David

MODIS
SCIENCE DATA SUPPORT TEAM
PRESENTATION

September 24, 1993

AGENDA

Page

1. Action Items 1
2. MODIS Airborne Simulator (MAS) Status 2
3. MODIS Level 2 Processing Shell Design and Development 4
4. MODIS Land Prototype 10
5. MODIS SDST Meeting Calendar 12
6. MODIS SDST Document Schedule 14

ACTION ITEMS

No.	Due Date	Item
1.	08/13/93	[Al Fleig] Speak to Steve Unger on simulation data. Develop an approach for a plan for simulated test data. STATUS: Open. (Assigned 07/23/93)
2.	09/03/93	[Carl Solomon] Evaluate the SeaWiFS scheduling algorithm and code to see if it can be applied to MODIS prototyping. STATUS: Open. (Assigned 06/25/93)
3.	09/20/93	[Al Fleig, Paul Hubanks, Jim Storey] Prepare response to "MODIS pointing knowledge" for Dave Diner/Scientific Working group AM1 Platform (SWAMP). STATUS: Open. (Assigned 09/03/93)
4.	09/30/93	[Al Fleig] Develop meta-documentation concept for ATBDs. STATUS: Open. (Assigned 09/03/93)

MODIS Airborne Simulator (MAS) Status

Paul A. Hubanks
Progress through 23 September 1993

1. Status of MAS Data User's Guide Version 2.0
2. Status of MODIS Earth Location Error Report Version 2.0
3. SCAR-A Processing Status
4. Meeting scheduled with Jan Peter-Mueller at 8AM Monday September 27th in Rm G-95 to discuss MODIS pointing requirements.
5. HDF 3.3 Release 1 is available from NCSA.
6. Problem: Need to develop a way to identify calibration source and version for MAS data. Background: Currently calibration is determined by several sources including: Dr. Kings group and AMES. Thus far the SDST has used the calibration from Dr. Kings group to process data. In the future it is possible that other groups or investigators may be involved in the calibration effort. In addition Dr. King's group often puts out several versions of calibration coefficients and logic for each experiment. In the past, these were simply identified as preliminary and final. For the FIRE experiment there was a preliminary, a final, then a 2nd "final" calibration. There needs to be a consistent way to earmark these calibrations. Preliminary calibration will be defined as a quick and dirty calibration with known flaws to process data and allow some near real time analysis. Final calibration will be defined as a more detailed and intensive calibration - it is released with the belief that it is the best possible calibration. There will be 3 parts to the calibration designator: Experiment, Team, and Version.

Experiment:	SCARA, ASTEX, etc.
Calibration Team:	KING = Dr. Michael King AMES = Ames Research Facility JEDLOVEK = Dr. Jedlovek
Versions:	0.0 will denote the initial preliminary calibration 0.1 will denote the 2nd release of a preliminary calibration etc. 1.0 will denote the initial release of a final calibration 1.1 will denote the 2nd release of a final calibration etc.

(Example: Calibration = ASTEX KING 1.0)

I will coordinate with Tom Arnold to have him use these designators in his calibration reports so calibration of MAS data can be tracked.

This designator of calibration can be written on the face label of each output tape. Currently there are 10 fully processed ASTEX tapes (using ASTEX KING 1.0) and 2 processed SCAR-A tapes (using SCAR-A KING 0.0).

In addition I would like to add the calibration designator to the HDF Metadata on each tape. This will require

1. Dumping the original HDF Level1b flight track files from 8mm tape to disk (1 hour).
2. Running a job that would:
    a. Read the original HDF files (1 HDF file for each flight track) into memory.
    b. Create a new HDF file with the <u>additional</u> Metadata entry and copying all original radiance data and Metadata to the new file.
3. Writing all the new HDF flight track files back to 8mm tape (1 hour).

Depending on how much time Brenda has to spare this could take as little as 1 week or up to 2 weeks to complete, in addition I will need a day or two the write the software to perform function 2. above. Due to the Science Team Meeting next week this effort will delay the distribution of ASTEX data tapes to the Goddard DAAC by about 3 weeks.

