



RODEO

**RODEO WP3
EUMETNET
Supplementary
Observations dataHub
(E-SOH)**

European Weather Cloud User Workshop, 2023-09-26

Morten W. Hansen, RODEO WP3 / E-SOH project lead





Content

- E-SOH goals
- E-SOH Technical Architecture
- Data and metadata
- Interoperability between domains



Project Goals

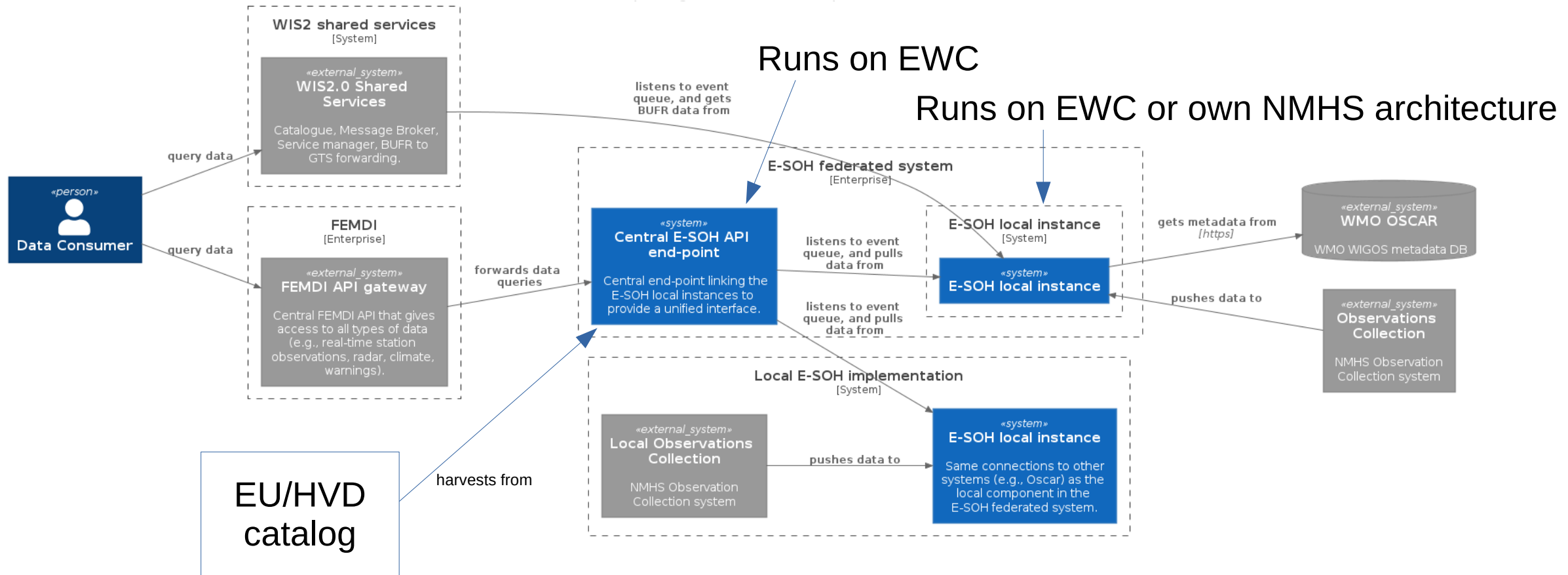
Main goal:

To enable increased sharing of Real-Time/Near-Real-Time observations and to allow a gradual transition from the use of the Global Telecommunication System (GTS) to the use of the Internet for collection and distribution of information.

- Open and unrestricted data
- Alignment with the FAIR principles
- Interoperability across main domains
 - WMO WIS 2.0
 - Meteorological High Value Data (EU Regulation 2019/1024)
 - Data for Official Duty (ECOMET GA 13)

