



Contribution ID: 538 Contribution code: **contribution ID 538**

Type: **Oral**

## **Development of the automatic procedures for spinor matrix element calculation with massive particles.**

*Thursday, 2 December 2021 12:20 (20 minutes)*

An algorithm for the spinor amplitudes with massive particles is implemented in the SANC computer system framework.

Procedure for simplification of the expressions with spinor products is based on little group technique in six-dimensional space-time.

Amplitudes for bremsstrahlung processes  $e+e\to(e+e/\mu+\mu-/HZ/Z\gamma/\gamma\gamma)+\gamma$  are obtained in gauge-covariant form analytically eliminating all gauge-fixing parameters. Numerical integration is performed by ReneSANCe Monte-Carlo event generator.

**Primary author:** Mr DYDYSHKA, Yahor (Joint Institute for Nuclear Research, Dubna)

**Presenter:** Mr DYDYSHKA, Yahor (Joint Institute for Nuclear Research, Dubna)

**Session Classification:** Track 3: Computations in Theoretical Physics: Techniques and Methods

**Track Classification:** Track 3: Computations in Theoretical Physics: Techniques and Methods