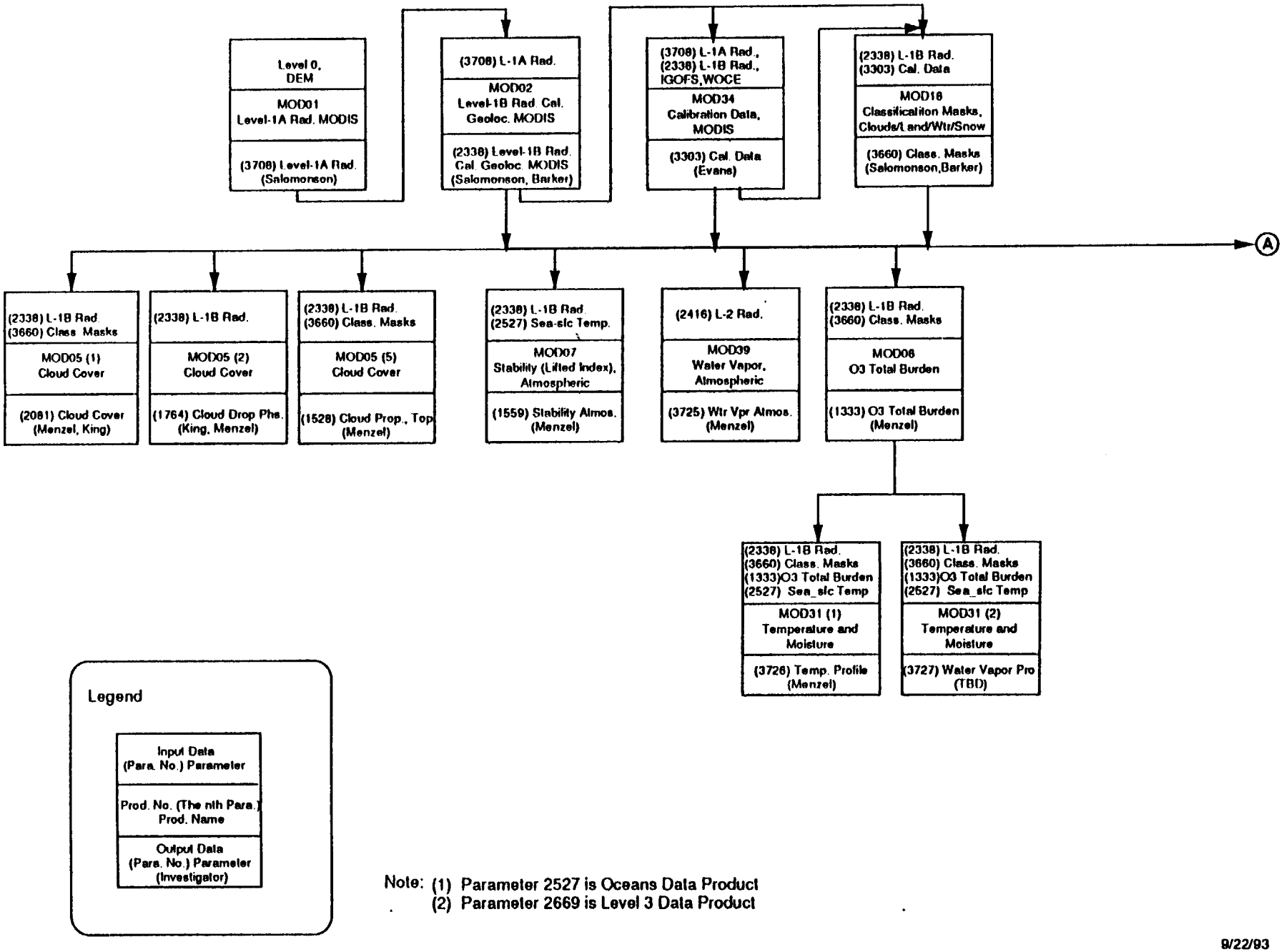
MODIS Level 2 Processing Shell Design and Development

J. J. Pan
MODIS Science Data Support Team
(301) 982-3700

Status:

- Update the Level 2 Algorithm Dependency Diagram. The information on the ancillary data which is not included in the diagram will be provided by the ancillary data table.
- Check the PGS Toolkit Requirements Specification Document and revise the Level 2 Shell System Requirements Document.
- Prepare materials for the MODIS Science Meeting.

