Modul:Convert/data

This page defines the conversion data used by Module:Convert. All documentation (from Module:Convert/doc) is at that page.

Do not manually add units to this page. First add the unit definitions in Module:Convert/documentation/conversion data. And then update this page by copying the results from Module:Convert/makeunits (those results appear at Module talk:Convert/makeunits).

Any changes should first be tested at Module:Convert/data/sandbox—see Module:Convert/sandbox/testcases.

New units can be manually added at Module:Convert/extra as a temporary measure before being incorporated into this main table.

```
-- Conversion data used by [[Module:Convert]] which uses mw.loadData() for
-- read-only access to this module so that it is loaded only once per page.
-- See [[:en:Template:Convert/Transwiki guide]] if copying to another wiki.
--
-- These data tables follow:
--   all_units           all properties for a unit, including default output
--   default_exceptions  exceptions for default output ('kg' and 'g' have differe
--   link_exceptions     exceptions for links ('kg' and 'g' have different links)
--
-- These tables are generated by a script which reads the wikitext of a page that
-- documents the required properties of each unit; see [[:en:Module:Convert/doc]]

--------------------------------------------------------------------------------
-- Do not change the data in this table because it is created by running --
-- a script that reads the wikitext from a wiki page (see note above).   --
--------------------------------------------------------------------------------
local all_units = {
    ["Gy"] = {
        _name1   = "gray",
        _symbol  = "Gy",
        utype    = "absorbed radiation dose",
        scale    = 1,
        prefixes = 1,
        default  = "rad",
        link     = "Gray (unit)",
    },
    ["rad"] = {
        _name1   = "rad",
        _symbol  = "rad",
        utype    = "absorbed radiation dose",
        scale    = 0.01,
        prefixes = 1,
        default  = "Gy",
        link     = "Rad (unit)",
    },
    ["cm/s2"] = {
        name1    = "centimetre per second squared",
        name1_us = "centimeter per second squared",
        name2    = "centimetres per second squared",
        name2_us = "centimeters per second squared",
        symbol   = "cm/s<sup>2</sup>",
        utype    = "acceleration",
```

```
        scale    = 0.01,
        default  = "ft/s2",
        link     = "Gal (unit)",
    },
    ["ft/s2"] = {
        name1    = "foot per second squared",
        name2    = "feet per second squared",
        symbol   = "ft/s<sup>2</sup>",
        utype    = "acceleration",
        scale    = 0.3048,
        default  = "m/s2",
    },
    ["g0"] = {
        name1    = "standard gravity",
        name2    = "standard gravities",
        symbol   = "''g''<sub>0</sub>",
        utype    = "acceleration",
        scale    = 9.80665,
        default  = "m/s2",
    },
    ["g-force"] = {
        name2    = "''g''",
        symbol   = "''g''",
        utype    = "acceleration",
        scale    = 9.80665,
        default  = "m/s2",
        link     = "g-force",
    },
    ["km/hs"] = {
        name1    = "kilometre per hour per second",
        name1_us = "kilometer per hour per second",
        name2    = "kilometres per hour per second",
        name2_us = "kilometers per hour per second",
        symbol   = "km/(h·s)",
        utype    = "acceleration",
        scale    = 0.27777777777777779,
        default  = "mph/s",
        link     = "Acceleration",
    },
    ["km/s2"] = {
        name1    = "kilometre per second squared",
        name1_us = "kilometer per second squared",
        name2    = "kilometres per second squared",
        name2_us = "kilometers per second squared",
        symbol   = "km/s<sup>2</sup>",
        utype    = "acceleration",
        scale    = 1000,
        default  = "mph/s",
        link     = "Acceleration",
    },
    ["m/s2"] = {
        name1    = "metre per second squared",
        name1_us = "meter per second squared",
        name2    = "metres per second squared",
        name2_us = "meters per second squared",
        symbol   = "m/s<sup>2</sup>",
        utype    = "acceleration",
        scale    = 1,
        default  = "ft/s2",
    },
    ["mph/s"] = {
        name1    = "mile per hour per second",
        name2    = "miles per hour per second",
        symbol   = "mph/s",
```

```
        utype    = "acceleration",
        scale    = 0.44704,
        default  = "km/hs",
        link     = "Acceleration",
    },
    ["km/h/s"] = {
        target   = "km/hs",
    },
    ["standard gravity"] = {
        target   = "g0",
    },
    ["1000sqft"] = {
        name1    = "thousand square feet",
        name2    = "thousand square feet",
        symbol   = "1000 sq ft",
        utype    = "area",
        scale    = 92.90304,
        default  = "m2",
        link     = "Square foot",
    },
    ["a"] = {
        _name1   = "are",
        _symbol  = "a",
        utype    = "area",
        scale    = 100,
        prefixes = 1,
        default  = "sqft",
        link     = "Hectare#Are",
    },
    ["acre"] = {
        symbol   = "acre",
        usename  = 1,
        utype    = "area",
        scale    = 4046.8564224,
        default  = "ha",
        subdivs  = { ["rood"] = { 4, default = "ha" }, ["sqperch"] = { 160, defau
    },
    ["acre-sing"] = {
        target   = "acre",
    },
    ["arpent"] = {
        symbol   = "arpent",
        usename  = 1,
        utype    = "area",
        scale    = 3418.89,
        default  = "ha",
    },
    ["cda"] = {
        name1    = "cuerda",
        symbol   = "cda",
        utype    = "area",
        scale    = 3930.395625,
        default  = "ha acre",
    },
    ["daa"] = {
        name1    = "decare",
        symbol   = "daa",
        utype    = "area",
        scale    = 1000,
        default  = "km2 sqmi",
    },
    ["dunam"] = {
        symbol   = "dunam",
        usename  = 1,
```

```
        utype    = "area",
        scale    = 1000,
        default  = "km2 sqmi",
    },
    ["dunum"] = {
        symbol   = "dunum",
        usename  = 1,
        utype    = "area",
        scale    = 1000,
        default  = "km2 sqmi",
        link     = "Dunam",
    },
    ["ha"] = {
        name1    = "hectare",
        symbol   = "ha",
        utype    = "area",
        scale    = 10000,
        default  = "acre",
    },
    ["hectare"] = {
        name1    = "hectare",
        symbol   = "ha",
        usename  = 1,
        utype    = "area",
        scale    = 10000,
        default  = "acre",
    },
    ["Irish acre"] = {
        name1    = "Irish acre",
        symbol   = "Irish acres",
        utype    = "area",
        scale    = 6555.2385024,
        default  = "ha",
        link     = "Acre (Irish)",
    },
    ["m2"] = {
        _name1   = "square metre",
        _name1_us= "square meter",
        _symbol  = "m<sup>2</sup>",
        prefix_position= 8,
        utype    = "area",
        scale    = 1,
        prefixes = 2,
        default  = "sqft",
        link     = "Square metre",
    },
    ["pondemaat"] = {
        name1    = "pondemaat",
        name2    = "pondemaat",
        symbol   = "pond",
        utype    = "area",
        scale    = 3674.363358816,
        default  = "m2",
        link     = ":nl:pondemaat",
    },
    ["pyeong"] = {
        name2    = "pyeong",
        symbol   = "pyeong",
        usename  = 1,
        utype    = "area",
        scale    = 3.3057851239669422,
        default  = "m2",
    },
    ["rai"] = {
```

```
        name2    = "rai",
        symbol   = "rai",
        utype    = "area",
        scale    = 1600,
        default  = "m2",
        link     = "Rai (unit)",
    },
    ["rood"] = {
        symbol   = "rood",
        usename  = 1,
        utype    = "area",
        scale    = 1011.7141056,
        default  = "sqft m2",
        subdivs  = { ["sqperch"] = { 40, default = "m2" } },
        link     = "Rood (unit)",
    },
    ["sqfoot"] = {
        name1    = "square foot",
        name2    = "square foot",
        symbol   = "sq ft",
        utype    = "area",
        scale    = 0.09290304,
        default  = "m2",
    },
    ["sqft"] = {
        name1    = "square foot",
        name2    = "square feet",
        symbol   = "sq ft",
        utype    = "area",
        scale    = 0.09290304,
        default  = "m2",
    },
    ["sqin"] = {
        name1    = "square inch",
        name2    = "square inches",
        symbol   = "sq in",
        utype    = "area",
        scale    = 0.00064516,
        default  = "cm2",
    },
    ["sqmi"] = {
        name1    = "square mile",
        symbol   = "sq mi",
        utype    = "area",
        scale    = 2589988.110336,
        default  = "km2",
    },
    ["sqnmi"] = {
        name1    = "square nautical mile",
        symbol   = "sq nmi",
        utype    = "area",
        scale    = 3429904,
        default  = "km2 sqmi",
        link     = "Nautical mile",
    },
    ["sqperch"] = {
        name2    = "perches",
        symbol   = "perch",
        usename  = 1,
        utype    = "area",
        scale    = 25.29285264,
        default  = "m2",
        link     = "Rod (unit)#Area and volume",
    },
```

```
    ["sqverst"] = {
        symbol   = "square verst",
        usename  = 1,
        utype    = "area",
        scale    = 1138062.24,
        default  = "km2 sqmi",
        link     = "Verst",
    },
    ["sqyd"] = {
        name1    = "square yard",
        symbol   = "sq yd",
        utype    = "area",
        scale    = 0.83612736,
        default  = "m2",
    },
    ["tsubo"] = {
        name2    = "tsubo",
        symbol   = "tsubo",
        usename  = 1,
        utype    = "area",
        scale    = 3.3057851239669422,
        default  = "m2",
        link     = "Japanese units of measurement#Area",
    },
    ["acres"] = {
        target   = "acre",
    },
    ["are"] = {
        target   = "a",
    },
    ["decare"] = {
        target   = "daa",
    },
    ["foot2"] = {
        target   = "sqfoot",
    },
    ["ft2"] = {
        target   = "sqft",
    },
    ["in2"] = {
        target   = "sqin",
        symbol   = "in<sup>2</sup>",
    },
    ["km²"] = {
        target   = "km2",
    },
    ["mi2"] = {
        target   = "sqmi",
    },
    ["million acre"] = {
        target   = "e6acre",
    },
    ["million acres"] = {
        target   = "e6acre",
    },
    ["million hectares"] = {
        target   = "e6ha",
    },
    ["m²"] = {
        target   = "m2",
    },
    ["nmi2"] = {
        target   = "sqnmi",
    },
```

```
    ["pond"] = {
        target   = "pondemaat",
    },
    ["sq arp"] = {
        target   = "arpent",
    },
    ["sqkm"] = {
        target   = "km2",
    },
    ["sqm"] = {
        target   = "m2",
    },
    ["square verst"] = {
        target   = "sqverst",
    },
    ["verst2"] = {
        target   = "sqverst",
    },
    ["yd2"] = {
        target   = "sqyd",
    },
    ["m2/ha"] = {
        name1    = "square metre per hectare",
        name1_us = "square meter per hectare",
        name2    = "square metres per hectare",
        name2_us = "square meters per hectare",
        symbol   = "m<sup>2</sup>/ha",
        utype    = "area per unit area",
        scale    = 0.0001,
        default  = "sqft/acre",
        link     = "Basal area",
    },
    ["sqft/acre"] = {
        name1    = "square foot per acre",
        name2    = "square feet per acre",
        symbol   = "sq ft/acre",
        utype    = "area per unit area",
        scale    = 2.295684113865932e-5,
        default  = "m2/ha",
        link     = "Basal area",
    },
    ["cent"] = {
        name1    = "cent",
        symbol   = "¢",
        utype    = "cent",
        scale    = 1,
        default  = "cent",
        link     = "Cent (currency)",
    },
    ["¢"] = {
        target   = "cent",
    },
    ["A.h"] = {
        name1    = "ampere hour",
        symbol   = "A·h",
        utype    = "charge",
        scale    = 3600,
        default  = "coulomb",
    },
    ["coulomb"] = {
        _name1   = "coulomb",
        _symbol  = "C",
        utype    = "charge",
        scale    = 1,
```

```
        prefixes = 1,
        default  = "e",
        link     = "Coulomb",
    },
    ["e"] = {
        name1    = "elementary charge",
        symbol   = "''e''",
        utype    = "charge",
        scale    = 1.602176487e-19,
        default  = "coulomb",
    },
    ["g-mol"] = {
        name1    = "gram-mole",
        symbol   = "g&#8209;mol",
        utype    = "chemical amount",
        scale    = 1,
        default  = "lbmol",
        link     = "Mole (unit)",
    },
    ["gmol"] = {
        name1    = "gram-mole",
        symbol   = "gmol",
        utype    = "chemical amount",
        scale    = 1,
        default  = "lbmol",
        link     = "Mole (unit)",
    },
    ["kmol"] = {
        name1    = "kilomole",
        symbol   = "kmol",
        utype    = "chemical amount",
        scale    = 1000,
        default  = "lbmol",
        link     = "Mole (unit)",
    },
    ["lb-mol"] = {
        name1    = "pound-mole",
        symbol   = "lb&#8209;mol",
        utype    = "chemical amount",
        scale    = 453.59237,
        default  = "mol",
    },
    ["lbmol"] = {
        name1    = "pound-mole",
        symbol   = "lbmol",
        utype    = "chemical amount",
        scale    = 453.59237,
        default  = "mol",
    },
    ["mol"] = {
        name1    = "mole",
        symbol   = "mol",
        utype    = "chemical amount",
        scale    = 1,
        default  = "lbmol",
        link     = "Mole (unit)",
    },
    ["kgCO2/L"] = {
        name1    = "kilogram per litre",
        name1_us = "kilogram per liter",
        name2    = "kilograms per litre",
        name2_us = "kilograms per liter",
        symbol   = "kg(CO<sub>2</sub>)/L",
        utype    = "co2 per unit volume",
```

```
        scale    = 1000,
        default  = "lbCO2/USgal",
        link     = "Exhaust gas",
    },
    ["lbCO2/USgal"] = {
        name1    = "pound per US gallon",
        name2    = "pounds per US gallon",
        symbol   = "lbCO2/US gal",
        utype    = "co2 per unit volume",
        scale    = 119.82642731689663,
        default  = "kgCO2/L",
        link     = "Exhaust gas",
    },
    ["oz/lb"] = {
        per      = { "oz", "lb" },
        utype    = "concentration",
        default  = "mg/kg",
    },
    ["mg/kg"] = {
        per      = { "mg", "kg" },
        utype    = "concentration",
        default  = "oz/lb",
    },
    ["g/dm3"] = {
        name1    = "gram per cubic decimetre",
        name1_us = "gram per cubic decimeter",
        name2    = "grams per cubic decimetre",
        name2_us = "grams per cubic decimeter",
        symbol   = "g/dm<sup>3</sup>",
        utype    = "density",
        scale    = 1,
        default  = "kg/m3",
        link     = "Density",
    },
    ["g/L"] = {
        name1    = "gram per litre",
        name1_us = "gram per liter",
        name2    = "grams per litre",
        name2_us = "grams per liter",
        symbol   = "g/L",
        utype    = "density",
        scale    = 1,
        default  = "lb/cuin",
        link     = "Density",
    },
    ["g/mL"] = {
        name1    = "gram per millilitre",
        name1_us = "gram per milliliter",
        name2    = "grams per millilitre",
        name2_us = "grams per milliliter",
        symbol   = "g/mL",
        utype    = "density",
        scale    = 1000,
        default  = "lb/cuin",
        link     = "Density",
    },
    ["g/ml"] = {
        name1    = "gram per millilitre",
        name1_us = "gram per milliliter",
        name2    = "grams per millilitre",
        name2_us = "grams per milliliter",
        symbol   = "g/ml",
        utype    = "density",
        scale    = 1000,
```

```
        default  = "lb/cuin",
        link     = "Density",
    },
    ["kg/dm3"] = {
        name1    = "kilogram per cubic decimetre",
        name1_us = "kilogram per cubic decimeter",
        name2    = "kilograms per cubic decimetre",
        name2_us = "kilograms per cubic decimeter",
        symbol   = "kg/dm<sup>3</sup>",
        utype    = "density",
        scale    = 1000,
        default  = "lb/cuft",
        link     = "Density",
    },
    ["kg/L"] = {
        name1    = "kilogram per litre",
        name1_us = "kilogram per liter",
        name2    = "kilograms per litre",
        name2_us = "kilograms per liter",
        symbol   = "kg/L",
        utype    = "density",
        scale    = 1000,
        default  = "lb/USgal",
        link     = "Density",
    },
    ["kg/l"] = {
        name1    = "kilogram per litre",
        name1_us = "kilogram per liter",
        name2    = "kilograms per litre",
        name2_us = "kilograms per liter",
        symbol   = "kg/l",
        utype    = "density",
        scale    = 1000,
        default  = "lb/USgal",
        link     = "Density",
    },
    ["kg/m3"] = {
        name1    = "kilogram per cubic metre",
        name1_us = "kilogram per cubic meter",
        name2    = "kilograms per cubic metre",
        name2_us = "kilograms per cubic meter",
        symbol   = "kg/m<sup>3</sup>",
        utype    = "density",
        scale    = 1,
        default  = "lb/cuyd",
        link     = "Density",
    },
    ["lb/cuft"] = {
        name1    = "pound per cubic foot",
        name2    = "pounds per cubic foot",
        symbol   = "lb/cu ft",
        utype    = "density",
        scale    = 16.018463373960142,
        default  = "g/cm3",
        link     = "Density",
    },
    ["lb/cuin"] = {
        name1    = "pound per cubic inch",
        name2    = "pounds per cubic inch",
        symbol   = "lb/cu in",
        utype    = "density",
        scale    = 27679.904710203122,
        default  = "g/cm3",
        link     = "Density",
```

```
    },
    ["lb/cuyd"] = {
        name1    = "pound per cubic yard",
        name2    = "pounds per cubic yard",
        symbol   = "lb/cu yd",
        utype    = "density",
        scale    = 0.5932764212577829,
        default  = "kg/m3",
        link     = "Density",
    },
    ["lb/impgal"] = {
        name1    = "pound per imperial gallon",
        name2    = "pounds per imperial gallon",
        symbol   = "lb/imp gal",
        utype    = "density",
        scale    = 99.776372663101697,
        default  = "kg/L",
        link     = "Density",
    },
    ["lb/in3"] = {
        name1    = "pound per cubic inch",
        name2    = "pounds per cubic inch",
        symbol   = "lb/cu in",
        utype    = "density",
        scale    = 27679.904710203122,
        default  = "g/cm3",
        link     = "Density",
    },
    ["lb/U.S.gal"] = {
        name1    = "pound per U.S. gallon",
        name2    = "pounds per U.S. gallon",
        symbol   = "lb/U.S. gal",
        utype    = "density",
        scale    = 119.82642731689663,
        default  = "kg/L",
        link     = "Density",
    },
    ["lb/USbu"] = {
        name1    = "pound per US bushel",
        name2    = "pounds per US bushel",
        symbol   = "lb/US bu",
        utype    = "density",
        scale    = 12.871859780974471,
        default  = "kg/m3",
        link     = "Bushel",
    },
    ["lb/USgal"] = {
        name1    = "pound per US gallon",
        name2    = "pounds per US gallon",
        symbol   = "lb/US gal",
        utype    = "density",
        scale    = 119.82642731689663,
        default  = "kg/L",
        link     = "Density",
    },
    ["lbm/cuin"] = {
        name1    = "pound mass per cubic inch",
        name2    = "pounds mass per cubic inch",
        symbol   = "lbm/cu in",
        utype    = "density",
        scale    = 27679.904710203122,
        default  = "g/cm3",
        link     = "Density",
    },
```

```
    ["mg/L"] = {
        name1    = "milligram per litre",
        name1_us = "milligram per liter",
        name2    = "milligrams per litre",
        name2_us = "milligrams per liter",
        symbol   = "mg/L",
        utype    = "density",
        scale    = 0.001,
        default  = "lb/cuin",
        link     = "Density",
    },
    ["oz/cuin"] = {
        name1    = "ounce per cubic inch",
        name2    = "ounces per cubic inch",
        symbol   = "oz/cu in",
        utype    = "density",
        scale    = 1729.9940443876951,
        default  = "g/cm3",
        link     = "Density",
    },
    ["g/cm3"] = {
        per      = { "g", "cm3" },
        utype    = "density",
        default  = "lb/cuin",
    },
    ["g/m3"] = {
        per      = { "g", "m3" },
        utype    = "density",
        default  = "lb/cuyd",
        link     = "Density",
    },
    ["Mg/m3"] = {
        per      = { "Mg", "m3" },
        utype    = "density",
        default  = "lb/cuft",
    },
    ["mg/l"] = {
        per      = { "mg", "l" },
        utype    = "density",
        default  = "oz/cuin",
    },
    ["µg/dL"] = {
        per      = { "µg", "dL" },
        utype    = "density",
        default  = "lb/cuin",
    },
    ["µg/l"] = {
        per      = { "µg", "l" },
        utype    = "density",
        default  = "oz/cuin",
    },
    ["lb/ft3"] = {
        target   = "lb/cuft",
    },
    ["lb/yd3"] = {
        target   = "lb/cuyd",
    },
    ["lbm/in3"] = {
        target   = "lbm/cuin",
    },
    ["mcg/dL"] = {
        target   = "µg/dL",
    },
    ["oz/in3"] = {
```

```
        target   = "oz/cuin",
    },
    ["ug/dL"] = {
        target   = "µg/dL",
    },
    ["ug/l"] = {
        target   = "µg/l",
    },
    ["B.O.T.U."] = {
        name1    = "Board of Trade Unit",
        symbol   = "B.O.T.U.",
        utype    = "energy",
        scale    = 3600000,
        default  = "MJ",
        link     = "Kilowatt-hour",
    },
    ["bboe"] = {
        name1    = "barrel of oil equivalent",
        name2    = "barrels of oil equivalent",
        symbol   = "bboe",
        utype    = "energy",
        scale    = 6117863200,
        default  = "GJ",
    },
    ["BOE"] = {
        name1    = "barrel of oil equivalent",
        name2    = "barrels of oil equivalent",
        symbol   = "BOE",
        utype    = "energy",
        scale    = 6117863200,
        default  = "GJ",
    },
    ["BTU"] = {
        name1    = "British thermal unit",
        symbol   = "BTU",
        utype    = "energy",
        scale    = 1055.05585262,
        default  = "kJ",
    },
    ["Btu"] = {
        name1    = "British thermal unit",
        symbol   = "Btu",
        utype    = "energy",
        scale    = 1055.05585262,
        default  = "kJ",
    },
    ["BTU-39F"] = {
        name1    = "British thermal unit (39°F)",
        name2    = "British thermal units (39°F)",
        symbol   = "BTU<sub>39°F</sub>",
        utype    = "energy",
        scale    = 1059.67,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Btu-39F"] = {
        name1    = "British thermal unit (39°F)",
        name2    = "British thermal units (39°F)",
        symbol   = "Btu<sub>39°F</sub>",
        utype    = "energy",
        scale    = 1059.67,
        default  = "kJ",
        link     = "British thermal unit",
    },
```

```
    ["BTU-59F"] = {
        name1    = "British thermal unit (59°F)",
        name2    = "British thermal units (59°F)",
        symbol   = "BTU<sub>59°F</sub>",
        utype    = "energy",
        scale    = 1054.804,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Btu-59F"] = {
        name1    = "British thermal unit (59°F)",
        name2    = "British thermal units (59°F)",
        symbol   = "Btu<sub>59°F</sub>",
        utype    = "energy",
        scale    = 1054.804,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["BTU-60F"] = {
        name1    = "British thermal unit (60°F)",
        name2    = "British thermal units (60°F)",
        symbol   = "BTU<sub>60°F</sub>",
        utype    = "energy",
        scale    = 1054.68,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Btu-60F"] = {
        name1    = "British thermal unit (60°F)",
        name2    = "British thermal units (60°F)",
        symbol   = "Btu<sub>60°F</sub>",
        utype    = "energy",
        scale    = 1054.68,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["BTU-63F"] = {
        name1    = "British thermal unit (63°F)",
        name2    = "British thermal units (63°F)",
        symbol   = "BTU<sub>63°F</sub>",
        utype    = "energy",
        scale    = 1054.6,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Btu-63F"] = {
        name1    = "British thermal unit (63°F)",
        name2    = "British thermal units (63°F)",
        symbol   = "Btu<sub>63°F</sub>",
        utype    = "energy",
        scale    = 1054.6,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["BTU-ISO"] = {
        name1    = "British thermal unit (ISO)",
        name2    = "British thermal units (ISO)",
        symbol   = "BTU<sub>ISO</sub>",
        utype    = "energy",
        scale    = 1055.056,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Btu-ISO"] = {
```

```
        target   = "BTU-ISO",
    },
    ["BTU-IT"] = {
        name1    = "British thermal unit (IT)",
        name2    = "British thermal units (IT)",
        symbol   = "BTU<sub>IT</sub>",
        utype    = "energy",
        scale    = 1055.05585262,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Btu-IT"] = {
        name1    = "British thermal unit (IT)",
        name2    = "British thermal units (IT)",
        symbol   = "Btu<sub>IT</sub>",
        utype    = "energy",
        scale    = 1055.05585262,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["BTU-mean"] = {
        name1    = "British thermal unit (mean)",
        name2    = "British thermal units (mean)",
        symbol   = "BTU<sub>mean</sub>",
