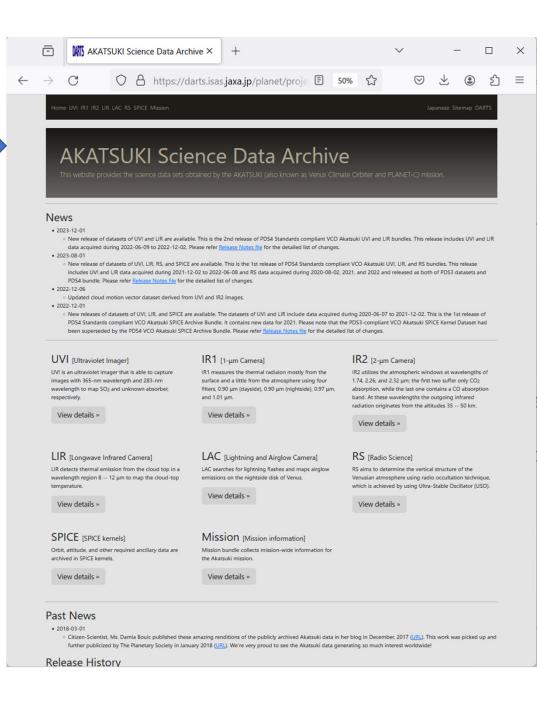# Summary of AKATSUKI data and ALEDAS-V data

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presented by

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- All AKATSUKI data (imageries and cloud motion vectors) can be found at
  AKATSUKI Science Data Archive.
  https://darts.isas.jaxa.jp/planet/project/akatsuki/

- ALEDAS-V DATA is available upon request.
  akatsuki-daws-contact@cps-jp.org

  - ALEDAS-V = AFES LETKF Data Assimilation System for Venus
  - Those assimilation trial data, especially used in Fujisawa+2022
    https://doi.org/10.1038/s41598-022-18634-6, are supposed to be open by the end of this March, but are still under construction.
  - Collaboration with VCD project

AKATSUKI Science Data Archive
https://darts.isas.jaxa.jp/planet/project/akatsuki/index.html.en

- There are three data types:
  - PDS3 compliant data (datasets, e.g., VCO-V-UVI-3-CDR-V1.0)
  - PDS4 compliant data (bundles, e.g., urn:jaxa:darts:vco_uvi)
  - Non-PDS compliant data (NetCDF)

- All PDS3 compliant data will be migrated into PDS4 compliant data.
  - UVI, LIR, RS, and SPICE data had been migrated into PDS4.
  - IR1 and IR2 data will be migrated into PDS4 in future.
  - LAC data will be released as PDS4 in future.
  - CMV (Cloud Motion Vector) data will also be released as PDS4 in future (CSV will be created from NetCDF file; NetCDF file will remain as is)

- All PDS4 bundles will be reviewed by PDS
  - SPICE bundle had been reviewed by PDS NAIF.
  - All other bundles will be reviewed by PDS ATM.

List of PDS3 Datasets

Instrument	Dataset	Data Set ID	Superseded by PDS4?
SPICE	SPICE Kernel Dataset	VCO-V-SPICE-6-V1.0	Yes
UVI	UVI Raw Data	VCO-V-UVI-2-EDR-V1.0	Yes
	UVI Calibrated Data	VCO-V-UVI-3-CDR-V1.0	Yes
	UVI Geometry Information	VCO-V-UVI-3-SEDR-V1.0	Yes
LIR	LIR Raw Data	VCO-V-LIR-2-EDR-V1.0	Yes
	LIR Calibrated Data	VCO-V-LIR-3-CDR-V1.0	Yes
	LIR Geometry Information	VCO-V-LIR-3-SEDR-V1.0	Yes
IR1	IR1 Raw Data	VCO-V-IR1-2-EDR-V1.0	Yes
	IR1 Calibrated Data	VCO-V-IR1-3-CDR-V1.0	Yes
	IR1 Geometry Information	VCO-V-IR1-3-SEDR-V1.0	Yes
IR2	IR2 Raw Data	VCO-V-IR2-2-EDR-V1.0	Yes
	IR2 Calibrated Data	VCO-V-IR2-3-CDR-V1.0	Yes
	IR2 Geometry Information	VCO-V-IR2-3-SEDR-V1.0	Yes
RS	RS Doppler Profiles	VCO-V-RS-3-OCC-V1.0	No
	RS Bending Angle and Temperature/Pressure Profiles	VCO-V-RS-5-OCC-V1.0	No

- All PDS3 Datasets had been reviewed by PDS ATM or NAIF.
- All PDS3 Datasets had been released on DARTS, and PDS ATM or NAIF.
- LAC dataset will be created only as PDS4.

List of non PDS compliant Datasets

Dataset	ID	Superseded by PDS4?
UVI Longitude-Latitude Map Data	vco_uvi_l3_v1.1	No
LIR Longitude-Latitude Map Data	vco_lir_l3_v1.1	No
IR1 Longitude-Latitude Map Data	vco_ir1_l3_v1.0	No
IR2 Longitude-Latitude Map Data	vco_ir2_l3_v1.0	No
Cloud Motion Vector Data Set	vco_cmv_v1.3	No

- Map Data and CMV Data Set mainly provided as NetCDF files.

List of PDS4 bundles

Bundle	Logical Identifier	Release Status	Review Status
Mission bundle	urn:jaxa:darts:vco	Released on DARTS	Not yet
SPICE bundle	urn:jaxa:darts:vco_spice	Released on DARTS and NAIF	Reviewed
UVI bundle	urn:jaxa:darts:vco_uvi	Released on DARTS	Not yet
LIR bundle	urn:jaxa:darts:vco_lir	Released on DARTS	Not yet
RS bundle	urn:jaxa:darts:vco_rs	Released on DARTS	Under review
IR1 bundle	urn:jaxa:darts:vco_ir1	Under preparation	Not yet
IR2 bundle	urn:jaxa:darts:vco_ir2	Under preparation	Not yet
LAC bundle	urn:jaxa:darts:vco_lac	Under preparation	Not yet
CMV bundle	urn:jaxa:darts:vco_cmv	Under preparation	Not yet