MODIS Level 2 Atmosphere and Land Data Products I (DRAFT)

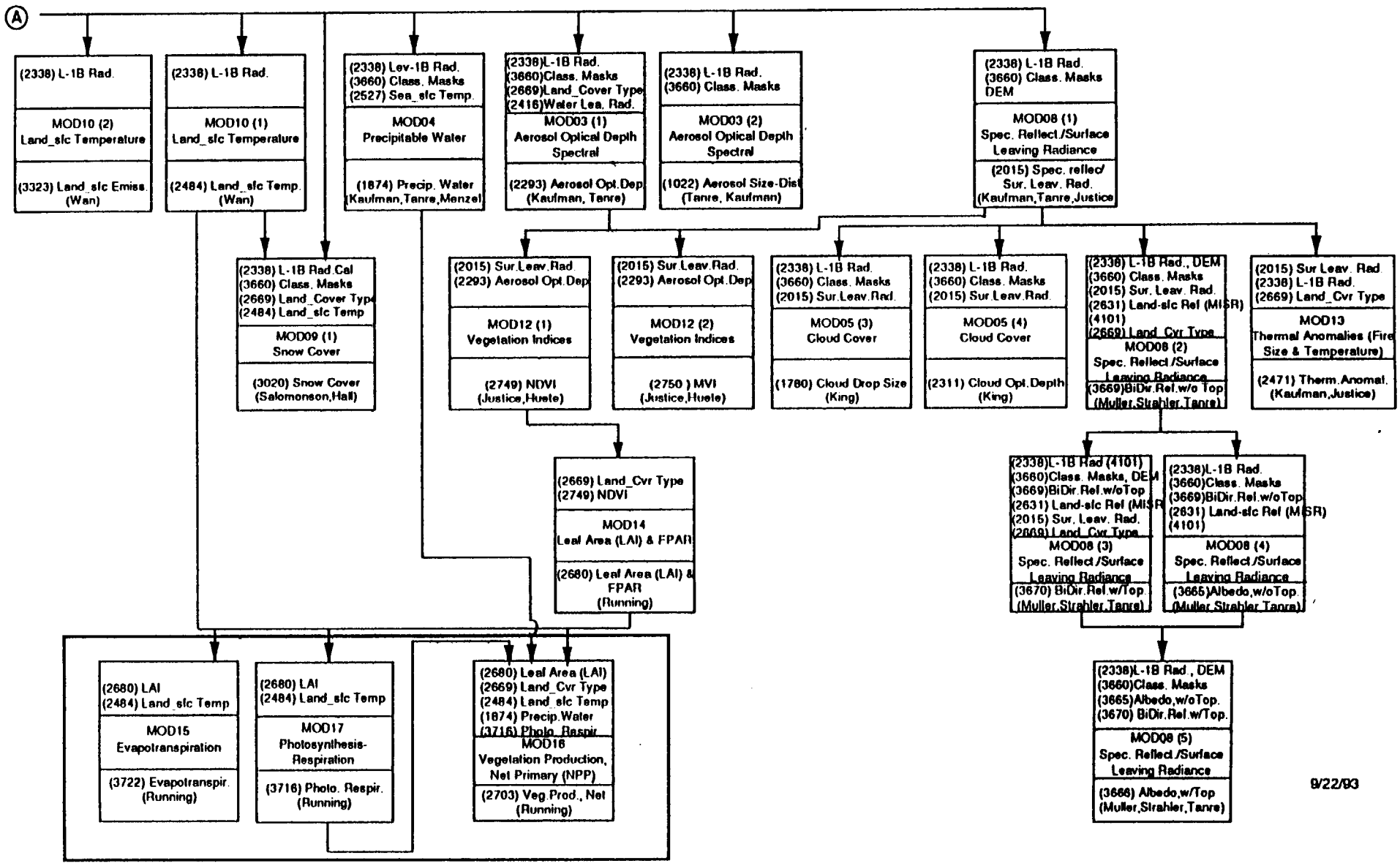


Note: (1) Parameter 2527 is Oceans Data Product
(2) Parameter 2669 is Level 3 Data Product

