



Science with SALT II: Oct 2003



A large, complex industrial structure, likely a particle accelerator or synchrotron, featuring a central hexagonal mirror segment and a network of blue pipes. The structure is composed of numerous interconnected blue pipes and metal supports, forming a dense, geometric framework. The central mirror segment is a large, hexagonal, reflective surface, possibly made of silicon or another high-reflectivity material, which is being installed or maintained. The overall scene is brightly lit, with light reflecting off the metallic surfaces and the mirror segments. The text "Final batch of mirror segments installed by May 2005" is overlaid in red on the right side of the image.

**Final batch of mirror segments
installed by May 2005**





Telescope control room (Petri SA, Sandisa SO)

SALT Astronomy Operations Team (~2006)





When was SALT completed?

Declaration of SALT “First Light”: 1 Sep 2005

- With all segments installed (May 05)
- With SALTICAM and filter set (Jul 05)

**But, no active optics (edge sensors)
and no closed-loop guidance/focus**



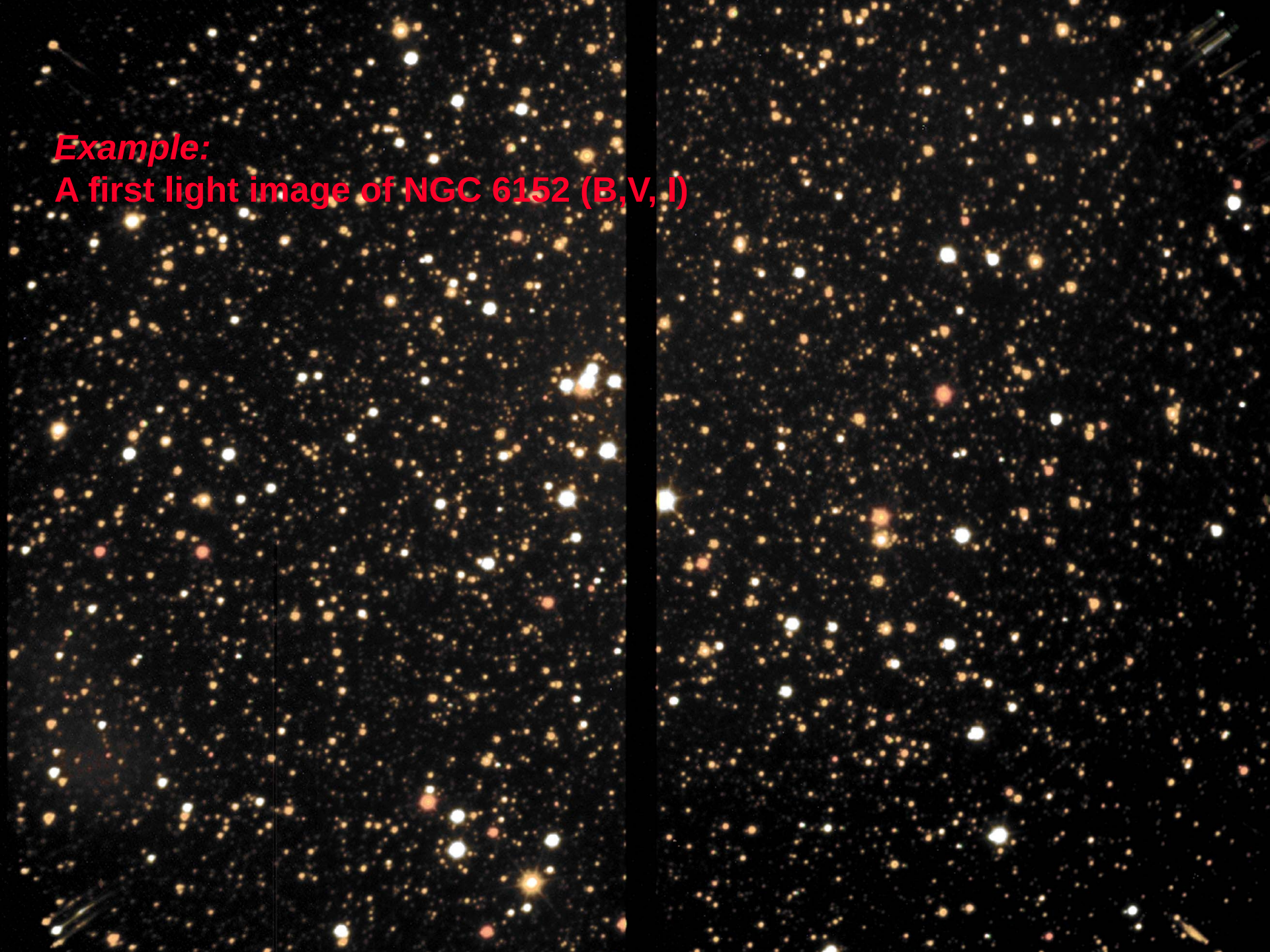
**47 Tuc:
Combined U,V,I (120 sec total)**



