Outreach Activities of the Max-Planck-Institut für Radioastronomie in Bonn, Germany

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Institute

- 4 directors and 4 scientific groups
- 6 technical groups
- 300 scientists, engineers, administrative staff
- main buildung in Bonn
- 100m-radio telescope and LOFAR-station in Effelsberg (40 km southwest of Bonn)

Outreach Group

- Norbert Junkes (full time)
- Staff of 3 (part time) in Effelsberg
- Me (just a very small part of my working time)


Das 100-m

Outreach Activities Part I

- Talks for visitor groups in the pavilion (Apr - Oct, Tuesday - Saturday, 6 times per day; up to 80 visitors per talk; usually 8,000 visitors/year)
- Series of talks in Bad Münstereifel (Apr-Nov, once a month, colleagues of MPIfR), in Deutsches Museum Bonn (Oct-Dec, once a month, external scientists)
- Press releases of scientific results and events (2010: 13)
- Interviews in TV and radio (15 to 20 per year)
- Requests from laymen (40 to 50 per year)
- Open day (at last Sep 2009, next Sep 2011)

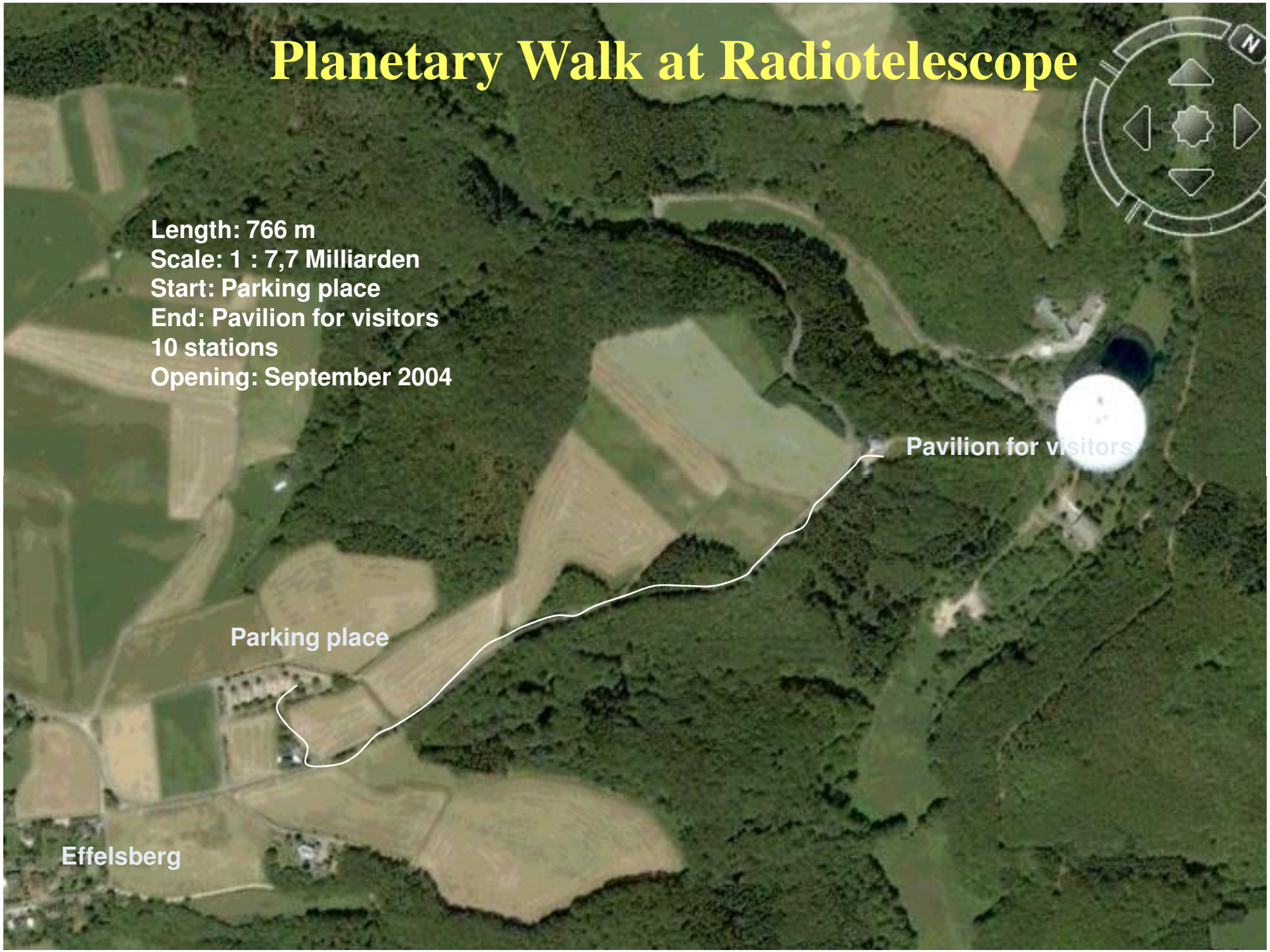
Outreach Activities Part II

- Large brochure/poster about the institute in total (in German only)
- Flyers about radio-observatory in English and German
- Calendar of the institute including pictures of radio telescope, instrumentation and scientific results

Outreach Activities Part III

