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**Classification of Four Three-Level Atomic Systems into Two Categories in Light of the Study of Their Resonances** TONY ABI-SALLOUM, Widener University — Of the four possible three-level atomic systems (Lambda, Vee and two Cascade schemes), only two exhibit reduction in the absorption of a probe field when a weak second driving field is present. The reduction in absorption can be a result of Electromagnetically Induced Transparency (EIT) or it can be a consequence of Autler-Townes (AT) splitting. In this talk, we present studies of resonances of four different three-level systems. Two categories of three-level systems are compared and the line of separation between EIT and AT is delineated.

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