



ILWS/European Partnership

Report to the LWS MOWG

Washington, DC, May 10–11, 2004

Hannu Koskinen



Current ESA missions

- SOHO
 - attempts to extend until 2009
 - minimum P/L, at least LASCO as long as it lasts
 - enough fuel for much longer operations
 - S/C getting old
- Cluster
 - attempts to extend until 2009
 - constraints on S/C separation must be released at some point

Extension decisions for 2 years at a time

- should not be a problem, if S/C OK

Future solar missions

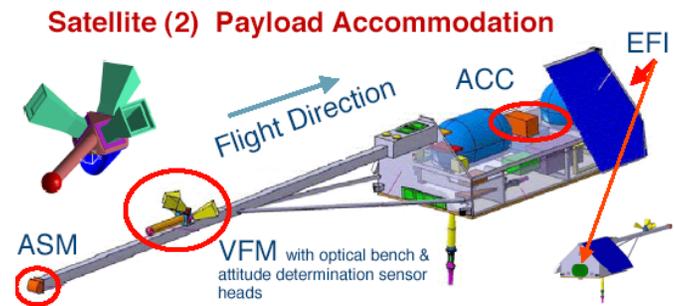
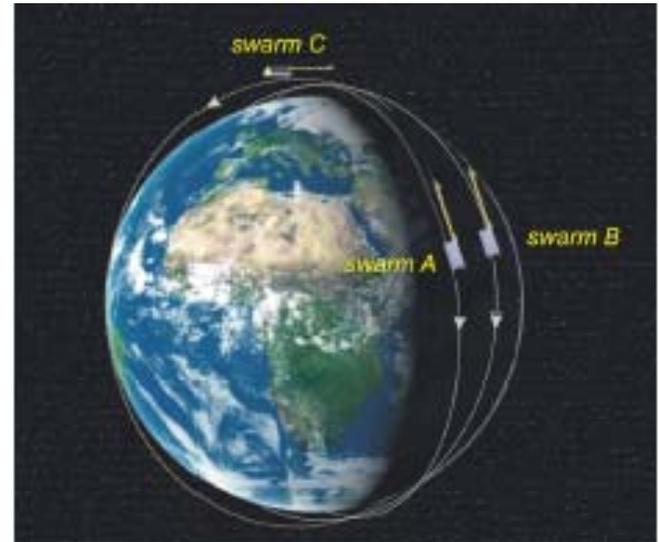
- SDO coronagraph option terminated
 - development kept alive for a mission of opportunity
- Solar Orbiter
 - technical planning ongoing for 2013 launch
 - Venus flyby to obtain 0.21 AU distance and 38 deg inclination
 - some uncertainties still exist
 - re-endorsed at SSWG on May 11, 2004.
- Picard (French national initiative)
 - solar diameter and shape, total irradiance, oscillations
 - status unclear

BepiColombo as a solar sentinel ?

- Two components
 - Mercury Planetary Orbiter (MPO; ESA)
 - Mercury Magnetospheric Orbiter (MMO, Japan)
- MPO AO
 - closes on 15 May, 2004
 - instrument complement to be confirmed in November, 2004
 - national P/L funding a major issue
 - cruise science (2012–2014) unlikely
 - MPO, MMO, chemical & plasma prop. modules in one stack
 - some solar monitoring by the X-ray instrument (UK/FIN)
 - solar X-ray and proton fluxes needed for interpretation of fluorescence spectra

Geospace missions

- Magnetosphere
 - nothing at present in the ESA programme
 - some national proposals
 - Maxwell, Heracles
 - nothing certain
- Ionosphere
 - SWARM
 - in the Living Planet Programme
 - 3 S/C
 - primary target: Earth's magnetic field
 - includes EFI and accelerometers
 - final selection soon



Open ends

- Call for Themes 2015 – 2025 (replies by June 1)
 - broad themes from all space science areas welcome, e.g.,
 - multiscale, multipoint magnetospheric physics (M³)
 - space weather science
- Temporary extra financing of the Science Programme
 - 2005 – 2012 (xyz M €; no decisions made)
 - being discussed now (no open calls expected)
 - Eddington (stellar oscillations) to be brought back to the programme
 - ESA Solar System Working Group 10–11 May, 2004
 - Solar: reinforce Solar Orbiter
 - Planetary: quick Mars lander
 - M'sphere: focus on long term goal M³ (after 2015)
 - technology demonstration for M³ with capacity to support ILWS (SMART-3)