codata Documentation

Release 0.8.0

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GETTING STARTED

Sources: https://github.com/MilanSkocic/codata

1.1 codata



codata provides the lastest codata constants (2018). The raw codata are taken from http://physics.nist.gov/constants.

1.1.1 How to install

A Makefile is provided which uses fpm for building the library with additional options:

- compile the source generator and generate the sources
- copy needed sources into the python wrapper folder
- build a shared library
- install the C headers
- uninstall the library and headers

On windows, msys2 needs to be installed and use the mingw64 or mingw32 terminals.

Build: the configuration file will set all the environmental variables necessary for the compilation

source configuration make

Run tests

fpm test

Install

make install

Uninstall

make uninstall

If a shared is needed:

make shared

1.1.2 Dependencies

```
gcc>=9
gfortran>=9
```

1.1.3 License

GNU General Public License v3 (GPLv3)

1.2 pycodata

Python module containing the codata constants.

1.2.1 How to install

```
pip install pycodata
```

1.2.2 Dependencies

1.2.3 License

GNU General Public License v3 (GPLv3)

1.3 Examples

1.3.1 Example in Fortran

```
program example_in_f
    use iso_fortran_env
    use codata
    implicit none

print *, "c=", speed_of_light_in_vacuum
    print *, "u(c)=", u_speed_of_light_in_vacuum
end program
```

1.3.2 Example in C

```
#include <stdio.h>
#include "codata.h"

int main(void) {
    printf("c=%f\n", SPEED_OF_LIGHT_IN_VACUUM);
    printf("U(c)=%f\n", U_SPEED_OF_LIGHT_IN_VACUUM);
    return 0;
}
```

1.3.3 Example in Python

```
import pycodata
print(pycodata.SPEED_OF_LIGHT_IN_VACUUM)
```

1.3. Examples 3

TWO

RELEASE NOTES

2.1 Codata 0.8.0 Release Note

2.1.1 Summary

- Back to the approach with a library.
- Compatible with fpm.
- Configuration file for setting all the environmental variables.
- Global makefile for building a static library (through fpm) and a shared library.
- Automatic copy of the necessary sources for the python wrapper.
- Python wrapper built with the static library
 - no dependency on a shared library.
 - sources and static library embeded in the python wrapper.
- FORD for documenting the Fortran code.
- Integration of the FORD documentation into the main documentation with sphinx.

2.1.2 Download

Codata Releases

PYPI

2.1.3 Contributors

Milan Skocic

2.1.4 Commits

 $\textbf{Full Changelog:} \ https://github.com/MilanSkocic/codata/compare/0.7.1...0.8.0$

2.2 Codata 0.7.1 Release Note

2.2.1 Summary

- Minor fixes in generator code
- Add automatic copy of c sources for the python wrapper.

2.2.2 Download

Codata Releases

PYPI

2.2.3 Contributors

Milan Skocic

2.2.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.7.0...0.7.1

2.3 Codata 0.7.0 Release Note

2.3.1 Changes

- Migrate documentation from doxygen to sphinx+breathe.
- Add YEAR constant indicating the year of the codata constants.
- Refractoring

2.3.2 Download

Codata Releases

PYPI

2.3.3 Contributors

Milan Skocic

2.3.4 Commits

 $\textbf{Full Changelog:}\ https://github.com/MilanSkocic/codata/compare/0.6.0...0.7.0$

2.4 Codata 0.6.0 Release Note

2.4.1 Changes

- Created documentation.
- Fixed missing uncertainties for Cpython.

2.4.2 Download

Codata Releases

PYPI

2.4.3 Contributors

Milan Skocic

2.4.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.5.0...0.6.0

2.5 Codata 0.5.0 Release Note

2.5.1 Changes

- Changed the complete approach by not generating a library but only source files for different languages.
- Available languages: Fortran, C, python, CPython

2.5.2 Download

Codata Releases

PYPI

2.5.3 Contributors

Milan Skocic

2.5.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.4.0...0.5.0

2.6 Codata 0.4.0 Release Note

2.6.1 Changes

- Bring back pywrapper in the codata repository to sync versions.
- Improvements of the documentation.

2.6.2 Download

Codata Releases

PYPI

2.6.3 Contributors

Milan Skocic

2.6.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.3.0...0.4.0

2.7 Codata 0.3.0 Release Note

2.7.1 Changes

• Only last codata constants.

2.7.2 Download

Codata Releases

PYPI

2.7.3 Contributors

Milan Skocic

2.7.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.2.1...0.3.0

2.8 Codata 0.2.1 Release Note

2.8.1 Changes

- Integration of Intel Fortran compiler and MSVC in cmake scripts.
- · Add specifications and instructions for compiling on Windows

2.8.2 Download

Codata Releases

PYPI

2.8.3 Contributors

Milan Skocic

2.8.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.2.0...0.2.1

2.9 Codata 0.2.0 Release Note

2.9.1 Changes

- Bug fixes for the codata 2010.
- Bug fixes in the tests linked to the codata 2010.
- Add python wrapper for the number of constants method.

2.9.2 Download

Codata Releases

PYPI

2.9.3 Contributors

Milan Skocic

2.9.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.1.0...0.2.0

2.10 Codata 0.1.0 Release Note

2.10.1 Changes

Implementation of:

- the parser of the codata raw data
- the generator of the Fortran modules
- the C API and C header
- the python wrapper (will be moved to its repository next release).

2.10.2 Download

Codata Releases

PYPI

2.10.3 Contributors

Milan Skocic

2.10.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/....0.1.0

CHAPTER

THREE

API

3.1 codata

3.1.1 Fortran

Fortran code API

3.1.2 C

```
/**
* @file
* @brief Codata module - autogenerated.
#if _MSC_VER & APIDLL
#define ADD_IMPORT __declspec(dllimport)
#define ADD_EXPORT __declspec(dllexport)
#else
#define ADD_IMPORT
#define ADD_EXPORT
ADD_IMPORT extern const int YEAR;
ADD_IMPORT extern const double ALPHA_PARTICLE_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_ALPHA_PARTICLE_ELECTRON_MASS_RATIO; /**<
ADD_IMPORT extern const double ALPHA_PARTICLE_MASS; /**< kg */
ADD_IMPORT extern const double U_ALPHA_PARTICLE_MASS; /**< kg */
ADD_IMPORT extern const double ALPHA_PARTICLE_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double U_ALPHA_PARTICLE_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double ALPHA_PARTICLE_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV_
ADD_IMPORT extern const double U_ALPHA_PARTICLE_MASS_ENERGY_EQUIVALENT_IN_MEV; /**<__
→MeV */
ADD_IMPORT extern const double ALPHA_PARTICLE_MASS_IN_U; /**< u */
ADD_IMPORT extern const double U_ALPHA_PARTICLE_MASS_IN_U; /**< u */
ADD_IMPORT extern const double ALPHA_PARTICLE_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double U_ALPHA_PARTICLE_MOLAR_MASS; /**< kg mol^-1 */
```

