

DOWNLOAD PDF NEW MOON RISING: THE MAKING OF AMERICAS NEW SPACE VISION AND THE REMAKING OF NASA

Chapter 1 : Apogee Books Space Series by Robert Godwin

*New Moon Rising: The Making of America's New Space Vision and the Remaking of NASA: Apogee Books Space Series 42 [Keith L. Cowing, Frank Sietzen Jr.] on www.nxgvision.com *FREE* shipping on qualifying offers. Readers will gain the most comprehensive view available on what President Bush's new space vision will do for human exploration of the Solar.*

Cowing detail how the National Aeronautics and Space Administration attempted to recover from the shuttle Columbia tragedy and prepare to fulfill President George W. We scored all of that. Already, shock waves had rolled over NASA as to what had come out during the spring and summer hearings on Capitol Hill. That was the worst of the worst. It just blistered a whole lot of people around here -- I mean, big time blister. To say they were unhappy was an understatement, and some were spoiling for a fight. Confront the accusers head on. To hell with Congress. NASA people in safety organizations were livid, Pastorek said. Would NASA seek to agree? Or, as some were suggesting, would the agency take the gloves off, and for the first time since Feb. We knew that they were going to make recommendations, and we knew that they were going to make findings, Pastorek said. Findings of fact were conclusions of law -- they are factual. But what would be their conclusions as to what had to change? Sign unseen, before they knew what the implications of such an embrace would be. Not surprisingly, the draft caused a tumult in the leadership. And the debate formed two arcs of concern. One was over the phrase, accept the findings. The other, the more contentious debate, addressed this idea of saying comply with the recommendations. The findings would likely say that there was nothing in the safety program. Some were already objecting to that prospect, as they had howled when Gehman said as much during the hearings. Sean was having conversations with Gehman, Pastorek recalled. But there were no leaks from the board to NASA. We were doing what everybody else was doing, he said, which amounted to a careful reading of tea leaves. And there were many tea leaves to read. Much of that was public bluster, with an unseen effort to reach out to NASA. Despite their public utterances, many on Capitol Hill wanted to see NASA survive the disaster, and possibly made stronger. And despite the public humiliation and depth of the Columbia tragedy, with all of its potential impact on the shuttle program, the shuttle enjoyed strong, if not bipartisan, support. Pastorek had read and summarized all of the documents that had been sent to the CAIB, and read and summarized the damning e-mails from the NASA, Boeing and USA workers who were concerned about the foam strike effects before the day of the disaster. It was an indictment, by fact. Factually, you did something wrong, Pastorek said. That was had for a lot of people to accept. Many were worried that Gehman would recommend that the shuttle should never fly again, that it was unsafe. Such a recommendation would be another disaster for NASA, for the space station components that were sitting in storage at the Kennedy Space Center awaiting launch aboard the shuttles. In addition there was unfinished hardware around the world, specifically designed for launch aboard the shuttles. Without the shuttles all this space hardware would be marooned -- destined to become expensive museum pieces. Yet there were other concerns -- that the report would so tightly bind NASA into specific actions and proscribe specific results from the actions, that it could actually create a new safety problem. The internal debate raged in the final hours before the release. NASA would accept the findings, and comply with the recommendations, however hard they might be. But defining the pathways to get to those reforms, and to both absorb the CAIB recommendations as well as head off any more political problems it might create, would prove much harder than he had expected. A few were missing. He would recall much later the atmosphere of the dinner as being cordial with no finger-pointing or incidents. Inevitably, questions would arise. There would be no further embellishments needed, nor should any be expected. Any follow-on sessions that he would agree to have with NASA would only serve as a way for NASA to obtain explanations on what the CAIB had found and recommended and to get advice on how the recommendations could be implemented. Pastorek said NASA now needed to go one step further. It needed to say we embrace this report. There was a standoff, and Pastorek

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said later, Well, I got nowhere with that. And when Readdy spoke to the press the next time, he, too, said, We embrace this report. Slowly, as the weeks passed, the phrase cropped up in more and more NASA public utterances. We accept the findings, we will comply with the recommendations, we embrace this report. We had to make sure we come clean about our mistakes, and that our people were prepared for the hearings. But when you make them, especially on the scale of the Columbia accident, you have to admit it, as a first step in the process of correcting them, Pastorek said. That long internal struggle, and public response, ended a phase of the Columbia accident that had opened on Feb. Now the hard work would start of fixing the shuttles and making them safe again.

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Chapter 2 : Exclusive: Book details NASA's ordeal

Readers will gain the most comprehensive view available on what President Bush's new space vision will do for human exploration of the Solar System-and how nearly everything NASA does will change as a result.

