

Prep guide – Plane waves

Big picture goal – To show that there exist traveling wave solutions to the Maxwell equations, and to characterize the most basic of these solutions.

1) How do we get from the Maxwell equations to differential equations that we can identify as wave equations?

2) How does one represent a plane wave mathematically? Write down a complex representation and also a pure real representation.

3) What does the term 'polarization' mean in this context?