



Contribution ID: 272

Type: **Talk**

## Pion structure from twisted mass lattice QCD down to the physical pion mass

*Friday, July 29, 2016 3:00 PM (20 minutes)*

We present an investigation of pion structure based on ETMC  $N_f = 2$  and  $N_f = 2 + 1 + 1$  twisted mass configurations at maximal twist. We compute the first two moments of the quark momentum fraction of the pion and the electromagnetic form factor. For the latter, momentum is injected using twisted boundary conditions and  $F_\pi(Q^2)$  is calculated at the physical pion mass. We find that our data is consistent with vector meson dominance and experimental data in the region of momentum transfer  $Q^2 > 0.01 \text{ GeV}^2$ .

**Authors:** Mr KOSTRZEWA, Bartosz (HISKP (Theory) - Universitaet Bonn); Prof. URBACH, Carsten (HISKP (Theory) - Universitaet Bonn); Dr SANFILIPPO, Francesco (INFN - Sezione Roma Tre); Mr OEHM, Maximilian (HISKP (Theory) - Universitaet Bonn); Dr SIMULA, Silvano (INFN - Sezione Roma Tre)

**Presenter:** Mr KOSTRZEWA, Bartosz (HISKP (Theory) - Universitaet Bonn)

**Session Classification:** Hadron Structure

**Track Classification:** Hadron Structure