Cowing detail how the National Aeronautics and Space Administration attempted to recover from the shuttle Columbia tragedy and prepare to fulfill President George W. Word of an announcement that America would be going back to the moon surfaced in early December. These rumors soon contained a specific announcement venue in mind: Few could argue that it was a natural place to make a major policy announcement about space. Indeed, in a fall hearing, Rep. Dana Rohrabacher , R-Calif. While some thought was given to possibly announcing it at Kitty Hawk, this would only happen if it was ready to be announced. It soon became clear that the policy would not be completed, and the interest in aiming for Kitty Hawk evaporated. Moreover, the administration simply did not see the need to rush its own deliberative processes to meet external venues regardless of the historic resonances they might offer. Eventually, the speculation was so rampant that the White House saw the need to dampen the speculation. Some vocal enthusiasts would apparently only be satisfied if they saw Bush walk out on the dais at Kitty Hawk and make an announcement. In other words, "yes there is a policy. No it is not ready yet. When it is we will let you know. It became clear that although the policy was now in the final editing phase that it would not be ready for announcement on the 17th at Kitty Hawk. No firm date for its release was yet known and it could be any time in the next few weeks leading up to Christmas, or the weeks after the New Year break. There was some urgency to get the policy announced as soon as it was ready so as to reduce the chance that it would leak. People were listening for hints as Cheney spoke: At our best, Americans are a confident and a resolute people. When we set our minds to great objectives, we see the work through. The Air and Space Museum, both here and on the Mall in Washington shows what can be accomplished with confidence, perseverance and unity of purpose. As the descendants of pioneers and immigrants, Americans are explorers by nature. And our native ingenuity and sense of adventure have been put to good purposes. Our air and space programs have been critical to the widespread prosperity of a continental nation. Space was mentioned, but in a context far broader than space exploration: One small piece of their Flyer traveled far beyond this field. It was carried by another flying machine, on Apollo 11, all the way to the Sea of Tranquillity on the moon. These past hundred years have brought supersonic flights, frequent space travel, the exploration of Mars, and the Voyager 1 spacecraft, which right now is moving at 39, miles per hour toward the outer edge of our solar system. By our skill and daring, America has excelled in every area of aviation and space travel. And our national commitment remains firm: By our skill and daring, we will continue to lead the world in flight. Speaking from orbit in a live interview with CNN, Expedition 8 astronaut Mike Foale was asked about possible new space policy initiatives and whether the space station might be passed by for a direct push to send humans to Mars. Foale replied that he and crewmate Sasha Kalari had spent "a lot of time looking down at Earth" and that "mountain-climbing analogies came to mind. Nonetheless, he would be surprised by what transpired during the next hour. The plan set before him that day had been built piece by piece in the methodical march towards consensus. It had started with the young space staffers thinking about space policy after the disaster in the skies above Texas. That moment had set in motion a chance alignment that so many in the space community had dreamed of for decades. The meeting had grown so large, and so many had been involved at the end, that it required a larger room than normal. Rove had not been a big supporter of the idea and maintained a cautious attitude, although he did not criticize it. The plan called for granting NASA an immediate -- though relatively modest -- budget increase, as well as an additional boost spread over several years. As Bush looked at the numbers, the others wondered if he would agree to them, given that only two other agencies -- the departments of Defense and Homeland Security -- were marked for increases in fiscal year Would the president agree and put his political capital behind the plan? As the discussions moved toward a final choice -- the moon and then perhaps onward to Mars and beyond, too --

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Bush turned to Cheney. Bush said he saw the policy as being more than picking a destination in space and then going there. Rather, it was about going out into the solar system to accomplish a broader set of objectives. It should put to rest once and for all the decades-old and what one attendee called the "somewhat tired argument" that space exploration was best performed by robots, not people. The new policy should embrace a mix of human and robotic missions -- all focused toward a common goal: Explore the vast reaches of the solar system; make that the centerpiece of American civil space policy. There was a minute or two of silence. Then the vice president spoke up: One other item emerged: That instinct, frankly, has blown me away. It is a pleasure to serve in such an administration for such a man. These are the moments when this is all worth while. The more the president had thought about the policy, the more he wanted to "make a big deal about it," said one source who had attended the meeting. That decision was a surprise, since all assumed Bush would make a quiet rollout next Monday morning, Dec. Instead, he asked Hadley to find the next suitable date at which he could make a major space announcement. Contrary to speculation by the media and people professing to have inside knowledge of what was going on, as soon as the final go-ahead was given to the policy, the next open date was selected. This date was not chosen because it was after a Mars rover landing date. Nor was there actually any delay in coming to a decision -- this despite speculation that missing one anniversary or another was indicative of indecision. Now, as the year came to a close, the president was preparing to announce the new vision for space to the nation. It had been 10 months and three weeks since Columbia had been destroyed. The civil space agency had moved from tragedy to renewal in the span of a single year.

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Chapter 3 : 11 September Bad news from Earth | SpaceRef - Your Space Reference

Get this from a library! New moon rising: the making of America's new space vision and the remaking of NASA. [Frank Sietzen; Keith L Cowing] -- DVD includes footage of President George W. Bush's "Space Vision" speech at NASA headquarters in Jan. ; NASA Administrator Sean O'Keefe's press conference following the announcement;.

