

Monday, May 29

19h: ice-breaker – welcome cocktail

Tuesday, May 30

Session: The early stages: planetesimal formation and their relationship to the Earth

Chair: G. Libourel

9.00-9.20 **M. Bizzarro : Nucleosynthetic diversity of chondrites and their components – tracking disk mass transport processes and the early formation of large-scale solar system reservoirs**

9.20-9.35 E.A. Worsham: The cosmic Mo-Ru isotope correlation and the dichotomy between carbonaceous and non-carbonaceous meteorites

9.35-9.50 T. Kleine: Dating the formation of Jupiter

9.50-10.05 S. Charnoz: On the formation of planetesimals via streaming instability in an evolving disk including condensation fronts

10.05-10.20 J. L. Hellmann: Hf-W chronometry of ordinary chondrites and the timing of solar nebula metal-silicate fractionation

10.20-10.50 Coffee break

10.50-11.05 T. Lichtenberg: A thermo-mechanical ‘goldilocks’ regime for impact splash chondrule formation

11.05-11.25 **H. Palme: Meteorites and the composition of the terrestrial planets**

11.25-11.40 C. Burkhardt: The accretion history of Earth and Mars as told by nucleosynthetic anomalies

11.40-12.00 **C. Alexander: Asteroidal sources of the volatiles for the terrestrial planets**

12.00-14.00 Lunch break

Session: Dynamical models of terrestrial planet formation and evolution of the Earth-Moon angular momentum – Chair: P. Michel

14.00-14.20 **S.N. Raymond: Comparing dynamical models of terrestrial planet formation**

14.20-14.35 M. Lambrechts : Impact of pebble accretion on terrestrial planet formation

14.35-14.50 K.A. Kretke : Forming the Solar System from Pebbles

14.50-15.05 A. Izidoro : Is the migration of Jupiter through the asteroid belt necessary to explain the properties of the inner solar system?

15.05-15.20 S. Jacobson: Mantle composition constraints on planet formation scenarios

15.20-15.35 N. G. Zube : Fast planet building in grand tack leads to excess mantle tungsten in terrestrial bodies

Session : Delivery of volatile elements, including water – Chair: H. Becker

15.35-15.55 **B.J. Wood: Condensation temperatures and abundances of volatile elements in the Earth**

15.55-16.15 **M.M. Hirschmann : Acquisition and processing of Earth's major volatiles**

16.15-16.30 A. Boujibar: Metal-silicate partitioning of Na, Rb and Cs and implications for the origin of volatile elements in the inner Solar System

16.30-19.30 Coffee break and 1st Poster session

Wednesday, May 31

9.00-9.20 **B. Marty: Origin of water and other volatile elements on Earth, in light of recent results from the Rosetta mission**

9.20-9.35 S. Péron : Solar wind implantation supplied light volatiles during the first stage of Earth accretion

9.35-9.55 **L.J. Hallis: The D/H ratio of the deep mantle**

9.55-10.10 S. Ida: Water delivery to the Earth by pebble accretion in an evolving disk

10.10-10.40 coffee break

Session : Moon formation : models and constraints – Chair: M. Wieczorek

10.40-11.00 **T.S. Kruijer : Isotopic constraints on the origin of the Moon**

11.00-11.20 **S.J. Lock: A new model for lunar origin: equilibration with Earth beyond the corotation limit**

11.20-11.35 G. O. Hollyday: Lunar accretion after a high-energy, high-angular momentum giant impact

11.35-11.50 C. F. Gammie: Magnetic fields and the early evolution of the protolunar disk

11.50-12.10 **J. Wade: Making the Moon from the Earth – an internally consistent isotopic and chemical model**

12.10-14.00 Lunch break

14.00-14.15 C. Fitoussi: Tin isotopes constraints on the formation of the Moon

14.15-14.30 N. J. Potts : Constraining the volatile budget of the lunar interior

14.30-14.45 B. Bourdon: New isotope constraints on the maximum age of the Moon and the age of volatile element depletion in the Earth.

14.45-15.05 **F. Nimmo: Angular momentum evolution of the Earth-Moon system**

15.05-15.20 M. Cuk : Tidal evolution of the Moon from a high-obliquity high-angular momentum Earth.

15.20-15.35 E. Füri: Re-evaluating the source(s) of lunar 'water' using a new estimate of the cosmogenic Deuterium production rate

Session : Consequences of impacts – Chair: K. Wuenneman

15.35-15.55 **S. Mukhopadhyay : Volatile delivery and loss associated with impacts**

15.55-16.25 coffee break

16.25-16.40 R.C. Hin: Magnesium isotope evidence that accretional vapour loss shapes planetary compositions

16.40-17.00 **M. Nakajima : Effects of giant impacts on mantle melting and planetary magnetic field**

17.00-17.15 L. Manske: Impact-induced melting by giant collision events – implications for the formation of magma oceans on terrestrial planets

17.15-17.30 D. Breuer: The influence of impacts on the lunar magma ocean crystallization

17.30-17.45 L. Schaefer: The effects of accretionary impacts on the compositions of rocky planets