3 Astronomical Walks in Effelsberg:

1) Planetary Walk (opening Sep 2004)
2) Milky Way Walk (opening Sep 2006)
3) Galaxy Walk (to be opened in Nov 2010)


Planetary Walk at Radiotelescope
Length: 766 m
Scale: 1 : 7,7 Milliarden
Start: Parking place
End: Pavilion for visitors
10 stations
Opening: September 2004
Pavilion for visitors
Parking place
Effelsberg

Planetary Walk

10 Stations, length of walk 766 m from Pluto to Sun:

1) Pluto
2) Neptune
3) Uranus
4) Saturn
5) Jupiter
6) Mars
7) Earth
8) Venus
9) Mercury
10) Sun

Milky Way Walk at the Radiotelescope

Observatory Effelsberg

Kirchsahr

Length: 4 km
Scale: 1 : 10^{17}
Start: Burgsahr
End: 100m-telescope
18 stations
Opening: September 2006

Binzenbach

Burgsahr

Milky Way Walk, Part I

18 Stations, length of walk 4 km (=40,000 ly) from IC 410 via Earth to Center of Milky Way:

Part I of the walk: IC410 to Earth (1.5 km corresponding to 15,000 ly):

1) Starting point is IC 410, a star cluster in the outer area of Milky Way. Walking with 4 km/h, we move with 350 million times of light velocity
2) 700 m (=7,000 ly): double star cluster h and Chi Persei in constellation Perseus
3) 870 m (=8,700 ly) Crab Nebula (M1)
4) 1.2 km (=12,000 ly): Supernovae remnant S147
5) 1.35 km (=13,500 ly): Orion-Nebula
6) 1.46 km (=14,570 ly): Beteigeuse
7) 1.46 km (=14,600 ly): Plejaden
8) 1.5 km (=14,991 ly): Sirius
9) 1.5 km (= 15,000 ly): Earth

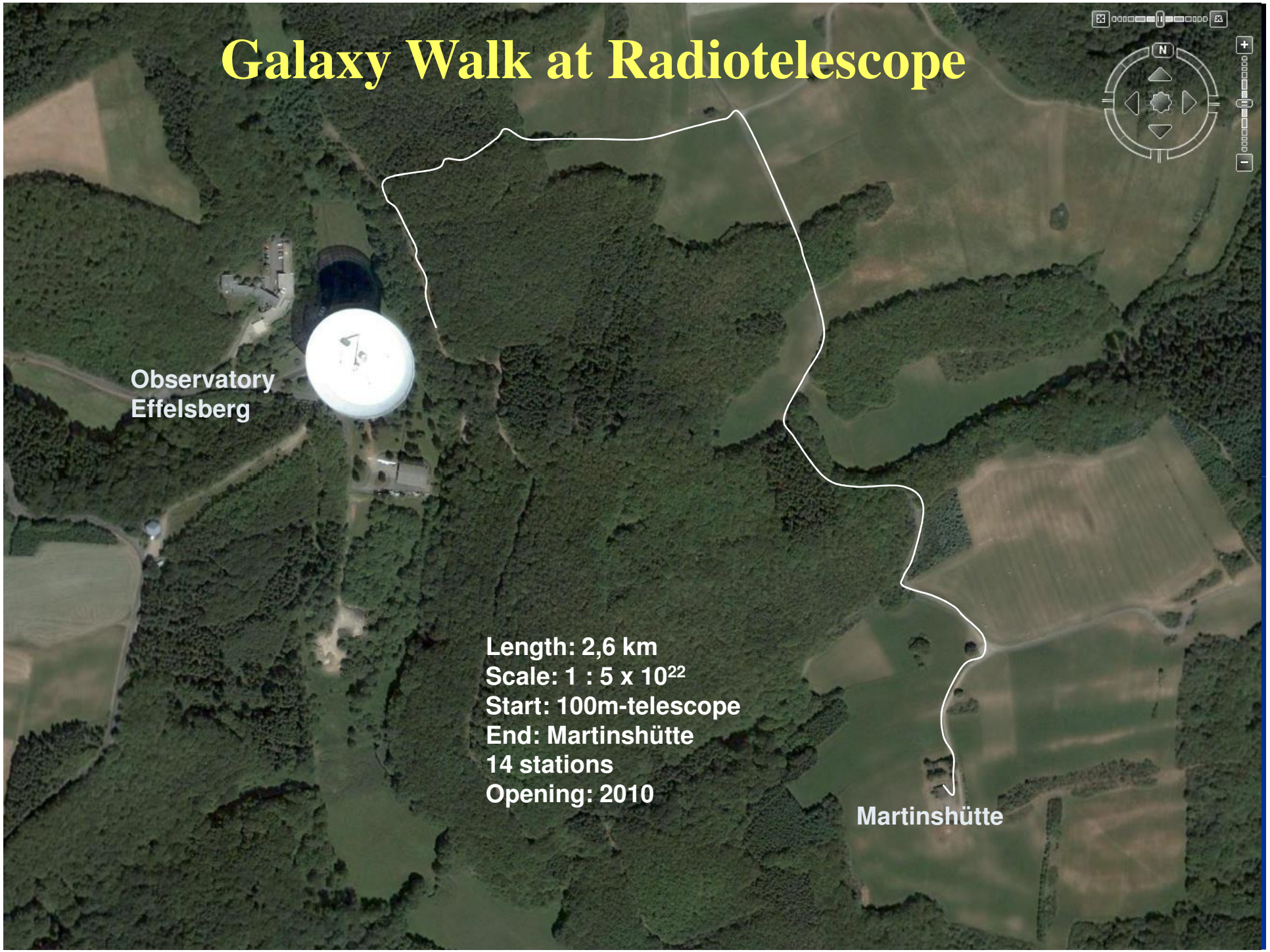
Milky Way Walk, Part II

Continuing from Earth to Galactic Center:

10) 43 cm (=4.3 ly): Alpha Centauri
11) 2.5 m (= 25 ly): Wega
12) 52 m (= 520 ly): Antares
13) 98 m (= 980 ly): Dumbbel Nebula
14) 700 m (= 7,000 ly): Eagle Nebula
15) 1 km (= 10,000 ly): M22 (Globular cluster)
16) 1.5 km (= 15,000 ly): SN1604
17) 2.0 km (= 20,000 ly): W43
18) 2.5 km (= 25,000 ly): Galactic Center

Distance to Andromeda Galaxy corresponds to 250 km ➔ House of Astronomy in Heidelberg

Galaxy Walk at Radiotelescope



Galaxy Walk

14 Stations, length of walk 2.6 km from Center of Milky Way to Big Bang:

1) Starting point Milky Way; from here 2570 m (= 12.85 billion ly); walking speed of 3 km/h means 100 billion times of light velocity
2) 50 cm (= 2.5 million ly): Andromeda Galaxy
3) 2.40 m (= 12 million ly): Starburst-Galaxy M82
4) 10 m (= 50 million ly): Active Galaxy M87
5) 50 m (= 250 million ly): Active Galaxy NGC 1275
6) 150 m (= 750 million ly): Cygnus A
7) 450 m (= 2,2 billion ly): Quasar 3C 273
8) 800 m (= 4,0 billion ly): Quasar 3C 48
9) 950 m (= 4,75 billion ly): Quasar 3C 295
10) 1200 m (= 6 billion ly): Galaxy B0218+367
11) 1420 m (= 7,1 billion ly): Quasar 3C 286
12) 1840 m (= 9,2 billion ly): Radiosource 0917+62
13) 2260 m (= 11,3 billion ly): Galaxy MG J0414+0534
14) 2570 m (= 12,85 billion ly): Galaxy J1148+5251, 850 million ly (170 m) to Big Bang

Outreach Activities Part IV

Future activities:

1) 3-D movies about astronomy
2) Preparation of a 3-D movie about the 100m-telescope
3) 40th anniversary of the 100m telescope in 2011

Thank you for your attention!