Cowing detail how the National Aeronautics and Space Administration attempted to recover from the shuttle Columbia tragedy and prepare to fulfill President George W. Part 2 deals with how the space plan developed at the grassroots level within the administration in Bush took office, there were some largely overlooked staffers in the White House that formed the corporate memory for space policy, and whose work served as the foundation for much of what was to come. Two staffers played important if not crucial roles in this space policy activity. Klinger and Alexander were little known outside the Washington space community, but their influence on shaping policy was substantial. And Klinger in particular would come to play an even larger role in helping to advance the space policy-making process as the fall of drew to a close. Soon after the Columbia accident on Feb. These meetings were at the lowest possible level -- the staff level. People were basically getting together, on their own initiative, to kick around ideas. The Columbia accident had happened, of course, and the future of space exploration appeared uncertain. They wanted to see if some clarity of purpose for space could be defined, and if they themselves could come to an agreement about it. The largely young staffers came from a wide variety of EOP agencies. Who were these White House employees? None of the participants interviewed for this book wanted to be identified. But what they all had in common was their love of space. Some had impressive technical educations; these were engineers who could talk the technical side of space flight as well as any geeks. Anything to be "doing" space stuff. They lived and breathed the stuff. When they went on trips, it was to space museums or launches. When they got together for lunch or on their own time, it was to talk space, or attend lectures about space. And, unlike many in Washington, they actually knew what they were talking about. Together, they now sat down in the aftermath of the shuttle disaster to think; what was America going to do now? Was there something, they thought, that the administration could do, something that could possibly be elevated to the presidential level that could be the basis of a presidential announcement, or an acknowledgment by the president about the importance of space? As they continued their talks -- unstructured and without any formal agenda -- their meetings took on a name. They began to be called the "Splinter Group. But the staffers had no real process going, not hoping or expecting to create any new policy. And they all agreed on one other thing: They had to keep things quiet, under the radar, so as not to arouse NASA in any way. As such they kept it to just a discussion. Each time they got together, everyone in the room felt strongly that something needed to be done about the space program. Nobody wanted to entertain the thought of ending the human exploration of space because of Columbia. These "roundtables" went on through April Some brought or referred to white papers on various space topics written years before. Then there was a subtle shift in the Splinter meetings. They became just a bit more formal. In addition to the original members, invitations were extended to other EOP officials and staff. These included staff of Vice President Dick Cheney , some from other elements of the Domestic Policy Council and other cabinet representatives. The attendees started to look across the material that had been generated since the winter and ask hard questions. Where should human spaceflight go? Should America be doing it at all? Should the country be going all out? Many flat-out said the country should finally get going out beyond low-Earth orbit, as it had during Apollo. Together, the ideas were drafted on paper into a "strawman" draft policy document. They were asking each other the same questions that their predecessors had raised decades ago: They all assumed that the space shuttle would be, and could be, fixed and would fly again. But there was also a consensus that was forming up that looked at the shuttle as holding the space program back, in a sense. And if so, what should that something else be? Summer was now upon Washington, and the Splinter attendees were picking up indications that NASA was interested in an expanded mission. But what they wanted appeared, as

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far as some in the White House heard, to be everything imaginable. He needed to pay for the Columbia investigation, keeping the shuttles flying at least until the space station was completed, and maybe longer. New cargo vehicle studies. Advanced rocket engine and launch vehicle technology. All he seemed to want was a pot of new money for NASA and some new mission. With the space agency growing more active in the search for a new vision and mission for itself, the Splinterees decided it was time to let NASA into their deliberations, if they were ever to amount to anything. Not every meeting was attended by all three. Other senior staff from the same suite of White House agencies joined the discussion. The options on the table ranged from everything NASA was currently doing, as well as more. Oh, you want to do that? Immediately, it was clear that cost would rapidly constrain some ideas. So they asked that question, too: Are we going to be constrained by cost in what we do? How can we work this? Give us more money, a lot more money, and we can go really far out there. The ideas quickly got ranked by complexity and cost. And it was now time to take these studies, ideas, and projections and see if the White House of George W. Bush could fold them -- or parts of the Rump scenarios -- into a policy construct. The policy construction process would follow a traditional form. NSC, as usual, chaired this policy effort. The level of interest by these officials quickly became apparent, for not all of the deputies attended these meetings, or even sent representatives. To the surprise of many, Armitage not only came out for NASA, he came out loudly and never missed any of the meetings. It just made sense to the president to look at it that way, he said. It had set a clear limit for budget growth that domestic agencies could follow. But NASA had two sets of numbers it was following. It was made up, once again, of just staff, but this time they had specific instructions. First, the Rump team developed detailed "vision" options. Then they were required to run the budget numbers out through completion of the particular vision. Keep all of this "budget neutral" -- that is, no new money. How could NASA get a new space vision with no money to pay for it? Everything was on the table: NASA wanted it all, and a new exploration project of undetermined origin, too. He wanted something on that scale, however. But he was, according to some on the Rump II staff, in a fighting mood. In their words, they were all budget neutral -- except the budget proposed by NASA. The deputies took this data, and came back with a compromise approach. The 5 percent decrease was called a disaster. They were unreasonable about this budget issue, some thought. So he began to lobby, hard. Halloween was fast approaching. He called in other agencies. Some thought he called Bush. It looked bleak for NASA. He called in every chit he was owed. The bean-counting administrator whom many had dismissed as being uninterested in space was now fighting -- and fighting hard -- for space exploration after all. He went to OMB, and the agency ran scenario after scenario. NASA was fighting for its very existence, he said. And, finally, he won. When some staffers heard that he had wrangled new money out of OMB, many were astonished. The previous orders from Bush had been clear: No domestic agency would be getting any budget increase starting in

