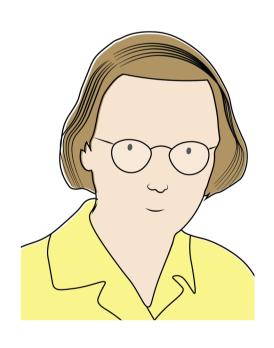
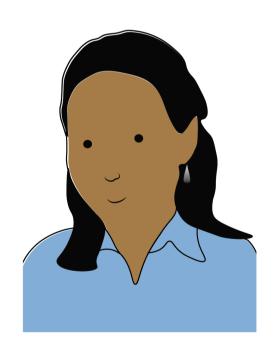
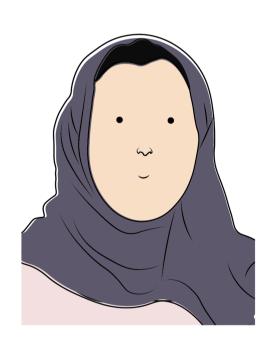


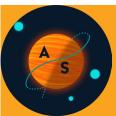
# 11 Women in Astro & Space







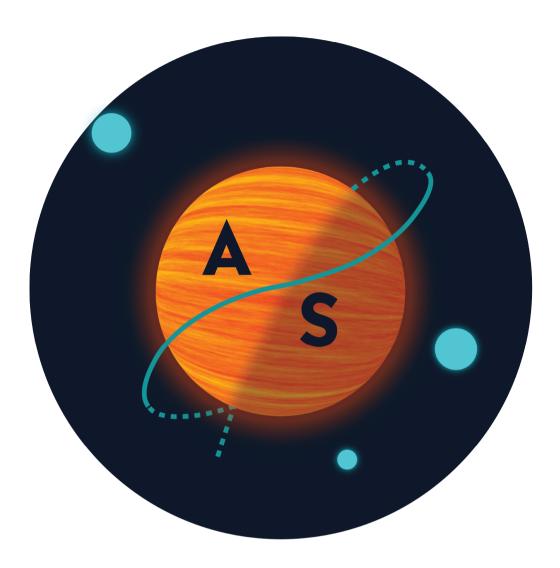
2021







#### II WOMEN IN ASTRO & SPACE



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This calendar is the result of the social media campaign called "February 11th, 11 Women in Astro & Space".

Its aim is to show the diversity of women in astronomy and space sciences; their careers, achievements and struggles. Its purpose is to inspire girls to choose careers in STEM. And it also serves to encourage those women who are in the process of becoming space scientists or astronomers. Finally, it tries to create a bridge with art through digital illustration.

I hope you enjoy the content and if you like it, do follow the social media of Astro & Space.

# January

| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|--------|---------|-----------|----------|--------|----------|--------|
|        |         |           |          | 1      | 2        | 3      |
|        |         |           |          |        |          |        |
| 4      | 5       | 6         | 7        | 8      | 9        | 10     |
|        |         |           |          |        |          |        |
| 11     | 12      | 13        | 14       | 15     | 16       | 17     |
|        |         |           |          |        |          |        |
| 18     | 19      | 20        | 21       | 22     | 23       | 24     |
|        |         |           |          |        |          |        |
| 25     | 26      | 27        | 28       | 29     | 30       | 31     |
|        |         |           |          |        |          |        |
|        |         |           |          |        |          |        |
|        |         |           |          |        |          |        |
|        |         |           |          |        |          |        |

### VALENTINA TERESHKOVA



Valentina is the first and youngest woman to have flown in space. She was only 26 years old when she went on a solo space mission, the Vostok 6.

Before becoming an engineer and cosmonaut, she worked as a textile worker. It was the fact that she trained as a competitive parachutist what took her to space.

