

Cluster and Space Weather

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- Cluster support for Space Weather
- S/C and mission status (first results)
- Data distribution
- Conclusion

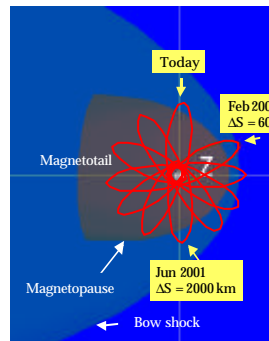
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Cluster support for Space Weather

- Limitations:
 - non-real time mission
 - 50% duty cycle (100% from July 2001)
- Advantages:
 - 4 spacecraft -> new observations, model refinements.
 - complete instrumentation (E, B, waves, particles)
 - fast access to processed data from all instruments

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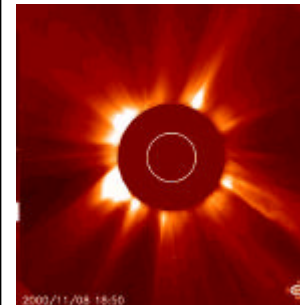
Spacecraft and Mission status



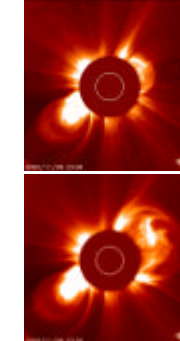
- Mission operation 1 Feb. 2001
- All four S/C in perfect shape
- Both long and short eclipses successfully passed
- Separation: 600, 2000 km

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Solar storm of 8 November 2000



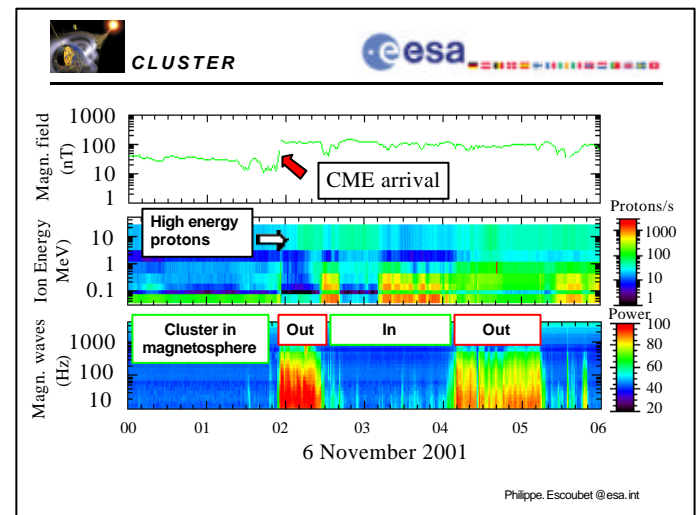
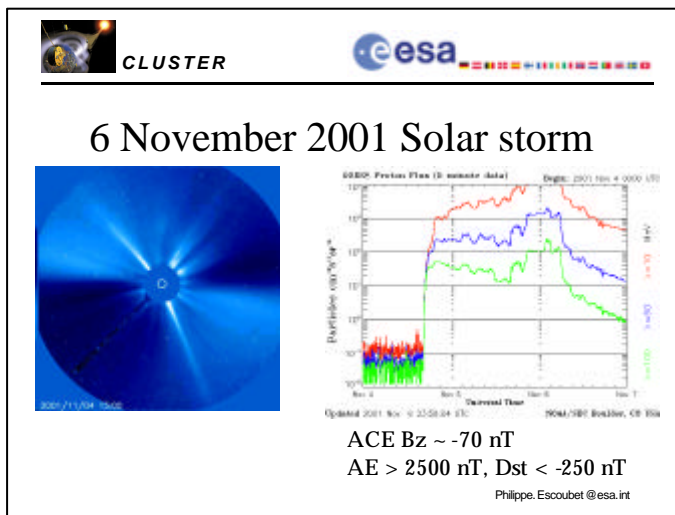
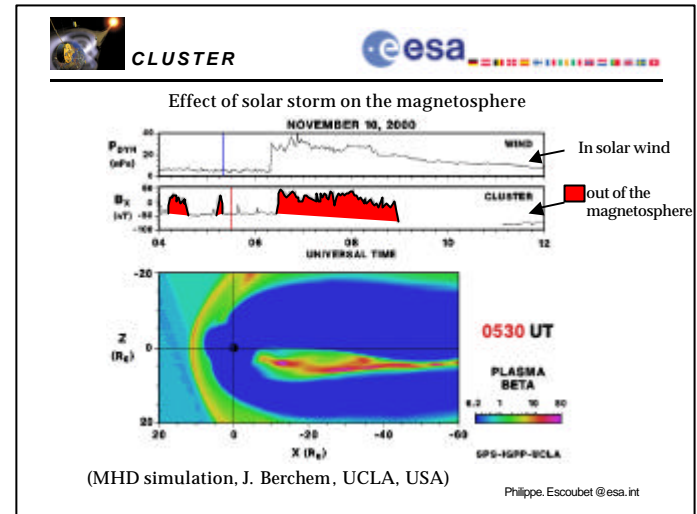
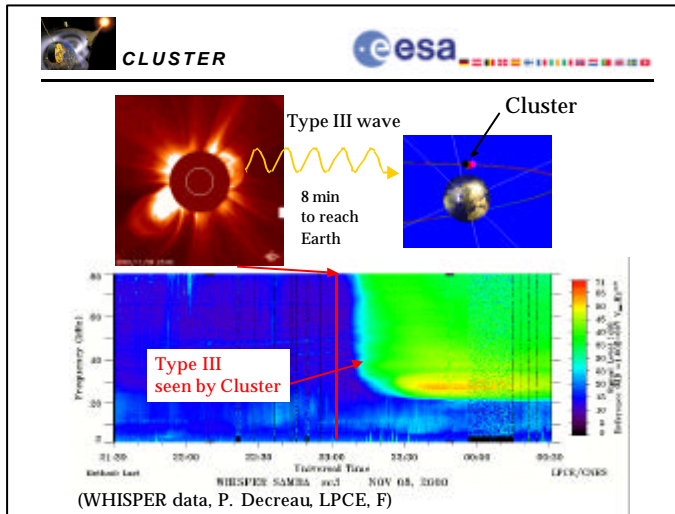
SOHO LASCO