        utype    = "energy",
        scale    = 1055.87,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Btu-mean"] = {
        name1    = "British thermal unit (mean)",
        name2    = "British thermal units (mean)",
        symbol   = "Btu<sub>mean</sub>",
        utype    = "energy",
        scale    = 1055.87,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["BTU-th"] = {
        name1    = "British thermal unit (thermochemical)",
        name2    = "British thermal units (thermochemical)",
        symbol   = "BTU<sub>th</sub>",
        utype    = "energy",
        scale    = 1054.35026444,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Btu-th"] = {
        name1    = "British thermal unit (thermochemical)",
        name2    = "British thermal units (thermochemical)",
        symbol   = "Btu<sub>th</sub>",
        utype    = "energy",
        scale    = 1054.35026444,
        default  = "kJ",
        link     = "British thermal unit",
    },
    ["Cal"] = {
        name1    = "calorie",
        symbol   = "Cal",
        utype    = "energy",
        scale    = 4184,
        default  = "kJ",
    },
    ["cal"] = {
```

```
        name1    = "calorie",
        symbol   = "cal",
        utype    = "energy",
        scale    = 4.184,
        default  = "J",
    },
    ["Cal-15"] = {
        name1    = "Calorie (15°C)",
        name2    = "Calories (15°C)",
        symbol   = "Cal<sub>15</sub>",
        utype    = "energy",
        scale    = 4185.8,
        default  = "kJ",
        link     = "Calorie",
    },
    ["cal-15"] = {
        name1    = "calorie (15°C)",
        name2    = "calories (15°C)",
        symbol   = "cal<sub>15</sub>",
        utype    = "energy",
        scale    = 4.1858,
        default  = "J",
        link     = "Calorie",
    },
    ["Cal-IT"] = {
        name1    = "Calorie (International Steam Table)",
        name2    = "Calories (International Steam Table)",
        symbol   = "Cal<sub>IT</sub>",
        utype    = "energy",
        scale    = 4186.8,
        default  = "kJ",
        link     = "Calorie",
    },
    ["cal-IT"] = {
        name1    = "calorie (International Steam Table)",
        name2    = "calories (International Steam Table)",
        symbol   = "cal<sub>IT</sub>",
        utype    = "energy",
        scale    = 4.1868,
        default  = "J",
        link     = "Calorie",
    },
    ["Cal-th"] = {
        name1    = "Calorie (thermochemical)",
        name2    = "Calories (thermochemical)",
        symbol   = "Cal<sub>th</sub>",
        utype    = "energy",
        scale    = 4184,
        default  = "kJ",
        link     = "Calorie",
    },
    ["cal-th"] = {
        name1    = "calorie (thermochemical)",
        name2    = "calories (thermochemical)",
        symbol   = "cal<sub>th</sub>",
        utype    = "energy",
        scale    = 4.184,
        default  = "J",
        link     = "Calorie",
    },
    ["CHU-IT"] = {
        name1    = "Celsius heat unit (International Table)",
        name2    = "Celsius heat units (International Table)",
        symbol   = "CHU<sub>IT</sub>",
```

```
        utype    = "energy",
        scale    = 1899.100534716,
        default  = "kJ",
        link     = "Conversion of units#Energy",
    },
    ["cufootnaturalgas"] = {
        name1    = "cubic foot of natural gas",
        name2    = "cubic foot of natural gas",
        symbol   = "cuftnaturalgas",
        usename  = 1,
        utype    = "energy",
        scale    = 1055055.85262,
        default  = "MJ",
        link     = "Conversion of units#Energy",
    },
    ["cuftnaturalgas"] = {
        name1    = "cubic foot of natural gas",
        name2    = "cubic feet of natural gas",
        symbol   = "cuftnaturalgas",
        usename  = 1,
        utype    = "energy",
        scale    = 1055055.85262,
        default  = "MJ",
        link     = "Conversion of units#Energy",
    },
    ["Eh"] = {
        name1    = "Hartree",
        symbol   = "''E''<sub>h</sub>",
        utype    = "energy",
        scale    = 4.35974417e-18,
        default  = "eV",
    },
    ["erg"] = {
        symbol   = "erg",
        utype    = "energy",
        scale    = 0.0000001,
        default  = "µJ",
    },
    ["eV"] = {
        name1    = "electronvolt",
        symbol   = "eV",
        utype    = "energy",
        scale    = 1.602176487e-19,
        default  = "aJ",
    },
    ["feV"] = {
        name1    = "femtoelectronvolt",
        symbol   = "feV",
        utype    = "energy",
        scale    = 1.602176487e-34,
        default  = "yJ",
        link     = "Electronvolt",
    },
    ["foe"] = {
        symbol   = "foe",
        utype    = "energy",
        scale    = 1e44,
        default  = "YJ",
        link     = "Foe (unit)",
    },
    ["ftlb"] = {
        name1    = "foot-pound",
        symbol   = "ft·lb",
        utype    = "energy",
```

```
        alttype  = "torque",
        scale    = 1.3558179483314004,
        default  = "J",
        link     = "Foot-pound (energy)",
    },
    ["ftlb-f"] = {
        name1    = "foot-pound force",
        name2    = "foot-pounds force",
        symbol   = "ft·lb<sub>f</sub>",
        utype    = "energy",
        alttype  = "torque",
        scale    = 1.3558179483314004,
        default  = "J",
        link     = "Foot-pound (energy)",
    },
    ["ftlbf"] = {
        name1    = "foot-pound force",
        name2    = "foot-pounds force",
        symbol   = "ft·lbf",
        utype    = "energy",
        alttype  = "torque",
        scale    = 1.3558179483314004,
        default  = "J",
        link     = "Foot-pound (energy)",
    },
    ["ftpdl"] = {
        name1    = "foot-poundal",
        symbol   = "ft·pdl",
        utype    = "energy",
        scale    = 0.0421401100938048,
        default  = "J",
    },
    ["GeV"] = {
        name1    = "gigaelectronvolt",
        symbol   = "GeV",
        utype    = "energy",
        scale    = 1.602176487e-10,
        default  = "nJ",
        link     = "Electronvolt",
    },
    ["gTNT"] = {
        name2    = "grams of TNT",
        symbol   = "gram of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4184,
        default  = "kJ",
        link     = "TNT equivalent",
    },
    ["Gtoe"] = {
        name1    = "gigatonne of oil equivalent",
        name2    = "gigatonnes of oil equivalent",
        symbol   = "Gtoe",
        utype    = "energy",
        scale    = 4.1868e19,
        default  = "EJ",
        link     = "Tonne of oil equivalent",
    },
    ["GtonTNT"] = {
        name2    = "gigatons of TNT",
        symbol   = "gigaton of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4.184e18,
```

```
        default  = "EJ",
        link     = "TNT equivalent",
    },
    ["GtTNT"] = {
        name2    = "gigatonnes of TNT",
        symbol   = "gigatonne of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4.184e18,
        default  = "EJ",
        link     = "TNT equivalent",
    },
    ["GW.h"] = {
        name1    = "gigawatt-hour",
        symbol   = "GW·h",
        utype    = "energy",
        scale    = 3.6e12,
        default  = "TJ",
        link     = "Kilowatt-hour",
    },
    ["GWh"] = {
        name1    = "gigawatt-hour",
        symbol   = "GWh",
        utype    = "energy",
        scale    = 3.6e12,
        default  = "TJ",
        link     = "Kilowatt-hour",
    },
    ["hph"] = {
        name1    = "horsepower-hour",
        symbol   = "hp·h",
        utype    = "energy",
        scale    = 2684519.537696172792,
        default  = "kWh",
        link     = "Horsepower",
    },
    ["inlb"] = {
        name1    = "inch-pound",
        symbol   = "in·lb",
        utype    = "energy",
        alttype  = "torque",
        scale    = 0.1129848290276167,
        default  = "mJ",
        link     = "Foot-pound (energy)",
    },
    ["inlb-f"] = {
        name1    = "inch-pound force",
        name2    = "inch-pounds force",
        symbol   = "in·lb<sub>f</sub>",
        utype    = "energy",
        alttype  = "torque",
        scale    = 0.1129848290276167,
        default  = "mJ",
        link     = "Foot-pound (energy)",
    },
    ["inlbf"] = {
        name1    = "inch-pound force",
        name2    = "inch-pounds force",
        symbol   = "in·lbf",
        utype    = "energy",
        alttype  = "torque",
        scale    = 0.1129848290276167,
        default  = "mJ",
        link     = "Foot-pound (energy)",
```

```
    },
    ["inoz-f"] = {
        name1    = "inch-ounce force",
        name2    = "inch-ounces force",
        symbol   = "in·oz<sub>f</sub>",
        utype    = "energy",
        alttype  = "torque",
        scale    = 0.00706155181422604375,
        default  = "mJ",
        link     = "Foot-pound (energy)",
    },
    ["inozf"] = {
        name1    = "inch-ounce force",
        name2    = "inch-ounces force",
        symbol   = "in·ozf",
        utype    = "energy",
        alttype  = "torque",
        scale    = 0.00706155181422604375,
        default  = "mJ",
        link     = "Foot-pound (energy)",
    },
    ["J"] = {
        _name1   = "joule",
        _symbol  = "J",
        utype    = "energy",
        scale    = 1,
        prefixes = 1,
        default  = "cal",
        link     = "Joule",
    },
    ["kBOE"] = {
        name1    = "kilo barrel of oil equivalent",
        name2    = "kilo barrels of oil equivalent",
        symbol   = "kBOE",
        utype    = "energy",
        scale    = 6.1178632e12,
        default  = "TJ",
        link     = "Barrel of oil equivalent",
    },
    ["kcal"] = {
        name1    = "kilocalorie",
        symbol   = "kcal",
        utype    = "energy",
        scale    = 4184,
        default  = "kJ",
        link     = "Calorie",
    },
    ["kcal-15"] = {
        name1    = "kilocalorie (15°C)",
        name2    = "kilocalories (15°C)",
        symbol   = "kcal<sub>15</sub>",
        utype    = "energy",
        scale    = 4185.8,
        default  = "kJ",
        link     = "Calorie",
    },
    ["kcal-IT"] = {
        name1    = "kilocalorie (International Steam Table)",
        name2    = "kilocalories (International Steam Table)",
        symbol   = "kcal<sub>IT</sub>",
        utype    = "energy",
        scale    = 4186.8,
        default  = "kJ",
        link     = "Calorie",
```

```
    },
    ["kcal-th"] = {
        name1    = "kilocalorie (thermochemical)",
        name2    = "kilocalories (thermochemical)",
        symbol   = "kcal<sub>th</sub>",
        utype    = "energy",
        scale    = 4184,
        default  = "kJ",
        link     = "Calorie",
    },
    ["kerg"] = {
        name1    = "kiloerg",
        symbol   = "kerg",
        utype    = "energy",
        scale    = 0.0001,
        default  = "mJ",
        link     = "Erg",
    },
    ["keV"] = {
        name1    = "kiloelectronvolt",
        symbol   = "keV",
        utype    = "energy",
        scale    = 1.602176487e-16,
        default  = "fJ",
        link     = "Electronvolt",
    },
    ["kgTNT"] = {
        name2    = "kilograms of TNT",
        symbol   = "kilogram of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4184000,
        default  = "MJ",
        link     = "TNT equivalent",
    },
    ["kt(TNT)"] = {
        name1    = "kilotonne",
        name1_us = "kiloton",
        symbol   = "kt",
        utype    = "energy",
        scale    = 4.184e12,
        default  = "TJ",
        link     = "TNT equivalent",
    },
    ["ktoe"] = {
        name1    = "kilotonne of oil equivalent",
        name2    = "kilotonnes of oil equivalent",
        symbol   = "ktoe",
        utype    = "energy",
        scale    = 4.1868e13,
        default  = "TJ",
        link     = "Tonne of oil equivalent",
    },
    ["ktonTNT"] = {
        name1    = "kiloton of TNT",
        name2    = "kilotons of TNT",
        symbol   = "kt",
        utype    = "energy",
        scale    = 4.184e12,
        default  = "TJ",
        link     = "TNT equivalent",
    },
    ["ktTNT"] = {
        name2    = "kilotonnes of TNT",
```

```
        symbol   = "kilotonne of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4.184e12,
        default  = "TJ",
        link     = "TNT equivalent",
    },
    ["kW.h"] = {
        name1    = "kilowatt-hour",
        symbol   = "kW·h",
        utype    = "energy",
        scale    = 3600000,
        default  = "MJ",
    },
    ["kWh"] = {
        name1    = "kilowatt-hour",
        symbol   = "kWh",
        utype    = "energy",
        scale    = 3600000,
        default  = "MJ",
    },
    ["Mcal"] = {
        name1    = "megacalorie",
        symbol   = "Mcal",
        utype    = "energy",
        scale    = 4184000,
        default  = "MJ",
        link     = "Calorie",
    },
    ["mcal"] = {
        name1    = "millicalorie",
        symbol   = "mcal",
        utype    = "energy",
        scale    = 0.004184,
        default  = "mJ",
        link     = "Calorie",
    },
    ["Mcal-15"] = {
        name1    = "megacalorie (15°C)",
        name2    = "megacalories (15°C)",
        symbol   = "Mcal<sub>15</sub>",
        utype    = "energy",
        scale    = 4185800,
        default  = "MJ",
        link     = "Calorie",
    },
    ["mcal-15"] = {
        name1    = "millicalorie (15°C)",
        name2    = "millicalories (15°C)",
        symbol   = "mcal<sub>15</sub>",
        utype    = "energy",
        scale    = 0.0041858,
        default  = "mJ",
        link     = "Calorie",
    },
    ["Mcal-IT"] = {
        name1    = "megacalorie (International Steam Table)",
        name2    = "megacalories (International Steam Table)",
        symbol   = "Mcal<sub>IT</sub>",
        utype    = "energy",
        scale    = 4186800,
        default  = "MJ",
        link     = "Calorie",
    },
```

```
    ["mcal-IT"] = {
        name1    = "millicalorie (International Steam Table)",
        name2    = "millicalories (International Steam Table)",
        symbol   = "mcal<sub>IT</sub>",
        utype    = "energy",
        scale    = 0.0041868,
        default  = "mJ",
        link     = "Calorie",
    },
    ["Mcal-th"] = {
        name1    = "megacalorie (thermochemical)",
        name2    = "megacalories (thermochemical)",
        symbol   = "Mcal<sub>th</sub>",
        utype    = "energy",
        scale    = 4184000,
        default  = "MJ",
        link     = "Calorie",
    },
    ["mcal-th"] = {
        name1    = "millicalorie (thermochemical)",
        name2    = "millicalories (thermochemical)",
        symbol   = "mcal<sub>th</sub>",
        utype    = "energy",
        scale    = 0.004184,
        default  = "mJ",
        link     = "Calorie",
    },
    ["Merg"] = {
        name1    = "megaerg",
        symbol   = "Merg",
        utype    = "energy",
        scale    = 0.1,
        default  = "J",
        link     = "Erg",
    },
    ["merg"] = {
        name1    = "millierg",
        symbol   = "merg",
        utype    = "energy",
        scale    = 0.0000000001,
        default  = "µJ",
        link     = "Erg",
    },
    ["MeV"] = {
        name1    = "megaelectronvolt",
        symbol   = "MeV",
        utype    = "energy",
        scale    = 1.602176487e-13,
        default  = "pJ",
        link     = "Electronvolt",
    },
    ["meV"] = {
        name1    = "millielectronvolt",
        symbol   = "meV",
        utype    = "energy",
        scale    = 1.602176487e-22,
        default  = "zJ",
        link     = "Electronvolt",
    },
    ["MMBtu"] = {
        name1    = "million British thermal units",
        name2    = "million British thermal units",
        symbol   = "MMBtu",
        utype    = "energy",
```

```
        scale    = 1055055852.62,
        default  = "GJ",
        link     = "British thermal unit",
    },
    ["Mt(TNT)"] = {
        name1    = "megatonne",
        name1_us = "megaton",
        symbol   = "Mt",
        utype    = "energy",
        scale    = 4.184e15,
        default  = "PJ",
        link     = "TNT equivalent",
    },
    ["Mtoe"] = {
        name1    = "megatonne of oil equivalent",
        name2    = "megatonnes of oil equivalent",
        symbol   = "Mtoe",
        utype    = "energy",
        scale    = 4.1868e16,
        default  = "PJ",
        link     = "Tonne of oil equivalent",
    },
    ["MtonTNT"] = {
        name1    = "megaton of TNT",
        name2    = "megatons of TNT",
        symbol   = "Mt",
        utype    = "energy",
        scale    = 4.184e15,
        default  = "PJ",
        link     = "TNT equivalent",
    },
    ["mtonTNT"] = {
        name2    = "millitons of TNT",
        symbol   = "milliton of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4184000,
        default  = "MJ",
        link     = "TNT equivalent",
    },
    ["MtTNT"] = {
        name2    = "megatonnes of TNT",
        symbol   = "megatonne of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4.184e15,
        default  = "PJ",
        link     = "TNT equivalent",
    },
    ["mtTNT"] = {
        name2    = "millitonnes of TNT",
        symbol   = "millitonne of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4184000,
        default  = "MJ",
        link     = "TNT equivalent",
    },
    ["MW.h"] = {
        name1    = "megawatt-hour",
        symbol   = "MW·h",
        utype    = "energy",
        scale    = 3600000000,
        default  = "GJ",
```

```
        link     = "Kilowatt-hour",
    },
    ["mW.h"] = {
        name1    = "milliwatt-hour",
        symbol   = "mW·h",
        utype    = "energy",
        scale    = 3.6,
        default  = "J",
        link     = "Kilowatt-hour",
    },
    ["MWh"] = {
        name1    = "megawatt-hour",
        symbol   = "MWh",
        utype    = "energy",
        scale    = 3600000000,
        default  = "GJ",
        link     = "Kilowatt-hour",
    },
    ["mWh"] = {
        name1    = "milliwatt-hour",
        symbol   = "mWh",
        utype    = "energy",
        scale    = 3.6,
        default  = "J",
        link     = "Kilowatt-hour",
    },
    ["neV"] = {
        name1    = "nanoelectronvolt",
        symbol   = "neV",
        utype    = "energy",
        scale    = 1.602176487e-28,
        default  = "yJ",
        link     = "Electronvolt",
    },
    ["PeV"] = {
        name1    = "petaelectronvolt",
        symbol   = "PeV",
        utype    = "energy",
        scale    = 0.0001602176487,
        default  = "mJ",
        link     = "Electronvolt",
    },
    ["peV"] = {
        name1    = "picoelectronvolt",
        symbol   = "peV",
        utype    = "energy",
        scale    = 1.602176487e-31,
        default  = "yJ",
        link     = "Electronvolt",
    },
    ["PSh"] = {
        name1    = "Pferdestärkenstunde",
        symbol   = "PSh",
        utype    = "energy",
        scale    = 2647795.5,
        default  = "kWh",
    },
    ["quad"] = {
        name1    = "quadrillion British thermal units",
        name2    = "quadrillion British thermal units",
        symbol   = "quad",
        utype    = "energy",
        scale    = 1.054804e18,
        default  = "EJ",
```

```
        link     = "Quad (unit)",
    },
    ["Ry"] = {
        name1    = "rydberg",
        symbol   = "Ry",
        utype    = "energy",
        scale    = 2.1798741e-18,
        default  = "eV",
        link     = "Rydberg constant",
    },
    ["scf"] = {
        name1    = "standard cubic foot",
        name2    = "standard cubic feet",
        symbol   = "scf",
        utype    = "energy",
        scale    = 2869.2044809344,
        default  = "kJ",
    },
    ["scfoot"] = {
        name1    = "standard cubic foot",
        name2    = "standard cubic foot",
        symbol   = "scf",
        utype    = "energy",
        scale    = 2869.2044809344,
        default  = "kJ",
    },
    ["t(TNT)"] = {
        name1    = "tonne",
        name1_us = "ton",
        symbol   = "t",
        utype    = "energy",
        scale    = 4184000000,
        default  = "GJ",
        link     = "TNT equivalent",
    },
    ["TeV"] = {
        name1    = "teraelectronvolt",
        symbol   = "TeV",
        utype    = "energy",
        scale    = 1.602176487e-7,
        default  = "µJ",
        link     = "Electronvolt",
    },
    ["th"] = {
        name1    = "thermie",
        symbol   = "th",
        utype    = "energy",
        scale    = 4186800,
        default  = "MJ",
        link     = "Conversion of units#Energy",
    },
    ["thm-EC"] = {
        name1    = "therm (EC)",
        name2    = "therms (EC)",
        symbol   = "thm (EC)",
        utype    = "energy",
        scale    = 105506000,
        default  = "MJ",
        link     = "Therm",
    },
    ["thm-UK"] = {
        name1    = "therm (UK)",
        name2    = "therms (UK)",
        symbol   = "thm (UK)",
```

```
        utype    = "energy",
        scale    = 105505585.257348,
        default  = "MJ",
        link     = "Therm",
    },
    ["thm-US"] = {
        name1    = "therm (US)",
        name1_us = "therm (U.S.)",
        name2    = "therms (US)",
        name2_us = "therms (U.S.)",
        symbol   = "thm (US)",
        sym_us   = "thm (U.S.)",
        utype    = "energy",
        scale    = 105480400,
        default  = "MJ",
        link     = "Therm",
    },
    ["toe"] = {
        name1    = "tonne of oil equivalent",
        name2    = "tonnes of oil equivalent",
        symbol   = "toe",
        utype    = "energy",
        scale    = 41868000000,
        default  = "GJ",
    },
    ["tonTNT"] = {
        name2    = "tons of TNT",
        symbol   = "ton of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4184000000,
        default  = "GJ",
        link     = "TNT equivalent",
    },
    ["tTNT"] = {
        name2    = "tonnes of TNT",
        symbol   = "tonne of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4184000000,
        default  = "GJ",
        link     = "TNT equivalent",
    },
    ["TtonTNT"] = {
        name2    = "teratons of TNT",
        symbol   = "teraton of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4.184e21,
        default  = "ZJ",
        link     = "TNT equivalent",
    },
    ["TtTNT"] = {
        name2    = "teratonnes of TNT",
        symbol   = "teratonne of TNT",
        usename  = 1,
        utype    = "energy",
        scale    = 4.184e21,
        default  = "ZJ",
        link     = "TNT equivalent",
    },
    ["TW.h"] = {
        name1    = "terawatt-hour",
        symbol   = "TW·h",
```

```
        utype    = "energy",
        scale    = 3.6e15,
        default  = "PJ",
        link     = "Kilowatt-hour",
    },
    ["TWh"] = {
        name1    = "terawatt-hour",
        symbol   = "TWh",
        utype    = "energy",
        scale    = 3.6e15,
        default  = "PJ",
        link     = "Kilowatt-hour",
    },
    ["W.h"] = {
        name1    = "watt-hour",
        symbol   = "W·h",
        utype    = "energy",
        scale    = 3600,
        default  = "kJ",
        link     = "Kilowatt-hour",
    },
    ["Wh"] = {
        name1    = "watt-hour",
        symbol   = "Wh",
        utype    = "energy",
        scale    = 3600,
        default  = "kJ",
        link     = "Kilowatt-hour",
    },
    ["µerg"] = {
        name1    = "microerg",
        symbol   = "µerg",
        utype    = "energy",
        scale    = 1e-13,
        default  = "nJ",
        link     = "Erg",
    },
    ["µeV"] = {
        name1    = "microelectronvolt",
        symbol   = "µeV",
        utype    = "energy",
        scale    = 1.602176487e-25,
        default  = "yJ",
        link     = "Electronvolt",
    },
    ["µW.h"] = {
        name1    = "microwatt-hour",
        symbol   = "µW·h",
        utype    = "energy",
        scale    = 0.0036,
        default  = "mJ",
        link     = "Kilowatt-hour",
    },
    ["µWh"] = {
        name1    = "microwatt-hour",
        symbol   = "µWh",
        utype    = "energy",
        scale    = 0.0036,
        default  = "mJ",
        link     = "Kilowatt-hour",
    },
    ["-kW.h"] = {
        target   = "kW.h",
        link     = "Kilowatt hour",
```

```
    },
    ["btu"] = {
        target   = "BTU",
    },
    ["Calorie"] = {
        target   = "Cal",
    },
    ["ft.lbf"] = {
        target   = "ftlbf",
    },
    ["ft·lbf"] = {
        target   = "ftlbf",
    },
    ["g-cal-15"] = {
        target   = "cal-15",
    },
    ["g-cal-IT"] = {
        target   = "cal-IT",
    },
    ["g-cal-th"] = {
        target   = "cal-th",
    },
    ["g-kcal-15"] = {
        target   = "kcal-15",
    },
    ["g-kcal-IT"] = {
        target   = "kcal-IT",
    },
    ["g-kcal-th"] = {
        target   = "kcal-th",
    },
    ["g-Mcal-15"] = {
        target   = "Mcal-15",
    },
    ["g-mcal-15"] = {
        target   = "mcal-15",
    },
    ["g-Mcal-IT"] = {
        target   = "Mcal-IT",
    },
    ["g-mcal-IT"] = {
        target   = "mcal-IT",
    },
    ["g-Mcal-th"] = {
        target   = "Mcal-th",
    },
    ["g-mcal-th"] = {
        target   = "mcal-th",
    },
    ["GW-h"] = {
        target   = "GW.h",
    },
    ["GW·h"] = {
        target   = "GW.h",
    },
    ["Hartree"] = {
        target   = "Eh",
    },
    ["hp.h"] = {
        target   = "hph",
    },
    ["in.lb-f"] = {
        target   = "inlb-f",
    },
```

```
    ["in.lbf"] = {
        target   = "inlbf",
    },
    ["in.oz-f"] = {
        target   = "inoz-f",
    },
    ["in.ozf"] = {
        target   = "inozf",
    },
    ["kbboe"] = {
        target   = "kBOE",
        symbol   = "kbboe",
    },
    ["kg-cal-15"] = {
        target   = "Cal-15",
    },
    ["kg-cal-IT"] = {
        target   = "Cal-IT",
    },
    ["kg-cal-th"] = {
        target   = "Cal-th",
    },
    ["kW-h"] = {
        target   = "kW.h",
    },
    ["kW·h"] = {
        target   = "kW.h",
    },
    ["MW-h"] = {
        target   = "MW.h",
    },
    ["mW-h"] = {
        target   = "mW.h",
