APPENDIX C

CONTRIBUTORS BY NAME

Appendix C. Contributors by Name

This section lists scientific involvement during the data analysis preparation, observing programme preparation, data reduction, and catalogue production (principal contributors to the Hipparcos Input Catalogue, a full listing of which is given in the printed Hipparcos Input Catalogue, SP–1136, are also included). Evidently, the level of contributions differed greatly, between those who were involved for a short period for a particular contribution, to those whose involvement has extended, essentially full time, for almost 20 years. Bold type indicates leading contributor to the task. Institutes correspond to locations where the activities were undertaken. ESA/ESOC and industrial contributions are not listed here, nor are those of the Scientific Proposals Selection Committee (see introductory pages).

J.R. Allington-Smith *Mullard Space Science Laboratory, Holmbury St Mary, U.K.* Early developments for data simulation.

M. Amoretti *Istituto di Astrofisica Spaziale, CNR, Frascati, Italy.* Initial studies of optical modelling in FAST.

G.K. Andreasen *Copenhagen University Observatory, Denmark.* Development of photometric data analysis algorithms for NDAC. Development of photometric data analysis algorithms for Tycho.

S.V. Antipin *Sternberg Astronomical Institute, Moscow University, Russia.* Checks of identifications of Hipparcos variables with catalogues of variable and suspected variable stars, PPM catalogue, etc.

F. Arenou *Observatoire de Paris-Meudon, URA CNRS 335, France.* Construction of the Hipparcos Input Catalogue. **Merging of the FAST and NDAC single star data.** Astrometric results merging group. **Parts G and X of the Double and Multiple Systems Annex.** Production of Hipparcos Catalogue intermediate astrometry.

A.N. Argue *Institute of Astronomy, Cambridge, England.* **Selection of reference frame link stars for the Hipparcos Input Catalogue. Coordination of the observations of pre-launch data for reference frame link stars.** Speckle interferometry of southern link stars observed by Hubble Space Telescope.

J.E. Arlot *Bureau des Longitudes, URA CNRS 707, Paris, France.* **Pre-launch ephemerides of satellites of major planets.**

M. Badiali *Istituto di Astrofisica Spaziale, CNR, Frascati, Italy.* Optical modelling for FAST calibration. **Double star reductions in FAST.** Double star working group.

A. Baglin *Observatoire de Paris-Meudon, URA CNRS 335, France.* Compilation of pre-launch data for variable stars.

D. Barthès *Université de Montpellier II, URA CNRS 1368, France.* Pre-launch ephemerides of large-amplitude variable stars, and updates throughout mission.

G. Bässgen *Astronomisches Institut, Tübingen, Germany.* **Tycho data reductions.**

U. Bastian *Astronomisches Rechen-Institut, Heidelberg, Germany.* Tycho data reductions. **Prediction of Tycho transits for stars and solar system objects. Compilation of Volume 4.** Astrometric parameter determination for FAST. **Hipparcos Science Team.** Development of *Celestia 2000*.

M.O. Baylac *Observatoire de Paris-Meudon, URA CNRS 335, France.* Reliability of the Hipparcos Input Catalogue data.

A. Bec-Borsenberger *Bureau des Longitudes, URA CNRS 707, Paris, France.* **Pre-launch ephemerides of minor planets.**

P. Belforte *Centro di Studi sui Sistemi, Torino, Italy.* Pre-launch studies for first steps of the data reduction in FAST.

P.L. Bernacca *Osservatorio Astrofisico di Asiago and Centro di Studi e Attività Spaziali (CISAS) 'G.Colombo', Università di Padova, Italy.* **Leader of system and mission analysis during industrial feasibility study, 1977. Promotion of mission approval by ESA/SPC (1979–80). Scientific supervision and control of the Italian contributions and tasks in FAST:** optical modelling, main grid and star mapper data reduction, attitude determination, sphere solution, double star reduction; **and to the Hipparcos Project:** comparison of attitude determinations by FAST and NDAC. Preparation of double star reductions in FAST. **Hipparcos Science Team.** FAST Steering Committee.

H.H. Bernstein *Astronomisches Rechen-Institut, Heidelberg, Germany.* Absolute astrometry of double stars in FAST. Double star working group. Part O of the Double and Multiple Systems Annex.

D. Bertani *Istituto Nazionale di Ottica, Firenze, Italy.* Optical modelling for FAST calibrations.

B. Betti *Dipartimento di Topografia e Rilevamento, Politecnico di Milano, Italy.* Pre-launch studies of sphere solution methods in FAST.

