

Search strategy

Query

```
( (SIMUL+ AND ASTRONOM+)/TI AND (OBSERV+)/TI/AB/TX ) AND PD <= 2017-12-27
```

14 Documents

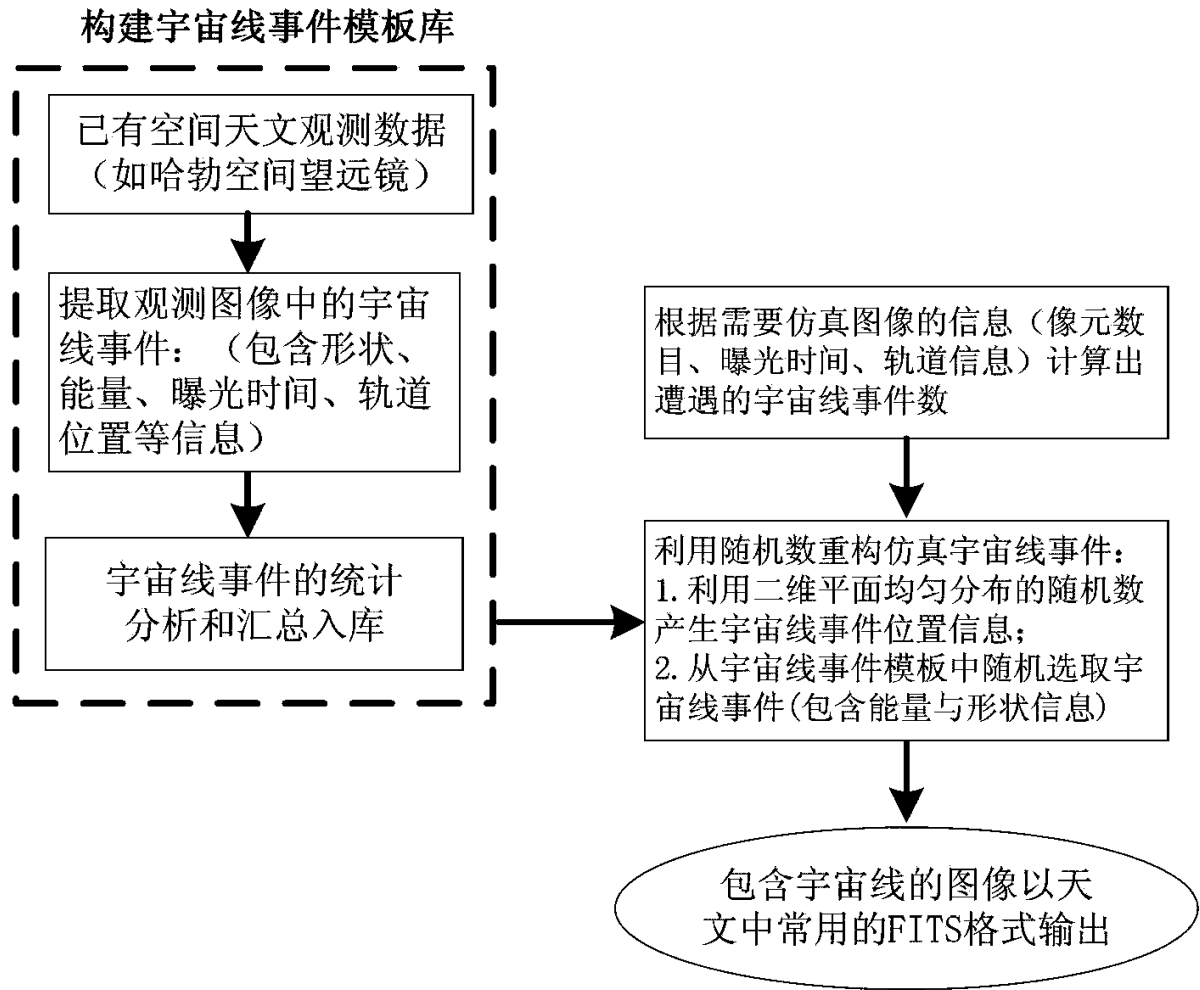
Publication numbers	Title	Current assignees
CN103324812 A	Method for simulating space astronomy cosmic ray observation image	NATIONAL ASTRONOMICAL OBSERVATORIES CHINESE ACADEMY OF SCIENCES
CN201993521U U	Simulation astronomical telescope	ANHUI POPULAR SCIENCE PRODUCT ENGINEERING RESEARCH CENTRE
CN102162909 A	Simulation astronomical telescope	ANHUI POPULAR SCIENCE PRODUCT ENGINEERING RESEARCH CENTRE
CN102353884 A	LED light source apparatus for correction and test by simulating sun movement and astronomical refraction	RAYSPower NEW ENERGY
CN104537180 A	Numerical simulation method of astronomical site selection atmospheric optical parameter measurement instrument	NANJING INSTITUTE OF ASTRONOMICAL OPTICS & TECHNOLOGY NATIONAL ASTRONOMICAL OBSERVATORIES CAS
JP2006139003 A	Planetarium system and program for astronomical simulator	KONICA MINOLTA PLANETARIUM
JP2004361584 A	Projector for planetarium and program for astronomical simulator	KONICA MINOLTA PLANETARIUM
US4213254 A	Astronomical optical simulator	WHITING THOMAS A
RU2581643 C1	Simulator for training complex tasks of study of astronomical object by participants of space expedition	FEDERALNOE G BJDZHETNOE UCHREZHDENIE NAUKI G NTS RF INSTITUTE MEDIKO BIOLOG ROSSIJSKOJ AKADEMII NAUK GNT
CN102799192 A	Nonlinear disturbance simulation and detection control system for astronomical telescope	NANJING INSTITUTE OF ASTRONOMICAL OPTICS & TECHNOLOGY NATIONAL ASTRONOMICAL OBSERVATORIES CAS
JP2005010546 A	Planetarium projection system and program for astronomical simulator	KONICA MINOLTA PLANETARIUM
JP2005003833 A	Planetarium projector and program for astronomical simulator	KONICA MINOLTA PLANETARIUM
FR2423835 A1	Sky at night simulator - has micro computer controlling light sources placed under hemispherical frame	POIRIER ALAIN
KR20030007273 A	Astronomical simulation apparatus and method	CHO HYUNG, ...

Title

(CN103324812)

Method for simulating space astronomy cosmic ray observation image

Images



Publication data including kind & date

CN103324812	A	2013-09-25	CN103324812
CN103324812	B	2015-12-23	CN103324812B



Abstract

(CN103324812B)

The invention discloses a method for simulating a space astronomy cosmic ray observation image. The method comprises a first step of choosing existing space telescope images according to the characters of a space astronomy observation instrument which needs simulating, a second step of grouping the space telescope images according to different orbital positions in the process of observing, wherein each group of images are processed by the following steps, firstly, all cosmic ray events in the images are extracted to establish cosmic ray event template libraries, and secondly, the statistic analysis is carried out on the cosmic ray event template libraries established for each group of images, the statistic process is carried out on the quantity of encountered events on a CCD target face in unit picture element area and in unit time, the quantity of the encountered events is recorded as the cosmic ray encounter rate CRsRate, and the statistic process is carried out on the energy distribution of the cosmic ray events and the number of picture elements occupied by each cosmic ray event, a third step of extracting the cosmic ray events from the cosmic ray event template libraries according to the information of images to be simulated, a fourth step of generating simulation cosmic ray images through the extracted cosmic ray events in the third step, the remaining picture elements, except the cosmic ray events, in the images serve as the background, and the value of the remaining picture elements is set to be zero.