    },
    ["MW·h"] = {
        target   = "MW.h",
    },
    ["TW-h"] = {
        target   = "TW.h",
    },
    ["uerg"] = {
        target   = "µerg",
    },
    ["ueV"] = {
        target   = "µeV",
    },
    ["uW-h"] = {
        target   = "µW.h",
    },
    ["uW.h"] = {
        target   = "µW.h",
    },
    ["uWh"] = {
        target   = "µWh",
    },
    ["W-h"] = {
        target   = "W.h",
    },
    ["eVpar"] = {
        _name1   = "electronvolt",
        _symbol  = "eV",
        utype    = "energy per chemical amount",
        scale    = 96485.329522144166,
        prefixes = 1,
```

```
        default  = "kcal/mol",
        link     = "Electronvolt",
    },
    ["kcal/mol"] = {
        per      = { "kcal", "mol" },
        utype    = "energy per chemical amount",
        default  = "kJ/mol",
        link     = "Kilocalorie per mole",
    },
    ["kJ/mol"] = {
        per      = { "kJ", "mol" },
        utype    = "energy per chemical amount",
        default  = "kcal/mol",
        link     = "Joule per mole",
    },
    ["kWh/100 km"] = {
        name1    = "kilowatt-hour per 100 kilometres",
        name1_us = "kilowatt-hour per 100 kilometers",
        name2    = "kilowatt-hours per 100 kilometres",
        name2_us = "kilowatt-hours per 100 kilometers",
        symbol   = "kW·h/100 km",
        utype    = "energy per unit length",
        scale    = 36,
        default  = "MJ/km kWh/mi",
        link     = "Kilowatt-hour",
    },
    ["kWh/100 mi"] = {
        name1    = "kilowatt-hour per 100 miles",
        name2    = "kilowatt-hours per 100 miles",
        symbol   = "kW·h/100 mi",
        utype    = "energy per unit length",
        scale    = 22.3694,
        default  = "mpge",
        link     = "Miles per gallon gasoline equivalent",
    },
    ["MJ/100 km"] = {
        name1    = "megajoule per 100 kilometres",
        name1_us = "megajoule per 100 kilometers",
        name2    = "megajoules per 100 kilometres",
        name2_us = "megajoules per 100 kilometers",
        symbol   = "MJ/100 km",
        utype    = "energy per unit length",
        scale    = 10,
        default  = "BTU/mi",
        link     = "British thermal unit",
    },
    ["mpge"] = {
        name1    = "mile per gallon gasoline equivalent",
        name2    = "miles per gallon gasoline equivalent",
        symbol   = "mpg&#8209;e",
        utype    = "energy per unit length",
        scale    = 13e-6,
        invert   = -1,
        iscomplex= true,
        default  = "kWh/100 mi",
        link     = "Miles per gallon gasoline equivalent",
    },
    ["BTU/mi"] = {
        per      = { "BTU", "mi" },
        utype    = "energy per unit length",
        default  = "v > 1525 ! M ! k ! J/km",
    },
    ["kJ/km"] = {
        per      = { "kJ", "km" },
```

```
        utype    = "energy per unit length",
        default  = "BTU/mi",
    },
    ["kWh/km"] = {
        per      = { "-kW.h", "km" },
        utype    = "energy per unit length",
        default  = "MJ/km kWh/mi",
    },
    ["kWh/mi"] = {
        per      = { "-kW.h", "mi" },
        utype    = "energy per unit length",
        default  = "kWh/km MJ/km",
    },
    ["MJ/km"] = {
        per      = { "MJ", "km" },
        utype    = "energy per unit length",
        default  = "BTU/mi",
    },
    ["mpg-e"] = {
        target   = "mpge",
    },
    ["BTU/lb"] = {
        name1    = "British thermal unit per pound",
        name2    = "British thermal units per pound",
        symbol   = "BTU/lb",
        utype    = "energy per unit mass",
        scale    = 429.92261414790346,
        default  = "kJ/kg",
        link     = "British thermal unit",
    },
    ["cal/g"] = {
        name1    = "calorie per gram",
        name2    = "calories per gram",
        symbol   = "cal/g",
        utype    = "energy per unit mass",
        scale    = 4184,
        default  = "J/g",
    },
    ["GJ/kg"] = {
        name1    = "gigajoule per kilogram",
        name2    = "gigajoules per kilogram",
        symbol   = "GJ/kg",
        utype    = "energy per unit mass",
        scale    = 1e9,
        default  = "ktTNT/t",
        link     = "Specific energy",
    },
    ["J/g"] = {
        name1    = "joule per gram",
        name2    = "joules per gram",
        symbol   = "J/g",
        utype    = "energy per unit mass",
        scale    = 1000,
        default  = "kcal/g",
        link     = "Specific energy",
    },
    ["kcal/g"] = {
        name1    = "kilocalorie per gram",
        name2    = "kilocalories per gram",
        symbol   = "kcal/g",
        utype    = "energy per unit mass",
        scale    = 4184000,
        default  = "kJ/g",
    },
```

```
    ["kJ/g"] = {
        name1    = "kilojoule per gram",
        name2    = "kilojoules per gram",
        symbol   = "kJ/g",
        utype    = "energy per unit mass",
        scale    = 1000000,
        default  = "kcal/g",
        link     = "Specific energy",
    },
    ["kJ/kg"] = {
        name1    = "kilojoule per kilogram",
        name2    = "kilojoules per kilogram",
        symbol   = "kJ/kg",
        utype    = "energy per unit mass",
        scale    = 1000,
        default  = "BTU/lb",
        link     = "Specific energy",
    },
    ["ktonTNT/MT"] = {
        name2    = "kilotons of TNT per metric ton",
        symbol   = "kiloton of TNT per metric ton",
        usename  = 1,
        utype    = "energy per unit mass",
        scale    = 4184000000,
        default  = "GJ/kg",
        link     = "TNT equivalent",
    },
    ["ktTNT/t"] = {
        name2    = "kilotonnes of TNT per tonne",
        symbol   = "kilotonne of TNT per tonne",
        usename  = 1,
        utype    = "energy per unit mass",
        scale    = 4184000000,
        default  = "GJ/kg",
        link     = "TNT equivalent",
    },
    ["MtonTNT/MT"] = {
        name2    = "megatons of TNT per metric ton",
        symbol   = "megaton of TNT per metric ton",
        usename  = 1,
        utype    = "energy per unit mass",
        scale    = 4.184e12,
        default  = "TJ/kg",
        link     = "TNT equivalent",
    },
    ["MtTNT/MT"] = {
        name2    = "megatonnes of TNT per tonne",
        symbol   = "megatonne of TNT per tonne",
        usename  = 1,
        utype    = "energy per unit mass",
        scale    = 4.184e12,
        default  = "TJ/kg",
        link     = "TNT equivalent",
    },
    ["TJ/kg"] = {
        name1    = "terajoule per kilogram",
        name2    = "terajoules per kilogram",
        symbol   = "TJ/kg",
        utype    = "energy per unit mass",
        scale    = 1e12,
        default  = "MtTNT/MT",
        link     = "Specific energy",
    },
    ["Cal/g"] = {
```

```
        per      = { "Cal", "g" },
        utype    = "energy per unit mass",
        default  = "kJ/g",
    },
    ["BTU/cuft"] = {
        per      = { "BTU", "cuft" },
        utype    = "energy per unit volume",
        default  = "kJ/L",
    },
    ["Cal/12USoz(mL)serve"] = {
        per      = { "Cal", "-12USoz(mL)serve" },
        utype    = "energy per unit volume",
        default  = "kJ/L",
    },
    ["Cal/12USoz(ml)serve"] = {
        per      = { "Cal", "-12USoz(ml)serve" },
        utype    = "energy per unit volume",
        default  = "kJ/l",
    },
    ["Cal/12USozserve"] = {
        per      = { "Cal", "-12USozserve" },
        utype    = "energy per unit volume",
        default  = "kJ/L",
    },
    ["Cal/USoz"] = {
        per      = { "Cal", "USoz" },
        utype    = "energy per unit volume",
        default  = "kJ/ml",
    },
    ["kJ/L"] = {
        per      = { "kJ", "L" },
        utype    = "energy per unit volume",
        default  = "BTU/cuft",
    },
    ["kJ/l"] = {
        per      = { "kJ", "l" },
        utype    = "energy per unit volume",
        default  = "BTU/cuft",
    },
    ["kJ/ml"] = {
        per      = { "kJ", "ml" },
        utype    = "energy per unit volume",
        default  = "Cal/USoz",
    },
    ["MJ/m3"] = {
        per      = { "MJ", "m3" },
        utype    = "energy per unit volume",
        default  = "BTU/cuft",
    },
    ["Sv"] = {
        _name1   = "sievert",
        _symbol  = "Sv",
        utype    = "equivalent radiation dose",
        scale    = 1,
        prefixes = 1,
        default  = "rem",
        link     = "Sievert",
    },
    ["rem"] = {
        _name1   = "rem",
        _symbol  = "rem",
        utype    = "equivalent radiation dose",
        scale    = 0.01,
        prefixes = 1,
```

```
        default  = "Sv",
        link     = "Roentgen equivalent man",
    },
    ["g/km"] = {
        name1    = "gram per kilometre",
        name1_us = "gram per kilometer",
        name2    = "grams per kilometre",
        name2_us = "grams per kilometer",
        symbol   = "g/km",
        utype    = "exhaust emission",
        scale    = 1e-6,
        default  = "oz/mi",
        link     = "Exhaust gas",
    },
    ["g/mi"] = {
        name1    = "gram per mile",
        name2    = "grams per mile",
        symbol   = "g/mi",
        utype    = "exhaust emission",
        scale    = 6.2137119223733397e-7,
        default  = "g/km",
        link     = "Exhaust gas",
    },
    ["gCO2/km"] = {
        name1    = "gram of CO<sub>2</sub> per kilometre",
        name1_us = "gram of CO<sub>2</sub> per kilometer",
        name2    = "grams of CO<sub>2</sub> per kilometre",
        name2_us = "grams of CO<sub>2</sub> per kilometer",
        symbol   = "g(CO<sub>2</sub>)/km",
        utype    = "exhaust emission",
        scale    = 1e-6,
        default  = "ozCO2/mi",
        link     = "Exhaust gas",
    },
    ["gCO2/mi"] = {
        name1    = "gram of CO<sub>2</sub> per mile",
        name2    = "grams of CO<sub>2</sub> per mile",
        symbol   = "g(CO<sub>2</sub>)/mi",
        utype    = "exhaust emission",
        scale    = 6.2137119223733397e-7,
        default  = "gCO2/km",
        link     = "Exhaust gas",
    },
    ["kg/km"] = {
        name1    = "kilogram per kilometre",
        name1_us = "kilogram per kilometer",
        name2    = "kilograms per kilometre",
        name2_us = "kilograms per kilometer",
        symbol   = "kg/km",
        utype    = "exhaust emission",
        scale    = 0.001,
        default  = "lb/mi",
        link     = "Exhaust gas",
    },
    ["kgCO2/km"] = {
        name1    = "kilogram of CO<sub>2</sub> per kilometre",
        name1_us = "kilogram of CO<sub>2</sub> per kilometer",
        name2    = "kilograms of CO<sub>2</sub> per kilometre",
        name2_us = "kilograms of CO<sub>2</sub> per kilometer",
        symbol   = "kg(CO<sub>2</sub>)/km",
        utype    = "exhaust emission",
        scale    = 0.001,
        default  = "lbCO2/mi",
        link     = "Exhaust gas",
```

```
    },
    ["lb/mi"] = {
        name1    = "pound per mile",
        name2    = "pounds per mile",
        symbol   = "lb/mi",
        utype    = "exhaust emission",
        scale    = 0.00028184923173665794,
        default  = "kg/km",
        link     = "Exhaust gas",
    },
    ["lbCO2/mi"] = {
        name1    = "pound of CO<sub>2</sub> per mile",
        name2    = "pounds of CO<sub>2</sub> per mile",
        symbol   = "lb(CO<sub>2</sub>)/mi",
        utype    = "exhaust emission",
        scale    = 0.00028184923173665794,
        default  = "kgCO2/km",
        link     = "Exhaust gas",
    },
    ["oz/mi"] = {
        name1    = "ounce per mile",
        name2    = "ounces per mile",
        symbol   = "oz/mi",
        utype    = "exhaust emission",
        scale    = 1.7615576983541121e-5,
        default  = "g/km",
        link     = "Exhaust gas",
    },
    ["ozCO2/mi"] = {
        name1    = "ounce of CO<sub>2</sub> per mile",
        name2    = "ounces of CO<sub>2</sub> per mile",
        symbol   = "oz(CO<sub>2</sub>)/mi",
        utype    = "exhaust emission",
        scale    = 1.7615576983541121e-5,
        default  = "gCO2/km",
        link     = "Exhaust gas",
    },
    ["cuft/a"] = {
        name1    = "cubic foot per annum",
        name2    = "cubic feet per annum",
        symbol   = "cu ft/a",
        utype    = "flow",
        scale    = 8.9730672142368242e-10,
        default  = "m3/a",
        link     = "Cubic foot per second",
    },
    ["cuft/d"] = {
        name1    = "cubic foot per day",
        name2    = "cubic feet per day",
        symbol   = "cu ft/d",
        utype    = "flow",
        scale    = 3.2774128000000003e-7,
        default  = "m3/d",
        link     = "Cubic foot per second",
    },
    ["cuft/h"] = {
        name1    = "cubic foot per hour",
        name2    = "cubic feet per hour",
        symbol   = "cu ft/h",
        utype    = "flow",
        scale    = 7.8657907200000004e-6,
        default  = "m3/h",
        link     = "Cubic foot per second",
    },
```

```
    ["cuft/min"] = {
        name1    = "cubic foot per minute",
        name2    = "cubic feet per minute",
        symbol   = "cu ft/min",
        utype    = "flow",
        scale    = 0.00047194744319999999,
        default  = "m3/min",
    },
    ["cuft/s"] = {
        name1    = "cubic foot per second",
        name2    = "cubic feet per second",
        symbol   = "cu ft/s",
        utype    = "flow",
        scale    = 28316846592e-12,
        default  = "m3/s",
    },
    ["cumi/a"] = {
        name1    = "cubic mile per annum",
        name2    = "cubic miles per annum",
        symbol   = "cu mi/a",
        utype    = "flow",
        scale    = 132.08171170940057,
        default  = "km3/a",
        link     = "Cubic foot per second",
    },
    ["cuyd/h"] = {
        name1    = "cubic yard per hour",
        name2    = "cubic yards per hour",
        symbol   = "cuyd/h",
        utype    = "flow",
        scale    = 0.00021237634944000001,
        default  = "m3/h",
        link     = "Cubic foot per second",
    },
    ["cuyd/s"] = {
        name1    = "cubic yard per second",
        name2    = "cubic yards per second",
        symbol   = "cu yd/s",
        utype    = "flow",
        scale    = 0.76455485798400002,
        default  = "m3/s",
    },
    ["Goilbbl/a"] = {
        name1    = "billion barrels per year",
        name2    = "billion barrels per year",
        symbol   = "Gbbl/a",
        utype    = "flow",
        scale    = 5.0380033629933836,
        default  = "v * 1.58987294928 < 10 ! e6 ! e9 ! m3/a",
        link     = "Barrel per day",
    },
    ["impgal/h"] = {
        name1    = "imperial gallon per hour",
        name2    = "imperial gallons per hour",
        symbol   = "imp gal/h",
        utype    = "flow",
        scale    = 1.2628027777777779e-6,
        default  = "m3/h",
        link     = "Gallon",
    },
    ["impgal/min"] = {
        name1    = "imperial gallon per minute",
        name2    = "imperial gallons per minute",
        symbol   = "imp gal/min",
```

```
        utype    = "flow",
        scale    = 7.5768166666666671e-5,
        default  = "m3/s",
        link     = "Gallon",
    },
    ["impgal/s"] = {
        name1    = "imperial gallon per second",
        name2    = "imperial gallons per second",
        symbol   = "impgal/s",
        utype    = "flow",
        scale    = 0.00454609,
        default  = "m3/s",
        link     = "Imperial gallons per second",
    },
    ["km3/a"] = {
        name1    = "cubic kilometre per annum",
        name1_us = "cubic kilometer per annum",
        name2    = "cubic kilometres per annum",
        name2_us = "cubic kilometers per annum",
        symbol   = "km<sup>3</sup>/a",
        utype    = "flow",
        scale    = 31.68808781402895,
        default  = "cumi/a",
        link     = "Cubic metre per second",
    },
    ["km3/d"] = {
        name1    = "cubic kilometre per day",
        name1_us = "cubic kilometer per day",
        name2    = "cubic kilometres per day",
        name2_us = "cubic kilometers per day",
        symbol   = "km<sup>3</sup>/d",
        utype    = "flow",
        scale    = 11574.074074074075,
        default  = "cuft/d",
        link     = "Cubic metre per second",
    },
    ["koilbbl/a"] = {
        name1    = "thousand barrels per year",
        name2    = "thousand barrels per year",
        symbol   = "kbbl/a",
        utype    = "flow",
        scale    = 5.0380033629933841e-6,
        default  = "v * 1.58987294928 < 10 ! ! e3 ! m3/a",
        link     = "Barrel per day",
    },
    ["koilbbl/d"] = {
        name1    = "thousand barrels per day",
        name2    = "thousand barrels per day",
        symbol   = "kbbl/d",
        utype    = "flow",
        scale    = 0.0018401307283333335,
        default  = "v * 1.58987294928 < 10 ! ! e3 ! m3/d",
        link     = "Barrel per day",
    },
    ["L/h"] = {
        name1    = "litre per hour",
        name1_us = "liter per hour",
        name2    = "litres per hour",
        name2_us = "liters per hour",
        symbol   = "L/h",
        utype    = "flow",
        scale    = 2.7777777777777776e-7,
        default  = "impgal/h USgal/h",
        link     = "Cubic metre per second",
```

```
    },
    ["L/min"] = {
        name1    = "litre per minute",
        name1_us = "liter per minute",
        name2    = "litres per minute",
        name2_us = "liters per minute",
        symbol   = "L/min",
        utype    = "flow",
        scale    = 1.6666666666666667e-5,
        default  = "impgal/min USgal/min",
        link     = "Cubic metre per second",
    },
    ["L/s"] = {
        name1    = "litre per second",
        name1_us = "liter per second",
        name2    = "litres per second",
        name2_us = "liters per second",
        symbol   = "L/s",
        utype    = "flow",
        scale    = 0.001,
        default  = "cuft/s",
        link     = "Cubic metre per second",
    },
    ["m3/a"] = {
        name1    = "cubic metre per annum",
        name1_us = "cubic meter per annum",
        name2    = "cubic metres per annum",
        name2_us = "cubic meters per annum",
        symbol   = "m<sup>3</sup>/a",
        utype    = "flow",
        scale    = 3.1688087814028947e-8,
        default  = "cuft/a",
        link     = "Cubic metre per second",
    },
    ["m3/d"] = {
        name1    = "cubic metre per day",
        name1_us = "cubic meter per day",
        name2    = "cubic metres per day",
        name2_us = "cubic meters per day",
        symbol   = "m<sup>3</sup>/d",
        utype    = "flow",
        scale    = 1.1574074074074073e-5,
        default  = "cuft/d",
        link     = "Cubic metre per second",
    },
    ["m3/h"] = {
        name1    = "cubic metre per hour",
        name1_us = "cubic meter per hour",
        name2    = "cubic metres per hour",
        name2_us = "cubic meters per hour",
        symbol   = "m<sup>3</sup>/h",
        utype    = "flow",
        scale    = 0.00027777777777777778,
        default  = "cuft/h",
        link     = "Cubic metre per second",
    },
    ["m3/min"] = {
        name1    = "cubic metre per minute",
        name1_us = "cubic meter per minute",
        name2    = "cubic metres per minute",
        name2_us = "cubic meters per minute",
        symbol   = "m<sup>3</sup>/min",
        utype    = "flow",
        scale    = 0.016666666666666666,
```

```
        default  = "cuft/min",
        link     = "Cubic metre per second",
    },
    ["m3/s"] = {
        name1    = "cubic metre per second",
        name1_us = "cubic meter per second",
        name2    = "cubic metres per second",
        name2_us = "cubic meters per second",
        symbol   = "m<sup>3</sup>/s",
        utype    = "flow",
        scale    = 1,
        default  = "cuft/s",
    },
    ["Moilbbl/a"] = {
        name1    = "million barrels per year",
        name2    = "million barrels per year",
        symbol   = "Mbbl/a",
        utype    = "flow",
        scale    = 0.0050380033629933837,
        default  = "v * 1.58987294928 < 10 ! e3 ! e6 ! m3/a",
        link     = "Barrel per day",
    },
    ["Moilbbl/d"] = {
        name1    = "million barrels per day",
        name2    = "million barrels per day",
        symbol   = "Mbbl/d",
        utype    = "flow",
        scale    = 1.8401307283333335,
        default  = "v * 1.58987294928 < 10 ! e3 ! e6 ! m3/d",
        link     = "Barrel per day",
    },
    ["oilbbl/a"] = {
        name1    = "barrel per year",
        name2    = "barrels per year",
        symbol   = "bbl/a",
        utype    = "flow",
        scale    = 5.0380033629933841e-9,
        default  = "m3/a",
        link     = "Barrel per day",
    },
    ["oilbbl/d"] = {
        name1    = "barrel per day",
        name2    = "barrels per day",
        symbol   = "bbl/d",
        utype    = "flow",
        scale    = 1.8401307283333336e-6,
        default  = "m3/d",
    },
    ["Toilbbl/a"] = {
        name1    = "trillion barrels per year",
        name2    = "trillion barrels per year",
        symbol   = "Tbbl/a",
        utype    = "flow",
        scale    = 5038.0033629933832,
        default  = "v * 1.58987294928 < 10 ! e9 ! e12 ! m3/a",
        link     = "Barrel per day",
    },
    ["U.S.gal/d"] = {
        name1    = "U.S. gallon per day",
        name2    = "U.S. gallons per day",
        symbol   = "U.S. gal/d",
        utype    = "flow",
        scale    = 4.3812636388888893e-8,
        default  = "m3/s",
```

```
        customary= 1,
    },
    ["U.S.gal/h"] = {
        name1    = "gallon per hour",
        name2    = "gallons per hour",
        symbol   = "gal/h",
        utype    = "flow",
        scale    = 1.0515032733333334e-6,
        default  = "m3/h",
        link     = "Gallon",
        customary= 2,
    },
    ["U.S.gal/min"] = {
        name1    = "U.S. gallon per minute",
        name2    = "U.S. gallons per minute",
        symbol   = "U.S. gal/min",
        utype    = "flow",
        scale    = 6.3090196400000003e-5,
        default  = "m3/s",
        link     = "Gallon",
    },
    ["USgal/a"] = {
        name1    = "US gallon per year",
        name2    = "US gallons per year",
        symbol   = "US gal/a",
        utype    = "flow",
        scale    = 1.1995246102365199e-10,
        default  = "m3/s",
    },
    ["USgal/d"] = {
        name1    = "US gallon per day",
        name2    = "US gallons per day",
        symbol   = "US gal/d",
        utype    = "flow",
        scale    = 4.3812636388888893e-8,
        default  = "m3/s",
    },
    ["USgal/h"] = {
        name1    = "gallon per hour",
        name2    = "gallons per hour",
        symbol   = "gal/h",
        utype    = "flow",
        scale    = 1.0515032733333334e-6,
        default  = "m3/h",
        link     = "Gallon",
        customary= 1,
    },
    ["USgal/min"] = {
        name1    = "US gallon per minute",
        name2    = "US gallons per minute",
        symbol   = "US gal/min",
        utype    = "flow",
        scale    = 6.3090196400000003e-5,
        default  = "m3/s",
        link     = "Gallon",
    },
    ["USgal/s"] = {
        name1    = "US gallon per second",
        name1_us = "U.S. gallon per second",
        name2    = "US gallons per second",
        name2_us = "U.S. gallons per second",
        symbol   = "USgal/s",
        utype    = "flow",
        scale    = 0.003785411784,
```

```
        default  = "m3/s",
        link     = "US gallons per second",
    },
    ["ft3/a"] = {
        target   = "cuft/a",
    },
    ["ft3/d"] = {
        target   = "cuft/d",
    },
    ["ft3/h"] = {
        target   = "cuft/h",
    },
    ["ft3/s"] = {
        target   = "cuft/s",
    },
    ["Gcuft/a"] = {
        target   = "e9cuft/a",
    },
    ["Gcuft/d"] = {
        target   = "e9cuft/d",
    },
    ["kcuft/a"] = {
        target   = "e3cuft/a",
    },
    ["kcuft/d"] = {
        target   = "e3cuft/d",
    },
    ["kcuft/s"] = {
        target   = "e3cuft/s",
    },
    ["Mcuft/a"] = {
        target   = "e6cuft/a",
    },
    ["Mcuft/d"] = {
        target   = "e6cuft/d",
    },
    ["Mcuft/s"] = {
        target   = "e6cuft/s",
    },
    ["m³/s"] = {
        target   = "m3/s",
    },
    ["Tcuft/a"] = {
        target   = "e12cuft/a",
    },
    ["Tcuft/d"] = {
        target   = "e12cuft/d",
    },
    ["u.s.gal/min"] = {
        target   = "U.S.gal/min",
    },
    ["usgal/min"] = {
        target   = "USgal/min",
    },
    ["-LTf"] = {
        name1    = "long ton-force",
        name2    = "long tons-force",
        symbol   = "LTf",
        utype    = "force",
        scale    = 9964.01641818352,
        default  = "kN",
    },
    ["-STf"] = {
        name1    = "short ton-force",
```

```
        name2    = "short tons-force",
        symbol   = "STf",
        utype    = "force",
        scale    = 8896.443230521,
        default  = "kN",
    },
    ["dyn"] = {
        name1    = "dyne",
        symbol   = "dyn",
        utype    = "force",
        scale    = 0.00001,
        default  = "gr-f",
    },
    ["g-f"] = {
        name1    = "gram-force",
        name2    = "grams-force",
        symbol   = "g<sub>f</sub>",
        utype    = "force",
        scale    = 0.00980665,
        default  = "mN oz-f",
        link     = "Kilogram-force",
    },
    ["gf"] = {
        name1    = "gram-force",
        name2    = "grams-force",
        symbol   = "gf",
        utype    = "force",
        scale    = 0.00980665,
        default  = "mN ozf",
        link     = "Kilogram-force",
    },
    ["gr-f"] = {
        name1    = "grain-force",
        name2    = "grains-force",
        symbol   = "gr<sub>f</sub>",
        utype    = "force",
        scale    = 0.0006354602307515,
        default  = "µN",
        link     = "Pound (force)",
    },
    ["grf"] = {
        name1    = "grain-force",
        name2    = "grains-force",
        symbol   = "grf",
        utype    = "force",
        scale    = 0.0006354602307515,
        default  = "µN",
        link     = "Pound (force)",
