

Abstract Submitted  
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**The Orbital Angular Momentum Sum Rule** FATMA ASLAN,  
MATTHIAS BURKARDT, New Mexico State University — As an alternative to  
the  $J_i$  sum rule for the quark angular momentum, a sum rule for the quark orbital  
angular momentum, based on a twist-3 generalized parton distribution, has been  
suggested. We study the validity of this sum rule in the context of scalar Yukawa  
interactions as well as in QED for an electron.

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