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**Sunday, 24 June**

18:00 – 21:00 Welcome reception and registration at the  
Astrophysical Institute Potsdam, main observatory building

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**Monday, 25 June**

8:00 – 09:45 Registration and poster preparation

09:45 – 10:00 Welcome address

**Session 1: Solar flow patterns**

(Chair: J. Beckers)

10:00 **A. Kosovichev:** Helioseismology measurements of variations of the differential rotation and meridional flows

**M. Roth:** Helioseismic measurements of the meridional circulation

11:00 – 11:30 **Coffee break**

11:30 *U. Mitra-Kraev:* Meridional flow profile measurements with SOHO/MDI

*R. Brajša:* On the solar rotation and activity

**E. Benevolenskaya:** Magnetic elements in polar regions on the Sun

**N. Seehafer:** Force-free magnetic fields in the solar atmosphere

13:00 – 14:00 **Lunch break**

**Session 2: Solar tachocline**

(Chair: E. Forgács-Dajka)

14:00 **A.S. Brun:** MHD instabilities in stellar radiation zones with and without rotation

**R. Arlt:** The magnetic stability of the solar tachocline

**S. Tobias:**  $\beta$ -plane MHD turbulence in the solar tachocline

15:30 – 16:00 **Coffee break**

16:00 **P. Garaud:** Constraints on angular momentum transport in the Sun from simulations of the tachocline

*G. Guerrero:* The influence of the shape and the thickness of the solar tachocline

*G. Rüdiger:* Penetration of meridional flow into the radiative zone

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**Tuesday, 26 June**

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**Session 3: Stellar differential rotation and meridional flow**

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(Chairs: M. Knölker, I. Tuominen)

- 9:30      **A. Collier Cameron:** Differential rotation on rapidly-rotating stars
- A. Reiners:* Differential rotation in F stars
- M. Weber:* Differential rotation of giant stars
- V. Holzwarth:* The impact of meridional circulation on stellar butterfly diagrams and polar caps
- H. Balthasar:* Daily sunspot numbers and periods of the solar rotation
- 11:00 – 11:30      **Coffee break**
- 11:30      **M. Miesch:** Differential rotation and meridional circulation in global-scale simulations of solar convection
- B. Brown:* Rapid rotation, active nests of convection and global-scale flows in solar-like stars
- A. Palacios:* Rotation in the extended turbulent convective envelope of a red giant star
- K. Chan:* Rotating convection in f-boxes: faster rotation and larger boxes
- M. Steffen:* Rotating star-in-a-box experiments
- 13:00 – 14:00      **Lunch break**
- 14:00      **M. Küker:** Modelling differential rotation of A and F stars
- P. Käpylä:* Turbulent viscosity and  $\Lambda$ -effect from numerical turbulence models
- A.F. Lanza:* Modelling the time variations of the surface differential rotation in AB Dor and LQ Hya
- H.-E. Fröhlich:* Bayesian analysis of the differential rotation of  $\epsilon$  Eri from MOST data
- G. Bisnovatyi-Kogan:* Centrifugal driving of differential rotation in convective star regions
- 15:30 – 16:00      **Coffee break**
- 16:00      *J. Beckers:* Can variable meridional flows lead to false exoplanet detections?
- N. Toque:* Rapid differential rotation in massive stars
- S. Mathis:* Meridional circulation in the radiation zones of rotating stars
- J. Staude:* Global vortical, Rossby-like modes with long periods in the solar interior
- 17:00      POSTER PRESENTATIONS, 5 min. each

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**Wednesday, 27 June**


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**Session 4: Solar and stellar activity**


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(Chair: K. Strassmeier)

- 9:30      **S. Hubrig:** Evolution of magnetic fields in stars across the upper main sequence
- A. Reiners:** Ultra-cool and extra-vigorous: rotation and activity in M- and L-dwarfs
- S. Berdyugina:** Stellar butterfly diagrams and differential rotation
- 11:00 – 11:30    **Coffee break**
- 11:30      *Th. Carroll:* Requirements for Zeeman-Doppler imaging of cool stars
- R. Schlichenmaier:** Relation between photospheric magnetic field and chromospheric emission
- S. Marsden:* Starspots and relativity: Applied Doppler imaging for the gravity probe B mission
- M. Ternullo:* Looking inside the butterfly diagram
- Ch. Watson:* Indirect imaging of interacting binaries
- 13:00 – 14:00    **Lunch break**
- 14:00      **T. Metcalfe:** Asteroseismic signatures of stellar magnetic activity cycles
- K.I. Oláh:** Multiple cycles in active stars
- A. Tlatov:* 22-years variations rotation of the Sun and solar activity cycles
- H. Korhonen:* From flip-flop dynamo models to observation
- N. Zolotova:* Enigma of the solar cycle 4
- 16:15      Boat trip