    },
    ["kdyn"] = {
        name1    = "kilodyne",
        symbol   = "kdyn",
        utype    = "force",
        scale    = 0.01,
        default  = "oz-f",
        link     = "Dyne",
    },
    ["kg-f"] = {
        name1    = "kilogram-force",
        name2    = "kilograms-force",
        symbol   = "kg<sub>f</sub>",
        utype    = "force",
        scale    = 9.80665,
        default  = "N lb-f",
```

```
    },
    ["kgf"] = {
        name1    = "kilogram-force",
        name2    = "kilograms-force",
        symbol   = "kgf",
        utype    = "force",
        scale    = 9.80665,
        default  = "N lbf",
    },
    ["kp"] = {
        name1    = "kilopond",
        symbol   = "kp",
        utype    = "force",
        scale    = 9.80665,
        default  = "N lb-f",
        link     = "Kilogram-force",
    },
    ["L/T-f"] = {
        name1    = "long ton-force",
        name2    = "long tons-force",
        symbol   = "L/T<sub>f</sub>",
        utype    = "force",
        scale    = 9964.01641818352,
        default  = "kN",
    },
    ["L/Tf"] = {
        name1    = "long ton-force",
        name2    = "long tons-force",
        symbol   = "L/Tf",
        utype    = "force",
        scale    = 9964.01641818352,
        default  = "kN",
    },
    ["lb-f"] = {
        name1    = "pound-force",
        name2    = "pounds-force",
        symbol   = "lb<sub>f</sub>",
        utype    = "force",
        scale    = 4.4482216152605,
        default  = "N",
        link     = "Pound (force)",
    },
    ["lbf"] = {
        name1    = "pound-force",
        name2    = "pounds-force",
        symbol   = "lbf",
        utype    = "force",
        scale    = 4.4482216152605,
        default  = "N",
        link     = "Pound (force)",
    },
    ["lb(f)"] = {
        name1    = "pound",
        symbol   = "lb",
        utype    = "force",
        scale    = 4.4482216152605,
        default  = "N",
        link     = "Pound (force)",
    },
    ["LT-f"] = {
        name1    = "long ton-force",
        name2    = "long tons-force",
        symbol   = "LT<sub>f</sub>",
        utype    = "force",
```

```
        scale    = 9964.01641818352,
        default  = "kN",
    },
    ["LTf"] = {
        name1    = "long ton-force",
        name2    = "long tons-force",
        symbol   = "LTf",
        usename  = 1,
        utype    = "force",
        scale    = 9964.01641818352,
        default  = "kN",
    },
    ["Mdyn"] = {
        name1    = "megadyne",
        symbol   = "Mdyn",
        utype    = "force",
        scale    = 10,
        default  = "lb-f",
        link     = "Dyne",
    },
    ["mdyn"] = {
        name1    = "millidyne",
        symbol   = "mdyn",
        utype    = "force",
        scale    = 0.00000001,
        default  = "gr-f",
        link     = "Dyne",
    },
    ["mg-f"] = {
        name1    = "milligram-force",
        name2    = "milligrams-force",
        symbol   = "mg<sub>f</sub>",
        utype    = "force",
        scale    = 0.00000980665,
        default  = "µN gr-f",
        link     = "Kilogram-force",
    },
    ["mgf"] = {
        name1    = "milligram-force",
        name2    = "milligrams-force",
        symbol   = "mgf",
        utype    = "force",
        scale    = 0.00000980665,
        default  = "µN grf",
        link     = "Kilogram-force",
    },
    ["Mp"] = {
        name1    = "megapond",
        symbol   = "Mp",
        utype    = "force",
        scale    = 9806.65,
        default  = "kN LT-f ST-f",
        link     = "Kilogram-force",
    },
    ["mp"] = {
        name1    = "millipond",
        symbol   = "mp",
        utype    = "force",
        scale    = 0.00000980665,
        default  = "µN gr-f",
        link     = "Kilogram-force",
    },
    ["N"] = {
        _name1   = "newton",
```

```
        _symbol  = "N",
        utype    = "force",
        scale    = 1,
        prefixes = 1,
        default  = "lb-f",
        link     = "Newton (unit)",
    },
    ["oz-f"] = {
        name1    = "ounce-force",
        name2    = "ounces-force",
        symbol   = "oz<sub>f</sub>",
        utype    = "force",
        scale    = 0.2780138203095378125,
        default  = "mN",
        link     = "Pound (force)",
    },
    ["ozf"] = {
        name1    = "ounce-force",
        name2    = "ounces-force",
        symbol   = "ozf",
        utype    = "force",
        scale    = 0.2780138203095378125,
        default  = "mN",
        link     = "Pound (force)",
    },
    ["p"] = {
        name1    = "pond",
        symbol   = "p",
        utype    = "force",
        scale    = 0.00980665,
        default  = "mN oz-f",
        link     = "Kilogram-force",
    },
    ["pdl"] = {
        name1    = "poundal",
        symbol   = "pdl",
        utype    = "force",
        scale    = 0.138254954376,
        default  = "N",
    },
    ["S/T-f"] = {
        name1    = "short ton-force",
        name2    = "short tons-force",
        symbol   = "S/T<sub>f</sub>",
        utype    = "force",
        scale    = 8896.443230521,
        default  = "kN",
    },
    ["S/Tf"] = {
        name1    = "short ton-force",
        name2    = "short tons-force",
        symbol   = "S/Tf",
        utype    = "force",
        scale    = 8896.443230521,
        default  = "kN",
    },
    ["ST-f"] = {
        name1    = "short ton-force",
        name2    = "short tons-force",
        symbol   = "ST<sub>f</sub>",
        utype    = "force",
        scale    = 8896.443230521,
        default  = "kN",
    },
```

```
    ["STf"] = {
        name1    = "short ton-force",
        name2    = "short tons-force",
        symbol   = "STf",
        usename  = 1,
        utype    = "force",
        scale    = 8896.443230521,
        default  = "kN",
    },
    ["t-f"] = {
        name1    = "tonne-force",
        name2    = "tonnes-force",
        symbol   = "t<sub>f</sub>",
        utype    = "force",
        scale    = 9806.65,
        default  = "kN LT-f ST-f",
        link     = "Ton-force#Tonne-force",
    },
    ["tf"] = {
        name1    = "tonne-force",
        name2    = "tonnes-force",
        symbol   = "tf",
        utype    = "force",
        scale    = 9806.65,
        default  = "kN LTf STf",
        link     = "Ton-force#Tonne-force",
    },
    ["dyne"] = {
        target   = "dyn",
    },
    ["newtons"] = {
        target   = "N",
    },
    ["poundal"] = {
        target   = "pdl",
    },
    ["tonne-force"] = {
        target   = "tf",
    },
    ["impgal/mi"] = {
        per      = { "@impgal", "mi" },
        utype    = "fuel efficiency",
        invert   = 1,
        iscomplex= true,
        default  = "l/km USgal/mi",
    },
    ["km/L"] = {
        per      = { "km", "L" },
        utype    = "fuel efficiency",
        invert   = -1,
        iscomplex= true,
        default  = "mpgimp mpgus",
    },
    ["km/l"] = {
        per      = { "km", "l" },
        utype    = "fuel efficiency",
        invert   = -1,
        iscomplex= true,
        default  = "mpgimp mpgus",
    },
    ["L/100 km"] = {
        per      = { "L", "100km" },
        utype    = "fuel efficiency",
        invert   = 1,
```

```
        iscomplex= true,
        default  = "mpgimp mpgus",
        symlink  = "[[Fuel economy in automobiles#Units of measure|L/100 km]
    },
    ["l/100 km"] = {
        per      = { "l", "100km" },
        utype    = "fuel efficiency",
        invert   = 1,
        iscomplex= true,
        default  = "mpgimp mpgus",
        symlink  = "[[Fuel economy in automobiles#Units of measure|l/100 km]
    },
    ["L/km"] = {
        per      = { "L", "km" },
        utype    = "fuel efficiency",
        invert   = 1,
        iscomplex= true,
        default  = "mpgimp mpgus",
    },
    ["l/km"] = {
        per      = { "l", "km" },
        utype    = "fuel efficiency",
        invert   = 1,
        iscomplex= true,
        default  = "mpgimp mpgus",
    },
    ["mi/impqt"] = {
        per      = { "mi", "impqt" },
        utype    = "fuel efficiency",
        invert   = -1,
        iscomplex= true,
        default  = "km/L",
    },
    ["mi/U.S.qt"] = {
        per      = { "mi", "U.S.qt" },
        utype    = "fuel efficiency",
        invert   = -1,
        iscomplex= true,
        default  = "km/L",
    },
    ["mi/USqt"] = {
        per      = { "mi", "USqt" },
        utype    = "fuel efficiency",
        invert   = -1,
        iscomplex= true,
        default  = "km/L",
    },
    ["mi/usqt"] = {
        per      = { "mi", "usqt" },
        utype    = "fuel efficiency",
        invert   = -1,
        iscomplex= true,
        default  = "km/L",
    },
    ["mpgimp"] = {
        per      = { "mi", "@impgal" },
        symbol   = "mpg<sub>&#8209;imp</sub>",
        utype    = "fuel efficiency",
        invert   = -1,
        iscomplex= true,
        default  = "L/100 km+mpgus",
        symlink  = "[[Fuel economy in automobiles#Units of measure|mpg]]<sub>&#82
    },
    ["mpgus"] = {
```

```
        per      = { "mi", "+USgal" },
        symbol   = "mpg<sub>&#8209;US</sub>",
        utype    = "fuel efficiency",
        invert   = -1,
        iscomplex= true,
        default  = "L/100 km+mpgimp",
        symlink  = "[[Fuel economy in automobiles#Units of measure|mpg]]<sub>&#82
    },
    ["U.S.gal/mi"] = {
        per      = { "*U.S.gal", "mi" },
        sp_us    = true,
        utype    = "fuel efficiency",
        invert   = 1,
        iscomplex= true,
        default  = "l/km impgal/mi",
    },
    ["usgal/mi"] = {
        per      = { "+USgal", "mi" },
        utype    = "fuel efficiency",
        invert   = 1,
        iscomplex= true,
        default  = "l/km impgal/mi",
    },
    ["L/100km"] = {
        target   = "L/100 km",
    },
    ["l/100km"] = {
        target   = "l/100 km",
    },
    ["mpg"] = {
        shouldbe = "Use %{mpgus%} for miles per US gallon or %{mpgimp%} for miles
    },
    ["mpgU.S."] = {
        target   = "mpgus",
        symbol   = "mpg<sub>&#8209;U.S.</sub>",
        sp_us    = true,
        symlink  = "[[Fuel economy in automobiles#Units of measure|mpg]]<sub>&#82
    },
    ["mpgu.s."] = {
        target   = "mpgus",
        symbol   = "mpg<sub>&#8209;U.S.</sub>",
        sp_us    = true,
        symlink  = "[[Fuel economy in automobiles#Units of measure|mpg]]<sub>&#82
    },
    ["mpgUS"] = {
        target   = "mpgus",
    },
    ["USgal/mi"] = {
        target   = "usgal/mi",
    },
    ["kPa/m"] = {
        per      = { "kPa", "-m-frac" },
        utype    = "fracture gradient",
        default  = "psi/ft",
    },
    ["psi/ft"] = {
        per      = { "psi", "-ft-frac" },
        utype    = "fracture gradient",
        default  = "kPa/m",
    },
    ["cm/km"] = {
        name1    = "centimetre per kilometre",
        name1_us = "centimeter per kilometer",
        name2    = "centimetres per kilometre",
```

```
        name2_us = "centimeters per kilometer",
        symbol   = "cm/km",
        utype    = "gradient",
        scale    = 0.00001,
        default  = "ft/mi",
        link     = "Grade (slope)",
    },
    ["ft/mi"] = {
        name1    = "foot per mile",
        name2    = "feet per mile",
        symbol   = "ft/mi",
        utype    = "gradient",
        scale    = 0.00018939393939393939,
        default  = "v < 5.28 ! c ! ! m/km",
        link     = "Grade (slope)",
    },
    ["ft/nmi"] = {
        name1    = "foot per nautical mile",
        name2    = "feet per nautical mile",
        symbol   = "ft/nmi",
        utype    = "gradient",
        scale    = 0.00016457883369330455,
        default  = "v < 6.076 ! c ! ! m/km",
        link     = "Grade (slope)",
    },
    ["in/ft"] = {
        name1    = "inch per foot",
        name2    = "inches per foot",
        symbol   = "in/ft",
        utype    = "gradient",
        scale    = 0.083333333333333329,
        default  = "mm/m",
        link     = "Grade (slope)",
    },
    ["in/mi"] = {
        name1    = "inch per mile",
        name2    = "inches per mile",
        symbol   = "in/mi",
        utype    = "gradient",
        scale    = 1.5782828282828283e-5,
        default  = "v < 0.6336 ! m ! c ! m/km",
        link     = "Grade (slope)",
    },
    ["m/km"] = {
        name1    = "metre per kilometre",
        name1_us = "meter per kilometer",
        name2    = "metres per kilometre",
        name2_us = "meters per kilometer",
        symbol   = "m/km",
        utype    = "gradient",
        scale    = 0.001,
        default  = "ft/mi",
        link     = "Grade (slope)",
    },
    ["mm/km"] = {
        name1    = "millimetre per kilometre",
        name1_us = "millimeter per kilometer",
        name2    = "millimetres per kilometre",
        name2_us = "millimeters per kilometer",
        symbol   = "mm/km",
        utype    = "gradient",
        scale    = 0.000001,
        default  = "in/mi",
        link     = "Grade (slope)",
```

```
    },
    ["mm/m"] = {
        name1    = "millimetre per metre",
        name1_us = "millimeter per meter",
        name2    = "millimetres per metre",
        name2_us = "millimeters per meter",
        symbol   = "mm/m",
        utype    = "gradient",
        scale    = 0.001,
        default  = "in/ft",
        link     = "Grade (slope)",
    },
    ["admi"] = {
        name1    = "admiralty mile",
        symbol   = "nmi (admiralty)",
        utype    = "length",
        scale    = 1853.184,
        default  = "km mi",
        link     = "Nautical mile",
    },
    ["AU"] = {
        name1    = "astronomical unit",
        symbol   = "AU",
        utype    = "length",
        scale    = 149597870700,
        default  = "km mi",
    },
    ["Brnmi"] = {
        name1    = "British nautical mile",
        symbol   = "(Brit) nmi",
        utype    = "length",
        scale    = 1853.184,
        default  = "km mi",
        link     = "Nautical mile",
    },
    ["bu"] = {
        name2    = "bu",
        symbol   = "bu",
        usename  = 1,
        utype    = "length",
        scale    = 0.0030303030303030303,
        default  = "mm",
        link     = "Japanese units of measurement#Length",
    },
    ["ch"] = {
        name1    = "chain",
        symbol   = "ch",
        utype    = "length",
        scale    = 20.1168,
        default  = "ft m",
        subdivs  = { ["ft"] = { 66, default = "m" }, ["yd"] = { 22, default = "m"
        link     = "Chain (unit)",
    },
    ["chlk"] = {
        name1    = "[[Chain (unit)|chain]]",
        symbol   = "[[Chain (unit)|ch]]",
        utype    = "length",
        scale    = 20.1168,
        default  = "ft m",
        link     = "",
    },
    ["chain"] = {
        symbol   = "chain",
        usename  = 1,
```

```
        utype    = "length",
        scale    = 20.1168,
        default  = "ft m",
        subdivs  = { ["ft"] = { 66, default = "m" }, ["yd"] = { 22, default = "m"
        link     = "Chain (unit)",
    },
    ["chainlk"] = {
        symbol   = "[[Chain (unit)|chain]]",
        usename  = 1,
        utype    = "length",
        scale    = 20.1168,
        default  = "ft m",
        link     = "",
    },
    ["dpcm"] = {
        name2    = "dot/cm",
        symbol   = "dot/cm",
        utype    = "length",
        scale    = 100,
        invert   = -1,
        iscomplex= true,
        default  = "dpi",
        link     = "Dots per inch",
    },
    ["dpi"] = {
        name2    = "DPI",
        symbol   = "DPI",
        utype    = "length",
        scale    = 39.370078740157481,
        invert   = -1,
        iscomplex= true,
        default  = "pitch",
        link     = "Dots per inch",
    },
    ["fathom"] = {
        symbol   = "fathom",
        usename  = 1,
        utype    = "length",
        scale    = 1.8288,
        default  = "ft m",
    },
    ["foot"] = {
        name1    = "foot",
        name2    = "foot",
        symbol   = "ft",
        utype    = "length",
        scale    = 0.3048,
        default  = "m",
        subdivs  = { ["in"] = { 12, default = "m" } },
        link     = "Foot (unit)",
    },
    ["ft"] = {
        name1    = "foot",
        name2    = "feet",
        symbol   = "ft",
        utype    = "length",
        scale    = 0.3048,
        exception= "integer_more_precision",
        default  = "m",
        subdivs  = { ["in"] = { 12, default = "m" } },
        link     = "Foot (unit)",
    },
    ["furlong"] = {
        symbol   = "furlong",
```

```
        usename  = 1,
        utype    = "length",
        scale    = 201.168,
        default  = "ft m",
    },
    ["Gly"] = {
        name1    = "gigalight-year",
        symbol   = "Gly",
        utype    = "length",
        scale    = 9.4607304725808e24,
        default  = "Mpc",
        link     = "Light-year#Definitions",
    },
    ["Gpc"] = {
        name1    = "gigaparsec",
        symbol   = "Gpc",
        utype    = "length",
        scale    = 3.0856775814671916e25,
        default  = "Gly",
        link     = "Parsec#Megaparsecs and gigaparsecs",
    },
    ["hand"] = {
        name1    = "hand",
        symbol   = "h",
        utype    = "length",
        builtin  = "hand",
        scale    = 0.1016,
        iscomplex= true,
        default  = "in cm",
        link     = "Hand (unit)",
    },
    ["in"] = {
        name1    = "inch",
        name2    = "inches",
        symbol   = "in",
        utype    = "length",
        scale    = 0.0254,
        exception= "subunit_more_precision",
        default  = "mm",
    },
    ["inabbreviated"] = {
        name2    = "in",
        symbol   = "in",
        utype    = "length",
        scale    = 0.0254,
        default  = "mm",
        link     = "Inch",
    },
    ["kly"] = {
        name1    = "kilolight-year",
        symbol   = "kly",
        utype    = "length",
        scale    = 9.4607304725808e18,
        default  = "pc",
        link     = "Light-year#Definitions",
    },
    ["kpc"] = {
        name1    = "kiloparsec",
        symbol   = "kpc",
        utype    = "length",
        scale    = 3.0856775814671916e19,
        default  = "kly",
        link     = "Parsec#Parsecs and kiloparsecs",
    },
```

```
    ["LD"] = {
        name1    = "lunar distance",
        symbol   = "LD",
        utype    = "length",
        scale    = 384403000,
        default  = "km mi",
        link     = "Lunar distance (astronomy)",
    },
    ["league"] = {
        symbol   = "league",
        usename  = 1,
        utype    = "length",
        scale    = 4828.032,
        default  = "km",
        link     = "League (unit)",
    },
    ["ly"] = {
        name1    = "light-year",
        symbol   = "ly",
        utype    = "length",
        scale    = 9.4607304725808e15,
        default  = "AU",
    },
    ["m"] = {
        _name1   = "metre",
        _name1_us= "meter",
        _symbol  = "m",
        utype    = "length",
        scale    = 1,
        prefixes = 1,
        default  = "v > 0 and v < 3 ! ftin ! ft",
        link     = "Metre",
    },
    ["mi"] = {
        name1    = "mile",
        symbol   = "mi",
        utype    = "length",
        scale    = 1609.344,
        default  = "km",
        subdivs  = { ["ch"] = { 80, default = "km" }, ["chlk"] = { 80, default =
    },
    ["mil"] = {
        symbol   = "mil",
        usename  = 1,
        utype    = "length",
        scale    = 0.0000254,
        default  = "mm",
        link     = "Thousandth of an inch",
    },
    ["Mly"] = {
        name1    = "megalight-year",
        symbol   = "Mly",
        utype    = "length",
        scale    = 9.4607304725808e21,
        default  = "kpc",
        link     = "Light-year#Definitions",
    },
    ["Mpc"] = {
        name1    = "megaparsec",
        symbol   = "Mpc",
        utype    = "length",
        scale    = 3.0856775814671916e22,
        default  = "Mly",
        link     = "Parsec#Megaparsecs and gigaparsecs",
```

```
    },
    ["NM"] = {
        name1    = "nautical mile",
        symbol   = "NM",
        utype    = "length",
        scale    = 1852,
        default  = "km mi",
    },
    ["nmi"] = {
        name1    = "nautical mile",
        symbol   = "nmi",
        utype    = "length",
        scale    = 1852,
        default  = "km mi",
    },
    ["oldUKnmi"] = {
        name1    = "nautical mile",
        symbol   = "nmi",
        utype    = "length",
        scale    = 1853.184,
        default  = "km mi",
    },
    ["oldUSnmi"] = {
        name1    = "nautical mile",
        symbol   = "nmi",
        utype    = "length",
        scale    = 1853.24496,
        default  = "km mi",
    },
    ["pc"] = {
        name1    = "parsec",
        symbol   = "pc",
        utype    = "length",
        scale    = 3.0856775814671916e16,
        default  = "ly",
    },
    ["perch"] = {
        name2    = "perches",
        symbol   = "perch",
        usename  = 1,
        utype    = "length",
        scale    = 5.0292,
        default  = "ft m",
        link     = "Rod (unit)",
    },
    ["pitch"] = {
        name2    = "µm",
        symbol   = "µm",
        utype    = "length",
        scale    = 1e-6,
        default  = "dpi",
        defkey   = "pitch",
        linkey   = "pitch",
        link     = "Dots per inch",
    },
    ["pole"] = {
        symbol   = "pole",
        usename  = 1,
        utype    = "length",
        scale    = 5.0292,
        default  = "ft m",
        link     = "Rod (unit)",
    },
    ["pre1954U.S.nmi"] = {
```

```
        name1    = "(pre-1954 U.S.) nautical mile",
        symbol   = "(pre&#8209;1954 U.S.) nmi",
        utype    = "length",
        scale    = 1853.24496,
        default  = "km mi",
        link     = "Nautical mile",
    },
    ["pre1954USnmi"] = {
        name1    = "(pre-1954 US) nautical mile",
        name1_us = "(pre-1954 U.S.) nautical mile",
        symbol   = "(pre&#8209;1954 US) nmi",
        sym_us   = "(pre&#8209;1954 U.S.) nmi",
        utype    = "length",
        scale    = 1853.24496,
        default  = "km mi",
        link     = "Nautical mile",
    },
    ["rd"] = {
        name1    = "rod",
        symbol   = "rd",
        utype    = "length",
        scale    = 5.0292,
        default  = "ft m",
        link     = "Rod (unit)",
    },
    ["royal cubit"] = {
        name1    = "royal cubit",
        symbol   = "cu",
        utype    = "length",
        scale    = 0.524,
        default  = "mm",
    },
    ["rtkm"] = {
        name1    = "route kilometre",
        name1_us = "route kilometer",
        symbol   = "km",
        utype    = "length",
        scale    = 1000,
        default  = "mi",
        link     = "Kilometre",
    },
    ["rtmi"] = {
        name1    = "route mile",
        symbol   = "mi",
        utype    = "length",
        scale    = 1609.344,
        default  = "km",
        link     = "Mile",
    },
    ["shaku"] = {
        name2    = "shaku",
        symbol   = "shaku",
        usename  = 1,
        utype    = "length",
        scale    = 0.30303030303030304,
        default  = "m",
        link     = "Shaku (unit)",
    },
    ["sm"] = {
        name1    = "smoot",
        symbol   = "sm",
        utype    = "length",
        scale    = 1.70180,
        default  = "m",
```

```
        link     = "Smoot (unit)",
    },
    ["smi"] = {
        name1    = "statute mile",
        symbol   = "mi",
        utype    = "length",
        scale    = 1609.344,
        default  = "km",
        subdivs  = { ["chain"] = { 80, default = "km" } },
    },
    ["solar radius"] = {
        name1    = "solar radius",
        name2    = "solar radii",
        symbol   = "''R''<sub>⊙</sub>",
        utype    = "length",
        scale    = 695700e3,
        default  = "km",
    },
    ["sun"] = {
        name2    = "sun",
        symbol   = "sun",
        usename  = 1,
        utype    = "length",
        scale    = 0.030303030303030304,
        default  = "mm",
        link     = "Japanese units of measurement#Length",
    },
    ["thou"] = {
        name2    = "thou",
        symbol   = "thou",
        usename  = 1,
        utype    = "length",
        scale    = 0.0000254,
        default  = "mm",
        link     = "Thousandth of an inch",
    },
    ["verst"] = {
        symbol   = "verst",
        usename  = 1,
        utype    = "length",
        scale    = 1066.8,
        default  = "km mi",
    },
    ["yd"] = {
        name1    = "yard",
        symbol   = "yd",
        utype    = "length",
        scale    = 0.9144,
        default  = "m",
        subdivs  = { ["ft"] = { 3, default = "m" } },
    },
    ["µin"] = {
        name1    = "microinch",
        name2    = "microinches",
        symbol   = "µin",
        utype    = "length",
        scale    = 0.0000000254,
        default  = "nm",
        link     = "SI prefix#Non-metric units",
    },
    ["Å"] = {
        name1    = "ångström",
        symbol   = "Å",
        utype    = "length",
```

```
        scale    = 0.0000000001,
        default  = "in",
    },
    ["Hz"] = {
        _name1   = "hertz",
        _name2   = "hertz",
        _symbol  = "Hz",
        utype    = "length",
        scale    = 3.3356409519815204e-9,
        invert   = -1,
        iscomplex= true,
        prefixes = 1,
        default  = "m",
        link     = "Hertz",
    },
    ["rpm"] = {
        name1    = "revolution per minute",
        name2    = "revolutions per minute",
        symbol   = "rpm",
        utype    = "length",
        scale    = 5.5594015866358675e-11,
        invert   = -1,
        iscomplex= true,
        default  = "Hz",
        link     = "Revolutions per minute",
    },
    ["-ft-frac"] = {
        target   = "ft",
        link     = "Fracture gradient",
    },
    ["-in-stiff"] = {
        target   = "in",
        link     = "Stiffness",
    },
    ["-m-frac"] = {
        target   = "m",
        link     = "Fracture gradient",
    },