(continues on next page)

```
ADD_IMPORT extern const double ALPHA_PARTICLE_PROTON_MASS_RATIO; /**<
ADD_IMPORT extern const double U_ALPHA_PARTICLE_PROTON_MASS_RATIO; /**<
ADD_IMPORT extern const double ALPHA_PARTICLE_RELATIVE_ATOMIC_MASS; /**<
ADD_IMPORT extern const double U_ALPHA_PARTICLE_RELATIVE_ATOMIC_MASS; /**<
ADD_IMPORT extern const double ANGSTROM_STAR; /**< m */
ADD_IMPORT extern const double U_ANGSTROM_STAR; /**< m */
ADD_IMPORT extern const double ATOMIC_MASS_CONSTANT; /**< kg */
ADD_IMPORT extern const double U_ATOMIC_MASS_CONSTANT; /**< kg */
ADD_IMPORT extern const double ATOMIC_MASS_CONSTANT_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double U_ATOMIC_MASS_CONSTANT_ENERGY_EQUIVALENT: /**< J */
ADD_IMPORT extern const double ATOMIC_MASS_CONSTANT_ENERGY_EQUIVALENT_IN_MEV: /**< MeV_
ADD_IMPORT extern const double U_ATOMIC_MASS_CONSTANT_ENERGY_EQUIVALENT_IN_MEV; /**<_
→MeV */
ADD_IMPORT extern const double ATOMIC_MASS_UNIT_ELECTRON_VOLT_RELATIONSHIP: /**< eV */
ADD_IMPORT extern const double U_ATOMIC_MASS_UNIT_ELECTRON_VOLT_RELATIONSHIP: /**< eV_
→ */
ADD IMPORT extern const double ATOMIC MASS UNIT HARTREE RELATIONSHIP: /**< E h */
ADD_IMPORT extern const double U_ATOMIC_MASS_UNIT_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double ATOMIC_MASS_UNIT_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double U_ATOMIC_MASS_UNIT_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double ATOMIC_MASS_UNIT_INVERSE_METER_RELATIONSHIP; /**< m^-1_
ADD_IMPORT extern const double U_ATOMIC_MASS_UNIT_INVERSE_METER_RELATIONSHIP; /**< m^-

→ 1 */

ADD_IMPORT extern const double ATOMIC_MASS_UNIT_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double U_ATOMIC_MASS_UNIT_JOULE_RELATIONSHIP: /**< J */
ADD_IMPORT extern const double ATOMIC_MASS_UNIT_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double U_ATOMIC_MASS_UNIT_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double ATOMIC_MASS_UNIT_KILOGRAM_RELATIONSHIP; / ** < kg */
ADD_IMPORT extern const double U_ATOMIC_MASS_UNIT_KILOGRAM_RELATIONSHIP; / **< kg */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_1ST_HYPERPOLARIZABILITY; /**< C^3 m^3 J^-
→2 */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_1ST_HYPERPOLARIZABILITY; /**< C^3 m^3_
→J^-2 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_2ND_HYPERPOLARIZABILITY; /**< C^4 m^4 J^-
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_2ND_HYPERPOLARIZABILITY: /**< C^4 m^4_
→J^-3 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_ACTION; /**< J s */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_ACTION; /**< J s */
                                                                        (continues on next page)
```

```
ADD_IMPORT extern const double ATOMIC_UNIT_OF_CHARGE: /**< C */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_CHARGE; /**< C */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_CHARGE_DENSITY; /**< C m^-3 */
ADD IMPORT extern const double U ATOMIC UNIT OF CHARGE DENSITY: /**< C m^-3 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_CURRENT; /**< A */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_CURRENT; / ** < A */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_ELECTRIC_DIPOLE_MOM; /**< C m */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_ELECTRIC_DIPOLE_MOM; /**< C m */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_ELECTRIC_FIELD:/**< V m^-1 */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_ELECTRIC_FIELD; /**< V m^-1 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_ELECTRIC_FIELD_GRADIENT: /**< V m^-2 */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_ELECTRIC_FIELD_GRADIENT; /**< V m^-2 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_ELECTRIC_POLARIZABILITY; /**< C^2 m^2 J^-
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_ELECTRIC_POLARIZABILITY; /**< C^2 m^2_
→J^-1 */
ADD IMPORT extern const double ATOMIC UNIT OF ELECTRIC POTENTIAL: /**< V */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_ELECTRIC_POTENTIAL; /**< V */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_ELECTRIC_QUADRUPOLE_MOM; /**< C m^2 */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_ELECTRIC_QUADRUPOLE_MOM; /**< C m^2 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_ENERGY; /**< J */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_ENERGY; /**< J */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_FORCE; /**< N */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_FORCE: /**< N */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_LENGTH; /**< m */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_LENGTH; /**< m */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_MAG__DIPOLE_MOM: /**< J T^-1 */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_MAG__DIPOLE_MOM; /**< J T^-1 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_MAG__FLUX_DENSITY; / ** < T */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_MAG__FLUX_DENSITY; /**< T */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_MAGNETIZABILITY; /**< J T^-2 */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_MAGNETIZABILITY; /**< J T^-2 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_MASS; /**< kg */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_MASS; /**< kg */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_MOMENTUM; /**< kg m s^-1 */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_MOMENTUM; /**< kg m s^-1 */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_PERMITTIVITY; /**< F m^-1 */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_PERMITTIVITY; /**< F m^-1 */
                                                                        (continues on next page)
```

```
ADD_IMPORT extern const double ATOMIC_UNIT_OF_TIME; /**< s */
ADD_IMPORT extern const double U_ATOMIC_UNIT_OF_TIME; /**< s */
ADD_IMPORT extern const double ATOMIC_UNIT_OF_VELOCITY; /**< m s^-1 */
ADD IMPORT extern const double U ATOMIC UNIT OF VELOCITY: /**< m s^-1 */
ADD_IMPORT extern const double AVOGADRO_CONSTANT; /**< mol^-1 */
ADD_IMPORT extern const double U_AVOGADRO_CONSTANT; /**< mo1^-1 */
ADD_IMPORT extern const double BOHR_MAGNETON; /**< J T^-1 */
ADD_IMPORT extern const double U_BOHR_MAGNETON; /**< J T^-1 */
ADD_IMPORT extern const double BOHR_MAGNETON_IN_EV_T: /**< eV T^-1 */
ADD_IMPORT extern const double U_BOHR_MAGNETON_IN_EV_T; /**< eV T^-1 */
ADD_IMPORT extern const double BOHR_MAGNETON_IN_HZ_T; /**< Hz T^-1 */
ADD_IMPORT extern const double U_BOHR_MAGNETON_IN_HZ_T; /**< Hz T^-1 */
ADD_IMPORT extern const double BOHR_MAGNETON_IN_INVERSE_METER_PER_TESLA; /**< m^-1 T^-
ADD_IMPORT extern const double U_BOHR_MAGNETON_IN_INVERSE_METER_PER_TESLA; /**< m^-1 T^
-1 */
ADD IMPORT extern const double BOHR MAGNETON IN K T: /**< K T^-1 */
ADD_IMPORT extern const double U_BOHR_MAGNETON_IN_K_T; /**< K T^-1 */
ADD_IMPORT extern const double BOHR_RADIUS; /**< m */
ADD_IMPORT extern const double U_BOHR_RADIUS; /**< m */
ADD_IMPORT extern const double BOLTZMANN_CONSTANT; /**< J K^-1 */
ADD_IMPORT extern const double U_BOLTZMANN_CONSTANT; /**< J K^-1 */
ADD_IMPORT extern const double BOLTZMANN_CONSTANT_IN_EV_K; /**< eV K^-1 */
ADD_IMPORT extern const double U_BOLTZMANN_CONSTANT_IN_EV_K; /**< eV K^-1 */
ADD_IMPORT extern const double BOLTZMANN_CONSTANT_IN_HZ_K; /**< Hz K^-1 */
ADD_IMPORT extern const double U_BOLTZMANN_CONSTANT_IN_HZ_K; /**< Hz K^-1 */
ADD_IMPORT extern const double BOLTZMANN_CONSTANT_IN_INVERSE_METER_PER_KELVIN: /**< m^-
\hookrightarrow 1 K^{\wedge}-1 */
ADD_IMPORT extern const double U_BOLTZMANN_CONSTANT_IN_INVERSE_METER_PER_KELVIN; /**<__
\rightarrow m^{\wedge} - 1 \quad K^{\wedge} - 1 \quad */
ADD_IMPORT extern const double CHARACTERISTIC_IMPEDANCE_OF_VACUUM; /**< ohm */
ADD_IMPORT extern const double U_CHARACTERISTIC_IMPEDANCE_OF_VACUUM; /**< ohm */
ADD IMPORT extern const double CLASSICAL ELECTRON RADIUS: /**< m */
ADD_IMPORT extern const double U_CLASSICAL_ELECTRON_RADIUS; /**< m */
ADD_IMPORT extern const double COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double CONDUCTANCE_QUANTUM; /**< S */
ADD_IMPORT extern const double U_CONDUCTANCE_QUANTUM; /**< S */
```