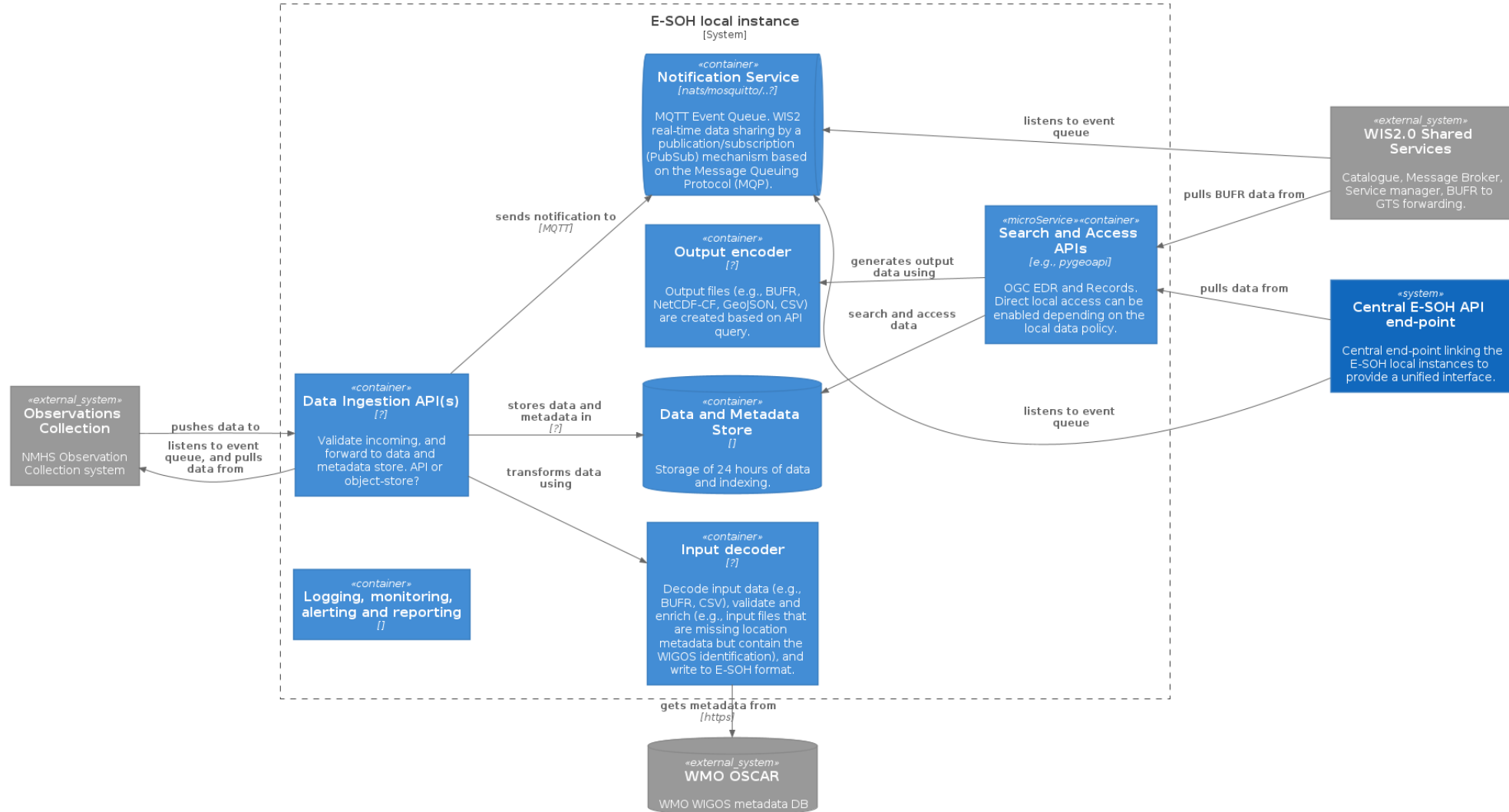


E-SOH Landscape Diagram (C4)