    ["-m-stiff"] = {
        target   = "m",
        link     = "Stiffness",
    },
    ["100km"] = {
        target   = "km",
        multiplier= 100,
    },
    ["100mi"] = {
        target   = "mi",
        multiplier= 100,
    },
    ["100miles"] = {
        target   = "mi",
        symbol   = "miles",
        multiplier= 100,
    },
    ["admiralty nmi"] = {
        target   = "oldUKnmi",
    },
    ["angstrom"] = {
        target   = "Å",
    },
    ["au"] = {
        target   = "AU",
        symbol   = "au",
```

```
    },
    ["feet"] = {
        target   = "ft",
    },
    ["hands"] = {
        target   = "hand",
    },
    ["inch"] = {
        target   = "in",
    },
    ["light-year"] = {
        target   = "ly",
    },
    ["meter"] = {
        target   = "m",
        sp_us    = true,
    },
    ["meters"] = {
        target   = "m",
        sp_us    = true,
    },
    ["metre"] = {
        target   = "m",
    },
    ["metres"] = {
        target   = "m",
    },
    ["micrometre"] = {
        target   = "µm",
    },
    ["micron"] = {
        target   = "µm",
        default  = "µin",
    },
    ["mile"] = {
        target   = "mi",
    },
    ["miles"] = {
        target   = "mi",
    },
    ["parsec"] = {
        target   = "pc",
    },
    ["rod"] = {
        target   = "rd",
    },
    ["smoot"] = {
        target   = "sm",
    },
    ["uin"] = {
        target   = "µin",
    },
    ["yard"] = {
        target   = "yd",
    },
    ["yards"] = {
        target   = "yd",
    },
    ["yds"] = {
        target   = "yd",
    },
    ["dtex"] = {
        name1    = "decitex",
        name2    = "decitex",
```

```
        symbol   = "dtex",
        utype    = "linear density",
        scale    = 1e-7,
        default  = "lb/yd",
        link     = "Units of textile measurement#Units",
    },
    ["kg/cm"] = {
        name1    = "kilogram per centimetre",
        name1_us = "kilogram per centimeter",
        name2    = "kilograms per centimetre",
        name2_us = "kilograms per centimeter",
        symbol   = "kg/cm",
        utype    = "linear density",
        scale    = 100,
        default  = "lb/yd",
        link     = "Linear density",
    },
    ["kg/m"] = {
        name1    = "kilogram per metre",
        name1_us = "kilogram per meter",
        name2    = "kilograms per metre",
        name2_us = "kilograms per meter",
        symbol   = "kg/m",
        utype    = "linear density",
        scale    = 1,
        default  = "lb/yd",
        link     = "Linear density",
    },
    ["lb/ft"] = {
        name1    = "pound per foot",
        name2    = "pounds per foot",
        symbol   = "lb/ft",
        utype    = "linear density",
        scale    = 1.4881639435695539,
        default  = "kg/m",
        link     = "Linear density",
    },
    ["lb/yd"] = {
        name1    = "pound per yard",
        name2    = "pounds per yard",
        symbol   = "lb/yd",
        utype    = "linear density",
        scale    = 0.49605464785651798,
        default  = "kg/m",
        link     = "Linear density",
    },
    ["G"] = {
        _name1   = "gauss",
        _name2   = "gauss",
        _symbol  = "G",
        utype    = "magnetic field strength",
        scale    = 0.0001,
        prefixes = 1,
        default  = "T",
        link     = "Gauss (unit)",
    },
    ["T"] = {
        _name1   = "tesla",
        _symbol  = "T",
        utype    = "magnetic field strength",
        scale    = 1,
        prefixes = 1,
        default  = "G",
        link     = "Tesla (unit)",
```

```
    },
    ["A/m"] = {
        name1    = "ampere per metre",
        name1_us = "ampere per meter",
        name2    = "amperes per metre",
        name2_us = "amperes per meter",
        symbol   = "A/m",
        utype    = "magnetizing field",
        scale    = 1,
        default  = "Oe",
    },
    ["kA/m"] = {
        name1    = "kiloampere per metre",
        name1_us = "kiloampere per meter",
        name2    = "kiloamperes per metre",
        name2_us = "kiloamperes per meter",
        symbol   = "kA/m",
        utype    = "magnetizing field",
        scale    = 1000,
        default  = "kOe",
        link     = "Ampere per metre",
    },
    ["MA/m"] = {
        name1    = "megaampere per metre",
        name1_us = "megaampere per meter",
        name2    = "megaamperes per metre",
        name2_us = "megaamperes per meter",
        symbol   = "MA/m",
        utype    = "magnetizing field",
        scale    = 1e6,
        default  = "kOe",
        link     = "Ampere per metre",
    },
    ["Oe"] = {
        _name1   = "oersted",
        _symbol  = "Oe",
        utype    = "magnetizing field",
        scale    = 79.5774715,
        prefixes = 1,
        default  = "kA/m",
        link     = "Oersted",
    },
    ["-Lcwt"] = {
        name1    = "hundredweight",
        name2    = "hundredweight",
        symbol   = "cwt",
        utype    = "mass",
        scale    = 50.80234544,
        default  = "lb",
    },
    ["-Scwt"] = {
        name1    = "hundredweight",
        name2    = "hundredweight",
        symbol   = "cwt",
        utype    = "mass",
        scale    = 45.359237,
        default  = "lb",
    },
    ["-ST"] = {
        name1    = "short ton",
        symbol   = "ST",
        utype    = "mass",
        scale    = 907.18474,
        default  = "t",
```

```
    },
    ["carat"] = {
        symbol   = "carat",
        usename  = 1,
        utype    = "mass",
        scale    = 0.0002,
        default  = "g",
        link     = "Carat (mass)",
    },
    ["drachm"] = {
        name1_us = "dram",
        symbol   = "drachm",
        usename  = 1,
        utype    = "mass",
        scale    = 0.001771845195,
        default  = "g",
        link     = "Dram (unit)",
    },
    ["dram"] = {
        target   = "drachm",
    },
    ["dwt"] = {
        name1    = "pennyweight",
        symbol   = "dwt",
        utype    = "mass",
        scale    = 0.00155517384,
        default  = "oz g",
    },
    ["DWton"] = {
        symbol   = "deadweight ton",
        usename  = 1,
        utype    = "mass",
        scale    = 1016.0469088,
        default  = "DWtonne",
        link     = "Deadweight tonnage",
    },
    ["DWtonne"] = {
        symbol   = "deadweight tonne",
        usename  = 1,
        utype    = "mass",
        scale    = 1000,
        default  = "DWton",
        link     = "Deadweight tonnage",
    },
    ["g"] = {
        _name1   = "gram",
        _symbol  = "g",
        utype    = "mass",
        scale    = 0.001,
        prefixes = 1,
        default  = "oz",
        link     = "Gram",
    },
    ["gr"] = {
        name1    = "grain",
        symbol   = "gr",
        utype    = "mass",
        scale    = 0.00006479891,
        default  = "g",
        link     = "Grain (unit)",
    },
    ["Gt"] = {
        name1    = "gigatonne",
        symbol   = "Gt",
```

```
        utype    = "mass",
        scale    = 1000000000000,
        default  = "LT ST",
        link     = "Tonne",
    },
    ["impgalh2o"] = {
        name1    = "imperial gallon of water",
        name2    = "imperial gallons of water",
        symbol   = "imp gal H<sub>2</sub>O",
        utype    = "mass",
        scale    = 4.5359236999999499,
        default  = "lb kg",
        link     = "Imperial gallon",
    },
    ["kt"] = {
        name1    = "kilotonne",
        symbol   = "kt",
        utype    = "mass",
        scale    = 1000000,
        default  = "LT ST",
        link     = "Tonne",
    },
    ["lb"] = {
        name1    = "pound",
        symbol   = "lb",
        utype    = "mass",
        scale    = 0.45359237,
        exception= "integer_more_precision",
        default  = "kg",
        subdivs  = { ["oz"] = { 16, default = "kg" } },
        link     = "Pound (mass)",
    },
    ["Lcwt"] = {
        name1    = "long hundredweight",
        name2    = "long hundredweight",
        symbol   = "Lcwt",
        usename  = 1,
        utype    = "mass",
        scale    = 50.80234544,
        default  = "lb",
        subdivs  = { ["qtr"] = { 4, default = "kg" }, ["st"] = { 8, default = "kg
        link     = "Hundredweight",
    },
    ["long cwt"] = {
        name1    = "long hundredweight",
        name2    = "long hundredweight",
        symbol   = "long cwt",
        utype    = "mass",
        scale    = 50.80234544,
        default  = "lb kg",
        subdivs  = { ["qtr"] = { 4, default = "kg" } },
        link     = "Hundredweight",
    },
    ["long qtr"] = {
        name1    = "long quarter",
        symbol   = "long qtr",
        utype    = "mass",
        scale    = 12.70058636,
        default  = "lb kg",
    },
    ["LT"] = {
        symbol   = "long ton",
        usename  = 1,
        utype    = "mass",
```

```
        scale    = 1016.0469088,
        default  = "t",
        subdivs  = { ["Lcwt"] = { 20, default = "t", unit = "-Lcwt" } },
    },
    ["lt"] = {
        name1    = "long ton",
        symbol   = "LT",
        utype    = "mass",
        scale    = 1016.0469088,
        default  = "t",
        subdivs  = { ["Lcwt"] = { 20, default = "t", unit = "-Lcwt" } },
    },
    ["metric ton"] = {
        symbol   = "metric ton",
        usename  = 1,
        utype    = "mass",
        scale    = 1000,
        default  = "long ton",
        link     = "Tonne",
    },
    ["MT"] = {
        name1    = "metric ton",
        symbol   = "t",
        utype    = "mass",
        scale    = 1000,
        default  = "LT ST",
        link     = "Tonne",
    },
    ["Mt"] = {
        name1    = "megatonne",
        symbol   = "Mt",
        utype    = "mass",
        scale    = 1000000000,
        default  = "LT ST",
        link     = "Tonne",
    },
    ["oz"] = {
        name1    = "ounce",
        symbol   = "oz",
        utype    = "mass",
        scale    = 0.028349523125,
        default  = "g",
    },
    ["ozt"] = {
        name1    = "troy ounce",
        symbol   = "ozt",
        utype    = "mass",
        scale    = 0.0311034768,
        default  = "oz g",
    },
    ["pdr"] = {
        name1    = "pounder",
        symbol   = "pdr",
        utype    = "mass",
        scale    = 0.45359237,
        default  = "kg",
        link     = "Pound (mass)",
    },
    ["qtr"] = {
        name1    = "quarter",
        symbol   = "qtr",
        utype    = "mass",
        scale    = 12.70058636,
        default  = "lb kg",
```

```
        subdivs  = { ["lb"] = { 28, default = "kg" } },
        link     = "Long quarter",
    },
    ["Scwt"] = {
        name1    = "short hundredweight",
        name2    = "short hundredweight",
        symbol   = "Scwt",
        usename  = 1,
        utype    = "mass",
        scale    = 45.359237,
        default  = "lb",
        link     = "Hundredweight",
    },
    ["short cwt"] = {
        name1    = "short hundredweight",
        name2    = "short hundredweight",
        symbol   = "short cwt",
        utype    = "mass",
        scale    = 45.359237,
        default  = "lb kg",
        link     = "Hundredweight",
    },
    ["short qtr"] = {
        name1    = "short quarter",
        symbol   = "short qtr",
        utype    = "mass",
        scale    = 11.33980925,
        default  = "lb kg",
    },
    ["ST"] = {
        symbol   = "short ton",
        usename  = 1,
        utype    = "mass",
        scale    = 907.18474,
        default  = "t",
        subdivs  = { ["Scwt"] = { 20, default = "t", unit = "-Scwt" } },
    },
    ["shtn"] = {
        name1    = "short ton",
        symbol   = "sh tn",
        utype    = "mass",
        scale    = 907.18474,
        default  = "t",
    },
    ["shton"] = {
        symbol   = "ton",
        usename  = 1,
        utype    = "mass",
        scale    = 907.18474,
        default  = "t",
    },
    ["solar mass"] = {
        name1    = "solar mass",
        name2    = "solar masses",
        symbol   = "''M''<sub>☉</sub>",
        utype    = "mass",
        scale    = 1.98855e30,
        default  = "kg",
    },
    ["st"] = {
        name1    = "stone",
        name2    = "stone",
        symbol   = "st",
        utype    = "mass",
```

```
        scale    = 6.35029318,
        default  = "lb kg",
        subdivs  = { ["lb"] = { 14, default = "kg lb" } },
        link     = "Stone (unit)",
    },
    ["t"] = {
        name1    = "tonne",
        name1_us = "metric ton",
        symbol   = "t",
        utype    = "mass",
        scale    = 1000,
        default  = "LT ST",
    },
    ["tonne"] = {
        name1    = "tonne",
        name1_us = "metric ton",
        symbol   = "t",
        utype    = "mass",
        scale    = 1000,
        default  = "shton",
    },
    ["troy pound"] = {
        symbol   = "troy pound",
        usename  = 1,
        utype    = "mass",
        scale    = 0.3732417216,
        default  = "lb kg",
        link     = "Troy weight",
    },
    ["usgalh2o"] = {
        name1    = "US gallon of water",
        name1_us = "U.S. gallon of water",
        name2    = "US gallons of water",
        name2_us = "U.S. gallons of water",
        symbol   = "US gal H<sub>2</sub>O",
        utype    = "mass",
        scale    = 3.7776215836051126,
        default  = "lb kg",
        link     = "United States customary units#Fluid volume",
    },
    ["viss"] = {
        name2    = "viss",
        symbol   = "viss",
        utype    = "mass",
        scale    = 1.632932532,
        default  = "kg",
        link     = "Myanmar units of measurement#Mass",
    },
    ["billion tonne"] = {
        target   = "e9t",
    },
    ["kilogram"] = {
        target   = "kg",
    },
    ["kilotonne"] = {
        target   = "kt",
    },
    ["lbs"] = {
        target   = "lb",
    },
    ["lbt"] = {
        target   = "troy pound",
    },
    ["lcwt"] = {
```

```
        target   = "Lcwt",
    },
    ["long ton"] = {
        target   = "LT",
    },
    ["mcg"] = {
        target   = "µg",
    },
    ["million tonne"] = {
        target   = "e6t",
    },
    ["scwt"] = {
        target   = "Scwt",
    },
    ["short ton"] = {
        target   = "ST",
    },
    ["stone"] = {
        target   = "st",
    },
    ["thousand tonne"] = {
        target   = "e3t",
    },
    ["tonnes"] = {
        target   = "t",
    },
    ["kg/kW"] = {
        name1    = "kilogram per kilowatt",
        name2    = "kilograms per kilowatt",
        symbol   = "kg/kW",
        utype    = "mass per unit power",
        scale    = 0.001,
        default  = "lb/hp",
        link     = "Kilowatt",
    },
    ["lb/hp"] = {
        name1    = "pound per horsepower",
        name2    = "pounds per horsepower",
        symbol   = "lb/hp",
        utype    = "mass per unit power",
        scale    = 0.00060827738784176115,
        default  = "kg/kW",
        link     = "Horsepower",
    },
    ["kg/h"] = {
        per      = { "kg", "h" },
        utype    = "mass per unit time",
        default  = "lb/h",
    },
    ["lb/h"] = {
        per      = { "lb", "h" },
        utype    = "mass per unit time",
        default  = "kg/h",
    },
    ["g-mol/d"] = {
        name1    = "gram-mole per day",
        name2    = "gram-moles per day",
        symbol   = "g&#8209;mol/d",
        utype    = "molar rate",
        scale    = 1.1574074074074073e-5,
        default  = "µmol/s",
        link     = "Mole (unit)",
    },
    ["g-mol/h"] = {
```

```
        name1    = "gram-mole per hour",
        name2    = "gram-moles per hour",
        symbol   = "g&#8209;mol/h",
        utype    = "molar rate",
        scale    = 0.00027777777777777778,
        default  = "mmol/s",
        link     = "Mole (unit)",
    },
    ["g-mol/min"] = {
        name1    = "gram-mole per minute",
        name2    = "gram-moles per minute",
        symbol   = "g&#8209;mol/min",
        utype    = "molar rate",
        scale    = 0.016666666666666666,
        default  = "g-mol/s",
        link     = "Mole (unit)",
    },
    ["g-mol/s"] = {
        name1    = "gram-mole per second",
        name2    = "gram-moles per second",
        symbol   = "g&#8209;mol/s",
        utype    = "molar rate",
        scale    = 1,
        default  = "lb-mol/min",
        link     = "Mole (unit)",
    },
    ["gmol/d"] = {
        name1    = "gram-mole per day",
        name2    = "gram-moles per day",
        symbol   = "gmol/d",
        utype    = "molar rate",
        scale    = 1.1574074074074073e-5,
        default  = "µmol/s",
        link     = "Mole (unit)",
    },
    ["gmol/h"] = {
        name1    = "gram-mole per hour",
        name2    = "gram-moles per hour",
        symbol   = "gmol/h",
        utype    = "molar rate",
        scale    = 0.00027777777777777778,
        default  = "mmol/s",
        link     = "Mole (unit)",
    },
    ["gmol/min"] = {
        name1    = "gram-mole per minute",
        name2    = "gram-moles per minute",
        symbol   = "gmol/min",
        utype    = "molar rate",
        scale    = 0.016666666666666666,
        default  = "gmol/s",
        link     = "Mole (unit)",
    },
    ["gmol/s"] = {
        name1    = "gram-mole per second",
        name2    = "gram-moles per second",
        symbol   = "gmol/s",
        utype    = "molar rate",
        scale    = 1,
        default  = "lbmol/min",
        link     = "Mole (unit)",
    },
    ["kmol/d"] = {
        name1    = "kilomole per day",
```

```
        name2    = "kilomoles per day",
        symbol   = "kmol/d",
        utype    = "molar rate",
        scale    = 0.011574074074074073,
        default  = "mmol/s",
        link     = "Mole (unit)",
    },
    ["kmol/h"] = {
        name1    = "kilomole per hour",
        name2    = "kilomoles per hour",
        symbol   = "kmol/h",
        utype    = "molar rate",
        scale    = 0.27777777777777779,
        default  = "mol/s",
        link     = "Mole (unit)",
    },
    ["kmol/min"] = {
        name1    = "kilomole per minute",
        name2    = "kilomoles per minute",
        symbol   = "kmol/min",
        utype    = "molar rate",
        scale    = 16.666666666666668,
        default  = "mol/s",
        link     = "Kilomole (unit)",
    },
    ["kmol/s"] = {
        name1    = "kilomole per second",
        name2    = "kilomoles per second",
        symbol   = "kmol/s",
        utype    = "molar rate",
        scale    = 1000,
        default  = "lb-mol/s",
        link     = "Mole (unit)",
    },
    ["lb-mol/d"] = {
        name1    = "pound-mole per day",
        name2    = "pound-moles per day",
        symbol   = "lb&#8209;mol/d",
        utype    = "molar rate",
        scale    = 0.0052499116898148141,
        default  = "mmol/s",
        link     = "Pound-mole",
    },
    ["lb-mol/h"] = {
        name1    = "pound-mole per hour",
        name2    = "pound-moles per hour",
        symbol   = "lb&#8209;mol/h",
        utype    = "molar rate",
        scale    = 0.12599788055555555,
        default  = "mol/s",
        link     = "Pound-mole",
    },
    ["lb-mol/min"] = {
        name1    = "pound-mole per minute",
        name2    = "pound-moles per minute",
        symbol   = "lb&#8209;mol/min",
        utype    = "molar rate",
        scale    = 7.5598728333333334,
        default  = "mol/s",
        link     = "Pound-mole",
    },
    ["lb-mol/s"] = {
        name1    = "pound-mole per second",
        name2    = "pound-moles per second",
```

```
        symbol   = "lb&#8209;mol/s",
        utype    = "molar rate",
        scale    = 453.59237,
        default  = "kmol/s",
        link     = "Pound-mole",
    },
    ["lbmol/d"] = {
        name1    = "pound-mole per day",
        name2    = "pound-moles per day",
        symbol   = "lbmol/d",
        utype    = "molar rate",
        scale    = 0.0052499116898148141,
        default  = "mmol/s",
        link     = "Pound-mole",
    },
    ["lbmol/h"] = {
        name1    = "pound-mole per hour",
        name2    = "pound-moles per hour",
        symbol   = "lbmol/h",
        utype    = "molar rate",
        scale    = 0.12599788055555555,
        default  = "mol/s",
        link     = "Pound-mole",
    },
    ["lbmol/min"] = {
        name1    = "pound-mole per minute",
        name2    = "pound-moles per minute",
        symbol   = "lbmol/min",
        utype    = "molar rate",
        scale    = 7.5598728333333334,
        default  = "mol/s",
        link     = "Pound-mole",
    },
    ["lbmol/s"] = {
        name1    = "pound-mole per second",
        name2    = "pound-moles per second",
        symbol   = "lbmol/s",
        utype    = "molar rate",
        scale    = 453.59237,
        default  = "kmol/s",
        link     = "Pound-mole",
    },
    ["mmol/s"] = {
        name1    = "millimole per second",
        name2    = "millimoles per second",
        symbol   = "mmol/s",
        utype    = "molar rate",
        scale    = 0.001,
        default  = "lb-mol/d",
        link     = "Mole (unit)",
    },
    ["mol/d"] = {
        name1    = "mole per day",
        name2    = "moles per day",
        symbol   = "mol/d",
        utype    = "molar rate",
        scale    = 1.1574074074074073e-5,
        default  = "µmol/s",
        link     = "Mole (unit)",
    },
    ["mol/h"] = {
        name1    = "mole per hour",
        name2    = "moles per hour",
        symbol   = "mol/h",
```

```
        utype    = "molar rate",
        scale    = 0.00027777777777777778,
        default  = "mmol/s",
        link     = "Mole (unit)",
    },
    ["mol/min"] = {
        name1    = "mole per minute",
        name2    = "moles per minute",
        symbol   = "mol/min",
        utype    = "molar rate",
        scale    = 0.016666666666666666,
        default  = "mol/s",
        link     = "Mole (unit)",
    },
    ["mol/s"] = {
        name1    = "mole per second",
        name2    = "moles per second",
        symbol   = "mol/s",
        utype    = "molar rate",
        scale    = 1,
        default  = "lb-mol/min",
        link     = "Mole (unit)",
    },
    ["µmol/s"] = {
        name1    = "micromole per second",
        name2    = "micromoles per second",
        symbol   = "µmol/s",
        utype    = "molar rate",
        scale    = 0.000001,
        default  = "lb-mol/d",
        link     = "Mole (unit)",
    },
    ["umol/s"] = {
        target   = "µmol/s",
    },
    ["/acre"] = {
        name1    = "per acre",
        name2    = "per acre",
        symbol   = "/acre",
        utype    = "per unit area",
        scale    = 0.00024710538146716532,
        default  = "/ha",
        link     = "Acre",
    },
    ["/ha"] = {
        name1    = "per hectare",
        name2    = "per hectare",
        symbol   = "/ha",
        utype    = "per unit area",
        scale    = 100e-6,
        default  = "/acre",
        link     = "Hectare",
    },
    ["/sqcm"] = {
        name1    = "per square centimetre",
        name1_us = "per square centimeter",
        name2    = "per square centimetre",
        name2_us = "per square centimeter",
        symbol   = "/cm<sup>2</sup>",
        utype    = "per unit area",
        scale    = 1e4,
        default  = "/sqin",
        link     = "Square centimetre",
    },
```

```
    ["/sqin"] = {
        name1    = "per square inch",
        name2    = "per square inch",
        symbol   = "/in<sup>2</sup>",
        utype    = "per unit area",
        scale    = 1550.0031000062002,
        default  = "/sqcm",
        link     = "Square inch",
    },
    ["/sqkm"] = {
        name1    = "per square kilometre",
        name1_us = "per square kilometer",
        name2    = "per square kilometre",
        name2_us = "per square kilometer",
        symbol   = "/km<sup>2</sup>",
        utype    = "per unit area",
        scale    = 1e-6,
        default  = "/sqmi",
        link     = "Square kilometre",
    },
    ["/sqmi"] = {
        name1    = "per square mile",
        name2    = "per square mile",
        symbol   = "/sq mi",
        utype    = "per unit area",
        scale    = 3.8610215854244582e-7,
        default  = "/sqkm",
        link     = "Square mile",
    },
    ["PD/acre"] = {
        name1    = "inhabitant per acre",
        name2    = "inhabitants per acre",
        symbol   = "/acre",
        utype    = "per unit area",
        scale    = 0.00024710538146716532,
        default  = "PD/ha",
        link     = "Acre",
    },
    ["PD/ha"] = {
        name1    = "inhabitant per hectare",
        name2    = "inhabitants per hectare",
        symbol   = "/ha",
        utype    = "per unit area",
        scale    = 100e-6,
        default  = "PD/acre",
        link     = "Hectare",
    },
    ["PD/sqkm"] = {
        name1    = "inhabitant per square kilometre",
        name1_us = "inhabitant per square kilometer",
        name2    = "inhabitants per square kilometre",
        name2_us = "inhabitants per square kilometer",
        symbol   = "/km<sup>2</sup>",
        utype    = "per unit area",
        scale    = 1e-6,
        default  = "PD/sqmi",
        link     = "Square kilometre",
    },
    ["PD/sqmi"] = {
        name1    = "inhabitant per square mile",
        name2    = "inhabitants per square mile",
        symbol   = "/sq mi",
        utype    = "per unit area",
        scale    = 3.8610215854244582e-7,
```

```
        default  = "PD/sqkm",
        link     = "Square mile",
    },
    ["/cm2"] = {
        target   = "/sqcm",
    },
    ["/in2"] = {
        target   = "/sqin",
    },
    ["/km2"] = {
        target   = "/sqkm",
    },
    ["pd/acre"] = {
        target   = "PD/acre",
    },
    ["pd/ha"] = {
        target   = "PD/ha",
    },
    ["PD/km2"] = {
        target   = "PD/sqkm",
    },
    ["pd/km2"] = {
        target   = "PD/sqkm",
    },
    ["PD/km²"] = {
        target   = "PD/sqkm",
    },
    ["pd/sqkm"] = {
        target   = "PD/sqkm",
    },
    ["pd/sqmi"] = {
        target   = "PD/sqmi",
    },