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```
ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_AMPERE_90; /**< A */
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_AMPERE_90; /**< A */
ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_COULOMB_90; /**< C */
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_COULOMB_90; /**< C */
ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_FARAD_90; /**< F */
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_FARAD_90; /**< F */
ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_HENRY_90; /**< H */
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_HENRY_90; /**< H */
ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_JOSEPHSON_CONSTANT; /**< Hz V^-1_
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_JOSEPHSON_CONSTANT; /**< Hz V^-

→ 1 */

ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_OHM_90; /**< ohm */
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_OHM_90; /**< ohm */
ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_VOLT_90; /**< V */
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_VOLT_90; /**< V */
ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_VON_KLITZING_CONSTANT; /**< ohm */
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_VON_KLITZING_CONSTANT; /**< ohm_
→ */
ADD_IMPORT extern const double CONVENTIONAL_VALUE_OF_WATT_90; /**< W */
ADD_IMPORT extern const double U_CONVENTIONAL_VALUE_OF_WATT_90; /**< W */
ADD_IMPORT extern const double COPPER_X_UNIT; /**< m */
ADD_IMPORT extern const double U_COPPER_X_UNIT; /**< m */
ADD_IMPORT extern const double DEUTERON_ELECTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_DEUTERON_ELECTRON_MAG__MOM__RATIO: /**<
ADD_IMPORT extern const double DEUTERON_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_DEUTERON_ELECTRON_MASS_RATIO:/**<
ADD_IMPORT extern const double DEUTERON_G_FACTOR: /**< */
ADD_IMPORT extern const double U_DEUTERON_G_FACTOR; /**<
ADD_IMPORT extern const double DEUTERON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double U_DEUTERON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double DEUTERON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_DEUTERON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double DEUTERON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_DEUTERON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**< __
→ */
ADD_IMPORT extern const double DEUTERON_MASS; /**< kg */
ADD_IMPORT extern const double U_DEUTERON_MASS; /**< kg */
ADD_IMPORT extern const double DEUTERON_MASS_ENERGY_EQUIVALENT; /**< J */
                                                                        (continues on next page)
```

```
ADD_IMPORT extern const double U_DEUTERON_MASS_ENERGY_EQUIVALENT: /**< J */
ADD_IMPORT extern const double DEUTERON_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD_IMPORT extern const double U_DEUTERON_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD IMPORT extern const double DEUTERON MASS IN U: /**< u */
ADD_IMPORT extern const double U_DEUTERON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double DEUTERON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double U_DEUTERON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double DEUTERON_NEUTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_DEUTERON_NEUTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double DEUTERON_PROTON_MAG__MOM__RATIO; /**< */
ADD_IMPORT extern const double U_DEUTERON_PROTON_MAG__MOM__RATIO:/**<
ADD_IMPORT extern const double DEUTERON_PROTON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_DEUTERON_PROTON_MASS_RATIO; /**< */
ADD_IMPORT extern const double DEUTERON_RELATIVE_ATOMIC_MASS: /**<
ADD_IMPORT extern const double U_DEUTERON_RELATIVE_ATOMIC_MASS; /**<
ADD_IMPORT extern const double DEUTERON_RMS_CHARGE_RADIUS; /**< m */
ADD IMPORT extern const double U DEUTERON RMS CHARGE RADIUS: /**< m */
ADD_IMPORT extern const double ELECTRON_CHARGE_TO_MASS_QUOTIENT; /**< C kg^-1 */
ADD_IMPORT extern const double U_ELECTRON_CHARGE_TO_MASS_QUOTIENT; /**< C kg^-1 */
ADD_IMPORT extern const double ELECTRON_DEUTERON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_ELECTRON_DEUTERON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double ELECTRON_DEUTERON_MASS_RATIO: /**<
ADD_IMPORT extern const double U_ELECTRON_DEUTERON_MASS_RATIO; /**< */
ADD_IMPORT extern const double ELECTRON_G_FACTOR; /**<
ADD_IMPORT extern const double U_ELECTRON_G_FACTOR; /**< */
ADD_IMPORT extern const double ELECTRON_GYROMAG__RATIO; /**< s^-1 T^-1 */
ADD_IMPORT extern const double U_ELECTRON_GYROMAG__RATIO: /**< s^-1 T^-1 */
ADD_IMPORT extern const double ELECTRON_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-1 */
ADD_IMPORT extern const double U_ELECTRON_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-1 */
ADD_IMPORT extern const double ELECTRON_HELION_MASS_RATIO; /**<
ADD_IMPORT extern const double U_ELECTRON_HELION_MASS_RATIO; /**< */
ADD IMPORT extern const double ELECTRON MAG MOM: /**< J T^-1 */
ADD_IMPORT extern const double U_ELECTRON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double ELECTRON_MAG__MOM__ANOMALY; /**<
ADD_IMPORT extern const double U_ELECTRON_MAG_MOM_ANOMALY; /**<
ADD_IMPORT extern const double ELECTRON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_ELECTRON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**<
```

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```
ADD_IMPORT extern const double ELECTRON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double U_ELECTRON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**< _
~ */
ADD_IMPORT extern const double ELECTRON_MASS; /**< kg */
ADD_IMPORT extern const double U_ELECTRON_MASS: /**< kg */
ADD_IMPORT extern const double ELECTRON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double U_ELECTRON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double ELECTRON_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD_IMPORT extern const double U_ELECTRON_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD_IMPORT extern const double ELECTRON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double U_ELECTRON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double ELECTRON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double U_ELECTRON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double ELECTRON_MUON_MAG__MOM__RATIO; /**< */
ADD_IMPORT extern const double U_ELECTRON_MUON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double ELECTRON_MUON_MASS_RATIO; /**<
ADD_IMPORT extern const double U_ELECTRON_MUON_MASS_RATIO; /**< */
ADD_IMPORT extern const double ELECTRON_NEUTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_ELECTRON_NEUTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double ELECTRON_NEUTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_ELECTRON_NEUTRON_MASS_RATIO; /**<
ADD_IMPORT extern const double ELECTRON_PROTON_MAG__MOM__RATIO; /**< */
ADD_IMPORT extern const double U_ELECTRON_PROTON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double ELECTRON_PROTON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_ELECTRON_PROTON_MASS_RATIO: /**<
ADD_IMPORT extern const double ELECTRON_RELATIVE_ATOMIC_MASS;/**<
ADD_IMPORT extern const double U_ELECTRON_RELATIVE_ATOMIC_MASS; /**<
ADD_IMPORT extern const double ELECTRON_TAU_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_ELECTRON_TAU_MASS_RATIO; /**< */
ADD_IMPORT extern const double ELECTRON_TO_ALPHA_PARTICLE_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_ELECTRON_TO_ALPHA_PARTICLE_MASS_RATIO; /**<
ADD_IMPORT extern const double ELECTRON_TO_SHIELDED_HELION_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_ELECTRON_TO_SHIELDED_HELION_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double ELECTRON_TO_SHIELDED_PROTON_MAG__MOM__RATIO; /**< */
ADD_IMPORT extern const double U_ELECTRON_TO_SHIELDED_PROTON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double ELECTRON_TRITON_MASS_RATIO; /**<
ADD_IMPORT extern const double U_ELECTRON_TRITON_MASS_RATIO; /**< */
ADD_IMPORT extern const double ELECTRON_VOLT; /**< J */
                                                                       (continues on next page)
```

```
ADD_IMPORT extern const double U_ELECTRON_VOLT; /**< J */
ADD_IMPORT extern const double ELECTRON_VOLT_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double U_ELECTRON_VOLT_ATOMIC_MASS_UNIT_RELATIONSHIP: /**< u */
ADD_IMPORT extern const double ELECTRON_VOLT_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double U_ELECTRON_VOLT_HARTREE_RELATIONSHIP: /**< E_h */
ADD_IMPORT extern const double ELECTRON_VOLT_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double U_ELECTRON_VOLT_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double ELECTRON_VOLT_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double U_ELECTRON_VOLT_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double ELECTRON_VOLT_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double U_ELECTRON_VOLT_JOULE_RELATIONSHIP: /**< J */
ADD_IMPORT extern const double ELECTRON_VOLT_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double U_ELECTRON_VOLT_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double ELECTRON_VOLT_KILOGRAM_RELATIONSHIP: /**< kg */
ADD_IMPORT extern const double U_ELECTRON_VOLT_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double ELEMENTARY_CHARGE; /**< C */
ADD IMPORT extern const double U ELEMENTARY CHARGE: /**< C */
ADD_IMPORT extern const double ELEMENTARY_CHARGE_OVER_H_BAR; /**< A J^-1 */
ADD_IMPORT extern const double U_ELEMENTARY_CHARGE_OVER_H_BAR; /**< A J^-1 */
ADD_IMPORT extern const double FARADAY_CONSTANT; /**< C mol^-1 */
ADD_IMPORT extern const double U_FARADAY_CONSTANT; /**< C mol^-1 */
ADD_IMPORT extern const double FERMI_COUPLING_CONSTANT; /**< GeV^-2 */
ADD_IMPORT extern const double U_FERMI_COUPLING_CONSTANT; /**< GeV^-2 */
ADD_IMPORT extern const double FINE_STRUCTURE_CONSTANT; /**<
ADD_IMPORT extern const double U_FINE_STRUCTURE_CONSTANT; /**< */
ADD_IMPORT extern const double FIRST_RADIATION_CONSTANT: / ** < W m^2 */
ADD_IMPORT extern const double U_FIRST_RADIATION_CONSTANT: /**< W m^2 */
ADD_IMPORT extern const double FIRST_RADIATION_CONSTANT_FOR_SPECTRAL_RADIANCE; /**< W_
→m^2 sr^-1 */
ADD_IMPORT extern const double U_FIRST_RADIATION_CONSTANT_FOR_SPECTRAL_RADIANCE; /**<_
→W m^2 sr^-1 */
ADD_IMPORT extern const double HARTREE_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double U_HARTREE_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double HARTREE_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double U_HARTREE_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double HARTREE_ENERGY; /**< J */
ADD_IMPORT extern const double U_HARTREE_ENERGY; /**< J */
ADD_IMPORT extern const double HARTREE_ENERGY_IN_EV; /**< eV */
```

