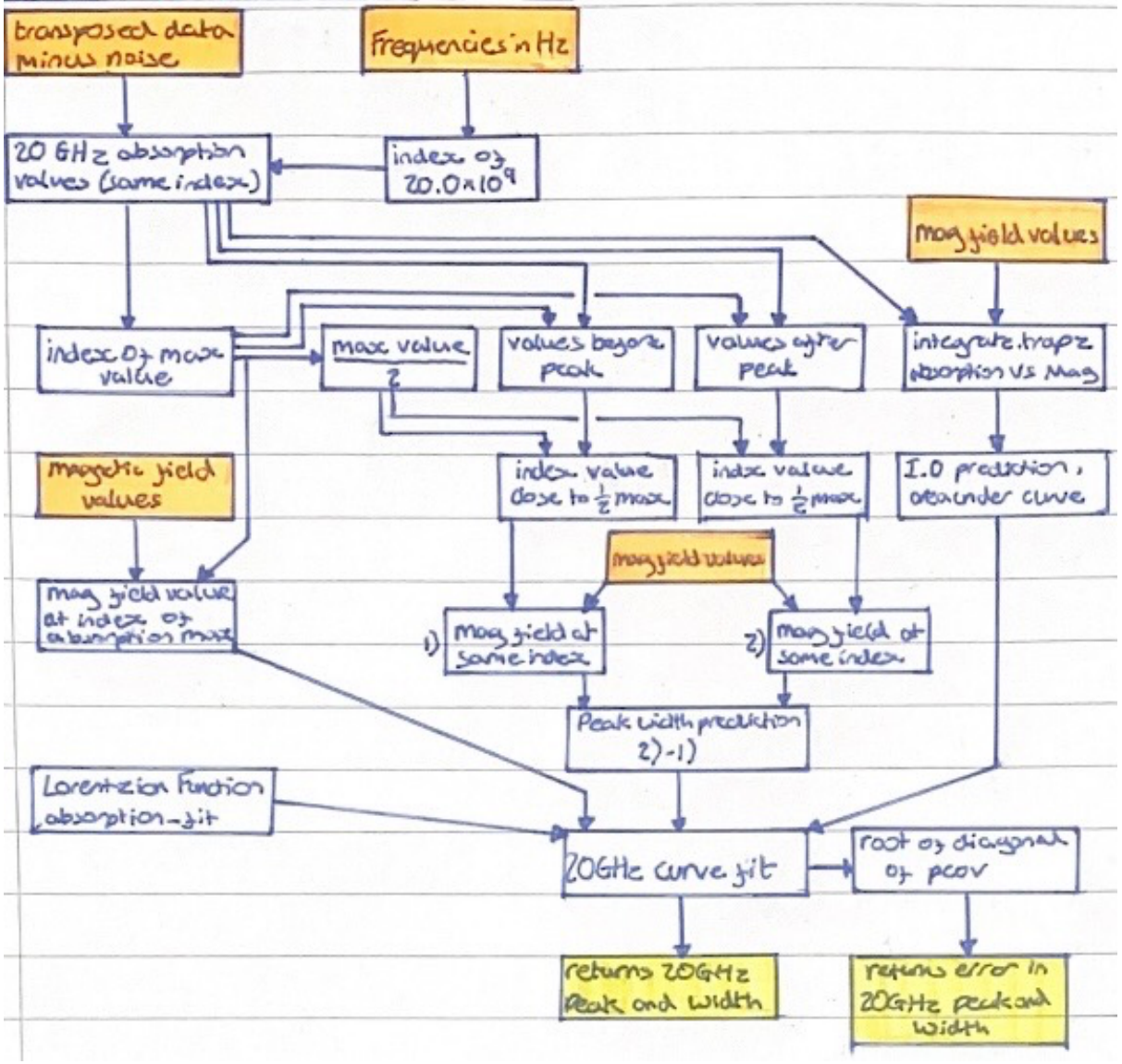
Finding and removing noise :



