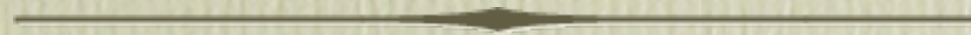


DAS

Main Database & System Architecture

DAS Demonstration

Implementation of Val/Cal Software



Objectives for Phase A and B1

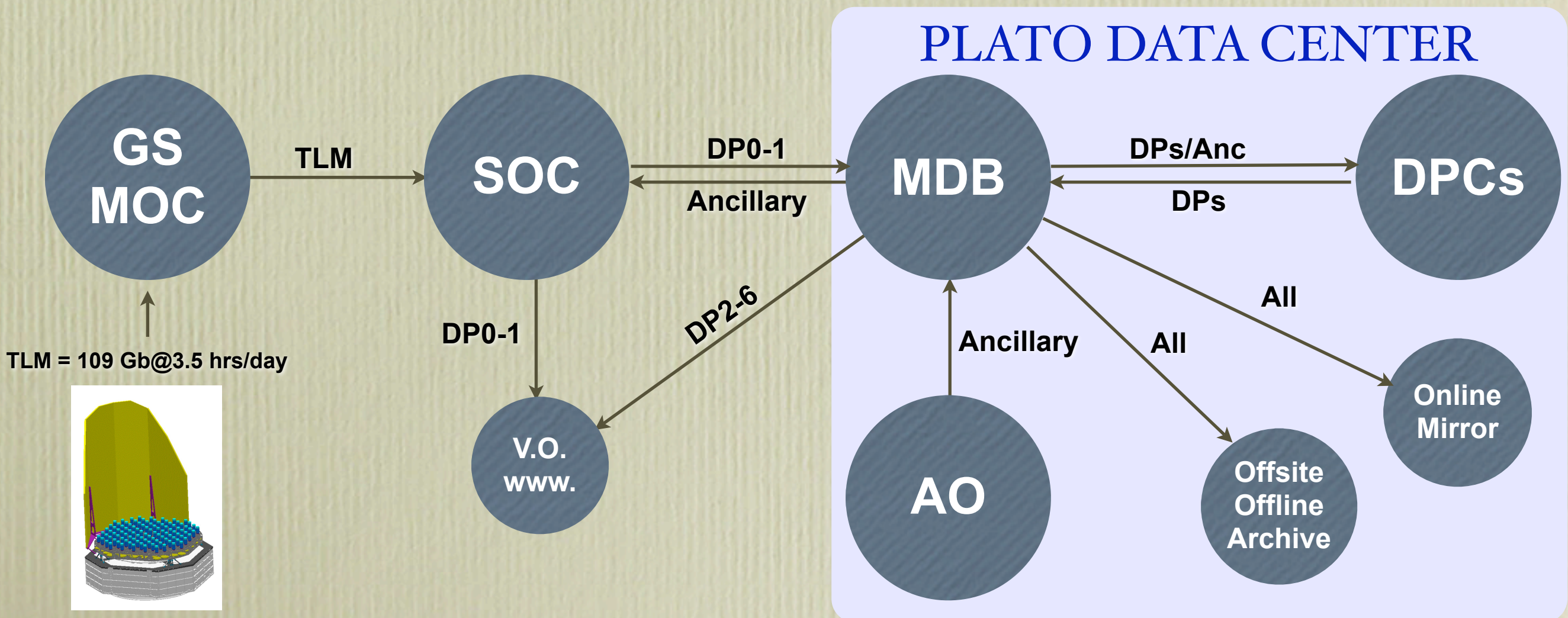
- **To build a simplified & scaled (demonstrative) PLATO DAS at the MPS, in order to demonstrate the feasibility and requirements of critical components**
- **Contribute to Definition Phase Reports (A , B1 including cost estimates)**
- **The demonstration will run, at least, until the end of Phase B1 (end 2011)**