Source: Wikipedia



### February

| Monday | Tuesday | Wednesday | Thursday  | Friday | Saturday | Sunday                                     |
|--------|---------|-----------|---|--------|----------|--|
| 1      | 2       | 3         | 4<br>World Cancer Day                                       | 5      | 6        | 7  |
| 8      | 9       | 10        | 11<br>International Day of<br>Women and Girls in<br>Science | 12     | 13       | 14   |
| 15     | 16      | 17        | 18  | 19     | 20       | 21<br>International Mother<br>Language Day |
| 22     | 23      | 24        | 25  | 26     | 27       | 28   |
|        |         |           |   |        |          |  |
|        |         |           |   |        |          |  |

### PARIS PIŞMIŞ



Paris was an Armenian-Mexican astronomer and the first woman to obtain a doctorate from the Faculty of Science at Istanbul University. Her supervisor referred to her as her most gifted student.

She settled at UNAM in Mexico where she worked studying galaxies, star clusters, and planetary nebulae.

She was the most influential person in establishing Mexico's importance in astronomical education and research. And she was a role model for other astronomers. She gave astronomy lectures in Turkish, English, French, German, Italian, and Spanish.

Source: Two Turkish Lady Astronomers by Hoffleit, D. (2005)

### March

| Monday                            | Tuesday | Wednesday | Thursday | Friday | Saturday      | Sunday   |
|-----------------------------------|---------|-----------|----------|--------|---------------|--|
| l<br>Zero Discrimination<br>Day   | 2       | 3         | 4        | 5      | 6             | 7  |
| 8<br>International<br>Women's Day | 9       | 10        | 11       | 12     | 13            | 14   |
| 15                                | 16      | 17        | 18       | 19     | 20<br>Equinox | 21<br>World Day to<br>Eliminate Racial<br>Discrimination |
| 22                                | 23      | 24        | 25       | 26     | 27            | 28   |
| 29                                | 30      | 31        |          |        |               |  |
|                                   |         |           |          |        |               |  |

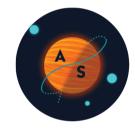
### ABIMBOLA ALALE



Abimbola is a space scientist from Nigeria and the only female boss of a major satellite company -the Nigerian Communications Satellite Ltd- in Africa, Europe and the Middle East.

Besides being the woman taking Nigeria to space, she is also the mom of 10 children, 9 of whom are adopted.

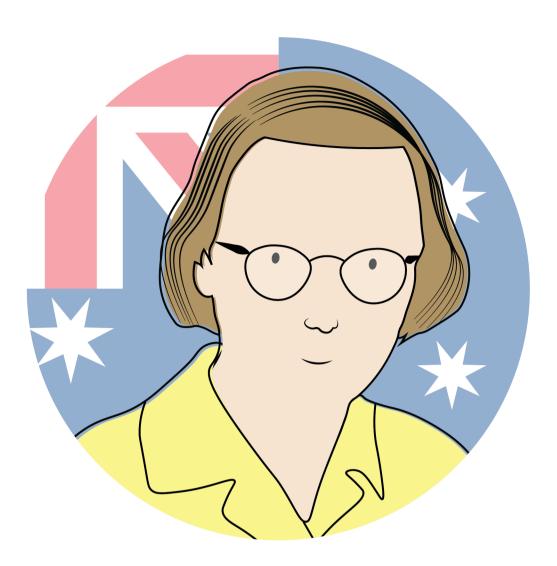
Source: BBC



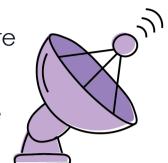


| Monday   | Tuesday                                  | Wednesday | Thursday        | Friday | Saturday | Sunday |
|--|--|-----------|-----------------|--------|----------|--------|
|  |  |           | 1               | 2      | 3        | 4      |
| 5  | 6  | 7         | 8               | 9      | 10       | 11     |
| 12<br>International Day of<br>Human Space Flight | 13<br>Astro & Space first<br>anniversary | 14        | 15              | 16     | 17       | 18     |
| 19   | 20                                       | 21        | 22<br>Earth Day | 23     | 24       | 25     |
| 26   | 27                                       | 28        | 29              | 30     |          |        |
|  |  |           |                 |        |          |        |

### RUBY PAYNE-SCOTT



Ruby was the first female radio astronomer. But before doing astronomy, she did research at the Cancer Research Laboratory at the University of Sydney.