17.45-18.00 C. Gillmann: Mantle and surface conditions evolution modified by impacts

18.00-18.15 G. J. Golabek: Coupling giant impacts and longer-term evolution models

18.15-18.30 M. Landeau: Core merging, chemical equilibration, and stratification after giant impacts

Thursday, June 1

Session : Core-mantle differentiation – Chair: J. Badro

9.00-9.15 W. Neumann : Modeling the differentiation of IVB iron meteorites' parent body

9.15-9.35 **A. Shahar: An isotopic signature of core-mantle differentiation**

9.35-9.50 R. Deguen: Bounds on metal-silicate equilibration conditions during core formation

9.50-10.05 J.-B. Wacheul : Fragmentation and thermal exchanges during liquid metal sedimentation in a viscous fluid: a fluid mechanics experimental approach

10.05-10.25 **J. Siebert: A Sulfur-poor terrestrial core inferred from metal-silicate partitioning experiments**

10.25-10.55 coffee break

10.55-11.10 V. Laurenz: The effect of sulfur on the behaviour of moderately siderophile elements during core formation

11.10-11.25 R.A. Fischer: Sensitivities of Earth's core and mantle compositions to accretion and differentiation processes

11.25-11.40 D.C. Rubie: The sequestration of tungsten into Earth's core during accretion

11.40-11.55 I. Blanchard : How much potassium is in the core?

12.00-14.00 Lunch

Session : Magma ocean evolution and crystallization – Chair: T. Spohn

14.00-14.20 **J.W. Hernlund : Constraints upon magma ocean temperature, longevity, and oxidation state from accretion evolution scenarios**

14.20-14.40 **S. Labrosse: Thermal convection in the Earth mantle interacting with magma oceans above and/or below**

14.40-15.00 **P.J. Tackley: Magma ocean crystallization and early tectonics of terrestrial planets**

15.00-15.15 D. J. Bower: Advancing dynamic and thermodynamic modelling of magma oceans

15.15-15.30 K. Armstrong: Iron speciation in silicate melts as a function of pressure: implications for magma ocean and early atmosphere evolution

15.30-15.45 M. D. Ballmer: Compositional fractionation of terrestrial magma oceans

15.45-16.00 S. Schwinger: Modeling of lunar magma ocean crystallization and implications for the properties of primordial lunar crust

16.00 – 19.00 Coffee break and 2nd poster session

19.30 – banquet

Friday, June 2

Session : Nature and timing of the "late veneer" – Chair: B. Bourdon

9.00-9.20 **H. Becker: Compositional constraints on late accreted material**

9.20-9.35 M. Fischer-Gödde : Ruthenium isotopic evidence for an inner Solar System origin of the late veneer

9.35-9.50 T. Hopp: Ruthenium stable isotopes: insights into the crystallization of protoplanetary cores and the late accretion history of the Earth

9.50-10.05 P. Gleißner : Combining S-Se-Te and highly siderophile element abundances in ancient lunar impactites – new constraints on impactor composition, mixing and lunar differentiation

10.05-10.25 **W.F. Bottke : Evidence for two impacting populations in the early bombardment of Mars and the Moon**

10.25-10.55 Coffee break

10.55-11.15 **S. Marchi : Earth's late accretion: fire from above, fire from below**

11.15-11.30 (R. Brasser) S. Mojzsis : Late veneer and late accretion to the terrestrial planets

11.30-11.45 A. Morbidelli: The lunar late heavy bombardment as a tail end of planet accretion.

11.45-12.00 K. Wünnemann: Forming the Moon's nearside-farside dichotomies via giant impact

12.00-14.00: lunch break

Session: Geodynamics in early terrestrial planets – Chair: D. Breuer

14.00-14.20 **N. Tosi: Early thermo-chemical dynamics of terrestrial mantles**

14.20-14.35 A.-C. Plesa : Mantle mixing: the effect of the initial compositional distribution

14.35-14.50 N. Katyal: Early Earth Interior-Surface-Atmosphere Interactions

14.50-15.10 **T.V. Gerya: Plume-lid tectonics in early terrestrial planets**

15.10-15.25 V. Debaille : Stagnant-lid tectonics during the Archaean and delayed onset of plate tectonics

15.25-15.40 T. Nakagawa : Water circulation in a coupled ocean-plate-mantle-core evolution model: Towards a planetary system modeling

15.40-16.00 **B.P. Weiss: Paleomagnetic constraints on the existence of a Hadean geodynamo**

16.00-16.30 coffee break

16.30-16.50 **J.G. O'Rourke: Sustaining a global magnetic field on Earth but not Venus with precipitation of light elements from the core**

Session : Geophysics of extra-solar Earths and super-Earths – Chair: S. Ida

16.50-17.05 E. Kokubo : Orbital architecture of planetary systems formed by giant impacts.