A. Blaauw *Kapteyn Laboratory, Groningen, The Netherlands.* **Chairman of Scientific Proposals Selection Committee. Coordination of external review of Hipparcos Input Catalogue preparation.**

E. Bois *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* Theoretical studies of satellite rotation.

L. Borriello *Tecnopolis-CSATA, Bari, Italy.* **Double star recognition and preparation of reductions in FAST.**

P. Brosche *Sternwarte der Universitaet Bonn, Germany.* Measurement of pre-launch astrometric data. Reference frame working group (photographic method). Former member of Hipparcos Science Team (1982).

W.N. Brouw *CSIRO, Epping, Australia.* FAST Steering Committee.

B. Bucciarelli *Osservatorio Astronomico di Torino, Italy.* Baseline sphere solution method and software implementation in FAST. **Validation of the sphere solution by alternative methods.** Assessment of residual systematic errors between FAST and NDAC catalogues.

A. Budowski *CNES, Toulouse, France.* Integration and test of sphere and astrometric parameter software for FAST.

M. Burnet *Observatoire de Genève, Switzerland.* Observation of photometric data pre-launch and during the mission.

A. Butchins *University of London Observatory, London, U.K.* Development of data analysis algorithms for Tycho.

E. Canuto *Politecnico di Torino & Centro di Studi sui Sistemi, Torino, Italy.* **Image dissector and star mapper reductions. Attitude determination in FAST.**

D. Cardini *Istituto di Astrofisica Spaziale, CNR, Frascati, Italy.* Optical modelling for FAST calibration. Double star reductions in FAST.

D. Carlucci *Centro di Studi sui Sistemi, Torino, Italy.* Pre-launch studies for first steps of the data reduction in FAST.

M. Cetica *Istituto Nazionale di Ottica, Firenze, Italy.* Optical modelling for FAST calibration.

M. Chareton *Observatoire de Besançon, France.* Pre-launch simulations of satellite observations. Global observing programme optimisation.

B. Chausserie-Laprée *CNES, Toulouse, France.* Sphere software support for FAST.

C. Coleman *University College, London, U.K.* Former member of Hipparcos Science Team (1981–82).

S.A. Cowling *Department of Applied Mathematics and Astronomy, University College, Cardiff, Wales.* General relativistic metric studies in NDAC.

M. Crézé *Observatoire Astronomique de Strasbourg, URA CNRS 1280, France.* **Construction of the Hipparcos Input Catalogue: pre-launch simulations. Global observing programme optimisation. Hipparcos Science Team.**

F. Crifo *Observatoire de Paris-Meudon, URA CNRS 335, France.* Construction of the Hipparcos Input Catalogue. **Survey definition. Reliability of the Hipparcos Input Catalogue data.**

A.M. Cruise *Mullard Space Science Laboratory, Holmbury St Mary, U.K.* Organisation of NDAC Consortium. Early developments of star mapper reduction software. Former member of Hipparcos Science Team (1983–86).

D.T. van Daalen *Faculty of Geodetic Engineering, Delft University of Technology, The Netherlands.* **Great-circle reduction for FAST.** Former member of Hipparcos Science Team (1986).

S. Daillet *CNES, Toulouse, France.* Attitude determination software support and integration for FAST.

W. Delaney *Istituto di Scienze dell'Informazione, Università di Bari, Italy.* Pre-launch studies for double star reductions in FAST.

J. Delhaye *Observatoire de Paris-Meudon, URA CNRS 335, France.* Construction of the Hipparcos Input Catalogue.

C. Dettbarn *Astronomisches Rechen-Institut, Heidelberg, Germany.* Pre-launch measurements of astrometric data for cluster stars. Astrometric parameter determination in FAST.

P. Didelon *Observatoire Astronomique de Strasbourg, URA CNRS 1280, France.* Production of the Tycho Input Catalogue.

G. Dinderman *Sky Publishing Corporation, Cambridge, Massachusetts, U.S.A.* Technical illustrator for the Millennium Star Atlas.

J. Dommanget *Observatoire Royal de Belgique, Bruxelles, Belgium.* **Coordination of the compilation and observations of pre-launch double/multiple star data. Construction of the Catalogue of the Components of Double and Multiple Stars (CCDM) used for the double/multiple star annexes.** Double star working group. Chairman of the INCA Steering Committee (from 1988).

F. Donati *Politecnico di Torino & Centro di Studi sui Sistemi, Torino, Italy.* **Attitude determination in FAST. Image dissector tube and star mapper data reductions in FAST. Comparison of attitude between FAST and NDAC. Hipparcos Science Team.**

M.T. Dumoulin† *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* Satellite data modelling and data calibration.