Inventors

WU CHAO

DENG JINGSONG

QIU YULEI

WEI JIANYAN

Latest standardized assignees - inventors removed

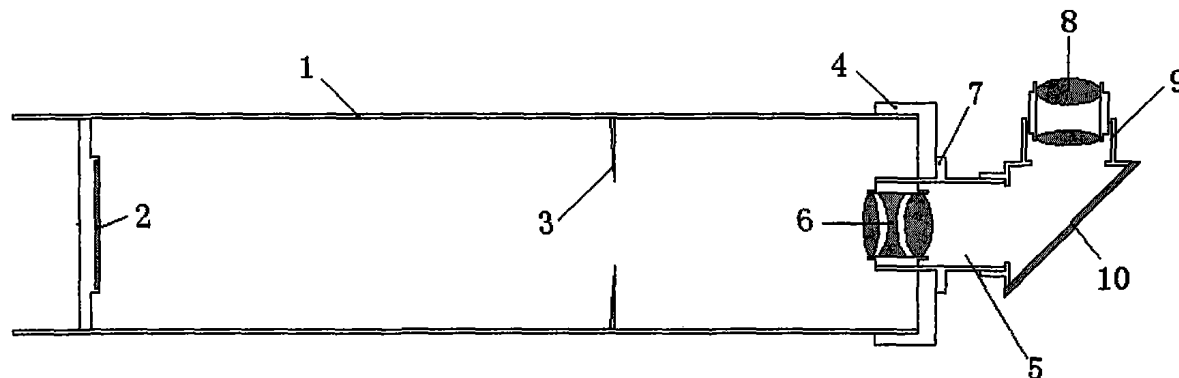
NATIONAL ASTRONOMICAL OBSERVATORIES CHINESE ACADEMY OF SCIENCES

Family 2/14 - FAMPAT - ©Questel

Title

(CN201993521U)

Simulation astronomical telescope

Images**Publication data including kind & date**[CN201993521](#)

U

2011-09-28

CN201993521U

**Abstract**

(CN201993521U)

The utility model discloses a simulation astronomical telescope, which comprises a tube mechanism. An OLED (organic light emitted diode) display screen which is controlled by a single chip microcomputer to realize a display function is disposed at the front end of the tube mechanism, a diaphragm is arranged at the middle end of the tube mechanism, a projection observation device is connected to the rear end of the tube mechanism via a transfer connector, a projection lens mounting tube provided with a projection lens is arranged at the front of the projection observation device, a zenith lens is arranged in the middle of the projection observation device, a 45-degree plane mirror is mounted in the zenith lens, and an eye lens which is perpendicular to the projection lens mounting tube is disposed on the rear of the projection observation device. An objective lens imaging system in the front half of an astronomical telescope is replaced by a simulation imaging system, vivid celestial images are simulated on a focal plane at real time to be observed, and the simulation astronomical telescope is unaffected by observation conditions, is simple in service, wide in applicability range, and suitable to be used as an introduction tool or an auxiliary device for astronomy enthusiasts to be familiar with the starry sky and train using skills of telescopes.

Inventors

YANG PING

FANG MING

ZHOU JUNQING

YU GAO

Latest standardized assignees - inventors removed

ANHUI POPULAR SCIENCE PRODUCT ENGINEERING RESEARCH CENTRE

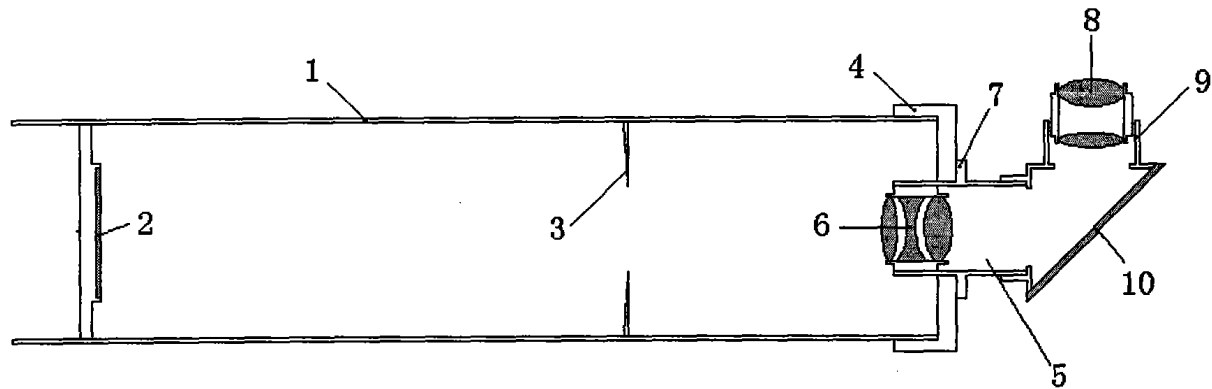
Family 3/14 - FAMPAT - ©Questel

Title

(CN102162909)

Simulation astronomical telescope

Images



Publication data including kind & date

[CN102162909](#)

A

2011-08-24

CN102162909



Abstract

(CN102162909)

The invention discloses a simulation astronomical telescope. The simulation astronomical telescope comprises a lens barrel mechanism, wherein an organic light emitting diode (OLED) display screen which is controlled by a singlechip to display is arranged at the front end of the lens barrel mechanism, an aperture is arranged at the middle end of the lens barrel mechanism, and a projection observation device is connected at the rear end of the lens barrel mechanism through an interface; and a projection lens assembling lens barrel with a projection lens is arranged on the front part of the projection observation device, a zenith telescope is arranged on the middle part of the projection observation device, a 45-DEG plane mirror is arranged in the zenith telescope, and an ocular lens perpendicular to the projection lens assembling lens barrel is arranged on the rear part of the projection observation device. In the simulation astronomical telescope, a simulation imaging system is used for replacing an objective lens imaging system which is arranged on the front half part of an astronomical telescope, and living celestial body images are simulated on the focal plane in real time for observation. The simulation astronomical telescope is not influenced by observation conditions, is easy to use, has a wide application range, and is suitable to be used as beginning tools and auxiliary equipment for astrophiles to know starry sky well and train using skills of telescopes.

