

# SADE, a Multi-Sensor Calibration Data Repository

Patrice Henry

# SADE – Calibration Data Repository

## Systematic collect of satellite acquisitions over 20 desert sites

- ◆ ***POLDER 1*** (oct. 1996- june 1997) – ***POLDER 2*** – ***POLDER3/PARASOL***
- ◆ **Since 1990** : **SPOT** high resolution
- ◆ **Since 1998** : ***VEGETATION 1 & 2***
- ◆ **Since 2001** : ***ENVISAT/MERIS, AQUA/MODIS***
  - + ***SeaWiFs, AVHRR***
  - + ***MISR, ATSR2, AATSR...***
  - + ***Formosat 2, Kompsat 2, Theos, Pléiades, SPOT6***
  - + ***Landsat7/ETM+, Terra/MODIS***
  - + **Meteo data (NCEP + EPTOMS)**

## Storage in a data base

- ◆ **ORACLE** data base
- ◆ **Easy data management (SQL requests)**
- ◆ **Link between satellite measurements and calibration results (traceability)**

**Note** : SADE also includes measurements over ocean, sun glint, clouds, snowy sites and moon

# SADE – Calibration Data Repository

Stored data (more than 300.000 multispectral measurements over deserts)

- **Mean ToA reflectance over the site** (and associated standard deviation)
- **Viewing date**
- **Geometric acquisition conditions** : viewing angles, sun angles
- **Atmospheric conditions** : pressure, water vapor, ozone, aerosol optical depth
- **Product reference**

⇒ **Only clear sky data are selected**

Calibration results are also stored in the data base

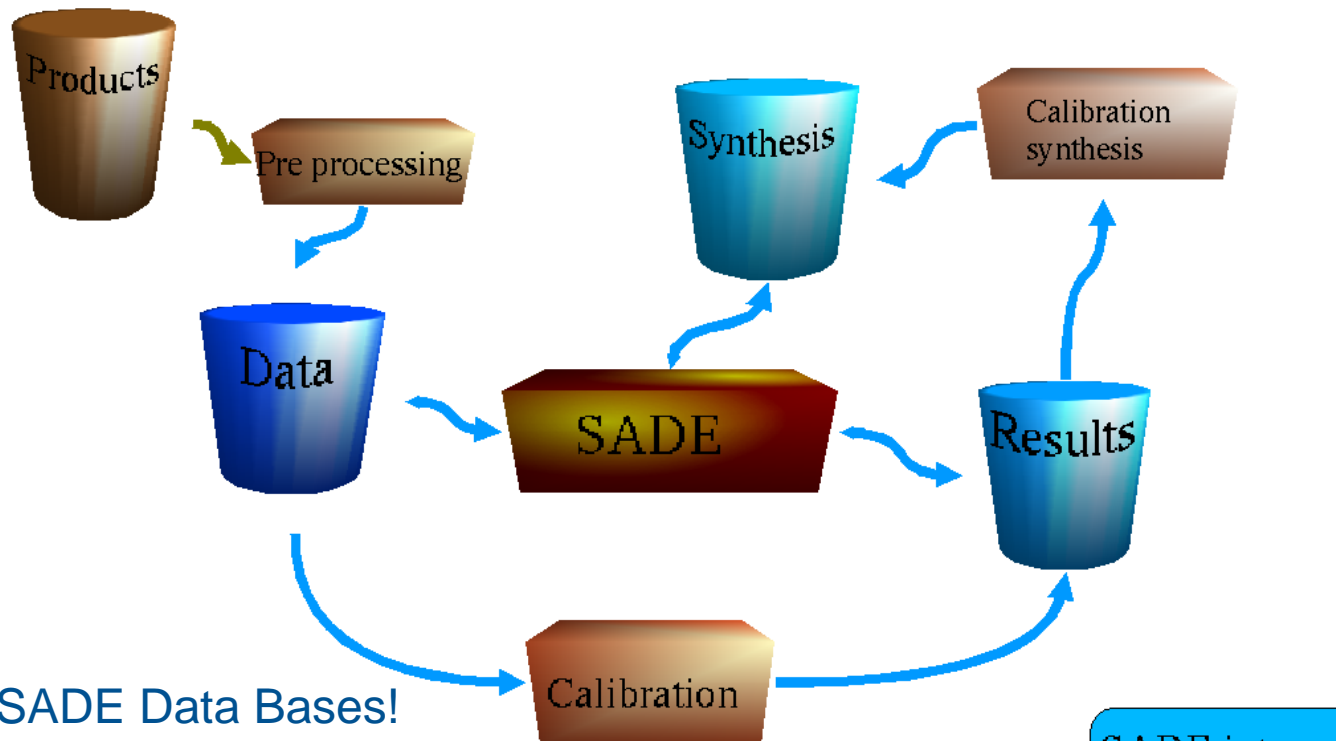
- **Elementary calibration results associated to each satellite acquisition**
- **Enhanced calibration results computed after modeling, filtering, statistics, comparisons...**