    ["/l"] = {
        name1    = "per litre",
        name1_us = "per liter",
        name2    = "per litre",
        name2_us = "per liter",
        symbol   = "/l",
        utype    = "per unit volume",
        scale    = 1000,
        default  = "/usgal",
        link     = "Litre",
    },
    ["/USgal"] = {
        name1    = "per gallon",
        name2    = "per gallon",
        symbol   = "/gal",
        utype    = "per unit volume",
        scale    = 264.172052,
        default  = "/l",
        link     = "US gallon",
        customary= 2,
    },
    ["/usgal"] = {
        target   = "/USgal",
    },
    ["bhp"] = {
        name1    = "brake horsepower",
        name2    = "brake horsepower",
        symbol   = "bhp",
        utype    = "power",
        scale    = 745.69987158227022,
        default  = "kW",
```

```
        link     = "Horsepower#Brake horsepower",
    },
    ["Cal/d"] = {
        name1    = "large calorie per day",
        name2    = "large calories per day",
        symbol   = "Cal/d",
        utype    = "power",
        scale    = 0.048425925925925928,
        default  = "kJ/d",
        link     = "Calorie",
    },
    ["Cal/h"] = {
        name1    = "large calorie per hour",
        name2    = "large calories per hour",
        symbol   = "Cal/h",
        utype    = "power",
        scale    = 1.1622222222222223,
        default  = "kJ/h",
        link     = "Calorie",
    },
    ["cal/h"] = {
        name1    = "calorie per hour",
        name2    = "calories per hour",
        symbol   = "cal/h",
        utype    = "power",
        scale    = 0.0011622222222222223,
        default  = "W",
        link     = "Calorie",
    },
    ["CV"] = {
        name1    = "metric horsepower",
        name2    = "metric horsepower",
        symbol   = "CV",
        utype    = "power",
        scale    = 735.49875,
        default  = "kW",
    },
    ["hk"] = {
        name1    = "metric horsepower",
        name2    = "metric horsepower",
        symbol   = "hk",
        utype    = "power",
        scale    = 735.49875,
        default  = "kW",
    },
    ["hp"] = {
        name1    = "horsepower",
        name2    = "horsepower",
        symbol   = "hp",
        utype    = "power",
        scale    = 745.69987158227022,
        default  = "kW",
    },
    ["hp-electric"] = {
        name1    = "electric horsepower",
        name2    = "electric horsepower",
        symbol   = "hp",
        utype    = "power",
        scale    = 746,
        default  = "kW",
        link     = "Horsepower#Electrical horsepower",
    },
    ["hp-electrical"] = {
        name1    = "electrical horsepower",
```

```
        name2    = "electrical horsepower",
        symbol   = "hp",
        utype    = "power",
        scale    = 746,
        default  = "kW",
        link     = "Horsepower#Electrical horsepower",
    },
    ["hp-metric"] = {
        name1    = "metric horsepower",
        name2    = "metric horsepower",
        symbol   = "hp",
        utype    = "power",
        scale    = 735.49875,
        default  = "kW",
    },
    ["ihp"] = {
        name1    = "indicated horsepower",
        name2    = "indicated horsepower",
        symbol   = "ihp",
        utype    = "power",
        scale    = 745.69987158227022,
        default  = "kW",
        link     = "Horsepower#Indicated horsepower",
    },
    ["kcal/h"] = {
        name1    = "kilocalorie per hour",
        name2    = "kilocalories per hour",
        symbol   = "kcal/h",
        utype    = "power",
        scale    = 1.1622222222222223,
        default  = "kW",
        link     = "Calorie",
    },
    ["kJ/d"] = {
        name1    = "kilojoule per day",
        name2    = "kilojoules per day",
        symbol   = "kJ/d",
        utype    = "power",
        scale    = 0.011574074074074073,
        default  = "Cal/d",
        link     = "Kilojoule",
    },
    ["kJ/h"] = {
        name1    = "kilojoule per hour",
        name2    = "kilojoules per hour",
        symbol   = "kJ/h",
        utype    = "power",
        scale    = 0.27777777777777779,
        default  = "W",
        link     = "Kilojoule",
    },
    ["PS"] = {
        name1    = "metric horsepower",
        name2    = "metric horsepower",
        symbol   = "PS",
        utype    = "power",
        scale    = 735.49875,
        default  = "kW",
    },
    ["shp"] = {
        name1    = "shaft horsepower",
        name2    = "shaft horsepower",
        symbol   = "shp",
        utype    = "power",
```

```
        scale    = 745.69987158227022,
        default  = "kW",
        link     = "Horsepower#Shaft horsepower",
    },
    ["W"] = {
        _name1   = "watt",
        _symbol  = "W",
        utype    = "power",
        scale    = 1,
        prefixes = 1,
        default  = "hp",
        link     = "Watt",
    },
    ["BTU/h"] = {
        per      = { "BTU", "h" },
        utype    = "power",
        default  = "W",
    },
    ["Btu/h"] = {
        per      = { "Btu", "h" },
        utype    = "power",
        default  = "W",
    },
    ["BHP"] = {
        target   = "bhp",
    },
    ["btu/h"] = {
        target   = "BTU/h",
    },
    ["HP"] = {
        target   = "hp",
    },
    ["Hp"] = {
        target   = "hp",
    },
    ["hp-mechanical"] = {
        target   = "hp",
    },
    ["IHP"] = {
        target   = "ihp",
    },
    ["SHP"] = {
        target   = "shp",
    },
    ["whp"] = {
        target   = "hp",
    },
    ["hp/lb"] = {
        name1    = "horsepower per pound",
        name2    = "horsepower per pound",
        symbol   = "hp/lb",
        utype    = "power per unit mass",
        scale    = 1643.986806,
        default  = "kW/kg",
        link     = "Power-to-weight ratio",
    },
    ["hp/LT"] = {
        name1    = "horsepower per long ton",
        name2    = "horsepower per long ton",
        symbol   = "hp/LT",
        utype    = "power per unit mass",
        scale    = 0.73392268125000004,
        default  = "kW/t",
        link     = "Power-to-weight ratio",
```

```
    },
    ["hp/ST"] = {
        name1    = "horsepower per short ton",
        name2    = "horsepower per short ton",
        symbol   = "hp/ST",
        utype    = "power per unit mass",
        scale    = 0.821993403,
        default  = "kW/t",
        link     = "Power-to-weight ratio",
    },
    ["hp/t"] = {
        name1    = "horsepower per tonne",
        name2    = "horsepower per tonne",
        symbol   = "hp/t",
        utype    = "power per unit mass",
        scale    = 0.74569987158227022,
        default  = "kW/t",
        link     = "Power-to-weight ratio",
    },
    ["kW/kg"] = {
        name1    = "kilowatt per kilogram",
        name2    = "kilowatts per kilogram",
        symbol   = "kW/kg",
        utype    = "power per unit mass",
        scale    = 1000,
        default  = "hp/lb",
        link     = "Power-to-weight ratio",
    },
    ["kW/t"] = {
        name1    = "kilowatt per tonne",
        name2    = "kilowatts per tonne",
        symbol   = "kW/t",
        utype    = "power per unit mass",
        scale    = 1,
        default  = "PS/t",
        link     = "Power-to-weight ratio",
    },
    ["PS/t"] = {
        name1    = "metric horsepower per tonne",
        name2    = "metric horsepower per tonne",
        symbol   = "PS/t",
        utype    = "power per unit mass",
        scale    = 0.73549875,
        default  = "kW/t",
        link     = "Power-to-weight ratio",
    },
    ["shp/lb"] = {
        name1    = "shaft horsepower per pound",
        name2    = "shaft horsepower per pound",
        symbol   = "shp/lb",
        utype    = "power per unit mass",
        scale    = 1643.986806,
        default  = "kW/kg",
        link     = "Power-to-weight ratio",
    },
    ["hp/tonne"] = {
        target   = "hp/t",
        symbol   = "hp/tonne",
        default  = "kW/tonne",
    },
    ["kW/tonne"] = {
        target   = "kW/t",
        symbol   = "kW/tonne",
    },
```

```
    ["-lb/in2"] = {
        name1    = "pound per square inch",
        name2    = "pounds per square inch",
        symbol   = "lb/in<sup>2</sup>",
        utype    = "pressure",
        scale    = 6894.7572931683608,
        default  = "kPa kgf/cm2",
    },
    ["atm"] = {
        name1    = "standard atmosphere",
        symbol   = "atm",
        utype    = "pressure",
        scale    = 101325,
        default  = "kPa",
        link     = "Atmosphere (unit)",
    },
    ["Ba"] = {
        name1    = "barye",
        symbol   = "Ba",
        utype    = "pressure",
        scale    = 0.1,
        default  = "Pa",
    },
    ["bar"] = {
        symbol   = "bar",
        utype    = "pressure",
        scale    = 100000,
        default  = "kPa",
        link     = "Bar (unit)",
    },
    ["dbar"] = {
        name1    = "decibar",
        symbol   = "dbar",
        utype    = "pressure",
        scale    = 10000,
        default  = "kPa",
        link     = "Bar (unit)",
    },
    ["inHg"] = {
        name1    = "inch of mercury",
        name2    = "inches of mercury",
        symbol   = "inHg",
        utype    = "pressure",
        scale    = 3386.388640341,
        default  = "kPa",
    },
    ["kBa"] = {
        name1    = "kilobarye",
        symbol   = "kBa",
        utype    = "pressure",
        scale    = 100,
        default  = "hPa",
        link     = "Barye",
    },
    ["kg-f/cm2"] = {
        name1    = "kilogram-force per square centimetre",
        name1_us = "kilogram-force per square centimeter",
        name2    = "kilograms-force per square centimetre",
        name2_us = "kilograms-force per square centimeter",
        symbol   = "kg<sub>f</sub>/cm<sup>2</sup>",
        utype    = "pressure",
        scale    = 98066.5,
        default  = "psi",
        link     = "Kilogram-force",
```

```
    },
    ["kg/cm2"] = {
        name1    = "kilogram per square centimetre",
        name1_us = "kilogram per square centimeter",
        name2    = "kilograms per square centimetre",
        name2_us = "kilograms per square centimeter",
        symbol   = "kg/cm<sup>2</sup>",
        utype    = "pressure",
        scale    = 98066.5,
        default  = "psi",
        link     = "Kilogram-force",
    },
    ["kgf/cm2"] = {
        name1    = "kilogram-force per square centimetre",
        name1_us = "kilogram-force per square centimeter",
        name2    = "kilograms-force per square centimetre",
        name2_us = "kilograms-force per square centimeter",
        symbol   = "kgf/cm<sup>2</sup>",
        utype    = "pressure",
        scale    = 98066.5,
        default  = "psi",
        link     = "Kilogram-force",
    },
    ["ksi"] = {
        name1    = "kilopound per square inch",
        name2    = "kilopounds per square inch",
        symbol   = "ksi",
        utype    = "pressure",
        scale    = 6894757.2931683613,
        default  = "MPa",
        link     = "Pound per square inch",
    },
    ["lbf/in2"] = {
        name1    = "pound-force per square inch",
        name2    = "pounds-force per square inch",
        symbol   = "lbf/in<sup>2</sup>",
        utype    = "pressure",
        scale    = 6894.7572931683608,
        default  = "kPa kgf/cm2",
    },
    ["mb"] = {
        name1    = "millibar",
        symbol   = "mb",
        utype    = "pressure",
        scale    = 100,
        default  = "hPa",
        link     = "Bar (unit)",
    },
    ["mbar"] = {
        name1    = "millibar",
        symbol   = "mbar",
        utype    = "pressure",
        scale    = 100,
        default  = "hPa",
        link     = "Bar (unit)",
    },
    ["mmHg"] = {
        name1    = "millimetre of mercury",
        name1_us = "millimeter of mercury",
        name2    = "millimetres of mercury",
        name2_us = "millimeters of mercury",
        symbol   = "mmHg",
        utype    = "pressure",
        scale    = 133.322387415,
```

```
        default  = "kPa",
    },
    ["Pa"] = {
        _name1   = "pascal",
        _symbol  = "Pa",
        utype    = "pressure",
        scale    = 1,
        prefixes = 1,
        default  = "psi",
        link     = "Pascal (unit)",
    },
    ["psf"] = {
        name1    = "pound per square foot",
        name2    = "pounds per square foot",
        symbol   = "psf",
        utype    = "pressure",
        scale    = 47.880258980335839,
        default  = "kPa",
        link     = "Pound per square inch",
    },
    ["psi"] = {
        name1    = "pound per square inch",
        name2    = "pounds per square inch",
        symbol   = "psi",
        utype    = "pressure",
        scale    = 6894.7572931683608,
        default  = "kPa",
    },
    ["Torr"] = {
        name1    = "torr",
        symbol   = "Torr",
        utype    = "pressure",
        scale    = 133.32236842105263,
        default  = "kPa",
    },
    ["N/cm2"] = {
        per      = { "N", "cm2" },
        utype    = "pressure",
        default  = "psi",
    },
    ["N/m2"] = {
        per      = { "N", "m2" },
        utype    = "pressure",
        default  = "psi",
    },
    ["g/cm2"] = {
        per      = { "g", "cm2" },
        utype    = "pressure",
        default  = "lb/sqft",
        multiplier= 9.80665,
    },
    ["g/m2"] = {
        per      = { "g", "m2" },
        utype    = "pressure",
        default  = "lb/sqft",
        multiplier= 9.80665,
    },
    ["kg/ha"] = {
        per      = { "kg", "ha" },
        utype    = "pressure",
        default  = "lb/acre",
        multiplier= 9.80665,
    },
    ["kg/m2"] = {
```

```
        per      = { "kg", "m2" },
        utype    = "pressure",
        default  = "lb/sqft",
        multiplier= 9.80665,
    },
    ["lb/1000sqft"] = {
        per      = { "lb", "1000sqft" },
        utype    = "pressure",
        default  = "g/m2",
        multiplier= 9.80665,
    },
    ["lb/acre"] = {
        per      = { "lb", "acre" },
        utype    = "pressure",
        default  = "kg/ha",
        multiplier= 9.80665,
    },
    ["lb/sqft"] = {
        per      = { "lb", "sqft" },
        utype    = "pressure",
        default  = "kg/m2",
        multiplier= 9.80665,
    },
    ["lb/sqyd"] = {
        per      = { "lb", "sqyd" },
        utype    = "pressure",
        default  = "kg/m2",
        multiplier= 9.80665,
    },
    ["LT/acre"] = {
        per      = { "LT", "acre" },
        utype    = "pressure",
        default  = "t/ha",
        multiplier= 9.80665,
    },
    ["MT/ha"] = {
        per      = { "MT", "ha" },
        utype    = "pressure",
        default  = "LT/acre ST/acre",
        multiplier= 9.80665,
    },
    ["oz/sqft"] = {
        per      = { "oz", "sqft" },
        utype    = "pressure",
        default  = "g/m2",
        multiplier= 9.80665,
    },
    ["oz/sqyd"] = {
        per      = { "oz", "sqyd" },
        utype    = "pressure",
        default  = "g/m2",
        multiplier= 9.80665,
    },
    ["ST/acre"] = {
        per      = { "ST", "acre" },
        utype    = "pressure",
        default  = "t/ha",
        multiplier= 9.80665,
    },
    ["t/ha"] = {
        per      = { "t", "ha" },
        utype    = "pressure",
        default  = "LT/acre ST/acre",
        multiplier= 9.80665,
```

```
    },
    ["tonne/acre"] = {
        per      = { "tonne", "acre" },
        utype    = "pressure",
        default  = "tonne/ha",
        multiplier= 9.80665,
    },
    ["tonne/ha"] = {
        per      = { "tonne", "ha" },
        utype    = "pressure",
        default  = "tonne/acre",
        multiplier= 9.80665,
    },
    ["kgfpsqcm"] = {
        target   = "kgf/cm2",
    },
    ["kgpsqcm"] = {
        target   = "kg/cm2",
    },
    ["kN/m2"] = {
        target   = "kPa",
    },
    ["lb/in2"] = {
        target   = "lbf/in2",
    },
    ["torr"] = {
        target   = "Torr",
    },
    ["Bq"] = {
        _name1   = "becquerel",
        _symbol  = "Bq",
        utype    = "radioactivity",
        scale    = 1,
        prefixes = 1,
        default  = "pCi",
        link     = "Becquerel",
    },
    ["Ci"] = {
        _name1   = "curie",
        _symbol  = "Ci",
        utype    = "radioactivity",
        scale    = 3.7e10,
        prefixes = 1,
        default  = "GBq",
        link     = "Curie (unit)",
    },
    ["Rd"] = {
        _name1   = "rutherford",
        _symbol  = "Rd",
        utype    = "radioactivity",
        scale    = 1e6,
        prefixes = 1,
        default  = "MBq",
        link     = "Rutherford (unit)",
    },
    ["cm/h"] = {
        name1    = "centimetre per hour",
        name1_us = "centimeter per hour",
        name2    = "centimetres per hour",
        name2_us = "centimeters per hour",
        symbol   = "cm/h",
        utype    = "speed",
        scale    = 2.7777777777777775e-6,
        default  = "in/h",
```

```
        link     = "Metre per second",
    },
    ["cm/s"] = {
        name1    = "centimetre per second",
        name1_us = "centimeter per second",
        name2    = "centimetres per second",
        name2_us = "centimeters per second",
        symbol   = "cm/s",
        utype    = "speed",
        scale    = 0.01,
        default  = "in/s",
        link     = "Metre per second",
    },
    ["cm/year"] = {
        name1    = "centimetre per year",
        name1_us = "centimeter per year",
        name2    = "centimetres per year",
        name2_us = "centimeters per year",
        symbol   = "cm/year",
        utype    = "speed",
        scale    = 3.168873850681143e-10,
        default  = "in/year",
        link     = "Orders of magnitude (speed)",
    },
    ["foot/s"] = {
        name1    = "foot per second",
        name2    = "foot per second",
        symbol   = "ft/s",
        utype    = "speed",
        scale    = 0.3048,
        default  = "m/s",
    },
    ["ft/min"] = {
        name1    = "foot per minute",
        name2    = "feet per minute",
        symbol   = "ft/min",
        utype    = "speed",
        scale    = 0.00508,
        default  = "m/min",
        link     = "Feet per second",
    },
    ["ft/s"] = {
        name1    = "foot per second",
        name2    = "feet per second",
        symbol   = "ft/s",
        utype    = "speed",
        scale    = 0.3048,
        default  = "m/s",
        link     = "Feet per second",
    },
    ["furlong per fortnight"] = {
        name2    = "furlongs per fortnight",
        symbol   = "furlong per fortnight",
        usename  = 1,
        utype    = "speed",
        scale    = 0.00016630952380952381,
        default  = "km/h mph",
        link     = "FFF system",
    },
    ["in/h"] = {
        name1    = "inch per hour",
        name2    = "inches per hour",
        symbol   = "in/h",
        utype    = "speed",
```

```
        scale    = 7.0555555555555559e-6,
        default  = "cm/h",
        link     = "Inch",
    },
    ["in/s"] = {
        name1    = "inch per second",
        name2    = "inches per second",
        symbol   = "in/s",
        utype    = "speed",
        scale    = 0.0254,
        default  = "cm/s",
        link     = "Inch",
    },
    ["in/year"] = {
        name1    = "inch per year",
        name2    = "inches per year",
        symbol   = "in/year",
        utype    = "speed",
        scale    = 8.0489395807301024e-10,
        default  = "cm/year",
        link     = "Orders of magnitude (speed)",
    },
    ["isp"] = {
        name1    = "second",
        symbol   = "s",
        utype    = "speed",
        scale    = 9.80665,
        default  = "km/s",
        link     = "Specific impulse",
    },
    ["km/d"] = {
        name1    = "kilometre per day",
        name1_us = "kilometer per day",
        name2    = "kilometres per day",
        name2_us = "kilometers per day",
        symbol   = "km/d",
        utype    = "speed",
        scale    = 1.1574074074074074e-2,
        default  = "mi/d",
        link     = "Orders of magnitude (speed)",
    },
    ["km/h"] = {
        name1    = "kilometre per hour",
        name1_us = "kilometer per hour",
        name2    = "kilometres per hour",
        name2_us = "kilometers per hour",
        symbol   = "km/h",
        utype    = "speed",
        scale    = 0.27777777777777779,
        default  = "mph",
        link     = "Kilometres per hour",
    },
    ["km/s"] = {
        name1    = "kilometre per second",
        name1_us = "kilometer per second",
        name2    = "kilometres per second",
        name2_us = "kilometers per second",
        symbol   = "km/s",
        utype    = "speed",
        scale    = 1000,
        default  = "mi/s",
        link     = "Metre per second",
    },
    ["kn"] = {
```

```
        name1    = "knot",
        symbol   = "kn",
        utype    = "speed",
        scale    = 0.51444444444444448,
        default  = "km/h mph",
        link     = "Knot (unit)",
    },
    ["kNs/kg"] = {
        name2    = "kN&#8209;s/kg",
        symbol   = "kN&#8209;s/kg",
        utype    = "speed",
        scale    = 1000,
        default  = "isp",
        link     = "Specific impulse",
    },
    ["m/min"] = {
        name1    = "metre per minute",
        name1_us = "meter per minute",
        name2    = "metres per minute",
        name2_us = "meters per minute",
        symbol   = "m/min",
        utype    = "speed",
        scale    = 0.016666666666666666,
        default  = "ft/min",
        link     = "Metre per second",
    },
    ["m/s"] = {
        name1    = "metre per second",
        name1_us = "meter per second",
        name2    = "metres per second",
        name2_us = "meters per second",
        symbol   = "m/s",
        utype    = "speed",
        scale    = 1,
        default  = "ft/s",
    },
    ["Mach"] = {
        name2    = "Mach",
        symbol   = "Mach",
        utype    = "speed",
        builtin  = "mach",
        scale    = 0,
        iscomplex= true,
        default  = "km/h mph",
        link     = "Mach number",
    },
    ["mi/d"] = {
        name1    = "mile per day",
        name2    = "miles per day",
        symbol   = "mi/d",
        utype    = "speed",
        scale    = 1.8626666666666667e-2,
        default  = "km/d",
        link     = "Orders of magnitude (speed)",
    },
    ["mi/s"] = {
        name1    = "mile per second",
        name2    = "miles per second",
        symbol   = "mi/s",
        utype    = "speed",
        scale    = 1609.344,
        default  = "km/s",
        link     = "Mile",
    },
```

```
    ["mm/h"] = {
        name1    = "millimetre per hour",
        name1_us = "millimeter per hour",
        name2    = "millimetres per hour",
        name2_us = "millimeters per hour",
        symbol   = "mm/h",
        utype    = "speed",
        scale    = 2.7777777777777781e-7,
        default  = "in/h",
        link     = "Metre per second",
    },
    ["mph"] = {
        name1    = "mile per hour",
        name2    = "miles per hour",
        symbol   = "mph",
        utype    = "speed",
        scale    = 0.44704,
        default  = "km/h",
        link     = "Miles per hour",
    },
    ["Ns/kg"] = {
        name2    = "N&#8209;s/kg",
        symbol   = "N&#8209;s/kg",
        utype    = "speed",
        scale    = 1,
        default  = "isp",
        link     = "Specific impulse",
    },
    ["si tsfc"] = {
        name2    = "g/(kN·s)",
        symbol   = "g/(kN·s)",
        utype    = "speed",
        scale    = 9.9999628621379242e-7,
        invert   = -1,
        iscomplex= true,
        default  = "tsfc",
        link     = "Thrust specific fuel consumption",
    },
    ["tsfc"] = {
        name2    = "lb/(lbf·h)",
        symbol   = "lb/(lbf·h)",
        utype    = "speed",
        scale    = 2.832545036049801e-5,
        invert   = -1,
        iscomplex= true,
        default  = "si tsfc",
        link     = "Thrust specific fuel consumption",
    },
    ["cm/y"] = {
        target   = "cm/year",
    },
    ["cm/yr"] = {
        target   = "cm/year",
    },
    ["in/y"] = {
        target   = "in/year",
    },
    ["in/yr"] = {
        target   = "in/year",
    },
    ["knot"] = {
        target   = "kn",
    },
    ["knots"] = {
```

```
        target   = "kn",
    },
    ["kph"] = {
        target   = "km/h",
    },
    ["mi/h"] = {
        target   = "mph",
    },
    ["mm/s"] = {
        per      = { "mm", "s" },
        utype    = "speed",
        default  = "in/s",
        link     = "Metre per second",
    },
    ["C"] = {
        name1    = "degree Celsius",
        name2    = "degrees Celsius",
        symbol   = "°C",
        usesymbol= 1,
        utype    = "temperature",
        scale    = 1,
        offset   = -273.15,
        iscomplex= true,
        istemperature= true,
        default  = "F",
        link     = "Celsius",
    },
    ["F"] = {
        name1    = "degree Fahrenheit",
        name2    = "degrees Fahrenheit",
        symbol   = "°F",
        usesymbol= 1,
        utype    = "temperature",
        scale    = 0.55555555555555558,
        offset   = 32-273.15*(9/5),
        iscomplex= true,
        istemperature= true,
        default  = "C",
        link     = "Fahrenheit",
    },
    ["K"] = {
        _name1   = "kelvin",
        _symbol  = "K",
        usesymbol= 1,
        utype    = "temperature",
        scale    = 1,
        offset   = 0,
        iscomplex= true,
        istemperature= true,
        prefixes = 1,
        default  = "C F",
        link     = "Kelvin",
    },
    ["keVT"] = {
        name1    = "kiloelectronvolt",
        symbol   = "keV",
        utype    = "temperature",
        scale    = 11.604505e6,
        offset   = 0,
        iscomplex= true,
        default  = "MK",
        link     = "Electronvolt",
    },
    ["R"] = {
```

```
        name1    = "degree Rankine",
        name2    = "degrees Rankine",
        symbol   = "°R",
        usesymbol= 1,
        utype    = "temperature",
        scale    = 0.55555555555555558,