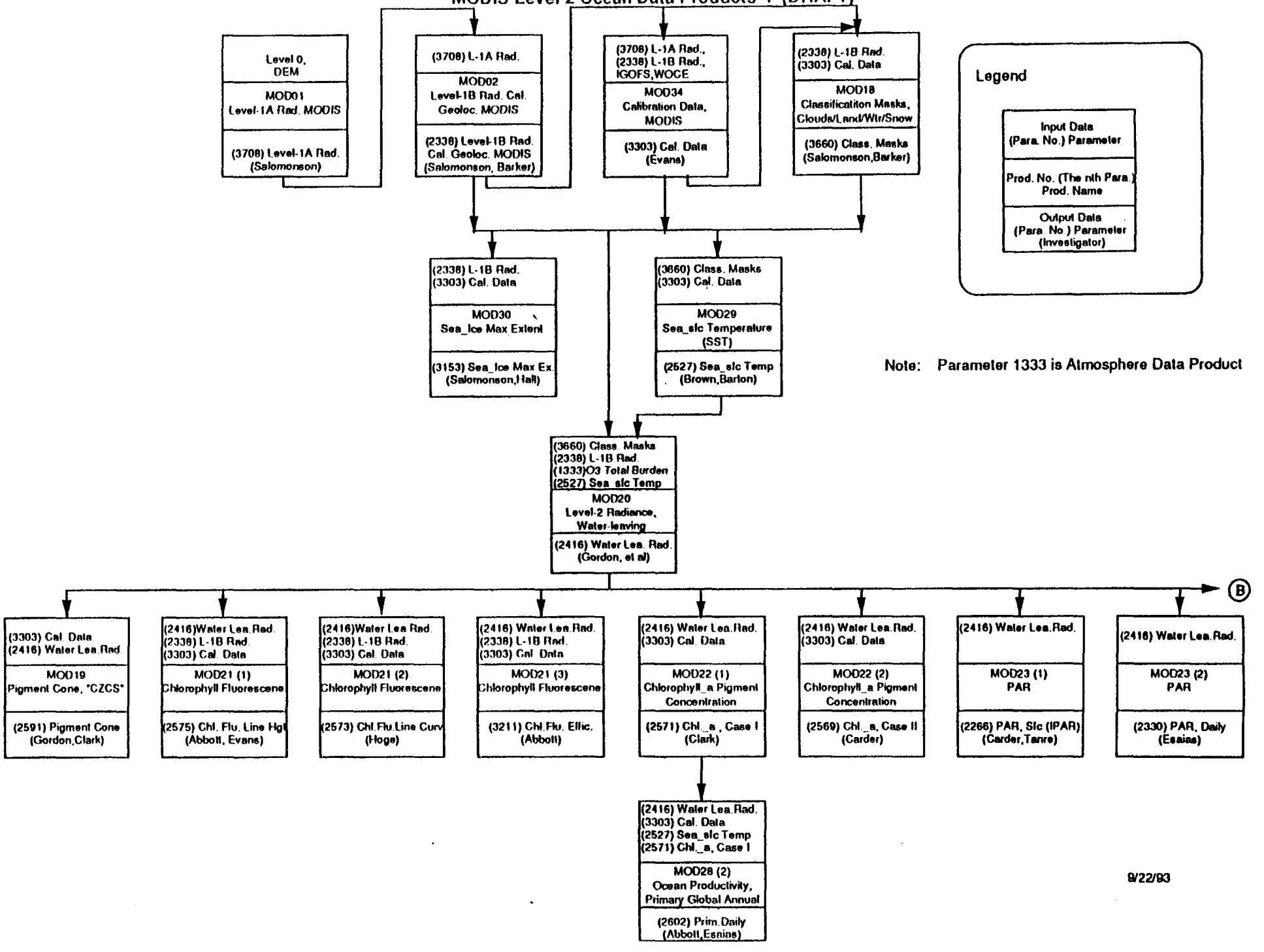
9/22/93

MODIS Level 2 Atmosphere and Land Data Products (II) (DRAFT)

Note: (1) Parameters 2527 and 2416 are Oceans Data Products
(2) Parameter 2669 is Level 3 Data Product
(3) Parameter 4101 is from ?