J. Dupic *CNES, Toulouse, France.* **Data simulation software design and development for FAST.**

O.V. Durlevich *Sternberg Astronomical Institute, Moscow University, Russia.* Computer processing of the lists of GCVS names allocated to new variables discovered with Hipparcos.

D. Egret *Observatoire Astronomique de Strasbourg, URA CNRS 1280, France.* **Compilation of complementary data for the Hipparcos Input Catalogue. Construction of the Tycho Input Catalogue.**

N. Elton *Mullard Space Science Laboratory, Holmbury St Mary, U.K.* Development of image dissector tube data analysis algorithms in NDAC.

A. Emanuele *Istituto di Astrofisica Spaziale, CNR, Frascati, Italy.* Optical modelling for FAST calibrations. Double star reductions in FAST. **Orbital double star solutions in FAST.**

M. Erbach *Astronomisches Rechen-Institut, Heidelberg, Germany.* Compilation of pre-launch astrometric data.

D.W. Evans *Royal Greenwich Observatory, Cambridge, U.K.* **Photometric reductions in NDAC. Merging of FAST and NDAC photometric data. Production of the Hipparcos Catalogue Epoch Photometry Annex. Leader of photometry working group.**

L. Eyer *Observatoire de Genève, Switzerland.* **Variable star analysis. Construction of light curves.** Variable star working group.

C. Fabricius *Copenhagen University Observatory, Denmark.* **Tycho Catalogue verification.**

J. Falin *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* Scientific secretary for FAST-France.

J.L. Falin *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* **FAST data reductions. Coordination of the software developed in FAST institutes. FAST consortium interface document. Coordination of the FAST data reductions.**

B. Fassino *Centro di Studi sui Sistemi, Torino, Italy.* Image dissector tube and star mapper data reduction in FAST. Attitude determination in FAST.

R.T. Fienberg *Sky Publishing Corporation, Cambridge, Massachusetts, U.S.A.* Publisher and overall coordinator for the Millennium Star Atlas.

F. Figueras *Universitat de Barcelona, Spain.* Observation of pre-launch photometric data.

G. Foster *AAVSO, Cambridge, U.S.A.* Construction of light curves.

W. Fricke† *Astronomisches Rechen-Institut, Heidelberg, Germany.* Chairman of the INCA Steering Committee (1982–88). FAST Steering Committee.

M. Frœschlé *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* **Pre-launch simulations of satellite and intermediate data. FAST data reductions. Sphere solution and astrometric parameter determination in FAST.** Astrometric results merging group.

M.S. Frolov *Institute of Astronomy (Russian Academy of Science), Moscow, Russia.* Preparing the list of new variables discovered with Hipparcos and satisfying the requirements for GCVS name lists.

J.Y. Le Gall *Laboratoire d'Astronomie Spatiale du CNRS, Marseille, France.* Modelling of the instrument optics.

I. Galligani *Instituto di Matematica, Bologna, Italy.* **Baseline FAST sphere solution.**

F. Gazengel *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* **Triple star solutions.**

F. Genova *CNES, Paris, France.* FAST Steering Committee.

A. Gòmez *Observatoire de Paris-Meudon, URA CNRS 335, France.* **Construction of the Hipparcos Input Catalogue. Coordination of the production of successive versions of the Hipparcos Input Catalogue. Reliability of the Hipparcos Input Catalogue data.** Interface with proposers. Publication of the Hipparcos Input Catalogue.

M.H. Gomez *CNES, Toulouse, France.* Management of the software documentation for FAST.

M. Gonano *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* Preparation of data calibrations.

M. Grenon *Observatoire de Genève, Switzerland.* **Construction of the Hipparcos Input Catalogue: coordination of acquisition and compilation of pre-launch photometric data. Photometric standard stars. Calibration of the Hipparcos and Tycho photometric systems. Variable star analysis. Construction of light curves. Construction of identification charts. Joint leader of variable star working group. Photometry working group. Hipparcos Catalogue photometry. Hipparcos Science Team.**

M. Grewing *Astronomisches Institut, Tübingen, Germany.* Organisation of the Tycho Consortium. **Hipparcos Science Team.**

V. Großmann *Astronomisches Institut, Tübingen, Germany.* **Tycho photometric calibrations and reductions. Production of the Tycho Catalogue Epoch Photometry Annex. Preparation of ASCII data files and index files for Tycho Catalogue Epoch Photometry Annex.** Photometry working group.