E-SOH Container Diagram (C4) – local instance





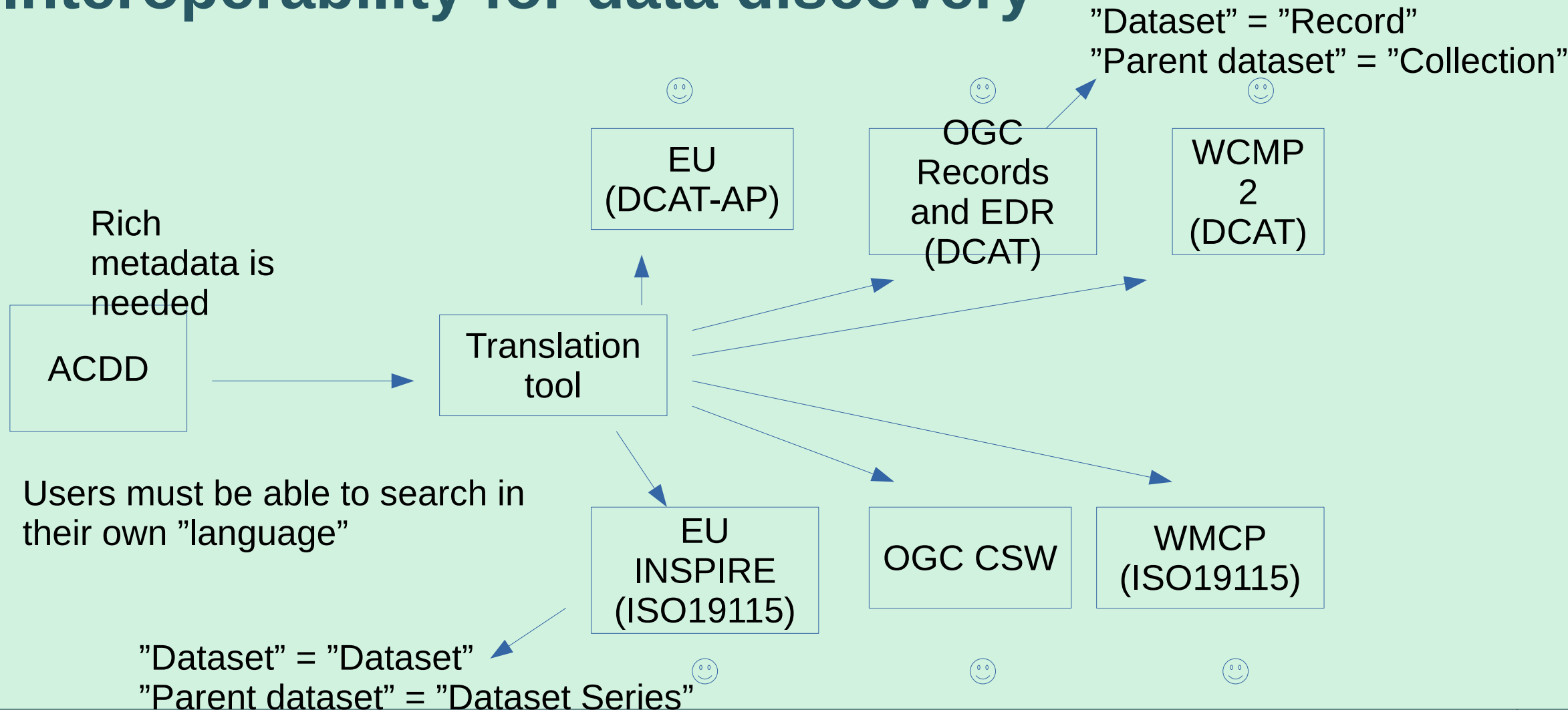
Data and metadata – definition

A *dataset* is the combination of data records and the associated information content required to find and use the data.

- The information content shall accompany the data records, following agreed standards
 - Climate and Forecast Convention for use metadata (e.g., variable definitions and units)
 - Attribute Convention for Data Discovery (ACDD) for discovery metadata (e.g., time and place of observation, data creator, title, keywords, etc.)
- To provide flexibility in (OGC EDR and Records) API search and access functionality,
 - E-SOH defines datasets with the highest possible granularity, i.e., one data record in each dataset
- In addition, notification messages will contain both complete metadata and data records (but flexibility is expected)



Interoperability for data discovery



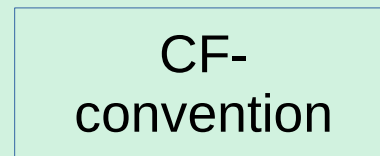


Interoperability for data use (variable definitions)

