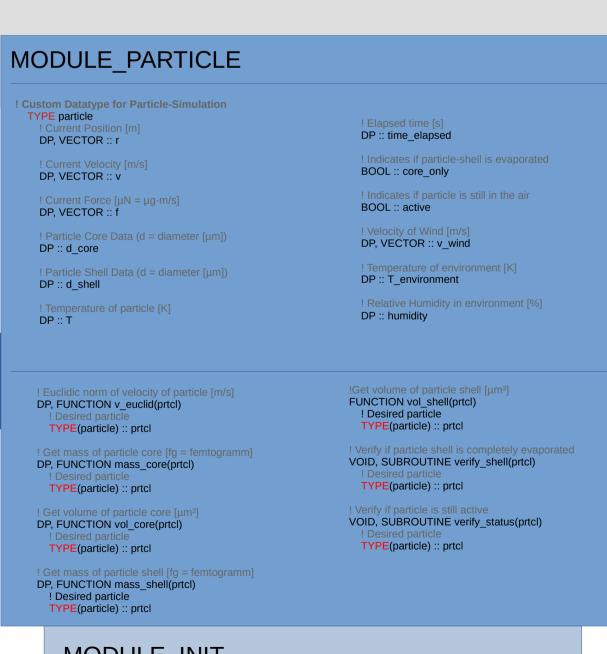
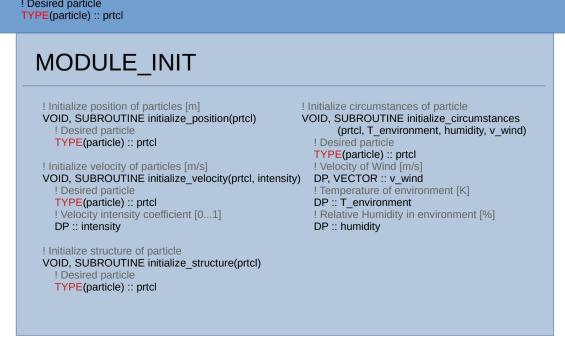


MODULE_PARAMETERS ! Dimension of Simulation INT, PARAMETER :: dim = 3 ! Density of Water [kg/m³] [fg/µm³] DP, PARAMETER :: rho_H20 DP, PARAMETER :: rho cov2 DP, DIMENSION(dim) :: g DP, PARAMETER :: R DP, PARAMETER :: D_0 DP, PARAMETER :: p_atm DP, PARAMETER :: T_0 ! Antoine Equation Parameters (H2O) DP, PARAMETER :: A DP, PARAMETER :: B DP, PARAMETER :: M_H2O DP, PARAMETER :: C DP, PARAMETER :: mmHg_Pa_conversion DP, PARAMETER :: M_air DP, PÄRAMETER :: PI DP, PARAMETER :: sneeze_vel DP, FUNCTION rho_air(T_environment) DP :: T_environment DP, FUNCTION nu_air(T_environment) DP :: T_environment DP, FUNCTION etha_air(T_environment) DP :: T_environment





NUMERIC_INTEGRATION INTERFACE VOID, SUBROUTINE num_int_procedure(f, y, dt, params, params_dim, alg_dim) VECTOR, FUNCTION **func**(y, params, params_dim, alg_dim) ! Generic function varianble PROCEDURE(func) :: f INT :: alg_dim INT :: alg_dim INT :: params_dim DP, VECTOR:: params INT :: params_dim DP, VECTOR:: params DP, VECTOR :: y DP, VECTOR, RESULT :: dydx DP, VECTOR :: y VOID, SUBROUTINE runge_kutta_2k(f, y, dt, params, params_dim, alg_dim) VOID, SUBROUTINE runge_kutta_4k(f, y, dt, params, params_dim, alg_dim) VOID, SUBROUTINE **euler**(f, y, dt, params, params_dim, alg_dim) PROCEDURE(func) :: f PROCEDURE(func) :: f PROCEDURE(func) :: f INT :: alg_dim INT :: alg_dim INT :: alg_dim INT :: params_dim INT :: params_dim INT :: params_dim DP, VECTOR:: params DP, VECTOR:: params DP, VECTOR:: params DP, VECTOR :: y DP, VECTOR :: y DP, VECTOR :: y