6Nov2013_SOCPDR

Wednesday, November 06, 2013 2:05 PM

Schwadron = UNH 01: Overview

Brown: where can we see all the documents Schwadron: they are all APL documents

Angold 02: Requirements Analysis - 2:07 - 2:19

- Brown: what type of archiving do you do? Angold/Davis: answer
- Petro: any requirements to put instruments in Safe Mode? Angold: concept: instrument takes care of itself;
 - Dickinson: distinguish between S/C and instrument safe mode
- Wortman: are we doing acceptance testing at the MOC/SOC
 - Artis: we won't be doing independent testing of MOC/SOC interface software; not yet decided
- Nair: SOC will be on university network? Can university IT security cut you off? Schwadron: it will be on a university network; it's a moving target, hard to predict for the future; currently 2 MOCs are managed at UNH; there are 3-5 total; center that Schwadron is in is used to being agile in dealing with these issues

Brown: if you need a type of connectivity from APL, make it a requirement on APL so there is hesitancy before changing it on APL's side

Schwadron 03: SOC Description - 2:20 - 2:24

Brown: test SOCs are for commanding? Schwadron: correct

Christian 04: Operations - 2:25 -

Floor: give a brief description of the FlatSat
Christian: S/C simulator and simulators of the instruments
Tycho: where does name come from?
Christian: board level set up for the S/C
Nair: can you give a brief summary of commanding in the orbits
Christian: it depends on orbit; we use onboard S/C file priority system to
ensure first data we get is the most important
Second priority is the low cadence for interesting time periods that shows key
times in the science
Third priority is the full science data
Nair: what about up to the S/C
Christian: we will want to command when we are past Aphelion
Brown: how long is an orbit?
Christian: 3 orbits/year
Brown: planning software?
Christian: TBD
Nair: [didn't catch question]
Christian: fast commanding is health/safety; everything else will be planned
orbits in advance
Nair: how often do you get opportunities to command high rate?
Christian: we have no plan to do high rate outside 0.25 AU; low rate is default
mode

Nair: is the threshold to change modes (0.25 AU a parameter) something you could change?

Christian: probably in FSW, but it is a set by S/C; if we did, we could overflow our telemetry allocation; we won't have trouble filling our allocation

Nair: EPI-Hi/Lo commanded independently

Christian: yes

Floor: can you send commands from EPI-Hi to Lo?

Christian: our standard mode is to go through UNH; we would like to be able to interface directly with Hi/Lo GSEOS systems

McComas: normative plan is to go through UNH

Schwadron 05: Testing, Processing, Data Products, Plan and Status

Brown: do you have any desire to run telemetry pipeline during testing

Schwadron: we'll get to this; send faux-telemetry streams through GSEOS Brown: instrument teams will be working with UNH to get data processing systems working on UNH systems

Schwadron: yes

Brown: have you chosen a data format?

NS: ASCII and CDF

Brown: L0 files: tables or concatenated CCSDS packets?

NS: L0 is whatever it is when it comes out the door; whatever came out of the MOC; some of these design features are not finalized until it is clear what the FSW is doing

Artis: different facilities for telemetry flow? Does telemetry flow to Caltech and APL?

NS: plan is most flow between MOC/SOC; similar to IBEX; centralized IBEX SOC; computers that instrument teams have access to - can access data directly

Artis: remote facilities won't be receiving real-time telemetry; just data archives NS: correct

Mitchell: except during commissioning

Nair: how are you monitoring health and safety?

NS: the ITFs will help; create health and safety data products

Floor: S/C can do a disk copy of products?

NS: they have a lot of flexibility

Brown: bandwidth; do you have enough? GB/day to move data around? Is it a scaleup from IBEX

NS: very similar; not a lot of data

Mitchell: it is a problem on the ground - has been a problem on RBSP

NS: we have a lot of experience, and have not had problems; CRATER has

much larger volumes

Christian: 5GB/year

Brown: what does L3 include

NS: plan for L3 data is to share data; want to plan for this now so we can be writing papers after launch

Brown: metadata for files - do you have a plan early in this life cycle; make sure it happens before it's time to put it in the deep archive; what are calibrations? Passbands? Etc.

NS: this is down the road; VPOS (?) are easier to deal with Floor: as a team, have you talked about production schedule of products?

NS: yes, we've talked about this; we've talked about it to the level we expect at PDR; in case of energetic particle data, processing will be quick; once we get everything calibrated, flow through pipeline will be fast; hard part: validation,

good process for the shared data

Floor: do you mean using FIELDS data? Do you know that FIELDS will have produced the data you need in order for you to use them

NS: remember, in the combined data that's L3; we'll need to work this in the near future

Brown: working out w/FIELDS team for appropriate quick-look data products is important

Closure from McComas

Reviewers (stage right to left):

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