Lagoon Nebula: 180 sec total (U, V, I)

Example:

A first light image of NGC 6152 (B,V,I)



The SALT Construction Phase was completed in Nov 2005, when SALT was inaugurated.





SALT Inauguration: 10 Nov 2005
Opened by the South African
President (at the time),
Thabo Mbeki



~2000 people attended the inauguration, reflecting the high profile of the project



Has enjoyed media attention....



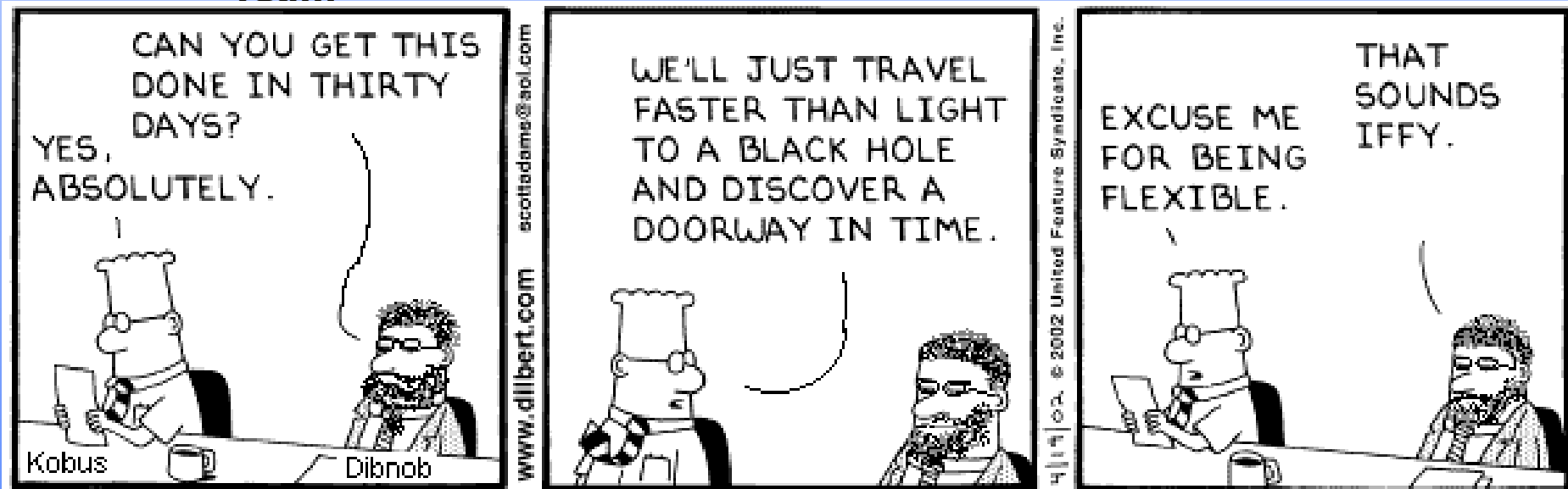
President Mbeki inaugurates the huge Southern African Large Telescope (SALT) in the Karoo