Inventors

YANG PING

FANG MING

ZHOU JUNQING

YU GAO

Latest standardized assignees - inventors removed

ANHUI POPULAR SCIENCE PRODUCT ENGINEERING RESEARCH CENTRE

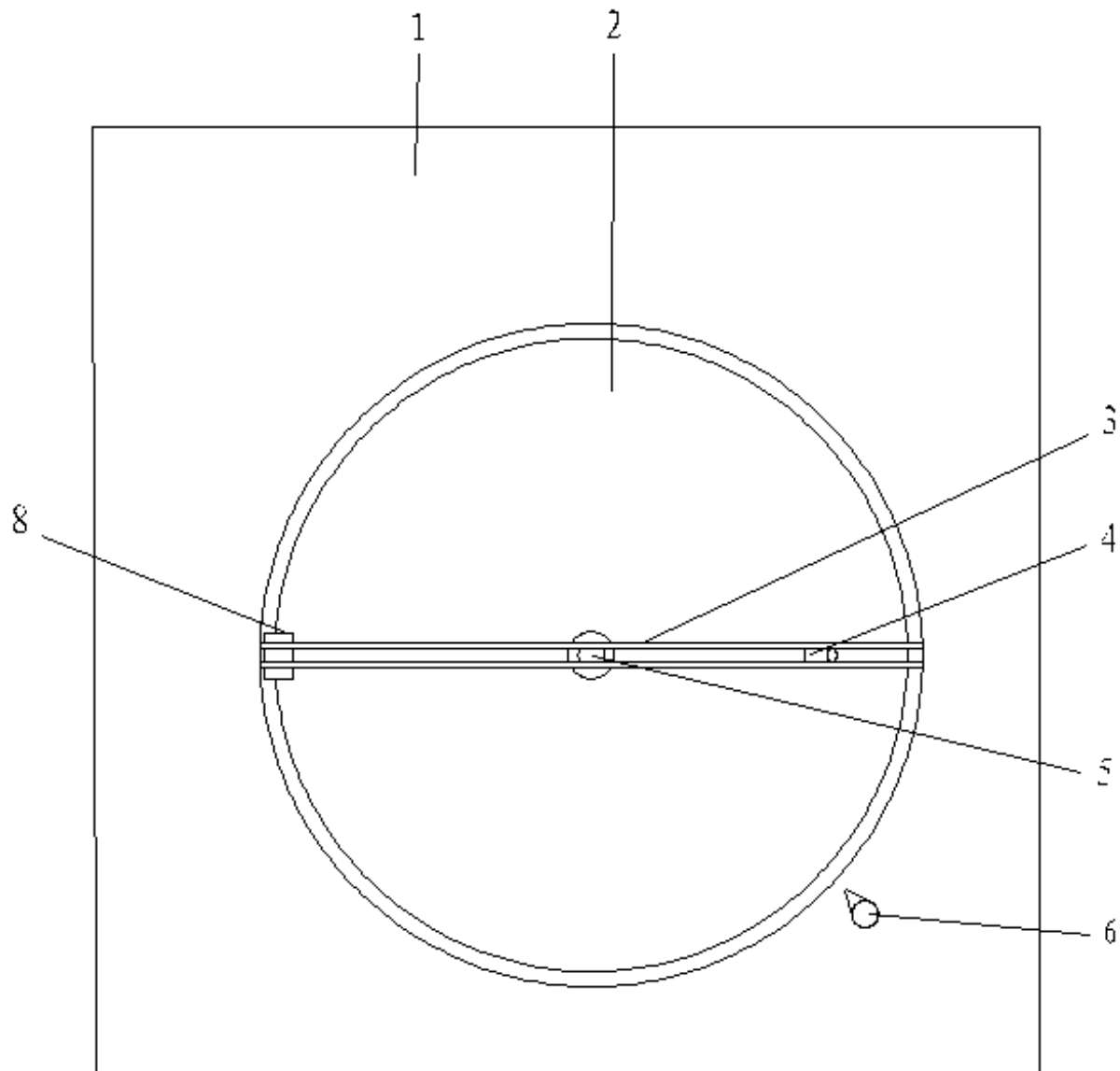
Family 4/14 - FAMPAT - ©Questel

Title

(CN102353884B)

LED light source apparatus for correction and test by simulating sun movement and astronomical refraction

Images



Publication data including kind & date

CN102353884	A	2012-02-15	CN102353884
CN102353884	B	2013-10-16	CN102353884B



Abstract

(CN102353884B)

The invention discloses a simulation sun movement astronomical refraction correction and test LED light source apparatus. The apparatus comprises: a fixed plate; a horizontal rotary plate; a horizontal driver, which is used for controlling horizontal rotations of the horizontal rotary plate to simulate an azimuth change of the sun; a vertical shunt; a vertical driver, which is used for controlling vertical rotations of the vertical shunt to simulate a pitch angle change of the sun; a simulation LED light source device; a sun aspect sensor; and an atmospheric environment simulator, which is used for simulating meteorological conditions of weathers. The fixed plate and the horizontal rotary plate are connected smoothly and rotationally; the vertical shunt and the vertical driver are arranged on the horizontal rotary plate; the simulation LED light source device is arranged on the vertical shunt; and the horizontal driver is arranged on the fixed plate. Besides, a distance between the simulation LED light source device and the sun aspect sensor can be adjusted movably, so that a sun-earth distance and changes of sun visual sense sizes can be simulated, wherein the changes of sun visual sense sizes are caused by the astronomical refraction. According to the invention, an actual running state of the sun can be simulated realistically.

Inventors

XUE LIMING

LIU BOANG

Latest standardized assignees - inventors removed

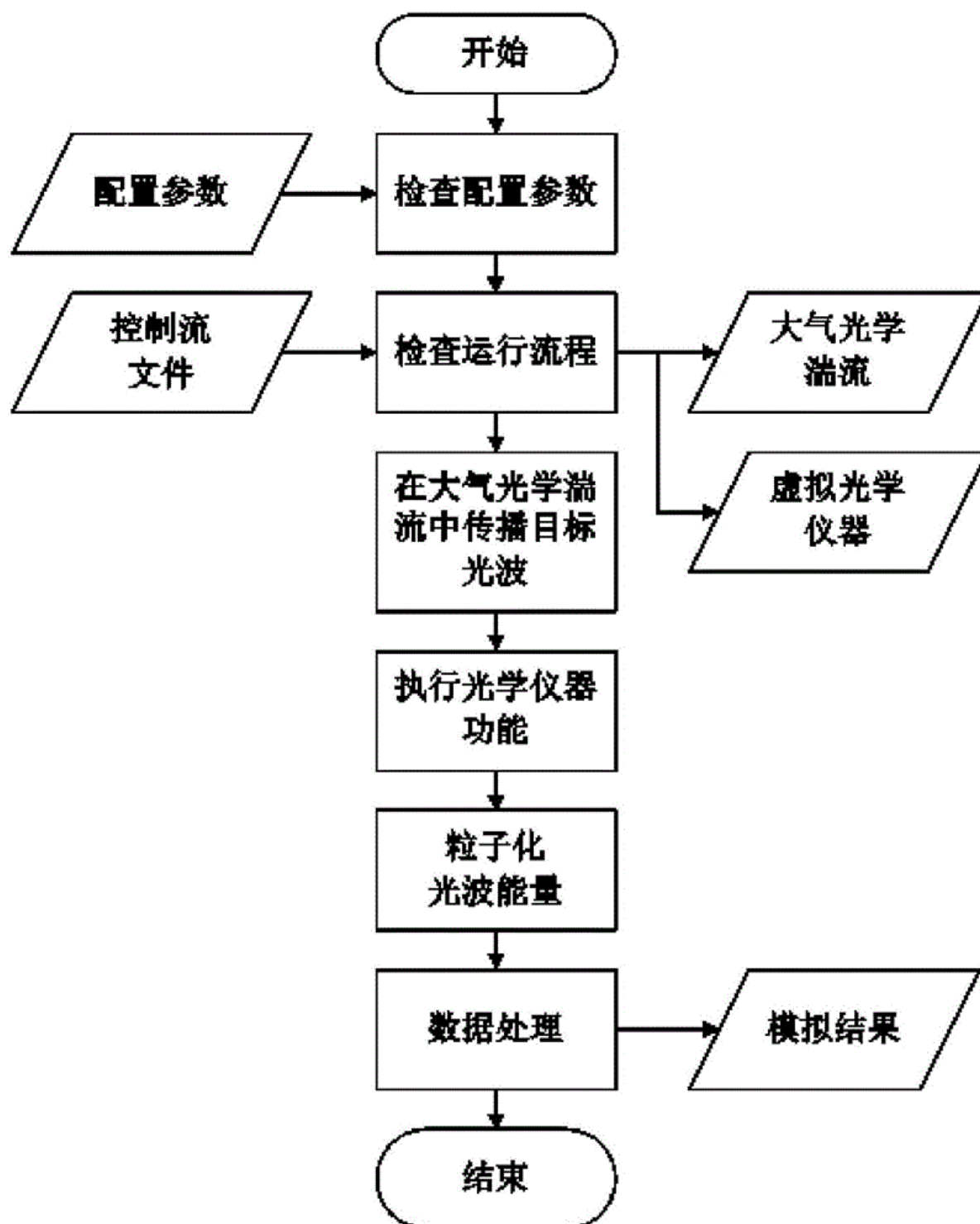
RAYSPower NEW ENERGY

Family 5/14 - FAMPAT - ©Questel

Title

(CN104537180)