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**Thursday, 28 June**

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**Session 5: Magnetic instability in radiation zones**

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(Chair: R. Tavakol)

- 09:30 **L. Kitchatinov:** Hydromagnetic stability of stellar radiative cores with toroidal magnetic fields
- J. Braithwaite:** Magnetic field configurations in rotating non-convective stars
- M. Gellert:* Helicity and  $\alpha$ -effect by Tayler instability of axial shear
- A. Bonanno:* Stretching of the toroidal field and generation of magnetosonic waves in differentially rotating plasma
- 11:00 – 11:30 **Coffee break**
- 11:30 *S. Moiseenko:* Magnetorotational supernovae and magnetorotational instability formation
- J. Szklarski:* MRI in the laboratory: PROMISE
- A. Reisenegger:* Magnetic field evolution in neutron stars
- A. Kholtygin:* Line profile variability of OB stars: pulsation, rotation and magnetic field
- N. Leprovost:* Theory of turbulent mixing and transport in the Sun
- D. Callebaut:* Exact generation from multipolar seed field
- 13:00 – 14:00 **Lunch break**
- 14:00 POSTER PRESENTATIONS, 5 min. each
- 15:45 – 19:45 **Visit to Telegraph Mountain with Great Refractor and Einstein Tower then to Einstein's summer house in Caputh**

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**Friday, 29 June**

**Session 6: Dynamo theory**

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(Chair: D. Schmitt)

- 09:30      **A. Brandenburg:** Location of the solar dynamo
- M. Browning:* Simulations of dynamo action in the solar convection zone and tachocline
- M. Schüssler:** Are solar cycles predictable?
- E. Işık:* A coupled model of magnetic field generation and transport in stars
- 11:00 – 11:30      **Coffee break**
- 11:30      **M. Dikpati:** Predicting solar 'climate' by assimilating magnetic data into a flux-dynamo model
- L. Jouve:* On the role of meridional flows in flux-transport dynamo models
- M. Rempel:** Non-kinematic flux-transport dynamos with variable meridional flow
- N. Featherstone:* Convective core dynamos of A-type stars with fossil magnetic field
- D. Elstner:* How can  $\alpha^2$ -dynamos be axisymmetric?
- 13:15      *G. Rüdiger:* Closing, invitation to BBQ

## POSTERS

- I.A. Ansari:* Effect of variability of solar wind on low latitude Pc3 geomagnetic pulsations in South-East Australia
- F. Espinosa Lara:* The dynamics of fully radiative rotating stars
- E. Forgács-Dajka:* Behaviour of sunspot polarities
- L.C. Garcia de Andrade:* Astrophysical dynamos in Riemann spaces
- M. Hagenaar:* Ephemeral bipolar regions in coronal holes
- S. Hubrig:* Spots on the surface of HgMn stars: clues to the origin of Hg and Mn peculiarities
- S. Järvinen:* Doppler imaging of V889 Her
- S. Ježič:* The improvement of the solar optical instrument at Ljubljana Observatory
- A. Kholtygin:* Magnetic field of  $\rho$  Leo: discovery, generation and stability
- M. Kopf:* A new Zeeman Doppler imaging code for active late-type stars
- Z. Kővári:* Antisolar differential rotation with poleward meridional flow on the K1-giant sigma Geminorum
- O. Özdarcan:* Photometric period analysis of V889 Herculis
- V.V. Pipin:* The  $\Omega \times J$  effect in solar and stellar dynamos
- M.V. Rodríguez Ledesma:* Rotation of low mass stars in the Orion Nebula Cluster
- I. Savanov:* Evolution of starspots from the photometric light-curve inversions
- S.O. Selam:* Activity induced orbital period variations of late-type close binaries
- M. Svanda:* On the meridional flux transport in the photosphere of the Sun
- A. Tlatov:* Duration of the extended solar cycles and amplitude of sunspot cycle
- I. Tuominen:* Kinematic frames and “active longitudes”: does the Sun have a face
- K. Vida:* Differential rotation and surface flow pattern on UZ Librae