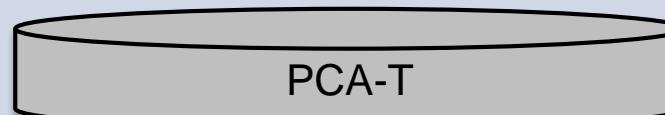
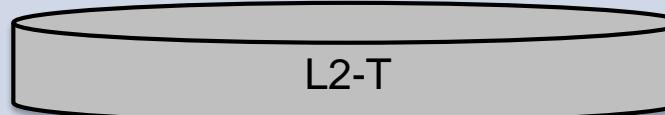


# **Defining test data for MTG-IRS**

## **(Action.M7.A8)**

	Technical data	Science data
<b>Level-0 spectra</b> for testing L1 processor	N/A	Single dwell of LBL spectra ( $0.001\text{cm}^{-1}$ ) from high resolution (1.25Km) model fields
<b>Level-1 radiances</b> (super users)	 Full disk of a single repeated simulated spectra	 Single dwell of RTTOV spectra from model fields, simulating apodised IRS L1 data
<b>PCA scores</b> (baseline for NRT dissemination)	 Full disk of a single repeated set of simulated PCA scores	 Single dwell of PCA scores generated from L1-S
<b>Reconstructed Radiances</b> (baseline for many NWP / AC users)	 Full disk of a single repeated set of simulated reconstructed radiances	 Single dwell of reconstructed radiances output from IRS-PP using PCA-S as input
<b>Level-2 retrievals</b> (baseline for now-casting and AC)	 Full disk of a single repeated simulated retrievals	 Single dwell L2 retrievals using L1-S as input

# **MTG-IRS Science test data:**

## **Purpose:**

Testing science applications (DA, retrieval schemes, recovering known profile ...)

## **Origin:**

Simulated from NWP model fields using RTTOV, IRS-PP, IRS-L2...

## **Domain:**

Data from a single (160x160) mixed scene dwell (expandable / time repeat)

