

ON THE EQUATORIAL TYPE SYSTEMS USED IN CPV TRACKING

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Abstract: *The concentrator photovoltaic (CPV) systems work to their highest efficiency only when they are provided with a tracking system of high accuracy. The sun ray's projections on to an equatorial plane, with the primary angles have been extended on the other two planes of a polar/equatorial reference system. Three pairs of solar angles are discussed and analytically modeled. Based on these angles new tracking mechanisms have been generated and comparative analyzed by numerical simulations.*

Key words: *concentrated photovoltaic (CPV), tracking systems, equatorial tracking, declination, hour angle, direct solar radiance, efficiency.*

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