Objectives for this meeting

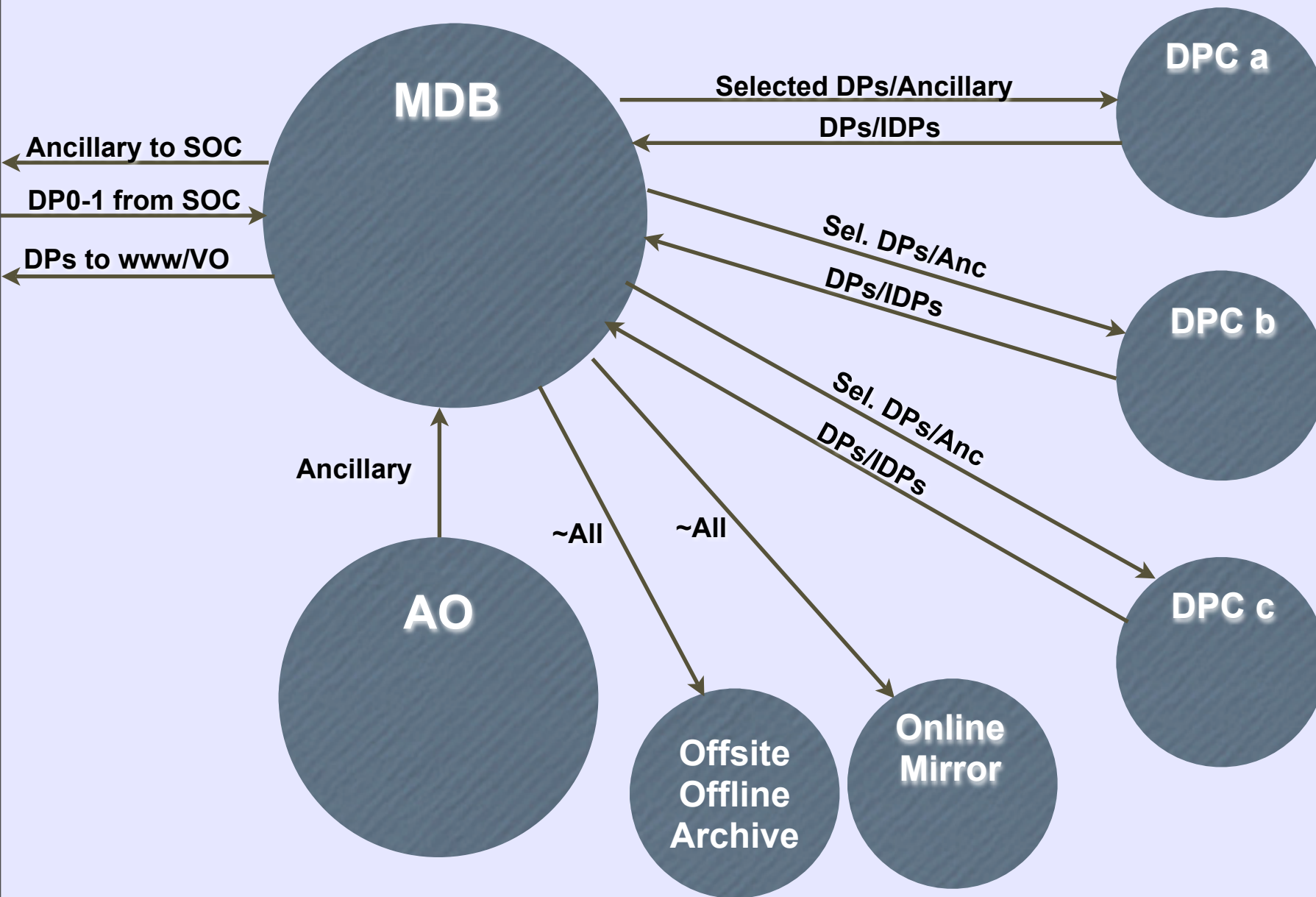
- **Determine which DAS & PDC components are critical and should be demonstrated for phase A, B1, and beyond?**
- **Determine the steps needed in order to achieve these goals on time?**
- **Obtain expressions of interest for contributions to**
 - **WP: System Architecture and Main Data Base**
 - **WP: Ancillary Database**
 - **WP: Data Treatment Implementation**