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```
ADD_IMPORT extern const double U_HARTREE_ENERGY_IN_EV; /**< eV */
ADD_IMPORT extern const double HARTREE_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double U_HARTREE_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double HARTREE_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double U_HARTREE_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double HARTREE_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double U_HARTREE_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double HARTREE_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double U_HARTREE_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double HARTREE_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double U_HARTREE_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double HELION_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_HELION_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double HELION_G_FACTOR; /**<
ADD_IMPORT extern const double U_HELION_G_FACTOR; /**< */
ADD_IMPORT extern const double HELION_MAG__MOM; /**< J T^-1 */
ADD IMPORT extern const double U HELION MAG MOM: /**< J T^-1 */
ADD_IMPORT extern const double HELION_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_HELION_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double HELION_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; / **< */
ADD_IMPORT extern const double U_HELION_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double HELION_MASS; /**< kg */
ADD_IMPORT extern const double U_HELION_MASS; /**< kg */
ADD_IMPORT extern const double HELION_MASS_ENERGY_EQUIVALENT: /**< J */
ADD_IMPORT extern const double U_HELION_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double HELION_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD_IMPORT extern const double U_HELION_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD_IMPORT extern const double HELION_MASS_IN_U; /**< u */
ADD_IMPORT extern const double U_HELION_MASS_IN_U; /**< u */
ADD_IMPORT extern const double HELION_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double U_HELION_MOLAR_MASS; /**< kg mol^-1 */
ADD IMPORT extern const double HELION PROTON MASS RATIO: /**< */
ADD_IMPORT extern const double U_HELION_PROTON_MASS_RATIO; /**< */
ADD_IMPORT extern const double HELION_RELATIVE_ATOMIC_MASS;/**<
ADD_IMPORT extern const double U_HELION_RELATIVE_ATOMIC_MASS:/**<
ADD_IMPORT extern const double HELION_SHIELDING_SHIFT; /**< */
ADD_IMPORT extern const double U_HELION_SHIELDING_SHIFT; /**<
```

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```
ADD_IMPORT extern const double HERTZ_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double U_HERTZ_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double HERTZ_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double U_HERTZ_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double HERTZ_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double U_HERTZ_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double HERTZ_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double U_HERTZ_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double HERTZ_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double U_HERTZ_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double HERTZ_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double U_HERTZ_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double HERTZ_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double U_HERTZ_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double HYPERFINE_TRANSITION_FREQUENCY_OF_CS_133;/**< Hz */
ADD_IMPORT extern const double U_HYPERFINE_TRANSITION_FREQUENCY_OF_CS_133; /**< Hz */
ADD IMPORT extern const double INVERSE FINE STRUCTURE CONSTANT: /**< */
ADD_IMPORT extern const double U_INVERSE_FINE_STRUCTURE_CONSTANT; /**<
ADD_IMPORT extern const double INVERSE_METER_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double U_INVERSE_METER_ATOMIC_MASS_UNIT_RELATIONSHIP: /**< u */
ADD_IMPORT extern const double INVERSE_METER_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double U_INVERSE_METER_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double INVERSE_METER_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double U_INVERSE_METER_HARTREE_RELATIONSHIP: /**< E_h */
ADD_IMPORT extern const double INVERSE_METER_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double U_INVERSE_METER_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double INVERSE_METER_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double U_INVERSE_METER_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double INVERSE_METER_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double U_INVERSE_METER_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double INVERSE_METER_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double U_INVERSE_METER_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double INVERSE_OF_CONDUCTANCE_QUANTUM; /**< ohm */
ADD_IMPORT extern const double U_INVERSE_OF_CONDUCTANCE_QUANTUM; /**< ohm */
ADD_IMPORT extern const double JOSEPHSON_CONSTANT; /**< Hz V^-1 */
ADD_IMPORT extern const double U_JOSEPHSON_CONSTANT; /**< Hz V^-1 */
ADD_IMPORT extern const double JOULE_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double U_JOULE_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
```

