NOTATIONS

Φ is the standard normal d.f.

ϕ is the standard normal p.d.f.

$S_n = X_1+\ldots+X_n$, where $\{X_n\}$ is a sequence of independent r.v.s.

f is the characteristic function of a d.f. F.

By $F \in \mathcal{D}_{NA}(\alpha)$ we mean F is in the domain of normal attraction of a stable law with characteristic exponent α.

By $F \in \mathcal{D}_{NNA}(\alpha)$ we mean F is in the domain of non-normal attraction of a stable law with characteristic exponent α.

$\mathcal{D}_A(\alpha) = \mathcal{D}_{NA}(\alpha) \cup \mathcal{D}_{NNA}(\alpha)$.

For a r.v. X, $R(x)=P\{|X|>x\}$.

$X \sim F$ means that the distribution function of r.v. X is F.

Let $\Theta = \{(t,n,x):|t|>\varepsilon>0,\ n\geq n_o,\ |x|\geq 1\}$.

The relation $f(x)=O(|g(x)|)$ as $x \to \infty$ means that $|f(x)|/|g(x)|$ is bounded for sufficiently large x.

The relation $f(x)=o(|g(x)|)$ as $x \to \infty$ means that $|f(x)|/|g(x)| \to 0$ as $x \to \infty$.

The largest integer less than or equal to x will be denoted by [x].

The indicator function of the set A is defined by
$I_A(x) = \begin{cases} 1 & \ldots \text{if } x \in A \\ 0 & \ldots \text{otherwise.} \end{cases}$

The signature funtion, denoted as sgn(.), is defined by $sgn(t)=t/|t|$.

The function h(x) is said to be **slowly varying** at infinity if $\lim_{x \to \infty} h(xt)/h(x)=1$ for all t>0.

$\xrightarrow{P}$ means convergence in probability.

$\xrightarrow{d}$ mean convergence in distribution.

DCT means Dominated Convergence Theorem.

If u and v are integers and u<v then $\sum_{k=v}^{u} ..=0$ and $\prod_{k=v}^{u} ..=1$.

Unless otherwise specified the symbols C, C_1, C_2, C_3, ... and c, c_1, c_2, c_3, ... denote positive constants. One and the same letter used in different portions of the text may stand for different values.

P(.) or $P_k(.)$ for k=1, 2, ... denote a polynomial in the variable |t| with non-negative coefficients, completely determined by the values of t; its meaning is not of much of importance and may even change from one step to another.

For any function g(t) and positive integer k, we will write $g^{(k)}(t)$ to denote $(d/dt)^k g(t)$ whenever such a derivative exists.

Halmos square □ indicates the end of a proof.