DAS

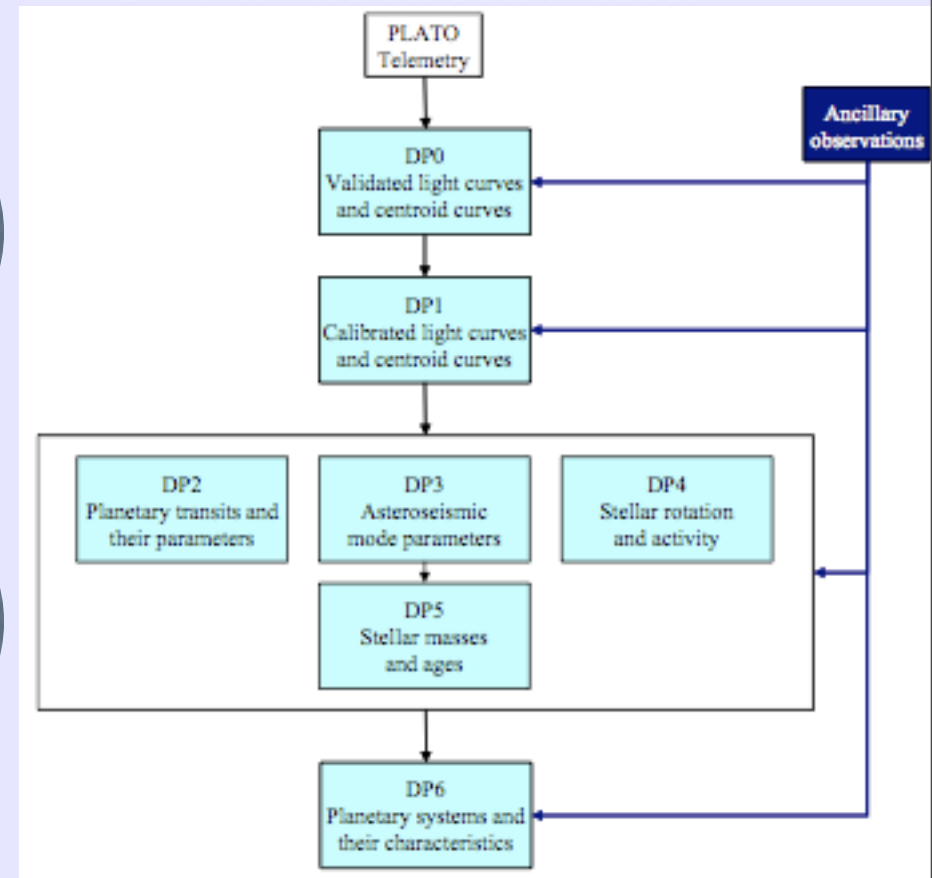
- **Main Data Base (MDB)** will reside at the MPS in Germany. It will collect, centralize, and distribute all Data Products (DPs) and ancillary observations.
- **Data Processing Centers (DPCs)** will manufacture DP2-DP6. They will be distributed amongst a few physical locations
- **Ancillary Observations (AO)** involves setup, maintenance, and population of ancillary data base.
- Offline-offsite, and online-mirror, archives for additional redundancy.
- Arrows depict the flow of the main DPs and ancillary in observation mode.