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```
ADD_IMPORT extern const double JOULE_ELECTRON_VOLT_RELATIONSHIP: /**< eV */
ADD_IMPORT extern const double U_JOULE_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double JOULE_HARTREE_RELATIONSHIP; /**< E_h */
ADD IMPORT extern const double U JOULE HARTREE RELATIONSHIP: /**< E h */
ADD_IMPORT extern const double JOULE_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double U_JOULE_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double JOULE_INVERSE_METER_RELATIONSHIP; / **< m^-1 */
ADD_IMPORT extern const double U_JOULE_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double JOULE_KELVIN_RELATIONSHIP: /**< K */
ADD_IMPORT extern const double U_JOULE_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double JOULE_KILOGRAM_RELATIONSHIP: /**< kg */
ADD_IMPORT extern const double U_JOULE_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double KELVIN_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double U_KELVIN_ATOMIC_MASS_UNIT_RELATIONSHIP: /**< u */
ADD_IMPORT extern const double KELVIN_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double U_KELVIN_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double KELVIN_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double U_KELVIN_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double KELVIN_HERTZ_RELATIONSHIP: /**< Hz */
ADD_IMPORT extern const double U_KELVIN_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double KELVIN_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double U_KELVIN_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double KELVIN_JOULE_RELATIONSHIP: /**< J */
ADD_IMPORT extern const double U_KELVIN_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double KELVIN_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double U_KELVIN_KILOGRAM_RELATIONSHIP; /**< kg */
ADD_IMPORT extern const double KILOGRAM_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double U_KILOGRAM_ATOMIC_MASS_UNIT_RELATIONSHIP; /**< u */
ADD_IMPORT extern const double KILOGRAM_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double U_KILOGRAM_ELECTRON_VOLT_RELATIONSHIP; /**< eV */
ADD_IMPORT extern const double KILOGRAM_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double U_KILOGRAM_HARTREE_RELATIONSHIP; /**< E_h */
ADD_IMPORT extern const double KILOGRAM_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double U_KILOGRAM_HERTZ_RELATIONSHIP; /**< Hz */
ADD_IMPORT extern const double KILOGRAM_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double U_KILOGRAM_INVERSE_METER_RELATIONSHIP; /**< m^-1 */
ADD_IMPORT extern const double KILOGRAM_JOULE_RELATIONSHIP; /**< J */
                                                                        (continues on next page)
```

```
ADD_IMPORT extern const double U_KILOGRAM_JOULE_RELATIONSHIP; /**< J */
ADD_IMPORT extern const double KILOGRAM_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double U_KILOGRAM_KELVIN_RELATIONSHIP; /**< K */
ADD_IMPORT extern const double LATTICE_PARAMETER_OF_SILICON; /**< m */
ADD_IMPORT extern const double U_LATTICE_PARAMETER_OF_SILICON; /**< m */
ADD_IMPORT extern const double LATTICE_SPACING_OF_IDEAL_SI__220; /**< m */
ADD_IMPORT extern const double U_LATTICE_SPACING_OF_IDEAL_SI__220; /**< m */
ADD_IMPORT extern const double LOSCHMIDT_CONSTANT__273_15_K__100_KPA; /**< m^-3 */
ADD_IMPORT extern const double U_LOSCHMIDT_CONSTANT__273_15_K__100_KPA; /**< m^-3 */
ADD_IMPORT extern const double LOSCHMIDT_CONSTANT__273_15_K__101_325_KPA; /**< m^-3 */
ADD_IMPORT extern const double U_LOSCHMIDT_CONSTANT__273_15_K__101_325_KPA; /**< m^-3_
ADD_IMPORT extern const double LUMINOUS_EFFICACY; /**< 1m W^-1 */
ADD_IMPORT extern const double U_LUMINOUS_EFFICACY; /**< lm W^-1 */
ADD_IMPORT extern const double MAG__FLUX_QUANTUM; /**< Wb */
ADD_IMPORT extern const double U_MAG__FLUX_QUANTUM; /**< Wb */
ADD IMPORT extern const double MOLAR GAS CONSTANT: /**< J mol^-1 K^-1 */
ADD_IMPORT extern const double U_MOLAR_GAS_CONSTANT; /**< J mol^-1 K^-1 */
ADD_IMPORT extern const double MOLAR_MASS_CONSTANT; /**< kg mol^-1 */
ADD_IMPORT extern const double U_MOLAR_MASS_CONSTANT; /**< kg mol^-1 */
ADD_IMPORT extern const double MOLAR_MASS_OF_CARBON_12; /**< kg mol^-1 */
ADD_IMPORT extern const double U_MOLAR_MASS_OF_CARBON_12; /**< kg mol^-1 */
ADD_IMPORT extern const double MOLAR_PLANCK_CONSTANT; /**< J Hz^-1 mol^-1 */
ADD_IMPORT extern const double U_MOLAR_PLANCK_CONSTANT; /**< J Hz^-1 mol^-1 */
ADD_IMPORT extern const double MOLAR_VOLUME_OF_IDEAL_GAS__273_15_K__100_KPA; /**< m^3_
→mo1^-1 */
ADD_IMPORT extern const double U_MOLAR_VOLUME_OF_IDEAL_GAS__273_15_K__100_KPA; /**< m^
\rightarrow 3 \text{ mol}^{-1} */
ADD_IMPORT extern const double MOLAR_VOLUME_OF_IDEAL_GAS__273_15_K__101_325_KPA;/**<_
→m^3 mol^-1 */
ADD_IMPORT extern const double U_MOLAR_VOLUME_OF_IDEAL_GAS__273_15_K__101_325_KPA; /**
\hookrightarrow < m^3 mol^-1 */
ADD_IMPORT extern const double MOLAR_VOLUME_OF_SILICON; /**< m^3 mol^-1 */
ADD_IMPORT extern const double U_MOLAR_VOLUME_OF_SILICON; /**< m^3 mol^-1 */
ADD_IMPORT extern const double MOLYBDENUM_X_UNIT; /**< m */
ADD_IMPORT extern const double U_MOLYBDENUM_X_UNIT; /**< m */
ADD_IMPORT extern const double MUON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_MUON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double MUON_ELECTRON_MASS_RATIO; /**< */
```

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```
ADD_IMPORT extern const double U_MUON_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double MUON_G_FACTOR; /**<
ADD_IMPORT extern const double U_MUON_G_FACTOR; /**< */
ADD IMPORT extern const double MUON MAG MOM: /**< J T^-1 */
ADD_IMPORT extern const double U_MUON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double MUON_MAG__MOM_ANOMALY; /**< */
ADD_IMPORT extern const double U_MUON_MAG__MOM__ANOMALY; /**<
ADD_IMPORT extern const double MUON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_MUON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double MUON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_MUON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double MUON_MASS; /**< kg */
ADD_IMPORT extern const double U_MUON_MASS; /**< kg */
ADD_IMPORT extern const double MUON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double U_MUON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double MUON_MASS_ENERGY_EQUIVALENT_IN_MEV: /**< MeV */
ADD_IMPORT extern const double U_MUON_MASS_ENERGY_EQUIVALENT_IN_MEV: /**< MeV */
ADD_IMPORT extern const double MUON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double U_MUON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double MUON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double U_MUON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double MUON_NEUTRON_MASS_RATIO: /**< */
ADD_IMPORT extern const double U_MUON_NEUTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double MUON_PROTON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_MUON_PROTON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double MUON_PROTON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_MUON_PROTON_MASS_RATIO; /**<
ADD_IMPORT extern const double MUON_TAU_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_MUON_TAU_MASS_RATIO; /**<
ADD_IMPORT extern const double NATURAL_UNIT_OF_ACTION; /**< J s */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_ACTION; /**< J s */
ADD IMPORT extern const double NATURAL UNIT OF ACTION IN EV S: /**< eV s */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_ACTION_IN_EV_S; /**< eV s */
ADD_IMPORT extern const double NATURAL_UNIT_OF_ENERGY; /**< J */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_ENERGY: /**< J */
ADD_IMPORT extern const double NATURAL_UNIT_OF_ENERGY_IN_MEV; /**< MeV */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_ENERGY_IN_MEV; /**< MeV */
```