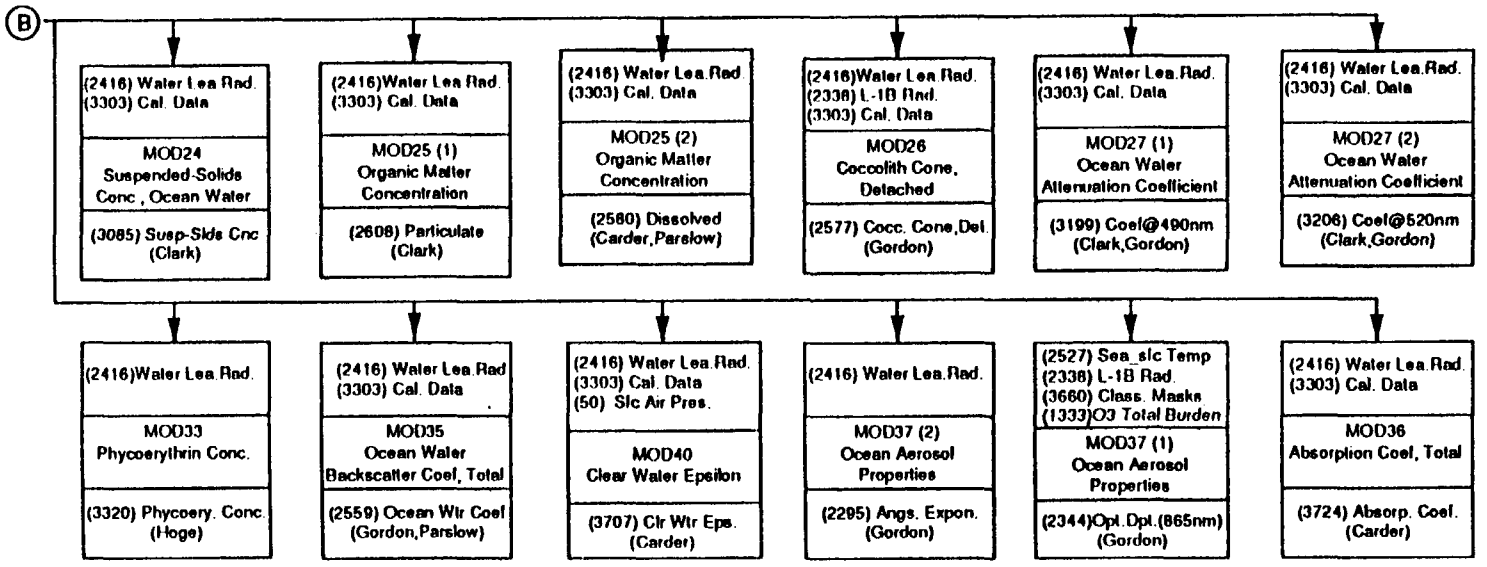


MODIS Level 2 Ocean Data Products I (DRAFT)