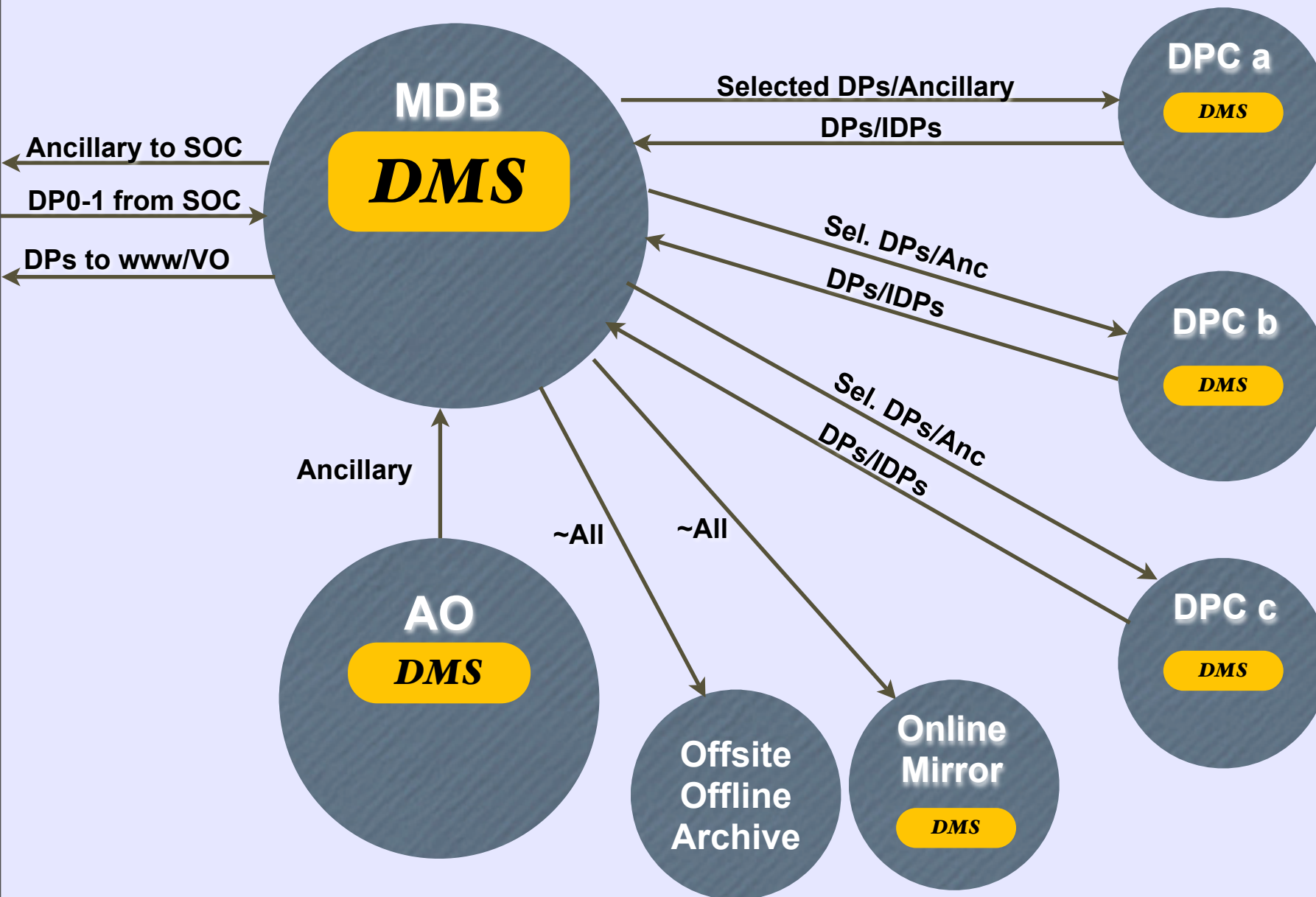
PLATO DATA CENTER



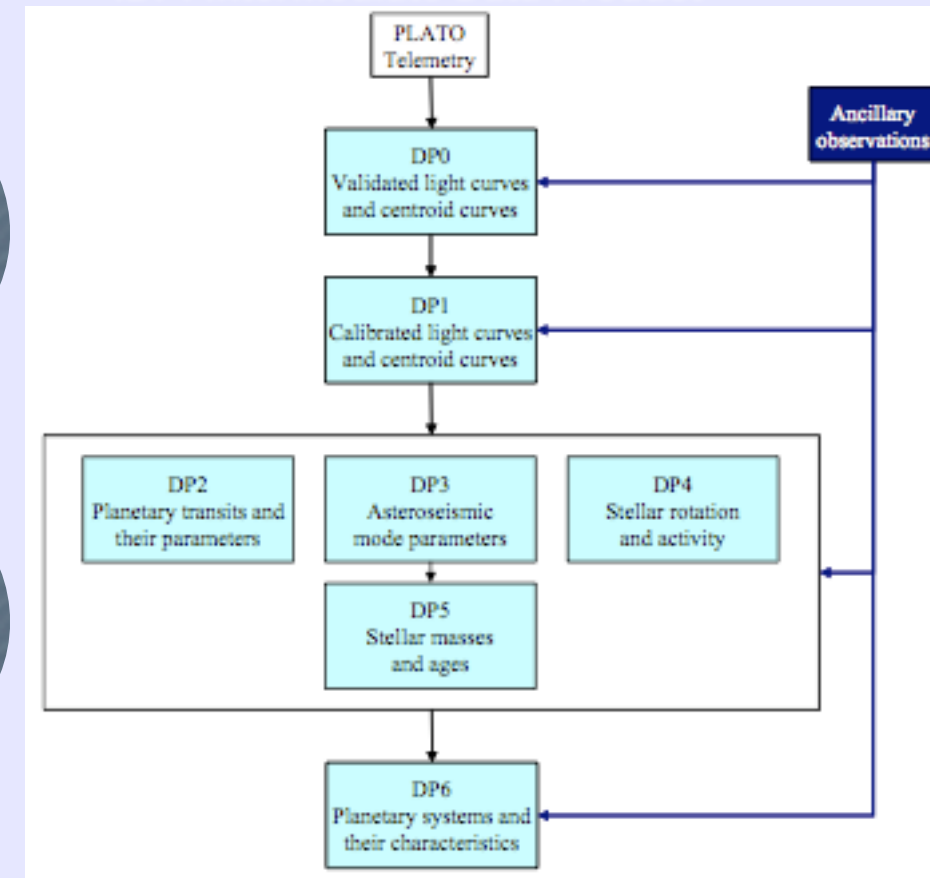
MDB: Main Data Base
DPC: Data Processing Center
AO: Ancillary Observations
DMS: Data Management System
WMS: Workflow Management System
IDP: Intermediate Data Product