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Chapter 4 : Exclusive: Book details Bush moon decision - www.nxgvision.com

New Moon Rising The Making Of America S New Space Vision And The Remaking Of Nasa Apogee Books Space Series 4 Free Pdf Books Download posted by Jessica Armstrong on November 07 This is a book of New Moon Rising The Making Of America S New Space Vision And The Remaking Of Nasa Apogee.

However, the revelation in early January that President Bush would announce a new exploration initiative on January 14 that involved sending humans back to the Moon and from there on to Mars captured the interest of the media, if only for a day or two. While the story was technically broken by a Reuters reporter with a brief story on the early evening of January 8th, the reporters with the inside story on the new policy turned out not to be with the Washington Post or New York Times, or even with Aviation Week or Space News. Instead, it was a pair of journalists recognized only in the small space community—Frank Sietzen and Keith Cowing—who had gained access months earlier to at least some of the major participants in the policy and thus had inside knowledge of the formation of the policy and its contents. This generated a modest bit of controversy, enough to warrant a rare article about the space media in the pages of the Columbia Journalism Review. They parlayed that knowledge into a series of articles for the UPI wire service and now a book, *New Moon Rising*, that offers more details about the policy and puts it into a broader context. In the months leading up to the publication of *New Moon Rising*, the book had been billed as a behind-the-scenes account of the formation of what has come to be known as the Vision for Space Exploration. The book is that, but it is also a wider review of the recent history of NASA and space policy. The result of these deliberations, spread out over most of , was a plan the President approved on December 19 and announced to the world at NASA Headquarters on January . The two chapters, oddly, are not adjacent to each other but are separated by a chapter that describes in detail a number of failed efforts, from the X to the Orbital Space Plane, to develop a successor to the shuttle. In any case, the chapters are informative enough to provide new insights into how the policy was drafted, but it will leave many readers hungry for more details about those efforts. Those chapters, as well as other insider information sprinkled throughout the book, are based on interviews with high-ranking but unnamed sources with NASA and the Administration. The passages in the book suggest that if the source s interviewed in the book are not any of these three, they worked closely enough with some or all of them to be intimately familiar with many of the private events described in the book. While much of the book relies on these interviews, much of the other material in the book, including events both prior to and after the release of new exploration vision, is taken from press conferences, other public events, and reports by the Columbia Accident Investigation Board and the Aldridge Commission. The biggest flaw of *New Moon Rising* is arguably not its content but how it is presented. The book is littered with errors that a trained copy editor would have caught immediately: Even the formatting seems odd: The book also lacks an index or bibliography. That note also promises to provide appendices and additional unpublished information related to the book on a web page , although at the time of the publication of this review no new material had been placed there. To be fair, at the time of this review the book itself was only starting to become available in bookstores. While the authors and the publisher should be commended for their speed in getting the latest information possible into print, their haste appears to have caused a number of errors that could have been avoided. Along with the typographical errors are a few factual errors. In another case, Congressman Bart Gordon is misidentified as a Republican. Most of these errors are minor, but a few are more significant. Towards the end of the book, the authors describe the voting history of senator and Democratic presidential candidate John Kerry, noting a number of votes he cast in favor of measures that would kill the ISS. That voting record ends in , but omits two additional votes, in and , where Kerry changed course and supported the station. Combined, these typographical and factual errors suggest that the book did not go through nearly as rigorous an editing process as desired. That can be explained in part, no doubt, by the rushed publication schedule: If the book is successful enough to warrant a second printing, hopefully these errors can be

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corrected. While *New Moon Rising* is not a perfect book, it does provide the best insight yet into the formation of the new space exploration vision and why that vision was important to a space agency that was casting about for a new direction. One can question who were the sources whose information became the foundation for this book, as well as their motivations, but unless and until the principals of this policy effort decide to write their own books or otherwise speak openly of their efforts, this book is likely to be the best, if not only, insight for years to come into the formation of a policy that may remake—or break—NASA. Jeff Foust [jeff thespacereview](#). He also operates the [Spacetoday](#).

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Chapter 5 : Exclusive: Book details Bush moon decision

America S New Space Vision And The Remaking Of Nasa Apogee Books Space Series 4 on www.nxgvision.com, this is just PDF generator result for the preview. New Moon Rising (song) - Wikipedia "New Moon Rising" is a song by Australian hard rock band Wolfmother.