27 November 2005



Reality of Commissioning / Completion

- **Underestimate of time to complete complex/first-time systems**
 - **Including the Prime Focus Payload**
 - **Science instruments (both took ~1 year longer than CDR estimates)**
 - **Not enough time for integration and thorough/complete testing**
 - **A significant number of subsystems not completed (e.g. mirror cleaning, SAMS)**
 - » **Handed over the Operations Team which became a “Completion Team”**





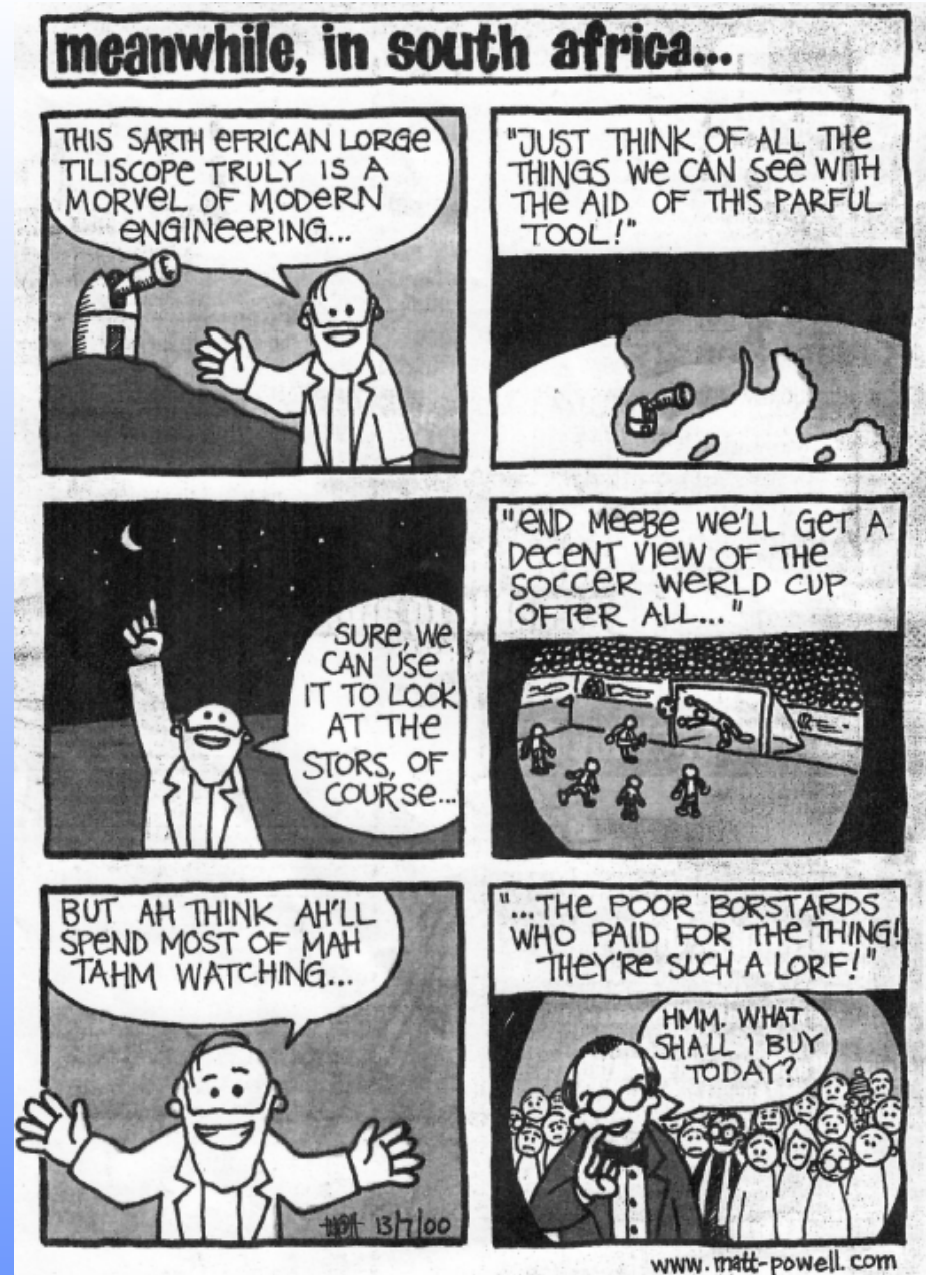
Sometimes it was just too much!