Numerical simulation method of astronomical site selection atmospheric optical parameter measurement instrument

Images**Publication data including kind & date**[CN104537180](#)

A

2015-04-22

CN104537180

[CN104537180](#)

B

2017-05-17

CN104537180B

**Abstract**

(CN104537180B)

Provided is a numerical simulation method of an astronomical site selection atmospheric optical parameter measurement

instrument. A configuration parameter module, a light wave atmospheric transmission model, an optical instrument physical model, a detector model, a data processing module and an operation scheme module are arranged; a simulation input condition is configured in the configuration parameter module; an optical instrument tracks objects; a command stream control file is programmed in the operation scheme module; operation starts, and an atmospheric optical module, an optical instrument module, a detector module and the data processing module are executed; an accelerating algorithm is designed for the modules; a major control logical algorithm is achieved on a CPU, and a high-parallelism large-data-throughout algorithm is achieved on a GPU. The method has expandability, a virtual experiment platform can be erected, performance comparison between astronomical site selection atmospheric optical turbulence measurement instruments is achieved through numerical simulation, the accelerating algorithm is designed to achieve real-time simulation of the turbulence measurement instruments, and the major control logical algorithm is achieved on the CPU of a computer.

Inventors

DAI SONGXIN

CHEN HUALIN

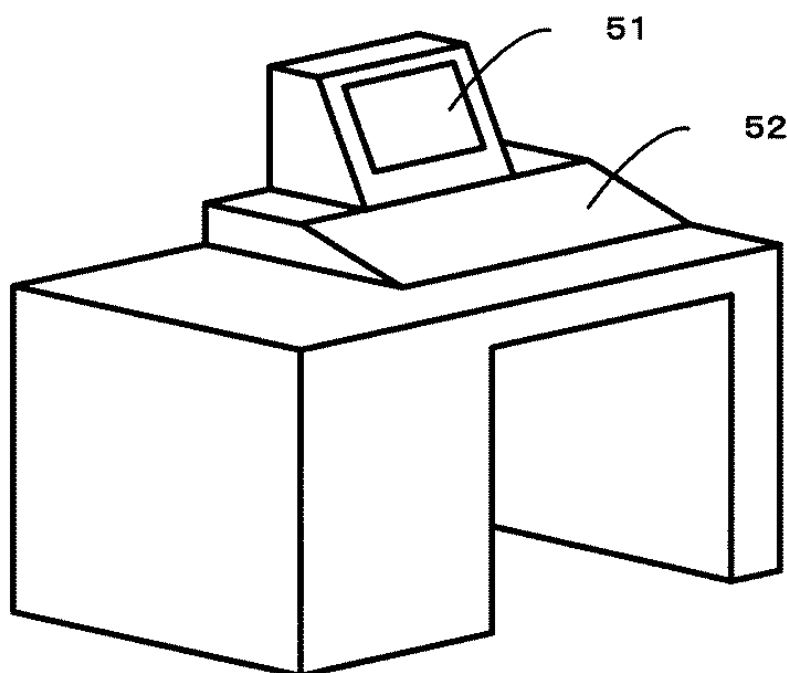
Latest standardized assignees - inventors removedNANJING INSTITUTE OF ASTRONOMICAL OPTICS & TECHNOLOGY NATIONAL ASTRONOMICAL OBSERVATORIES
CAS

Family 6/14 - FAMPAT - ©Questel

Title

(JP2006139003)

Planetarium system and program for astronomical simulator

Images**Publication data including kind & date**[JP2006139003](#)

A

2006-06-01

JP2006139003

**Abstract**

(JP2006139003)

PROBLEM TO BE SOLVED: To provide a planetarium system having an operation section enabling even an inexperienced operator to easily select an auxiliary image for explanation.

SOLUTION: The planetarium system is equipped with a dome screen 1 and a projector 10 for projecting a star field on the

dome screen 1. The projector 10 includes a video control section 2, video projecting section 3, and an operation section 5. The video control section 2 controls video images to be projected on the dome screen 1, and creates an operation picture to be displayed on the operation section 5. For carrying out the control on the operation screen: first, the observation time and the observation spot of the star field currently projected are acquired; then, a data storage section is referred to, and auxiliary images suitable for projection at the observation time and the observation point of the star field currently projected are extracted out of some auxiliary images in storage; and an operation picture showing buttons enabling selection of extracted auxiliary images is displayed.

COPYRIGHT: (C)2006,JPO&NCIP

Inventors

NISHIGAKI JUNJI

SUDA MASAKI

Latest standardized assignees - inventors removed

KONICA MINOLTA PLANETARIUM

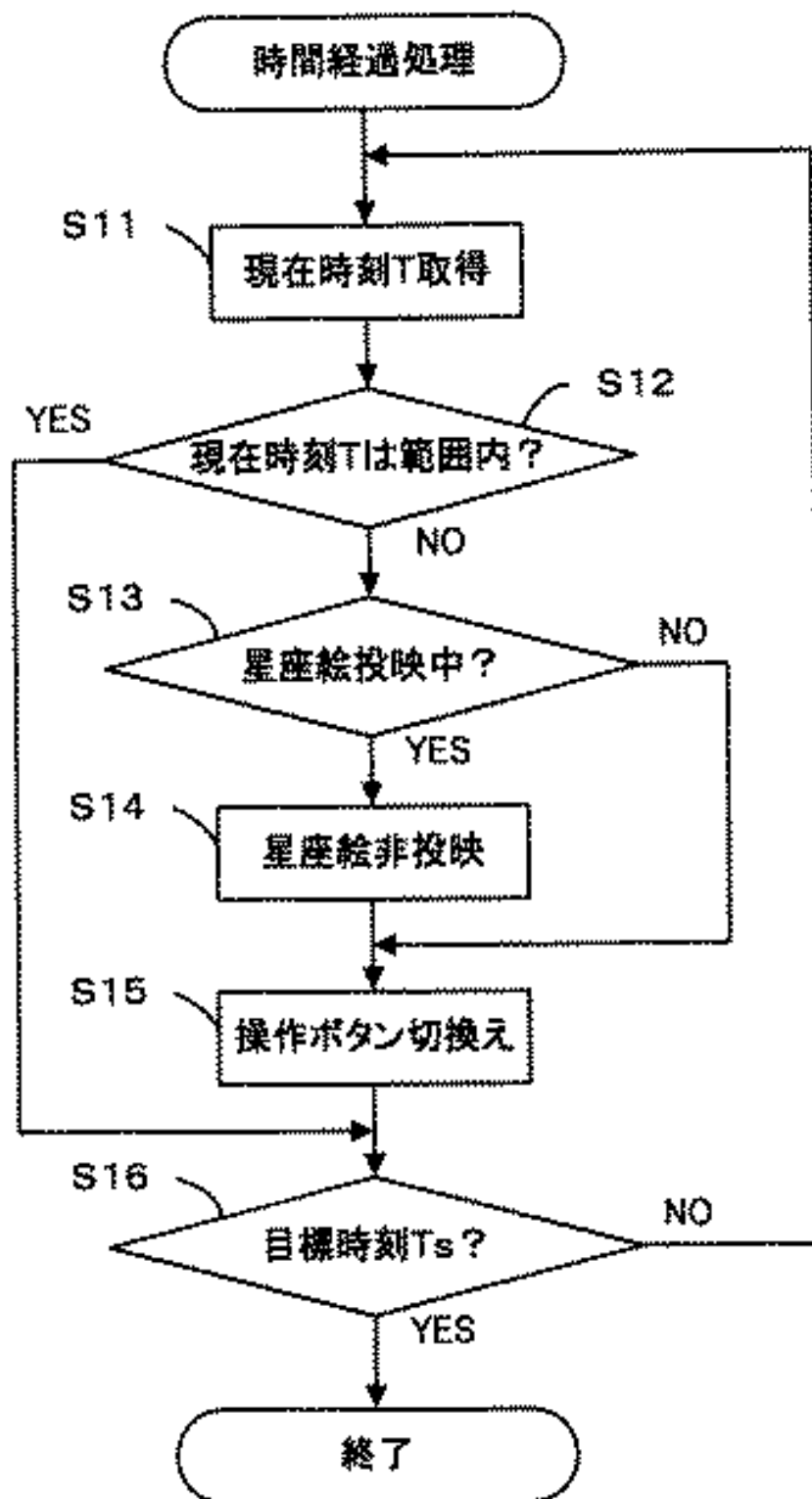
Family 7/14 - FAMPAT - ©Questel

Title

(JP2004361584)