Cowing detail how the National Aeronautics and Space Administration attempted to recover from the shuttle Columbia tragedy and prepare to fulfill President George W. As fall changed into winter, the process of settling on the final policy and associated directives was well underway. Word of an announcement that America would be going back to the moon surfaced in early December. These rumors soon contained a specific announcement venue in mind: Few could argue that it was a natural place to make a major policy announcement about space. Indeed, in a fall hearing, Rep. While some thought was given to possibly announcing it at Kitty Hawk, this would only happen if it was ready to be announced. It soon became clear that the policy would not be completed, and the interest in aiming for Kitty Hawk evaporated. Moreover, the administration simply did not see the need to rush its own deliberative processes to meet external venues regardless of the historic resonances they might offer. Eventually, the speculation was so rampant that the White House saw the need to dampen the speculation. Some vocal enthusiasts would apparently only be satisfied if they saw Bush walk out on the dais at Kitty Hawk and make an announcement. In other words, yes there is a policy. No it is not ready yet. When it is we will let you know. Anyone who watched this White House should have recognized the response. It became clear that although the policy was now in the final editing phase that it would not be ready for announcement on the 17th at Kitty Hawk. No firm date for its release was yet known and it could be any time in the next few weeks leading up to Christmas, or the weeks after the New Year break. There was some urgency to get the policy announced as soon as it was ready so as to reduce the chance that it would leak. People were listening for hints as Cheney spoke: It is not by chance that so much of this history played out in the United States of America. At our best, Americans are a confident and a resolute people. When we set our minds to great objectives, we see the work through. The Air and Space Museum, both here and on the Mall in Washington shows what can be accomplished with confidence, perseverance and unity of purpose. As the descendants of pioneers and immigrants, Americans are explorers by nature. And our native ingenuity and sense of adventure have been put to good purposes. Our air and space programs have been critical to the widespread prosperity of a continental nation. Space was mentioned, but in a context far broader than space exploration: A great American journey that began at Kitty Hawk continues in ways unimaginable to the Wright brothers. One small piece of their Flyer traveled far beyond this field. It was carried by another flying machine, on Apollo 11, all the way to the Sea of Tranquillity on the moon. These past hundred years have brought supersonic flights, frequent space travel, the exploration of Mars, and the Voyager 1 spacecraft, which right now is moving at 39, miles per hour toward the outer edge of our solar system. By our skill and daring, America has excelled in every area of aviation and space travel. And our national commitment remains firm: By our skill and daring, we will continue to lead the world in flight. While Bush had nothing overtly new to say, two people already in space did let drift a few tempting tidbits. Speaking from orbit in a live interview with CNN, Expedition 8 astronaut Mike Foale was asked about possible new space policy initiatives and whether the space station might be passed by for a direct push to send humans to Mars. Foale replied that he and crewmate Sasha Kaleri had spent a lot of time looking down at Earth and that mountain-climbing analogies came to mind. Foale noted that when attempts were made to climb peaks such as Everest and K2, a base camp was established along the way. He continued, I see the ISS as a base camp to get to the moon and the moon as a base camp on the way to Mars. When he arrived at the White House to meet with the president on the afternoon of Dec. Nonetheless, he would be surprised by what transpired during the next hour. The plan set before him that day had been built piece by piece in the methodical march towards consensus. It had started with the young space staffers thinking about space policy after the disaster in the

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skies above Texas. That moment had set in motion a chance alignment that so many in the space community had dreamed of for decades. The meeting had grown so large, and so many had been involved at the end, that it required a larger room than normal. Rove had not been a big supporter of the idea and maintained a cautious attitude, although he did not criticize it. The plan called for granting NASA an immediate -- though relatively modest -- budget increase, as well as an additional boost spread over several years. As Bush looked at the numbers, the others wondered if he would agree to them, given that only two other agencies -- the departments of Defense and Homeland Security -- were marked for increases in fiscal year. Would the president agree and put his political capital behind the plan? As the discussions moved toward a final choice -- the moon and then perhaps onward to Mars and beyond, too -- Bush turned to Cheney. Bush said he saw the policy as being more than picking a destination in space and then going there. Rather, it was about going out into the solar system to accomplish a broader set of objectives. It should put to rest once and for all the decades-old and what one attendee called the somewhat tired argument that space exploration was best performed by robots, not people. The new policy should embrace a mix of human and robotic missions -- all focused toward a common goal: Explore the vast reaches of the solar system; make that the centerpiece of American civil space policy. There was a minute or two of silence. Then the vice president spoke up: One other item emerged: The president was willing to put his prestige, standing, capital and reputation on this task, even if it means there are critics, and that we are singled out as the one domestic agency with an increase in these challenging budget times. That instinct, frankly, has blown me away. It is a pleasure to serve in such an administration for such a man. These are the moments when this is all worth while. Now that there was agreement on all the major points, Bush ended the discussion. The more the president had thought about the policy, the more he wanted to make a big deal about it, said one source who had attended the meeting. That decision was a surprise, since all assumed Bush would make a quiet rollout next Monday morning, Dec. Instead, he asked Hadley to find the next suitable date at which he could make a major space announcement. Contrary to speculation by the media and people professing to have inside knowledge of what was going on, as soon as the final go-ahead was given to the policy, the next open date was selected. This date was not chosen because it was after a Mars rover landing date. Nor was there actually any delay in coming to a decision -- this despite speculation that missing one anniversary or another was indicative of indecision. Now, as the year came to a close, the president was preparing to announce the new vision for space to the nation. It had been 10 months and three weeks since Columbia had been destroyed. The civil space agency had moved from tragedy to renewal in the span of a single year. Copyright by United Press International. Sections of the information displayed on this page dispatches, photographs, logos are protected by intellectual property rights owned by United Press International. As a consequence, you may not copy, reproduce, modify, transmit, publish, display or in any way commercially exploit any of the content of this section without the prior written consent of by United Press International.

