
pyontdd Documentation

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class pyontdd.lib.hadron.**Hadron**(*data*, *masses=None*, *gamma_type=None*, *hadron_type=None*, *fit_type=None*, *lattice_size=None*, *config_number=None*)

Class for Hadrons.

Parameters **data** : array_like

Numpy array of the data to be fit.

masses : tuple

The bare masses of the valence quarks comprising the hadron e.g.:

```
masses=(0.005, 0.01)
```

gamma_type : string

The gamma structure of the propagators e.g.:

```
gamma_type="AP"
```

for Axial-Pseudoscalar.

hadron_type : string

The type of Hadron that the data represents e.g.:

```
hadron_type="PseudoscalarMeson"
```

fit_type : string

The way we fit the data:

```
fit_type="Individual" or "Simultaneous"
```

lattice_size : dict

Dict that specifies the size of the lattice e.g.:

```
lattice_size = {"x": 24, "y": 24, "z": 24, "t": 64, "s": 16}
```

config_number : int, optional

The configuration number that this propagator corresponds to.

Methods

fit(*guess=None*, *fit_range=None*, *covariant_fit=False*, *correlated_fit=False*, *inv_covar=None*, *error=None*)

Fit the Hadron based on the parameters given.

class pyontdd.lib.hadron.**HadronCharged**(*data*, *masses=None*, *charges=None*, *gamma_type=None*, *hadron_type=None*, *fit_type=None*, *lattice_size=None*, *config_number=None*)

Class for Charged Hadrons. Inherits all parameters from Hadron.

Parameters **charges** : tuple

Tuple of charges of the quarks comprising the hadron in units of $e/3$ e.g. (2, -1)

See also:

Hadron HadronCharged inherits everything from this class.

Methods

get_charges ()

Get the charges.

Returns tuple :

Tuple of the charges.

`pyontdd.lib.register.registerCorrelator (f)`

Decorator to register a correlator type with the ones that CorrelatorFactory will search through.

class `pyontdd.lib.registered_types.RegisteredCorrelatorTypes`

A list of registered Correlator types that can be accessed by various functions/classes. Initially empty, this is populated by `pyontdd.lib.register.registerCorrelator(cls)` as a decorator.

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