During her astronomy career, she found together with her collaborators, a connection between sunspots and an increase in radio emissions from the Sun.

Sadly, her career as radio astronomer ended too soon. She wanted to start a family and there was no maternity leave at the time.

She was an advocate for women's rights, loved kittens and knitting.

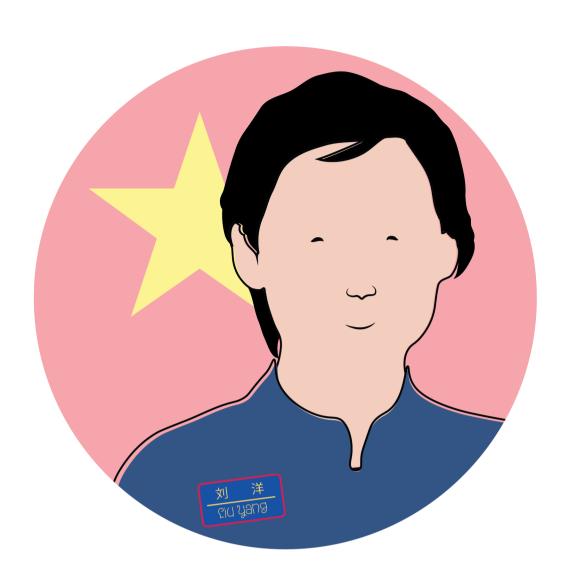
Source: Goss, William Miller, et al. (2010)



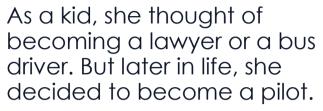
# May

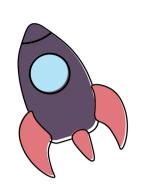
| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|--------|---------|-----------|----------|--------|----------|--------|
|        |         |           |          |        | 1        | 2      |
| 3      | 4       | 5         | 6        | 7      | 8        | 9      |
| 10     | 11      | 12        | 13       | 14     | 15       | 16     |
| 17     | 18      | 19        | 20       | 21     | 22       | 23     |
| 24     | 25      | 26        | 27       | 28     | 29       | 30     |
| 31     |         |           |          |        |          |        |

### LIU YANG



Liu Yang became the first Chinese woman in space in 2012.

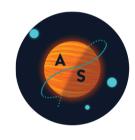




Since the moment she joined China's space programme she excelled. She served as a crew member on the space mission Shenzhou 9 and ran medical experiments in space.

Besides loving flying, she is an avid reader and loves to cook.

