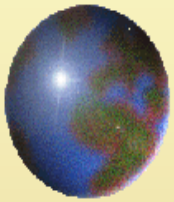
Reflections on Space Governance



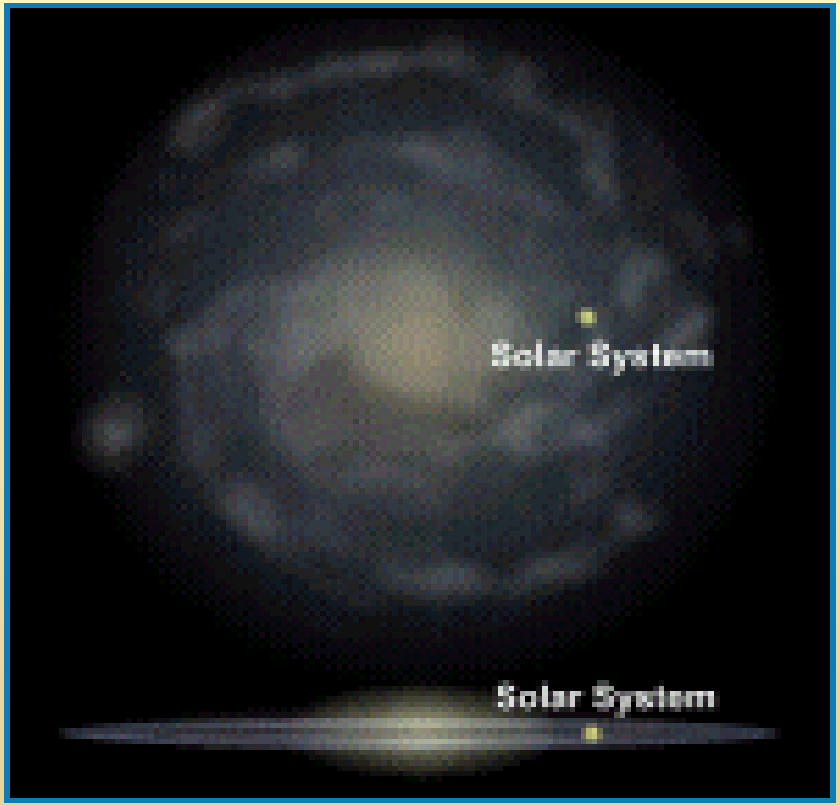
Karl Doetsch, Chairman Athena Global

Presented at Space Security Roundtable, McGill University,