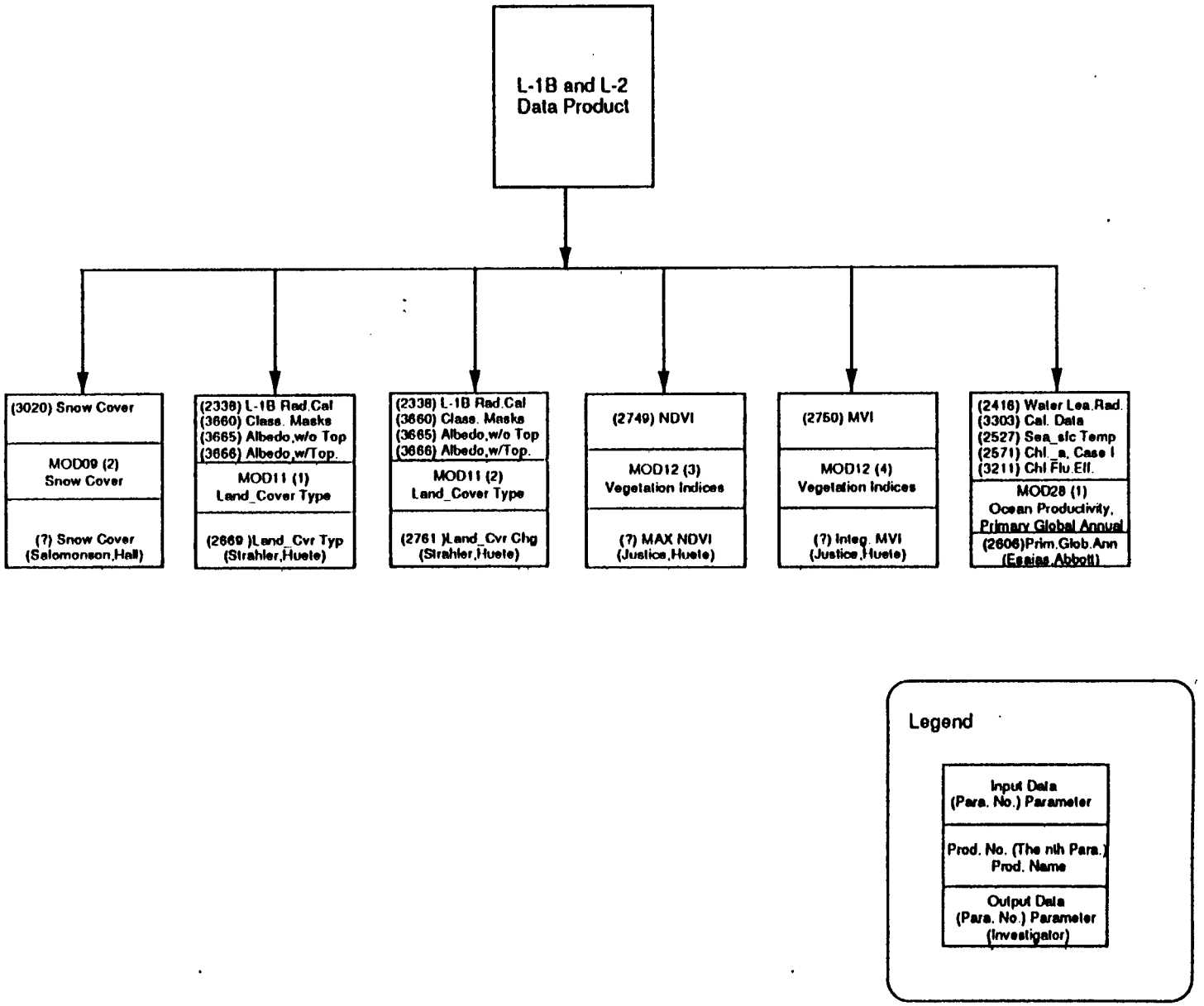
MODIS Level 2 Ocean Data Products II (DRAFT)

Note: Parameter 1333 is Atmosphere Data Product



9/22/93

MODIS Level 3 Data Products (DRAFT)



9/22/93

MODIS Land Prototype

Ruiming Chen
(301) 982-3754

Work through 09/23/93

MODIS Land Prototype

Contemporary land algorithms are being used in support of MODIS SDST prototyping goals (e.g., provide early understanding of challenge areas, validate the SDST Operations Concept, refine coding guidelines for MODIS Science Team (MST) algorithm developers, and encourage close collaboration between the SDST and MST members). For example, Advanced Very High Resolution Radiometer (AVHRR) data is being used in conjunction with prototype "fire"--MOD13 Thermal Anomalies (Fire Size and Temperature) and "snow"--MOD09 Snow Cover algorithms. (These algorithms are highlighted on the attached copy of the land dependency diagram.)