17.05-17.20 M. Ogihara : Formation of close-in super-Earths in disks evolving via disk winds

17.20-17.40 **S.J. Mojzsis : Geophysical constraints on cosmochemically Earth-like exoplanets**

17.40-17.55 T. Spohn: Formation of the Earth and its evolution into bi-stability

17.55-18.15 **C. Dorn: The origin of atmospheres on Super-Earths**

18.15 Meeting ends.

Posters:

Tuesday May 30:

- 1) G. J. Archer: The ^{182}Hf - ^{182}W isotopic systematics and Os isotopic compositions of H chondrites: constraining the thermal history of the H chondrite parent body
- 2) M. A. Baron: Magma ocean thermometry using metal-silicate partitioning of Germanium.
- 3) B.T. Bolin: Modification of asteroid family Yarkovsky V-shapes due to the dependence of thermal inertia on asteroid size
- 4) M.A. Bouhifd: Experimental constraints on Earth's core formation conditions: Insights from siderophile, lithophile and volatile elements.
- 5) A. Bouvier: Sm, Nd and Hf isotopic compositions of planetary materials
- 6) V. Clesi: Effect of water on metal-silicate partitioning and hydrogen incorporation in the core of the Earth and Mars
- 7) R. Deguen: Fluid dynamics experiments on impact-induced metal dispersion during Earth's accretion
- 8) P. Faure: Behaviour of rare Earth elements during the Earth's core formation
- 9) R. Fischer: Effects of core formation on the HF-W system
- 10) S. Flemetakis: The geochemical cycle of halogens in the Earth's mantle.
- 11) G. Florin : Mechanisms of metal segregation in chondrite with deformation: an integrated experimental and isotopic approach. Inferences on core formation
- 12)
- 13) M. Groen: High-precision Tungsten isotope analyses for Archean rocks from Isua (Greenland)
- 14) T. Grützner: Experimental determination of stable siderophile element isotope fractionation between liquid metal and liquid silicate
- 15) J. Guignard: Nickel isotope fractionation during core-mantle differentiation of planetesimals : an experimental and theoretical approach
- 16) S. Hackler: Volatiles on Earth – an experimental study
- 17) T. Hammouda: Rare Earth element partitioning between sulfides and silicate melt at $P < 1$ atmosphere and at reducing conditions

- 18) M. A. Hesse: Three-phase flow during chemical differentiation of primordial planetesimals
- 19) N. Ingrao: Rare Earth elements volatility at high temperature under reducing conditions
- 20) E. S. Jennings: Core-mantle partitioning of light elements during accretion: testing the limitations of EPMA for DAC experiments
- 21) S. Kovach: Role of fluids in CM parent bodies: Implications for timing and nature of alteration
- 22) M. Lasbleis: Can we estimate an upper bound for the magnetic field of rocky planets?
- 23) V. Lherm: Small scale equilibration processes during core formation

Thursday June 1st:

- 1) D. Lorocho: Siderophile volatile element partitioning during core formation
- 2) T.-H. Luu: Canonical array of bulk Mg-isotope of chondrites favours $^{26}\text{Al}/^{27}\text{Al}$ homogeneity in the protoplanetary disk
- 3) B. Mahan : Open-system heating and volatilization in carbonaceous chondrites: evidence from Zinc isotopes, water content and volatile element abundances
- 4) M. Matthes: Palladium-Silver chronology of IVB iron meteorites
- 5) S.E. Mazza: Tungsten stable isotopic fractionation in terrestrial magmas
- 6) A. Morison: Thermal convection in a spherical shell with phase change boundary conditions
- 7) F. Nabiei: Inclusions in extra-terrestrial diamonds reveal a lost terrestrial planet
- 8) J.A.M. Nanne: Osmium isotope fractionation during planetary core crystallization
- 9) A. Néri: Metal-silicate segregation in small bodies of the Solar System: Experimental study of the geometry in a three-phase system
- 10) W. Neumann : Thermal evolution and internal structure of the parent body of Acapulco- and Lodran-like achondrites.
- 11) G. Ortenzi: Earth magma ocean solidification and interior-surface-atmosphere interactions.
- 12) S. Pirani: The consequences of large-scale migration of the giant planets on minor bodies in the Solar System

- 13) B. Quarles: Dynamics of the giant planets due to a fully self-gravitating planetesimal disk
- 14) F. Robert: Hydrogen isotope fractionation in Methane plasma
- 15) A. Rohrbach: Fractionation of Cr-isotopes during metal–silicate differentiation?
- 16) A. Rozel: Generation of TTG rocks in the Archaen: numerical simulations of thermo-compositional mantle convection
- 17) F. E. Schmid: Sulfur isotopic composition of rocks derived from the Earth's mantle
- 18) J. Sikdar : Si and Mg isotopic composition in meteorites
- 19) P. A. Sossi: Experimental constraints on the evaporation of some moderately volatile elements at conditions relevant to planetary formation
- 20) T. A. Suer : Metal-silicate partitioning of Platinum at core formation conditions
- 21) S. Turner: How recently was there fluid flow on CV and CM chondrites?
- 22) M. C. Valdes : Investigating the Moon's early differentiation using Calcium isotopes
- 23) E. M. M. E. VanKooten: CM chondrites at the frontier: changes to cold weather in the disk
- 24) A. C. Withers: Experimental determination of Calcium isotopic fractionation between Clinopyroxene and carbonated silicate melt