Projector for planetarium and program for astronomical simulator

Images



Publication data including kind & date

[JP2004361584](#)

A 2004-12-24

JP2004361584

[JP4225837](#)

B2 2008-12-05

JP4225837



Abstract

(JP4225837)

PROBLEM TO BE SOLVED: To provide a planetarium projector capable of presenting the proper motions of fixed stars and a pseudo space travel, and capable of maintaining natural images to spectators without requiring advanced astronomical knowledge of an operator.

SOLUTION: First, the present time T is obtained. Then, whether the obtained time T is within the pre-set time range is determined. When the time T is out of the range, whether a constellation picture is being projected is determined. When the constellation picture is being projected, the constellation picture is brought into a non-projection state. After this operation or when the constellation picture is not being projected, the constellation operation button in an operation section is inhibited from being operated. After this operation or when the time T is within the range, whether the present time T has reached the target time Ts is determined. In the case the time T has not reached the target time Ts, the above operations are repeated. In the case the time T has reached the target time Ts, the process is terminated.

COPYRIGHT: (C)2005,JPO&NCIPI

Inventors

Kenichi Hyodo

Yoshio Nakagawa

Junji Nishigaki

Latest standardized assignees - inventors removed

KONICA MINOLTA PLANETARIUM

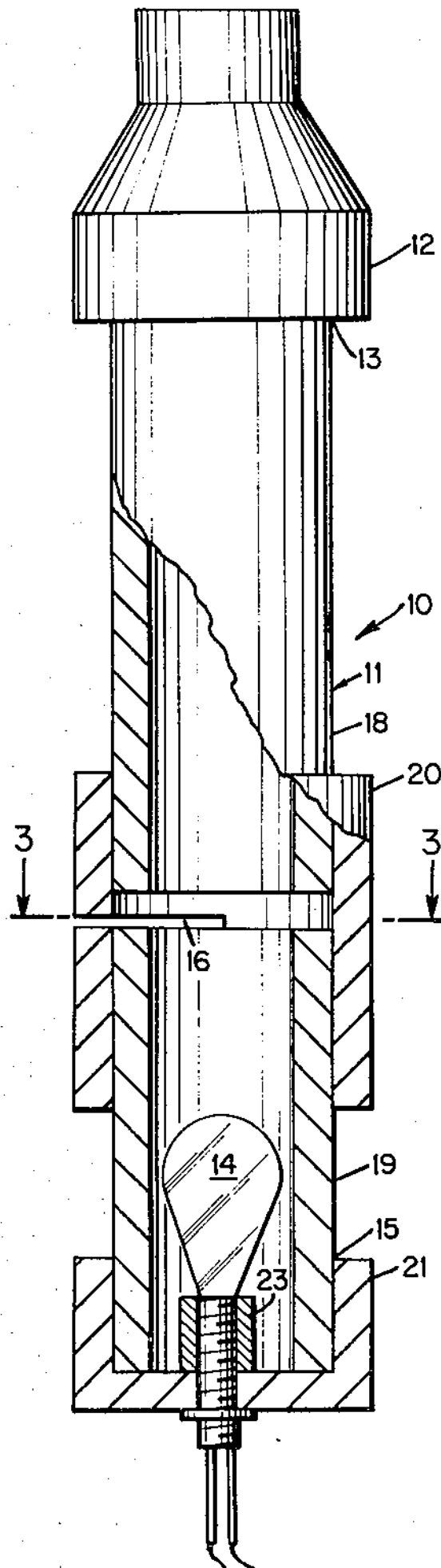
Family 8/14 - FAMPAT - ©Questel

Title

(US4213254)

Astronomical optical simulator

Images



Publication data including kind & date

[US4213254](#) A 1980-07-22 US4213254

**Abstract**

(US4213254)

An astronomical optical simulator made of a tubular body with an eyepiece at one end and a light source at the other with a slot in the tubular member to receive an opaque disk having openings distributed to simulate an array of astronomical bodies. The openings modify and pass light from the source giving the impression of an array of astronomical objects to an observer looking into the eyepiece.

Inventors

WHITING THOMAS A

Family 9/14 - FAMPAT - ©Questel

Title

(RU2581643)

Simulator for training complex tasks of study of astronomical object by participants of space expedition

Publication data including kind & date

[RU2581643](#) C1 2016-04-20 RU2581643

**Abstract**

(RU2581643)

FIELD: space.SUBSTANCE: simulator for training complex tasks of survey astronomical object participants space expedition includes operator workstation, simulation means and visualisation of real conditions of research, graphic station joystick interactive control of objects, connected in certain manner. Graphic station comprises at least two monitor displaying beyond cockpit environment, helmet display system with glasses with OLED matrix and magnetic pickup positioning.EFFECT: higher level and quality of training.3 cl