1. Fire Prototype

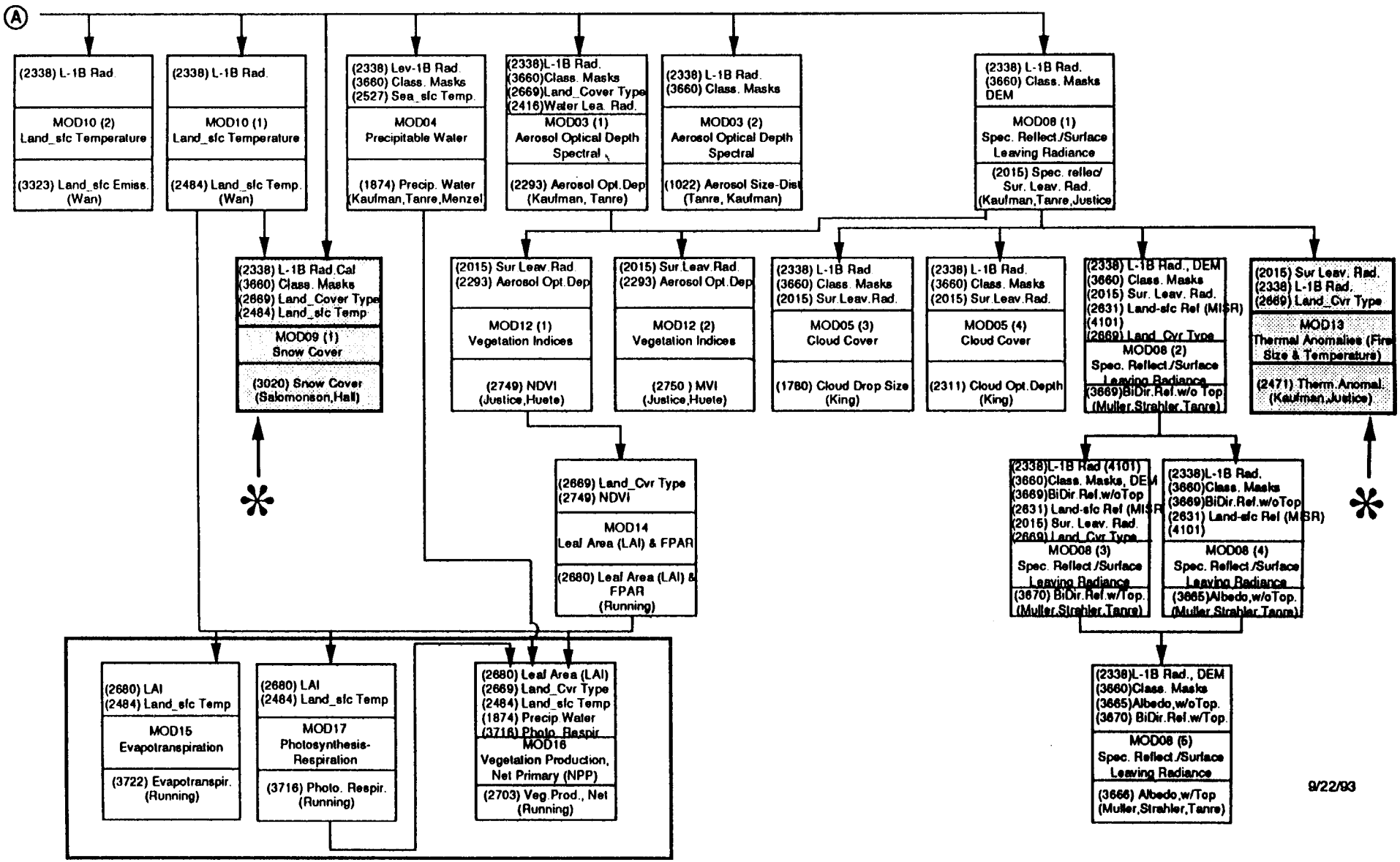
One orbit of AVHRR LAC data taken from North America was processed using Jackie Kendall's revised fire algorithm (new background/fire threshold, etc.). The results show fewer fire pixels than with the previous version. Typically, the EDC-supplied AVHRR LAC data has missing scan lines, and portions of scan lines (up to approximately 5% of the total). In addition, an orbit of Central Asian data was anomalous. I am attempting to identify the cause of this contamination.