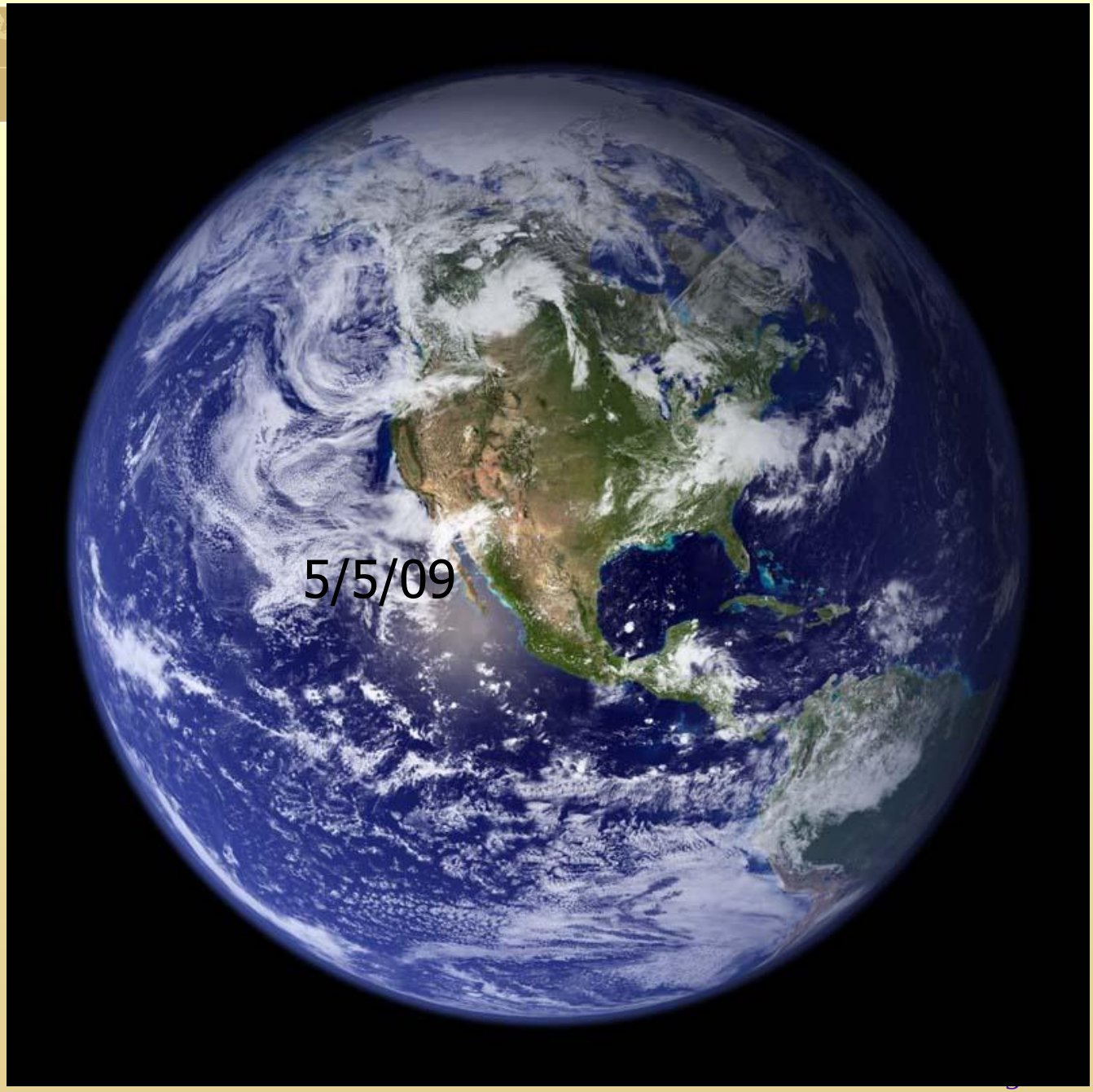
6 May 2009

Our Galaxy

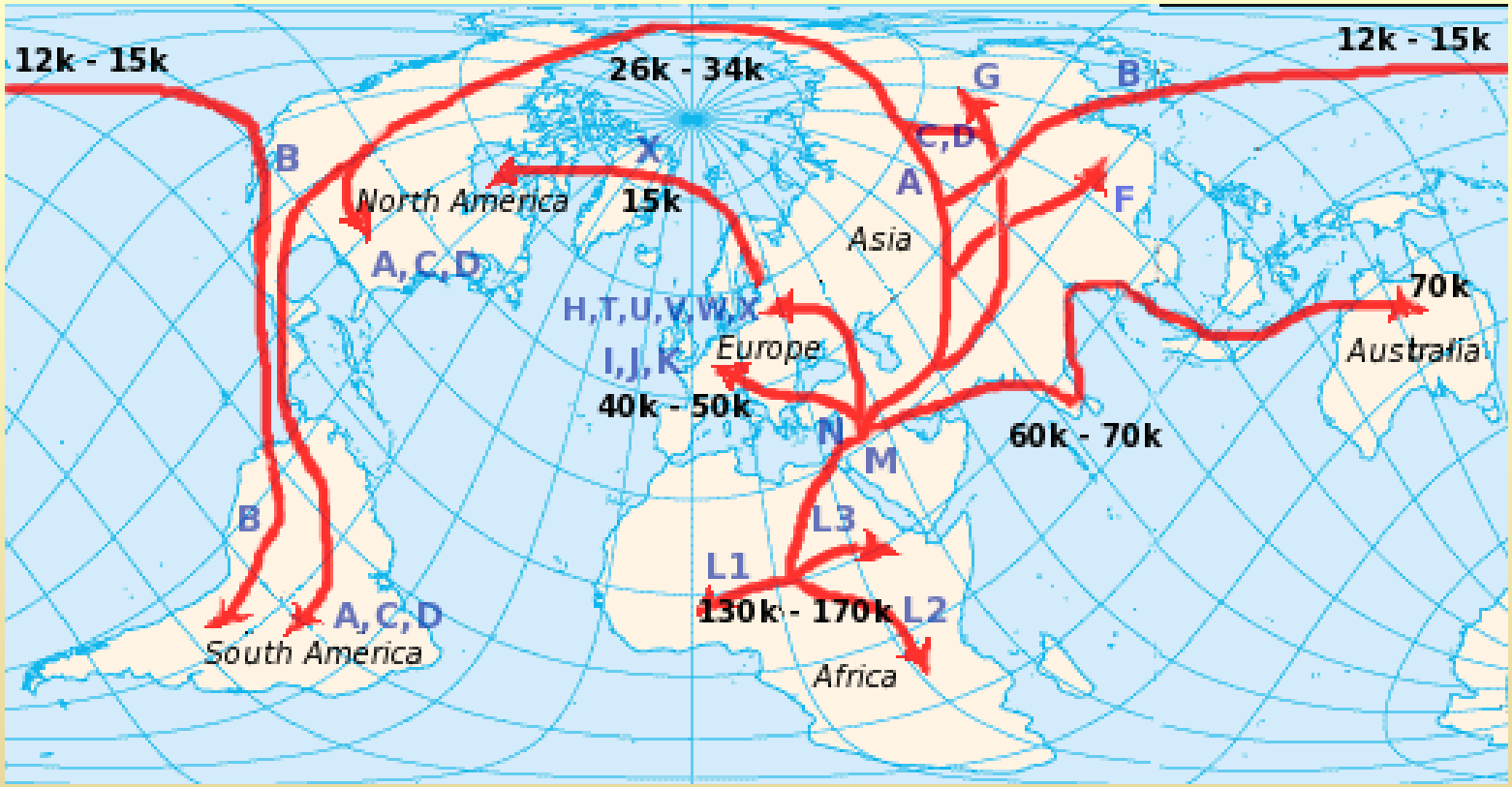
- Milky Way, our galaxy with hundreds of billions of stars, formed soon after the Big Bang creating the Universe



