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## Résumé

This study presents an analysis of radar signature at Ku-band for incidences ranging from 0° to 10° over the major bioclimatic zones, soil and vegetation types encountered in West-Africa, using data from Jason-3 and SWIM. Time-series of radar responses were built over the following environments: stone and sand deserts, Sahelian savannah and floodplain, flooded and non-flooded equatorial forests. Deserts and non-flooded equatorial forest exhibit almost constant responses, decreasing as the incidence angle increases. Similar seasonal variations of the backscattering coefficient between the dry and the wet season are observed at nadir for Jason-3 and SWIM with a decrease in dry season level and amplitude with the increase of the incidence angle. Backscattering at Ku-band can be related to soil roughness, vegetation cover and soil wetness.

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\*Intervenant