Inventors

USHAKOV IGOR BORISOVICH

BUBEEV JURIJ ARKADEVICH

GUSHCHIN VADIM IGOREVICH

BELAKOVSKIY MARK SAMUILOVICH

BORITKO JAROSLAV SERGEEVICH

CHERNJAKOV EVGENIJ LEONIDOVICH

GUREEV VLADIMIR OLEGOVICH

Latest standardized assignees - inventors removed

FEDERALNOE G BJDZHZETNOE UCHREZHDENIE NAUKI G NTS RF INSTITUTE MEDIKO BIOLOG ROSSIJSKOJ AKADEMII NAUK GNT

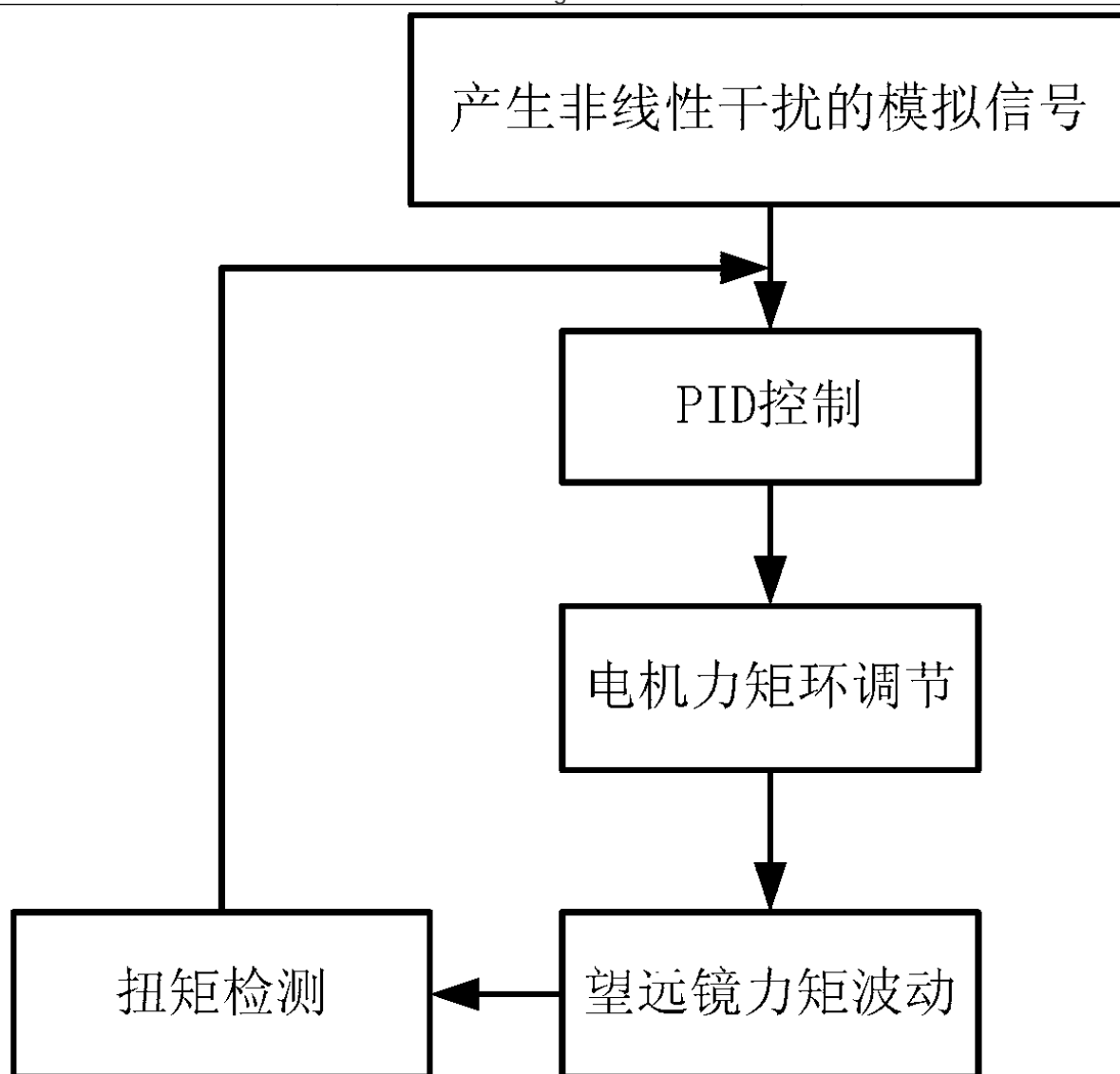
Family 10/14 - FAMPAT - ©Questel

Title

(CN102799192)

Nonlinear disturbance simulation and detection control system for astronomical telescope

Images

**Publication data including kind & date**

CN102799192

A

2012-11-28

CN102799192

**Abstract**

(CN102799192)

The invention discloses a nonlinear disturbance simulation and detection control system for an astronomical telescope. A simulated nonlinear disturbance signal is generated by program of an upper computer according to a nonlinear disturbance model; and the nonlinear disturbance simulation and detection control system further comprises a nonlinear disturbance simulation subsystem, a nonlinear disturbance detection subsystem and a software subsystem, wherein the nonlinear disturbance simulation subsystem consists of a PMAC (Programmable Multi Axis Controller), a disturbance torque motor and a motor driver; a shaft of the disturbance torque motor is connected with a telescope load through an elastic coupling to output a nonlinear disturbance torque; the nonlinear disturbance detection subsystem consists of a torque sensor and the PMAC; an analog quantity signal of the torque sensor is input into the PMAC motion controller and is compared with an upper computer command in real time to realize the closed loop of the torque; and the software subsystem realizes the simulations of nonlinear disturbance such as a wind load and the like by performing C language programming under Windows according to a nonlinear disturbance mathematical model. Compared with a system for physical simulation by adopting a physical model, the nonlinear disturbance simulation and detection control system provided by the invention is low in construction cost and is favorable in generality.

Inventors

YANG SHIHAI

WANG GUOMIN

Latest standardized assignees - inventors removed

NANJING INSTITUTE OF ASTRONOMICAL OPTICS & TECHNOLOGY NATIONAL ASTRONOMICAL OBSERVATORIES

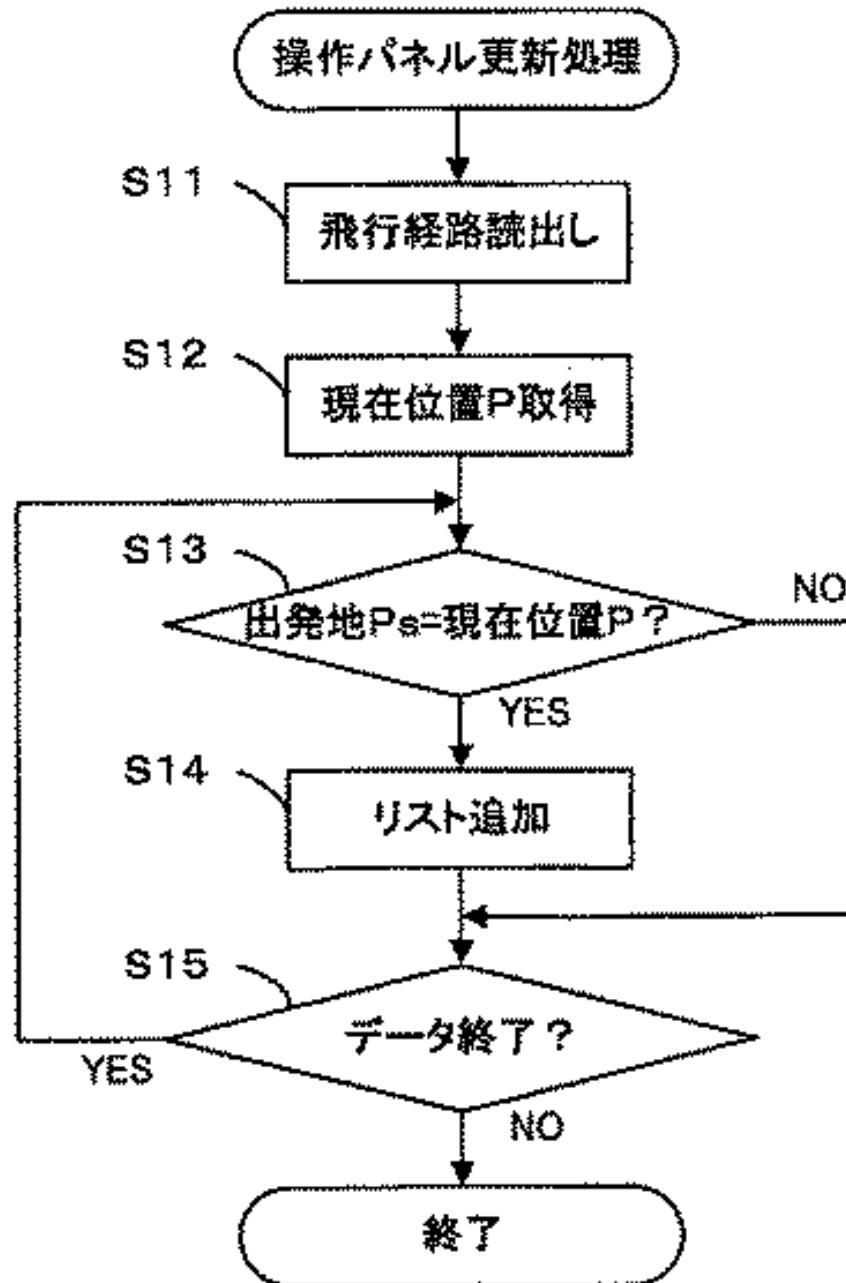
CAS

Family 11/14 - FAMPAT - ©Questel

Title

(JP2005010546)

Planetarium projection system and program for astronomical simulator

Images

Publication data including kind & date[JP2005010546](#)

A 2005-01-13 JP2005010546

**Abstract**

(JP2005010546)

PROBLEM TO BE SOLVED: To provide a planetarium projection system in which a plurality of flight paths are registered, an operator easily selects desired flight path and natural images are maintained to audience.