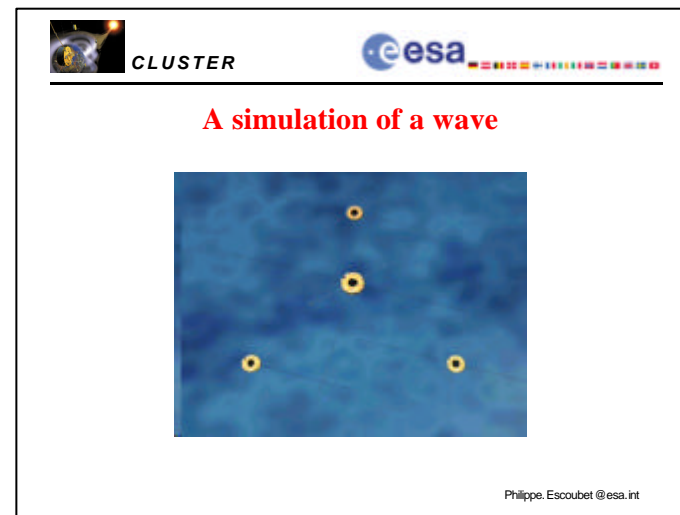
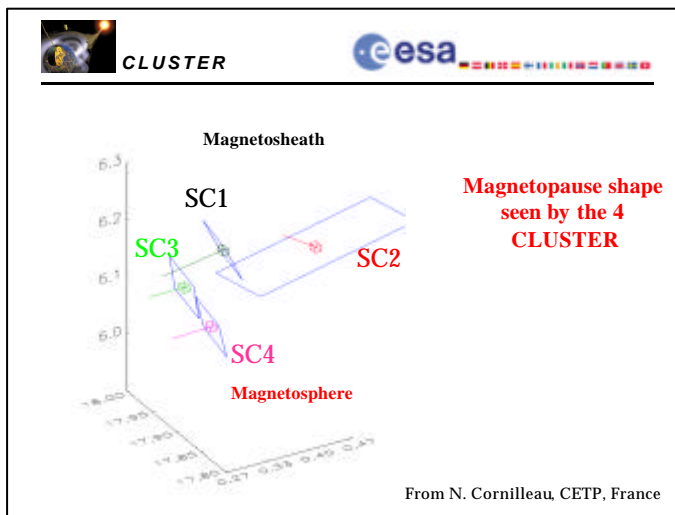
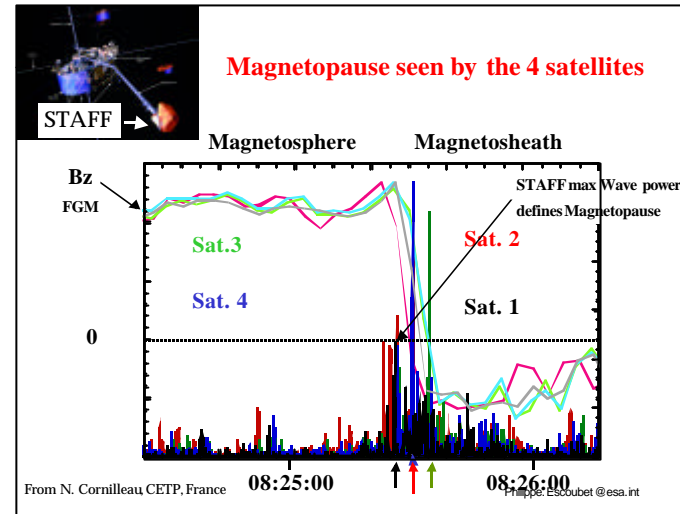
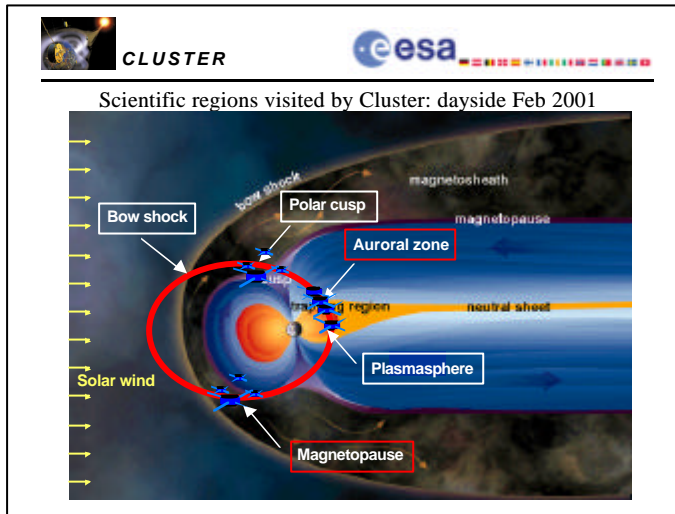