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```
ADD_IMPORT extern const double NATURAL_UNIT_OF_LENGTH; /**< m */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_LENGTH; /**< m */
ADD_IMPORT extern const double NATURAL_UNIT_OF_MASS; /**< kg */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_MASS; /**< kg */
ADD_IMPORT extern const double NATURAL_UNIT_OF_MOMENTUM; /**< kg m s^-1 */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_MOMENTUM; /**< kg m s^-1 */
ADD_IMPORT extern const double NATURAL_UNIT_OF_MOMENTUM_IN_MEV_C; /**< MeV/c */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_MOMENTUM_IN_MEV_C; /**< MeV/c */
ADD_IMPORT extern const double NATURAL_UNIT_OF_TIME; /**< s */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_TIME: /**< s */
ADD_IMPORT extern const double NATURAL_UNIT_OF_VELOCITY; /**< m s^-1 */
ADD_IMPORT extern const double U_NATURAL_UNIT_OF_VELOCITY; /**< m s^-1 */
ADD_IMPORT extern const double NEUTRON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_NEUTRON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double NEUTRON_ELECTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_NEUTRON_ELECTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double NEUTRON_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_NEUTRON_ELECTRON_MASS_RATIO; /**<
ADD_IMPORT extern const double NEUTRON_G_FACTOR; /**< */
ADD_IMPORT extern const double U_NEUTRON_G_FACTOR; /**<
ADD_IMPORT extern const double NEUTRON_GYROMAG__RATIO; /**< s^-1 T^-1 */
ADD_IMPORT extern const double U_NEUTRON_GYROMAG__RATIO; /**< s^-1 T^-1 */
ADD_IMPORT extern const double NEUTRON_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-1 */
ADD_IMPORT extern const double U_NEUTRON_GYROMAG__RATIO_IN_MHZ_T: /**< MHz T^-1 */
ADD_IMPORT extern const double NEUTRON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double U_NEUTRON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double NEUTRON_MAG__MOM__TO_BOHR_MAGNETON_RATIO: /**< */
ADD_IMPORT extern const double U_NEUTRON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double NEUTRON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_NEUTRON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double NEUTRON_MASS; /**< kg */
ADD_IMPORT extern const double U_NEUTRON_MASS; /**< kg */
ADD_IMPORT extern const double NEUTRON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double U_NEUTRON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double NEUTRON_MASS_ENERGY_EQUIVALENT_IN_MEV: /**< MeV */
ADD_IMPORT extern const double U_NEUTRON_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD_IMPORT extern const double NEUTRON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double U_NEUTRON_MASS_IN_U; /**< u */
                                                                        (continues on next page)
```

```
ADD_IMPORT extern const double NEUTRON_MOLAR_MASS: /**< kg mol^-1 */
ADD_IMPORT extern const double U_NEUTRON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double NEUTRON_MUON_MASS_RATIO; /**< */
ADD IMPORT extern const double U NEUTRON MUON MASS RATIO: /**<
ADD_IMPORT extern const double NEUTRON_PROTON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_NEUTRON_PROTON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double NEUTRON_PROTON_MASS_DIFFERENCE; / ** < kg */
ADD_IMPORT extern const double U_NEUTRON_PROTON_MASS_DIFFERENCE; /**< kg */
ADD_IMPORT extern const double NEUTRON_PROTON_MASS_DIFFERENCE_ENERGY_EQUIVALENT; /**<_
→J */
ADD_IMPORT extern const double U_NEUTRON_PROTON_MASS_DIFFERENCE_ENERGY_EQUIVALENT: /**
ADD_IMPORT extern const double NEUTRON_PROTON_MASS_DIFFERENCE_ENERGY_EQUIVALENT_IN_
→MEV:/**< MeV */
ADD_IMPORT extern const double U_NEUTRON_PROTON_MASS_DIFFERENCE_ENERGY_EQUIVALENT_IN_
→MEV; /**< MeV */
ADD_IMPORT extern const double NEUTRON_PROTON_MASS_DIFFERENCE_IN_U; /**< u */
ADD IMPORT extern const double U NEUTRON PROTON MASS DIFFERENCE IN U: /**< u */
ADD_IMPORT extern const double NEUTRON_PROTON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_NEUTRON_PROTON_MASS_RATIO; /**<
ADD_IMPORT extern const double NEUTRON_RELATIVE_ATOMIC_MASS; /**<
ADD_IMPORT extern const double U_NEUTRON_RELATIVE_ATOMIC_MASS; /**<
ADD_IMPORT extern const double NEUTRON_TAU_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_NEUTRON_TAU_MASS_RATIO; /**< */
ADD_IMPORT extern const double NEUTRON_TO_SHIELDED_PROTON_MAG__MOM__RATIO:/**<
ADD_IMPORT extern const double U_NEUTRON_TO_SHIELDED_PROTON_MAG__MOM__RATIO: /**<
ADD_IMPORT extern const double NEWTONIAN_CONSTANT_OF_GRAVITATION; /**< m^3 kg^-1 s^-2_
ADD_IMPORT extern const double U_NEWTONIAN_CONSTANT_OF_GRAVITATION; /**< m^3 kg^-1 s^-
→2 */
ADD_IMPORT extern const double NEWTONIAN_CONSTANT_OF_GRAVITATION_OVER_H_BAR_C; /**<_
\hookrightarrow (GeV/c^2)^-2 */
ADD_IMPORT extern const double U_NEWTONIAN_CONSTANT_OF_GRAVITATION_OVER_H_BAR_C; /**<_
\hookrightarrow (GeV/c^2)^-2 */
ADD_IMPORT extern const double NUCLEAR_MAGNETON; /**< J T^-1 */
ADD_IMPORT extern const double U_NUCLEAR_MAGNETON; /**< J T^-1 */
ADD_IMPORT extern const double NUCLEAR_MAGNETON_IN_EV_T; /**< eV T^-1 */
ADD_IMPORT extern const double U_NUCLEAR_MAGNETON_IN_EV_T; /**< eV T^-1 */
ADD_IMPORT extern const double NUCLEAR_MAGNETON_IN_INVERSE_METER_PER_TESLA; /**< m^-1_
\hookrightarrow T^{\wedge} - 1 */
```

(continues on next page)

```
ADD_IMPORT extern const double U_NUCLEAR_MAGNETON_IN_INVERSE_METER_PER_TESLA; / **< m^-
ADD_IMPORT extern const double NUCLEAR_MAGNETON_IN_K_T; /**< K T^-1 */
ADD_IMPORT extern const double U_NUCLEAR_MAGNETON_IN_K_T; /**< K T^-1 */
ADD_IMPORT extern const double NUCLEAR_MAGNETON_IN_MHZ_T; /**< MHz T^-1 */
ADD_IMPORT extern const double U_NUCLEAR_MAGNETON_IN_MHZ_T; /**< MHz T^-1 */
ADD_IMPORT extern const double PLANCK_CONSTANT; /**< J Hz^-1 */
ADD_IMPORT extern const double U_PLANCK_CONSTANT; /**< J Hz^-1 */
ADD_IMPORT extern const double PLANCK_CONSTANT_IN_EV_HZ; /**< eV Hz^-1 */
ADD_IMPORT extern const double U_PLANCK_CONSTANT_IN_EV_HZ: /**< eV Hz^-1 */
ADD_IMPORT extern const double PLANCK_LENGTH; /**< m */
ADD_IMPORT extern const double U_PLANCK_LENGTH; /**< m */
ADD_IMPORT extern const double PLANCK_MASS; /**< kg */
ADD_IMPORT extern const double U_PLANCK_MASS; /**< kg */
ADD_IMPORT extern const double PLANCK_MASS_ENERGY_EQUIVALENT_IN_GEV; /**< GeV */
ADD_IMPORT extern const double U_PLANCK_MASS_ENERGY_EQUIVALENT_IN_GEV; /**< GeV */
ADD IMPORT extern const double PLANCK TEMPERATURE: /**< K */
ADD_IMPORT extern const double U_PLANCK_TEMPERATURE; /**< K */
ADD_IMPORT extern const double PLANCK_TIME; /**< s */
ADD_IMPORT extern const double U_PLANCK_TIME; /**< s */
ADD_IMPORT extern const double PROTON_CHARGE_TO_MASS_QUOTIENT; /**< C kg^-1 */
ADD_IMPORT extern const double U_PROTON_CHARGE_TO_MASS_QUOTIENT; /**< C kg^-1 */
ADD_IMPORT extern const double PROTON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_PROTON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double PROTON_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_PROTON_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double PROTON_G_FACTOR; /**< */
ADD_IMPORT extern const double U_PROTON_G_FACTOR; /**<
ADD_IMPORT extern const double PROTON_GYROMAG__RATIO; /**< s^-1 T^-1 */
ADD_IMPORT extern const double U_PROTON_GYROMAG__RATIO; /**< s^-1 T^-1 */
ADD_IMPORT extern const double PROTON_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-1 */
ADD_IMPORT extern const double U_PROTON_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-1 */
ADD_IMPORT extern const double PROTON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double U_PROTON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double PROTON_MAG__MOM__TO_BOHR_MAGNETON_RATIO: /**< */
ADD_IMPORT extern const double U_PROTON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double PROTON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_PROTON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**<
                                                                        (continues on next page)
```