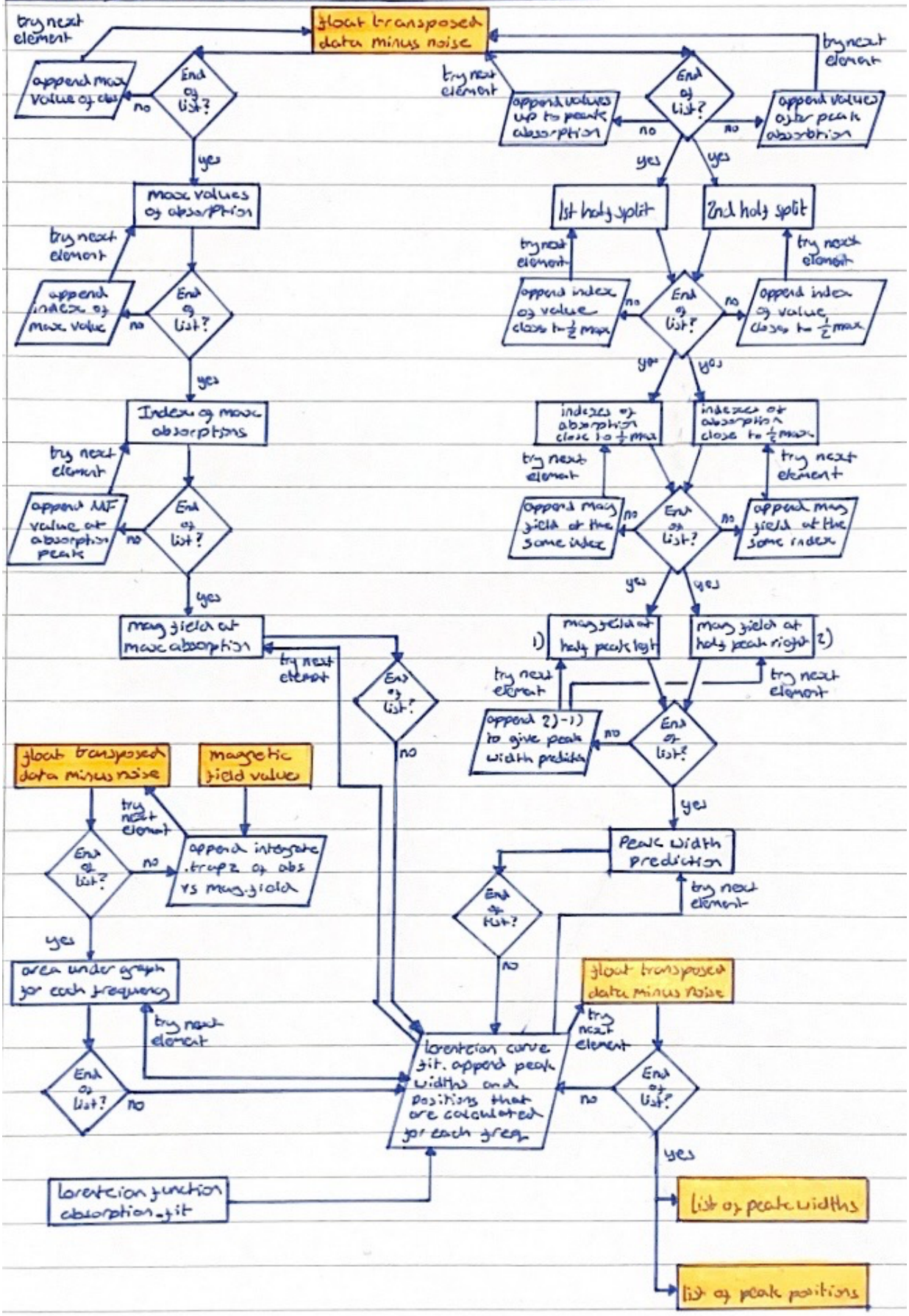
Functions used inside ProcessData :