PLATO DATA CENTER

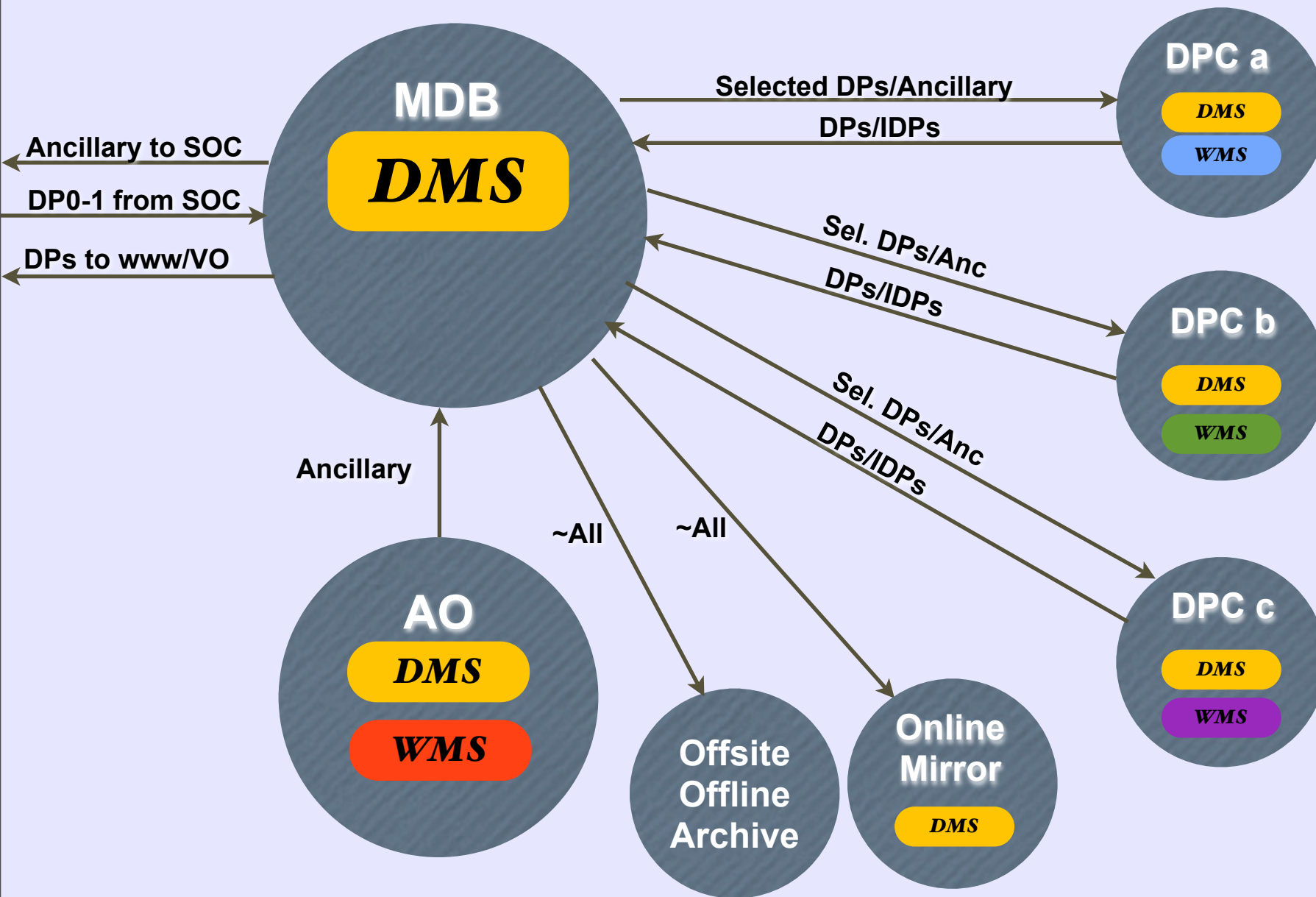


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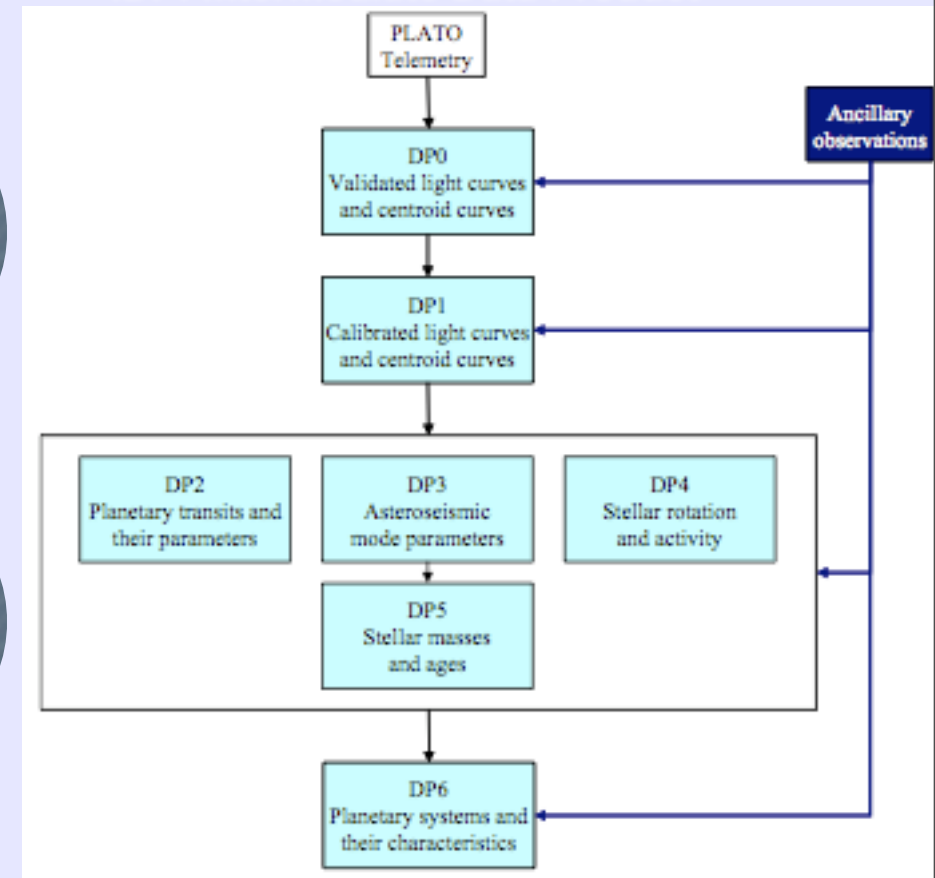


- Main requirement: Main Data Base (MDB), Data Processing Centers (DPCs), Ancillary Observations (AO), and full online mirror must read/write data via the same DMS
- automatic data transfer
- Homogeneous WMS environment not critical