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Chapter 6 : Toward a New Vision of Manned Spaceflight - MIT Technology Review

The new space vision is long term, of course, but the near term goals of Project Constellation are to develop the Crew Exploration Vehicle to replace the Space Shuttle (long overdue), conduct further robotic exploration of the solar system, use the space station as a test bed for human long term space flight, and sometime in the next decade.

After all, to reach the moon in , the U. If we had sustained this rate of progress, true believers argue, we might have reached Mars by now. But a cheap, reliable means of lifting payloads into low earth orbit, to 1, kilometers from the planet, remains the sine qua non for opening space. To achieve its three minutes at an altitude of kilometers, SpaceShipOne traveled at three times the speed of sound. Louis nonprofit that sponsored the Ansari X Prize “ proposed an annual multimillion-dollar event that, commencing in , could become a jaunty mix of Grand Prix car racing and a kind of Olympics for rocket engineers. Even without this private-sector activity, saw revived interest in manned spaceflight. Bush-haters dismissed the initiative as a cynical ploy. The Bush initiative has now defined the goals for one such program. Furthermore, this is the first time any U. The shuttle will be retired. By , the U. Using the CEV, American astronauts will return to the moon between and Though no exact timetable has been set, Mars is next. The last man to walk on the moon, Eugene Cernan of Apollo 17, is now When Sir Arthur C. Yet the fact that NASA rejected technologies that might have furthered manned exploration is evidence that America undertook the space race for reasons other than bragging rights. In this context, the U. NASA was formed for purposes of American national survival “ not prestige. By , both sides had rocketed men into orbit. The next beachhead was the moon. German ideas profoundly influenced American conceptions of manned spaceflight. The space race guaranteed that von Braun “ first as director of the U. But because national security drove the U. By landing a couple of astronauts in a lunar excursion module, Apollo offered the fastest route to the strategic high ground. Yet in the long term, it offered nothing that made space more accessible. And there were other beckoning paths that NASA, shaped by the shifting exigencies of the Cold War, chose not to follow. Stanislaw Ulam, the coinventor of the hydrogen bomb, had conceived the idea the day after the first U. Project Orion was led by Ted Taylor, designer of the U. To understand how Orion might have worked, imagine an enormous external-combustion engine. Matter packed around the bomb would become exploding plasma. The shock would have propelled Orion through space. Asked today how he could have proposed using several hundred nuclear detonations to launch the Orion spacecraft into orbit kilometers above the earth, Dyson is sanguine: Dyson, for one, expected to be junketing around the solar system with a crew of 40 by Fuel Deficiency The central claim of Orion still stands today: The only way to make a rocket reach even low earth orbit “ which takes a velocity of eight kilometers per second “ is to use booster stages. By this method, however, lifting one ton of payload into orbit requires about 16 tons of chemical rocket. To make a round trip to the moon, as Apollo did, meant five stages and almost 1, tons of chemical rocket for every ton of crewed module. During the s, NASA declined to pursue either of two strategies that would have made manned spaceflight feasible in the long term. The second was the development of an alternative to chemical rockets. Cowing, is a book so rushed it seems unedited. Still, it sheds some light, and true believers have reason to be guardedly optimistic. Constellation will develop several models of the new Crew Exploration Vehicle: CEVs may be assembled in Earth orbit. Meanwhile, Project Prometheus will develop a nuclear-powered electric propulsion system that could carry a spacecraft to destinations like Mars. At first glance, it seems that the technologies that NASA once rejected are being reconsidered. But Freeman Dyson points out that the most important criterion for a nuclear electric propulsion system like that of Prometheus is the weight-to-power ratio, measured in kilograms per kilowatt. To substantially improve on existing chemical rocket systems, Dyson says, the system needs a ratio no greater than five kilograms per kilowatt. Unfortunately, in the current NASA proposal, the Prometheus system would have a ratio of kilograms per kilowatt. If we are serious about developing a nuclear system, we need a totally new kind of reactor, operating at much higher temperature than existing types. There

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are other problems. Exposure to cancer-causing cosmic radiation during a three- to five-year round trip to Mars would be equivalent to receiving 25, chest x-rays. But for prolonged spaceflight, humans would probably require more radical biological enhancements. Future astronauts might differ significantly from their terrestrial kin. This is a long way from the vision of space travel for the masses that was promoted by Gene Kranz and Freeman Dyson. And as with the development of a new reactor, it might take a long time to create these demi-human space-farers. Concerning the future of human beings in space, a Kafka quote might apply: But not for us. Will you lead or follow? Join us at EmTech Digital

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Chapter 7 : The Space Review: Review: New Moon Rising

Find helpful customer reviews and review ratings for New Moon Rising: The Making of America's New Space Vision and the Remaking of NASA: Apogee Books Space Series 42 at www.nxgvision.com Read honest and unbiased product reviews from our users.