Challenges

- **Adequate funding**
 - **Operations and development**
- **Partner commitments**
 - **Already 2 partners have withdrawn**
- **Competitiveness and relevance in decades to come**
 - **Focusing on SALT's strengths**



From University of Canterbury student newspaper
In 2000

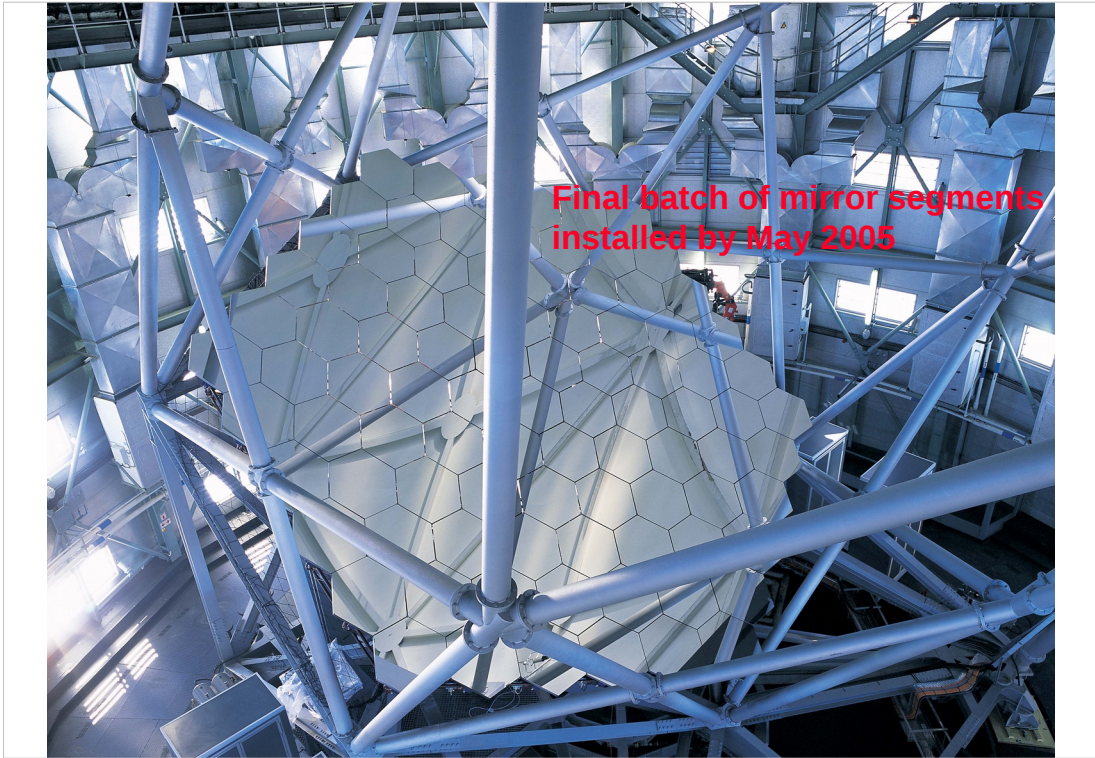
Final Remarks

- **The road to SALT has been a long and interesting journey!**
- **Many lessons learned**
- **Dedicated people made it a success**
- **Full time science operations began in late-2011**
 - *Image quality and instrument issues resolved*
- **New edge sensors installed in 2015**
 - *Stable images over a week at a time*
- **SALT has become an efficient and productive telescope producing forefront science**
 - *Publications testament to this*
- **Future development plans show great promise and will ensure SALT is a forefront facilities for decades to come**