**SADE = “Structure d’Accueil de Données d’Etalonnage”**

# Structure of the SADE Data Base

- The 3 levels of the database content

- ◆ Measurements
- ◆ Elementary Calibration Results
- ◆ Vicarious Calibration Results



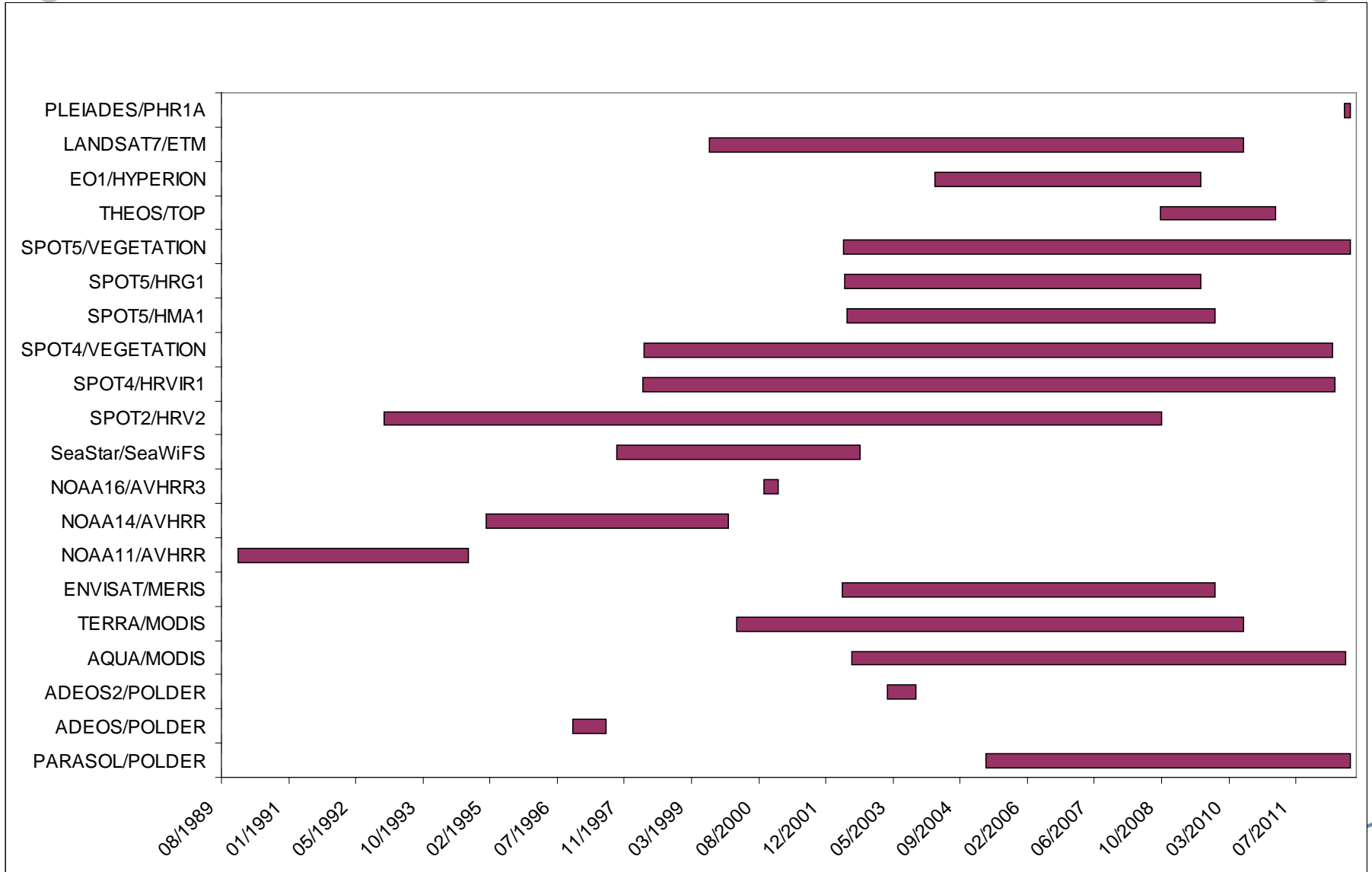
- Two SADE Data Bases!