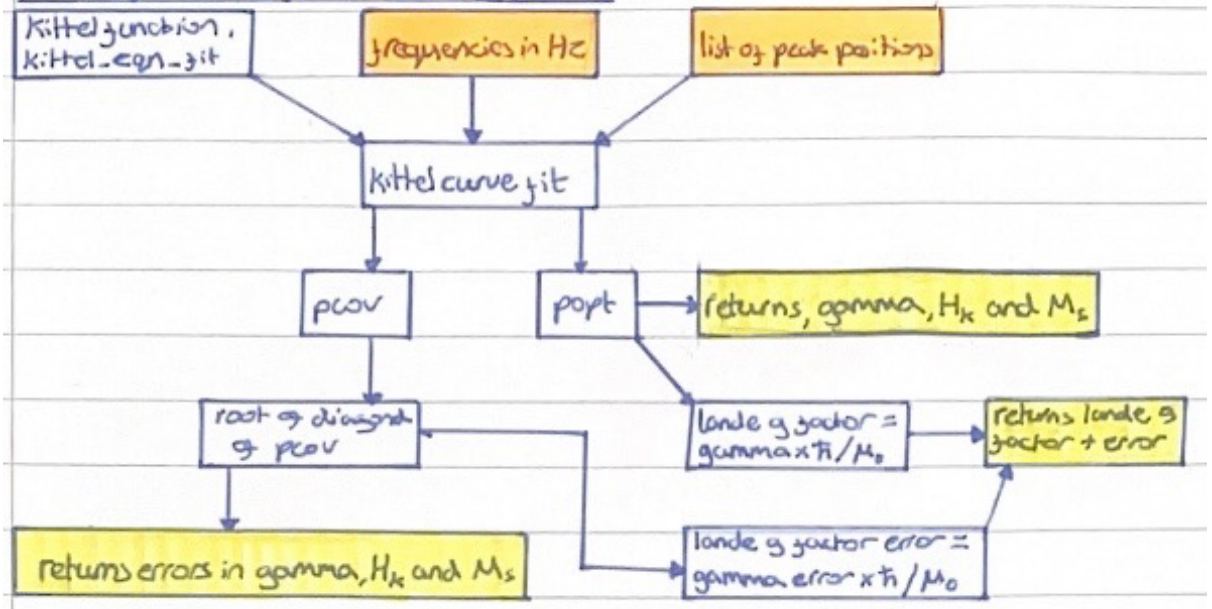
20GHz peak and Width calculations:



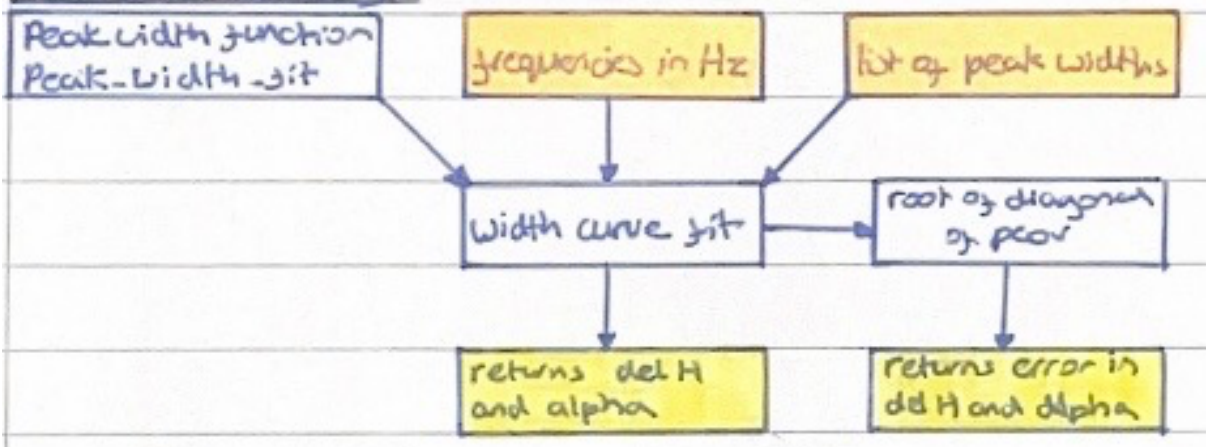
Calculating peak widths and peak value for all freqs:



Kittel eqn curve fit + lande g factor:



Peak Width fitting:



ProcessData returns: