

(formerly) Dresden

Sächsische Landesbibliothek Staats- und Universitätsbibliothek

---

Ms D.C. 183

*Revised Aratus latinus*

West Francia

early 9th century (destroyed 1945)

---

text

**note:** As this manuscript has been destroyed, I have been working from the Warburg Institute photographs; hence; the lack of data about the texts. For Haffner's 2012 listing of the contents, see bibliography below.

ff.        *Revised Aratus latinus*

**note:** As this manuscript has been destroyed, I have been working from the Warburg Institute photographs; hence, the lack of data about the texts.

fol. 13r IX. — *Id est Saturnus Iovis Mars sol Venus Mercurius luna.*  
INVOLUTIO SPHERAE

ff. 14r-26r X. ... a polo aquilonio sortes quadraginta restant centumduodecima sortes.  
ARCTURUS MAIOR. Porro arcturus minor quia pluribus phoenicae agricis — *et ad capiendos lepores sive in omni studio venandi exercitatus extiterit.*  
Habet quidem stellas iii. ANTECANIS.

ff. 26r-27v XII. *Cum sole et luna septem astra — et Mercurio demonstrata esse credebantur*

fol. 27v XIII. *Lacteus circulus quem Greci Galaxian vocant — in Sagittario tantum se contingent.* LACTEUS CIRCULUS.

fol. 28v XIV. ... duabus, Saturni duabus ut Sol. ZODIACUS CIRCULUS.

ff. 28v-29v XV. Luna terris vicinior est – sin hortu quarto, namque is certissimus auctor. LUNA.

fol. 31r SOL.

XVII. Sidera quae gentiles Praesepe et Asinos vocaverunt – adeptos fuisse opinabantur victoriam. EXPLICIT LIBER ASTROLOGORUM.

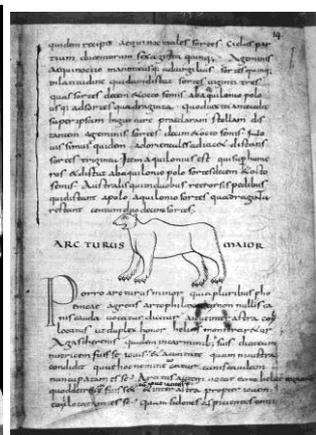
illustrations



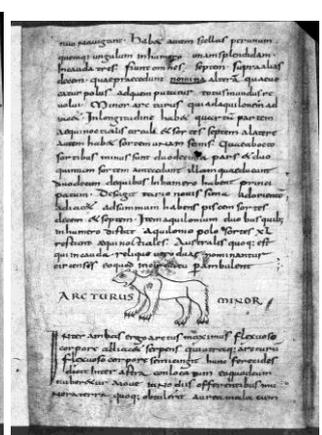
fol. 8v



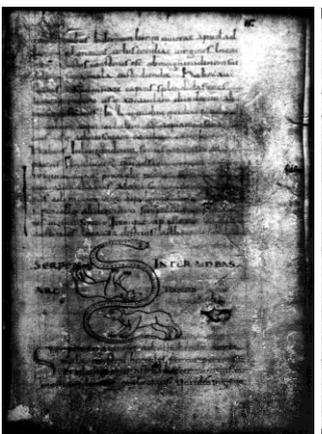
fol. 13r



fol. 14r



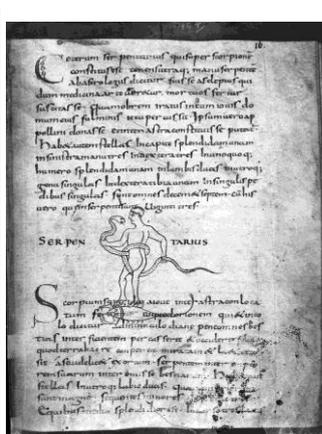
fol. 14v



fol. 15r



fol. 15v



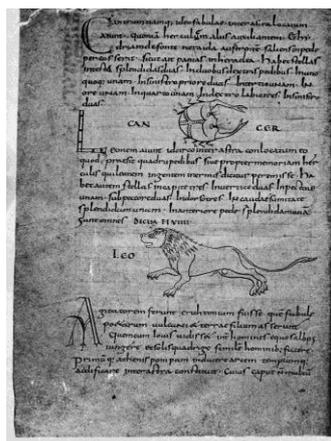
fol. 16r



fol. 16v



fol. 17r



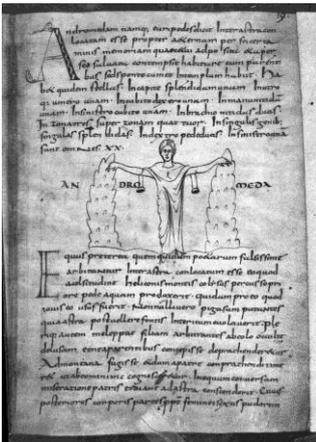
fol. 117v



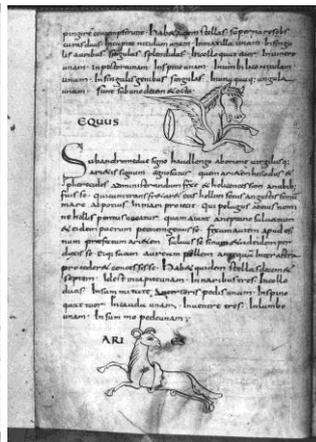
fol. 18r



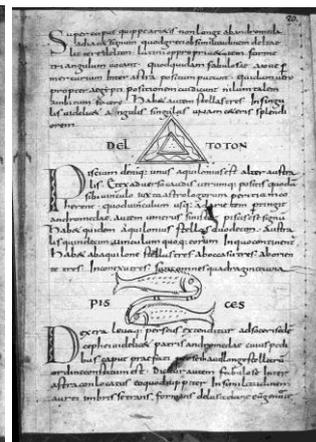
fol. 18v



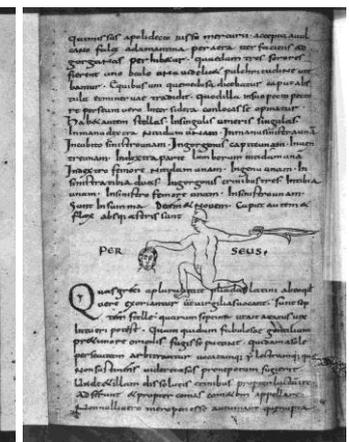
fol. 19r



fol. 19v



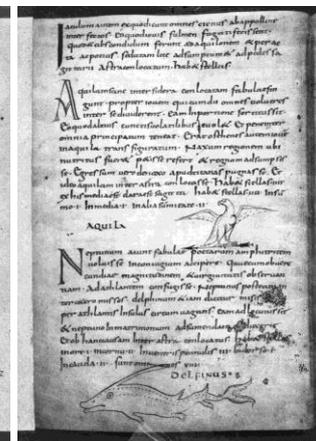
fol. 20r



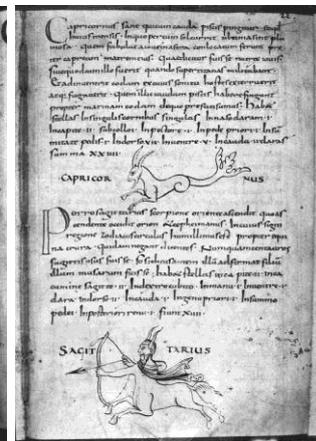
fol. 20v



fol. 21r



fol. 21v



fol. 22r



fol. 22v



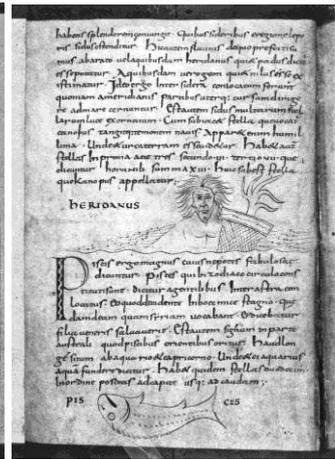
fol. 23r



fol. 23v



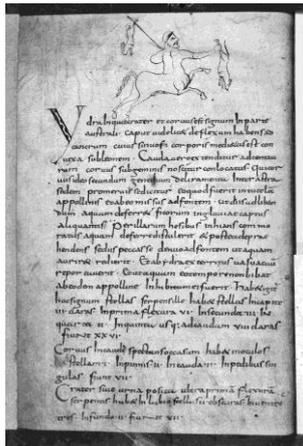
fol. 24r



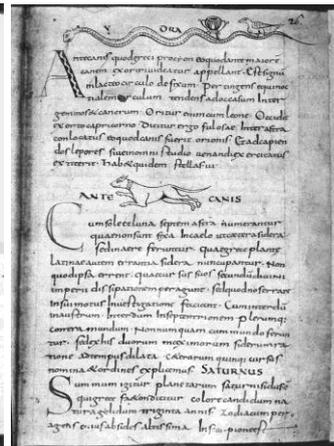
fol. 24v



fol. 25r



fol. 25v



fol. 26r



fol. 27v



fol. 28v



fol. 29v



fol. 31r

fol. 8v Summer and winter celestial hemispheres together on one page, with the summer hemispheres above the winter one and both with north at the top. For a fuller description, see the section on hemispheres.

[This preliminary study was made jointly with Elly DEKKER. An updated and corrected version has been published in her book in 2012,](#)

folio size: 238 x 165 mm

The presentation is in globe view.

Of the 48 Ptolemaic constellations, only 36 constellations are present in these maps. There are also non-Ptolemaic additions of a vase-like object in the northern hemisphere (the 'ivy leaf' or Coma Berenices) and an extra depiction of Capricorn amongst the constellations of the southern hemisphere. The following constellations do not appear: Ara, Corona Australis, Corona Borealis, Cygnus, Eridanus, Equuleus, Lepus, Lyra, Perseus, Sagitta, Triangulum and Ursa Minor. The constellations depicted conform to Hipparchus's rule are Orion, Bootes, Ophiuchus, and Sagittarius. All the other human figures violate the rule.

### **I: Cartography of the summer hemisphere**

The circle that frames the map represents the equinoctial colures. The vertical line through the middle of the map and the north and south equatorial poles represents the summer solstitial colure. Perpendicular to this colure, there are five straight lines representing the ever-visible circle, the Tropic of Cancer, the Equator, the Tropic of Capricorn and the ever-invisible circle. When expressed as fractions of the diameter of the map, the distances of the five horizontal lines from the North Pole measure 0.08, 0.18, 0.45, 0.58 and 0.80 respectively. In addition to these straight lines, there are two arcs (or sections of circles) that represent the northern and southern boundaries of the zodiacal band. The upper and lower boundaries of the zodiac intersect the solstitial colure at distances of 0.18 and 0.39 from the North Pole respectively (distances expressed as fractions of the diameter of the map). The line corresponding to the Tropic of Cancer is tangential to the upper boundary of the zodiacal band.

**a. Locations of the constellations with respect to the grid:**

North of the ever-visible circle: the head, shoulders and arms of Auriga (left of the colure), Draco (on the colure), the upper part of the vase-like image and Ursa Maior (right of the colure).

Between the ever-visible circle and the Tropic of Cancer: the body of Auriga from the chest to the knees (left of the colure) and the bottom of the vase-like object (right of the colure).

In the zodiacal band: Aries, Taurus and Gemini (left of the colure) and Cancer, Leo and Virgo (right of the colure).

Between the southern boundary of the zodiac and the Tropic of Capricorn: Orion (left of the colure) and Canis Minor, Hydra with Crater and Corvus (right of the colure).

Between the Tropic of Capricorn and the ever-invisible circle: Cetus and the anomalous Capricorn (left of the colure) and Canis Maior (in a vertical position running along the colure) and Navis (right of the colure).

South of the ever-invisible circle: the rear parts of Centaurus (right of the colure).

The ever-visible circle passes through the right hand, the right elbow, and the chest of Auriga; the neck of Draco and it lies beneath the feet of Ursa Maior.

The Tropic of Cancer passes through the ankles of Auriga.

The equator passes through Orion's hat, the cup of Crater and the neck of Corvus.

The Tropic of Capricorn passes through the tail of Cetus and the left ankle of Orion.

The ever-invisible circle passes through the belly of Canis Maior, the oars of Navis and the rear feet of the rear of Centaurus rest upon it.

The summer solstitial colure passes though the tail of Draco.

b. **Significant features of the constellation images**

- the head of **Draco** appears to the right of Auriga's outstretched arm.
- **Ursa Maior** [+] is to the right of Draco, faces to the left and is drawn as a tiny bear.
- **Auriga** [-] is standing directly above the Twins. He wears a short tunic and cape around his shoulders. He holds a sword upright in his right hand and raises his left hand. (Although this figure only vaguely resembles Auriga and he is missing all of his attributes, the identification is based on his location on the sphere.)
- The **vase-like object** [0] appears above the middle of the back of Leo and is shaped like a footed urn with water pouring from its mouth.
- **Aries** [+] with curled horns and a long tail is leaping to the left while looking back over his left shoulder to the right. He has a lacy ring around his body.
- **Taurus** [+] is depicted as ½ a bull facing to the right, with his right front leg bent under and his left one extended in front of him.
- The **Gemini** [-] are nude and are shown walking to the right with their inner arms resting on each other's shoulders.
- **Cancer** [+/-] is facing to the left and has two claws 8 legs and two eyes on his shell. His shell is scalloped on the right side. (The overall shape of Cancer is the same in the hemisphere and the star catalogue, but the beast is facing in opposite directions, so the scalloped edge appears as his face in the catalogue.)
- **Leo** [-] stands to the left, roaring with his tail upraised.
- **Virgo** [-] appears to be a male figure without wings. He wears a long dress and holds a branch in his raised right hand and holds his left hand down by his side.
- **Orion** [-] is kneeling to the left, below Taurus and Gemini, with his head directly below the right knee of Taurus. He appears to be seen from the rear but the hand that holds the club must be his right one because of the position of the fingers. He wears a knee-length tunic and a Phrygian cap. He holds a cloth in his left hand and a sword horizontally in his right hand. (His posture is nearly identical to the figures of Bootes and Hercules in the winter hemispheres)
- **Canis Minor** [+] is placed below the first section of Hydra, and leaps to the right.
- **Hydra** [+] has its head below Cancer, its tail below Virgo and he is drawn like a snake.
- **Crater** [-] is drawn as a goblet and is placed on the middle of Hydra, below Leo.
- **Corvus** [+] is placed near the middle of Hydra and faces forward.

- **Cetus** [+] is located below Aries and Orion, is drawn as a sea monster with a dog's face and front legs and a cork-screw tail.
- The anomalous **Capricorn** [0] is drawn with one long horn, a beard and a cork-screw tail.
- **Canis Maior** [-] is to the left of Navis. He is drawn as if he were running vertically up the solstitial colure. He has a very long tail.
- **Navis** [+] is to the right of Canis Maior and below the rear half of Hydra. It is drawn as a partly visible ship with a trefoil at one end, 7 oars, a little steering house and two shields on deck.
- The rear half of **Centaurus** [0] is placed upside-down, so that its body runs vertically along the colure (with its rear hooves uppermost) with only the rear half showing.

## II: Cartography of the winter hemisphere

The circle that frames the map represents the equinoctial colures. The vertical line through the middle of the map and the north and south equatorial poles represents the winter solstitial colure. Perpendicular to this colure, there are three straight lines representing the ever-visible circle, the Tropic of Cancer and the Equator. The lines corresponding to the Tropic of Capricorn and the ever-invisible circle are not drawn. When expressed as fractions of the diameter of the map, the distances of these three horizontal lines from the North Pole measure 0.20, 0.41 and 0.62 respectively. In addition to these straight lines, there are two arcs (or sections of circles) which represent the northern and southern boundaries of the zodiacal band. The upper and lower boundaries of the zodiac intersect the solstitial colure at distances of 0.13 and 0.34 from the South Pole, respectively (distances expressed as fractions of the diameter of the map).

### a. Locations of the constellations with respect to the grid

North of the ever-visible circle: the tail of Draco (left of the colure) and the body of Cepheus except for his head and hands (right of the colure).

Between the ever-visible circle and the Tropic of Cancer: Bootes and Hercules (left of the colure) and tail of Delphinus, the head and hands of Cepheus, Cassiopeia and Andromeda (right of the colure).

Between the northern boundary of the zodiac and the Tropic of Cancer: Aquila (left

of the colure) and the head of Delphinus and Pegasus (right of the colure).

In the zodiacal band: Libra, Scorpio (depicted with Ophiuchus and Serpens standing on top of him) and Sagittarius (left of the colure), and Capricorn, Aquarius and Pisces (right of the colure).

Below the southern boundary of the zodiac: Centaurus with Lupus (left of the colure) and Piscis with the stream of Aquarius (to the right of the colure).

The Tropic of Cancer passes through the head of Hercules the middle of Delphinus, and the head of Cassiopeia.

The ever-visible circle passes through the wrists and neck of Cepheus.

The equator passes through the waist and left shoulder of the figure holding Libra, the ears of Pegasus and the tail of the northern fish and the cord of Pisces.

The winter solstitial colure does not pass through any of the figures.

#### b. Significant features of the constellations images

- an extremely long tail-part of **Draco** [-] runs from the right of the colure, passes through it and ends above the head of **Bootes**.
- **Cepheus** [+] is upside down with his arms raised. He wears a short tunic and a long cloak around his shoulders. He is placed so that most of his body is placed north of the ever-visible circle. His hands and head, however, appear just south of this boundary.
- **Bootes** [+/-] appears above **Libra**. He walks to the left and appears to be seen from the rear, but the position of his fingers possibly suggests otherwise. He is dressed in a tunic and has a cloth covering his left/right arm. He holds a sword in his upraised left/right hand. His head touches the edge of the ever-visible circle. (The figure of **Bootes** is virtually identical to the depiction of **Hercules** and that of **Orion** in the summer hemisphere.)
- **Hercules** [0] is depicted upside down and kneels towards the right. His lower body is in profile and his upper body faces the viewer, so that he is shown kneeling on his left knee. He is nude but has a cloak over one of his shoulder. The cloak covers his arm so that it looks like a piece of cloth. He holds a club in his left hand behind him. (The figure of **Hercules** is similar to the depiction of **Bootes** and that of **Orion** in the summer hemisphere.)
- **Cassiopeia** [+/-] is upside down, directly below **Cepheus**. She wears a long dress, sits on a seat with a cushion, with her raised and outstretched hands. On both sides, there are depictions of the branches or trees more commonly found

accompanying Andromeda. Her head is cut by the Tropic of Cancer. (Apart from the odd addition of the trees, the depiction resembles that found in the text).

- **Andromeda** [+/-] is upside down to the right of Cassiopeia and above Pegasus. She is dressed in a long robe with sleeves that hang down from her elbows like tubes. Her arms are outstretched. (The figure of Andromeda is similar to that found in the text, save the loss of her accompanying rocks).
- **Aquila** [-] is standing upside down between Hercules and the zodiacal sign of Scorpio (Ophiuchus) and Sagittarius, and facing to the right with wings outspread.
- **Delphinus** [-] is directly above Capricorn, with the length of its worm-like body hugging the winter solstitial colure on the right side, and with its head facing toward the south. The Tropic of Capricorn bisects its body.
- **Pegasus** [+] is half a winged horse, upside down, facing left and placed above Capricorn and Aquarius. His ears and the tips of his wings touch the equator.
- **Libra** [0] is drawn as a figure in a long robe, holding a pair of scales in its outstretched right hand.
- **Scorpio** [+] is represented by the conflation of the figure of **Ophiuchus** with the Scorpio placed beneath his feet. The man faces away from the viewer and holds **Serpens** so it wraps around his waist and curls through his legs. The Scorpion faces to the left.
- **Sagittarius** [-] is a nude male figure, standing to the left and facing away from the viewer, holding a bow with his left hand in front of his body.
- **Capricorn** [+] faces right, has a single horn and a tail with a curl at the end.
- **Aquarius** [+/-] is nude except for a cape around his shoulders. He steps to the right, and holds an upturned urn in front of him that pours water into a stream. (The figures differ in that the Aquarius in the star catalogue is dressed and turns his head backwards over his shoulder to look towards the left.)
- **Pisces** [-] are swimming back-to-back in the same direction and are joined by a line at their mouths.
- Despite the depiction of the rear half of Centaurus in the summer hemisphere, the whole figure of **Centaurus** [+] appears below Scorpio and Sagittarius. He stands to the right holding **Lupus** in his outstretched right hand. In his left hand he holds a spear at the end of which another animal is hanging by its feet.
- **Piscis** [-] swims to the right, with his mouth connected to a stream, which runs to the right, but does not connect to Aquarius.

## Comments

Despite the stylistic and temporal distance between the two manuscripts, the closest pictorial parallel to the Dresden hemispheres appears in the Renaissance illustrations in **Vat Reg lat 1324**.

The hemispheres are arranged on one page, with north located at the top both the summer and winter hemisphere. This arrangement also appears in the Dresden manuscript, the two St Gall manuscripts and in **Vat Reg lat 1324** and it does provide a certain hindrance to being able to read across or between the two hemispheres. From a user's point of view, it is a solution inferior to the one that appears in the **Aberystwyth** and **Paris BN 12957** manuscripts.

In both hemispheres, the grid that represents the main celestial circles is a very corrupted form of the orthographic projection (see below). For instance, the zodiacal bands in the hemispheres completely fail to conform with this projection. Moreover, in the summer hemisphere, the Tropic of Cancer touches the northern boundary of the zodiac and the southern boundary of the zodiac intersects the equinoctial colures (the outer boundary of the hemisphere) at the Tropic of Capricorn. In the winter hemisphere, the northern boundary of the zodiac intersects the equinoctial colures (the outer boundary of the hemisphere) at the Tropic of Cancer.

Using the grid of the celestial circles as a guide, the overall design of the maps is also not very good. The Equator should be exactly in the middle of the maps and intersect with the colures at a distance of 0.50. But, in the summer hemisphere, the equator intersects the colure at a distance of 0.45 from the North Pole and in the winter hemisphere it intersects at 0.62. When interpreted in terms of an orthographic projection, in the summer hemisphere the intersections of the Tropics of Cancer and Capricorn with the colure should be at 0.30 (the map shows 0.18) and 0.70 (the map shows 0.58) respectively from the North Pole -- assuming an obliquity of the ecliptic of  $24^\circ$ . In the winter hemisphere, the Tropic of Cancer should intersect the colure at 0.70 (the map shows 0.59) from the South Pole. The same model of projection dictates that, for the summer hemisphere, the intersections of the boundaries of the zodiac with the colure should be at 0.25 (the map shows 0.18) and 0.35 (the map shows 0.39) from the North Pole, -- assuming the boundaries to be  $6^\circ$  north and south of the ecliptic. For the winter hemisphere, the intersections of the boundaries of the zodiac with the colure should be at 0.25 (the

map shows 0.13) and 0.35 (the map shows 0.34) from the South Pole respectively. Finally, with an orthographic projection, the intersections of the ever-visible and ever-invisible circles with the colure should in the summer hemisphere be at 0.14 (the map shows 0.08) and 0.86 (the map shows 0.80) from the North Pole respectively, for geographical latitude of  $44^\circ$ . The ever-visible circle should intersect the colure in the winter hemisphere at 0.86 (the map shows 0.80) from the South Pole.

Although any interpretation of these numbers is remains somewhat complicated by a number of factors, they seem to suggest that there were many intermediaries between these hemispheres and a hypothetical classical prototype. In considering the source or sources of the many structural problems of the maps, the one feature that seems to stand out most prominently as a possible explanation for the poor quality of the grid is the fact that the equator has not been placed in the middle of the map. In the summer hemisphere, the equator is too far north and, in the winter hemisphere, it appears too far to the south. This flaw, it seems, results from the artist's decision to copy the grid of the one hemisphere directly from the other - as if the structure of one hemisphere has been traced from a 'folded over' version of the other. The two hemispheres exactly mirror each other vertically and, as a result, they mirror each other's flaws. One can also see these 'errors' in the hemispheres in **Paris BN n.a. 1614**, the two **St Gall manuscripts** and **Vat Reg lat 1324**.

As mentioned, another problem in these maps is that is that the line corresponding to the Tropic of Cancer is tangential to the upper boundary of the zodiacal band.

- fol. 13r Picture of a celestial globe (labelled: INVOLUTIO SPHERAE) showing 9 constellations. PERSEUS, AURIGA, URSA MAIOR are above the zodiacal band; ARIES, TAURUS, GEMINI are in the band and ERIDANUS, the hind legs of CANIS MAIOR and ARGO are below it. The stand consists of six columns supporting the horizon ring and of one central support for the meridian ring. The four columns in front and the central support are decorated. The north pole is indicated by a clamping screw. For a fuller description, see the section on hemispheres.
- ff. 14r-26r Pen drawings of 41 constellation grouping. There are no stars marked. The pictures are set between blocks of text. Most constellations are surrounded by labels, written in capital letters

- fol. 14r **URSA MAIOR** (labelled: ARCTURUS MAIOR) stands to the left, with long toenails on its feet. Its mouth is open and it has a hump on its back. No tail is visible and it is slightly larger than the other bear.
- fol. 14v **URSA MINOR** (labelled: ARCTURUS MINOR) stands to the left, with long toenails on its feet. Its mouth is open and there is a hump on its back.
- fol. 15r **DRACO INTER ARCTOS** (labelled: SERPENS INTER AMBAS ARCTURUS) is a snake-like **Draco** with 3 bends in his body and his head presented as if viewed from the top (facing to the right). The Bears are between the second and third bends. They are back-to-back, facing in opposite directions and inwards towards the body of the Snake. Both seem to be galloping forward.
- fol. 15v **HERCULES** (labelled: HERCULES) is in the Garden of Hesperides with the Snake and the tree on the left. He is nude, bearded and kneels to the left on his left knee. He seems to have his upper torso facing away from the viewer. He holds the lion's skin over his outstretched left arm in front of him with its fur represented as scallops and the lion's head visible just under Hercules's left armpit. He holds a leafy branch behind his head horizontally in his right hand.
- CORONA** (labelled: CORONA) is a circlet of 9 dots with small hairs coming from each. There are two long ribbon tendrils coming away from the bottom of the crown to the left and right.
- fol. 16r **OPHIUCHUS** is nude with his back to the viewer, standing towards the left with the tips of his toes on the back of **SCORPIO** with **SERPENS** wrapped around his waist. The orientation of the Snake's body is complicated as it runs in front of his body, crosses behind its own body and then runs through his legs before being grasped in his left hand. The Snake is facing the man. **SCORPIO** faces to the left, with a almond-shaped body, 2 claws and 8 (?) legs and a thin tail that ends in a V-shape.
- fol. 16v There is a second **Scorpio** (labelled: SCORPIUS) with an almond-shaped body, long claws on the left side, 8 V-shaped legs and a segmented tail that end in a J-shape. It has a number of decorative bands on its body.

**BOOTES** (labelled: BOOTES) is facing the viewer and dressed in a short skirt with a

rolled cloth around his waist and his torso is nude. He holds a stick in his raised left arm and his left arm is outstretched and is transformed into a wing. His head is turned to the left in profile and he is bearded. His left leg is slightly raised as if he were about to take a step towards the right.

fol. 17r **VIRGO** (labelled: VIRGO) stands facing the viewer with her head turned towards the left. She has no wings, but is dressed in a long robe with a mantle over her head. He holds a holding plant (palm?) in her in outstretched right hand and she holds the Scales in her left at waist height. There is a decorative band around the neckline of her dress.

**GEMINI** (labelled: GEMINI) are dressed in short tunics with longer cloaks that are hung on their left shoulders. They hold spears in their outer hands and both are pointing towards the spears with their inner hands.

fol. 17v **CANCER** (labelled: CANCER) faces to the right and has a cross-shaped decoration on its back. It has 2 arm-like claws that end in pincers and 8 V-shaped legs and a scalloped nose with something like whiskers coming from near his eyes.

**Leo** (labelled: LEO) runs to the left with its mouth open and its tail streaming out to the left.

fol. 18r **AURIGA** (labelled: AGITATOR) kneels to the right wearing a long tunic that is tied at the waist and has a flower as the 'buckle' and there is a cloak flowing from his shoulders. His long tight sleeves are bunch on his forearms. He holds a flail with a single thong in his outstretched right hand and has 2 goats, face-to-face, on his outstretched left arm. There is a larger goat standing in front of him and facing him.

**TAURUS** (labelled: TAURUS) is depicted as half a bull facing to the right with his right leg tucked under and left leg extended out straight in front of him. He has short horns and a curly fringe.

fol. 18v **CEPHEUS** (labelled: CEPHEUS) stands facing the viewer with his with bared arms held out straight to either sides. He wears a short tunic, gathered at the waist and has a knee-length mantle that forms V-shaped swags over his shoulders. He has no other attributes.

**CASSIOPEIA** (labelled: CASSIEPHIA) is seated on a low-backed throne with a pillow

and with her arms outstretched to the sides. Her mantle is caught at her breast with a circular pin.

- fol. 19r **ANDROMEDA** (labelled: ANDROMEDA) stands facing the viewer, wearing a long straight robe the sleeves of which hang over her elbows like tubes. Her arms are bared and raised at shoulder height, resting upon two piles of rocks. Her hair is exposed, but tied back.
- fol. 19v **PEGASUS** (labelled: EQUUS) is depicted as half a winged horse that faces to the right (but only his right wing visible) with his forefeet reaching forward. The cut-off is an oval with a squiggly vertical line down it.
- ARIES** (labelled: ARIES) leaps to the left with his head turned backwards towards the right. He wears a frilly band around waist, has short curled horns, a long fleecy tail and has prominent genitals.
- fol. 20r **TRIANGULUM** (labelled: DELTOTON) is two nested triangles with a wavy pattern between the two and dots inside the middle.
- PISCES** (labelled: PISCES) are tied by striped band at mouths with both backs on top and swimming in opposite directions
- fol. 20v **PERSEUS** (labelled: PERSEUS) is nude, kneeling to left on what appear to be his left knee. The orientation of his torso is difficult to determine as it seems that the vertical line indicates the line of the backbone, but his navel is visible on the left side. He has a decapitated head in the hand that is outstretched in front and other hand held out behind him holding the *harpe* horizontally. He is wearing Phrygian cap.
- fol. 21r **PLEIADES** (labelled: VERGILIAE) are 7 bust-portraits of women with head coverings set within circles.
- fol. 21v **LYRA** (labelled: LYRA) with zither-shaped base and oxen horn side supports. The top bar rests above vertical supports surmounted by rings and there are horn-shaped elements in front of these. The pegs at the top of the bar are visible.
- CYGNUS** (labelled: CYGNUS) is walking to the right with S-shaped neck and its wings outstretched to the sides.

**AQUARIUS** (labelled: AQUARIUS) walks to right, with his right leg leading. He is wearing a Phrygian cap, long-sleeved shirt and loose leggings with his cape flowing behind him. He is pouring from upside-down urn he holds with both hands in front of him, and he looks backwards over his shoulder to the left.

fol. 22r **CAPRICORN** (labelled: CAPRICORNUS) faces to left with long curved (feathery) horns and a curled tail that ends in a trefoil. He has a beard and holds his legs out in front of him.

**SAGITTARIUS** (labelled: SAGITTARIUS) is a centaur leaping to left. He does not have a shirt, but does have a long cape flowing behind him. He is bearded and has extremely long, slightly twisting horns. He holds the bow in his outstretched left hand and pulls the string with his right.

fol. 22v **AQUILA** (labelled: AQUILA) stands with its wings outstretched, looking over his right shoulder to the left and standing on arrow (**SAGITTA**).

**DELPHINUS** (labelled: DELFINUS) has a long dolphin-like snout and a horn on his head, and a slim sinuous body that ends in an acanthus leaf-shaped tail.

fol. 23r **ORION** (labelled: ORION) is standing to left and seems to be facing the viewer. He wears a short tunic caught at the waist and a cloak that covers his outstretched right hand. His left arm is similarly outstretched and he holds a long sword horizontally in it. There is a scabbard at his waist. To the right of this figure is a drawing of a lion facing to the right with his left forepaw raised and that looks back over his shoulder towards the man with his tongue sticking out. His tail is raised high. The drawing appears to have been done prior to the man as the edge of Orion's scabbard covers the lion's left hind knee.

fol. 23v **CANIS MAIOR** (labelled: CANIS) is running to left with halo and star-rays from head. Its mouth is open and it has a very long thin tail with a tuft on the end.

**LEPUS** (labelled: LEPUS) is running to left and has long straight ears and prominent whiskers.

fol. 24 **ARGO** (labelled: NAUIS) is a nearly full ship with a blunt and at the right and a curved stern with an acanthus tip at the left. There are two steering oars at the rear of the ship and a small, highly-decorated house on deck. At the right side is a

scythe-shaped object that represents a mast with a furled pennant.

**CETUS** (labelled: COETUS) faces to the right. It has a dog/lion face with pointed ears, an open mouth with bared teeth, hairy jowls and fire coming out of its nostrils. The front feet are flippers, and the underside of its body is covered with scales, there is a twist in the tail and it end in a trefoil.

fol. 24v **ERIDANUS** (labelled: HERIDANUS) is an extremely well-drawn bust of male with flame-like hair and pointed beard. There is a cross-woven basket with a plant like mother-in-law's tongue to his right. There are indications of water to either side.

**PISCIS** (labelled: PISCIS) is swimming to the left, upside down with a prominent eye and a gaping mouth.

fol. 25r **ARA** (labelled: SACRARIUM) as square, three-level tower with numerous small opening at each level, the top storey is tubular are there are flames coming from the top. To the right, there is an attempt to copy the shape which has been abandoned.

fol. 25v **CENTAURUS** is a beefy centaur with short hair and a beard. It is running to right with its forelegs extended in front of it. It is holding dead dog (**LUPUS**) by its heels in his outstretched right hand;. In his hidden left hand he holds a straight stick which has a hare hanging by its heels from its end.

fol. 26r **HYDRA** (labelled: YDRA) is a long snake slithering to the left. It breaths fire and is highly decorated. There is a 2-handled **CRATER** on his back and **CORVUS** near his tail facing forwards.

**CANIS MINOR** (labelled: ANTECANIS) is running to left with a thick, decorated collar on his neck.

fol. 27r Images of the 5 planet gods set in roundels. Jupiter as an older bearded man; Mercury with wings on his head and a caduceus; Mars with a crested helmet and Saturn with a reed. Below this, there is an image of 3 concentric circles (labelled: LACTEUS CIRCULUS)

fol. 28v Sol and Luna placed within a zodiac circle and both hold orbs with a cross on each (labelled: ZODIACUS CIRCULUS) with Aries is full with a lacy ring around its stomach

looking backwards to the right over its shoulder; Taurus, is half a bull, the Gemini are two warriors; Cancer has a scalloped shell; Virgo is winged and has a stick; Libra is held by a nude male figure; Sagittarius is a centaur; and both Pisces have their backs towards the top and are connected by a line between their mouths.

- fol. 29v Luna (labelled: LUNA) is set within a roundel. She is standing behind the curved edge of a *biga* drawn by 2 bulls to the left. She has a crescent moon on her head, a torch in her left hand and she raises her right hand in salutation.
- fol. 31r Sol is set within a roundel. He is standing in a *quadriga* (with the horses spilt two-and-two). He is facing the viewer. He has a crown on his head and a sceptre in his left hand.

#### notes

Contains the *Revised Aratus latinus* with illustrations, Hyginus, Cicero's *Aratea*, *Excerptum de Astrologia* (Maass, Anonymous III, pp. 309-12) and *De ordine ac positone stellarum*. Presumed to have a French origin as one of the early owners was the Lyonnais Emperor, Jean de Tournes (see Buescu and Soubiran).

The illustrations fall within the **RAL I** group, the defining features of which are discussed in the Commentary.

#### bibliography

BUNTE 1875, pp. 11-12.

SCHNORR von CAROLSFELD 1882, I, pp. 334-35.

BREYSIG 1867, p. xxviii.

KATALOG ... DRESDEN 1882, I, pp. 334-35.

KAUFFMANN 1888.

MANITIUS 1897, pp. 305-32.

MAASS 1898, pp. xxi-xxii.

THIELE 1898, pp. 43, 161- 62, figs. 7 and p. 71.

written in 9th-10th century and also has Hyginus (ff 33 ff) Cicero *Aratea* (94ff) and the *Excerptum de Astrologia Arati* as the Phillippicus has; the Latin commentary in the interpolated version with the complete introduction; pen drawings with the Aratus commentary and with the *vertices extremos* are not without grace and elegance; perhaps the ms has associations with St Gall school re: style

MANITIUS 1901, pp. 462-72.

CUMONT 1916, p. 12.

BUESCU 1942, pp. 68-73; repr 1973, pp. 93-132

BYVANCK 1949, pp. 221-22, 225 and 229.

MARTIN 1956 p. 44.

speaks of Manitius having used a group of 'revised' manuscripts for his study: it is 9th century, and also contains an epitome of the *Phaenomena* by Priscian, an *Excerptum de astrologia Arati*, which is a description of the map of the sky in the Aratean order (Maass, Anon III, pp. 309-12); the *Astronomica* of Hyginus; the *Aratea* of Cicero; and the *De ordine ac positione stellarum in signis* taken from the Germanicus scholia

MARTIN 1956, p. 44.

9th century, also has an epitome of the *Phenemona* of Priscian, and *Excerptum de Astrologia Arati* (= Maass, pp. 309-12); *Astronomica* of Hyginus, *Aratea* of Cicero and *De ordine ac positione stellarum in signis*.

SOUBIRAN 1972, pp. 116-17 and 132-33.

McGURK 1973, p. 203.

REEVE 1980, pp. 508-11.

Dresden DC 183 left France sometime after 1573, the Cicero part is not illustrated, however

(the illustrations accompany *scholia Sangermanensis*); says the text would have to be pieced together from Breysig (pp. 105-232), Manitius 1897, pp. 305-32 and Maass 1898 pp. 99-32; Martin, *Hist* pp. 42-5 gives the best survey of what it would have embraced.

**O'CONNOR** 1980, p. 60, n. 3, 64.

says West Frankish, 1st half 9th century.

**McGURK** 1981, p. 320.

West Francia, early 9th century; *revised Aratus latinus*; notes 'spera solida' and its mistakes

**VIRÉ** 1981, pp. 165 ff.

**MUNK OLSEN** 1982, I, pp. 332 and 527.

**REEVE** 1983, p. 22.

re : Cicero ; 9th century (includes in stemma); nearest relative of Vercellensis; left France in 1573, precise home unknown.

**O'CONNOR** 1984, p. 64 and no 4.

**LeBOURDELLÈS** 1985, p. 77.

Breysig (p. xxviii) noted that corrections in a second hand in St Gall 250 came from the Sangermanensis; has identical content as St Gall 902 with RAL, Hyginus, Cicero *Aratea Excerptum de Astrologia* and the *De ordine ac positione stellarum*; of the 9th century, and contains: the *revised Aratus latinus*, Hyginus, Cicero's *Aratus*, *Excerptum de Astrologia*, *De ordine ac positone stellarum*; but has some peculiarities not found in the St Gall mss, such as the catalogue of stars with Catasterisms having been replaced with catalogue of the scholiasts of Germanicus; presumed to have a French origin as one of the early owners was the Lyonnais Emperor Jean de Tournes (see Buescu and Soubiran).

**KERSCHER** 1988, esp. fig 21.

**MÜTHERICH** 1989, pp. 32, 35, 38ff and 51.

**ERNST** 1991, p. 585.

**BORST** 1995, p. 195.

**HAFFNER** 1997, p. 174.

lists as 9th century with *recensio interpolata*.

**BISCHOFF** 1998, nr. 1044.

**OBRIST** 2001, pp. 24-25.

**BLUME HAFFNER METZGER** 2012, pp. 77-79 and 234-39.

pp. 77-79 - West Frankish ('largely identical' to Paris BN 12957); *Recensio interpolata*, Hyginus, Cicero transl of *Phaenomena* and Aachen star catalogue, *De ordine ac positione*; says represents the French monastic interest in purely astronomical issues; used in liberal arts education

pp. 234-39: must post-date 809, but disagreement about dating early or third quarter; illustrations close to all RAL manuscripts, but especially Paris BN 12957.

**DEKKER** 2012, pp. 118-142 (hemispheres), 192-207(globe on stand), 210-13 (h) and 255 (g).

pp. 210-13: follows the text of *Descriptio duorum semispheriorum* and precedes *Aratus genus*; addition of non-Aratean ivy leaf and anomalous Capricorn (belongs to the H3 group); most constellations follow Hipparchan rule

p. 255: drawing of celestial globe like **Paris BN lat 12957**, except for missing goats on Auriga's arm and animal below Ursa maior