2. Snow Cover Prototype

A PCI script for the prototype snow algorithm was received from George Riggs, who supports Dorothy Hall. Using the supplied script, I processed one orbit of AVHRR LAC data (which covers the area of North America and Greenland), and one orbit of AVHRR GAC data (which covers Alaska). The snow-cover results obtained from the two data sets were correctly processed and showed the ability to discriminate between snow and clouds. (Future versions of the algorithm may be improved to distinguish snow from ice.)

MODIS Level 2 Atmosphere and Land Data Products (II) (DRAFT)

Note: (1) Parameters 2527 and 2416 are Oceans Data Products
(2) Parameter 2669 is Level 3 Data Product
(3) Parameter 4101 is from ?



MODIS SDST Meeting Calendar
September 1993

Monday	Tuesday	Wednesday	Thursday	Friday
Mtg. A: Masuoka, Fleig, Carpenter Mtg. B: Masuoka, Fleig, Barker		1	3-4p: Tech Team 2	10a: SDST, B22, Rm G95 3
Holiday 6	7	11a-1p: HDF 8	8:30-10a: SW&DMP 10a-12p: ECS SRR RIDs 3-4p: Tech Team 9	10a: SDST, B22, Rm G95 10
2:30-3:30p: A 4-5p: B 13	ECS SRR 14	ECS SRR 15	DPFT IV DOAFT 3-4p: Tech Team 16	DPFT IV DOAFT 17
2:30-3:30p: A 4-5p: B 20	2p: ECS SRR RIDs 21	22	3-4p: Tech Team 4p: SW&DMP 23	10a: SDST, B22, Rm G95 24
2:30-3:30p: A 4-5p: B US/Japan Ocean Color, GSFC 27	8a: Calibration, B22, Rm 365 US/Japan Ocean Color, GSFC 28	8a:Science Team, B8, Auditorium 29	9a:Science Team, B8, Auditorium 30	

MODIS SDST Meeting Calendar
October 1993

Monday	Tuesday	Wednesday	Thursday	Friday
Mtg. A: Masuoka, Fleig, Carpenter Mtg. B: Masuoka, Fleig, Barker		MODIS CDR, Goleta, CA Dec. 7-10, 1993		8:30a:Science Team, B8, Auditorium 1
2:30-3:30p: A 4-5p: B 4	5	6	3-4p: Tech Team 7	10a: SDST, B22, Rm G95 8
2:30-3:30p: A 4-5p: B 11	12	13	3-4p: Tech Team 14	10a: SDST, B22, Rm G95 15
2:30-3:30p: A 4-5p: B 18	19	20	3-4p: Tech Team 21	10a: SDST, B22, Rm G95 22
2:30-3:30p: A 4-5p: B 25	26	27	3-4p: Tech Team 28	10a: SDST, B22, Rm G95 29

MODIS SDST Document Schedule			
Document	Status	Estimated Completion	Responsible Individuals
ATBD meta-documentation	outline	Sept 27	Al
Configuration Management Plan	draft	Nov	Carl
Level 1A Preliminary Design Report			Tom, Jim, John
Level 1A Baseline Requirements	completed		Lloyd, Tom, Carl, Jim
Level 1B Requirements Report			J. Barker, Tom, Joann Harnden
Level 2 Shell Requirements Report	draft	Oct 8	J.J., John C.
MAS Level 1B Data Processing Guide	draft	Oct 29	Paul Hubanks
MAS Level 1B Data User's Guide	draft	science mtg.	Paul Hubanks
MODIS Earth Location Error Report	completed		Al, Jim, Paul
Operations Concept	revision	science mtg.	John, Carl, J.J., Jim, Tom
Prototyping Plan	outline submitted		Ed, Phil
Quality Assurance Plan	draft		Sue
Science Computing Facility Plan	completed		Ed Masuoka
Software and Data Management Plan	revision	science mtg.	Carl, Ed, Al, Lloyd
Software Guidelines/Programming Standards			Carl, Tom, John
Software Test Plan			Sue, Phil