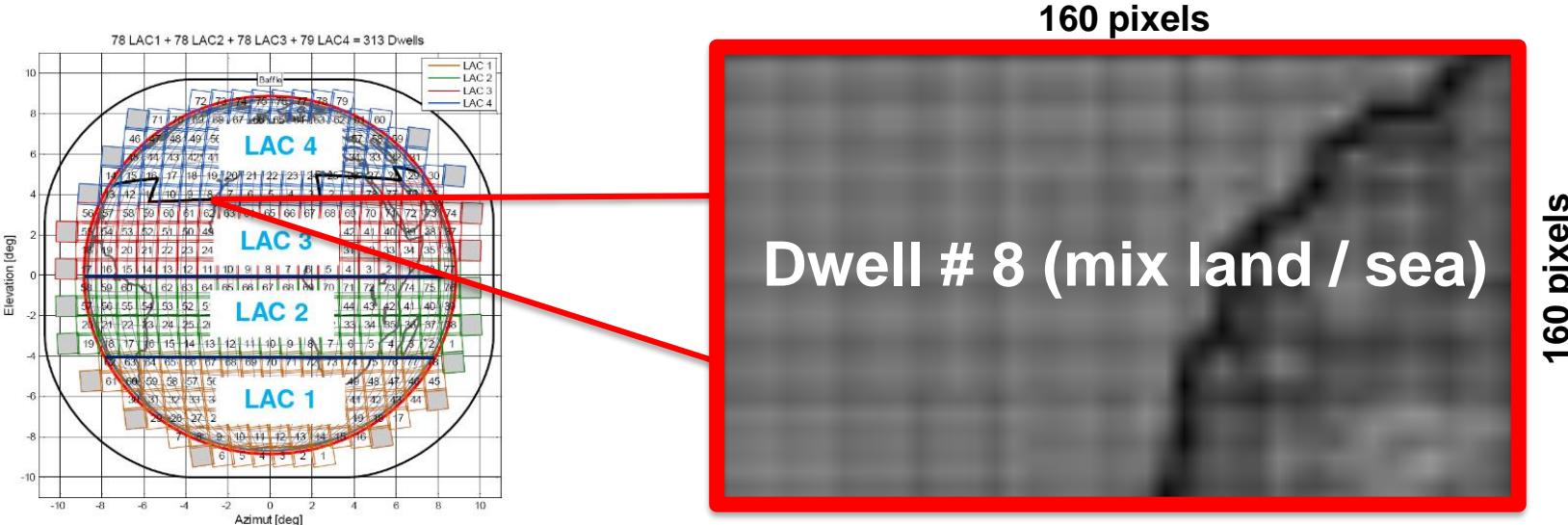
## **Format:**

Ideally close to NRT baseline

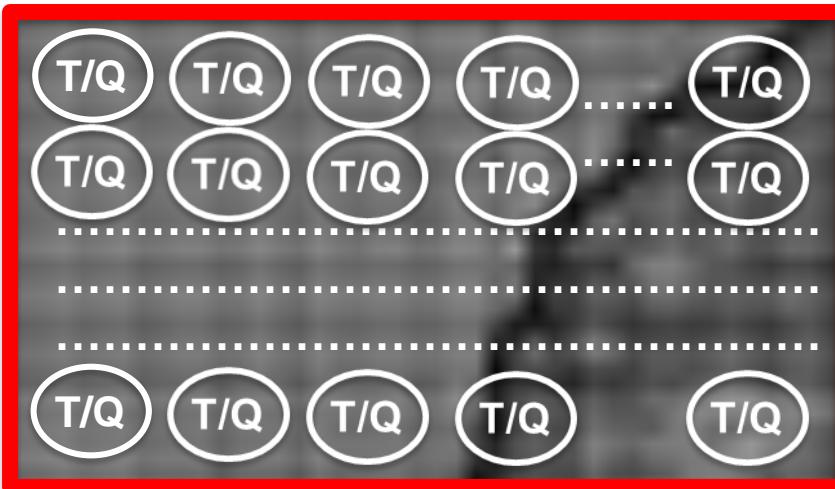
## **Metadata:**

Model profiles used in simulation, estimate of instrument noise, eigenvectors used for PCA compression, L2 quality data