- ◆ Operational Data Base
- ◆ Expertise Data Base

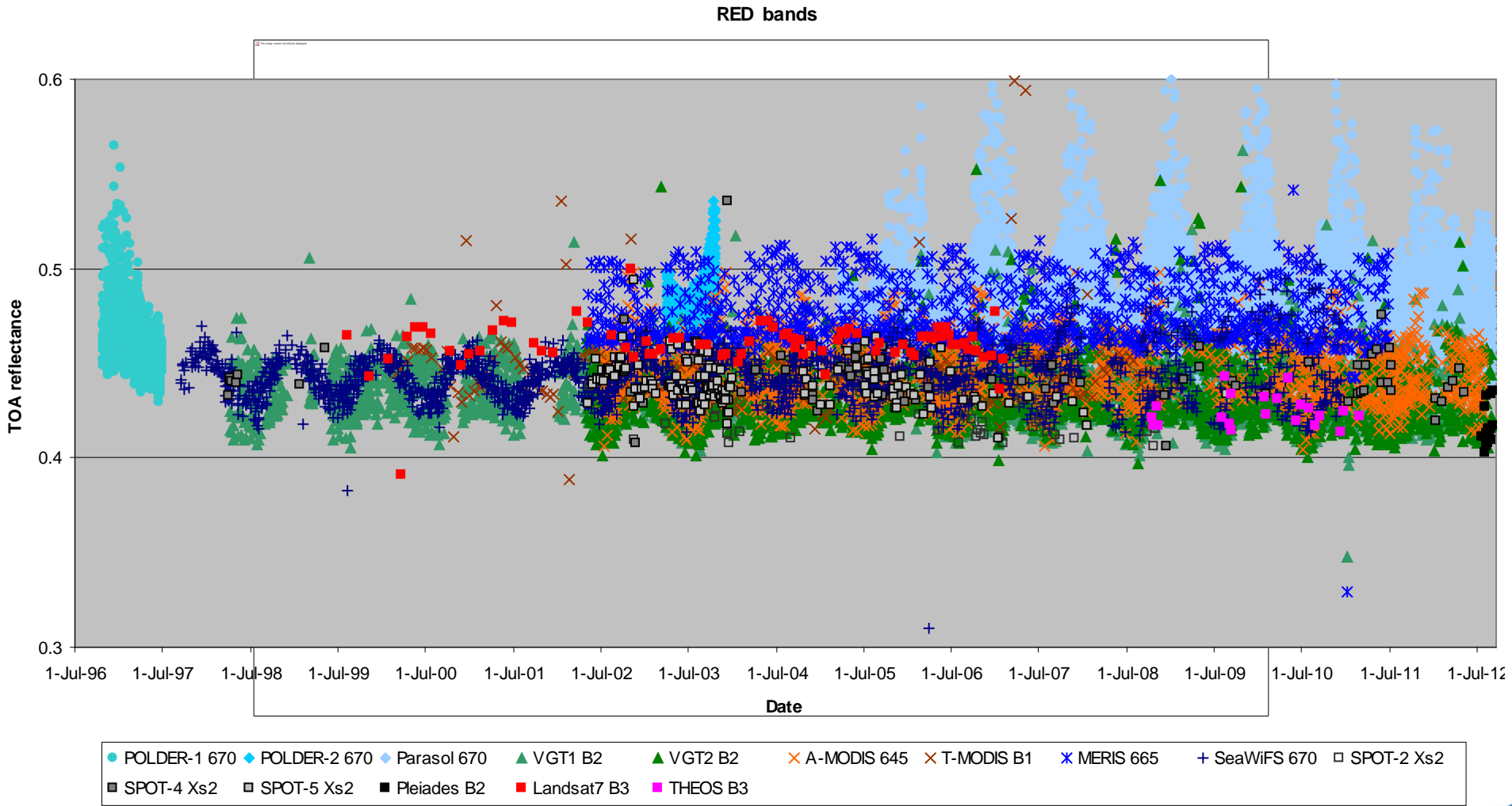
SADE internal

SADE externs

# SADE Content over Libya-4

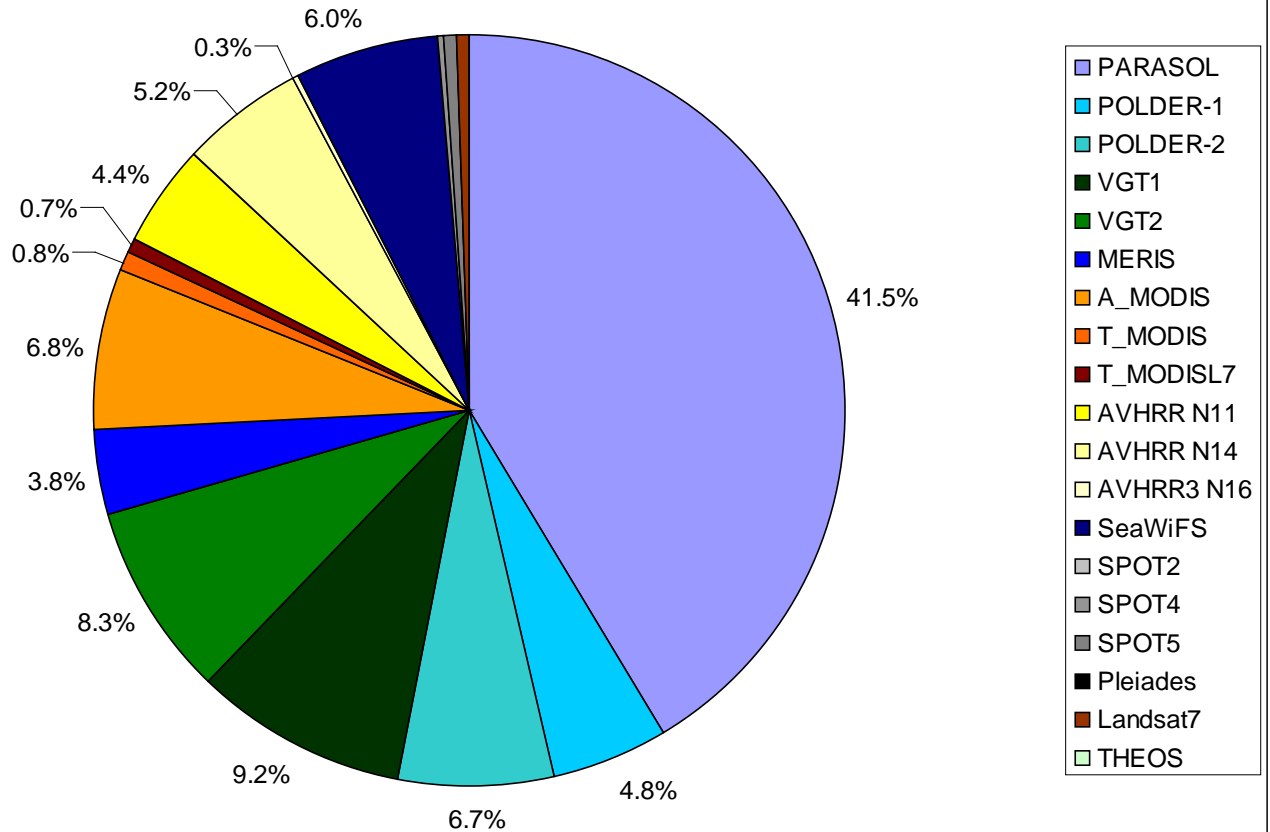


# SADE data over Libya-4



# SADE data over Libya-4

- More than 50% are POLDER data
- Less than 2% are high resolution data



28272 multispectral measurements over Libya\_4