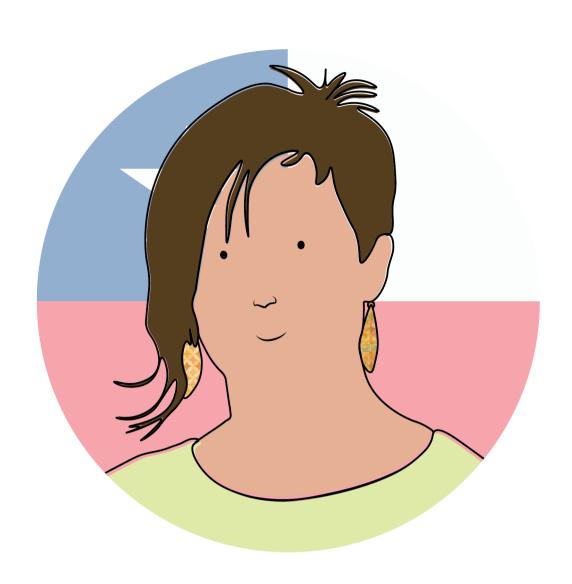
Source: BBC



### June

| Monday | Tuesday | Wednesday                           | Thursday | Friday | Saturday                      | Sunday         |
|--------|---------|-------------------------------------|----------|--------|-------------------------------|----------------|
|        | 1       | 2                                   | 3        | 4      | 5<br>World Environment<br>Day | 6              |
| 7      | 8       | 9                                   | 10       | 11     | 12                            | 13             |
| 14     | 15      | 16                                  | 17       | 18     | 19                            | 20<br>Solstice |
| 21     | 22      | 23                                  | 24       | 25     | 26                            | 27             |
| 28     | 29      | 30<br>International<br>Asteroid Day |          |        |                               |                |
|        |         |                                     |          |        |                               |                |

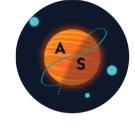
### PAULA JOFRÉ



Paula is a Chilean astronomer who works at the University Diego Portales in Chile. Her job is to find the family tree of the stars in the Milky Way.

Her interest in the universe began when she had to do a project for school and her mother suggested it to be about the planets. After getting a degree in astronomy in Chile, she did her PhD studies at the Max Planck Institute in Germany. During her PhD, she became a mom and had to face new challenges as she had to break the stereotypes young mothers suffer regarding their professional intentions. This double motivation encouraged her and later she began a postdoc at Cambridge University in the UK.

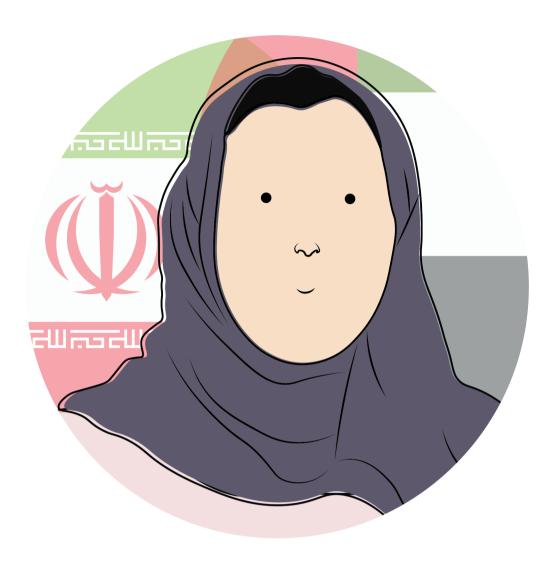
Source: Tell Magazine



# July

| Monday | Tuesday | Wednesday | Thursday | Friday                                   | Saturday | Sunday |
|--------|---------|-----------|----------|--|----------|--------|
|        |         |           | 1        | 2  | 3        | 4      |
| 5      | 6       | 7         | 8        | 9  | 10       | 11     |
| 12     | 13      | 14        | 15       | 16                                       | 17       | 18     |
| 19     | 20      | 21        | 22       | 23                                       | 24       | 25     |
| 26     | 27      | 28        | 29       | 30<br>International Day of<br>Friendship | 31       |        |
|        |         |           |          |  |          |        |

### SARAHALAMIRI



Sarah is an Iranian-born scientist. She wanted to learn more about space after seeing a picture of the Andromeda Galaxy when she was 12 years old. She studied computer engineering and then she started working at the Emirates Institute for Advanced Science and Technology.

Now she is the science lead of the first Arab mission to Mars, Hope. Within a few years, she put together a team to make this mission possible. The mission will study the red planet's weather and climate.

Besides taking the United Arab Emirates to its first interplanetary mission, Sarah is also the country's first-ever female Minister of State for Advanced Technology.