        offset   = 0,
        iscomplex= true,
        istemperature= true,
        default  = "K F C",
        link     = "Rankine scale",
    },
    ["Celsius"] = {
        target   = "C",
    },
    ["°C"] = {
        target   = "C",
    },
    ["°F"] = {
        target   = "F",
    },
    ["°R"] = {
        target   = "R",
    },
    ["C-change"] = {
        name1    = "degree Celsius change",
        name2    = "degrees Celsius change",
        symbol   = "°C",
        usesymbol= 1,
        utype    = "temperature change",
        scale    = 1,
        default  = "F-change",
        link     = "Celsius",
    },
    ["F-change"] = {
        name1    = "degree Fahrenheit change",
        name2    = "degrees Fahrenheit change",
        symbol   = "°F",
        usesymbol= 1,
        utype    = "temperature change",
        scale    = 0.55555555555555558,
        default  = "C-change",
        link     = "Fahrenheit",
    },
    ["K-change"] = {
        name1    = "kelvin change",
        name2    = "kelvins change",
        symbol   = "K",
        usesymbol= 1,
        utype    = "temperature change",
        scale    = 1,
        default  = "F-change",
        link     = "Kelvin",
    },
    ["°C-change"] = {
        target   = "C-change",
    },
    ["°F-change"] = {
        target   = "F-change",
    },
    ["century"] = {
        name1    = "century",
        name2    = "centuries",
        symbol   = "ha",
```

```
        utype    = "time",
        scale    = 3155760000,
        default  = "Gs",
    },
    ["d"] = {
        name1    = "day",
        symbol   = "d",
        utype    = "time",
        scale    = 86400,
        default  = "ks",
    },
    ["decade"] = {
        name1    = "decade",
        symbol   = "daa",
        utype    = "time",
        scale    = 315576000,
        default  = "Ms",
    },
    ["dog year"] = {
        name1    = "dog year",
        symbol   = "dog yr",
        utype    = "time",
        scale    = 220903200,
        default  = "years",
        link     = "List of unusual units of measurement#Dog year",
    },
    ["fortnight"] = {
        symbol   = "fortnight",
        usename  = 1,
        utype    = "time",
        scale    = 1209600,
        default  = "week",
    },
    ["h"] = {
        name1    = "hour",
        symbol   = "h",
        utype    = "time",
        scale    = 3600,
        default  = "ks",
    },
    ["long billion year"] = {
        name1    = "billion years",
        name2    = "billion years",
        symbol   = "Ta",
        utype    = "time",
        scale    = 31557600000000000000,
        default  = "Es",
        link     = "Annum",
    },
    ["millennium"] = {
        name1    = "millennium",
        name2    = "millennia",
        symbol   = "ka",
        utype    = "time",
        scale    = 31557600000,
        default  = "Gs",
    },
    ["milliard year"] = {
        name1    = "milliard years",
        name2    = "milliard years",
        symbol   = "Ga",
        utype    = "time",
        scale    = 31557600000000000,
        default  = "Ps",
```

```
        link     = "Annum",
    },
    ["million year"] = {
        name1    = "million years",
        name2    = "million years",
        symbol   = "Ma",
        utype    = "time",
        scale    = 31557600000000,
        default  = "Ts",
        link     = "Annum",
    },
    ["min"] = {
        name1    = "minute",
        symbol   = "min",
        utype    = "time",
        scale    = 60,
        default  = "s",
    },
    ["month"] = {
        symbol   = "month",
        usename  = 1,
        utype    = "time",
        scale    = 2629800,
        default  = "Ms",
    },
    ["months"] = {
        name1    = "month",
        symbol   = "mo",
        utype    = "time",
        scale    = 2629800,
        default  = "year",
    },
    ["s"] = {
        _name1   = "second",
        _symbol  = "s",
        utype    = "time",
        scale    = 1,
        prefixes = 1,
        default  = "min",
        link     = "Second",
    },
    ["short billion year"] = {
        name1    = "billion years",
        name2    = "billion years",
        symbol   = "Ga",
        utype    = "time",
        scale    = 31557600000000000,
        default  = "Ps",
        link     = "Annum",
    },
    ["short trillion year"] = {
        name1    = "trillion years",
        name2    = "trillion years",
        symbol   = "Ta",
        utype    = "time",
        scale    = 31557600000000000000,
        default  = "Es",
        link     = "Annum",
    },
    ["thousand million year"] = {
        name1    = "thousand million years",
        name2    = "thousand million years",
        symbol   = "Ga",
        utype    = "time",
```

```
        scale    = 31557600000000000,
        default  = "Ps",
        link     = "Annum",
    },
    ["wk"] = {
        symbol   = "week",
        usename  = 1,
        utype    = "time",
        scale    = 604800,
        default  = "Ms",
    },
    ["year"] = {
        name1    = "year",
        symbol   = "a",
        utype    = "time",
        scale    = 31557600,
        default  = "Ms",
        link     = "Annum",
    },
    ["years"] = {
        name1    = "year",
        symbol   = "yr",
        utype    = "time",
        scale    = 31557600,
        default  = "Ms",
        link     = "Annum",
    },
    ["byr"] = {
        target   = "short billion year",
    },
    ["day"] = {
        target   = "d",
    },
    ["days"] = {
        target   = "d",
    },
    ["dog yr"] = {
        target   = "dog year",
    },
    ["Gyr"] = {
        target   = "thousand million year",
    },
    ["hour"] = {
        target   = "h",
    },
    ["hours"] = {
        target   = "h",
    },
    ["kMyr"] = {
        target   = "thousand million year",
    },
    ["kmyr"] = {
        target   = "thousand million year",
    },
    ["kyr"] = {
        target   = "millennium",
    },
    ["long byr"] = {
        target   = "long billion year",
    },
    ["minute"] = {
        target   = "min",
    },
    ["minutes"] = {
```

```
        target   = "min",
    },
    ["mth"] = {
        target   = "month",
    },
    ["Myr"] = {
        target   = "million year",
    },
    ["myr"] = {
        target   = "million year",
    },
    ["second"] = {
        target   = "s",
    },
    ["seconds"] = {
        target   = "s",
    },
    ["tmyr"] = {
        target   = "thousand million year",
    },
    ["tryr"] = {
        target   = "short trillion year",
    },
    ["tyr"] = {
        target   = "millennium",
    },
    ["week"] = {
        target   = "wk",
    },
    ["weeks"] = {
        target   = "wk",
    },
    ["yr"] = {
        target   = "year",
    },
    ["kg.m"] = {
        name1    = "kilogram metre",
        name1_us = "kilogram meter",
        symbol   = "kg·m",
        utype    = "torque",
        scale    = 9.80665,
        default  = "Nm lbft",
        link     = "Kilogram metre (torque)",
    },
    ["kgf.m"] = {
        name1    = "kilogram force-metre",
        name1_us = "kilogram force-meter",
        symbol   = "kgf·m",
        utype    = "torque",
        scale    = 9.80665,
        default  = "Nm lbfft",
        link     = "Kilogram metre (torque)",
    },
    ["kgm"] = {
        name1    = "kilogram metre",
        name1_us = "kilogram meter",
        symbol   = "kg·m",
        utype    = "torque",
        scale    = 9.80665,
        default  = "Nm lbfft",
        link     = "Kilogram metre (torque)",
    },
    ["kpm"] = {
        name1    = "kilopond metre",
```

```
        name1_us = "kilopond meter",
        symbol   = "kp·m",
        utype    = "torque",
        scale    = 9.80665,
        default  = "Nm lbft",
        link     = "Kilogram metre (torque)",
    },
    ["lb-fft"] = {
        name1    = "pound force-foot",
        name2    = "pound force-feet",
        symbol   = "ft·lb<sub>f</sub>",
        utype    = "torque",
        scale    = 1.3558179483314004,
        default  = "Nm",
        link     = "Pound-foot (torque)",
    },
    ["lb.ft"] = {
        name1    = "pound force-foot",
        name2    = "pound force-feet",
        symbol   = "lb·ft",
        utype    = "torque",
        scale    = 1.3558179483314004,
        default  = "Nm",
        link     = "Pound-foot (torque)",
    },
    ["lb.in"] = {
        name1    = "pound force-inch",
        symbol   = "lb·in",
        utype    = "torque",
        scale    = 0.1129848290276167,
        default  = "mN.m",
        link     = "Pound-foot (torque)",
    },
    ["lbfft"] = {
        name1    = "pound force-foot",
        name2    = "pound force-feet",
        symbol   = "lbf·ft",
        utype    = "torque",
        scale    = 1.3558179483314004,
        default  = "Nm",
        link     = "Pound-foot (torque)",
    },
    ["lbft"] = {
        name1    = "pound-foot",
        name2    = "pound-feet",
        symbol   = "lb·ft",
        utype    = "torque",
        scale    = 1.3558179483314004,
        default  = "Nm",
        link     = "Pound-foot (torque)",
    },
    ["m.kg-f"] = {
        name1    = "metre kilogram-force",
        name1_us = "meter kilogram-force",
        name2    = "metre kilograms-force",
        name2_us = "meter kilograms-force",
        symbol   = "m·kg<sub>f</sub>",
        utype    = "torque",
        scale    = 9.80665,
        default  = "Nm lbfft",
        link     = "Kilogram metre (torque)",
    },
    ["m.kgf"] = {
        name1    = "metre kilogram-force",
```

```
        name1_us = "meter kilogram-force",
        name2    = "metre kilograms-force",
        name2_us = "meter kilograms-force",
        symbol   = "m·kgf",
        utype    = "torque",
        scale    = 9.80665,
        default  = "Nm lbfft",
        link     = "Kilogram metre (torque)",
    },
    ["mN.m"] = {
        name1    = "millinewton-metre",
        name1_us = "millinewton-meter",
        symbol   = "mN·m",
        utype    = "torque",
        scale    = 0.001,
        default  = "lb.in",
        link     = "Newton-metre",
    },
    ["Nm"] = {
        _name1   = "newton-metre",
        _name1_us= "newton-meter",
        _symbol  = "N·m",
        utype    = "torque",
        alttype  = "energy",
        scale    = 1,
        prefixes = 1,
        default  = "lbfft",
        link     = "Newton-metre",
    },
    ["kN/m"] = {
        per      = { "kN", "-m-stiff" },
        utype    = "torque",
        default  = "lbf/in",
    },
    ["lbf/in"] = {
        per      = { "lbf", "-in-stiff" },
        utype    = "torque",
        default  = "kN/m",
    },
    ["lb-f.ft"] = {
        target   = "lb-fft",
    },
    ["lbf.ft"] = {
        target   = "lbfft",
    },
    ["lbf·ft"] = {
        target   = "lbfft",
    },
    ["lb·ft"] = {
        target   = "lb.ft",
    },
    ["mkg-f"] = {
        target   = "m.kg-f",
    },
    ["mkgf"] = {
        target   = "m.kgf",
    },
    ["N.m"] = {
        target   = "Nm",
    },
    ["N·m"] = {
        target   = "Nm",
    },
    ["ton-mile"] = {
```

```
        symbol   = "ton-mile",
        usename  = 1,
        utype    = "transportation",
        scale    = 1.4599723182105602,
        default  = "tkm",
    },
    ["tkm"] = {
        name1    = "tonne-kilometre",
        name1_us = "tonne-kilometer",
        symbol   = "tkm",
        utype    = "transportation",
        scale    = 1,
        default  = "ton-mile",
    },
    ["-12USoz(mL)serve"] = {
        name1_us = "12 U.S. fl oz (355 mL) serving",
        symbol   = "12 US fl oz (355 mL) serving",
        sym_us   = "12 U.S. fl oz (355 mL) serving",
        utype    = "volume",
        scale    = 0.00035488235475000004,
        default  = "mL",
        link     = "Beverage can#Standard sizes",
    },
    ["-12USoz(ml)serve"] = {
        name1_us = "12 U.S. fl oz (355 ml) serving",
        symbol   = "12 US fl oz (355 ml) serving",
        sym_us   = "12 U.S. fl oz (355 ml) serving",
        utype    = "volume",
        scale    = 0.00035488235475000004,
        default  = "ml",
        link     = "Beverage can#Standard sizes",
    },
    ["-12USozserve"] = {
        name1_us = "12 U.S. fl oz serving",
        symbol   = "12 US fl oz serving",
        sym_us   = "12 U.S. fl oz serving",
        utype    = "volume",
        scale    = 0.00035488235475000004,
        default  = "mL",
        link     = "Beverage can#Standard sizes",
    },
    ["acre-foot"] = {
        name1    = "acre-foot",
        name2    = "acre-foot",
        symbol   = "acre·ft",
        utype    = "volume",
        scale    = 1233.48183754752,
        default  = "m3",
    },
    ["acre-ft"] = {
        name1    = "acre-foot",
        name2    = "acre-feet",
        symbol   = "acre·ft",
        utype    = "volume",
        scale    = 1233.48183754752,
        default  = "m3",
    },
    ["AUtbsp"] = {
        name1    = "Australian tablespoon",
        symbol   = "AU tbsp",
        utype    = "volume",
        scale    = 0.000020,
        default  = "ml",
    },
```

```
    ["Bcuft"] = {
        name1    = "billion cubic foot",
        name2    = "billion cubic feet",
        symbol   = "billion cu ft",
        utype    = "volume",
        scale    = 28316846.592,
        default  = "Gl",
        link     = "Cubic foot",
    },
    ["bdft"] = {
        name1    = "board foot",
        name2    = "board feet",
        symbol   = "bd ft",
        utype    = "volume",
        scale    = 0.0023597372167,
        default  = "m3",
    },
    ["board feet"] = {
        name2    = "board feet",
        symbol   = "board foot",
        usename  = 1,
        utype    = "volume",
        scale    = 0.0023597372167,
        default  = "m3",
    },
    ["board foot"] = {
        name2    = "board foot",
        symbol   = "board foot",
        usename  = 1,
        utype    = "volume",
        scale    = 0.0023597372167,
        default  = "m3",
    },
    ["cc"] = {
        name1    = "cubic centimetre",
        name1_us = "cubic centimeter",
        symbol   = "cc",
        utype    = "volume",
        scale    = 0.000001,
        default  = "cuin",
    },
    ["CID"] = {
        name1    = "cubic inch",
        name2    = "cubic inches",
        symbol   = "cu in",
        utype    = "volume",
        scale    = 0.000016387064,
        default  = "cc",
        link     = "Cubic inch#Engine displacement",
    },
    ["cord"] = {
        symbol   = "cord",
        utype    = "volume",
        scale    = 3.624556363776,
        default  = "m3",
        link     = "Cord (unit)",
    },
    ["cufoot"] = {
        name1    = "cubic foot",
        name2    = "cubic foot",
        symbol   = "cu ft",
        utype    = "volume",
        scale    = 0.028316846592,
        default  = "m3",
```

```
    },
    ["cuft"] = {
        name1    = "cubic foot",
        name2    = "cubic feet",
        symbol   = "cu ft",
        utype    = "volume",
        scale    = 0.028316846592,
        default  = "m3",
    },
    ["cuin"] = {
        name1    = "cubic inch",
        name2    = "cubic inches",
        symbol   = "cu in",
        utype    = "volume",
        scale    = 0.000016387064,
        default  = "cm3",
    },
    ["cumi"] = {
        name1    = "cubic mile",
        symbol   = "cu mi",
        utype    = "volume",
        scale    = 4168181825.440579584,
        default  = "km3",
    },
    ["cuyd"] = {
        name1    = "cubic yard",
        symbol   = "cu yd",
        utype    = "volume",
        scale    = 0.764554857984,
        default  = "m3",
    },
    ["firkin"] = {
        symbol   = "firkin",
        usename  = 1,
        utype    = "volume",
        scale    = 0.04091481,
        default  = "l impgal USgal",
        link     = "Firkin (unit)",
    },
    ["foot3"] = {
        target   = "cufoot",
    },
    ["Goilbbl"] = {
        name1    = "billion barrels",
        name2    = "billion barrels",
        symbol   = "Gbbl",
        utype    = "volume",
        scale    = 158987294.928,
        default  = "v * 1.58987294928 < 10 ! e6 ! e9 ! m3",
        link     = "Barrel (unit)#Oil barrel",
    },
    ["gr water"] = {
        name1    = "grains water",
        name2    = "grains water",
        symbol   = "gr H<sub>2</sub>O",
        utype    = "volume",
        scale    = 0.00000006479891,
        default  = "cm3",
        link     = "Grain (unit)",
    },
    ["grt"] = {
        name1    = "gross register ton",
        symbol   = "grt",
        utype    = "volume",
```

```
        scale    = 2.8316846592,
        default  = "m3",
        link     = "Gross register tonnage",
    },
    ["impbbl"] = {
        name1    = "imperial barrel",
        symbol   = "imp bbl",
        utype    = "volume",
        scale    = 0.16365924,
        default  = "l impgal USgal",
        link     = "Barrel (unit)",
    },
    ["impbsh"] = {
        name1    = "imperial bushel",
        symbol   = "imp bsh",
        utype    = "volume",
        scale    = 0.03636872,
        default  = "l impgal USdrygal",
    },
    ["impbu"] = {
        name1    = "imperial bushel",
        symbol   = "imp bu",
        utype    = "volume",
        scale    = 0.03636872,
        default  = "m3",
    },
    ["impgal"] = {
        name1    = "imperial gallon",
        symbol   = "imp gal",
        utype    = "volume",
        scale    = 0.00454609,
        default  = "l USgal",
    },
    ["impgi"] = {
        name1    = "gill",
        symbol   = "gi",
        utype    = "volume",
        scale    = 0.0001420653125,
        default  = "ml USoz",
        link     = "Gill (unit)",
    },
    ["impkenning"] = {
        name1    = "imperial kenning",
        symbol   = "kenning",
        utype    = "volume",
        scale    = 0.01818436,
        default  = "l USdrygal",
        link     = "Kenning (unit)",
    },
    ["impoz"] = {
        name1    = "imperial fluid ounce",
        symbol   = "imp fl oz",
        utype    = "volume",
        scale    = 0.0000284130625,
        default  = "ml USoz",
    },
    ["imppk"] = {
        name1    = "imperial peck",
        symbol   = "pk",
        utype    = "volume",
        scale    = 0.00909218,
        default  = "l USdrygal",
        link     = "Peck",
    },
```

```
    ["imppt"] = {
        name1    = "imperial pint",
        symbol   = "imp pt",
        utype    = "volume",
        scale    = 0.00056826125,
        default  = "l",
    },
    ["impqt"] = {
        name1    = "imperial quart",
        symbol   = "imp qt",
        utype    = "volume",
        scale    = 0.0011365225,
        default  = "ml USoz",
        customary= 3,
    },
    ["kilderkin"] = {
        symbol   = "kilderkin",
        usename  = 1,
        utype    = "volume",
        scale    = 0.08182962,
        default  = "l impgal USgal",
    },
    ["koilbbl"] = {
        name1    = "thousand barrels",
        name2    = "thousand barrels",
        symbol   = "kbbl",
        utype    = "volume",
        scale    = 158.987294928,
        default  = "v * 1.58987294928 < 10 ! ! e3 ! m3",
        link     = "Barrel (unit)#Oil barrel",
    },
    ["L"] = {
        _name1   = "litre",
        _name1_us= "liter",
        _symbol  = "L",
        utype    = "volume",
        scale    = 0.001,
        prefixes = 1,
        default  = "impgal USgal",
        link     = "Litre",
    },
    ["l"] = {
        _name1   = "litre",
        _name1_us= "liter",
        _symbol  = "l",
        utype    = "volume",
        scale    = 0.001,
        prefixes = 1,
        default  = "impgal USgal",
        link     = "Litre",
    },
    ["m3"] = {
        _name1   = "cubic metre",
        _name1_us= "cubic meter",
        _symbol  = "m<sup>3</sup>",
        prefix_position= 7,
        utype    = "volume",
        scale    = 1,
        prefixes = 3,
        default  = "cuft",
        link     = "Cubic metre",
    },
    ["Mbbl"] = {
        name1    = "thousand barrels",
```

```
        name2    = "thousand barrels",
        symbol   = "Mbbl",
        utype    = "volume",
        scale    = 158.987294928,
        default  = "v * 1.58987294928 < 10 ! e3 ! ! m3",
        link     = "Barrel (unit)#Oil barrel",
    },
    ["MMoilbbl"] = {
        name1    = "million barrels",
        name2    = "million barrels",
        symbol   = "MMbbl",
        utype    = "volume",
        scale    = 158987.294928,
        default  = "v * 1.58987294928 < 10 ! e3 ! e6 ! m3",
        link     = "Barrel (unit)#Oil barrel",
    },
    ["Moilbbl"] = {
        name1    = "million barrels",
        name2    = "million barrels",
        symbol   = "Mbbl",
        utype    = "volume",
        scale    = 158987.294928,
        default  = "v * 1.58987294928 < 10 ! e3 ! e6 ! m3",
        link     = "Barrel (unit)#Oil barrel",
    },
    ["MTON"] = {
        name1    = "measurement ton",
        symbol   = "MTON",
        utype    = "volume",
        scale    = 1.13267386368,
        default  = "m3",
    },
    ["MUSgal"] = {
        name1    = "million US gallons",
        name1_us = "million U.S. gallons",
        name2    = "million US gallons",
        name2_us = "million U.S. gallons",
        symbol   = "million US gal",
        sym_us   = "million U.S. gal",
        utype    = "volume",
        scale    = 3785.411784,
        default  = "Ml",
        link     = "US gallon",
    },
    ["oilbbl"] = {
        name1    = "barrel",
        symbol   = "bbl",
        utype    = "volume",
        scale    = 0.158987294928,
        default  = "m3",
        link     = "Barrel (unit)#Oil barrel",
    },
    ["stere"] = {
        symbol   = "stere",
        usename  = 1,
        utype    = "volume",
        scale    = 1,
        default  = "cuft",
    },
    ["Toilbbl"] = {
        name1    = "trillion barrels",
        name2    = "trillion barrels",
        symbol   = "Tbbl",
        utype    = "volume",
```

```
        scale    = 158987294928,
        default  = "v * 1.58987294928 < 10 ! e9 ! e12 ! m3",
        link     = "Barrel (unit)#Oil barrel",
    },
    ["USbbl"] = {
        name1    = "US barrel",
        name1_us = "U.S. barrel",
        symbol   = "US bbl",
        sym_us   = "U.S. bbl",
        utype    = "volume",
        scale    = 0.119240471196,
        default  = "l USgal impgal",
        link     = "Barrel (unit)",
    },
    ["USbeerbbl"] = {
        name1    = "US beer barrel",
        name1_us = "U.S. beer barrel",
        symbol   = "US bbl",
        sym_us   = "U.S. bbl",
        utype    = "volume",
        scale    = 0.117347765304,
        default  = "l USgal impgal",
        link     = "Barrel (unit)",
    },
    ["USbsh"] = {
        name1    = "US bushel",
        name1_us = "U.S. bushel",
        symbol   = "US bsh",
        sym_us   = "U.S. bsh",
        utype    = "volume",
        scale    = 0.03523907016688,
        default  = "l USdrygal impgal",
        link     = "Bushel",
    },
    ["USbu"] = {
        name1    = "US bushel",
        name1_us = "U.S. bushel",
        symbol   = "US bu",
        sym_us   = "U.S. bu",
        utype    = "volume",
        scale    = 0.03523907016688,
        default  = "l USdrygal impgal",
        link     = "Bushel",
    },
    ["USdrybbl"] = {
        name1    = "US dry barrel",
        name1_us = "U.S. dry barrel",
        symbol   = "US dry bbl",
        sym_us   = "U.S. dry bbl",
        utype    = "volume",
        scale    = 0.11562819898508,
        default  = "m3",
        link     = "Barrel (unit)",
    },
    ["USdrygal"] = {
        name1    = "US dry gallon",
        name1_us = "U.S. dry gallon",
        symbol   = "US dry gal",
        sym_us   = "U.S. dry gal",
        utype    = "volume",
        scale    = 0.00440488377086,
        default  = "l",
        link     = "Gallon",
    },
```

```
    ["USdrypt"] = {
        name1    = "US dry pint",
        name1_us = "U.S. dry pint",
        symbol   = "US dry pt",
        sym_us   = "U.S. dry pt",
        utype    = "volume",
        scale    = 0.0005506104713575,
        default  = "ml",
        link     = "Pint",
    },
    ["USdryqt"] = {
        name1    = "US dry quart",
        name1_us = "U.S. dry quart",
        symbol   = "US dry qt",
        sym_us   = "U.S. dry qt",
        utype    = "volume",
        scale    = 0.001101220942715,
        default  = "ml",
        link     = "Quart",
    },
    ["USflgal"] = {
        name1    = "US gallon",
        name1_us = "U.S. gallon",
        symbol   = "US fl gal",
        sym_us   = "U.S. fl gal",
        utype    = "volume",
        scale    = 0.003785411784,
        default  = "l impgal",
        link     = "Gallon",
    },
    ["USgal"] = {
        name1    = "US gallon",
        name1_us = "U.S. gallon",
        symbol   = "US gal",
        sym_us   = "U.S. gal",
        utype    = "volume",
        scale    = 0.003785411784,
        default  = "l impgal",
    },
    ["USgi"] = {
        name1    = "gill",
        symbol   = "gi",
        utype    = "volume",
        scale    = 0.0001182941183,
        default  = "ml impoz",
        link     = "Gill (unit)",
    },
    ["USkenning"] = {
        name1    = "US kenning",
        name1_us = "U.S. kenning",
        symbol   = "US kenning",
        sym_us   = "U.S. kenning",
        utype    = "volume",
        scale    = 0.01761953508344,
        default  = "l impgal",
        link     = "Kenning (unit)",
    },
    ["USmin"] = {
        name1    = "US minim",
        name1_us = "U.S. minim",
        symbol   = "US min",
        sym_us   = "U.S. min",
        utype    = "volume",
        scale    = 0.00000061611519921875,
```

```
        default  = "ml",
        link     = "Minim (unit)",
    },
    ["USoz"] = {
        name1    = "US fluid ounce",
        name1_us = "U.S. fluid ounce",
        symbol   = "US fl oz",
        sym_us   = "U.S. fl oz",
        utype    = "volume",
        scale    = 0.0000295735295625,