# MTG-IRS Science test data:

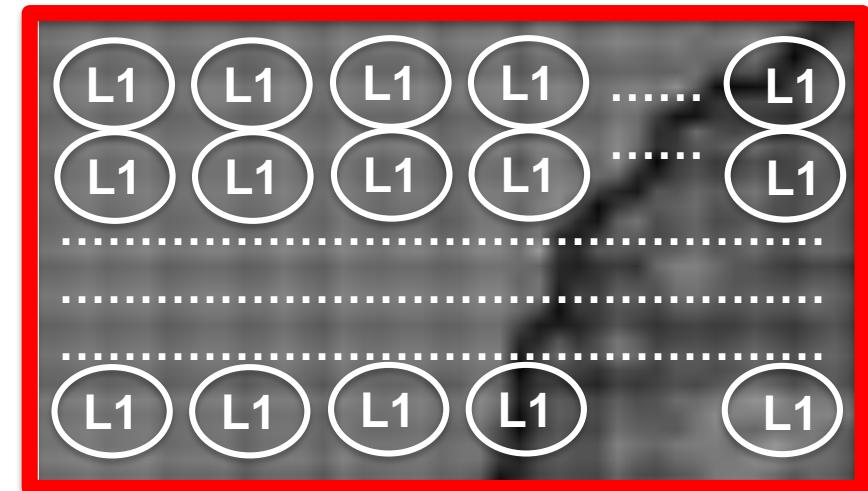


## NWP Model profiles

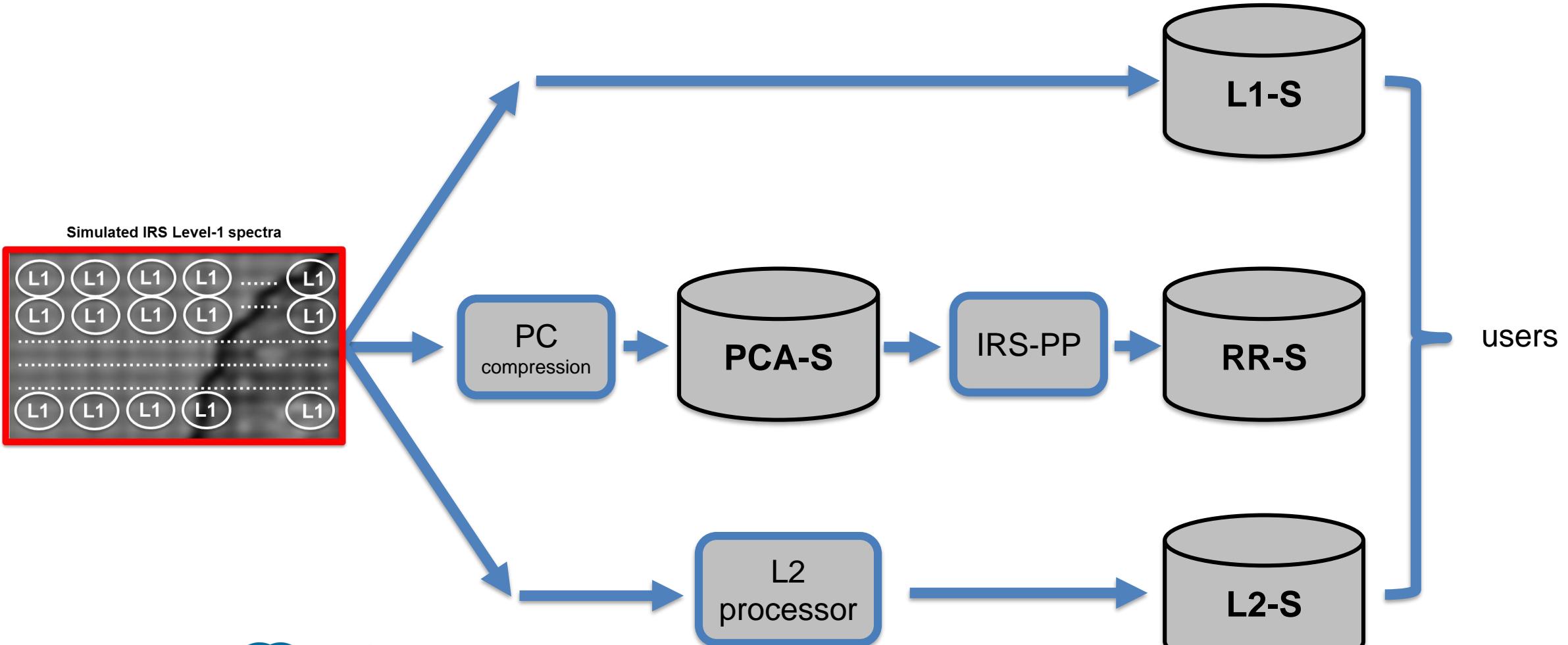


A blue rounded rectangle containing the letters "RT" in black, flanked by two blue arrows pointing right.

