Prelim Bits 26-05-2018

NASA Curiosity

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- NASA’s Curiosity Mars rover has successfully collected the first rock samples on the red planet in over a year, using a new way to drill rocks and extract powder from them.
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- Curiosity tested percussive drilling penetrating about two inches into a target called “Duluth.”
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- This technique, called Feed Extended Drilling, keeps the drill’s bit extended out past two stabiliser posts that were originally used to steady the drill against Martian rocks
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- It lets Curiosity drill using the force of its robotic arm, a little more like the way a human would drill into a wall at home.
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- Curiosity is a car-sized rover designed to explore Gale Crater on Mars as part of NASA's Mars Science Laboratory mission (MSL).
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3D-printed, driverless boats

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- MIT scientists have designed a fleet of 3D-printed, driverless boats that could ferry goods and people, helping clear up road congestion in waterway-rich cities such as Amsterdam, Bangkok and Venice.
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- The autonomous boats offer high manoeuvrability and precise control.
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- They can be built using low-cost printer, making mass manufacturing more feasible.
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- In the future, the researchers also envision the driverless boats being

adapted to perform city services overnight, instead of during busy daylight hours, further reducing congestion on both roads and canals.
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- 3D printing is any of various processes in which material is joined or solidified under computer control to create a three-dimensional object.
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- It is used in rapid prototyping and Additive manufacturing.
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India Netherlands relations

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- Prime Minister of Netherlands inaugurated the Indo-Dutch Ganga Forum to take forward the Memorandum of Understanding (MoU) signed between the Ministry of Water Resources, River Development and Ganga Rejuvenation and the Ministry of Infrastructure & Environment of the Netherlands.
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- The Netherlands has become the 64th signatory member of the International Solar Alliance.
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- Prime Minster of India noted that the first Indo-Dutch Centre of Excellence CoE in Vegetables had started in Baramati, Maharashtra.
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- The Netherlands government also shared the experiences of their collaboration with Uttar Pradesh government to reduce water consumption and employ cleaner technologies in tanneries in Kanpur.
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- According to data for 2016-17, the Netherlands was the fifth largest foreign investor in India.
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- In February 2016, a branch of the Netherlands-India Chamber of Commerce and Trade (NICCT) was established in Mumbai
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Unique telescope link

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- Scientists in South Africa on Friday launched the world’s first optical telescope linked to a radio telescope, combining “eyes and ears” to try to

unravel the secrets of the universe.
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- The device forms part of the Square Kilometre Array (SKA) project in the remote Karoo desert, which will be the world's most powerful radio telescope system.
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- The latest move combines the new optical telescope MeerLITCH — Dutch for 'more light' — with the recently-completed 64-dish MeerKAT radio telescope, located 200 kilometres away.
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- The project has been six years in the making by a joint-team of South African, Dutch and British scientists.
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- Among the priorities for MeerLICHT, which cost about $1.1 million, is the study of black holes, neutron stars and stellar explosions.
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- The Square Kilometre Array (SKA) is a large multi radio telescope project aimed to be built in Australia and South Africa.
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Patratu Super Thermal Power Project

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- The Prime Minister of India laid the foundation stone today for the 2400MW first phase of NTPC's Patratu Super Thermal Power Project in Jharkhand.
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- The project is a 74: 26 Joint Venture between Government of Jharkhand (GoJ) and Patratu Vidyut Utpadan Nigam Ltd. (PVUN), a subsidiary company of NTPC establishing a total capacity expansion of 4,000MW.
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- The project has salient features of Dry Ash disposable system (second to NTPC Dadri), zero liquid discharge system, Air-cooled condenser technology (only second to North Karanpura STPP) and rail loading facility for transportation of ash.
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- The Engineering, Procurement & Construction contract of the project has

been awarded to BHEL.
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- This project will allocate 85 per cent of the power to Jharkhand that will benefit the state in the long run and help in the economic growth of the region.
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- Under the Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya) scheme, this project will ensure providing 24x7 power availability to the households.
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Source: PIB, The Hindu

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