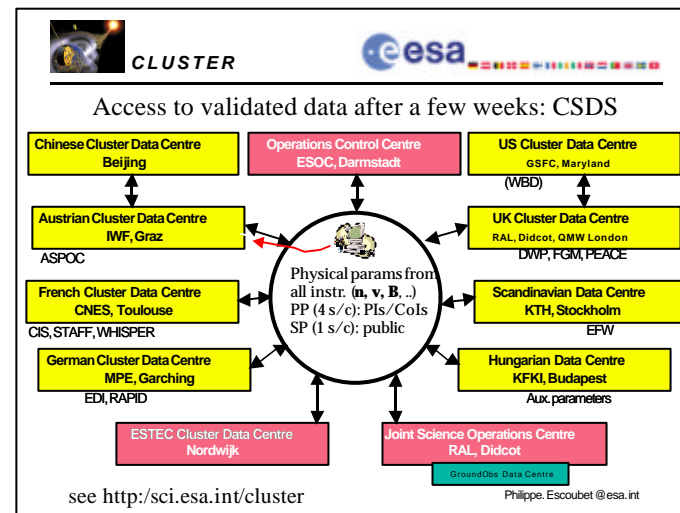
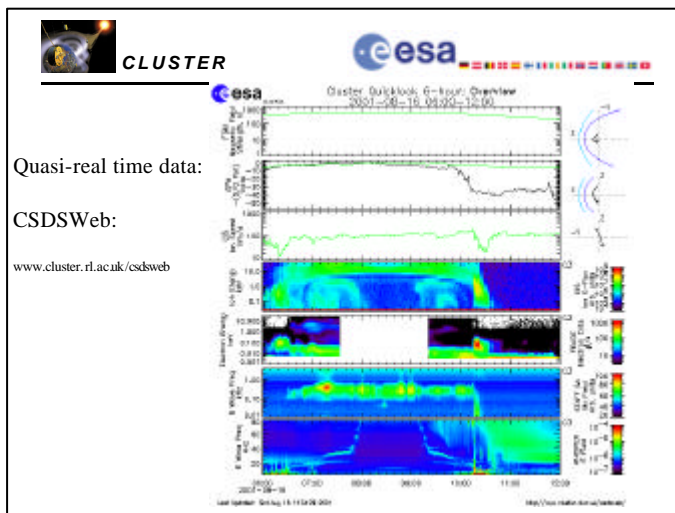
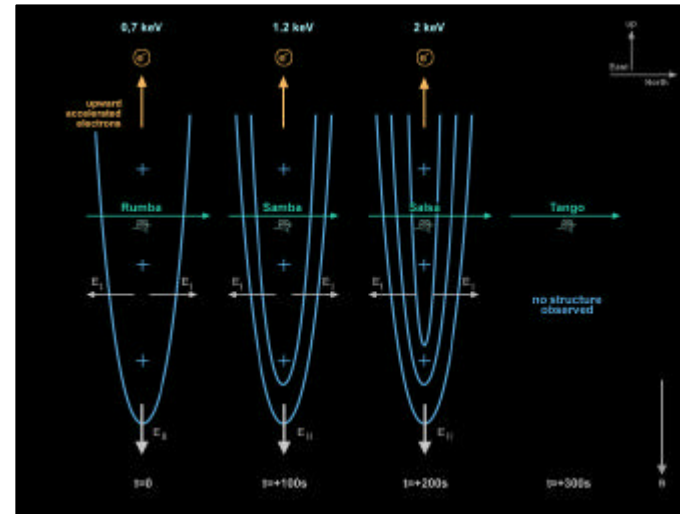
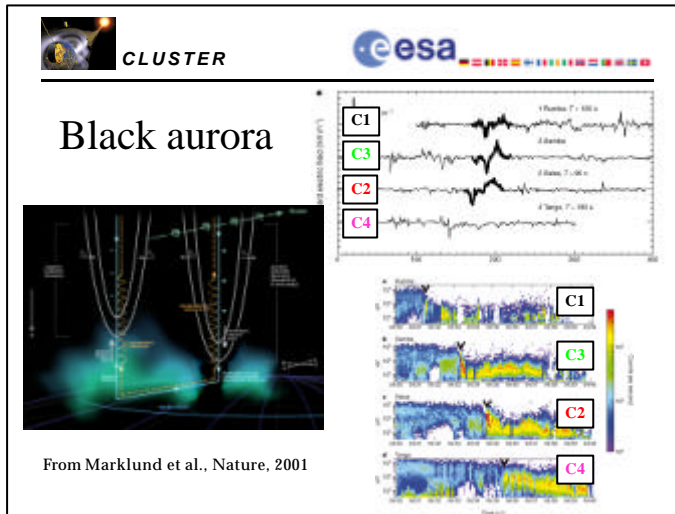
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CLUSTER



Conclusion

- Cluster mission is not a “space weather” mission
- Cluster is contributing to space weather by:
 - understanding the magnetosphere during all conditions (normal and extreme) in 3 Dimensions
 - making new measurements to refine models of the magnetosphere and its environment
 - allowing free access to data through CSDS

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