However, the revelation in early January that President Bush would announce a new exploration initiative on January 14 that involved sending humans back to the Moon and from there on to Mars captured the interest of the media, if only for a day or two. While the story was technically broken by a Reuters reporter with a brief story on the early evening of January 8th, the reporters with the inside story on the new policy turned out not to be with the Washington Post or New York Times, or even with Aviation Week or Space News. Instead, it was a pair of journalists recognized only in the small space community—Frank Sietzen and Keith Cowing—who had gained access months earlier to at least some of the major participants in the policy and thus had inside knowledge of the formation of the policy and its contents. This generated a modest bit of controversy, enough to warrant a rare article about the space media in the pages of the Columbia Journalism Review. They parlayed that knowledge into a series of articles for the UPI wire service and now a book, *New Moon Rising*, that offers more details about the policy and puts it into a broader context. In the months leading up to the publication of *New Moon Rising*, the book had been billed as a behind-the-scenes account of the formation of what has come to be known as the Vision for Space Exploration. The book is that, but it is also a wider review of the recent history of NASA and space policy. The result of these deliberations, spread out over most of , was a plan the President approved on December 19 and announced to the world at NASA Headquarters on January . The two chapters, oddly, are not adjacent to each other but are separated by a chapter that describes in detail a number of failed efforts, from the X to the Orbital Space Plane, to develop a successor to the shuttle. In any case, the chapters are informative enough to provide new insights into how the policy was drafted, but it will leave many readers hungry for more details about those efforts. Those chapters, as well as other insider information sprinkled throughout the book, are based on interviews with high-ranking but unnamed sources with NASA and the Administration. The passages in the book suggest that if the source s interviewed in the book are not any of these three, they worked closely enough with some or all of them to be intimately familiar with many of the private events described in the book. While much of the book relies on these interviews, much of the other material in the book, including events both prior to and after the release of new exploration vision, is taken from press conferences, other public events, and reports by the Columbia Accident Investigation Board and the Aldridge Commission. The biggest flaw of *New Moon Rising* is arguably not its content but how it is presented. The book is littered with errors that a trained copy editor would have caught immediately: Even the formatting seems odd: The book also lacks an index or bibliography. That note also promises to provide appendices and additional unpublished information related to the book on a web page, although at the time of the publication of this review no new material had been placed there. Along with the typographical errors are a few factual errors. In another case, Congressman Bart Gordon is misidentified as a Republican. Most of these errors are minor, but a few are more significant. Towards the end of the book, the authors describe the voting history of senator and Democratic presidential candidate John Kerry, noting a number of votes he cast in favor of measures that would kill the ISS. That voting record ends in , but omits two additional votes, in and , where Kerry changed course and supported the station. Combined, these typographical and factual errors suggest that the book did not go through nearly as rigorous an editing process as desired. That can be explained in part, no doubt, by the rushed publication schedule: While the authors and the publisher should be commended for their speed in getting the latest information possible into print, their haste appears to have caused a number of errors that could have been avoided. If the book is successful enough to warrant a second printing, hopefully these errors can be corrected. While *New Moon Rising* is not a perfect book, it does provide the best insight yet into the formation of the new space

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exploration vision and why that vision was important to a space agency that was casting about for a new direction. One can question who were the sources whose information became the foundation for this book, as well as their motivations, but unless and until the principals of this policy effort decide to write their own books or otherwise speak openly of their efforts, this book is likely to be the best, if not only, insight for years to come into the formation of a policy that may remake—or break—NASA. It helps NSS and does not cost you a cent! Bookmark this link for ALL your Amazon shopping!

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Chapter 8 : The Vision for Space Exploration: A Brief History (Part 1) | The Spudis Lunar Resources Blog

Review: New Moon Rising by Jeff Foust Monday, August 2, New Moon Rising: The Making Of America's New Space Vision And The Remaking Of NASA.

