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Titolo	Toroidal Multipole Moments in Classical Electrodynamics : An Analysis of their Emergence and Physical Significance // by Stefan Nanz
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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Symmetry Considerations of Charge-Current Distributions -- Multipole Expansion of the Electromagnetic Potentials and Fields -- Conclusions for the Physical Significance of Toroidal Multipole Moments.
Sommario/riassunto	Stefan Nanz investigates the necessity for three multipole families in classical electrodynamics. He shows that by imposing symmetry and parity constraints, it is sufficient to deal with only two multipole families. This implies that the toroidal multipole moments do not represent an independent multipole family, and they only emerge in the long-wavelength limit. Contents Symmetry Considerations of Charge-Current Distributions Multipole Expansion of the Electromagnetic Potentials and Fields Conclusions for the Physical Significance of Toroidal Multipole Moments Target Groups Researchers and students in the field of physics Practitioners in the field of optics and photonics The Author Stefan Nanz studied physics at Karlsruhe Institute of Technology and wrote his Master Thesis in the group of Prof. Dr. Carsten Rockstuhl. There, he is now a PhD student and working on

tailored disorder of scattering interfaces and photon management in
solar cells.
