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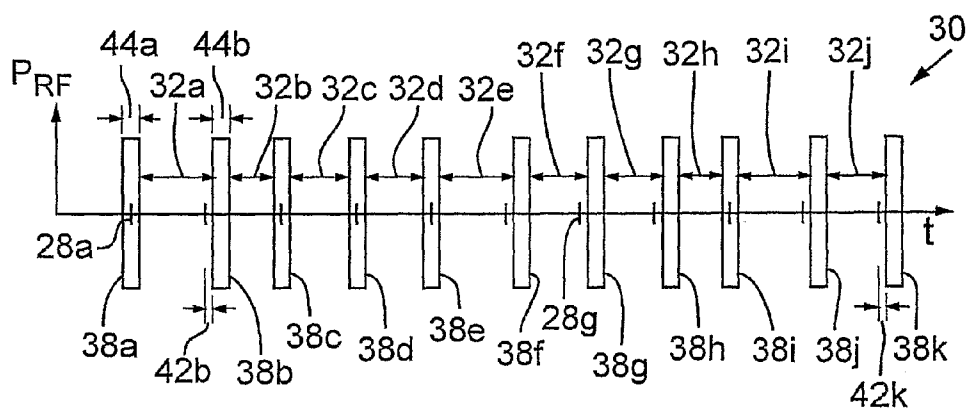
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(54) Title: LASER PULSE PICKING EMPLOYING CONTROLLED AOM LOADING



(57) **Abstract:** A laser (126) and an AOM (10) are pulsed at substantially regular and substantially similar constant high repetition rates to provide working laser outputs (40) with variable noimpingement intervals (50) without sacrificing laser pulse-to-pulse energy stability. When a working laser output (40) is demanded, an RF pulse (38) is applied to the AOM (10) in coincidence with the laser output pulse (24) to transmit the laser pulse to a target. When no working laser output (40) is demanded, an RF pulse (38) is applied to the AOM (10) in noncoincidence with the laser output (24), so that the laser pulse is blocked. Thus, the average thermal loading on the AOM (10) remains substantially constant regardless of how randomly the working laser outputs (40) are demanded. The AOM (10) can also be employed to control the energy of the working laser output (40) by controlling the power of the RF pulse (38) applied. When the RF power is changed, the duration (44) of the RF pulse (38) is modified to maintain the constant average RF power.

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