A. Guerry *CNES, Toulouse, France.* Integration of the global software system for FAST. **Exploitation of the data reduction software.**

J.L. Halbwachs *Observatoire Astronomique de Strasbourg, URA CNRS 1280, France.* **Production of Tycho Input Catalogue Revision. Tycho double star reductions. Tycho photometric reductions.**

P.C. Hansen *Copenhagen University Observatory, Denmark.* Development of algorithms for the Tycho Input Catalogue Revision and for Tycho astrometric processing. Development of algorithms for dynamical smoothing in NDAC.

L. Helmer *Astronomisk Observatorium, Brorfelde, Denmark.* Carlsberg Meridian Circle pre-launch observations.

P. Hemenway *University of Texas, Austin, U.S.A.* **Selection of Hipparcos-Hubble link stars.** Reference frame working group (Hubble Space Telescope observations).

R. Hering *Astronomisches Rechen-Institut, Heidelberg, Germany.* **Astrometric parameter determination in FAST.**

M. Hernandez *Royal Greenwich Observatory, Cambridge, U.K.* On-board clock calibrations.

D. Hestroffer *Bureau des Longitudes, URA CNRS 707, Paris, France/Astrophysics Division, ESA-ESTEC, The Netherlands.* **Solar system objects: reduction of FAST data; comparison of FAST/NDAC/TDAC data. Preparation of solar system object data for publication.**

F.A. van den Heuvel *Faculty of Geodetic Engineering, Delft University of Technology, The Netherlands.* Great-circle reductions for FAST.

E. Høg *Copenhagen University Observatory, Denmark.* **Satellite and payload design: Option A (1975), Tycho (1981). Leader of Tycho Consortium. Theoretical development of Tycho data reduction principles. Organisation of the Tycho Consortium. Development of the Hipparcos data reduction principles. Leader of NDAC Consortium (1982–90). Organisation of the NDAC Consortium. Compilation of Volume 4. Hipparcos Science Team. Preparation of Tycho data for the Millennium Star Atlas charts.** Documentation working group. Development of *Celestia 2000*.

C. Huc *CNES, Toulouse, France.* **Data Management and Command System. FAST Consortium software interface document. Integration of the institute-developed software in CNES.** Support of the great-circle reductions.

D. Iorio-Fili *Istituto Nazionale di Ottica, Firenze, Italy.* **Optical modelling for FAST calibrations.**

H. Jahreiß *Astronomisches Rechen-Institut, Heidelberg, Germany.* **Construction of the Hipparcos Input Catalogue: compilation of pre-launch astrometric data.**

C. Jaschek *Observatoire Astronomique de Strasbourg, URA CNRS 1280, France.* Former member of Hipparcos Science Team (1981).

K.J. Johnston *U.S. Naval Observatory, Washington, U.S.A.* Reference frame working group (radio stars: VLA observations).

D.L. Jones *Jet Propulsion Laboratory, Pasadena, U.S.A.* VLBI observations of radio stars for the reference frame link.

P.J. de Jonge *Faculty of Geodetic Engineering, Delft University of Technology, The Netherlands.* Great-circle reductions for FAST.

C. Jordi *Universitat de Barcelona, Spain.* Observation of pre-launch photometric data.

T.M. Kamperman *SRON, Utrecht, The Netherlands.* Pre-launch initial hardware studies.

E.V. Kazarovets *Institute of Astronomy (Russian Academy of Science), Moscow, Russia.* Checks of identifications of Hipparcos new variables with stars of the recent, still unpublished, GCVS name lists.

N.N. Kireeva *Institute of Astronomy (Russian Academy of Science), Moscow, Russia.* Selection of NSV catalogue stars confirmed with Hipparcos for allocating official GCVS names.

V. Kislyuk *Main Astronomical Observatory, Kiev, Ukraine.* Reference frame working group.

J.J. Kok† *Faculty of Geodetic Engineering, Delft University of Technology, The Netherlands.* Great-circle reductions for FAST.

J. Kovalevsky *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* **Leader of FAST Consortium. Coordination of FAST data reductions. Pre-launch data simulation. Theoretical development of Hipparcos data reduction principles. In-flight instrument calibration. Joint leader of reference frame working group.** Double and multiple star analysis. **Hipparcos Science Team.** Documentation working group.

P. Lacroute† *Strasbourg, France.* **Initiator of satellite astrometry concepts. Studies of satellite options, instrumentation, and reduction methods.** FAST Steering Committee.

P. Lampens *Koninklijke Sterrewacht van België, Brussels, Belgium.* Compilation of data for variable components in double/multiple systems. **Double star results: links with ground-based observations.** Double star working group.

M.G. Lattanzi *Osservatorio Astronomico di Torino, Italy.* Baseline sphere solution in FAST. **Formulation of alternative sphere solution method using real data in FAST.** Assessment of residual systematic errors between FAST and NDAC catalogues.

