

MOST (was Re: Zodiacal light linked to ancient Martian oceans)

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In article <3416b228.0406020948.74722f07@posting.google.com>, Abdul Ahad <aa_spaceagent@yahoo.co.uk> wrote:
>*On a slight change of topic (party pooper!)...*
>*How is the MOST mission performing as of late, and are we due any*
>*science releases in the near future?*

The spacecraft is doing very well. Some modest computer problems seen shortly after launch are still the only electronics problems... which is a relief, since it's all commercial components in a relatively high LEO that gets a fair bit of radiation. We're hoping for a working life of several years; the nominal primary mission is one year, but there's funding for two years of operations and agreement in principle for two more.

Commissioning took longer than expected, but operations are now smooth and essentially fully automated. If everybody went on vacation for a week, no data would be lost.

Pointing precision is now much better than specified despite a stray-light problem in the camera, and improving steadily as further software tweaks are done. Which is good, because the astronomers thought that science performance would be relatively unaffected by pointing jitter below the original spec, but they were wrong — every time the pointing gets better, the data gets better. Achieved photometric precision now is 1ppm for bright stars; even Hubble isn't quite that good, aside from being in the wrong orbit for this sort of work.

I should add at this point that the credit for essentially all of this goes to other people; I was involved in design and development in a modest way, but haven't had anything to do with commissioning and operations.

The observations so far have been all astrophysics. There is considerable interest in planet detection (by seeing brightness changes of the total star+planet system as the planet goes through phases), but the first good target star for that hasn't entered the continuous-viewing zone yet.

As for science releases, my understanding is that after some lengthy

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arguments about whether the evidence was really good enough for some of the conclusions, the first paper has cleared the editorial hurdles at Nature and is in the pipeline for publication. However, it's not "on the street" yet, so I can't talk about it (and I actually don't know very much about it -- the astronomers are doing all the data analysis and they haven't been saying much).

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"Think outside the box -- the box isn't our friend." | Henry Spencer
-- George Herbert | henry@spsystems.net