Source: Kayhan Life & BBC

# August

| Monday  | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|---|---------|-----------|----------|--------|----------|--------|
|   |         |           |          |        |          | 1      |
|   |         |           |          |        |          |        |
| 2   | 3       | 4         | 5        | 6      | 7        | 8      |
|   |         |           |          |        |          |        |
| 9<br>International Day of<br>the World's<br>Indigenous People | 10      | 11        | 12       | 13     | 14       | 15     |
| 16  | 17      | 18        | 19       | 20     | 21       | 22     |
| 10  |         |           |          | 20     | 21       | ZZ     |
| 23  | 24      | 25        | 26       | 27     | 28       | 29     |
| 30  | 31      |           |          |        |          |        |
|   |         |           |          |        |          |        |

### SHAZRENE MOHAMED



Shazrene is a scientist from Zimbabwe. As a child she dreamed to become an astronaut. Since her country did not have a space programme, she worked hard to get a scholarship at Harvard University in te USA.

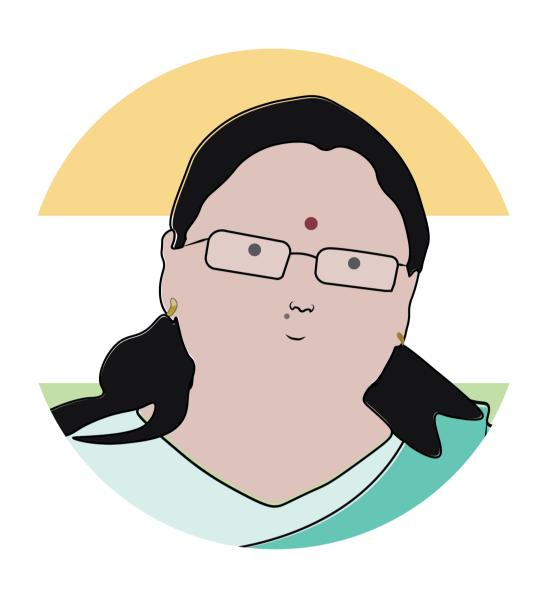
Circumstances out of her control prevent her from reaching space. But she persevered and did a PhD in astronomy at the University of Oxford, England. She did not go to space but instead, brought space to her. Now she works at the University of Cape Town in South Africa where she creates her own stars using supercomputers. Besides this, she is empathetic towards young people from disadvantaged backgrounds and is great at inspiring them to take more of an interest in science.

Source: Wittstock, Clinton in Because Science is Fun

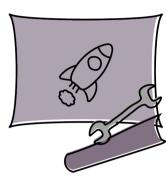
# September

| Monday | Tuesday | Wednesday     | Thursday | Friday                                | Saturday | Sunday |
|--------|---------|---------------|----------|---------------------------------------|----------|--------|
|        |         | 1             | 2        | 3                                     | 4        | 5      |
| 6      | 7       | 8             | 9        | 10<br>World Suicide<br>Prevention Day | 11       | 12     |
| 13     | 14      | 15            | 16       | 17                                    | 18       | 19     |
| 20     | 21      | 22<br>Equinox | 23       | 24                                    | 25       | 26     |
| 27     | 28      | 29            | 30       |                                       |          |        |
|        |         |               |          |                                       |          |        |

### RITU KARIDHAL



Ritu is known as the "Rocket Woman" of India.
As a child, she liked to stargaze with her mom.
Thanks to the support of her family, she became an aerospace engineer.



Upon finishing her studies, she joined the Indian Space Research Organisation. Eventually, she was appointed Deputy Operations Director of the Mangalyaan mission, which aimed to reach Mars. Ritu and her team created the "satellite's brain."

After the success of Mangalyaan, Ritu was appointed Mission Director of Chandrayaan-2, a mission that aimed to land on the Moon.

Source: Sci-Illustrate Stories

### October

| Monday                                       | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday                           |
|--|---------|-----------|----------|--------|----------|----------------------------------|
|  |         |           |          | 1      | 2        | 3                                |
| 4  | 5       | 6         | 7        | 8      | 9        | 10<br>World Mental Health<br>Day |
| 11<br>International Day of<br>the Girl Child | 12      | 13        | 14       | 15     | 16       | 17                               |
| 18   | 19      | 20        | 21       | 22     | 23       | 24                               |
| 25   | 26      | 27        | 28       | 29     | 30       | 31                               |
|  |         |           |          |        |          |                                  |

#### PREMANA WARDAYANTI PREMADI



Premana or Nana is the first female astronomer from Indonesia.

