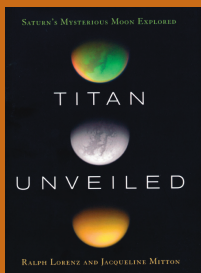


Titan Unveiled



Authors:
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Like many on that exciting Friday afternoon in January 2005, I had surreptitiously eschewed the work before me. I had instead manacled myself to the Internet in fascinated awe as, piece-by-piece, news of Huygens' descent towards Titan's surface unfolded. For, as the authors make clear, Titan's veil of thick cloud had made it the most coyly enigmatic body in the Solar System, save Venus. Indeed, being a mere moon that had the temerity to possess a thick atmosphere made it doubly so. This work succeeds the authors' previous title *Lifting Titan's Veil* released prior to the Cassini mission, their scope here now including the preparation, execution and current results from the orbiter and its surface-bound progeny.

Ralph Lorenz is a planetary scientist whose deep involvement in the mission gives the book a real sense of 'being there'. The frequent interspersal of 'Ralph's Log' successfully imparts the excitement of his direct involvement in the probes' explorations. Our first encounter with his log is the humorous tale of a telescopic encounter that will immediately endear him to observational astronomers everywhere. Jacqueline Mitton's long experience in imparting astronomical information in a comprehensible manner gives this work an accessibility to anyone with an interest in this mission.

We initially sweep through Titan's preceding Earth-bound and space-probe observational histories; the case for close-up probes becoming clear as we do so. Adequately prepared, we launch into Cassini's arrival at Titan and that thrilling drop of Huygens into the unknown. As with most human endeavours, there are highs and lows (like the avoidable 'failure' of one of the probe's communication channels) and the challenge of the unexpected (such as Huygens' perverse insistence on spinning in the wrong direction during its decent).

In relating the various experimental results and surprisingly 'Earth-like' imagery, the authors impart this with engaging styles permeated with their own perspectives on this pivotal mission. I found the book gripping - re-igniting the suspense of the actual encounter more than three years ago.

Steve Ringwood

INTERVIEW

Jacqueline Mitton has been a successful astronomy author for many years, and her latest offering is *Titan Unveiled*, a project written in tandem with Cassini scientist Ralph Lorenz. We asked Jacqueline about the work that went into the book.

You have co-written a number of books with scientists, such as Alan Stern and Ralph Lorenz. How does this writing partnership work, and what role do you play in it?

Both Alan and Ralph asked me to co-author books with them because they were – and still are – busy professional scientists but were keen to write popular books. They thought it would be a good idea to work with someone who had professional experience as a writer and editor as well as a background in astronomy. I have also worked with John Spencer and Jim Bell on *The Great Comet Crash* (Shoemaker-Levy 9's impact on Jupiter) and the NEAR mission to Eros, though those had chapters by other contributors too. On the two Titan books, I wrote some of the introductory material, and worked closely with Ralph on planning the contents, finding a publisher and moulding chunks of text into a coherent story.

What are the challenges of writing as a pair?

The most important things are to get on with your co-author on a personal level and to share the same vision for the book and who its potential readers are. You both need to be clear from the start about what each person's contribution will be. The obvious advantage of a partnership is that you both bring different skills, knowledge and perspectives that hopefully result in a better book! When it works well – as it did for Ralph and I – doing books with someone else is very enjoyable because you are sharing ideas and keeping up a regular correspondence. On a practical level, we had to cope with being on opposite sides of the Atlantic. You can do a lot by e-mail but sometimes it really is good to talk. Fortunately we were able to get together when I was at scientific meetings in the USA, or when Ralph was in the UK, and a few times we just scheduled a long phone call.

What is different about this new book compared to your previous work about Titan, *Lifting Titan's Veil*?

Our aim was to make *Titan Unveiled* a good read on its own for people who had not read *Lifting Titan's Veil* first but, at the same time, to keep duplication to a minimum. Essentially we picked up the story where we had left off in 2001, and continued it through to mid-2007. Our approach was much the same as before with Ralph's personal experience of working as a scientist on Cassini-Huygens being the strong unifying thread. As we say in the introduction, "science is principally about process, not conclusions". Our books are as much about the excitement of the discovery process as they are about the scientific findings. As to whether predictions about Titan proved correct – not surprisingly, some did and some didn't! Titan really does have liquid hydrocarbons and methane rain as widely predicted. Perhaps more surprising to some was the discovery of vast stretches of dunes made of icy sand, but Ralph had talked about 'The Sands of Titan' and mechanisms for forming dunes in our first book.

What is the most amazing fact that you learned during the writing of *Titan Unveiled*?

Titan is altogether an amazing world. But what is most memorable and stunning for me is simply the success of such an ambitious and daring mission as Cassini-Huygens – particularly the audacity of setting out to land a little package of instruments on such a distant alien world and achieving so much despite the odd hitch.

Are you working on any more books that we might see in the near future?

I have just finished writing *Moon* in Dorling Kindersley's *Eyewitness* series, scheduled to be published in time for the fortieth anniversary of the first Apollo Moon landing next year, and Frances Lincoln have just published *The Planet Gods*, an update of my earlier children's book *Kingdom of the Sun*.