T. Lederle *Astronomisches Rechen-Institut, Heidelberg, Germany.* **Construction of the Hipparcos Input Catalogue: compilation of pre-launch astrometric data.**

F. van Leeuwen *Royal Greenwich Observatory, Cambridge, U.K.* **Attitude determination in NDAC. Image dissector tube and star mapper data reductions in NDAC. Instrument calibration. Satellite attitude control and torque calibration. Hipparcos Catalogue Epoch Photometry Annex. Variability analysis. Variability Annex. Joint leader of variable star working group. Photometric notes and references. Photometry working group. Compilation of Volume 3. Hipparcos Science Team. Documentation working group.**

M.B. van Leeuwen-Toczko *Cambridge, U.K.* Literature search for period determination methods for variability analysis.

H. Lenhardt *Astronomisches Rechen-Institut, Heidelberg, Germany.* Astrometric parameter determination in FAST.

J.F. Lestrade *Observatoire de Paris, URA CNRS 1757, Meudon, France.* **VLBI observations of radio stars for the reference frame link.** Reference frame working group.

L. Lindegren *Lund Observatory, Sweden.* **Leader of NDAC Consortium. Theoretical development of the Hipparcos data reduction principles. Satellite and payload design and optimisation. Theory and implementation of sphere solution and astrometric parameter determination. Double and multiple star reductions in NDAC.** Double star working group. **Production of Double and Multiple Systems Annex. Astrometric results merging group. Joint leader of reference frame working group. Documentation working group. Production of final Hipparcos Catalogue. Production of Hipparcos Catalogue intermediate astrometry. Production of the Hipparcos Transit Data. Transformation of astrometric data (Section 1.5). Compilation of Volume 3. Hipparcos Science Team.** Development of *Celestia 2000*.

J. Lub *Sterrewacht, Leiden, The Netherlands.* Observation of pre-launch photometric data.

N. Lund *Danish Space Research Institute, Copenhagen, Denmark.* Great-circle and sphere solution studies in NDAC. Organisation of NDAC Consortium. Organisation of Tycho Consortium.

S.M. MacGillivray *Sky Publishing Corporation, Cambridge, Massachusetts, U.S.A.* Publication manager for the Millennium Star Atlas.

V.V. Makarov *Copenhagen University Observatory, Denmark.* **Tycho data reductions. Tycho double star reductions. Tycho Catalogue production. Preparation of Tycho data for the Millennium Star Atlas charts.**

J. Manfroid *Institut d'Astronomie, Liège, Belgium.* Observation of pre-launch photometric data.

H. van der Marel *Faculty of Geodetic Engineering, Delft University of Technology, The Netherlands.* **Great-circle reductions in FAST. Comparison of great-circle abscissae between NDAC and FAST.** Instrument calibration. **Hipparcos Science Team.**

C. Martin *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* **Double star photometry.**

J.A. Mattei *AAVSO, Cambridge, U.S.A.* **Compilation of AAVSO data for variable stars prelaunch and during the mission. Ephemerides for large-amplitude variable stars.** Variable star analysis. Variable star working group. Construction of light curves.

H. Mauder *Astronomisches Institut, Tübingen, Germany.* Tycho photometric data reductions.

J.M. Mazurier *Observatoire de Bordeaux, URA CNRS 352, France.* Bordeaux Meridian Circle pre-launch observations.

B. McLean *Space Telescope Science Institute, Baltimore, U.S.A.* Connection between the Tycho Catalogue and the Guide Star Catalog.

D. McNally *University of London Observatory, London, U.K.* Organisation of Tycho Consortium. Development of data analysis algorithms for Tycho.

S. Meara *Royal Greenwich Observatory, Cambridge, U.K.* Literature search for variability analysis.

D. Mégevand *Observatoire de Genève, Switzerland.* Construction of identification charts. Construction of light curves. **Preparation of identification charts and light curves for publication.**

M.O. Mennessier *Université de Montpellier II, URA CNRS 1368, France.* **Compilation of pre-launch data for variable stars. Pre-launch ephemerides of large-amplitude variable stars, and updates throughout mission. Evaluation of ESOC real-time monitoring of red variable stars.** Improvement of photometric calibrations for red stars.

E.T. Mentall *Sky Publishing Corporation, Cambridge, Massachusetts, U.S.A.* Shapes of nebulae and orientations of galaxies for the Millennium Star Atlas.

J.C. Mermilliod *Institut d'Astronomie de l'Université de Lausanne, Switzerland.* **Selection and compilation of pre-launch data for stars in open clusters.** Compilation of pre-launch photometric data.

