The swash zone is the morphologically dynamic region landward of the surf zone, where the shoreline sweeps back and forth across the beach face influencing the morphological behaviour of sandy beach systems. It represents the principal mechanism for near-shore sediment transport. Swash hydrodynamics were investigated on an intermediate beach using runup data at the scale of a single high tidal cycle and then on a single swash event, where previous studies have shown strong disparities at the level of the upper-beach face response [Masselink et al, 2007]. The purpose of this study is to assess whether this disparity is reflected in particular in signal level of runup. Runup data were obtained from video measurements during the ECORS-Truc Vert'08 beach experiment (France) with a continuously recording at 2Hz over a four hours time around high tide. Topography variations show strong local profile changes on the upper face of the beach between two consecutive days (a maximum of 20cm of erosion and 21cm of accretion occurred relative to the initial profile). Two cross-shore transects have been chosen for each of the two maximum profile changes (A1-A2 and E1-E2). Study was done under calm, constant, offshore wave conditions (peak period of 10.4s and offshore mean height (Ho) of 0.58m) in the wake of storm conditions, so the beach is under reconstruction. Surf zone topography shows the presence of a offshore low-tide terrace correlated with the erosive swash zone and a offshore bar profile behind the accretion area. The swash zone was associated with moderately reflective conditions (Iribarren parameters up to 0.9 and a beach slope of 0.058-0.072). Energy spectra, PSD(f) were computed and runup data were then partitioned to determine the total runup elevation (S), the incident and the infragravity band component (Sic,Sig). Results show a strong disparity in the runup height between transects of the two areas (SA1=1.3m, SA2=1.05m while SE1=0.6m and SE2=0.5m). Ratios of Nondimensional runup parameters present a same order of magnitude (Sinc=0.8 S ; Sig=0.45 S) while ratios between S and Ho are twice bigger in the accretive part. Then, at the scale of single swash events, swash duration parameters were determined showing a relative symmetric signal. Disparities found in the swash signal are finally not a direct consequence neither of the environmental conditions (Ho,To) nor the local swash zone parameters (β). Expanding the vision at the surf zone, the complex morphology seems to play the major role in the swash disparities.