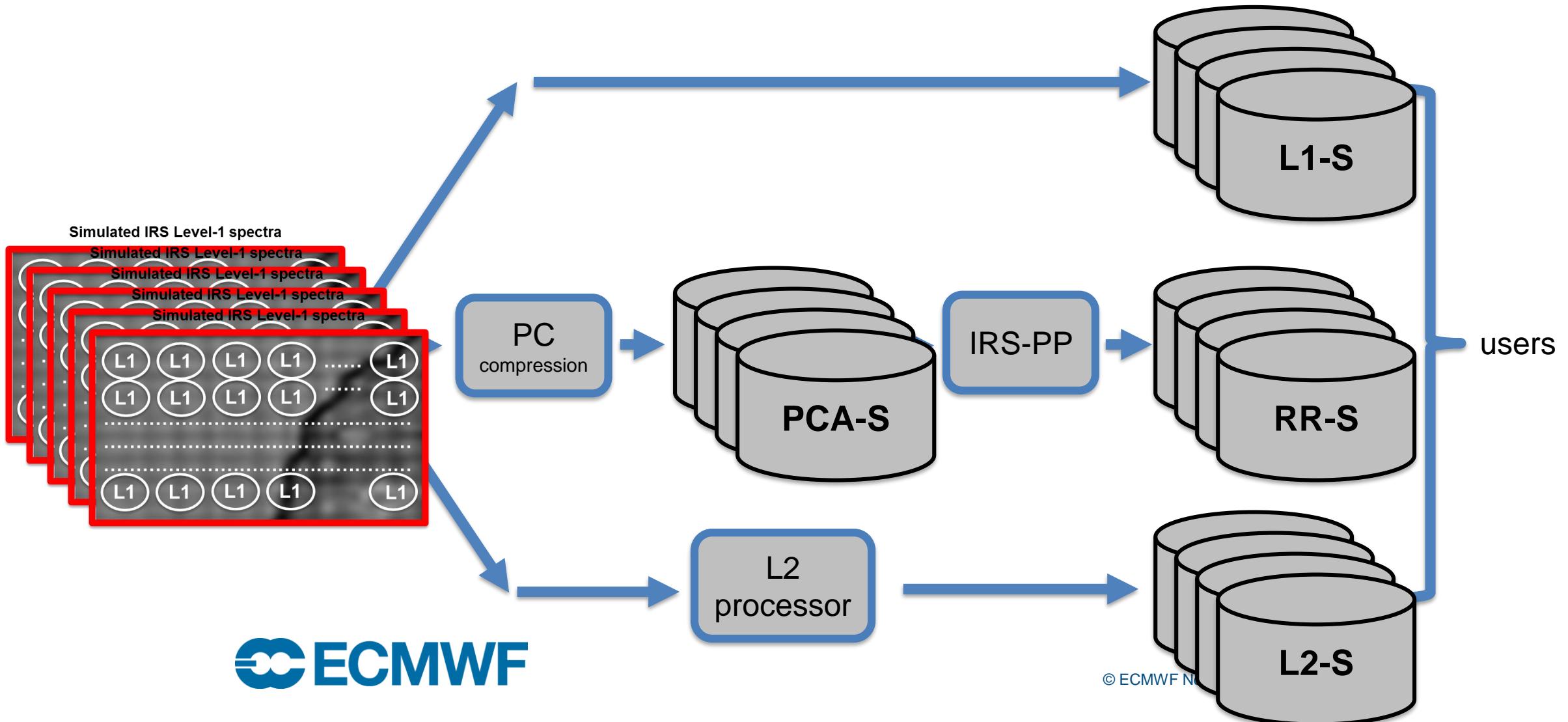
## Simulated IRS Level-1 spectra



# MTG-IRS Science test data: (initially single dwell)



# MTG-IRS Science test data: Multiple dwells in space and time



# **MTG-IRS Technical test data:**

## **Purpose:**

Testing technical ingest, memory, disk space, processing times

## **Origin:**

Simulated from single model profile (using RTTOV, IRS-PP, IRS-L2...)

## **Domain:**

Full disk (e.g. 1 hour)

## **Format:**

As close to NRT baseline as possible

## **Metadata:**

Eigenvectors used for PCA compression, L2 quality data...

# MTG-IRS Technical test data: (initially 1 complete scan schedule)