SOLUTION: Every set flight path is read first and present location P is then acquired, and one of the read flight paths is extracted to determine if the flight path stating point Ps is the same as the present location P. If yes, the flight path is displayed on an operation screen. If not, the flight path is not displayed. These processes are performed for the remaining flight paths. This processing is performed for every renewal of operation picture.

COPYRIGHT: (C)2005,JPO&NCIPI

Inventors

Ya Natsume

NISHIGAKI JUNJI

HYODO KENICHI

Latest standardized assignees - inventors removed

KONICA MINOLTA PLANETARIUM

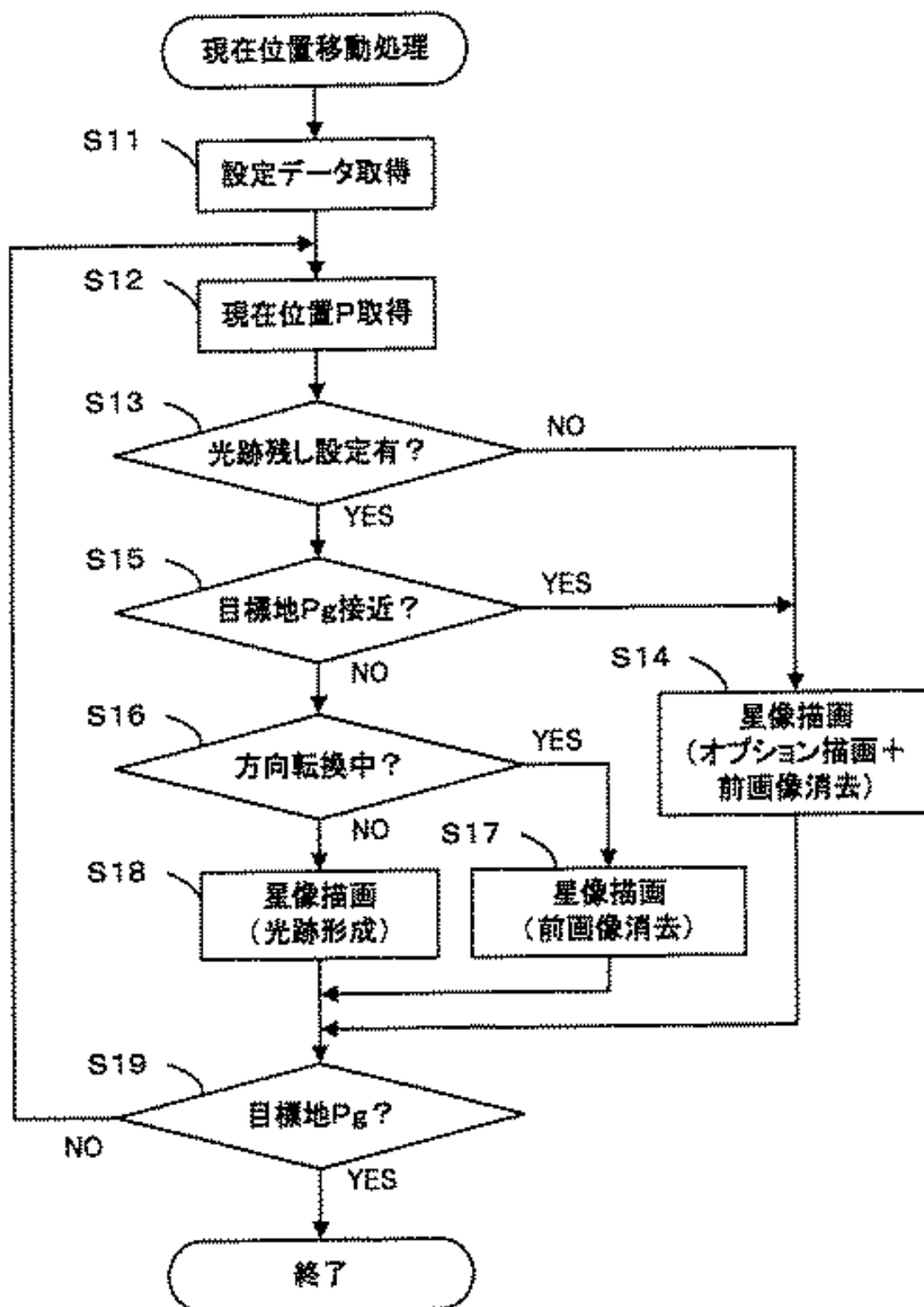
Family 12/14 - FAMPAT - ©Questel

Title

(JP2005003833)

Planetarium projector and program for astronomical simulator

Images



Publication data including kind & date

JP2005003833

A 2005-01-06 JP2005003833



Abstract

(JP2005003833)

PROBLEM TO BE SOLVED: To provide a planetarium projector which can perform processing to leave the traces of beams and can maintain the videos natural to spectators without requiring the vexatious operation of an operator.

SOLUTION: The coordinates of the present position P under simulation are acquired. Next, whether the processing to leave the traces of beams is set or not is judged. In the case of the setting not to perform the processing to leave the traces of beams, ordinary drawing processing complying with the optical setting is performed. In the case of the setting other than

the same, whether the present position P is in proximity to a target point Pg or not is judged. Even in the case the target point Pg is in proximity, the ordinary drawing processing is performed. In the case other than the same, whether direction changing is on the way or not is judged. In the case the direction changing is on the way, star images are drawn without performing the drawing of the option. In the case other than the same, the images in the position more previous to the present position P are left and the star images of the present position P are drawn in superposition.