M. Mermilliod *Institut d'Astronomie de l'Université de Lausanne, Switzerland.* Compilation of pre-launch photometric data.

F. Migliaccio *Dipartimento di Topografia e Rilevamento, Politecnico di Milano, Italy.* Pre-launch studies of sphere solution methods in FAST.

F. Mignard *Observatoire de la Côte d'Azur/CERGA, URA CNRS 1360, Grasse, France.* **FAST data reductions: astrometry and photometry. Theoretical development of Hipparcos data reduction principles. Photometry working group. Leader of double star working group.** Astrometric results merging group. **Hipparcos Science Team. Documentation working group. Production of Hipparcos Catalogue intermediate astrometry. Compilation of Volume 3.**

B. Morando† *Bureau des Longitudes, URA CNRS 707, Paris, France.* **Solar system objects.**

D. Morin *Observatoire de Paris-Meudon, URA CNRS 335, France.* **Construction of the Hipparcos Input Catalogue. Distribution of Hipparcos Catalogue data. Hipparcos Input Catalogue updates.** Development of *Celestia 2000*.

L.V. Morrison *Royal Greenwich Observatory, Cambridge, U.K.* **Carlsberg Meridian Circle pre-launch observations.** Reference frame working group (radio stars: Merlin observations).

F.P. Murgolo *Tecnopolis-CSATA, Bari, Italy.* **Software finalisation and engineering for baseline sphere solution in FAST.** Preparation of double star reductions in FAST.

C.A. Murray *Royal Greenwich Observatory, Herstmonceux, U.K.* Measurement of pre-launch astrometric data. Astrometric reductions in NDAC. **Hipparcos Science Team. Astrometric results merging group.** Intermediate astrometric results.

B. Nicolet *Observatoire de Genève, Switzerland.* Pre-launch simulations of satellite observing programme. Pre-launch optimisation of global observing programme.

O. Nys *Observatoire Royal de Belgique, Bruxelles, Belgium.* **Compilation of pre-launch double and multiple star data. Construction of the Catalogue of the Components of Double and Multiple Stars (CCDM) used for the double/multiple star annexes.**

E. Oblak *Observatoire de Besançon, France.* Observation and compilation of pre-launch photometric data, in particular for double and multiple stars. Global observing programme optimisation.

F. Ochsenbein *Observatoire Astronomique de Strasbourg, URA CNRS 1280, France.* FITS interfaces.

K.S. O'Flaherty *Astrophysics Division, European Space Agency, ESTEC, The Netherlands.* **Preparation of ASCII CD-ROMs. FITS interfaces. Compilation of Volume 2.**

W. O'Mullane *Astrophysics Division, European Space Agency, ESTEC, The Netherlands.* **Preparation of ASCII CD-ROMs. Load and search routines for ASCII data files.**

R. Pannunzio *Osservatorio Astronomico di Torino, Italy.* **Double and triple star reductions in FAST.** Double star working group.

E.N. Pastukhova *Institute of Astronomy (Russian Academy of Science), Moscow, Russia.* Computer determination of constellations for the GCVS names of new variables discovered with Hipparcos, checks of border cases, GSC identifications.

H. Pedersen *Copenhagen University Observatory, Denmark.* **Tycho astrometric catalogue production.**

M.J. Penston *Royal Greenwich Observatory, Cambridge, U.K.* Pre-launch astrometric measurements. **ESOC–RGO and internal NDAC interface software. Variable star period determinations. Control of data reduction software within NDAC/RGO.** Image dissector tube and star mapper data reductions in NDAC. Satellite torque analysis and on-board clock analysis. Variability annex. Variable star working group.

J.P. Périé *Observatoire de Bordeaux, URA CNRS 352, France.* Measurement of pre-launch astrometric data.

B. Pernier *Observatoire de Genève, Switzerland.* Observation of pre-launch photometric data.

M.A.C. Perryman *Astrophysics Division, European Space Agency, ESTEC, The Netherlands.* **ESA Project Scientist for Hipparcos. Scientific coordination of the Hipparcos project. Hipparcos Science Team (Chairman). Interface between scientific teams, industry, ESOC, and ESA advisory groups. Coordination of scientific inputs to satellite design, calibration and operation. Project manager during satellite operations. Interface with INCA, NDAC, FAST and TDAC Consortia, and working groups. Leader of documentation working group. Compilation of Volumes 1 and 2. Coordination of final mission products.**

C.S. Petersen *Copenhagen University Observatory, Denmark.* **Great-circle reductions in NDAC.** Instrument calibration.