Cowing That last day of Innocence On 6 September , on one of those stunningly crisp, cool days Washingtonians crave, a hearing was held at the Russell Senate Office building on shuttle safety. At the time NASA felt that it was on a secure path to upgrading the shuttle fleet such that, in the words of Bill Readdy, then Deputy Associate Administrator for the Office of Space Flight, who testified at the hearing "it will enable the Space Shuttle to fly safely well into the second decade of the 21st century. But no one was waving their arms about suggesting that any imminent threat existed. Upon leaving the hearing Readdy, noticing the stunningly blue cool sky, decided to walk back to his office. That walk ended up becoming an hour long chat with a reporter on the status of the space program. At that time Readdy saw that the ISS, while somewhat strained to meet the interest of a wide variety of users, could easily be tweaked such that it served as a test bed for the flight qualification of humans for long duration voyages. The tweaks would involve picking the research. No significant costs were envisioned. On that day Readdy was optimistic about where things could go, but like everyone else in the agency, was tired of what NASA had been put through over the past decade. Cost overruns on the ISS certainly did not help matters. As he excused himself and headed back to his office for a meeting, little did Readdy, or anyone else, know what would happen 5 days later on a cool, sunny September day. Some miles above the Earth, the International Space Station sped along as September 11th arrived. Otherwise, all things had been moving along at a normal pace. In Washington, and all along the east coast, it was another one of those classic clear September days Readdy had stopped to admire the previous week. While many were still on the commute into work, the attacks began. Soon people were watching news footage of the Twin towers on fire in New York. Then came word of an explosion at the Pentagon and rumors which later proved to be false of another one at the State Department. Anyone looking to the west from Washington could clearly see a plume of dark smoke rising from across the Potomac. Meanwhile, rumors of another plane flying up the Potomac toward Washington made the rounds. Other rumors spread of an odd plane seen circling above the Mall. People quickly left their desks and, in the hours ahead, managed to find their way home. Soon the entire agency would either be shut down or shut off from the rest of the world. Shuttles were secured, and gates were locked. As soon as he was told of the attacks, Culbertson checked to see when they would be passing over the east coast of the U. Discovering that this was only some minutes away, Culbertson grabbed a camera. Both the close-up and distant views from space were haunting. Culbertson would later radio back to Earth, "Our prayers and thoughts go out to all the people there, and everywhere else. Here I am looking up and down the East Coast to see if I can see anything else, and to the people in Washington. Culbertson would later reflect back and note how isolated he felt to be the only American off the planet.

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Chapter 9 : Paco: The Cat Who Meowed in Space - Homer Hickam

Surprisingly, however, according to New Moon Rising: The Making of America's New Space Vision and the Remaking of NASA, by Frank Sietzen Jr. and Keith L. Cowing, the genesis of the new space.

Near the end of my recent two hour co-appearance with Dr. Bush in January The VSE was devised to give our national civil space program a long-range direction “making human missions to the Moon, Mars and beyond the new strategic horizon for NASA, our national space agency. Then, in the spring of 1989, it was terminated by the current administration. Where did the VSE come from, what exactly happened to it and why did it go away? Answering these questions requires some background in order to give the context of the decisions about the VSE, and to explain how it came to be implemented by NASA. After the Apollo program ended, the spaceflight community wanted ambitious, long-term goals for NASA, including human voyages into deep space, assuring strong U.S. The agency itself has long subscribed to the paradigm first outlined by Wernher von Braun in the late 1950s. This sequence made logical sense in that each step enabled the next step and as technology improved and matured, humanity would become a space faring species. Once we had won the Moon race, there was no political need to continue the Apollo lunar missions and spaceflight once again was relegated to the background of modern American life. Throughout the eighties and nineties, many different proposals and initiatives attempted to define a new strategic goal for NASA, most often by attempting to resurrect the use of either the Moon or Mars part of the von Braun architecture as its centerpiece. SEI addressed the space goals sought by both Moon and Mars advocates. Considering the scale and scope of what was being proposed, this number was not unreasonable. Then in early 1986, the Space Shuttle Columbia and all seven members of the crew were tragically lost when the vehicle broke apart during re-entry. Once again, the agency looked to the White House for strategic guidance. The Columbia accident initiated a top-level nearly year-long review of the goals and strategies of the U.S. Much of this work is chronicled in New Moon Rising: Although that story is well told there, I will add a few new details not covered in their book. I first became aware of this activity in mid 1986 I had been making the rounds in various venues, preaching the gospel of lunar return to anyone willing to listen. Another key player was Dr. A friend of George Bush the elder, Klaus had a private meeting with President Bush in the spring of 1986, where he urged him to focus on building a lunar base. Klaus and several others including most notably Presidential Science Advisor John Marburger and his staff understood the importance and value of learning how to use the resources of the Moon to create a permanent, sustainable space faring infrastructure. This idea was central, not peripheral, to the emergence of lunar return as a major theme of the new direction being formulated by the White House-NASA study group. The intent of the VSE was to put forth a strategic direction for the next few decades leading to long-term space utility, so an ambitious, capability-creating paradigm was sought and why President Bush specifically mentioned the use of lunar resources in his space policy speech. However, the mission of the VSE became muddled and Mars advocacy was the reason. Although President Bush clearly understood the purpose and value of learning how to create new capability by going to the Moon, he wanted to demonstrate its wider relevance by including Mars as a goal in not the goal of the new VSE. Of the roughly 1000 words that make up the VSE speech President Bush delivered on January 14, 1986, the Moon is mentioned eleven 11 times. Moreover, the specific activities to be undertaken on the Moon are set forth and described, including learning how to live and work there for increasing periods of time and using its material and energy resources. Mars is mentioned four 4 times and no specific activities to be undertaken there are described. Almost immediately, the intent of the VSE to go to the Moon and learn to use what it had to offer was forgotten or ignored, at least by many below the Associate Administrator level and a few at and above that level. In consequence, the new initiative found itself off course rather quickly. I will describe those events in my next post.