COPYRIGHT: (C)2005,JPO&NCIP

Inventors

NISHIGAKI JUNJI

Ya Natsume

HYODO KENICHI

Latest standardized assignees - inventors removed

KONICA MINOLTA PLANETARIUM

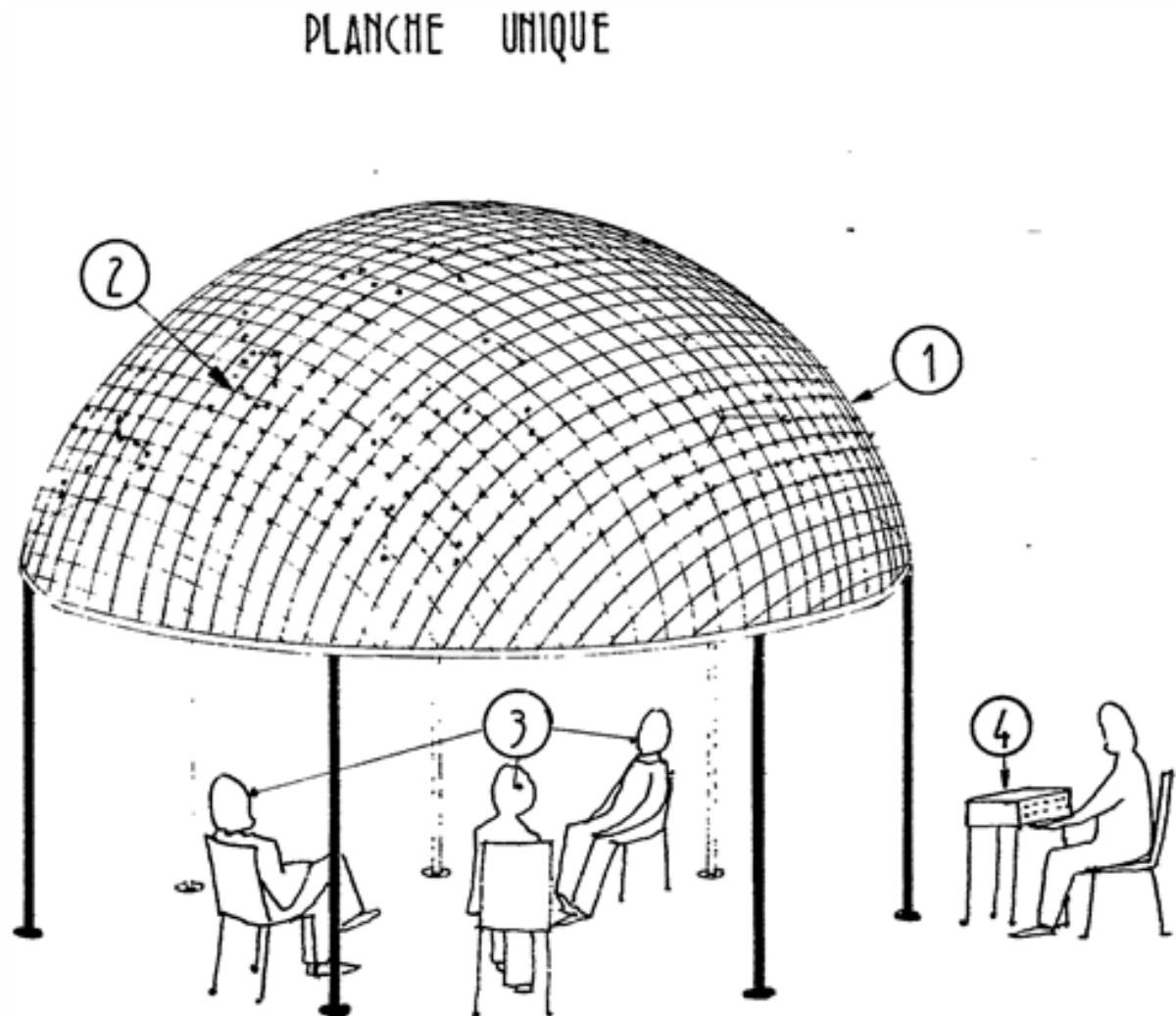
Family 13/14 - FAMPAT - ©Questel

Title

(FR2423835)

Sky at night simulator - has micro computer controlling light sources placed under hemispherical frame

Images



Publication data including kind & date

[FR2423835](#)

A1 1979-11-16 FR2423835



Abstract

(FR2423835)

The astronomical simulator is designed to simulate the sky at night. It uses luminous sources placed under a hemispherical frame. Simulation of the displacement of heavenly bodies is exclusively achieved by selective illumination of the luminous

sources, without any mechanical movement at the centre of the hemisphere or elsewhere. The simulator may also be used to represent atomic models, crystal networks or galactic models. The same luminous sources are used but they are illuminated according to different programmes provided by a programmable mini computer.

Latest standardized assignees - inventors removed

POIRIER ALAIN

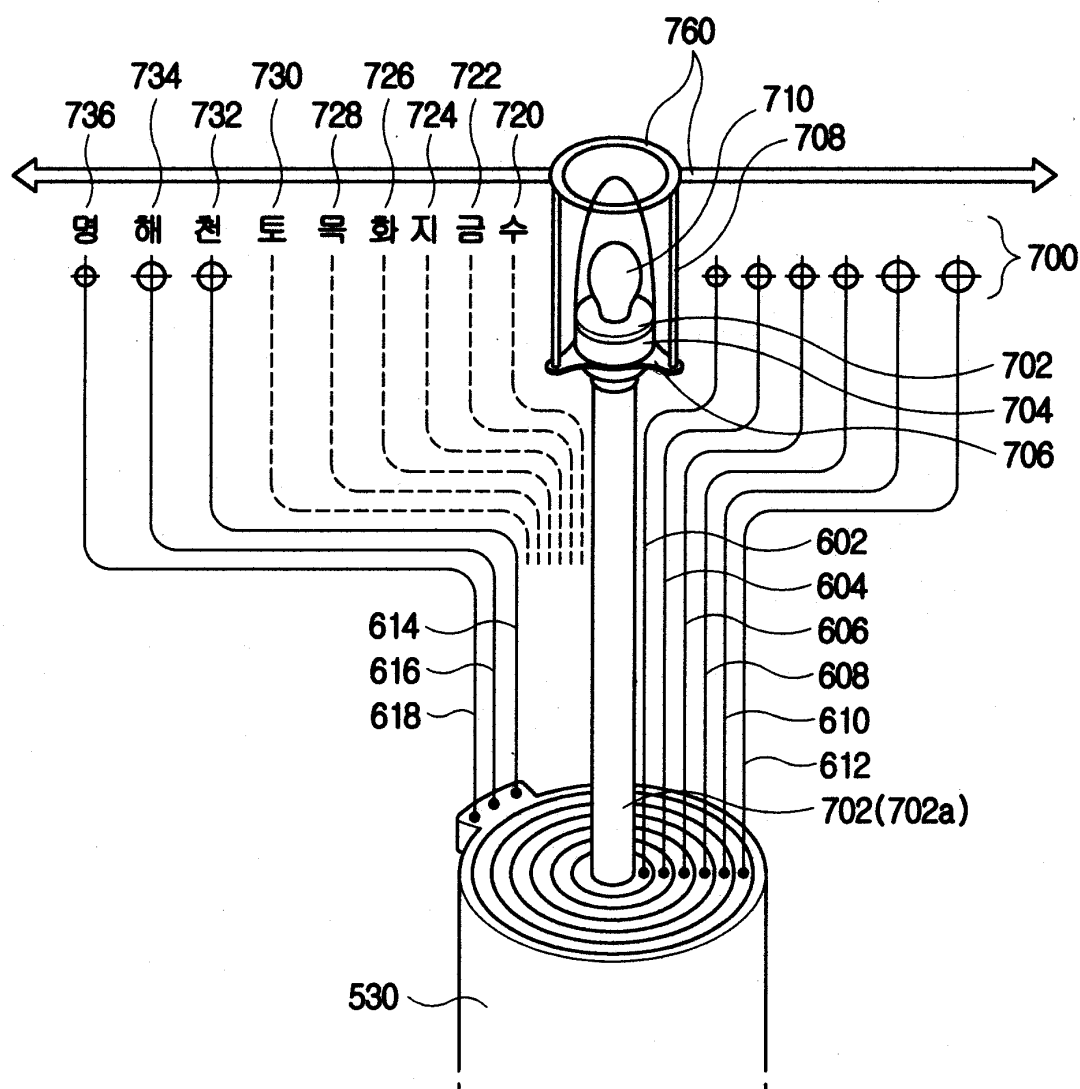
Family 14/14 - FAMPAT - ©Questel

Title

(KR20030007273)

Astronomical simulation apparatus and method

Images



Publication data including kind & date

[KR20030007273](#)

A

2003-01-23

KR20030007273



Abstract

(KR20030007273)

PURPOSE: An astronomical simulation apparatus and a method thereof are provided to produce a situation of a heavenly body according to the earth's revolution and rotation like the reality. **CONSTITUTION:** A power supply unit, a driving motor, and a control unit are installed at a base(100). A night power supply unit is installed on the base(100). The night power

supply unit defines night length corresponding to the subdivisions of the seasons or by months and supplies a power for a time of the defined length. A constellation area selecting unit selects a constellation area for applying the power from the night power supply unit. A housing(400) is connected to the base(100) and receives the night power supply unit and the constellation area selecting unit. A constellation light emitting unit emits a light according to the power from the constellation area selecting unit. A celestial globe(800) is connected to the housing(400). The constellation light emitting unit is installed at a surface of the celestial globe(800).

Inventors

CHO IN HYUNG

CHO JU HYUNG

Latest standardized assignees - inventors removed

CHO HYUNG

CHO JU HYUNG