R.B. Phillips *Haystack Observatory, Westford, U.S.A.* VLBI observations of radio stars for the reference frame link.

J.L. Pieplu *CNES, Toulouse, France.* **Coordination of the CNES operational software development, integration and test in FAST.** Astrometric parameter determination software support and integration. FAST data reductions. FAST Steering Committee.

I. Platais *Yale University Observatory, New Haven, U.S.A.* Reference frame working group (Lick and Yale proper motion stars).

K. Poder *Geodetic Institute, Copenhagen, Denmark.* Great-circle and sphere solution studies in NDAC.

R.S. Le Poole *Sterrewacht, Leiden, The Netherlands.* Construction of the Hipparcos Input Catalogue: observations related to pre-launch astrometric data. Instrument evolution and analysis. Optimisation of data reductions and error evaluation. **Hipparcos Science Team.** FAST Steering Committee. Verification of double and multiple systems annex data by ground-based observations.

R.A. Preston *Jet Propulsion Laboratory, Pasadena, U.S.A.* **Organisation of VLBI observations of radio stars for the reference frame link.**

L. Prévot *Observatoire de Marseille, URA CNRS 237, France.* **Measurement of pre-launch astrometric data.**

G. Prezioso *Tecnopolis-CSATA, Bari, Italy.* **Preparation of double star reductions in FAST.**

D. Priou *IGN, Paris, France.* **Development of HICIS software for the Hipparcos Input Catalogue CD-ROM. Development of *Celestia 2000*.**

L. Quijano *Real Instituto y Observatorio de la Armada, San Fernando, Spain.* Observation of pre-launch astrometric data.

C.F. Quist *Lund Observatory, Sweden.* Preparation of the Hipparcos Transit Data file.

N. Ramamani *Royal Greenwich Observatory, Cambridge, U.K.* Image dissector tube and star mapper data reductions in NDAC.

M. Rapaport *Observatoire de Bordeaux, URA CNRS 352, France.* Pre-lauch ephemerides of minor planets.

Y. Réquième *Observatoire de Bordeaux, URA CNRS 352, France.* **Construction of the Hipparcos Input Catalogue. Coordination of the observations of pre-launch astrometric data. Bordeaux Meridian Circle pre-launch observations.**

L.J. Robinson *Sky Publishing Corporation, Cambridge, Massachusetts, U.S.A.* Chief consultant on the Millennium Star Atlas.

V. Roman *CNES, Toulouse, France.* Software configuration control in CNES for FAST.

S. Röser *Astronomisches Rechen-Institut, Heidelberg, Germany.* Reference frame working group. Prediction of Tycho transits for solar system objects.

M. Rousseau *Observatoire de Bordeaux, URA CNRS 352, France.* **Measurement of pre-launch astrometric data.**

J.L. Russell *Space Telescope Science Institute, Baltimore, U.S.A.* Application of the Guide Star Catalog to the Tycho Input Catalogue.

M. Saisse *Laboratoire d'Astronomie Spatiale du CNRS, Marseille, France.* Former member of Hipparcos Science Team (1981).

N.N. Samus *Institute of Astronomy (Russian Academy of Science), Moscow, Russia.* **Allocation of GCVS official names to new variables discovered with Hipparcos.**

F. Sansò *Dipartimento di Topografia e Rilevamento, Politecnico di Milano, Italy.* Pre-launch studies of sphere solution methods in FAST.

A.B. Saust *Copenhagen University Observatory, Denmark.* Development of data analysis algorithms for Tycho astrometry.

D. Scales *Astronomisches Institut, Tübingen, Germany.* Tycho photometric data reductions.

E. Schilbach *Sternwarte Babelsberg, Potsdam, Germany.* Reference frame working group (Schmidt plate observations).

M.G. Schirone *Tecnopolis-CSATA, Bari, Italy.* Preparation of double star reductions in FAST. Implementation of baseline sphere solution in FAST.

H. Schrijver *SRON, Utrecht, The Netherlands.* **First-Look analysis and instrument calibration in FAST. Satellite payload geometrical calibration. Construction and development of the final results data base. Coordination of inputs to the final results data base. Final results compilation and verification. Hipparcos Science Team.** Documentation working group. **Production of printed and machine-readable Hipparcos Catalogue and Annexes. Preparation of Hipparcos data for the Millennium Star Atlas charts. Preparation of ASCII CD-ROMs.** Development of *Celestia 2000*.

