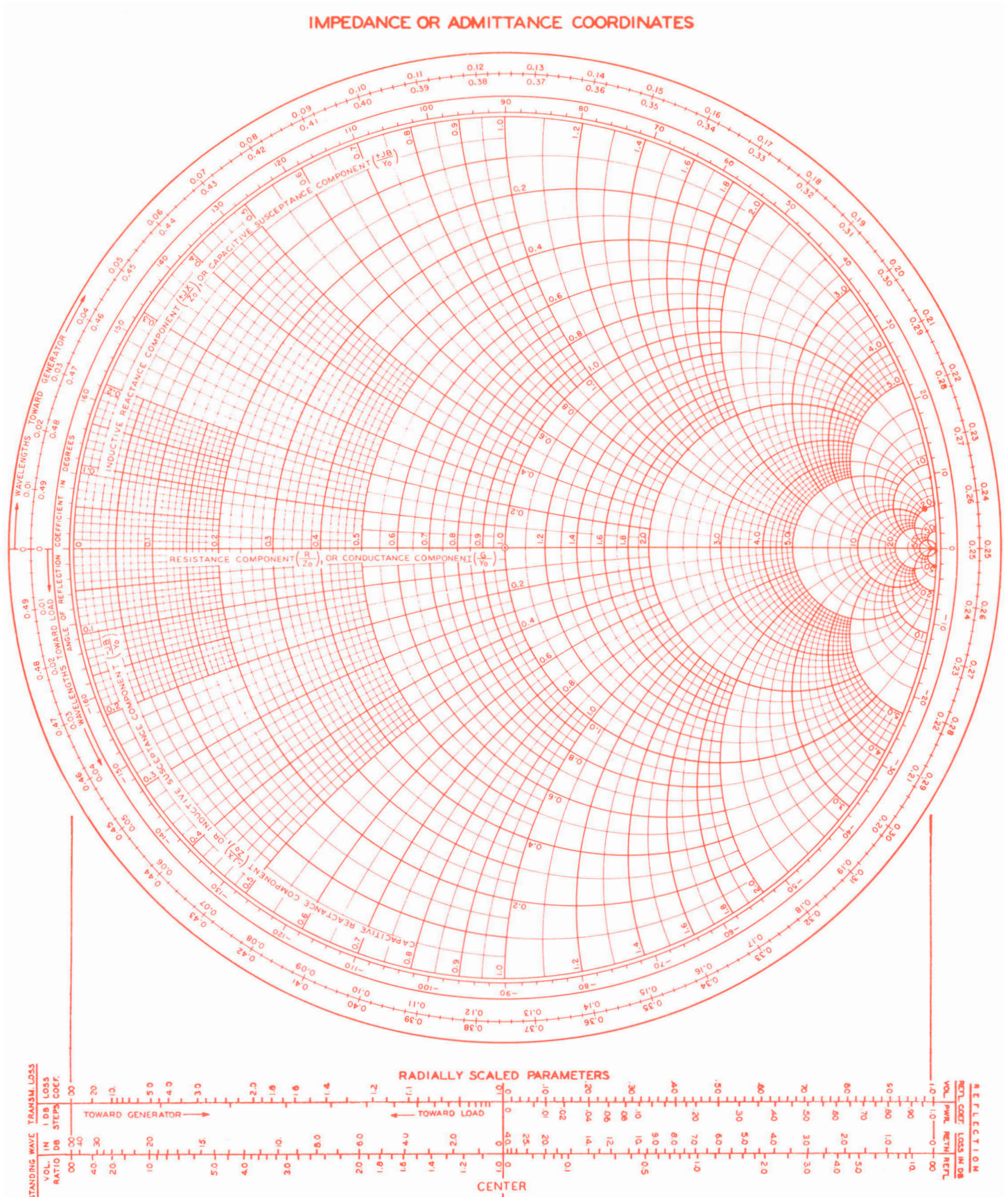


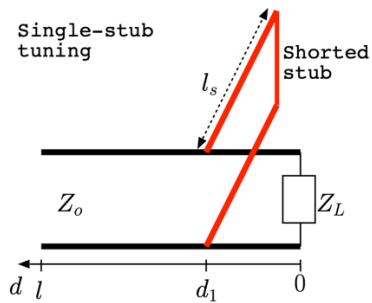
Lecture 40

1 Smith Chart Review

1. Load impedance Z_L is purely resistive (neither short nor open is considered as a resistor)
2. Load impedance Z_L is purely reactive
3. The load is shorted
4. The load is open
5. Find Γ_L from Z_L
6. Find Z_L from Γ_L
7. Find input impedance from load impedance
8. Find load impedance from input impedance
9. Given normalized load impedance z_L , find VSWR
10. Reflected voltage phasor is $\tilde{V}^- = 0$ for all $\tilde{V}^+$
11. Matched impedance $(1 + jb)$ cycle
12. Load admittance $Y_L = 0$
13. Load admittance $Y_L = \infty$
14. Find normalized load admittance y_L from normalized load impedance z_L
15. Matched impedance using single/double stub tuning



2 Single stub matching



want $y(d_1) + y_{stub} = 1$

1. The normalized load impedance is $z_L = 0.14 + 0.4j$. What is its corresponding point?
2. What is its corresponding point y_L ?
3. VSWR on black transmission line
4. Insert location d_1 (shortest)
5. Normalized admittance y_{stub}
6. For short-ended stub, find shortest stub length l_s
7. For open-ended stub, find shortest stub length l_s
8. VSWR on red transmission line
9. Normalized parallel impedance (admittance) at position d_1

