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Acoustic radiation force on oblate and prolate spheroids in Bessel beams

F.G. Mitri

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*Research Highlights

- The acoustic radiation force on a prolate and oblate rigid spheroids is derived
- The transition from progressive to pure standing wave Bessel beams is considered
- Calculations predict larger force amplitudes the more oblate the spheroid becomes
- Some exceptions are also noted for Bessel beams with a large half-cone angle
- The theory provides a benchmark tool for strictly numerical methods

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