```
ADD_IMPORT extern const double PROTON_MAG__SHIELDING_CORRECTION: / **<
ADD_IMPORT extern const double U_PROTON_MAG__SHIELDING_CORRECTION; /**< */
ADD_IMPORT extern const double PROTON_MASS; /**< kg */
ADD IMPORT extern const double U PROTON MASS: /**< kg */
ADD_IMPORT extern const double PROTON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double U_PROTON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double PROTON_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD_IMPORT extern const double U_PROTON_MASS_ENERGY_EQUIVALENT_IN_MEV; /**< MeV */
ADD_IMPORT extern const double PROTON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double U_PROTON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double PROTON_MOLAR_MASS: /**< kg mol^-1 */
ADD_IMPORT extern const double U_PROTON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double PROTON_MUON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_PROTON_MUON_MASS_RATIO; /**<
ADD_IMPORT extern const double PROTON_NEUTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double U_PROTON_NEUTRON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double PROTON_NEUTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_PROTON_NEUTRON_MASS_RATIO; /**<
ADD_IMPORT extern const double PROTON_RELATIVE_ATOMIC_MASS; /**<
ADD_IMPORT extern const double U_PROTON_RELATIVE_ATOMIC_MASS;/**<
ADD_IMPORT extern const double PROTON_RMS_CHARGE_RADIUS; /**< m */
ADD_IMPORT extern const double U_PROTON_RMS_CHARGE_RADIUS; /**< m */
ADD_IMPORT extern const double PROTON_TAU_MASS_RATIO: /**< */
ADD_IMPORT extern const double U_PROTON_TAU_MASS_RATIO; /**<
ADD_IMPORT extern const double QUANTUM_OF_CIRCULATION; /**< m^2 s^-1 */
ADD_IMPORT extern const double U_QUANTUM_OF_CIRCULATION; /**< m^2 s^-1 */
ADD_IMPORT extern const double QUANTUM_OF_CIRCULATION_TIMES_2; /**< m^2 s^-1 */
ADD_IMPORT extern const double U_QUANTUM_OF_CIRCULATION_TIMES_2; /**< m^2 s^-1 */
ADD_IMPORT extern const double REDUCED_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_REDUCED_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double REDUCED_MUON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_REDUCED_MUON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double REDUCED_NEUTRON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_REDUCED_NEUTRON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double REDUCED_PLANCK_CONSTANT; /**< J s */
ADD_IMPORT extern const double U_REDUCED_PLANCK_CONSTANT; /**< J s */
ADD_IMPORT extern const double REDUCED_PLANCK_CONSTANT_IN_EV_S; /**< eV s */
```

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```
ADD_IMPORT extern const double U_REDUCED_PLANCK_CONSTANT_IN_EV_S; /**< eV s */
ADD_IMPORT extern const double REDUCED_PLANCK_CONSTANT_TIMES_C_IN_MEV_FM; /**< MeV fm_
ADD_IMPORT extern const double U_REDUCED_PLANCK_CONSTANT_TIMES_C_IN_MEV_FM: /**< MeV_
ADD_IMPORT extern const double REDUCED_PROTON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_REDUCED_PROTON_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double REDUCED_TAU_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_REDUCED_TAU_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double RYDBERG_CONSTANT; /**< m^-1 */
ADD_IMPORT extern const double U_RYDBERG_CONSTANT; /**< m^-1 */
ADD_IMPORT extern const double RYDBERG_CONSTANT_TIMES_C_IN_HZ:/**< Hz */
ADD_IMPORT extern const double U_RYDBERG_CONSTANT_TIMES_C_IN_HZ; /**< Hz */
ADD_IMPORT extern const double RYDBERG_CONSTANT_TIMES_HC_IN_EV; /**< eV */
ADD_IMPORT extern const double U_RYDBERG_CONSTANT_TIMES_HC_IN_EV: /**< eV */
ADD_IMPORT extern const double RYDBERG_CONSTANT_TIMES_HC_IN_J;/**< J */
ADD_IMPORT extern const double U_RYDBERG_CONSTANT_TIMES_HC_IN_J; /**< J */
ADD_IMPORT extern const double SACKUR_TETRODE_CONSTANT__1_K__100_KPA; /**< */
ADD_IMPORT extern const double U_SACKUR_TETRODE_CONSTANT__1_K__100_KPA; /**<
ADD_IMPORT extern const double SACKUR_TETRODE_CONSTANT__1_K__101_325_KPA; /**<
ADD_IMPORT extern const double U_SACKUR_TETRODE_CONSTANT__1_K__101_325_KPA; /**<
ADD_IMPORT extern const double SECOND_RADIATION_CONSTANT; /**< m K */
ADD_IMPORT extern const double U_SECOND_RADIATION_CONSTANT; /**< m K */
ADD_IMPORT extern const double SHIELDED_HELION_GYROMAG__RATIO: /**< s^-1 T^-1 */
ADD_IMPORT extern const double U_SHIELDED_HELION_GYROMAG__RATIO: /**< s^-1 T^-1 */
ADD_IMPORT extern const double SHIELDED_HELION_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-1_
ADD_IMPORT extern const double U_SHIELDED_HELION_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-
→1 */
ADD_IMPORT extern const double SHIELDED_HELION_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double U_SHIELDED_HELION_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double SHIELDED_HELION_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**< __
→ */
ADD_IMPORT extern const double U_SHIELDED_HELION_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**
ADD_IMPORT extern const double SHIELDED_HELION_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**
ADD_IMPORT extern const double U_SHIELDED_HELION_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO;/
ADD_IMPORT extern const double SHIELDED_HELION_TO_PROTON_MAG__MOM__RATIO; / **<
                                                                        (continues on next page)
```

```
ADD_IMPORT extern const double U_SHIELDED_HELION_TO_PROTON_MAG__MOM__RATIO; /**< */
ADD_IMPORT extern const double SHIELDED_HELION_TO_SHIELDED_PROTON_MAG__MOM__RATIO; /**
→< */
ADD_IMPORT extern const double U_SHIELDED_HELION_TO_SHIELDED_PROTON_MAG__MOM__RATIO;/
** **/
ADD_IMPORT extern const double SHIELDED_PROTON_GYROMAG__RATIO; /**< s^-1 T^-1 */
ADD_IMPORT extern const double U_SHIELDED_PROTON_GYROMAG__RATIO; /**< s^-1 T^-1 */
ADD_IMPORT extern const double SHIELDED_PROTON_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-1_
ADD_IMPORT extern const double U_SHIELDED_PROTON_GYROMAG__RATIO_IN_MHZ_T; /**< MHz T^-

→ 1 */

ADD_IMPORT extern const double SHIELDED_PROTON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double U_SHIELDED_PROTON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double SHIELDED_PROTON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**< __
ADD_IMPORT extern const double U_SHIELDED_PROTON_MAG__MOM__TO_BOHR_MAGNETON_RATIO: /**
→< */
ADD_IMPORT extern const double SHIELDED_PROTON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**
ADD_IMPORT extern const double U_SHIELDED_PROTON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO;/
ADD_IMPORT extern const double SHIELDING_DIFFERENCE_OF_D_AND_P_IN_HD; /**<
ADD_IMPORT extern const double U_SHIELDING_DIFFERENCE_OF_D_AND_P_IN_HD; /**<
ADD_IMPORT extern const double SHIELDING_DIFFERENCE_OF_T_AND_P_IN_HT;/**<
ADD_IMPORT extern const double U_SHIELDING_DIFFERENCE_OF_T_AND_P_IN_HT;/**<
ADD_IMPORT extern const double SPEED_OF_LIGHT_IN_VACUUM; /**< m s^-1 */
ADD_IMPORT extern const double U_SPEED_OF_LIGHT_IN_VACUUM; /**< m s^-1 */
ADD_IMPORT extern const double STANDARD_ACCELERATION_OF_GRAVITY; /**< m s^-2 */
ADD_IMPORT extern const double U_STANDARD_ACCELERATION_OF_GRAVITY; /**< m s^-2 */
ADD_IMPORT extern const double STANDARD_ATMOSPHERE; /**< Pa */
ADD_IMPORT extern const double U_STANDARD_ATMOSPHERE; /**< Pa */
ADD_IMPORT extern const double STANDARD_STATE_PRESSURE; /**< Pa */
ADD_IMPORT extern const double U_STANDARD_STATE_PRESSURE; /**< Pa */
ADD_IMPORT extern const double STEFAN_BOLTZMANN_CONSTANT; /**< W m^-2 K^-4 */
ADD_IMPORT extern const double U_STEFAN_BOLTZMANN_CONSTANT; /**< W m^-2 K^-4 */
ADD_IMPORT extern const double TAU_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double U_TAU_COMPTON_WAVELENGTH; /**< m */
ADD_IMPORT extern const double TAU_ELECTRON_MASS_RATIO; /**<
ADD_IMPORT extern const double U_TAU_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double TAU_ENERGY_EQUIVALENT; /**< MeV */
                                                                        (continues on next page)
```