And currently, she is the director of the largest observatory in her home country, the Bosscha Observatory.

Despite having a busy agenda, she is also the founder of Universe Awareness for Children (UNAWE) Indonesia, which is an international organisation that aims to engage children in astronomy.

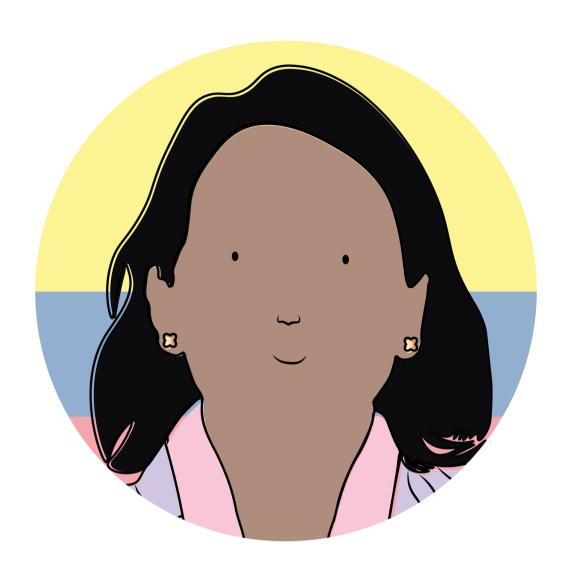
In 2017, the Minor Planet Centre under the the auspices of the International Astronomical Union, renamed asteroid 3024 PL to Asteroid 12937 Premadi to honour Nana's efforts to promote astronomy in the Asian country.

Source: Forbes & The Conversation

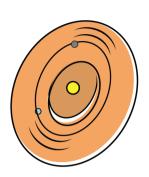
### November

| Monday | Tuesday | Wednesday | Thursday   | Friday | Saturday | Sunday |
|--------|---------|-----------|--|--------|----------|--------|
| 1      | 2       | 3         | 4  | 5      | 6        | 7      |
| 8      | 9       | 10        | 11   | 12     | 13       | 14     |
| 15     | 16      | 17        | 18   | 19     | 20       | 21     |
| 22     | 23      | 24        | 25<br>International Day<br>for the Elimination<br>of Violence against<br>Women | 26     | 27       | 28     |
| 29     | 30      |           |  |        |          |        |
|        |         |           |  |        |          |        |

#### PAOLA PINILLA



Paola is a Colombian astronomer whose interest in the universe started when she was young. By the time she was 14, she knew she wanted to study physics.



She did her bachelor and masters in Physics at Universidad de Los Andes in Colombia and got her PhD in astronomy at the University of Heidelberg in Germany.

Her research tries to answer the question "how are planets born?". Since she finished her PhD, she has been awarded renowned prizes. The latest one, allowed her to start her own research group at the Max Planck Institute in Germany.

Paola is passionate to increase diversity in astronomy and to create role models for women.



Source: CNN

### December

| Monday | Tuesday        | Wednesday | Thursday | Friday  | Saturday                            | Sunday |
|--------|----------------|-----------|----------|---|-------------------------------------|--------|
|        |                | 1         | 2        | 3<br>International Day of<br>Persons with<br>Disabilities | 4                                   | 5      |
| 6      | 7              | 8         | 9        | 10  | 11                                  | 12     |
| 13     | 14             | 15        | 16       | 17  | 18<br>International<br>Migrants Day | 19     |
| 20     | 21<br>Solstice | 22        | 23       | 24  | 25                                  | 26     |
| 27     | 28             | 29        | 30       | 31  |                                     |        |
|        |                |           |          |   |                                     |        |