

**Assani, I.**

**Multiple return times theorems for weakly mixing systems.** (English) Zbl 0985.37004  
*Ann. Inst. Henri Poincaré, Probab. Stat.* 36, No. 2, 153-165 (2000).

The author proves the pointwise convergence of the expression

$$\frac{1}{N} \sum_{n=0}^N a_n g(R^n z)$$

where  $(Z, K, \nu, R)$  is an ergodic dynamical system on a probability measure space  $(Z, K, \nu)$ , the sequence of scalars  $a_n$  has the form

$$a_n = a_n(x, y_1, y_2, \dots, y_J) = \left( \prod_{i=1}^H f_i(T^{b_i, n} x) \right) \left( \prod_{j=1}^J g_j(S_j^n y_j) \right),$$

$(b_1, b_2, \dots, b_H) \in Z^H$ ,  $J$  is a positive integer, the functions  $f_i$  and  $g_j$  are bounded and  $(X, F, \mu, T)$  and  $(Y, G_j, m_j, S_j)$  are weakly mixing systems.

Reviewer: [Liviu Goras \(Iași\)](#)

**MSC:**

[37A25](#) Ergodicity, mixing, rates of mixing  
[93E25](#) Computational methods in stochastic control (MSC2010)

Cited in **5** Documents

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[ergodic dynamical system](#); [weakly mixing systems](#)

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