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```
ADD_IMPORT extern const double U_TAU_ENERGY_EQUIVALENT; /**< MeV */
ADD_IMPORT extern const double TAU_MASS; /**< kg */
ADD_IMPORT extern const double U_TAU_MASS; /**< kg */
ADD_IMPORT extern const double TAU_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double U_TAU_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double TAU_MASS_IN_U; /**< u */
ADD_IMPORT extern const double U_TAU_MASS_IN_U; /**< u */
ADD_IMPORT extern const double TAU_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double U_TAU_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double TAU_MUON_MASS_RATIO; /**<
ADD_IMPORT extern const double U_TAU_MUON_MASS_RATIO; /**<
ADD_IMPORT extern const double TAU_NEUTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_TAU_NEUTRON_MASS_RATIO; /**<
ADD_IMPORT extern const double TAU_PROTON_MASS_RATIO; /**<
ADD_IMPORT extern const double U_TAU_PROTON_MASS_RATIO; /**<
ADD_IMPORT extern const double THOMSON_CROSS_SECTION; /**< m^2 */
ADD IMPORT extern const double U THOMSON CROSS SECTION: /**< m^2 */
ADD_IMPORT extern const double TRITON_ELECTRON_MASS_RATIO; /**< */
ADD_IMPORT extern const double U_TRITON_ELECTRON_MASS_RATIO; /**<
ADD_IMPORT extern const double TRITON_G_FACTOR; /**<
ADD_IMPORT extern const double U_TRITON_G_FACTOR; /**< */
ADD_IMPORT extern const double TRITON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double U_TRITON_MAG__MOM; /**< J T^-1 */
ADD_IMPORT extern const double TRITON_MAG__MOM__TO_BOHR_MAGNETON_RATIO: /**< */
ADD_IMPORT extern const double U_TRITON_MAG__MOM__TO_BOHR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double TRITON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**< */
ADD_IMPORT extern const double U_TRITON_MAG__MOM__TO_NUCLEAR_MAGNETON_RATIO; /**<
ADD_IMPORT extern const double TRITON_MASS; /**< kg */
ADD_IMPORT extern const double U_TRITON_MASS; /**< kg */
ADD_IMPORT extern const double TRITON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD_IMPORT extern const double U_TRITON_MASS_ENERGY_EQUIVALENT; /**< J */
ADD IMPORT extern const double TRITON MASS ENERGY EOUIVALENT IN MEV: /**< MeV */
ADD_IMPORT extern const double U_TRITON_MASS_ENERGY_EQUIVALENT_IN_MEV: /**< MeV */
ADD_IMPORT extern const double TRITON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double U_TRITON_MASS_IN_U; /**< u */
ADD_IMPORT extern const double TRITON_MOLAR_MASS; /**< kg mol^-1 */
ADD_IMPORT extern const double U_TRITON_MOLAR_MASS; /**< kg mol^-1 */
```

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```
ADD_IMPORT extern const double TRITON_PROTON_MASS_RATIO; /**<
ADD_IMPORT extern const double U_TRITON_PROTON_MASS_RATIO; /**<
ADD_IMPORT extern const double TRITON_RELATIVE_ATOMIC_MASS; /**<
ADD_IMPORT extern const double U_TRITON_RELATIVE_ATOMIC_MASS;/**<
ADD_IMPORT extern const double TRITON_TO_PROTON_MAG__MOM__RATIO; /**< */
ADD_IMPORT extern const double U_TRITON_TO_PROTON_MAG__MOM__RATIO; /**<
ADD_IMPORT extern const double UNIFIED_ATOMIC_MASS_UNIT; /**< kg */
ADD_IMPORT extern const double U_UNIFIED_ATOMIC_MASS_UNIT; /**< kg */
ADD_IMPORT extern const double VACUUM_ELECTRIC_PERMITTIVITY; /**< F m^-1 */
ADD_IMPORT extern const double U_VACUUM_ELECTRIC_PERMITTIVITY: /**< F m^-1 */
ADD_IMPORT extern const double VACUUM_MAG__PERMEABILITY; /**< N A^-2 */
ADD_IMPORT extern const double U_VACUUM_MAG__PERMEABILITY; /**< N A^-2 */
ADD_IMPORT extern const double VON_KLITZING_CONSTANT; /**< ohm */
ADD_IMPORT extern const double U_VON_KLITZING_CONSTANT; /**< ohm */
ADD_IMPORT extern const double WEAK_MIXING_ANGLE; /**<
ADD_IMPORT extern const double U_WEAK_MIXING_ANGLE; /**< */
ADD IMPORT extern const double WIEN FREQUENCY DISPLACEMENT LAW CONSTANT: /**< Hz K^-1...
ADD_IMPORT extern const double U_WIEN_FREQUENCY_DISPLACEMENT_LAW_CONSTANT; /**< Hz K^-
ADD_IMPORT extern const double WIEN_WAVELENGTH_DISPLACEMENT_LAW_CONSTANT; /**< m K */
ADD_IMPORT extern const double U_WIEN_WAVELENGTH_DISPLACEMENT_LAW_CONSTANT; /**< m K */
ADD_IMPORT extern const double W_TO_Z_MASS_RATIO; /**<
ADD_IMPORT extern const double U_W_TO_Z_MASS_RATIO; /**< */
```

3.2 pycodata

All constant as declared in the *codata* are inserted at the top level of the module.

Python module containing the codata constants.

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