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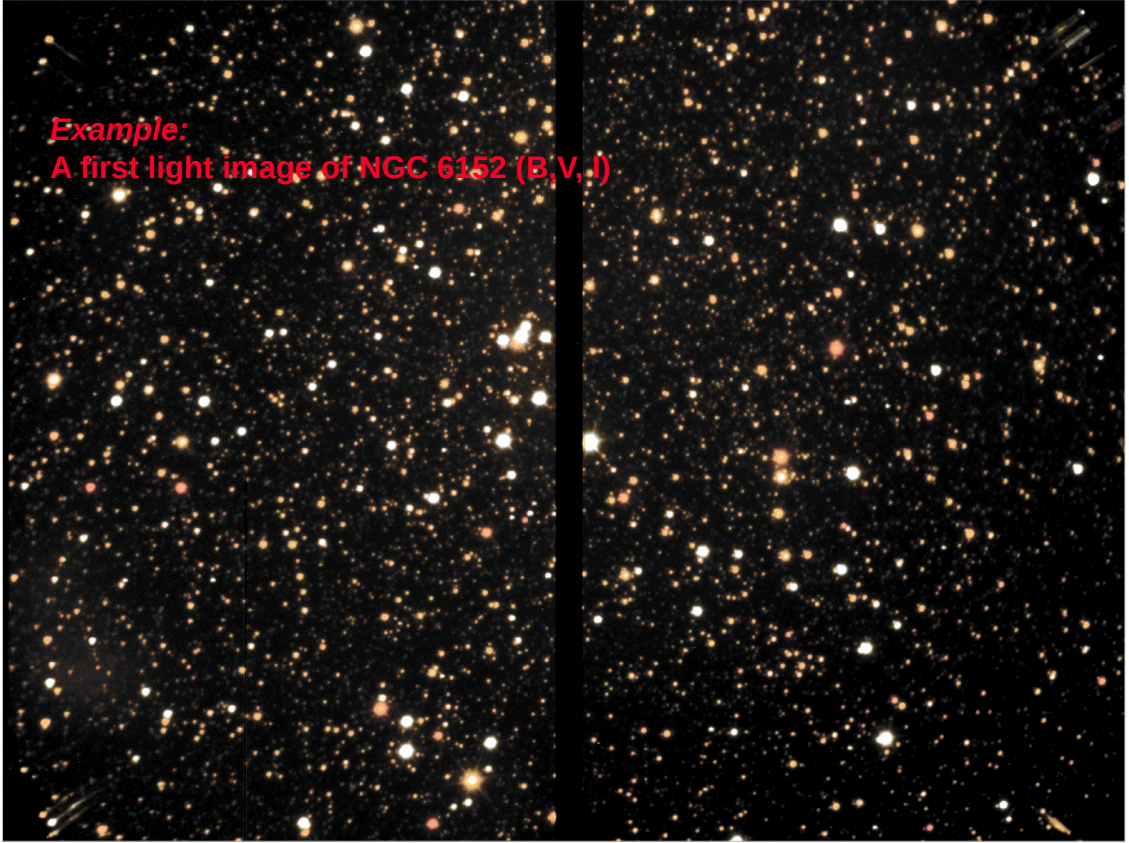