        default  = "ml",
    },
    ["USpk"] = {
        name1    = "US peck",
        name1_us = "U.S. peck",
        symbol   = "US pk",
        sym_us   = "U.S. pk",
        utype    = "volume",
        scale    = 0.00880976754172,
        default  = "l impgal",
        link     = "Peck",
    },
    ["USpt"] = {
        name1    = "US pint",
        name1_us = "U.S. pint",
        symbol   = "US pt",
        sym_us   = "U.S. pt",
        utype    = "volume",
        scale    = 0.000473176473,
        default  = "l imppt",
        link     = "Pint",
    },
    ["USqt"] = {
        name1    = "US quart",
        name1_us = "U.S. quart",
        symbol   = "US qt",
        sym_us   = "U.S. qt",
        utype    = "volume",
        scale    = 0.000946352946,
        default  = "ml",
        link     = "Quart",
        customary= 1,
    },
    ["USquart"] = {
        name1    = "US quart",
        name1_us = "U.S. quart",
        symbol   = "US qt",
        sym_us   = "U.S. qt",
        utype    = "volume",
        scale    = 0.000946352946,
        default  = "ml impoz",
        link     = "Quart",
    },
    ["UStbsp"] = {
        name1    = "US tablespoon",
        name1_us = "U.S. tablespoon",
        symbol   = "US tbsp",
        sym_us   = "U.S. tbsp",
        utype    = "volume",
        scale    = 1.4786764781250001e-5,
        default  = "ml",
    },
    ["winecase"] = {
        symbol   = "case",
```

```
        usename  = 1,
        utype    = "volume",
        scale    = 0.009,
        default  = "l",
        link     = "Case (goods)",
    },
    ["*U.S.drygal"] = {
        target   = "USdrygal",
        sp_us    = true,
        customary= 2,
    },
    ["*U.S.gal"] = {
        target   = "USgal",
        sp_us    = true,
        default  = "L impgal",
        customary= 2,
    },
    ["+USdrygal"] = {
        target   = "USdrygal",
        customary= 1,
    },
    ["+usfloz"] = {
        target   = "USoz",
        link     = "Fluid ounce",
        customary= 1,
    },
    ["+USgal"] = {
        target   = "USgal",
        customary= 1,
    },
    ["+USoz"] = {
        target   = "USoz",
        customary= 1,
    },
    ["@impgal"] = {
        target   = "impgal",
        link     = "Gallon",
        customary= 3,
    },
    ["acre feet"] = {
        target   = "acre-ft",
    },
    ["acre foot"] = {
        target   = "acre-foot",
    },
    ["acre ft"] = {
        target   = "acre-ft",
    },
    ["acre-feet"] = {
        target   = "acre-ft",
    },
    ["acre.foot"] = {
        target   = "acre-foot",
    },
    ["acre.ft"] = {
        target   = "acre-ft",
    },
    ["acre·ft"] = {
        target   = "acre-ft",
    },
    ["bushels"] = {
        target   = "USbsh",
    },
    ["cid"] = {
```

```
        target   = "CID",
    },
    ["ft3"] = {
        target   = "cuft",
    },
    ["gal"] = {
        target   = "USgal",
    },
    ["gallon"] = {
        shouldbe = "Use %{USgal%} for US gallons or %{impgal%} for imperial gallo
    },
    ["gallons"] = {
        shouldbe = "Use %{USgal%} for US gallons or %{impgal%} for imperial gallo
    },
    ["Gcuft"] = {
        target   = "e9cuft",
    },
    ["impfloz"] = {
        target   = "impoz",
    },
    ["Impgal"] = {
        target   = "impgal",
    },
    ["in3"] = {
        target   = "cuin",
        symbol   = "in<sup>3</sup>",
    },
    ["kcuft"] = {
        target   = "e3cuft",
    },
    ["kcum"] = {
        target   = "e3m3",
    },
    ["km³"] = {
        target   = "km3",
    },
    ["liter"] = {
        target   = "L",
        sp_us    = true,
    },
    ["liters"] = {
        target   = "L",
        sp_us    = true,
    },
    ["litre"] = {
        target   = "L",
    },
    ["litres"] = {
        target   = "L",
    },
    ["Mcuft"] = {
        target   = "e6cuft",
    },
    ["Mcum"] = {
        target   = "e6m3",
    },
    ["Mft3"] = {
        target   = "e6cuft",
    },
    ["mi3"] = {
        target   = "cumi",
    },
    ["m³"] = {
        target   = "m3",
```

```
    },
    ["Pcuft"] = {
        target   = "e15cuft",
    },
    ["pt"] = {
        shouldbe = "Use %{USpt%} for US pints or %{imppt%} for imperial pints (nc
    },
    ["qt"] = {
        shouldbe = "Use %{USqt%} for US quarts or %{impqt%} for imperial quarts (
    },
    ["Tcuft"] = {
        target   = "e12cuft",
    },
    ["Tft3"] = {
        target   = "e12cuft",
    },
    ["U.S.bbl"] = {
        target   = "USbbl",
        sp_us    = true,
        default  = "l U.S.gal impgal",
    },
    ["U.S.beerbbl"] = {
        target   = "USbeerbbl",
        sp_us    = true,
        default  = "l U.S.gal impgal",
    },
    ["U.S.bsh"] = {
        target   = "USbsh",
        sp_us    = true,
        default  = "l U.S.drygal impgal",
    },
    ["U.S.bu"] = {
        target   = "USbu",
        sp_us    = true,
        default  = "l U.S.drygal impgal",
    },
    ["U.S.drybbl"] = {
        target   = "USdrybbl",
        sp_us    = true,
    },
    ["U.S.drygal"] = {
        target   = "USdrygal",
        sp_us    = true,
    },
    ["U.S.drypt"] = {
        target   = "USdrypt",
        sp_us    = true,
    },
    ["U.S.dryqt"] = {
        target   = "USdryqt",
        sp_us    = true,
    },
    ["U.S.flgal"] = {
        target   = "USflgal",
        sp_us    = true,
    },
    ["U.S.floz"] = {
        target   = "USoz",
        sp_us    = true,
    },
    ["U.S.gal"] = {
        target   = "USgal",
        sp_us    = true,
        default  = "L impgal",
```

```
        link     = "U.S. gallon",
    },
    ["u.s.gal"] = {
        target   = "USgal",
        sp_us    = true,
        default  = "L impgal",
        link     = "U.S. gallon",
    },
    ["U.S.gi"] = {
        target   = "USgi",
        sp_us    = true,
    },
    ["U.S.kenning"] = {
        target   = "USkenning",
        sp_us    = true,
    },
    ["U.S.oz"] = {
        target   = "USoz",
        sp_us    = true,
    },
    ["U.S.pk"] = {
        target   = "USpk",
        sp_us    = true,
    },
    ["U.S.pt"] = {
        target   = "USpt",
        sp_us    = true,
    },
    ["U.S.qt"] = {
        target   = "USqt",
        sp_us    = true,
        default  = "L impqt",
        customary= 2,
    },
    ["usbbl"] = {
        target   = "USbbl",
    },
    ["usbeerbbl"] = {
        target   = "USbeerbbl",
    },
    ["usbsh"] = {
        target   = "USbsh",
    },
    ["usbu"] = {
        target   = "USbu",
    },
    ["usdrybbl"] = {
        target   = "USdrybbl",
    },
    ["usdrygal"] = {
        target   = "USdrygal",
    },
    ["usdrypt"] = {
        target   = "USdrypt",
    },
    ["usdryqt"] = {
        target   = "USdryqt",
    },
    ["USfloz"] = {
        target   = "USoz",
    },
    ["usfloz"] = {
        target   = "USoz",
    },
```

```
    ["USGAL"] = {
        target   = "USgal",
    },
    ["usgal"] = {
        target   = "USgal",
    },
    ["usgi"] = {
        target   = "USgi",
    },
    ["uskenning"] = {
        target   = "USkenning",
    },
    ["usoz"] = {
        target   = "USoz",
    },
    ["uspk"] = {
        target   = "USpk",
    },
    ["uspt"] = {
        target   = "USpt",
    },
    ["usqt"] = {
        target   = "USqt",
    },
    ["yd3"] = {
        target   = "cuyd",
    },
    ["cuft/sqmi"] = {
        per      = { "cuft", "sqmi" },
        utype    = "volume per unit area",
        default  = "m3/km2",
    },
    ["m3/ha"] = {
        name1    = "cubic metre per hectare",
        name1_us = "cubic meter per hectare",
        name2    = "cubic metres per hectare",
        name2_us = "cubic meters per hectare",
        symbol   = "m<sup>3</sup>/ha",
        utype    = "volume per unit area",
        scale    = 0.0001,
        default  = "USbu/acre",
        link     = "Hectare",
    },
    ["m3/km2"] = {
        per      = { "m3", "km2" },
        utype    = "volume per unit area",
        default  = "cuft/sqmi",
    },
    ["U.S.gal/acre"] = {
        per      = { "U.S.gal", "acre" },
        utype    = "volume per unit area",
        default  = "m3/km2",
    },
    ["USbu/acre"] = {
        name2    = "US bushels per acre",
        symbol   = "US bushel per acre",
        usename  = 1,
        utype    = "volume per unit area",
        scale    = 8.7077638761350888e-6,
        default  = "m3/ha",
        link     = "Bushel",
    },
    ["USgal/acre"] = {
        per      = { "USgal", "acre" },
```

```
        utype    = "volume per unit area",
        default  = "m3/km2",
    },
    ["cuyd/mi"] = {
        per      = { "cuyd", "mi" },
        utype    = "volume per unit length",
        default  = "m3/km",
    },
    ["m3/km"] = {
        per      = { "m3", "km" },
        utype    = "volume per unit length",
        default  = "cuyd/mi",
    },
    ["mich"] = {
        combination= { "ch", "mi" },
        multiple = { 80 },
        utype    = "length",
    },
    ["michlk"] = {
        combination= { "chlk", "mi" },
        multiple = { 80 },
        utype    = "length",
    },
    ["michainlk"] = {
        combination= { "chainlk", "mi" },
        multiple = { 80 },
        utype    = "length",
    },
    ["miyd"] = {
        combination= { "yd", "mi" },
        multiple = { 1760 },
        utype    = "length",
    },
    ["miydftin"] = {
        combination= { "in", "ft", "yd", "mi" },
        multiple = { 12, 3, 1760 },
        utype    = "length",
    },
    ["mift"] = {
        combination= { "ft", "mi" },
        multiple = { 5280 },
        utype    = "length",
    },
    ["ydftin"] = {
        combination= { "in", "ft", "yd" },
        multiple = { 12, 3 },
        utype    = "length",
    },
    ["ydft"] = {
        combination= { "ft", "yd" },
        multiple = { 3 },
        utype    = "length",
    },
    ["ftin"] = {
        combination= { "in", "ft" },
        multiple = { 12 },
        utype    = "length",
    },
    ["footin"] = {
        combination= { "in", "foot" },
        multiple = { 12 },
        utype    = "length",
    },
    ["handin"] = {
```

```
        combination= { "in", "hand" },
        multiple = { 4 },
        utype    = "length",
    },
    ["lboz"] = {
        combination= { "oz", "lb" },
        multiple = { 16 },
        utype    = "mass",
    },
    ["stlb"] = {
        combination= { "lb", "st" },
        multiple = { 14 },
        utype    = "mass",
    },
    ["stlboz"] = {
        combination= { "oz", "lb", "st" },
        multiple = { 16, 14 },
        utype    = "mass",
    },
    ["st and lb"] = {
        combination= { "lb", "st" },
        multiple = { 14 },
        utype    = "mass",
    },
    ["GN LTf"] = {
        combination= { "GN", "-LTf" },
        utype    = "force",
    },
    ["GN LTf STf"] = {
        combination= { "GN", "-LTf", "-STf" },
        utype    = "force",
    },
    ["GN STf"] = {
        combination= { "GN", "-STf" },
        utype    = "force",
    },
    ["GN STf LTf"] = {
        combination= { "GN", "-STf", "-LTf" },
        utype    = "force",
    },
    ["kN LTf"] = {
        combination= { "kN", "-LTf" },
        utype    = "force",
    },
    ["kN LTf STf"] = {
        combination= { "kN", "-LTf", "-STf" },
        utype    = "force",
    },
    ["kN STf"] = {
        combination= { "kN", "-STf" },
        utype    = "force",
    },
    ["kN STf LTf"] = {
        combination= { "kN", "-STf", "-LTf" },
        utype    = "force",
    },
    ["LTf STf"] = {
        combination= { "-LTf", "-STf" },
        utype    = "force",
    },
    ["MN LTf"] = {
        combination= { "MN", "-LTf" },
        utype    = "force",
    },
```

```
    ["MN LTf STf"] = {
        combination= { "MN", "-LTf", "-STf" },
        utype    = "force",
    },
    ["MN STf"] = {
        combination= { "MN", "-STf" },
        utype    = "force",
    },
    ["MN STf LTf"] = {
        combination= { "MN", "-STf", "-LTf" },
        utype    = "force",
    },
    ["STf LTf"] = {
        combination= { "-STf", "-LTf" },
        utype    = "force",
    },
    ["L/100 km mpgimp"] = {
        combination= { "L/100 km", "mpgimp" },
        utype    = "fuel efficiency",
    },
    ["l/100 km mpgimp"] = {
        combination= { "l/100 km", "mpgimp" },
        utype    = "fuel efficiency",
    },
    ["L/100 km mpgUS"] = {
        combination= { "L/100 km", "mpgus" },
        utype    = "fuel efficiency",
    },
    ["L/100 km mpgus"] = {
        combination= { "L/100 km", "mpgus" },
        utype    = "fuel efficiency",
    },
    ["l/100 km mpgus"] = {
        combination= { "l/100 km", "mpgus" },
        utype    = "fuel efficiency",
    },
    ["mpgimp L/100 km"] = {
        combination= { "mpgimp", "L/100 km" },
        utype    = "fuel efficiency",
    },
    ["LT ST t"] = {
        combination= { "lt", "-ST", "t" },
        utype    = "mass",
    },
    ["LT t ST"] = {
        combination= { "lt", "t", "-ST" },
        utype    = "mass",
    },
    ["ST LT t"] = {
        combination= { "-ST", "lt", "t" },
        utype    = "mass",
    },
    ["ST t LT"] = {
        combination= { "-ST", "t", "lt" },
        utype    = "mass",
    },
    ["t LT ST"] = {
        combination= { "t", "lt", "-ST" },
        utype    = "mass",
    },
    ["ton"] = {
        combination= { "LT", "ST" },
        utype    = "mass",
    },
```

```
    ["kPa kg/cm2"] = {
        combination= { "kPa", "kgf/cm2" },
        utype    = "pressure",
    },
    ["kPa lb/in2"] = {
        combination= { "kPa", "-lb/in2" },
        utype    = "pressure",
    },
    ["floz"] = {
        combination= { "impoz", "USoz" },
        utype    = "volume",
    },
}

-------------------------------------------------------------------------------
-- Do not change the data in this table because it is created by running --
-- a script that reads the wikitext from a wiki page (see note above).   --
-------------------------------------------------------------------------------
local default_exceptions = {
        -- Prefixed units with a default different from that of the base unit.
        -- Each key item is a prefixed symbol (unitcode for engineering notation)
        ["cm<sup>2</sup>"] = "sqin",
        ["dm<sup>2</sup>"] = "sqin",
        ["e3acre"] = "km2",
        ["e3m2"] = "e6sqft",
        ["e6acre"] = "km2",
        ["e6ha"] = "e6acre",
        ["e6km2"] = "e6sqmi",
        ["e6m2"] = "e6sqft",
        ["e6sqft"] = "v * 9.290304 < 100 ! e3 ! e6 ! m2",
        ["e6sqmi"] = "e6km2",
        ["hm<sup>2</sup>"] = "acre",
        ["km<sup>2</sup>"] = "sqmi",
        ["mm<sup>2</sup>"] = "sqin",
        ["aJ"] = "eV",
        ["e3BTU"] = "MJ",
        ["e6BTU"] = "GJ",
        ["EJ"] = "kWh",
        ["fJ"] = "keV",
        ["GJ"] = "kWh",
        ["MJ"] = "kWh",
        ["PJ"] = "kWh",
        ["pJ"] = "MeV",
        ["TJ"] = "kWh",
        ["YJ"] = "kWh",
        ["yJ"] = "µeV",
        ["ZJ"] = "kWh",
        ["zJ"] = "meV",
        ["e12cuft/a"] = "v * 2.8316846592 < 100 ! e9 ! e12 ! m3/a",
        ["e12cuft/d"] = "v * 2.8316846592 < 100 ! e9 ! e12 ! m3/d",
        ["e12m3/a"] = "Tcuft/a",
        ["e12m3/d"] = "Tcuft/d",
        ["e3cuft/a"] = "v * 2.8316846592 < 100 ! ! e3 ! m3/a",
        ["e3cuft/d"] = "v * 2.8316846592 < 100 ! ! e3 ! m3/d",
        ["e3cuft/s"] = "v * 2.8316846592 < 100 ! ! e3 ! m3/s",
        ["e3m3/a"] = "v < 28.316846592 ! k ! M ! cuft/a",
        ["e3m3/d"] = "v < 28.316846592 ! k ! M ! cuft/d",
        ["e3m3/s"] = "v < 28.316846592 ! k ! M ! cuft/s",
        ["e3USgal/a"] = "v * 3.785411784 < 1000 ! ! e3 ! m3/a",
        ["e6cuft/a"] = "v * 2.8316846592 < 100 ! e3 ! e6 ! m3/a",
        ["e6cuft/d"] = "v * 2.8316846592 < 100 ! e3 ! e6 ! m3/d",
        ["e6cuft/s"] = "v * 2.8316846592 < 100 ! e3 ! e6 ! m3/s",
        ["e6m3/a"] = "v < 28.316846592 ! M ! G ! cuft/a",
        ["e6m3/d"] = "v < 28.316846592 ! M ! G ! cuft/d",
```

```
        ["e6m3/s"] = "v < 28.316846592 ! e6 ! e9 ! cuft/s",
        ["e6USgal/a"] = "v * 3.785411784 < 1000 ! e3 ! e6 ! m3/a",
        ["e9cuft/a"] = "m3/a",
        ["e9cuft/d"] = "v * 2.8316846592 < 100 ! e6 ! e9 ! m3/d",
        ["e9m3/a"] = "v < 28.316846592 ! G ! T ! cuft/a",
        ["e9m3/d"] = "v < 28.316846592 ! G ! T ! cuft/d",
        ["e9m3/s"] = "v < 28.316846592 ! e9 ! e12 ! cuft/s",
        ["e9USgal/a"] = "v * 3.785411784 < 1000 ! e6 ! e9 ! m3/a",
        ["e9USgal/s"] = "v * 3.785411784 < 1000 ! e6 ! e9 ! m3/s",
        ["nN"] = "gr-f",
        ["µN"] = "gr-f",
        ["mN"] = "oz-f",
        ["am"] = "in",
        ["cm"] = "in",
        ["dam"] = "ft",
        ["dm"] = "in",
        ["e12km"] = "e12mi",
        ["e12mi"] = "e12km",
        ["e3AU"] = "ly",
        ["e3km"] = "e3mi",
        ["e3mi"] = "e3km",
        ["e6km"] = "e6mi",
        ["e6mi"] = "e6km",
        ["e9km"] = "AU",
        ["e9mi"] = "e9km",
        ["Em"] = "mi",
        ["fm"] = "in",
        ["Gm"] = "mi",
        ["hm"] = "ft",
        ["km"] = "mi",
        ["mm"] = "in",
        ["Mm"] = "mi",
        ["nm"] = "in",
        ["Pm"] = "mi",
        ["pm"] = "in",
        ["Tm"] = "mi",
        ["Ym"] = "mi",
        ["ym"] = "in",
        ["Zm"] = "mi",
        ["zm"] = "in",
        ["µm"] = "in",
        ["e12lb"] = "v * 4.5359237 < 10 ! Mt ! Gt",
        ["e3lb"] = "v * 4.5359237 < 10 ! kg ! t",
        ["e3ozt"] = "v * 0.311034768 < 10 ! kg ! t",
        ["e3t"] = "LT ST",
        ["e6carat"] = "t",
        ["e6lb"] = "v * 4.5359237 < 10 ! t ! kilotonne",
        ["e6ozt"] = "lb kg",
        ["e6ST"] = "Mt",
        ["e6t"] = "LT ST",
        ["e9lb"] = "v * 4.5359237 < 10 ! kilotonne ! Mt",
        ["e9t"] = "LT ST",
        ["Gg"] = "lb",
        ["kg"] = "lb",
        ["mg"] = "gr",
        ["Mg"] = "LT ST",
        ["ng"] = "gr",
        ["µg"] = "gr",
        ["mBq"] = "fCi",
        ["kBq"] = "nCi",
        ["MBq"] = "µCi",
        ["GBq"] = "mCi",
        ["TBq"] = "Ci",
        ["PBq"] = "kCi",
```

```
        ["EBq"] = "kCi",
        ["fCi"] = "mBq",
        ["pCi"] = "Bq",
        ["nCi"] = "Bq",
        ["µCi"] = "kBq",
        ["mCi"] = "MBq",
        ["kCi"] = "TBq",
        ["MCi"] = "PBq",
        ["ns"] = "µs",
        ["µs"] = "ms",
        ["ms"] = "s",
        ["ks"] = "h",
        ["Ms"] = "week",
        ["Gs"] = "decade",
        ["Ts"] = "millennium",
        ["Ps"] = "million year",
        ["Es"] = "thousand million year",
        ["MK"] = "keVT",
        ["cL"] = "impoz usoz",
        ["cl"] = "impoz usoz",
        ["cm<sup>3</sup>"] = "cuin",
        ["dL"] = "impoz usoz",
        ["dl"] = "impoz usoz",
        ["mm<sup>3</sup>"] = "cuin",
        ["dm<sup>3</sup>"] = "cuin",
        ["e12cuft"] = "v * 2.8316846592 < 100 ! e9 ! e12 ! m3",
        ["e12impgal"] = "v * 4.54609 < 1000 ! T ! P ! l",
        ["e12m3"] = "v < 28.316846592 ! T ! P ! cuft",
        ["e12U.S.gal"] = "v * 3.785411784 < 1000 ! T ! P ! l",
        ["e12USgal"] = "v * 3.785411784 < 1000 ! T ! P ! l",
        ["e15cuft"] = "v * 2.8316846592 < 100 ! e12 ! e15 ! m3",
        ["e15m3"] = "Pcuft",
        ["e3bdft"] = "v * 0.23597372167 < 100 ! e3 ! e6 ! m3",
        ["e3cuft"] = "v * 2.8316846592 < 100 ! ! e3 ! m3",
        ["e3impgal"] = "v * 4.54609 < 1000 ! k ! M ! l",
        ["e3m3"] = "v < 28.316846592 ! k ! M ! cuft",
        ["e3U.S.gal"] = "v * 3.785411784 < 1000 ! k ! M ! l",
        ["e3USgal"] = "v * 3.785411784 < 1000 ! k ! M ! l",
        ["e6bdft"] = "v * 0.23597372167 < 100 ! e3 ! e6 ! m3",
        ["e6cuft"] = "v * 2.8316846592 < 100 ! e3 ! e6 ! m3",
        ["e6cuyd"] = "v * 7.64554857984 < 10 ! e3 ! e6 ! m3",
        ["e6impgal"] = "v * 4.54609 < 1000 ! M ! G ! l",
        ["e6L"] = "USgal",
        ["e6m3"] = "v < 28.316846592 ! M ! G ! cuft",
        ["e6U.S.gal"] = "v * 3.785411784 < 1000 ! M ! G ! l",
        ["e6USgal"] = "v * 3.785411784 < 1000 ! M ! G ! l",
        ["e9bdft"] = "v * 0.23597372167 < 100 ! e6 ! e9 ! m3",
        ["e9cuft"] = "v * 2.8316846592 < 100 ! e6 ! e9 ! m3",
        ["e9impgal"] = "v * 4.54609 < 1000 ! G ! T ! l",
        ["e9m3"] = "v < 28.316846592 ! G ! T ! cuft",
        ["e9U.S.gal"] = "v * 3.785411784 < 1000 ! G ! T ! l",
        ["e9USgal"] = "v * 3.785411784 < 1000 ! G ! T ! l",
        ["GL"] = "cuft",
        ["Gl"] = "cuft",
        ["kL"] = "cuft",
        ["kl"] = "cuft",
        ["km<sup>3</sup>"] = "cumi",
        ["mL"] = "impoz usoz",
        ["ml"] = "impoz usoz",
        ["Ml"] = "v < 28.316846592 ! e3 ! e6 ! cuft",
        ["ML"] = "v < 28.316846592 ! e3 ! e6 ! cuft",
        ["TL"] = "cumi",
        ["Tl"] = "cumi",
        ["µL"] = "cuin",
```

```
        ["µl"] = "cuin",
}

-------------------------------------------------------------------------------
-- Do not change the data in this table because it is created by running --
-- a script that reads the wikitext from a wiki page (see note above).   --
-------------------------------------------------------------------------------
local link_exceptions = {
        -- Prefixed units with a linked article different from that of the base u
        -- Each key item is a prefixed symbol (not unitcode).
        ["mm<sup>2</sup>"] = "Square millimetre",
        ["cm<sup>2</sup>"] = "Square centimetre",
        ["dm<sup>2</sup>"] = "Square decimetre",
        ["km<sup>2</sup>"] = "Square kilometre",
        ["kJ"] = "Kilojoule",
        ["MJ"] = "Megajoule",
        ["GJ"] = "Gigajoule",
        ["TJ"] = "Terajoule",
        ["fm"] = "Femtometre",
        ["pm"] = "Picometre",
        ["nm"] = "Nanometre",
        ["µm"] = "Micrometre",
        ["mm"] = "Millimetre",
        ["cm"] = "Centimetre",
        ["dm"] = "Decimetre",
        ["dam"] = "Decametre",
        ["hm"] = "Hectometre",
        ["km"] = "Kilometre",
        ["Mm"] = "Megametre",
        ["Gm"] = "Gigametre",
        ["Tm"] = "Terametre",
        ["Pm"] = "Petametre",
        ["Em"] = "Exametre",
        ["Zm"] = "Zettametre",
        ["Ym"] = "Yottametre",
        ["µg"] = "Microgram",
        ["mg"] = "Milligram",
        ["kg"] = "Kilogram",
        ["Mg"] = "Tonne",
        ["yW"] = "Yoctowatt",
        ["zW"] = "Zeptowatt",
        ["aW"] = "Attowatt",
        ["fW"] = "Femtowatt",
        ["pW"] = "Picowatt",
        ["nW"] = "Nanowatt",
        ["µW"] = "Microwatt",
        ["mW"] = "Milliwatt",
        ["kW"] = "Kilowatt",
        ["MW"] = "Megawatt",
        ["GW"] = "Gigawatt",
        ["TW"] = "Terawatt",
        ["PW"] = "Petawatt",
        ["EW"] = "Exawatt",
        ["ZW"] = "Zettawatt",
        ["YW"] = "Yottawatt",
        ["as"] = "Attosecond",
        ["fs"] = "Femtosecond",
        ["ps"] = "Picosecond",
        ["ns"] = "Nanosecond",
        ["µs"] = "Microsecond",
        ["ms"] = "Millisecond",
        ["ks"] = "Kilosecond",
        ["Ms"] = "Megasecond",
        ["Gs"] = "Gigasecond",
```

```
        ["Ts"] = "Terasecond",
        ["Ps"] = "Petasecond",
        ["Es"] = "Exasecond",
        ["Zs"] = "Zettasecond",
        ["Ys"] = "Yottasecond",
        ["mm<sup>3</sup>"] = "Cubic millimetre",
        ["cm<sup>3</sup>"] = "Cubic centimetre",
        ["dm<sup>3</sup>"] = "Cubic decimetre",
        ["dam<sup>3</sup>"] = "Cubic decametre",
        ["km<sup>3</sup>"] = "Cubic kilometre",
        ["µL"] = "Microlitre",
        ["µl"] = "Microlitre",
        ["mL"] = "Millilitre",
        ["ml"] = "Millilitre",
        ["cL"] = "Centilitre",
        ["cl"] = "Centilitre",
        ["dL"] = "Decilitre",
        ["dl"] = "Decilitre",
        ["daL"] = "Decalitre",
        ["dal"] = "Decalitre",
        ["hL"] = "Hectolitre",
        ["hl"] = "Hectolitre",
        ["kL"] = "Kilolitre",
        ["kl"] = "Kilolitre",
        ["ML"] = "Megalitre",
        ["Ml"] = "Megalitre",
        ["GL"] = "Gigalitre",
        ["Gl"] = "Gigalitre",
        ["TL"] = "Teralitre",
        ["Tl"] = "Teralitre",
        ["PL"] = "Petalitre",
        ["Pl"] = "Petalitre",
}

--------------------------------------------------------------------------------
-- Do not change the data in this table because it is created by running --
-- a script that reads the wikitext from a wiki page (see note above).   --
--------------------------------------------------------------------------------
local per_unit_fixups = {
        -- Automatically created per units of form "x/y" may have their unit type
        -- changed, for example, "length/time" is changed to "speed".
        -- Other adjustments can also be specified.
        ["/area"] = "per unit area",
        ["/volume"] = "per unit volume",
        ["area/area"] = "area per unit area",
        ["energy/length"] = "energy per unit length",
        ["energy/mass"] = "energy per unit mass",
        ["energy/time"] = { utype = "power", link = "Power (physics)" },
        ["energy/volume"] = "energy per unit volume",
        ["force/area"] = { utype = "pressure", link = "Pressure" },
        ["length/length"] = { utype = "gradient", link = "Grade (slope)" },
        ["length/time"] = { utype = "speed", link = "Speed" },
        ["length/time/time"] = { utype = "acceleration", link = "Acceleration" },
        ["mass/area"] = { utype = "pressure", multiplier = 9.80665 },
        ["mass/length"] = "linear density",
        ["mass/mass"] = "concentration",
        ["mass/power"] = "mass per unit power",
        ["mass/time"] = "mass per unit time",
        ["mass/volume"] = { utype = "density", link = "Density" },
        ["power/mass"] = "power per unit mass",
        ["power/volume"] = { link = "Power density" },
        ["pressure/length"] = "fracture gradient",
        ["speed/time"] = { utype = "acceleration", link = "Acceleration" },
        ["volume/area"] = "volume per unit area",
```

```
        ["volume/length"] = "volume per unit length",
        ["volume/time"] = "flow",
}

return {
        all_units = all_units,
        default_exceptions = default_exceptions,
        link_exceptions = link_exceptions,
        per_unit_fixups = per_unit_fixups,
}
```