Input vocabularies

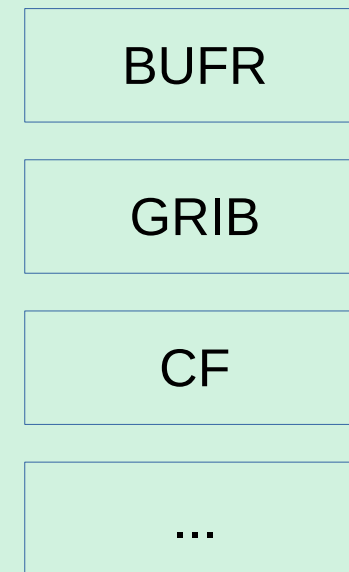


→
Ontology



→
Ontology

Output vocabularies





Example ontologies

<https://vocab.met.no> – CF standard name

PREFERRED TERM	air_pressure	
DEFINITION	Air pressure is the force per unit area which would be exerted when the moving gas molecules of which the air is composed strike a theoretical surface of any orientation.	
SOURCE	http://cfconventions.org/Data/cf-standard-names/78/build/cf-standard-name-table.html	
URI	https://vocab.met.no/CFSTDN/air_pressure	
DOWNLOAD THIS CONCEPT:	RDF/XML TURTLE JSON-LD	
CLOSELY MATCHING CONCEPTS	EARTH SCIENCE > ATMOSPHERE > ATMOSPHERIC PRESSURE > ATMOSPHERIC PRESSURE MEASUREMENTS	METNO - GCMD Earth Science keywords vocabulary
EXACTLY MATCHING CONCEPTS	SDN:P07::CFSN0015 air_pressure	vocab.nerc.ac.uk

<https://vocab.met.no> - GCMD Earth Science keyword

PREFERRED TERM	EARTH SCIENCE > ATMOSPHERE > ATMOSPHERIC PRESSURE > ATMOSPHERIC PRESSURE MEASUREMENTS	
DEFINITION	The force exerted per unit of area by the atmosphere as a consequence of gravitational attraction upon the 'column' of air lying directly above the point in question.	
SOURCE	https://gcmd.earthdata.nasa.gov/kms/concept/9efbc088-ba8c-4c9c-a458-ad6ad63f4188	
URI	https://vocab.met.no/GCMDSK/9efbc088-ba8c-4c9c-a458-ad6ad63f4188	
DOWNLOAD THIS CONCEPT:	RDF/XML TURTLE JSON-LD	
CLOSELY MATCHING CONCEPTS	air_pressure	METNO - Climate and Forecast Standard Names Vocabulary
EXACTLY MATCHING CONCEPTS	ATMOSPHERIC PRESSURE MEASUREMENTS	gcmd.earthdata.nasa.gov

<http://vocab.nerc.ac.uk> - CF standard name

Concept

air_pressure

URI <http://vocab.nerc.ac.uk/collection/P07/current/CFSN0015/>

Within Vocab Climate and Forecast Standard Names

Alternate Labels

Definition Air pressure is the force per unit area which would be exerted when the moving gas molecules of which the air is composed strike a theoretical surface of any orientation.

Date 2017-07-24T14:36:59

Identifier SDN:P07::CFSN0015

Note accepted

Has Current Version 2

Version 1

version 2

Same As

B39:pressure	air pressure	Mapping: 804901
P02:CAPI	Air pressure	Mapping: 32438
P04:G185	EARTH SCIENCE > Atmosphere > Atmospheric Pressure > Atmospheric Pressure Measurements	Mapping: 36992
P64:G185	EARTH SCIENCE > Atmosphere > Atmospheric Pressure > Atmospheric Pressure Measurements	Mapping: 502809
MMI	http://mmisw.org/ont/cf/parameter/air_pressure	Mapping: 257370
CF	http://vocab.nerc.ac.uk/standard_name/air_pressure/	Mapping: 351975
Broader	A05:EV_AIRPRESS Atmospheric pressure	Mapping: 865212
Related	P06:PASX Pascals	Mapping: 162104

Alternate Formats

Other formats for this page: [RDF/XML](#) [Turtle](#) [JSON-LD](#)

Alternate Profiles

Other views of this page: [Alternate Profiles ?](#) [NVS html view ?](#) [I-ADOPT html view ?](#)



Thank You

Morten W. Hansen

E-SOH project lead, MET Norway

+47 915 47 844, mortenwh@met.no

RODEO project: rodeoproject@fmi.fi

Website: <https://rodeo-project.eu>

Funded by



Co-funded by
the European Union



EUMETNET