P. Schwekendiek *Astronomisches Rechen-Institut, Heidelberg, Germany.* Prediction of Tycho transits. **Tycho transit prediction updating.**

G. Sechi *Centro di Studi sui Sistemi, Torino, Italy.* Comparison of attitudes determined by FAST and NDAC.

A. Sellier *Observatoire de Paris-Meudon, URA CNRS 335, France*. Compilation of pre-launch data for double and multiple stars. **Preparation of open cluster charts.**

G. Serieys *CNES, Toulouse, France*. **Exploitation of the data reduction software for FAST.**

R.W. Sinnott *Sky Publishing Corporation, Cambridge, Massachusetts, U.S.A.* **Programming and plotting of the Millennium Star Atlas charts.**

M.A.J. Snijders *Royal Greenwich Observatory, Cambridge, U.K. & Astronomisches Institut, Tübingen, Germany.* Preparation of NDAC data reductions. Tycho photometric error analysis.

S. Söderhjelm *Lund Observatory, Sweden*. Software for sphere solution and astrometric parameter determination in NDAC. Simulations of determination of general relativistic metric. **Double and multiple star reductions in NDAC. Construction of the Hipparcos Transit Data. Double star working group.**

A. Spagna *Osservatorio Astronomico di Torino, Italy.* Double and multiple star reductions in FAST.

B. Stewart *Rutherford Appleton Laboratory, Chilton, U.K.* Development of star mapper data processing algorithms for Tycho.

J. Storm *Copenhagen University Observatory, Denmark*. Development of data analysis algorithms for Tycho astrometry.

C. Taieb *Laboratoire d'Astronomie Spatiale du CNRS, Marseille, France*. Modelling of the instrument.

T. Tommasini *Dipartimento di Matematica, Università di Bologna, Italy.* **Baseline sphere solution numerical methods in FAST.**

J. Torra *Universitat de Barcelona, Spain*. Observation of pre-launch photometric data.

H.-J. Tucholke *Sternwarte der Universitaet Bonn, Germany.* Measurement of pre-launch astrometric data for stars in open clusters. Reference frame working group (photographic method).

C. Turon *Observatoire de Paris-Meudon, URA CNRS 335, France*. **Leader of INCA Consortium. Production of the Hipparcos Input Catalogue. Updating of observing programme throughout the mission. Interface with proposers. Interface with Scientific Selection Committee. Development of *Celestia 2000*. Verification of final catalogue formats. Hipparcos Science Team.** Documentation working group.

M. Vadel *CNES, Toulouse, France*. Exploitation of the data reduction software for FAST.

A. Vargas *CNES, Toulouse, France*. **Design of the Data Management and Command System.** Support and integration of the grid coordinate software in FAST.

C. de Vegt *Hamburg Observatory, Germany.* Measurement of pre-launch astrometric data. Reference frame working group (photographic and CCD observations).

M. Villenave *CNES, Toulouse, France*. **Data preparation software in FAST.**

J. Vondrak *Astronomical Institute, Prague, Czech Republic*. Reference frame working group (Earth rotation observations).

C. Waelkens *Instituut voor Sterrenkunde, Leuven, Belgium*. Classification of A- and B-type small-amplitude variables.

K. Wagner *Astronomisches Institut, Tübingen, Germany.* **Tycho transit identifications.**

H.G. Walter *Astronomisches Rechen-Institut, Heidelberg, Germany.* Pre-launch compilation of data for radio stars. **Astrometric parameter determination in FAST.** Former member of Hipparcos Science Team (1981).

L. Weber *Observatoire de Genève, Switzerland.* Construction of identification charts.

P.R. Wesselius *Department of Space Research, Groningen, The Netherlands.* Organisation of Tycho Consortium. Development of data analysis algorithms for Tycho.

G. Whitfield *Royal Greenwich Observatory, Cambridge, U.K.* Development of attitude reconstruction software.

A. Wicenec *Astronomisches Institut, Tübingen, Germany.* **Detection of star signal and sky background with Tycho. Tycho Epoch Photometry Annex production. Tycho Catalogue verification.**

R. Wielen *Astronomisches Rechen-Institut, Heidelberg, Germany.* **Parts G, O, V and X of the Double and Multiple Systems Annex.** FAST Steering Committee.

G.J. Wiersma *SRON, Utrecht, The Netherlands.* First-Look analysis and instrument calibration.

C.G. Wynne *Royal Greenwich Observatory, Cambridge, U.K.* Former member of Hipparcos Science Team (1981–84).

M. Yoshizawa *Copenhagen University Observatory, Denmark*. Development of star mapper data processing algorithms for Tycho.

V. Zappalà *Osservatorio Astronomico di Torino, Italy.* Modelling of minor planets in FAST.

I. Zegelaar *Sterrewacht, Leiden, The Netherlands.* Variability analysis of RR Lyrae variables.