Earth,
Our Home



Human Migration from Africa

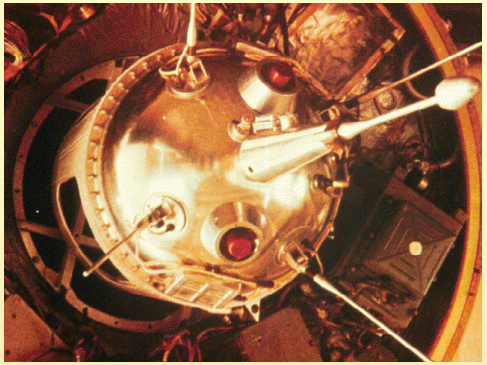


- Life migrated from oceans to land 400 million years ago
- Humans migrated out of Africa to all continents over a period of about 60,000 years

Lilienthal flies in 1894

First heavier than air repeatable human flights

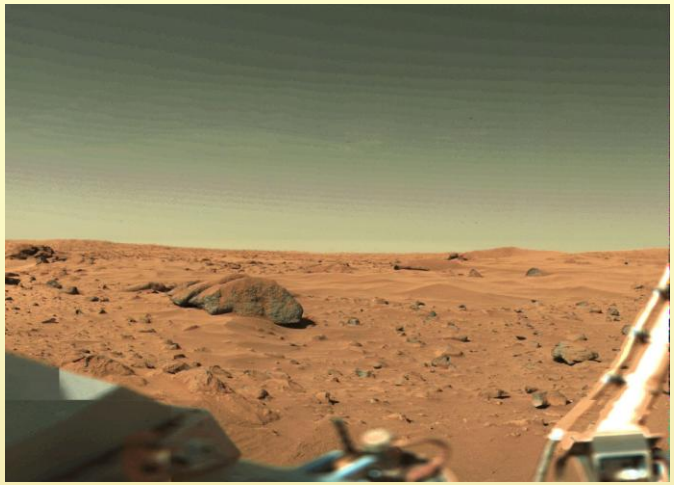
Space Events



- Reaction principle discovered, 360 bc
- Chinese Rocket, approx. 1230 ad
- Sputnik 1957
- **COPUOS Formed 1958**
- Luna 2 to Moon, 1959
- *Explorer (meteorology), 1959*
- *Echo (Communications) 1960*
- Gagarin orbits earth, 1961