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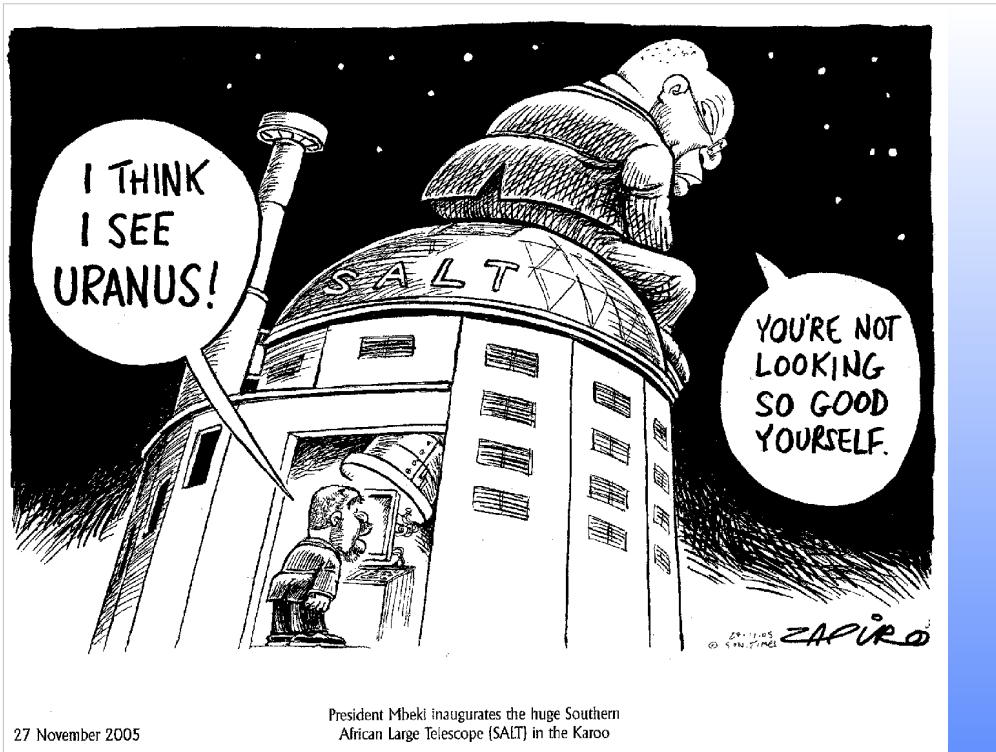






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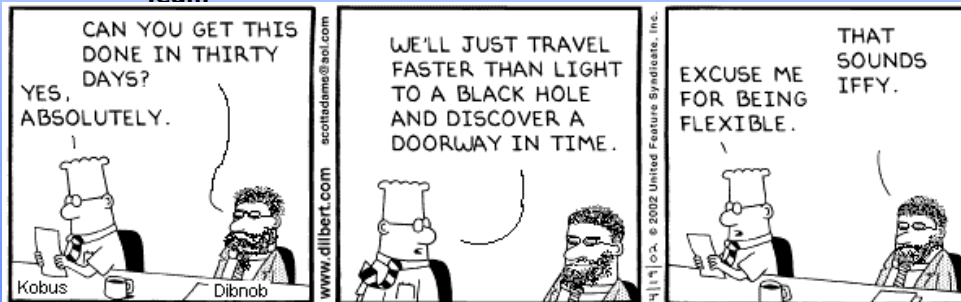
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Project Manager Project Scientist



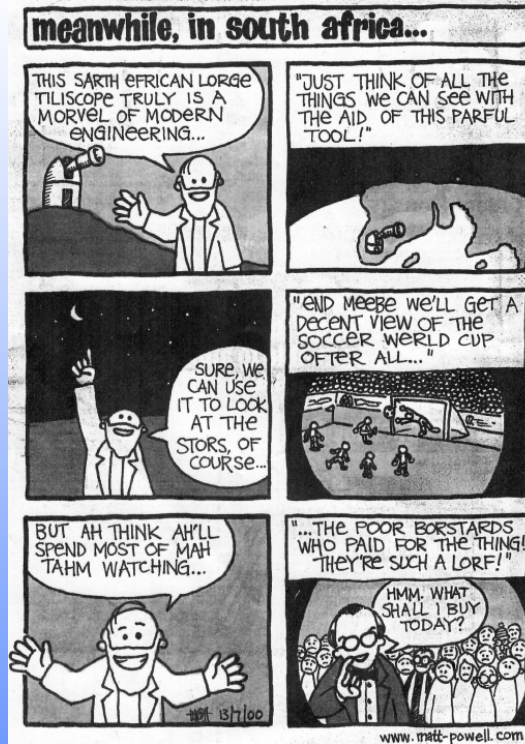
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