codata Documentation

Release 0.9.0

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CONTENTS:

CHAPTER

ONE

GETTING STARTED

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

1.1 codata

codata is a Fortran library providing the lastest codata constants (2018). It also provides a API for the C language. 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.

On windows, msys2 needs to be installed. The MSVC compiler is only necessary for compiling the python wrapper. Add the msys2 binary (usually C:msys64usrbin) to the path in order to be able to use make.

On Darwin, the gcc toolchain needs to be installed.

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

```
chmod +x configure.sh
. ./configure.sh
make
```

Run tests

```
make test
```

Install

```
make install
```

Uninstall

```
make uninstall
```

If building the python wrapper is needed:

```
cd pywrapper
make clean
make plat=(windows, linux or darwin)
```

1.1.2 Dependencies

```
gcc>=10
gfortran>=10
```

1.1.3 License

GNU General Public License v3 (GPLv3)

1.2 pycodata

Python wrapper around the Fortran codata library. The Fortran library does not need to be installed, the python wrapper embeds all needed dependencies. On linux, you might have to install *libgfortran* if it is not distributed with your linux distribution.

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 *, "version = ", codata_version_version

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

1.3.2 Example in C

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

int main(void){
    printf("version = %s\n", codata_version_capi_version);
    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

```python
import pycodata

print(pycodata.__version__)
print(pycodata.SPEED_OF_LIGHT_IN_VACUUM)
```

CHAPTER

TWO

RELEASE NOTES

2.1 Codata 0.9.0 Release Note

2.1.1 Summary

- No API changes.
- Automatic generation of the version module.
- Generic Makefiles for automatic the building process of the library and the pywrapper.
- Add targets: build, build_debug, test, test_debug.
- Minor fixes in documentation.

2.1.2 Download

Codata Releases

PYPI

2.1.3 Contributors

Milan Skocic

2.1.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.8.2...0.9.0

2.2 Codata 0.8.2 Release Note

2.2.1 Summary

- No API changes.
- Improve Makefile for generating the source code at each compilation.
- Source generator rewritten in Fortran.
- Switch to pyproject.toml for the Python wrapper.
- Minor fixes in documentation.

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/0.8.1...0.8.2

2.3 Codata 0.8.1 Release Note

2.3.1 Summary

- Use shared library in python wrapper.
- Minor fixes in documentation.

2.3.2 Download

Codata Releases

PYPI

2.3.3 Contributors

Milan Skocic

2.3.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.8.0...0.8.1

2.4 Codata 0.8.0 Release Note

2.4.1 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.

2.4.2 Download

Codata Releases

PYPI

2.4.3 Contributors

Milan Skocic

2.4.4 Commits

Full Changelog: https://github.com/MilanSkocic/codata/compare/0.7.1...0.8.0

2.5 Codata 0.7.1 Release Note

2.5.1 Summary

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

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/0.7.0...0.7.1

2.6 Codata 0.7.0 Release Note

2.6.1 Changes

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

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/0.6.0...0.7.0

2.7 Codata 0.6.0 Release Note

2.7.1 Changes

- Created documentation.
- Fixed missing uncertainties for Cpython.

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/0.5.0...0.6.0

2.8 Codata 0.5.0 Release Note

2.8.1 Changes

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

2.8.2 Download

Codata Releases

PYPI

2.8.3 Contributors

Milan Skocic

2.8.4 Commits

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

2.9 Codata 0.4.0 Release Note

2.9.1 Changes

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

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/0.3.0...0.4.0

2.10 Codata 0.3.0 Release Note

2.10.1 Changes

- Only last codata constants.

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/0.2.1...0.3.0

2.11 Codata 0.2.1 Release Note

2.11.1 Changes

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

2.11.2 Download

Codata Releases

PYPI

2.11.3 Contributors

Milan Skocic

2.11.4 Commits

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

2.12 Codata 0.2.0 Release Note

2.12.1 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.

2.12.2 Download

Codata Releases

PYPI

2.12.3 Contributors

Milan Skocic

2.12.4 Commits

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

2.13 Codata 0.1.0 Release Note

2.13.1 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).

2.13.2 Download

Codata Releases

PYPI

2.13.3 Contributors

Milan Skocic

2.13.4 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

- *codata.h*: Main C header for the whole library.

```c
/**
* @file
* @brief Main C header for the CODATA library.
*/

#ifndef CODATA_H
#define CODATA_H
#include "codata_version.h"
#include "codata_constants.h"
#endif
```

Version

- *codata_version.h*: C Header.

```c
/**
* @file
* @brief Version - autogenerated.
*/

#ifndef codata_VERSION_H
#define codata_VERSION_H
#if _MSC_VER
#define ADD_IMPORT __declspec(dllimport)
#else
#define ADD_IMPORT
#endif
ADD_IMPORT extern const char codata_version_capi_version[ 6];
#endif
```

Constants

- *codata_constants.h*: C Header.

```c
/**
* @file
* @brief Constants - autogenerated.
*/

#ifndef codata_CONSTANTS_H
#define codata_CONSTANTS_H
#if _MSC_VER
#define ADD_IMPORT __declspec(dllimport)
#else
#define ADD_IMPORT
#endif
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 */

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 */
```

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```
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^-
↪3 */
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 */

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 */
```

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```
ADD_IMPORT extern const double ATOMIC_UNIT_OF_ELECTRIC_POLARIZABILITY;/**< C^2 m^2 J^-
↪1 */
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 */

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;/**< mol^-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 */
```

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```
ADD_IMPORT extern const double BOHR_MAGNETON_IN_INVERSE_METER_PER_TESLA;/**< m^-1 T^-
↪1 */
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^-
↪1 K^-1 */
ADD_IMPORT extern const double U_BOLTZMANN_CONSTANT_IN_INVERSE_METER_PER_KELVIN;/**<␣
↪m^-1 K^-1 */

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 */

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 */
```

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```
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 */
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;/**<  */
```

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```
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;/**<  */

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;/**<  */
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```
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 */
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 */
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```
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 */
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;/**<  */
```

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```
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;/**<  */

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 */
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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 */

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 */
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```
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 */
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;/**< lm W^-1 */
ADD_IMPORT extern const double U_LUMINOUS_EFFICACY;/**< lm W^-1 */
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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␣
↪mol^-1 */
ADD_IMPORT extern const double U_MOLAR_VOLUME_OF_IDEAL_GAS__273_15_K__100_KPA;/**< m^
↪3 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;/**
↪< 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;/**<  */
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 */
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```
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 */

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 */
```

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```
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 */

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;/**
↪< J */

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_
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```
↪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;/**<␣
↪(GeV/c^2)^-2 */
ADD_IMPORT extern const double U_NEWTONIAN_CONSTANT_OF_GRAVITATION_OVER_H_BAR_C;/**<␣
↪(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␣
↪T^-1 */
ADD_IMPORT extern const double U_NUCLEAR_MAGNETON_IN_INVERSE_METER_PER_TESLA;/**< m^-
↪1 T^-1 */

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 */
```

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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;/**<  */

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;/**<  */
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```
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 */
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␣
↪fm */

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 */
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```
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;/**<  */
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;/**
```

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```
↪<  */

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 */
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;/**<  */
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```
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_EQUIVALENT_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 */

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 */
```

(continues on next page)

(continued from previous page)

```
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^-
↪1 */

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;/**<  */

#endif
```

3.2 pycodata

All constants as declared in the *codata* are inserted at the top level of the module. Python module containing the codata constants.

PYTHON MODULE INDEX

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