PLATO DATA CENTER

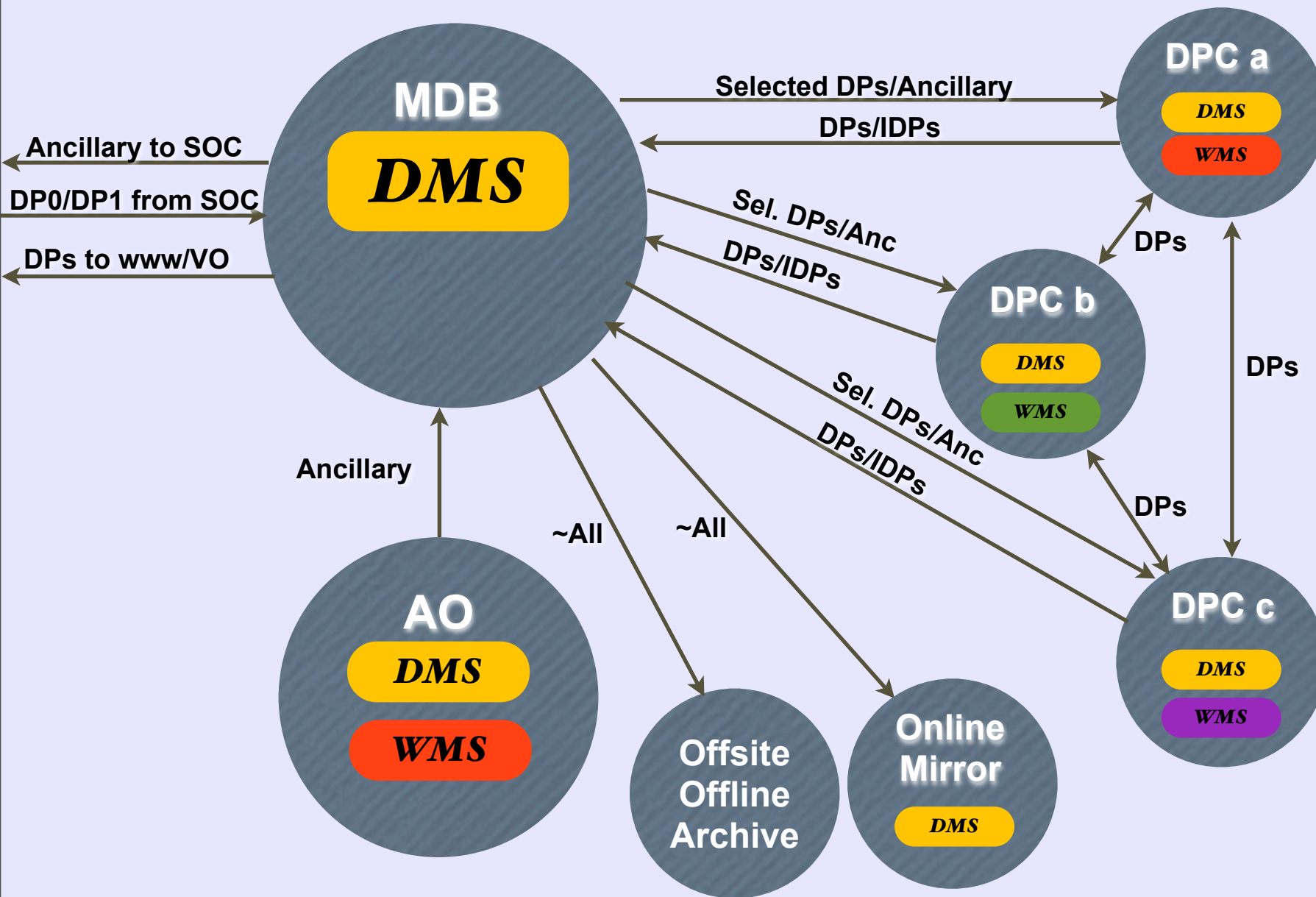


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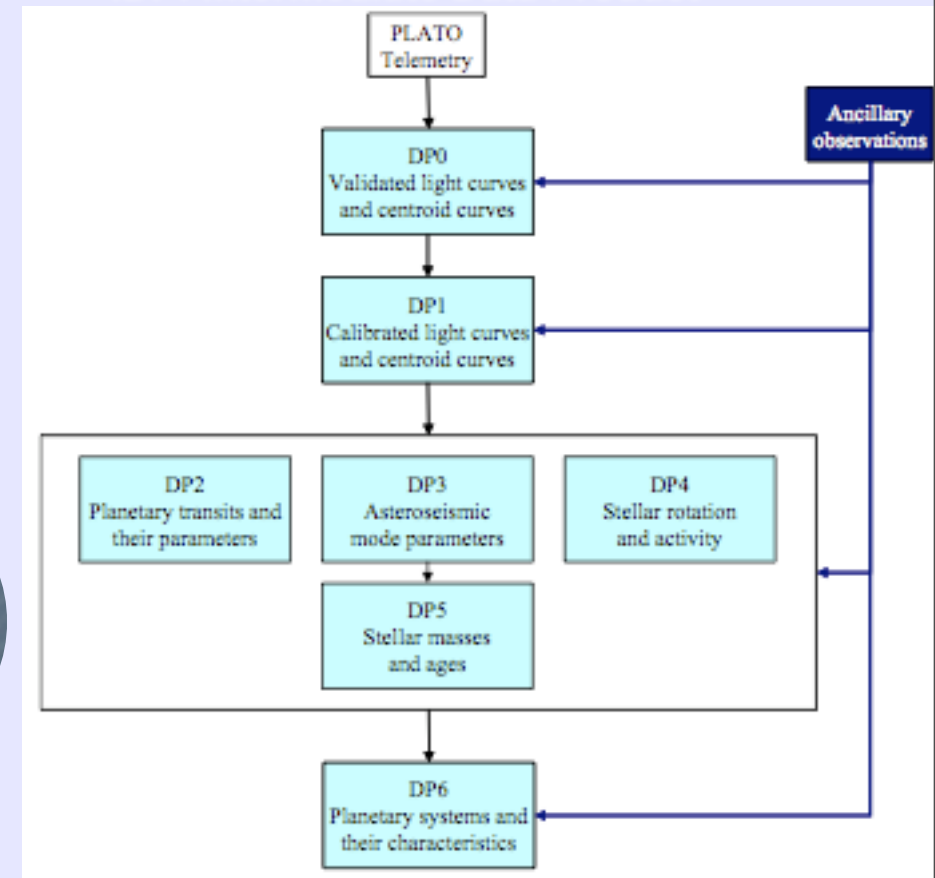


- Main requirement: Main Data Base (MDB), Data Processing Centers (DPCs), Ancillary Observations (AO), and full online mirror must read/write data via the same DMS
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PLATO DATA CENTER



MDB: Main Data Base
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- Main requirement: Main Data Base (MDB), Data Processing Centers (DPCs), Ancillary Observations (AO)(?), and full online mirror must read/write data via the same DMS
- automatic data transfer
- Homogeneous WMS environment not critical

Demonstrative DAS at MPS

- The Demonstrative DAS (D-DAS) is under construction at the MPS, Germany.
- Expect basic functionality will be ready in a few weeks.
- Will demonstrate the requirements and feasibility of critical DAS components, that are important to the success the definition phase
- The demonstration will/may include
 - **SOC**
 - simulate aspects of the SOC to implement initial data treatment validation/calibration software; jitter correction
 - input data from end-to-end simulator
 - simulation of SOC data stream; hence manufacture simplified DP0-1
 - ...
 - **PDC**
 - DMS ready in a few wks (MPS has involvement with its development)
 - WMS ready in a few wks
 - centralized MDB will be created and populated with some artificial/test ancillary data and the corresponding DP0-1 from the simulated SOC
 - simulation of PDC data stream to manufacture other DPs
 - ...

Demonstrative DAS

- **Interfaces**

- Main Data Base <-> Ancillary Observations
- SOC <-> PDC
- requirements for compatibility with Virtual Observatories
- ...

- **Network**

- requirements
- capacity
- lines of communication, i.e. SOC <-> PDC, MDB <-> local DPC
- ...

- ...

- **Demonstrative DAS Personal**

- 4 FTE until the end of Phase B1; DLR supporting 2 new full-time IT specialist positions, myself, 2 part-time programmers from MPS technical department with experience with space projects

- **Demonstrative DAS Hardware**

- 32 CPU cores, 128 GB memory, 12TB disk, and a fast network infrastructure will be dedicated to the DAS demonstration
- An additional 192 cores + 1.5 TB memory + 10-30 TBs disk will always be made available for specific tests