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**Stereology of extremes; shape factor of spheroids.** (English) Zbl 1051.60011  
[Extremes 6, No. 1, 5-24 \(2003\)](#).

Ellipsoidal particles of oblate shape are considered, i.e. their two major semiaxes are equal ( $X$ ) and one is minor ( $W < X$ ). The shape factor is defined as  $T = X^2/W^2 - 1$ . A shape factor of a planar section of such particle is  $Z = Y^2/V^2 - 1$ , where  $Y$  is the major and  $V$  the minor semiaxis of the section. The orientation of the section is assumed isotropic. It is shown that (roughly speaking) if the distribution of  $T$  belongs to a domain of the max-attraction of some max-stable law, then  $Z$  also belongs to the same domain. Gamma distribution of  $T$  is considered as an example.

Reviewer: R. E. Maiboroda (Kyiv)

**MSC:**

[60D05](#) Geometric probability and stochastic geometry  
[62G32](#) Statistics of extreme values; tail inference

Cited in **5** Documents

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[oblate shape particle](#); [domain of max attraction](#); [Gamma distribution](#)

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