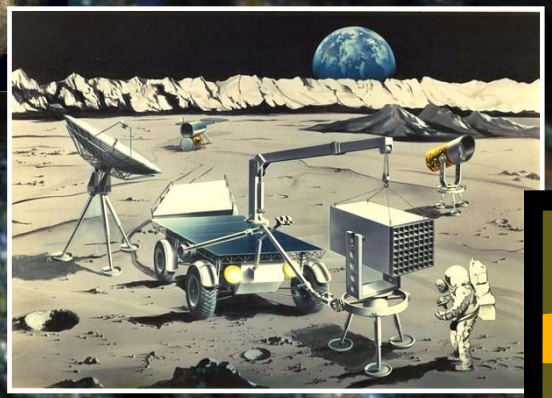
Space Events (continued)

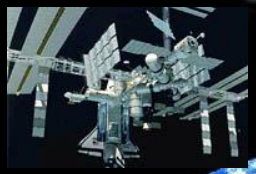
- Mariner 2 to Venus, 1962
- **STSC and LSC formed 1962**
- Mariner 4 to Mars, 1964
- *Transit (navigation), 1964*
- **UNISPACE I, 1968**
- Armstrong on Moon, 1969
- Space Station, Salyut/Soyuz, 1971
- *Landsat 1(Earth Observations) 1972*
- Mariner 10 to Mercury, 1973



LEAVING PLANET EARTH

Moon settlement





Mars outpost

Design by Olga Zhdanovich based on Don Dixon, NASA and NASDA artworks

Living on Planet Earth - Necessities

Water/ Resources

Energy

Environment/ Disasters

Security

Transportation

Shelter

Communications

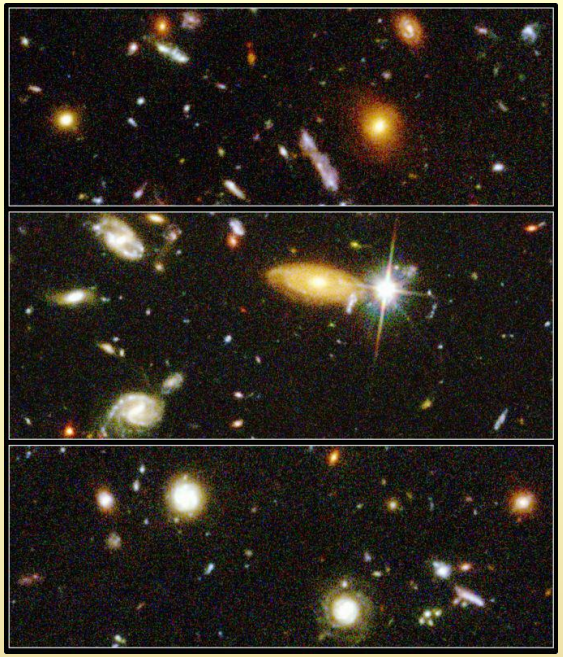
Health

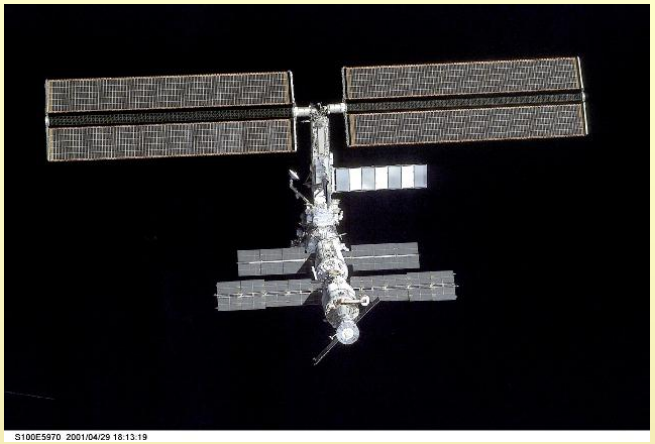
Education

Food

Space Assets

Space Events (continued)





- Pioneer, Jupiter1973, Saturn 1979
- Space Shuttle, 1981
- UNISPACE II 1982
- Voyager, Uranus 1986, Neptune 1989
- Space Station Mir, 1986
- Voyager leaves solar system, 1990
- Hubble Space Telescope, 1990
- International Space Station, 1998
- UNISPACE III 1999

Space Events

- **Sputnik 1957**
- COPUOS Formed 1958